GE HealthCare

SIGNA Artist, MR450w, MR450w GEM, SIGNA Architect, MR750, MR750w, and SIGNA PET/MR

Pre-Magnet Delivery System Installation

5500097
Revision 10
US English

Language Policy

DOC0371395 - Global Language Procedure

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UPOZORENJE (HR)	Ovaj servisni priručnik dostupan je na engleskom jeziku. • Ako davatelj usluge klijenta treba neki drugi jezik, klijent je dužan osigurati prijevod. • Ne pokušavajte servisirati opremu ako niste u potpunosti pročitali i razumjeli ovaj servisni priručnik. • Zanemarite li ovo upozorenje, može doći do ozljede davatelja usluge, operatera ili pacijenta uslijed strujnog udara, mehaničkih ili drugih rizika.
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 elektrického 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 uden at læse og forstå denne servicemanual. • Manglende overholdelse af denne advarsel kan medføre skade på grund af elektrisk stød, 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 alvorens 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)	See 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 d'installation et de maintenance est disponible uniquement en anglais. • Si le technicien d'un client a besoin de ce manuel dans une langue autre que l'anglais, il incombe au client de le faire traduire. • Ne pas tenter d'intervenir sur les équipements tant que ce manuel d'installation et de maintenance 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)	Τοπαρόν εγχειρίδιο σέρβις διατίθεται στα αγγλικά μόνο. • Εάν το άτομο παροχής σέρβις ενός πελάτη απαιτεί το παρόν εγχειρίδιο σε γλώσσα εκτός των αγγλικών, αποτελεί ευθύνη του πελάτη να παρέχει υπηρεσίες μετάφρασης. • Μηνεπιχειρήσετε την εκτέλεση εργασιών σέρβις στον εξοπλισμό εκτός εάν έχετε συμβουλευτεί και έχετε κατανοήσει το παρόν εγχειρίδιο σέρβις. • Εάν δεν λάβετε υπόψη την προειδοποίηση αυτή, ενδέχεται να προκληθεί τραυματισμός στο άτομο παροχής σέρβις, στο χειριστή ή στον ασθενή από ηλεκτροπληξία, μηχανικούς ή άλλους κινδύνους.
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 aðeins 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 lingua inglese. • Se un addetto alla manutenzione richiede il manuale in una lingua diversa, il cliente è tenuto a provvedere direttamente alla traduzione. • Procedere alla manutenzione dell'apparecchiatura solo dopo aver consultato il presente manuale ed averne compreso il contenuto. • Il mancato rispetto della presente avvertenza potrebbe causare lesioni all'addetto alla manutenzione, all'operatore o ai pazienti provocate da scosse elettriche, urti meccanici o 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。 • このサービスマニュアルを熟読し理解せずに、装置のサービスを行わないでください。 • この警告に従わない場合、サービスを担当される方、操作員あるいは患者 さんが、感電や機械的又はその他の危険により負傷する可能性があります。
경고 (KO)	본 서비스 매뉴얼은 영어로만 이용하실 수 있습니다. • 고객의 서비스 제공자가 영어 이외의 언어를 요구할 경우, 번역 서비스를 제공하는 것은 고객의 책임입니다. • 본 서비스 매뉴얼을 참조하여 숙지하지 않은 이상 해당 장비를 수리하려고 시도하지 마십시오. • 본 경고 사항에 유의하지 않으면 전기 쇼크, 기계적 위험, 또는 기타 위험으로 인해 서비스 제공자, 사용자 또는 환자에게 부상을 입힐 수 있습니다.
BRĪDINĀJUMS (LV)	Šī apkopes rokasgrāmata ir pieejama tikai angļu valodā. • Ja klienta apkopes sniedzējam nepieciešama informācija citā valodā, klienta pienākums ir nodrošināt tulkojumu. • Neveiciet aprīkojuma apkopi bez apkopes rokasgrāmatas izlasīšanas un saprašanas. • Šī brīdinājuma neievērošanas rezultātā var rasties elektriskās strāvas trieciena, mehānisku vai citu faktoru izraisītu traumu risks apkopes sniedzējam, operatoram vai pacientam.

ĮSPĖJIMAS (LT)	Šis eksploatavimo vadovas yra tik anglų kalba. • Jei kliento paslaugų tiekėjas reikalauja vadovo kita kalba – ne anglų, suteikti vertimo paslaugas privalo klientas. • Nemėginkite atlikti įrangos techninės priežiūros, jei neperskaitėte ar nesupratote šio eksploatavimo vadovo. • Jei nepaisysite šio įspėjimo, galimi paslaugų tiekėjo, operatoriaus ar paciento sužalojimai dėl elektros šoko, mechaninių ar kitų pavojų.
ADVARSEL (NO)	Denne servicehåndboken finnes bare på engelsk. • Hvis kundens serviceleverandør har bruk for 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 serwisant klienta wymaga języka innego niż angielski, zapewnienie usługi tłumaczenia jest obowiązkiem klienta. • Nie próbować serwisować urządzenia bez zapoznania się z niniejszym podręcznikiem serwisowym i zrozumienia go. • Niezastosowanie się do tego ostrzeżenia może doprowadzić do obrażeń serwisanta, operatora lub pacjenta w wyniku porażenia prądem elektrycznym, zagrożenia mechanicznego bądź innego.
ATENÇÃO (PT-BR)	Este manual de assistência técnica encontra-se disponível unicamente em inglês. • Se outro serviço de assistência técnica solicitar a tradução deste manual, caberá ao cliente fornecer os serviços de tradução. • Não tente reparar o equipamento sem ter consultado e compreendido este manual de assistência técnica. • A não observância deste aviso pode ocasionar ferimentos no técnico, operador ou paciente decorrentes de choques elétricos, mecânicos ou outros.
ATENÇÃO (PT-PT)	Este manual de assistência técnica só se encontra disponível em inglês. • Se qualquer outro serviço de assistência técnica solicitar este manual 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 assistência técnica. • O não cumprimento deste aviso pode colocar em perigo a segurança do técnico, do operador ou do paciente devido a choques eléctricos, mecânicos ou outros.
ATENŢIE (RO)	Acest manual de service este disponibil doar 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 техническому обслуживанию представлено 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 техническим обслуживанием оборудования обязательно обратитесь к данному руководству и поймите изложенные в нем сведения. • Несоблюдение требований данного предупреждения может привести к тому, что специалист по техобслуживанию, оператор или пациент получит удар электрическим током, механическую травму или другое повреждение.
UPOZORENJE (SR)	Ovo servisno uputstvo je dostupno samo na engleskom jeziku. • Ako klijentov serviser zahteva neki drugi jezik, klijent je dužan da obezbedi prevodilačke usluge. • Ne pokušavajte da opravite uređaj ako niste pročitali i razumeli ovo servisno uputstvo. • Zanemarivanje ovog upozorenja može dovesti do povređivanja servisera, rukovaoca ili pacijenta usled strujnog udara ili mehaničkih i drugih opasnosti.
UPOZORNE-NIE (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, kým si neprečítate návod na obluhu a neporozumiete mu. • Zanedbanie tohto upozornenia môže spôsobiť zranenie poskytovateľa služieb, obsluhujúcej osoby alebo pacienta elektrickým prúdom, mechanické alebo iné ohrozenie.
ATENCIÓN (ES)	Este manual de servicio sólo existe en inglés. • Si el encargado de mantenimiento de un cliente necesita un idioma que no sea el inglés, el cliente deberá encargarse de la traducción del manual. • No se deberá dar servicio técnico 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.
OPOZORILO (SL)	Ta servisni priročnik je na voljo samo v angleškem jeziku. • Če ponudnik storitve stranke potrebuje priročnik v drugem jeziku, mora stranka zagotoviti prevod. • Ne poskušajte servisirati opreme, če tega priročnika niste v celoti prebrali in razumeli. • Če tega opozorila ne upoštevate, se lahko zaradi električnega udara, mehanskih ali drugih nevarnosti poškoduje ponudnik storitev, operater ali bolnik.
DİKKAT (TR)	Bu servis kılavuzunun sadece ingilizcesi mevcuttur. • Eğer müşteri teknisyeni bu kılavuzu ingilizce dışında bir başka lisandan talep ederse, bunu tercüme ettirmek müşteriye düşer. • Servis kılavuzunu okuyup anlamadan ekipmanlara müdahale etmeyiniz. • Bu uyarıya uyulmaması, elektrik, mekanik veya diğer tehlikelerden dolayı teknisyen, operatör veya hastanın yaralanmasına yol açabilir.

ЗАСТЕРЕЖЕННЯ (UK)	Даний посібник з експлуатації доступний тільки англійською мовою. • Якщо постачальник послуг клієнта спілкується іноземною мовою, тоді клієнт зобов'язаний забезпечити переклад. • Заборонено проводити огляд обладнання без попереднього звертання до даного посібника з експлуатації і розуміння інформації, поданої у ньому. • Недотримання цього застереження може завдати шкоди здоров’ю постачальника послуг, оператора або пацієнта через ураження електричним струмом, механічну травму або інше ушкодження.

Contents

Chapter 1 Getting started

1.1 Preparing the site

Table 1-1 Tools and test equipment

Item	Quantity	Part number
Restricted Access Control Kit (contains two plastic warning signs for posting at site during installation and service activity)	1 Kit	46-271138G1
Nonmagnetic Titanium Service Tool Kit, Large Set	1 Kit	5112581
Nonmagnetic Titanium Service Tool Kit, Small Set	1 Kit	5113258
Digital Voltmeter (DVM)	1	-
Extension Cords, with Ground Conductor	1	-
Power Strip, Grounded Type, with Minimum of Five Outlets	1	-
Plastic or Aluminum Flashlight	1	-
Nonmagnetic Level	1	-
Nonmagnetic Tape Rule, 12 ft	1	-
Assorted Drill Bits	Varied	-
Inspection Mirror	1	-
Hobby and Utility Knives	1	-

Table 1-2 Required conditions

Condition
Before equipment is delivered, you must complete pre-installation work to avoid delays and confusion. Refer to one of the following manuals: • *SIGNA™ Artist 1.5T (Platform Configuration) Preinstallation Manual* (5670001) • *SIGNA™ Artist, Optima MR450w 1.5T (Legacy Configuration) Preinstallation Manual* (5936619-1EN) • *Discovery MR750 3.0T Pre-Installation* (5500101) • *SIGNA™ Architect, Discovery MR750w (Legacy Configuration) Preinstallation Manual* (5671000-8EN) • *SIGNA™ Architect (Platform Configuration) Preinstallation Manual* (5670003) • *SIGNA™ PET/MR System Preinstallation Manual* (5480759)

Table 1-3 Safety

Safety
Before working in any GE HealthCare MR suite or doing any GE HealthCare service procedure, you must: • Have read and understood all hazard conditions and safety requirements in the latest revision of the GE HealthCare *MR Service Safety Manual* (5452735). • Have successfully completed all relevant GE HealthCare Environmental Health and Safety (EHS) courses (or for non-GE employees, equivalent workplace training courses). • Comply with all site-specific training and workplace safety requirements. If you have any safety concerns at any time, do not begin work or immediately stop work and move to a safe location. Immediately contact your supervisor or site safety officer for instructions on how to proceed.

Introduction

This manual provides instructions for positioning or installing the following components of the SIGNA Artist, MR450w 1.5T, MR450w GEM 1.5T, SIGNA Architect, MR750 3.0T, MR750w 3.0T, or SIGNA PET/MR 3.0T system before delivery and installation of the magnet.

IMPORTANT
Pre-magnet delivery items depend on the region. Do installation only for the items shipped before magnet delivery.

- Main Disconnect Panel LOTO Placard
- Magnet room Curtain Rail/Cable Concealment Kit
- SIGNA Architect platform configuration:
  - Integrated Cooling Cabinet (ICC) or platform ICC (pICC) containing the cooling loops and gradient and patient blowers
  - Secondary Penetration Wall (SPW) and PEN mounting frames
- SIGNA Artist platform configuration:
  - ICC or pICC containing the cooling loops and gradient and patient blowers
  - Penetration Panel (PP) mounting frames
- MR450w, MR450w GEM, MR750, MR750w, SIGNA Artist legacy configuration, SIGNA Architect legacy configuration, and SIGNA PET/MR:
  - Heat Exchanger Cabinet (HEC) containing the cooling loops, and gradient blower
  - HEC to cryogen chiller hoses and insulation
  - SPW and PEN mounting frames

Basic system

The basic system consists of the following major equipment:

Figure 1-1 Architect platform configuration

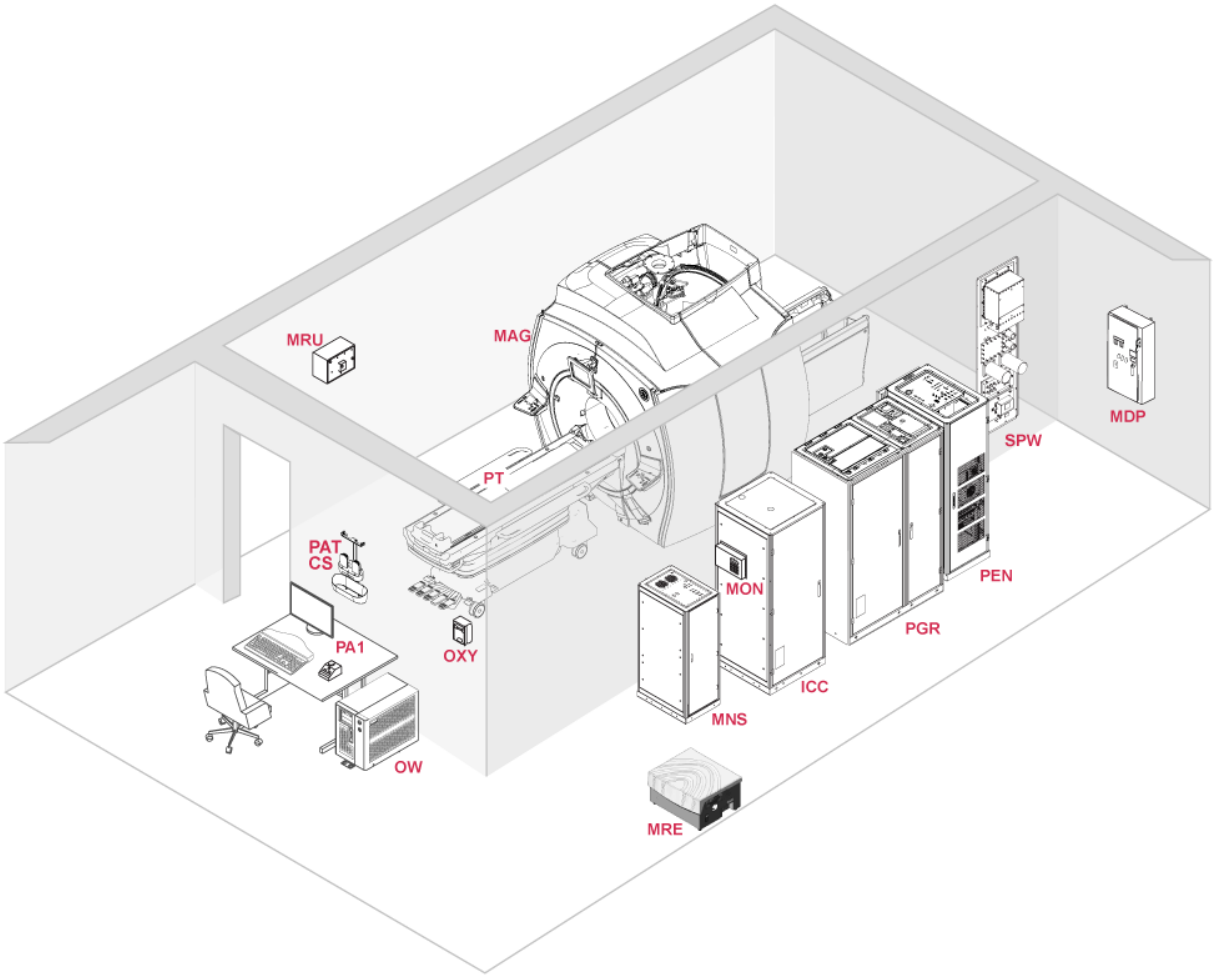


Figure 1-2 Artist platform configuration

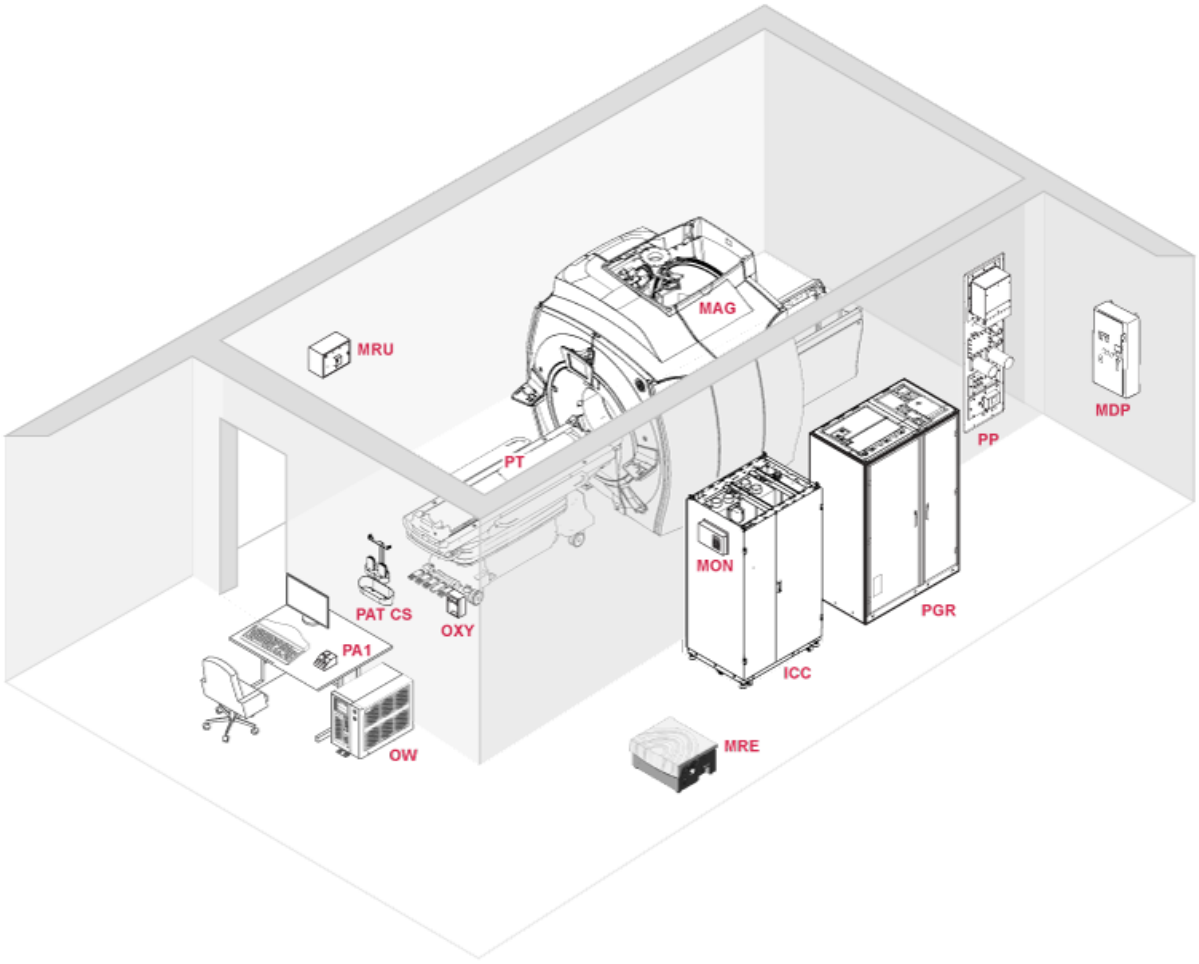


Figure 1-3 MR450w, MR450w GEM, Artist legacy configuration

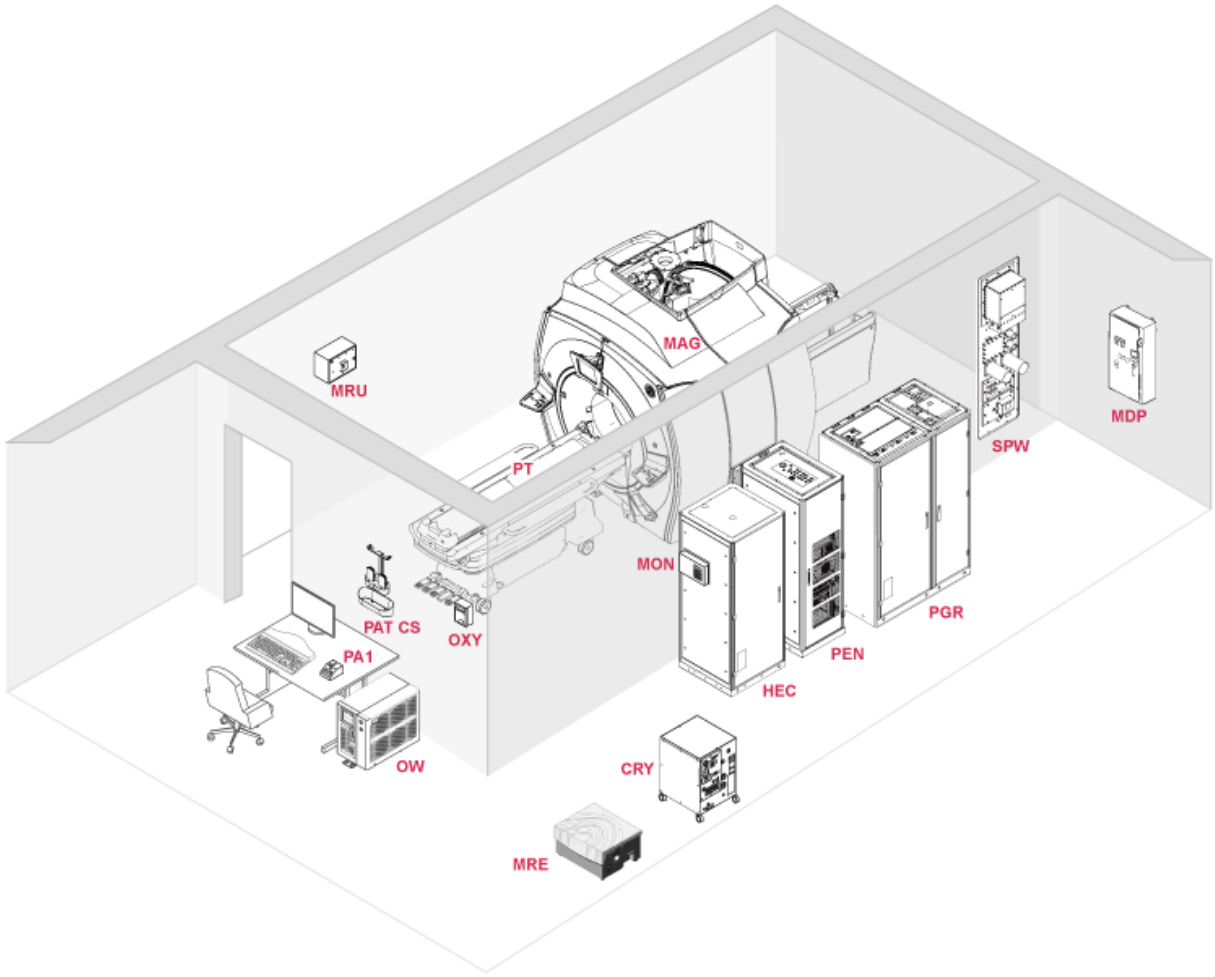


Figure 1-4 MR750, MR750w, Architect legacy configuration

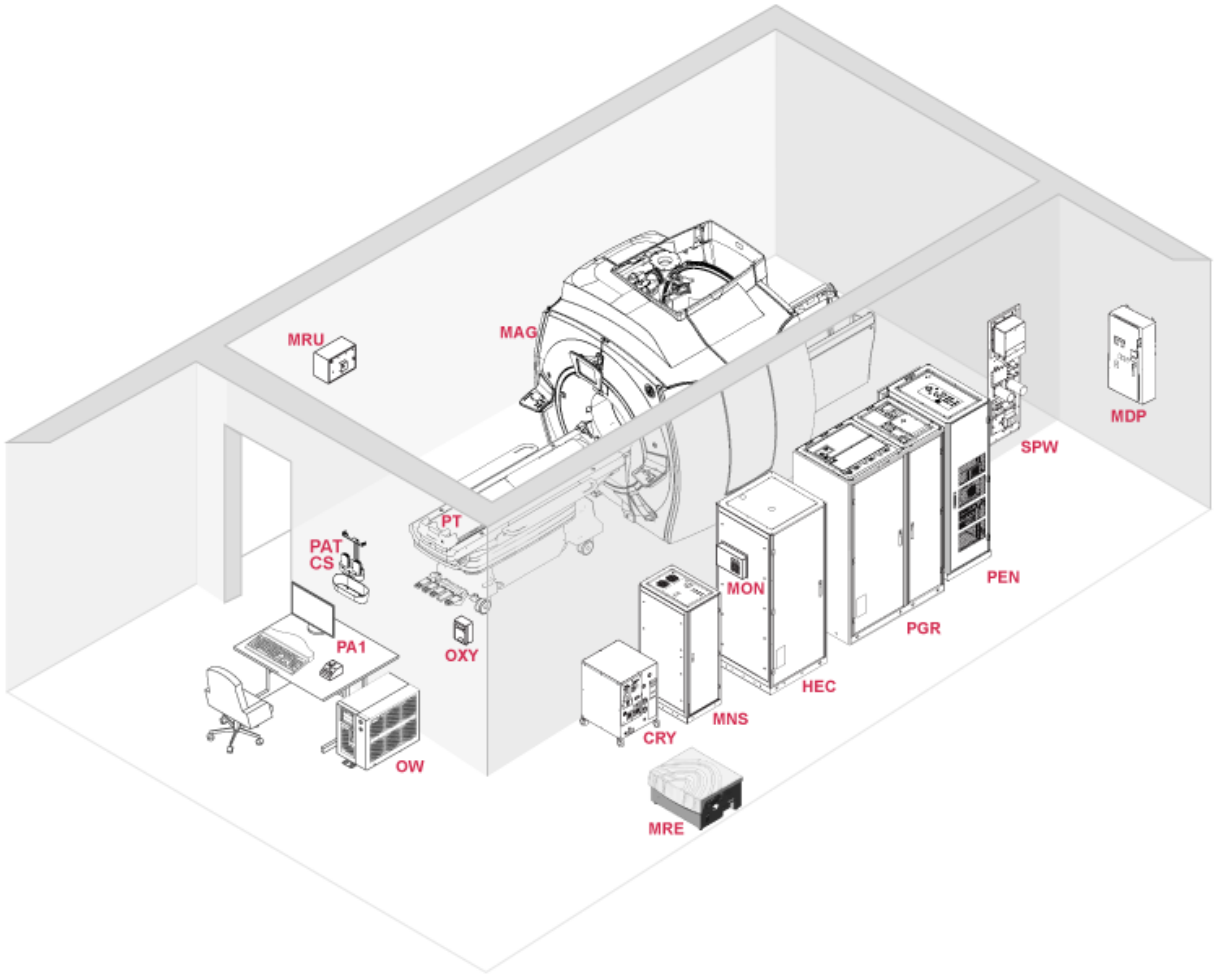
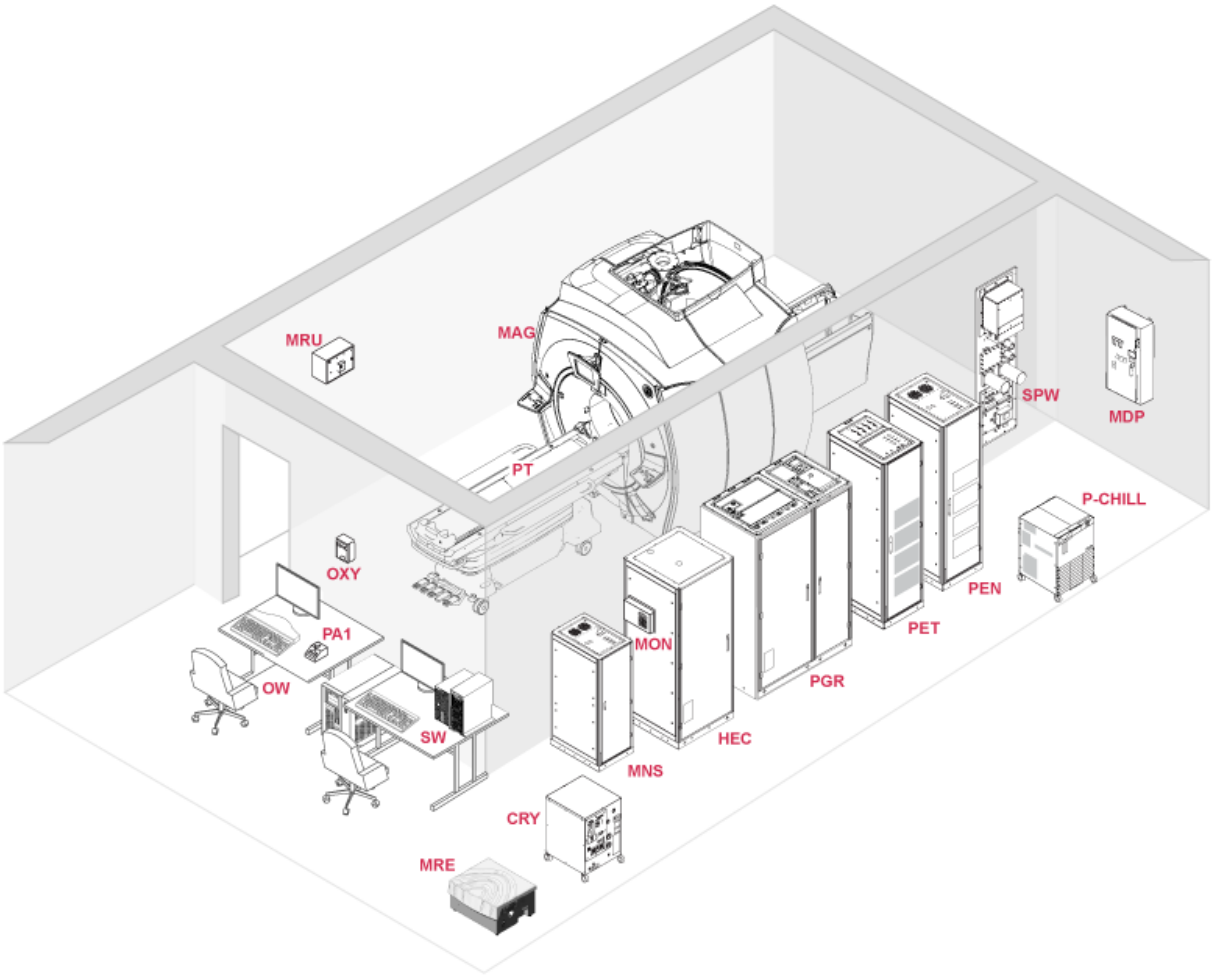


Figure 1-5 PET/MR



1.2 Doing an inspection of the product delivery

Prerequisites

Table 1-4 Safety

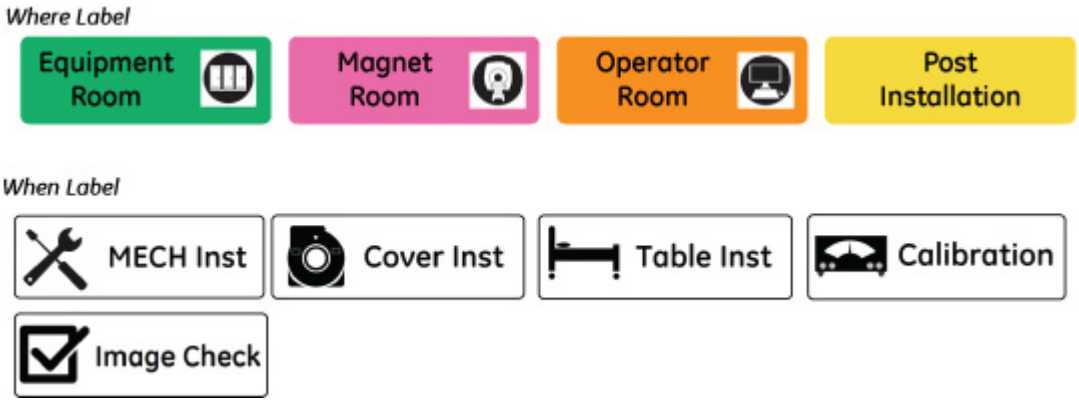
Safety
Before working in any GE HealthCare MR suite or doing any GE HealthCare service procedure, you must: • Have read and understood all hazard conditions and safety requirements in the latest revision of the GE HealthCare *MR Service Safety Manual* (5452735). • Have successfully completed all relevant GE HealthCare Environmental Health and Safety (EHS) courses (or for non-GE employees, equivalent workplace training courses). • Comply with all site-specific training and workplace safety requirements. If you have any safety concerns at any time, do not begin work or immediately stop work and move to a safe location. Immediately contact your supervisor or site safety officer for instructions on how to proceed.

Procedure

1. Examine all packages closely at delivery. If damage is apparent, do the following:
   1.1. Make sure the notation *damage in shipment* is written on all copies of the freight or express bill before delivery is accepted or signed for by a GE HealthCare representative or a hospital receiving agent.
   1.2. Whether noted or concealed, you must report damage to the carrier immediately upon discovery, or in any event, within 14 days after receipt, and hold the contents and containers 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.
   1.3. Call Global Parts at 1-800-548-3366 (option 6) to file a report of the damage.

   NOTE
   Contact your local service coordinator for more information on this process.
2. Make sure that all catalog numbers listed as delivered on the shipping document have been delivered.
3. If any catalogs and/or packing boxes are missing or noted as shipped short, identify the impact on the installation schedule.
4. Make sure each packing box is in the correct location based on the *Where Label* that is attached to the outside of the box.

Figure 1-6 Packing box labels



NOTE
The *When Label* identifies when to use the box.

5. If you are not sure about the contents of a box, refer to Product Delivery Instructions (PDIs) and packing lists to make sure the shipment is correct.

NOTE
PDIs specify box contents, part numbers, and shipping procedures, and are identified by catalog number. Lists of items included with each box are detailed in separate packing lists.

6. **(For systems with an ICC)** If the ICC has shipped, find the product locator card attached to the ICC Top Asm (5599329-10) or the platform ICC Asm (5766221).

   6.1. At this time, for U.S. ONLY, the preferred method of submitting information is the FE Site Verification Web Site. The FE Site Verification consists of three components that are available on the web from the main menu. They are:

      6.1.1. Install/deinstall product locator model and serial numbers

      6.1.2. Add/modify ship to address information

      6.1.3. Update CARES FE data for primary/secondary FEs

   6.2. One "Shipping Card" is filled out and submitted when shipped (extra cards are supplied for trans-shipments between storage and distribution points), and the "Installation Card" and extra shipment cards are attached.

NOTE
Make sure that the serial and model number on each rating plate matches the installation card numbers before removing the installation card. Note that there may be one or more shipment cards and bar code labels with the installation card. These shipment cards are used to trace the transfer of serialized units between various inventory storage and distribution points until the product reaches its final installation destination. Process just the installation card and discard any extra shipment cards and labels.

1.3 Product locator

During installation, the Install FE will make sure that the model and serial numbers are part of the asset. Use either the gib web interface (http://gib.gehealthcare.com/gib/gib_entry.jsp) or the MyPLCReader app. This information will then be loaded directly to Siebel by the IB verification team. If components are missing, submit a Global Installation Quality (GIQ) request.

To install the MyPLCReader app, use the following procedure.

1. From the GE app icon, search for and Install the MyPLCReader app on your iPhone or iPad.

Figure 1-7 MyPLCReader app

2. Update the Configuration page.
   2.1. The first time the app opens, the Configuration page will open.
   2.2. Enter your SSO, Country and **if in US select the edit button to change the default email address** (by default, this app will send the email to the Europe IB Team Resource.EuropeanCentralAdminGIB@ge.com). The email to be used in US is usa.ib.verification@ge.com.
3. Start your first scan.
   3.1. Go to the Menu, make the appropriate selection for the job you are doing: **New Install**, **Upgrade System**, or **Update System**.
   3.2. Enter the applicable data, install end date, system ID, and RFS number.
   3.3. Click **Scan Bar Codes** and start scanning each bar code on the PL Cards.
   3.4. Click the **Email** button.
   3.5. The email is sent to the default email address, which was set up earlier.

1.4 Pre-magnet delivery system installation workflow

Required conditions
All on-site construction must be complete before equipment is delivered and installation begins. Attempting to install the system while construction is being completed will impact installation efficiency and further delay site completion. Make sure that all pre-installation and construction work is completed before equipment is delivered to help make sure of an earlier turnover date.

Follow the workflow below to make sure of an orderly and efficient system installation. Note that many procedures may be performed in parallel and may be performed in any order according to the specific situation of each site.

This flowchart assumes that all system equipment was delivered together. Make sure that every part required is available before proceeding to the mechanical installation.

NOTE
The flowchart references the section number for the respective installation procedures. These procedures are similar to cable maps in that they are to be removed from this binder and used at the location where hardware installation is being performed. The procedures must be returned to the binder for future reference upon completion of the installation.

Installation flowchart explanation

Shown below is a legend of the areas within the flowchart installation procedures.

Table 1-5 Flowchart legend

Example	Description
PRE-INSTALLATION • Discovery MR750 3.0T, 5500101 • SIGNA Artist, Optima MR450w, 5670001 • SIGNA Architect, Discovery MR750w, 5670003 • SIGNA PET/MR, 5480759	Use the correct magnet manual that applies to the system being installed to locate the installation procedure listed below.
Chapter 1, Section 1.2 **Doing an inspection of the product delivery**	Section within this manual where the installation procedure is located.
MX	Indicates milestone completion goal in days.

IMPORTANT
Per ISO 9001 requirements, mark off procedures in the flowchart as you complete them.

Installation flowchart

Figure 1-8 Prerequisites for system installation

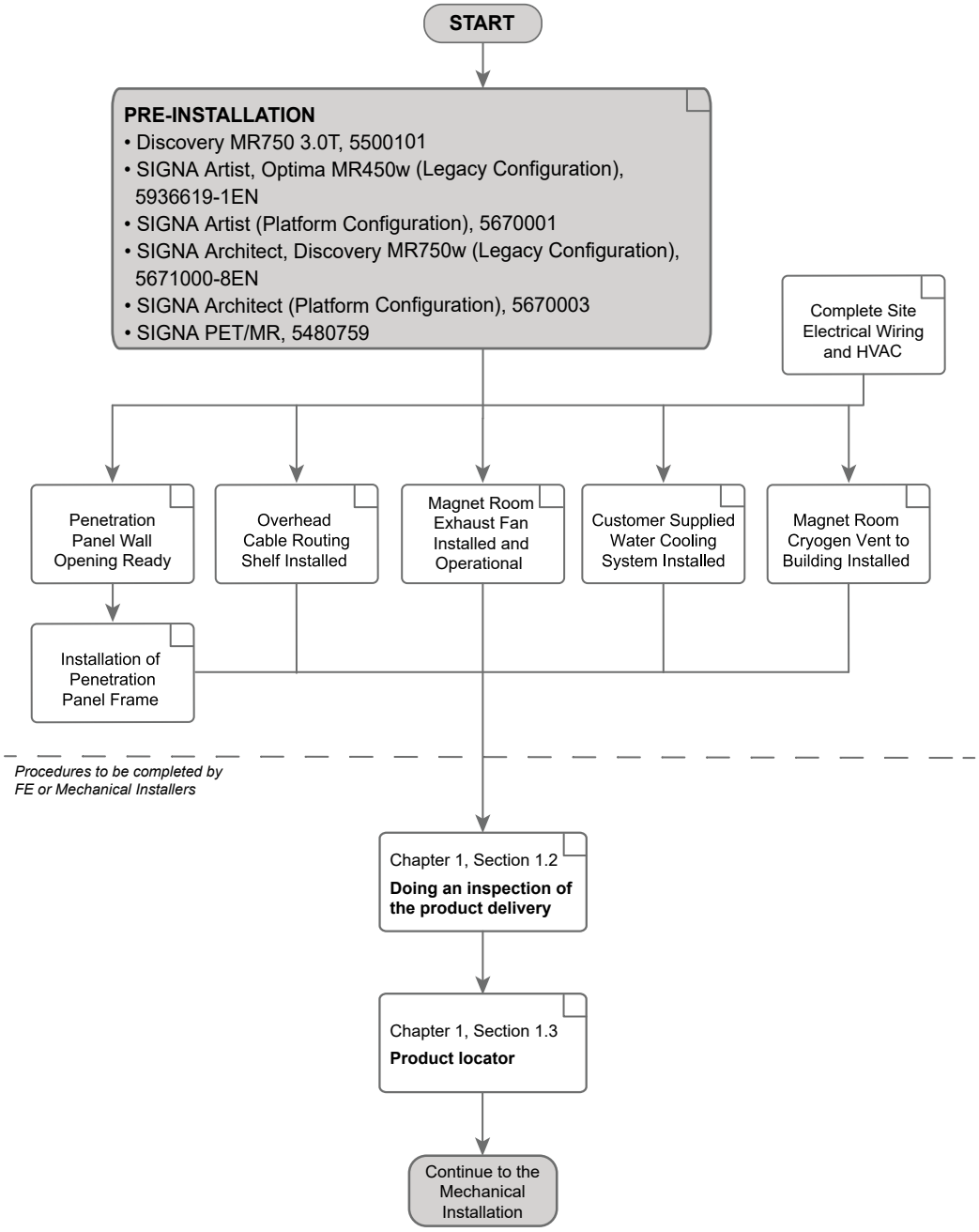


Figure 1-9 Pre-magnet delivery mechanical installation - MR450w, MR450w GEM, MR750, MR750w, Artist legacy configuration, Architect legacy configuration, and PET/MR

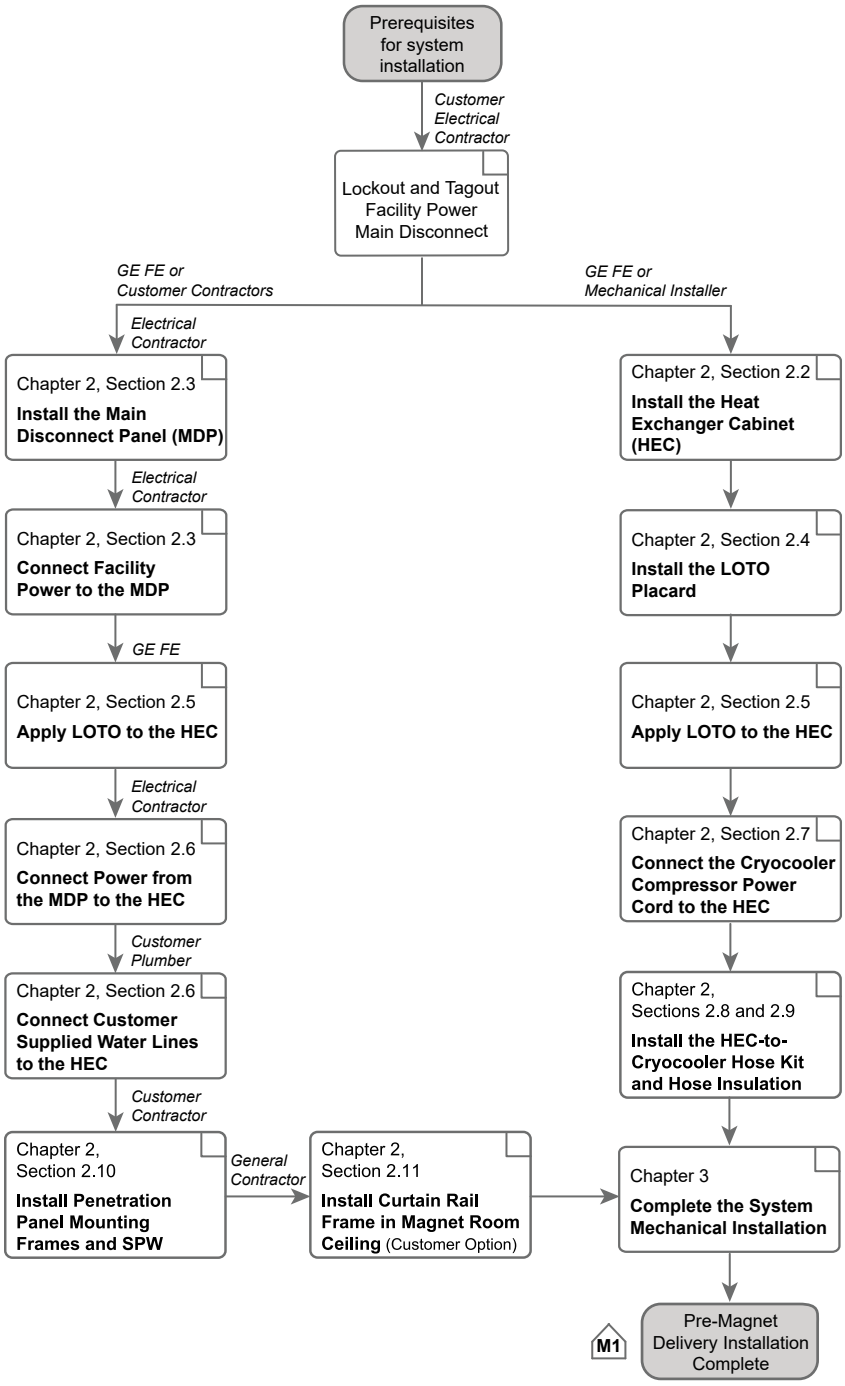
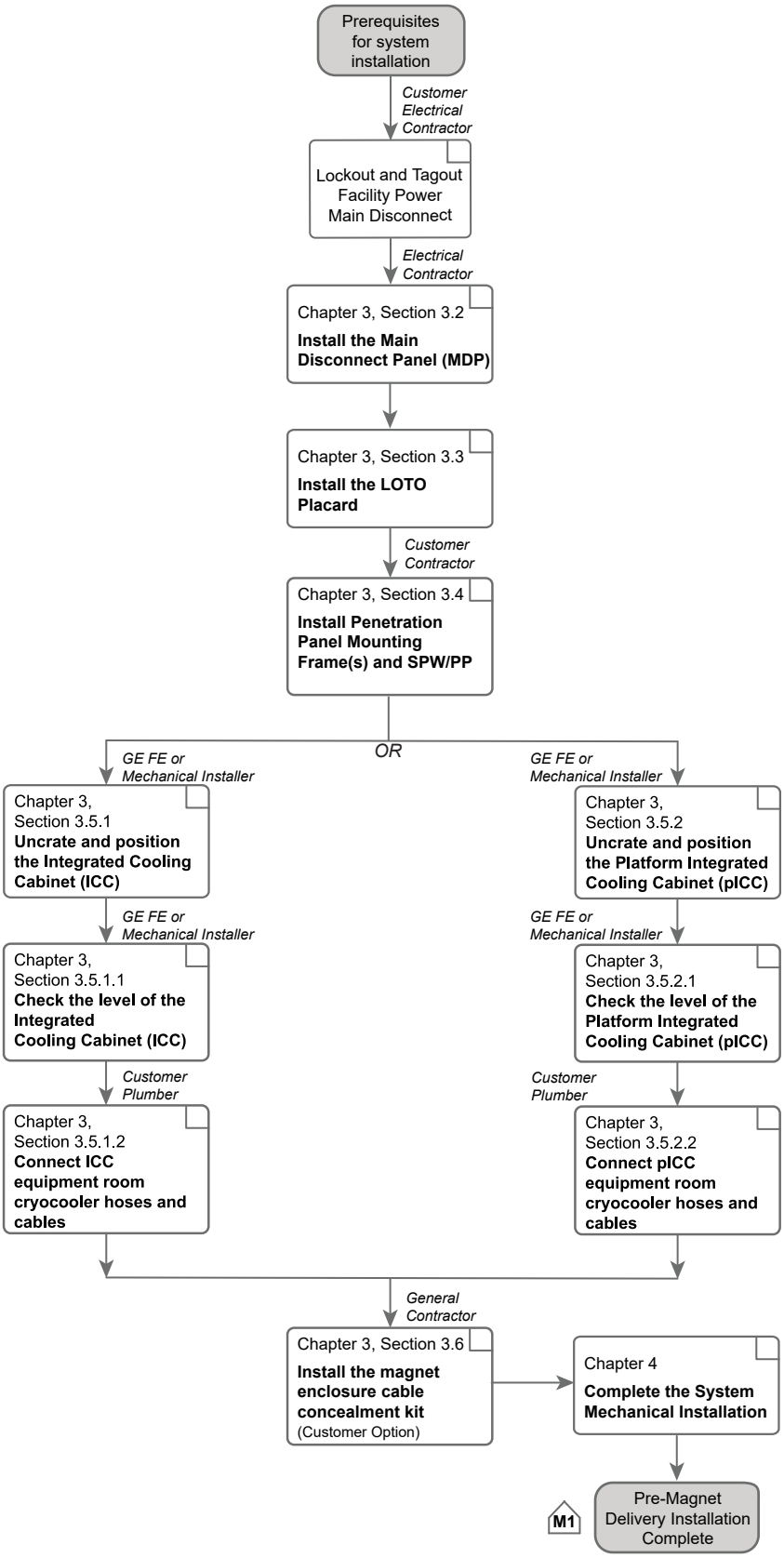


Figure 1-10 Pre-magnet delivery mechanical installation - Artist platform configuration and Architect platform configuration



Chapter 2 Installing components - MR450w, MR450w GEM, MR750, MR750w, Artist legacy configuration, Architect legacy configuration, and PET/MR

2.1 Installation requirements

Positioning of cabinets and components is critical for installing cables and post-installation system operation.

Refer to architectural site layouts for:

- Location of all cabinets and related equipment.
- For seismic anchoring (where required).

⚠ CAUTION

POTENTIAL INJURY HAZARD!

Cabinet weight is significant.

At least two people are required to move any cabinet.

NOTICE

RISK OF CABINET DAMAGE

Equipment damage may result if cabinets are too close to the magnet.

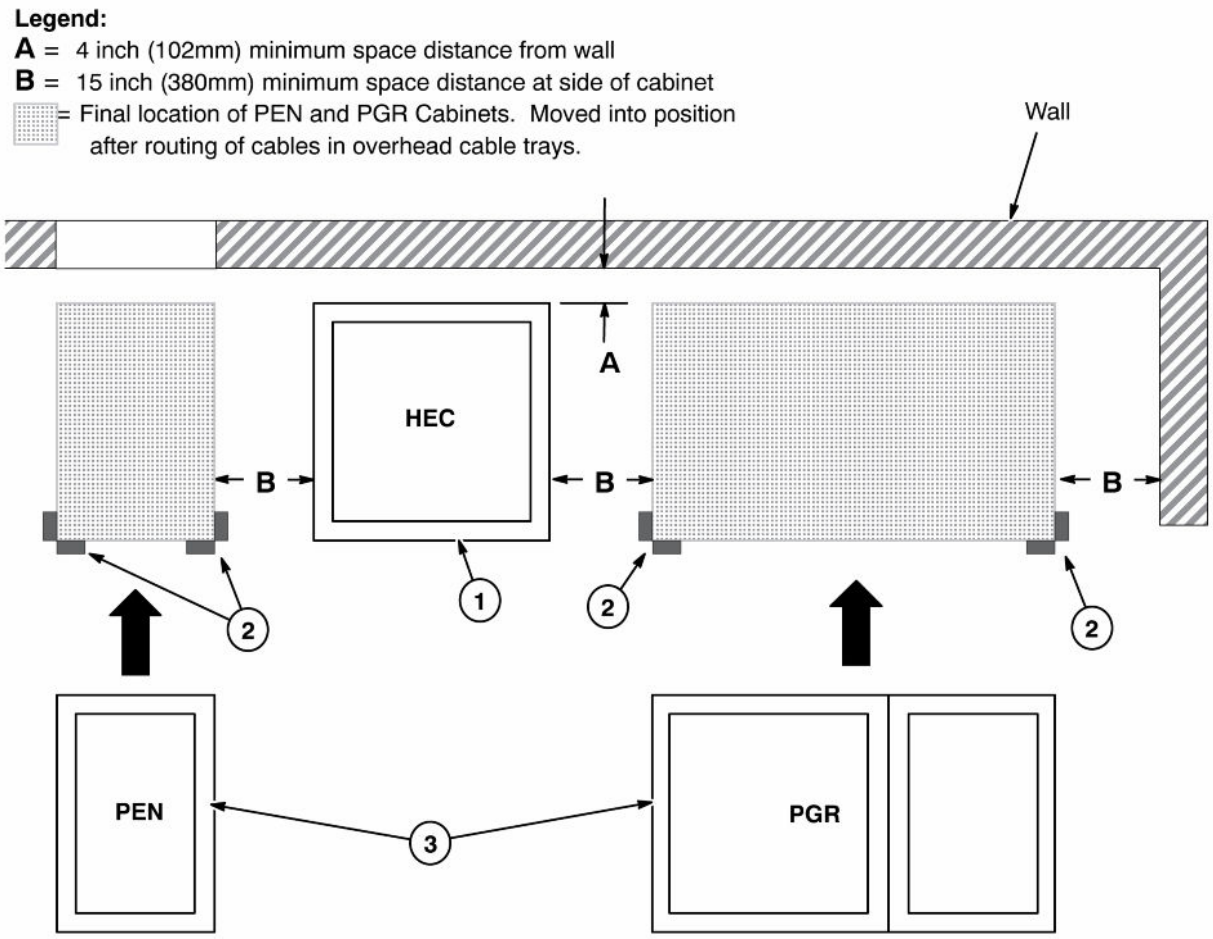
Equipment room cabinets must not be installed in an area with magnetic fields higher than 50 gauss. Refer to site layout plans for positioning of cabinets.

2.2 Installing the Heat Exchanger Cabinet (HEC)

Cabinet positioning preparation

The following illustration shows a typical layout for the equipment room.

Figure 2-1 Initial positioning of cabinets



1	Positioned HEC
2	Locations of the PEN and PGR cabinets
3	PEN and PGR cabinets ready to install

Refer to architectural site layout drawings to identify the location of the HEC.

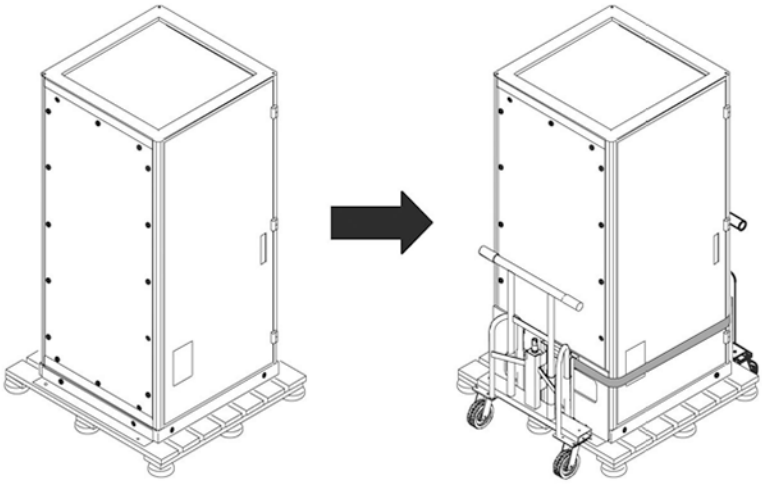
- If available, use the cabinet floor layout templates for positioning cabinets.
- If templates are not available, using the minimum spacing distances as noted in the previous figure, and apply tape on the floor to mark the final location of the front corners of the cabinets.

The PEN and PGR cabinets will be delivered and installed after installation of the magnet.

Cabinet with shipping pallet

The HEC is delivered to the site secured to a pallet. The cabinet must be removed from the pallet and positioned in the equipment room according to site layout plans. The cabinet moving dollies that were delivered to the site on a pallet are required to move the HEC off the pallet.

Figure 2-2 Dolly inserted between the HEC and pallet



Cabinet moving dollies

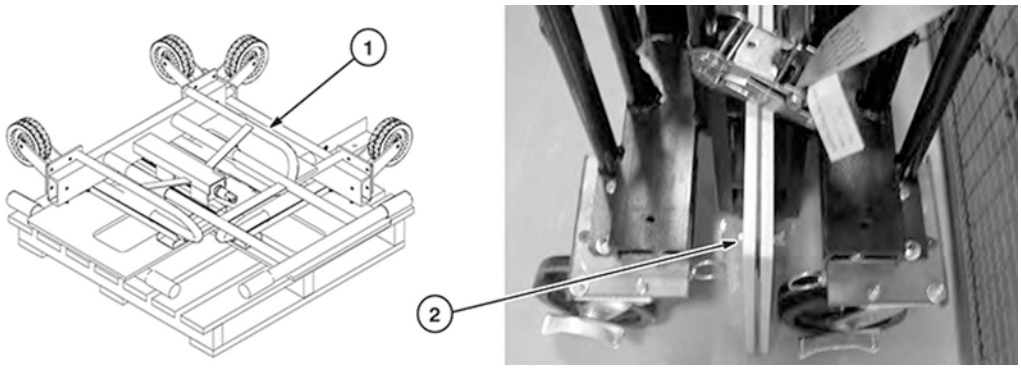
The cabinet moving dollies have been shipped to site on a separate pallet.

- To order dollies if they are not onsite, or for technical questions, contact UMI at 1-800-638-7457.

The dollies have the following features to aid in their use:

- Wheel Locking Pin - Keeps the wheels locked into a certain direction.
- Parking Brakes - For holding the cabinet in position.
- Slide and Lock - The dollies can be removed in limited space (15 inches or 380 mm).
- Twinning Hardware - Hardware to connect each dolly to the other dolly during transport without a cabinet.

Figure 2-3 Cabinet dollies



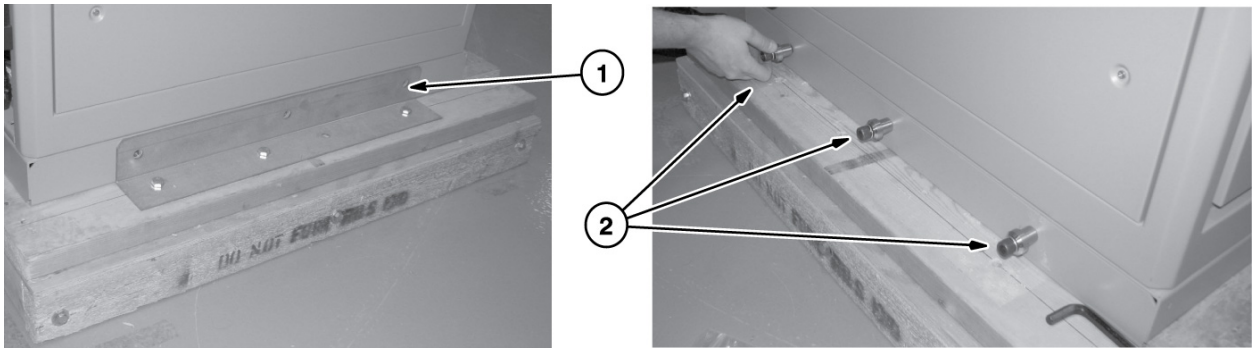
1. Unfasten and remove the dollies from the shipping pallet.
2. If the dollies need to be moved to a different area where the HEC is located, attach the two dollies together using the twinning hardware.

Moving the HEC into the equipment room

NOTICE

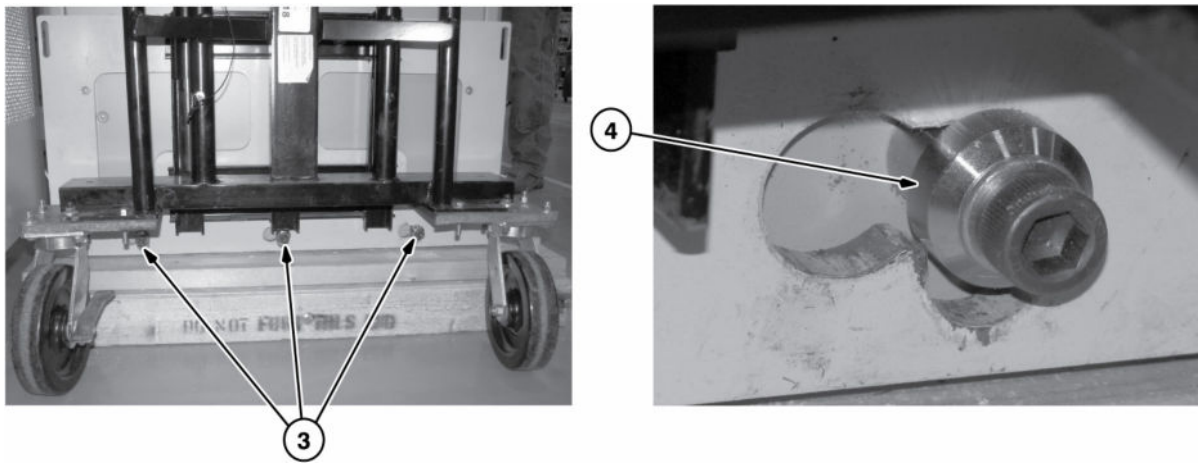
The screws and brackets used to secure the cabinets to the pallets during shipment of the cabinets are also used to secure the cabinets to the floor at sites requiring seismic support. DO NOT DISCARD BRACKETS AND FASTENING SCREWS. Retain and save for customer.

Figure 2-4 Installing bushings



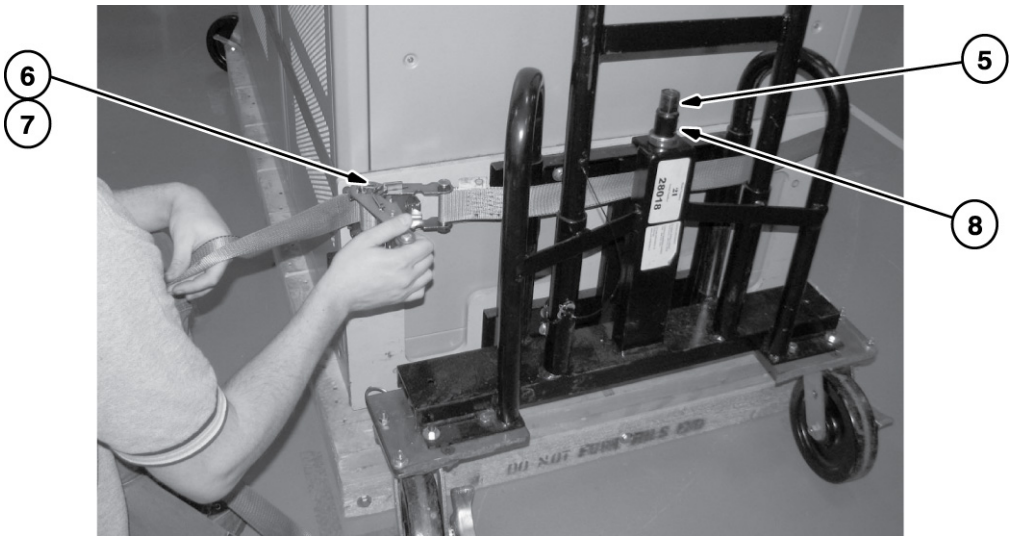
1. Unfasten screws for each angle shipping bracket and remove the bracket from each side of the cabinet.
2. Install the six bushings, three on each side, to the bottom of the cabinet.

Figure 2-5 Putting the dollies in position on the bushings



3. Maneuver the dolly so that all three bushings slip into the slide lock on the attachment plate.
4. Slide the dolly sideways to position the bushings in the lifting part of the attachment plate.

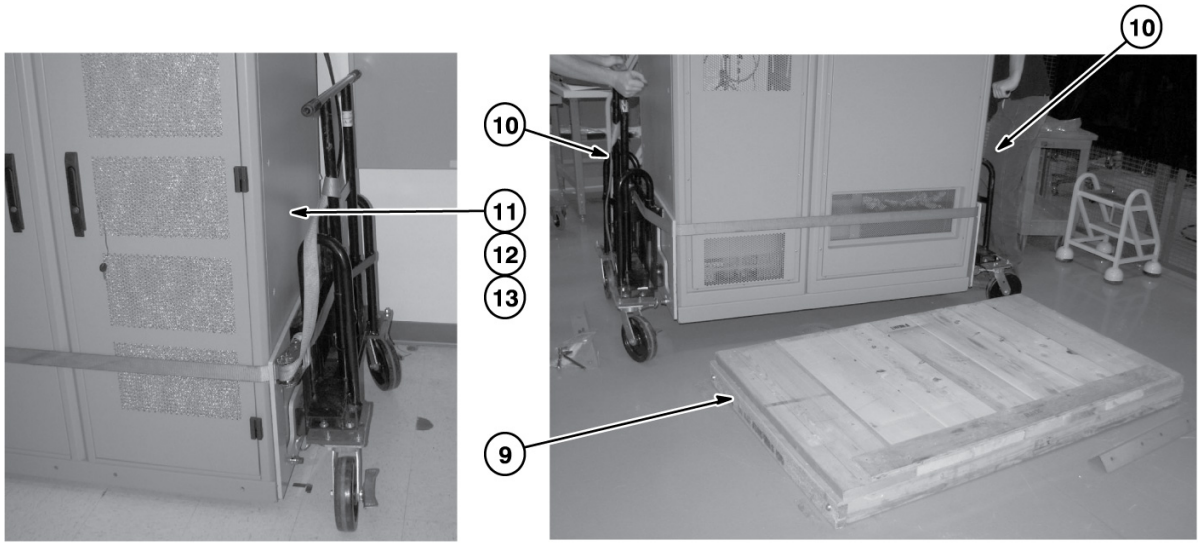
Figure 2-6 Securing the dollies to the cabinet



5. Raise the dolly by turning the jack screw clockwise. This will lock the dolly into position.
6. Secure to dollies with the strap. Make sure the strap goes through the slot of the attachment plate and the clamp is on the flat surface of the dolly.
7. Tighten the strap and close the clamp.
8. Lift the cabinet off of the pallet by turning the jack screw clockwise until the cabinet surface is free from the pallet surface.

NOTE
Alternate raising each dolly in 6 mm (1/4 inch) increments until the cabinet is above the pallet.

Figure 2-7 Final placement of cabinet

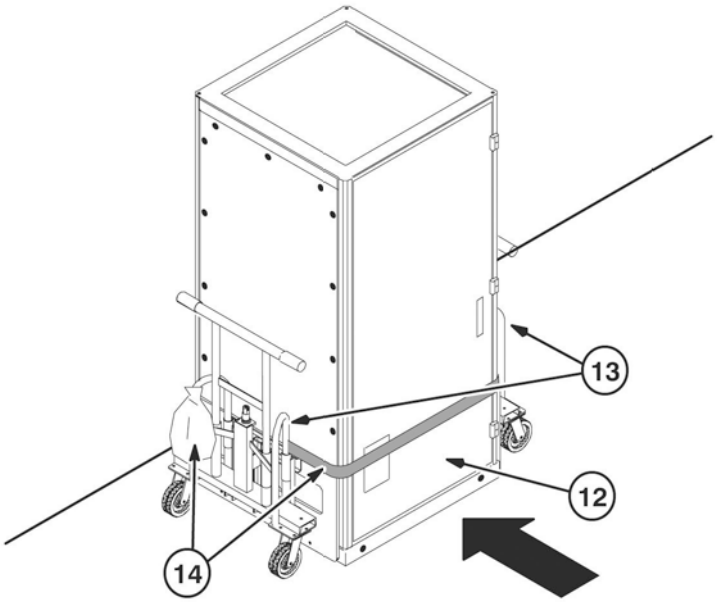


9. Slide the pallet out from under the cabinet.
10. Lower the cabinet by turning the jack screw counterclockwise until the cabinet is about 25 mm (1 inch) above the floor.

NOTE
Alternate lowering each side of the cabinet.

11. Move the cabinet into the equipment room.

Figure 2-8 Putting the cabinet in position



12. Refer to Cabinet positioning preparation on page 25 for preliminary placement of the cabinet and lower the cabinet into position.
13. Leave the dollies attached to the cabinet. They will be used for moving and positioning the PGR and PEN cabinets when they are delivered to site.
14. Remove the strap and store it in the bag delivered with the dollies, which also contained the bushings.

2.3 Installing the Main Disconnect Panel (MDP)

Prerequisites

Personnel requirements
IMPORTANT GE Field Engineers cannot install, service, or repair the MDP. Only a licensed electrician is qualified to complete these tasks. Refer to the MR Service Safety Manual (5452735) for further safety information. To service the MDP, the customer must provide a qualified electrician or other appropriate facility personnel who meets the electrical safety codes for their area.

Safety
Before working in any GE HealthCare MR suite or doing any GE HealthCare service procedure, you must: • Have read and understood all hazard conditions and safety requirements in the latest revision of the GE HealthCare *MR Service Safety Manual* (5452735). • Have successfully completed all relevant GE HealthCare Environmental Health and Safety (EHS) courses (or for non-GE employees, equivalent workplace training courses). • Comply with all site-specific training and workplace safety requirements. If you have any safety concerns at any time, do not begin work or immediately stop work and move to a safe location. Immediately contact your supervisor or site safety officer for instructions on how to proceed.

About this task

Have a customer electrician mount the MDP and connect it to a facility power source. Refer to architectural site layout drawings for specifications and mounting locations.

Figure 2-9 Main Disconnect Panel (MDP)

NOTE
This figure is for reference only and may not be specific to your product.

2.4 Installing the LOTO placard

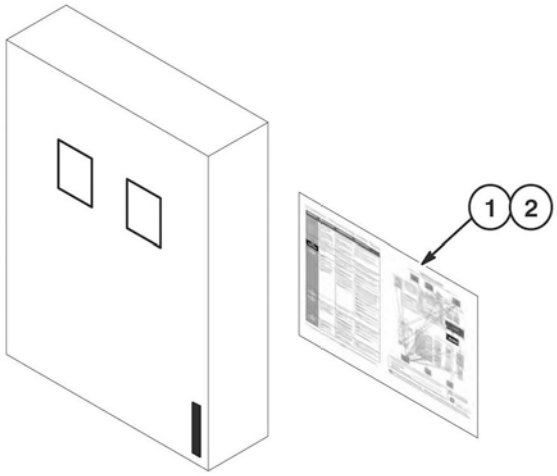
Prerequisites

Tools and test equipment			
Item	**Quantity**	**Part number**	**Manufacturer**
HDv Lock Out Tag Out Placard, English	1	5197122	-

About this task

The LOTO placard must be secured to the wall next to the MDP.

Figure 2-10 LOTO placard



Procedure

1. Remove the covering from the double-sided tape on the rear side of the placard.
2. Press and secure the placard to the surface next to the MDP.

2.5 Applying LOTO - HEC

Prerequisites

Personnel requirements			
Required persons	**Preliminary requirements**	**Procedure**	**Finalization**
1	-	10 minutes	-

Tools and test equipment			
Item	**Quantity**	**Part number**	**Manufacturer**
RED Lock Out/Tag Out Lock with Each Lock Uniquely Keyed	3	5451778	-
1 Inch Multi-Locking Device (if multiple service personnel are involved)	1 to 3 (up to three may be necessary if the valve LOTO devices support only one lock)	46-194427P313	-
Red Warning LOTO Tag	3	46-194427P322	-
Digital Voltmeter (DVM)	1	46-194427P284	-
Ball Valve LOTO Device	2	5372868	-

Safety
Before working in any GE HealthCare MR suite or doing any GE HealthCare service procedure, you must: • Have read and understood all hazard conditions and safety requirements in the latest revision of the GE HealthCare *MR Service Safety Manual* (5452735). • Have successfully completed all relevant GE HealthCare Environmental Health and Safety (EHS) courses (or for non-GE employees, equivalent workplace training courses). • Comply with all site-specific training and workplace safety requirements. If you have any safety concerns at any time, do not begin work or immediately stop work and move to a safe location. Immediately contact your supervisor or site safety officer for instructions on how to proceed.

⚠ WARNING

ELECTROCUTION HAZARD

High voltage present.

Use proper LOTO procedures before servicing and/or maintaining.

About this task

Prior to installing or doing servicing and/or maintenance work on the Heat Exchanger Cabinet (HEC), the steps in this Lockout/Tagout (LOTO) procedure must be completed by a LOTO-authorized GE HealthCare Field Engineer (FE). Completing all steps in this procedure ensures a safe environment, and avoids equipment damage when working on these parts.

Affected by LOTO				
Name of equipment	**Number of locks**	**Titles of employees authorized to perform LOTO**	**Titles of affected employees**	**How to notify**
• HEC • Cryocooler compressor	1 per GE HealthCare field engineer (FE)	GE HealthCare Field Engineers	Hospital personnel	Verbal, posted signs

NOTE

The following table describes the type, location, and magnitude of energy to be LOTO'd.

Energy Source	Yes	No	Location of Energy Isolating Means	Magnitude of Energy
Electrical	x		• Main Disconnect Panel (MDP) • Circuit breaker panel	380 to 480 VAC
Pneumatic		x		
Hydraulic		x		
Gas/Water/Steam		x		
Chemical		x		
Mechanical Motion		x		
Gravity		x		
Springs		x		
Thermal		x		
Stored Energy	x			

Energy Source	Yes	No	Location of Energy Isolating Means	Magnitude of Energy
Air Under Pressure		x		
Oil Under Pressure		x		
Water Under Pressure	x		Facility water valves at top of HEC and the MDP circuit breaker panel	• 6.0 Bar (87 psi) Input • 5.7 Bar (82.8 psi) Output Gradient Coil (GC) • 5.0 Bar (80 psi) Output Power, Gradient, and RF (PGR) Cabinet
Gas Under Pressure	x		Valves on ends of cryocooler helium lines – valves close automatically when disconnected	
Steam		x		
Other		x		

Types of equipment and/or methods selected to dissipate or isolate stored energy

About this task

None required.

Type(s) of equipment and/or method(s) used to ensure disconnection(s)

About this task

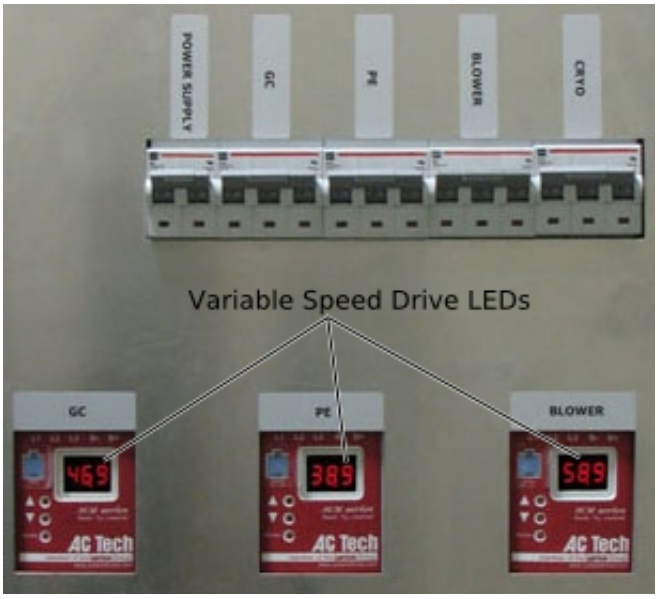
A personal lock and tag per Field Engineer (FE) at the site working on the de-energized equipment at the time of LOTO.

Procedure

1. Apply LOTO to the MDP:
   1.1. Notify affected personnel that LOTO will be applied.

1.2. On the front of the HEC, look at the variable speed drive displays to visually make sure that the power is on. If power is off, proceed to Step 1.5.

Figure 2-11 HEC variable speed drive displays



1.3. **NOTE**
Powering off HEC without first powering down pumps from VFD can put the VFD at risk of damage.

Toggle off the pumps and blower with the PLC Signal Box keypad as follows:

- Blower: Press and hold the up-arrow (^), and press **F1**
- Gradient Coil Pump: Press and hold the up arrow (^), and press **F2**
- Power Electronics: Press and hold the up arrow (^), and press **F3**

Figure 2-12 PLC signal box

1.4. Make sure the VFD LEDs read zero before proceeding.

1.5. Turn off all five circuit breakers on the HEC power box. The circuit breakers are located above the variable speed drive displays.

1.6.

NOTICE

LOSS OF POWER

Powering off the HEC circuit breaker will cause the Cryocooler Compressor to also lose power.

Make sure the HEC downtime is minimized to avoid boiling off cryogens.

Put Magnet Monitor in Service mode to prevent logging of false RFS case events during this time.

NOTE

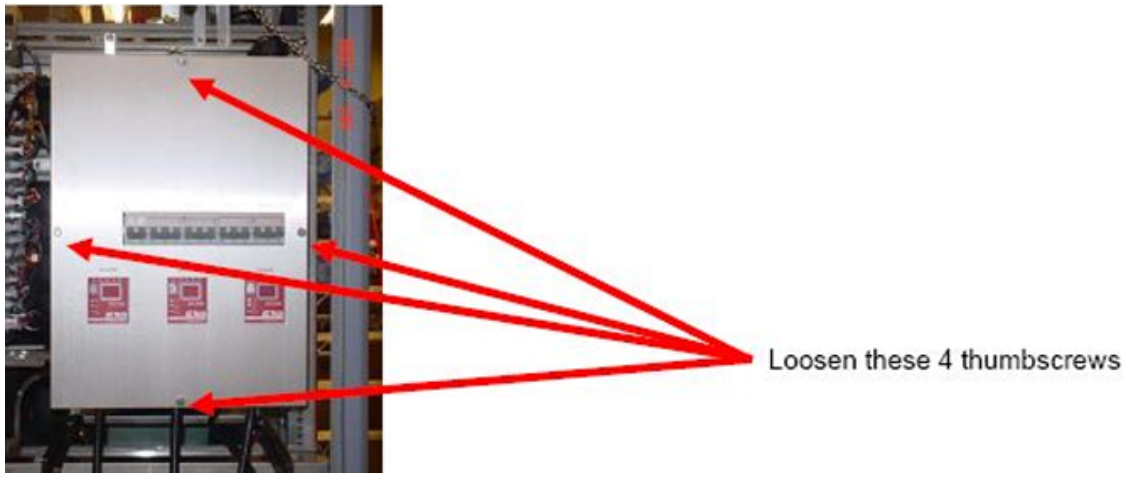
If the customer has supplied the MDP, see the MDP manual for information about LOTO for the HEC circuit breaker.

At the front of the MDP, move the HEC circuit breaker to the **OFF** position and apply LOTO.

Figure 2-13 HEC circuit breaker (example)

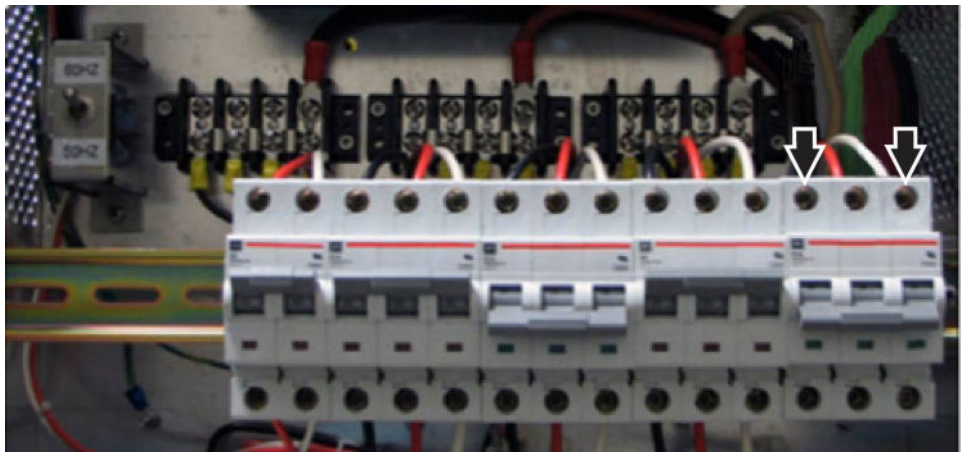
1.7. Make sure all energy is dissipated. Carefully remove the four thumbscrews securing the HEC power box front cover and remove the cover.

Figure 2-14 Location of screws on HEC power box



1.8. Make sure voltage is removed by testing the line-to-line voltage at the top of the breaker points.

Figure 2-15 Terminal points of HEC power box



1.9. Replace the power box front cover.

2. Apply LOTO to the HEC shut-off valves:

2.1. Prepare for shut down. Check with the facility owner to determine the proper shutdown method for the chiller.

2.2. Shut off both the facility return and supply valves by turning the handle to a 90° angle.

2.3. Apply LOTO device to both the return and supply valves.

Figure 2-16 LOTO installed on return valve

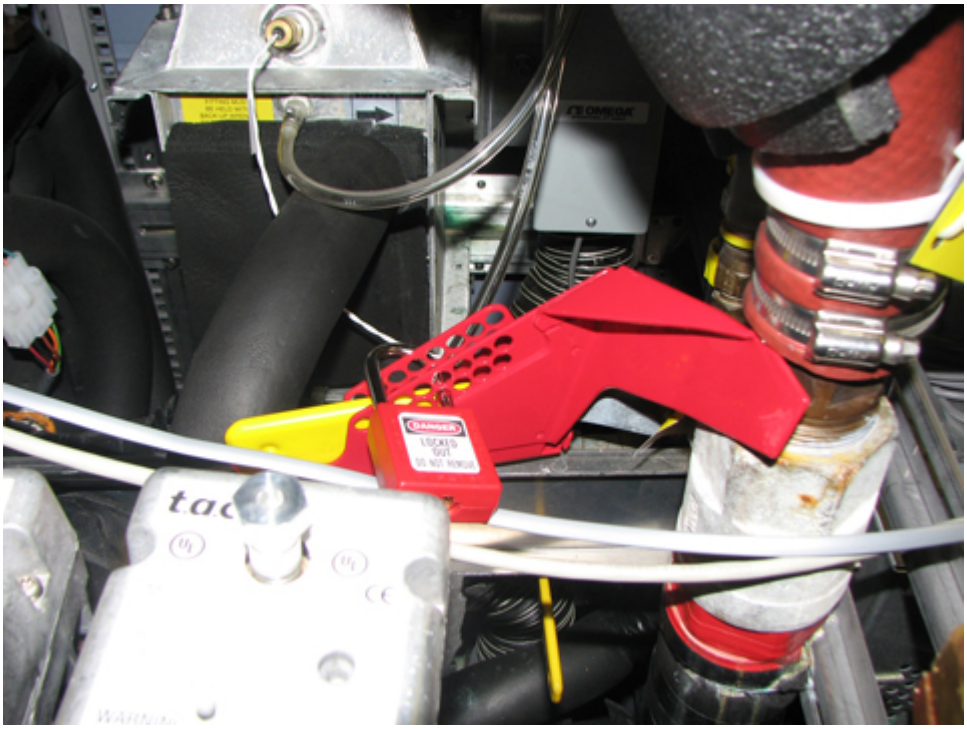
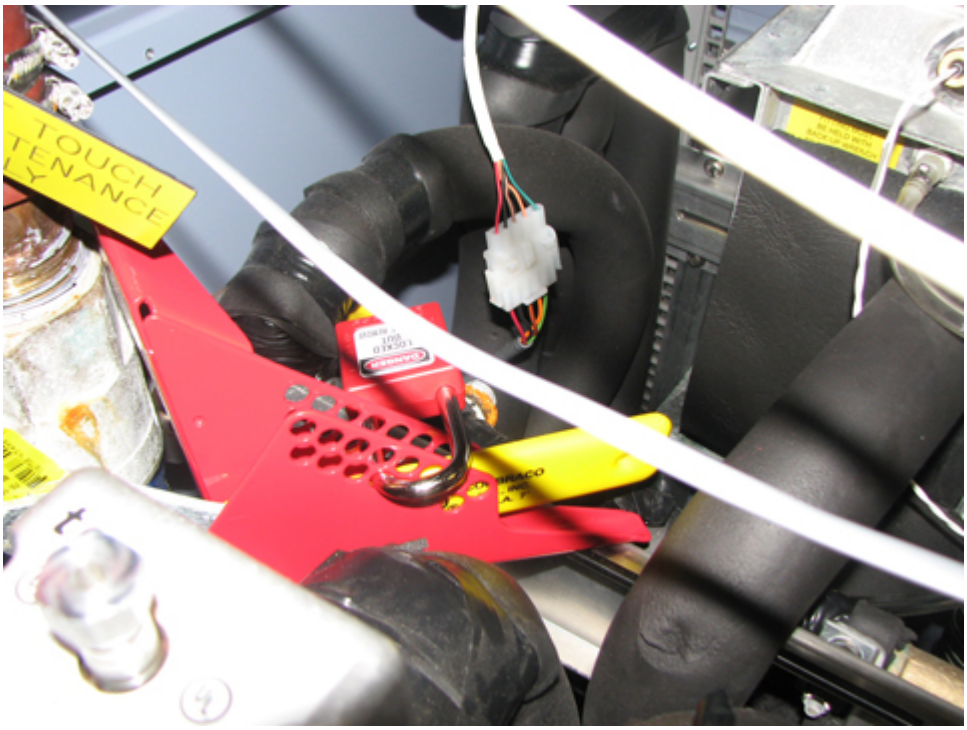


Figure 2-17 LOTO installed on supply valve



2.4. Drain the fluid between the return and supply lines. Refer to *Coolant Draining* in the Service Methods manual for the system.

2.5. Make sure there is no water draining from quick disconnect and pressure in the line is relieved.

2.6 Customer connections to the HEC cabinet

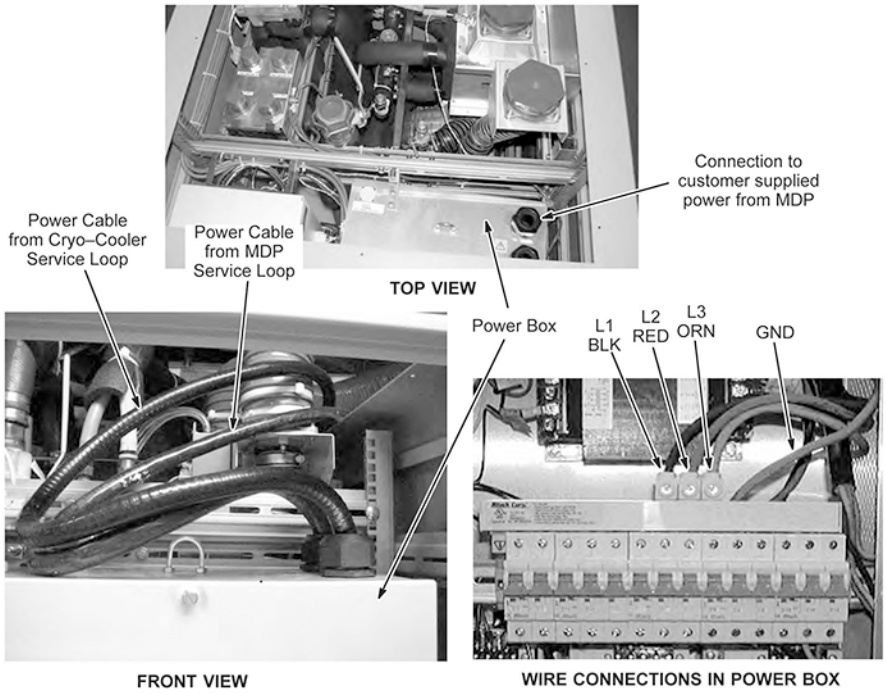
The customer will provide and install liquid coolant, pipe/hoses, filters, and connectors to the HEC cabinet.

The customer will also provide a flow meter to show coolant flow.

The customer is also providing and installing facility power to the HEC cabinet from the MDP.

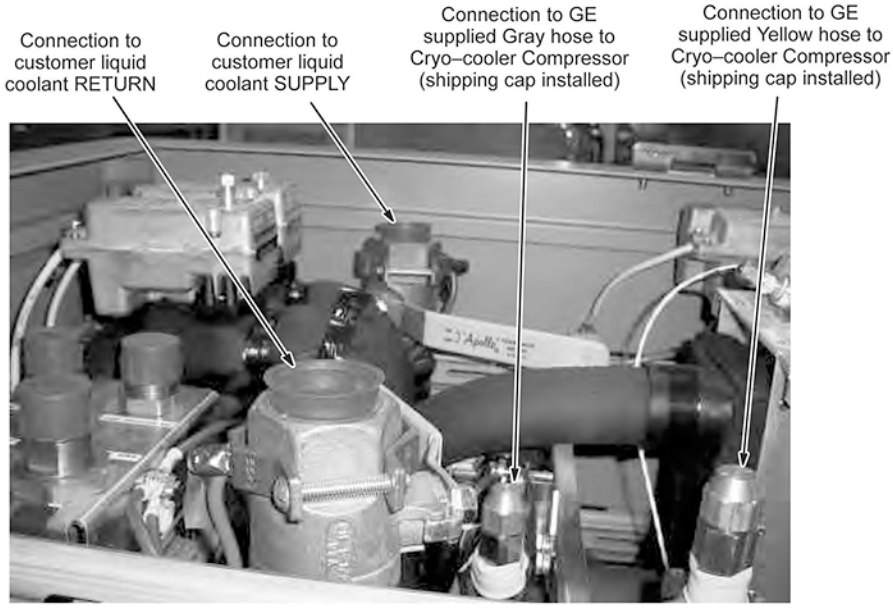
- The power box in the HEC is hinged so it can be swung out for access to components behind it. Therefore, hard conduit cannot be used for connecting facility power to the HEC at the connection point.
- Make sure to include a service loop for both the incoming power and the power cable routed to the cryocooler or step-up transformer.

Facility power installed by the customer



The space above the power box has been provided for this service loop. Refer to site drawings for specifications.

Facility water installed by the customer



The RETURN and SUPPLY connection points are indicated in the figure above. Refer to site drawings for specifications on routing and connections of customer supplied components.

The cooling water to the cryocooler is a direct feed from the facility water through the HEC. The cryocooler compressor connection points have preinstalled shipping caps, which will be removed when the hoses to the cryocooler are installed.

NOTICE

Before doing any leak tests at the HEC, the facility water should not be turned on unless the preinstalled shipping caps are securely in place at the top of the HEC or the cryocooler hoses from the HEC are completely installed.

2.7 Connecting the cryocooler compressor power cord to the HEC

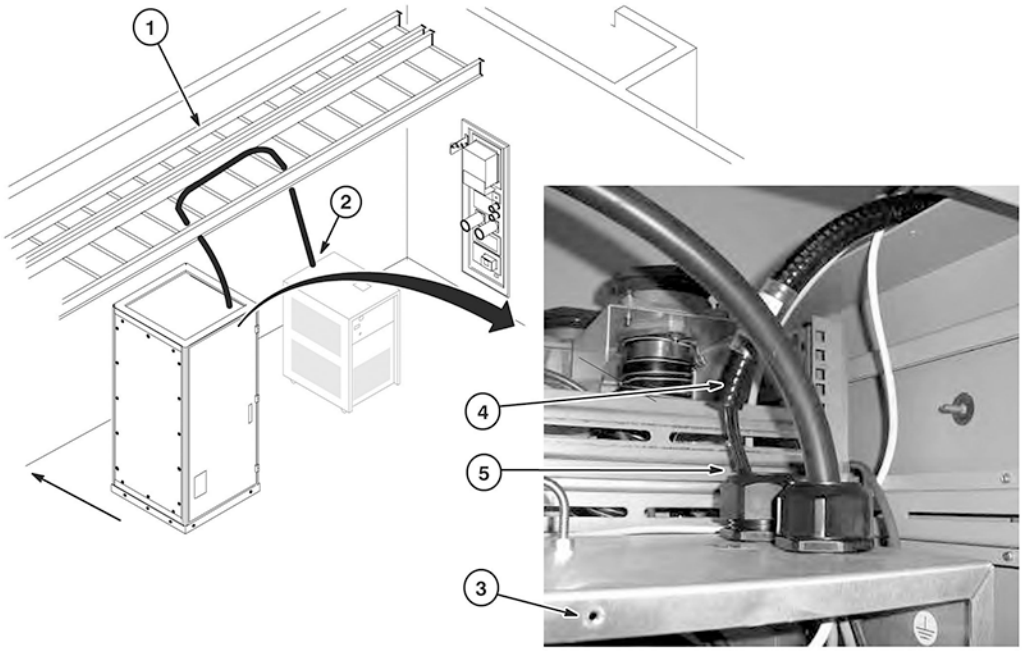
Prerequisites

Replacement parts			
Item	**Quantity**	**Part number**	**Manufacturer**
F-50SH Service Spare	1	5812867	-

About this task

Power to the cryogen compressor is fed through the Heat Exchanger Cabinet (HEC). The power cord supplied with the cryogen compressor in the magnet installation collector is to be wired into the power box inside the HEC.

Figure 2-18 Routing the compressor power cord



Procedure

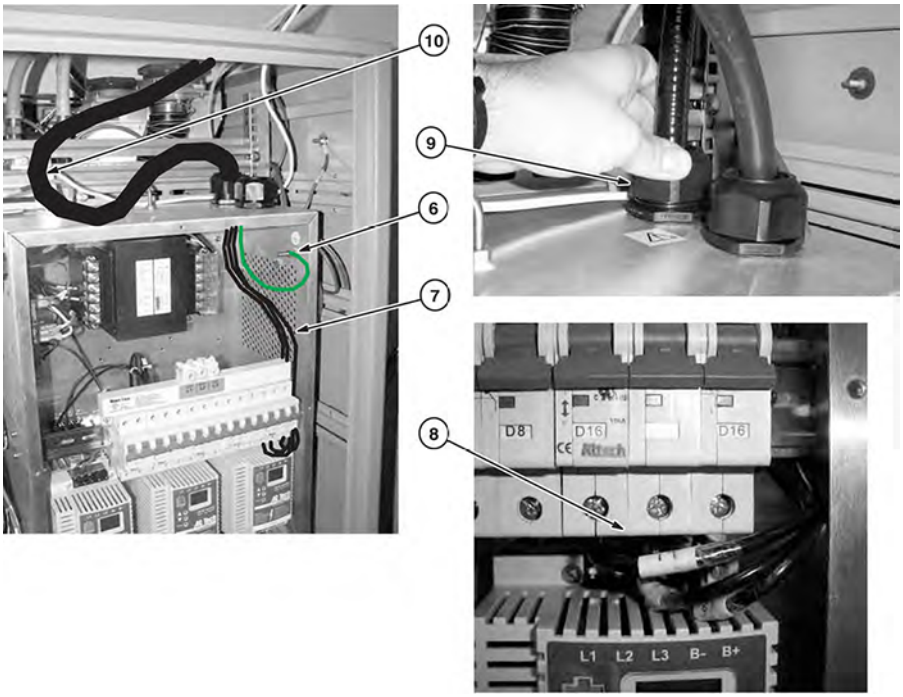
1. Route the power cord through the overhead cable tray to each cabinet.
2. The power cable installation instructions for connection to the terminal strip at the compressor are located in the applicable *Technical Instruction* manual shipped with the compressor.

   NOTE
   The power cord is delivered to site with ring terminals at one end and stripped wires at the other end.

   If a Sumitomo F-50 compressor is being installed, then the ring terminals have to be cut off and the wire stripped 13 mm (1/2 inch) for connection to the compressor pressure connectors.
3. Loosen the four captured screws at the front of the HEC power box and remove the cover.
4. Remove the strain relief provided on the end of the power cord and discard the strain relief. Route the power cable to the top of the power box.

5. Feed the power cord into the supplied strain relief at the top of the HEC.

Figure 2-19 Connecting the power cord to the HEC power box



6. Attach ground wire to the ground stud in the power box. The incoming main electrical ground shares the same stud. The cryogen compressor ground terminal should be placed on the stud with a nut between it and the main electrical ground. This ensures the main electrical ground will never be lifted if the cryogen compressor ground ever needs to be removed.

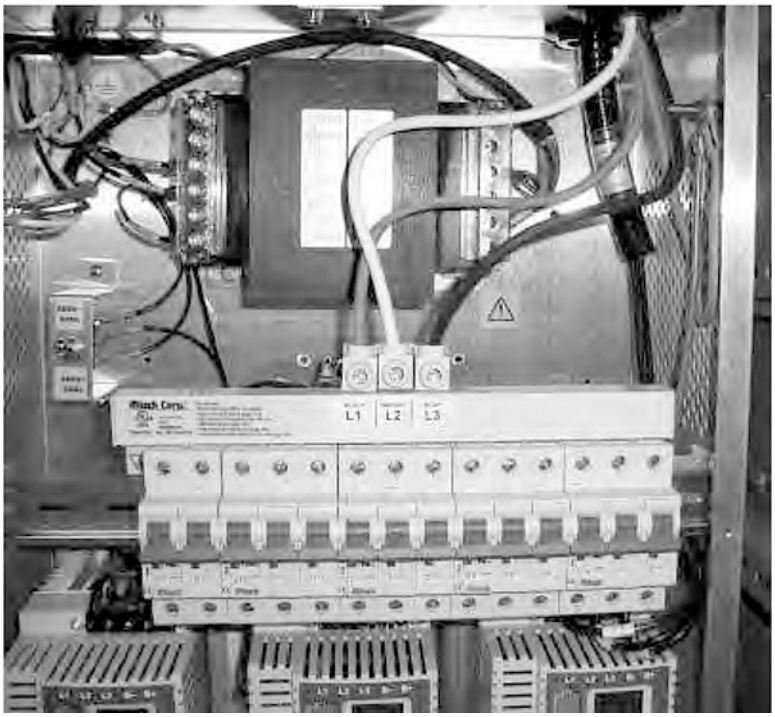
NOTICE

The cryogen compressor is phase sensitive. Make sure L1, L2, and L3 are connected appropriately at the cryogen compressor and that the incoming main electrical wires to the HEC are wired to the correct L1, L2, and L3 locations inside the HEC power box.

7. Route the L1, L2, and L3 cryogen compressor power cord wires to circuit breaker.
8. Insert the stripped ends of the wires into the bottom of the indicated breaker labeled CRY CB in the HEC power box. The wire sequence, from left to right, is L1, L2, L3. Tighten screws and inspect that each wire is clamped securely to the circuit breaker.
9. Tighten the strain relief at the top of the power box to securely clamp onto the power cord's conduit.

10. The conduit MUST be arranged with a service loop as shown.

Figure 2-20 Correct completed installation



11. Reinstall the front panel on the HEC power box.

2.8 Routing the HEC-to-cryocooler hose kit

Prerequisites

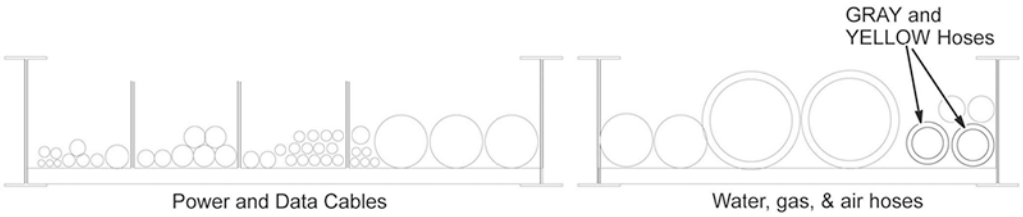
Replacement parts			
Item	**Quantity**	**Part number**	**Manufacturer**
DVMR Heat Exchanger to Cryogen Compressor Hose Kit	1	5268715	-

About this task

The HEC-to-cryogen hose kit is delivered to site and will be connected to the cryocooler compressor, which is delivered with the magnet.

Refer to the illustration below for the location of hoses routed in the equipment room in the overhead cable trays. Make sure the cables are in their designated areas of the trays. All future cable and hose locations are shown as reference.

Figure 2-21 Equipment room overhead cable assignments



Hose and fitting installation notes:

- To prevent cracking of fittings, hold fittings in the HEC stationary with wrench while flare connections are being made.
- A small amount of water may be applied to Push-Lok barbs to facilitate insertion into hoses.
- DO NOT use teflon tape on threads that have a flare fitting.

Figure 2-22 Threads with flare fittings

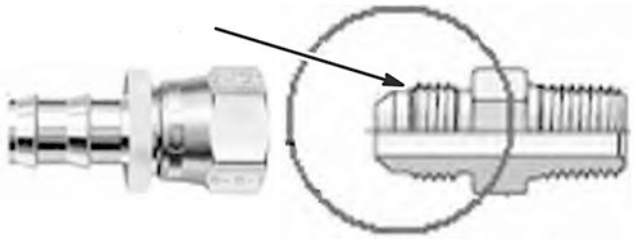
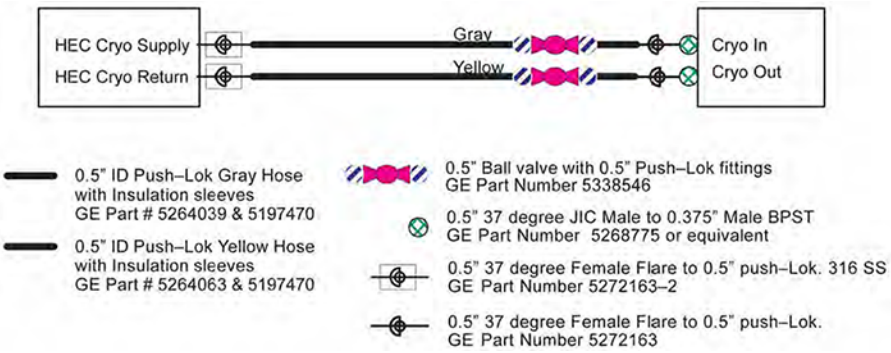


Figure 2-23 Air and water hose installation schematic

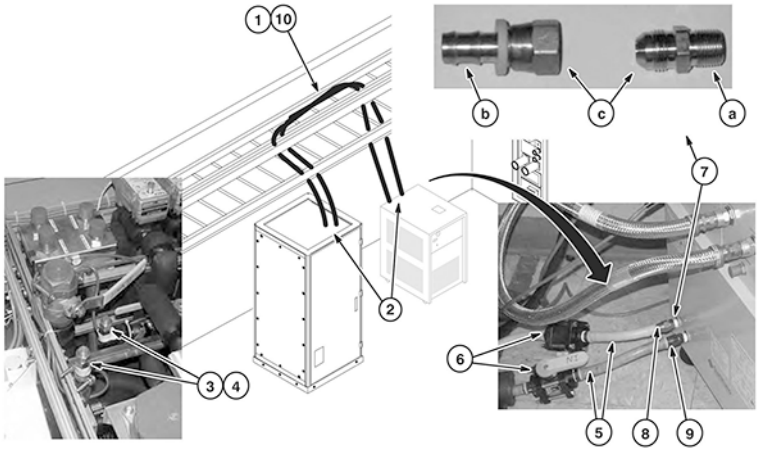


Procedure

1. Route GRAY and YELLOW hoses from the HEC through the designated overhead cable tray to the designated area where the cryogen compressor will be installed when it is delivered with the

magnet in the next system installation phase. If preferable, insulation sleeves can be installed at this time; see 2.9 Installing the HEC-to-cryocooler compressor hose insulation kit on page 47.

Figure 2-24 Routing the cryocooler hose



2. Cut the coolant hoses to length. Make sure there is enough extra hose for a service loop at the compressor end.

NOTE
Install the hose barbs and connectors called out in the following steps and not the hose barbs delivered with the F-50H compressor. This is for ease of disconnecting during service and to make sure of a proper hose barb connection to the hose. DO NOT use hose clamps with Push-Lok hose barbs.

3. At the HEC end of each hose, install the stainless steel 0.5 inch 37 degree female Push-Lok swivel fittings (5272163-2), which are included in the hose kit. DO NOT use teflon tape on the threads.

NOTE
To prevent cracking of fittings when attaching the flare connectors to the cabinet connection points, hold the fittings in the HEC stationary with a wrench while the flare connections are being made.

4. Connect each hose to the designated RETURN inlet (YELLOW) and SUPPLY outlet (GRAY) at the top of the HEC.
5. At the future compressor location, for both the GRAY and YELLOW hoses, measure 457 mm (18 inches) from the end and cut the hose.
6. Install the ball valve assembly (5338546) for each hose between the cut ends.

   The following steps will be completed after the cryocooler has been delivered to site. If necessary, store the flared fittings in a safe place for installation at that time.

7. At the compressor, in both IN and OUT ports, install a 0.5 inch 37 degree JIC male to 0.375 inch male BPST fitting (5268775) and a brass 0.5 inch female flare to 0.5 inch Push-Lok fitting (5272163), both of which are included in the hose kit.
   7.1. Attach teflon tape to the male tapered threads and insert into the cryocooler compressor IN and OUT ports.
   7.2. Attach the Push-Lok hose barb to the cryogen hose.
   7.3. Connect the male and female threads together.

8. Attach the YELLOW hose to the OUT on the compressor.
9. Attach the GRAY hose to the IN on the compressor.
10. Do a check for leaks at all connections.

2.9 Installing the HEC-to-cryocooler compressor hose insulation kit

Prerequisites

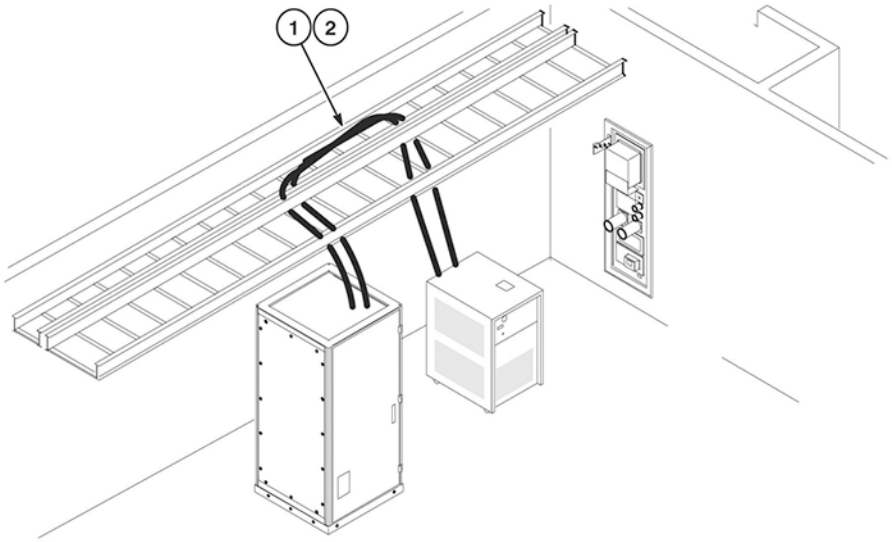
Consumables			
Item	**Quantity**	**Part number**	**Manufacturer**
Black Duct Tape	1	-	-

Replacement parts			
Item	**Quantity**	**Part number**	**Manufacturer**
DVMR Cryogen Compressor Coolant Hose Insulation Kit	1	5266250	-

About this task

Install the cryocooler compressor hose insulation.

Figure 2-25 Installing the hose insulation



Procedure

1. Attach the insulation sleeves (5197470), which are included in the insulation kit, to the supply and return hoses.
2. Apply black duct tape to the seams between the sections of insulation to prevent gaps.

2.10 Installing RF screen room wall mounting frame(s) and Secondary Pen Wall (SPW) or Penetration Panel (PP)

Refer to architectural site layout drawings to determine the location of the Secondary Pen Wall (SPW) and/or Penetration (PEN) panel frames.

The customer contractor is responsible for installing the SPW and/or PEN panel frames to the screen room wall.

⚠ CAUTION

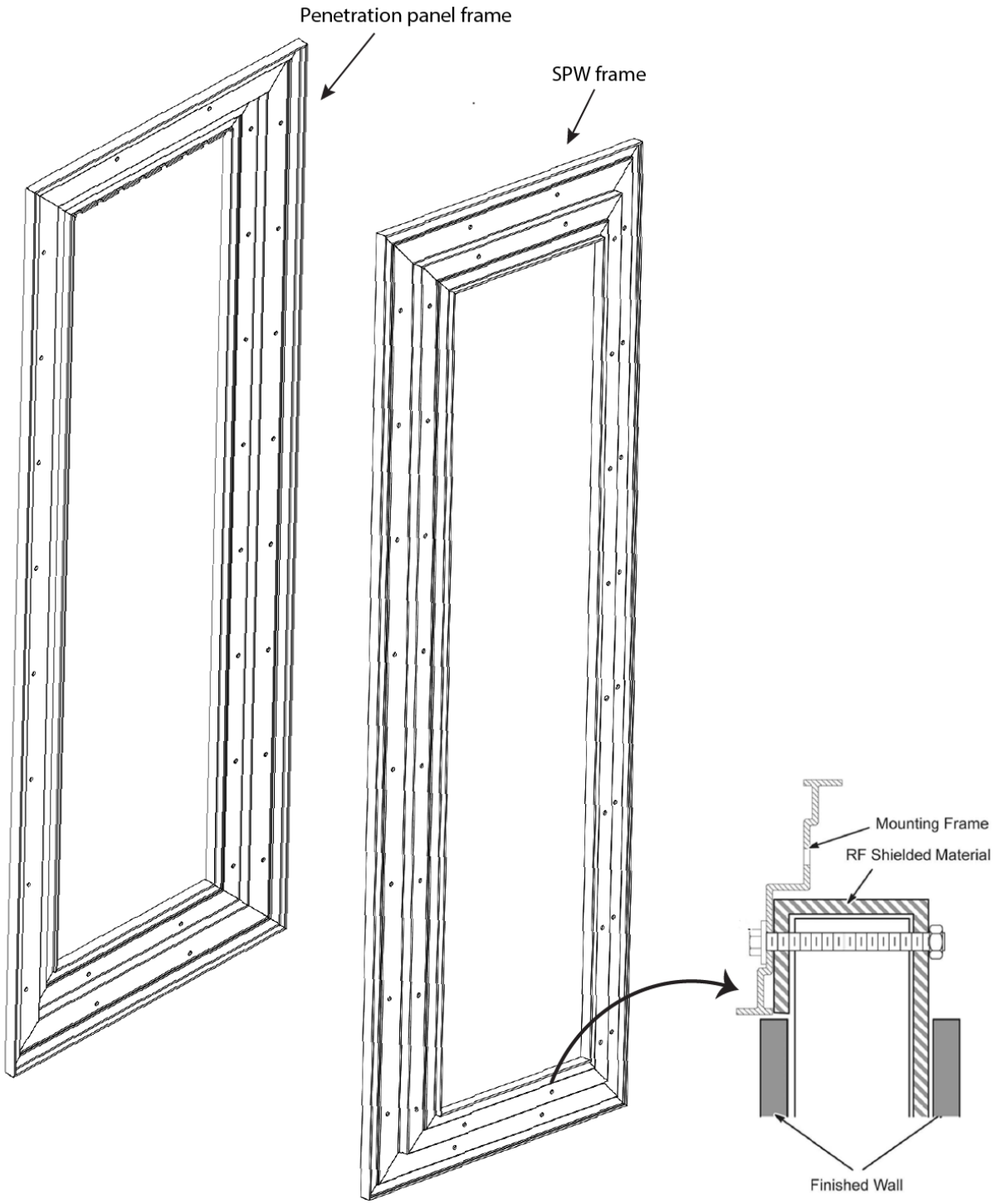
POTENTIAL INJURY HAZARD!

Secondary Pen Wall (SPW) weight is significant.

At least two people are required to lift and mount the SPW into the frame.

Installing the mounting frames in the RF screen room opening

Figure 2-26 Installing the mounting frames



NOTE
Artist platform configuration will not have an SPW frame.

1. From the equipment room side of the RF screen room wall, install the SPW and PEN panel frames. The PEN panel and SPW frames can be used as templates for hole locations. Make sure that the "This side up" label is in the up position when the frames are installed.
2. The customer contractor must secure all required frames to the screen room wall. The customer should provide fasteners and instructions for installation to achieve RF integrity.

Installing the SPW or PEN (if supplied at this time)

Replacement parts			
Item	**Quantity**	**Part number**	**Manufacturer**
Collector, Penetration Installation Hardware	1	5212657	-

NOTE
All parts listed in the procedure below are part of the collector 5212657.

Figure 2-27 Installing the SPW (For MR450w, MR450w GEM, MR750, MR750w, Artist legacy configuration, Architect, and PET/MR)

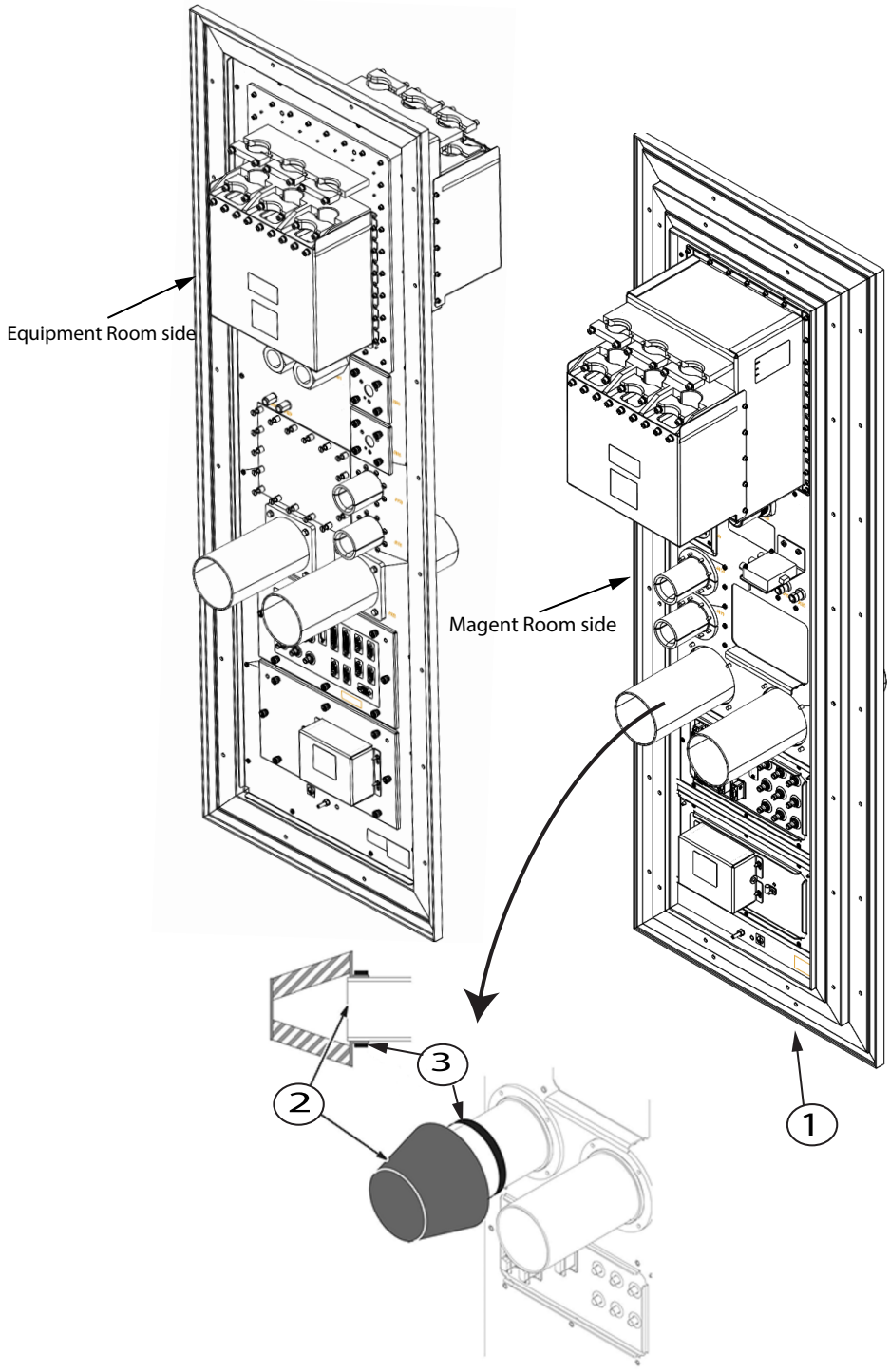
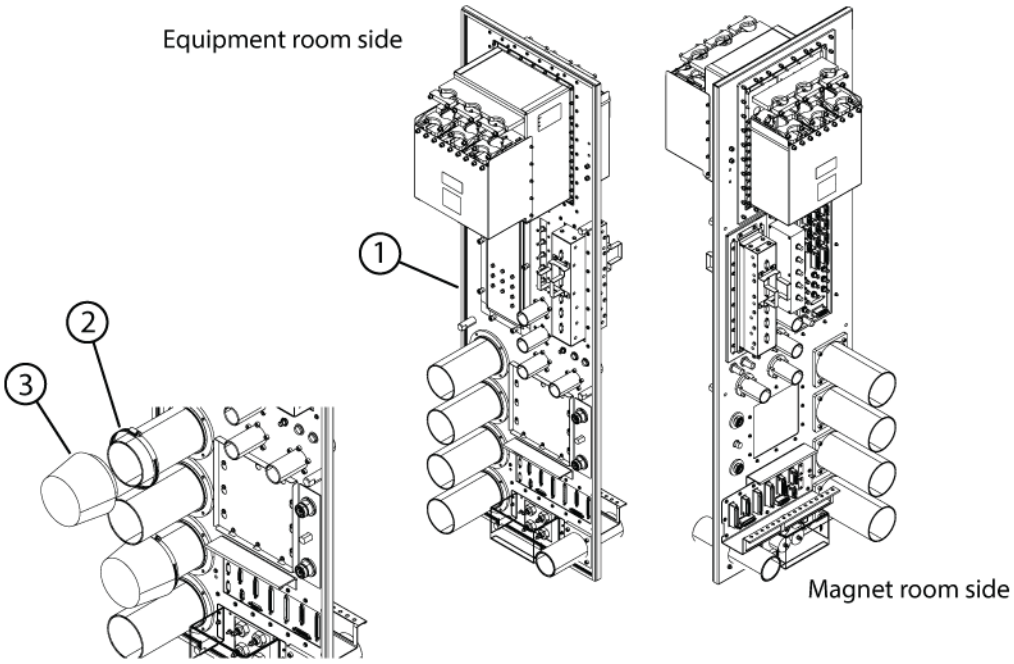


Figure 2-28 Installing the Penetration Panel (For Artist platform configuration)



1. Move the SPW or PP into the designated opening and mount it to the frame using 20 M5 x 12 mm stainless steel hex head screws (2381274-2) and M5 stainless steel flat washers (2381270-6).
2. Slide an air inlet filter (5290917) on to the end of the J105 waveguide and **(For Artist platform configuration)** the J103 waveguide.

   NOTICE

   Do NOT slide the filter mounting flange past the end of the waveguide or the filter may be damaged.
3. Secure the air filter firmly in place with a 4 inch plastic hose clamp (5263772-3).

2.11 Magnet enclosure cable curtain installation (customer option)

The optional Cable Curtain Kit is available for the MR750 or the MR450w sites only.

The optional Cable Concealment Kit is available for MR450w GEM, Artist, MR750w, Architect, and PET/MR sites only.

- For MR750 or MR450w, see Appendix A MR750 and MR450w cable curtain installation on page 103.
- For MR450w GEM and Artist, see MR450w GEM and Artist cable concealment kit installation on page 53.
- For MR750w, Architect, and PET/MR see MR750w and Architect cable concealment kit installation on page 55.

MR450w GEM and Artist cable concealment kit installation

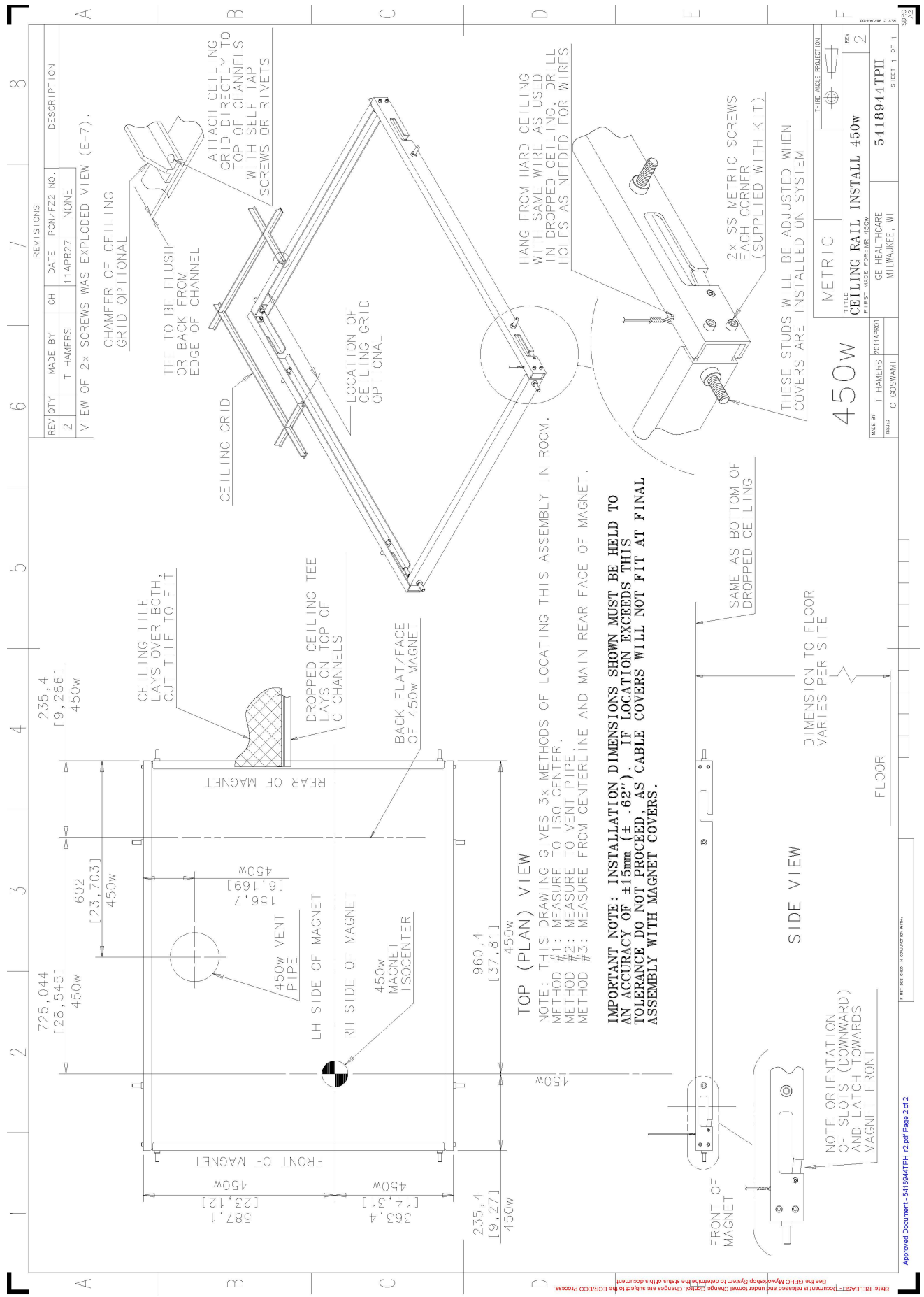
The MR450w GEM and Artist Cable Concealment Kit is an option delivered with this installation. It is provided if the customer site plans to install the kit. This option is only installed for MR450w GEM and Artist.

If the concealment kit is to be installed, the installation instructions for the ceiling frame are found on the following page as part of 5418944TPH. The cable concealment kit is installed in two stages:

- **First Stage** - The Ceiling Frame Kit (5418561) is to be installed prior to the delivery of the remaining system cabinets and cables, which will be delivered to site after the magnet installation. Refer to the instructions on the next page for location dimensions of the curtain rail. There are three methods for locating the curtain rail in the ceiling. They are:
  - Measure to the magnet isocenter
  - Measure to the center of the vent pipe
  - Measure from the centerline and main rear face of the magnet
- **Second Stage** - The four side covers are installed after the magnet enclosure has been installed and the curtain frame is in place in the ceiling. Refer to the *Optima MR450w, Optima MR450w GEM, and SIGNA Artist System Installation Manual* (5670002) for the MR450w GEM and Artist side cover installation procedures.

NOTICE

Installation dimensions shown on the following illustration must be held to an accuracy of ± 15 mm (± 0.62 inches). If the location exceeds this tolerance do not proceed, as cable covers will not fit at final assembly with the magnet covers.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2 | | T HAMERS | | 11APR27 | NONE | VIEW OF 2x SCREWS WAS EXPLODED VIEW (E-7).
CHAMFER OF CEILING GRID OPTIONAL
TEE TO BE FLUSH OR BACK FROM EDGE OF CHANNEL
ATTACH CEILING GRID DIRECTLY TO TOP OF CHANNELS WITH SELF TAP SCREWS OR RIVETS
CEILING GRID
LOCATION OF CEILING GRID OPTIONAL
HANG FROM HARD CEILING WITH SAME WIRE AS USED IN DROPPED CEILING. DRILL HOLES AS NEEDED FOR WIRES
2x SS METRIC SCREWS EACH CORNER (SUPPLIED WITH KIT)
THESE STUDS WILL BE ADJUSTED WHEN COVERS ARE INSTALLED ON SYSTEM
450w
METRIC
TITLE
CEILING RAIL INSTALL 450w
FIRST MADE FOR: MR 450w
GE HEALTHCARE MILWAUKEE, WI
5418944TPH
SHEET 1 OF 1
REV 2
THIRD ANGLE PROJECTION
MADE BY T HAMERS 2011APR01
ISSUED C GOSWAMI
CEILING TILE LAYS OVER BOTH, CUT TILE TO FIT
DROPPED CEILING TEE LAYS ON TOP OF C CHANNELS
BACK FLAT/FACE OF 450w MAGNET
SAME AS BOTTOM OF DROPPED CEILING
DIMENSION TO FLOOR VARIES PER SITE
FLOOR
235,4 [9,266] 450w
602 [23,703] 450w
725,044 [28,545] 450w
156,7 [6,169] 450w
450w VENT PIPE
LH SIDE OF MAGNET
RH SIDE OF MAGNET
450w MAGNET ISOCENTER
960,4 [37,81] 450w
235,4 [9,27] 450w
363,4 [14,31] 450w
587,1 [23,12] 450w
REAR OF MAGNET
FRONT OF MAGNET
TOP (PLAN) VIEW
NOTE: THIS DRAWING GIVES 3x METHODS OF LOCATING THIS ASSEMBLY IN ROOM.
METHOD #1: MEASURE TO ISO CENTER.
METHOD #2: MEASURE TO VENT PIPE.
METHOD #3: MEASURE FROM CENTERLINE AND MAIN REAR FACE OF MAGNET.
IMPORTANT NOTE: INSTALLATION DIMENSIONS SHOWN MUST BE HELD TO AN ACCURACY OF ±15mm (±.62"). IF LOCATION EXCEEDS THIS TOLERANCE DO NOT PROCEED, AS CABLE COVERS WILL NOT FIT AT FINAL ASSEMBLY WITH MAGNET COVERS.
SIDE VIEW
FRONT OF MAGNET
NOTE ORIENTATION OF SLOTS (DOWNWARD) AND LATCH TOWARDS MAGNET FRONT
Approved Document - 5418944TPH_r2.pdf Page 2 of 2
State: RELEASE - Document is released and under formal Change Control. Changes are subject to the ECR/ECO Process. See the GEHC Myworkshop System to determine the status of this document.

MR750w and Architect cable concealment kit installation

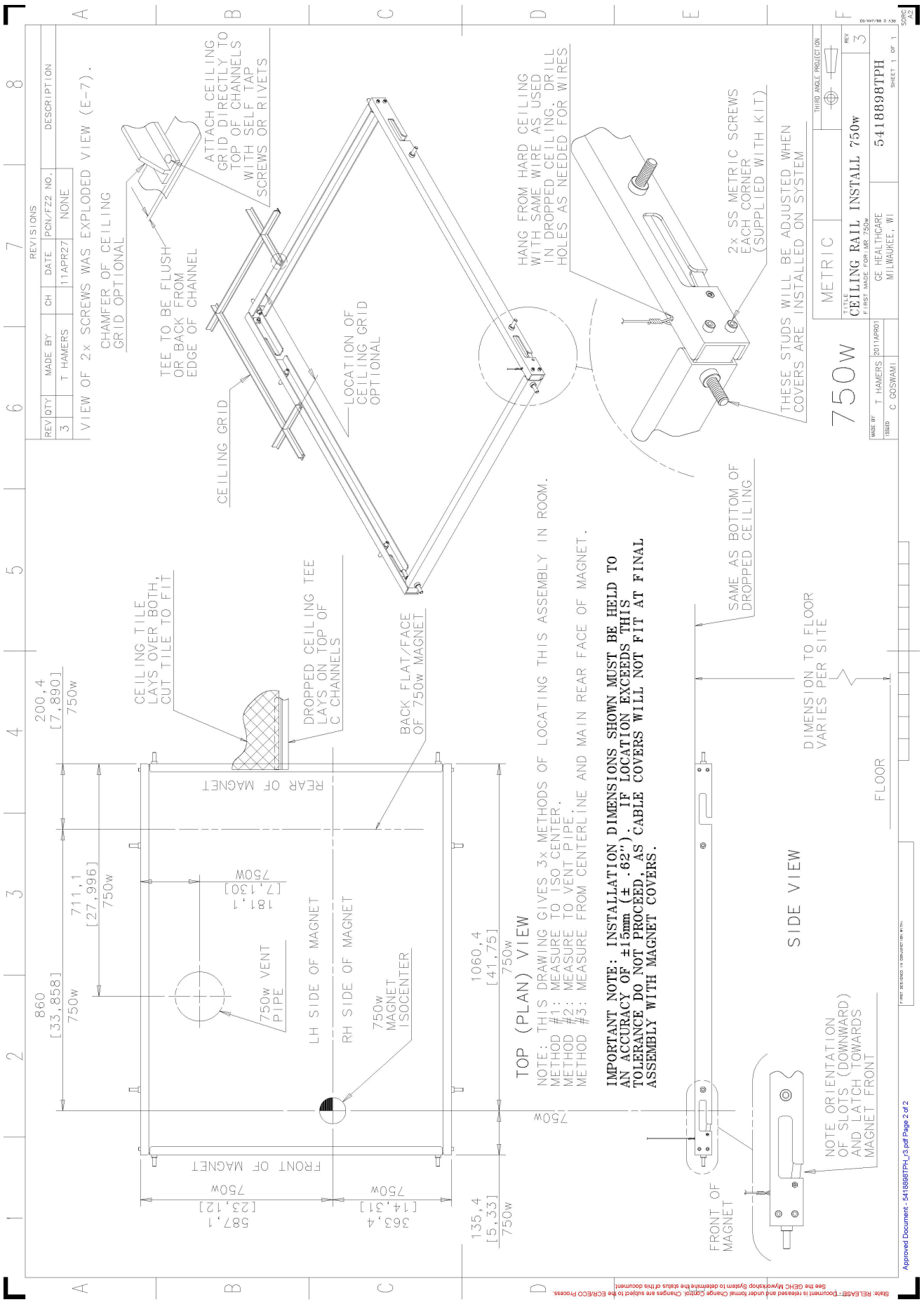
The MR750w and Architect Cable Concealment Kit is an option delivered with this installation. It is provided if the customer site plans to install the kit. This option is only installed for MR750w or Architect.

If the concealment kit is to be installed, the installation instructions for the ceiling frame are found on the following page as part of 5418898TPH. The cable concealment kit is installed in two stages:

- **First Stage** - The Ceiling Frame Kit (5418561) is to be installed prior to the delivery of the remaining system cabinets and cables, which will be delivered to the site after the magnet installation. Refer to the instructions on the next page for location dimensions of the curtain rail. There are three methods for locating the curtain rail in the ceiling. They are:
  - Measure to the magnet isocenter
  - Measure to the center of the vent pipe
  - Measure from the centerline and main rear face of the magnet
- **Second Stage** - The four side covers are installed after the magnet enclosure has been installed and the curtain rail is in place in the ceiling. Refer to the *Discovery MR750w GEM and SIGNA Architect 3.0T Installation Manual* (5670010) for the MR750, MR750w, and Architect side cover installation procedures.

NOTICE

Installation dimensions shown on the following illustration must be held to an accuracy of ± 15 mm (± 0.62 inches). If the location exceeds this tolerance do not proceed, as cable covers will not fit at final assembly with the magnet covers.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CHAMFER OF CEILING GRID OPTIONAL
TEE TO BE FLUSH OR BACK FROM EDGE OF CHANNEL
ATTACH CEILING GRID DIRECTLY TO TOP OF CHANNELS WITH SELF TAP SCREWS OR RIVETS
CEILING GRID
LOCATION OF CEILING GRID OPTIONAL
HANG FROM HARD CEILING WITH SAME WIRE AS USED IN DROPPED CEILING. DRILL HOLES AS NEEDED FOR WIRES
2x SS METRIC SCREWS EACH CORNER (SUPPLIED WITH KIT)
THESE STUDS WILL BE ADJUSTED WHEN COVERS ARE INSTALLED ON SYSTEM
SAME AS BOTTOM OF DROPPED CEILING
DIMENSION TO FLOOR VARIES PER SITE
FLOOR
750w
METRIC
CEILING RAIL INSTALL 750w
5418898TPH
REV 3
SHEET 1 OF 1
MADE BY T HAMERS 2011APR01
ISSUED C GOSWAMI
GE HEALTHCARE MILWAUKEE, WI
THIRD ANGLE PROJECTION
200,4 [7,890] 750w
711,1 [27,996] 750w
860 [33,858] 750w
CEILING TILE LAYS OVER BOTH, CUT TILE TO FIT
DROPPED CEILING TEE LAYS ON TOP OF C CHANNELS
BACK FLAT/FACE OF 750w MAGNET
REAR OF MAGNET
FRONT OF MAGNET
LH SIDE OF MAGNET
RH SIDE OF MAGNET
750w VENT PIPE
750w MAGNET ISOCENTER
1060,4 [41,75] 750w
135,4 [5,33] 750w
363,4 [14,31] 750w
587,1 [23,12] 750w
TOP (PLAN) VIEW
NOTE: THIS DRAWING GIVES 3x METHODS OF LOCATING THIS ASSEMBLY IN ROOM.
METHOD #1: MEASURE TO ISO CENTER.
METHOD #2: MEASURE TO VENT PIPE.
METHOD #3: MEASURE FROM CENTERLINE AND MAIN REAR FACE OF MAGNET.
IMPORTANT NOTE: INSTALLATION DIMENSIONS SHOWN MUST BE HELD TO AN ACCURACY OF ±15mm (±.62"). IF LOCATION EXCEEDS THIS TOLERANCE DO NOT PROCEED, AS CABLE COVERS WILL NOT FIT AT FINAL ASSEMBLY WITH MAGNET COVERS.
SIDE VIEW
FRONT OF MAGNET
NOTE ORIENTATION OF SLOTS (DOWNWARD) AND LATCH TOWARDS MAGNET FRONT
Approved Document - 5418898TPH_r3.pdf Page 2 of 2
State: RELEASE=Document is released and under formal Change Control. Changes are subject to the ECR/ECO Process. See the GEHC Mywork/sop System to determine the status of this document.

Chapter 3 Installing components - Artist and Architect platform configuration

3.1 Installation requirements

Positioning of cabinets and components is critical for installing cables and post-installation system operation.

Refer to architectural site layouts for:

- Location of all cabinets and related equipment.
- For seismic anchoring (where required).

⚠ CAUTION

POTENTIAL INJURY HAZARD!

Cabinet weight is significant.

At least two people are required to move any cabinet.

NOTICE

RISK OF CABINET DAMAGE

Equipment damage may result if cabinets are too close to the magnet.

Equipment room cabinets must not be installed in an area with magnetic fields higher than 50 gauss. Refer to site layout plans for positioning of cabinets.

3.2 Installing the Main Disconnect Panel (MDP)

Prerequisites

Personnel requirements
IMPORTANT GE Field Engineers cannot install, service, or repair the MDP. Only a licensed electrician is qualified to complete these tasks. Refer to the MR Service Safety Manual (5452735) for further safety information. To service the MDP, the customer must provide a qualified electrician or other appropriate facility personnel who meets the electrical safety codes for their area.

Safety
Before working in any GE HealthCare MR suite or doing any GE HealthCare service procedure, you must: • Have read and understood all hazard conditions and safety requirements in the latest revision of the GE HealthCare *MR Service Safety Manual* (5452735). • Have successfully completed all relevant GE HealthCare Environmental Health and Safety (EHS) courses (or for non-GE employees, equivalent workplace training courses). • Comply with all site-specific training and workplace safety requirements. If you have any safety concerns at any time, do not begin work or immediately stop work and move to a safe location. Immediately contact your supervisor or site safety officer for instructions on how to proceed.

About this task

Have a customer electrician mount the MDP and connect it to a facility power source. Refer to architectural site layout drawings for specifications and mounting locations.

Figure 3-1 Main Disconnect Panel (MDP)

NOTE
This figure is for reference only and may not be specific to your product.

3.3 Installing the LOTO placard

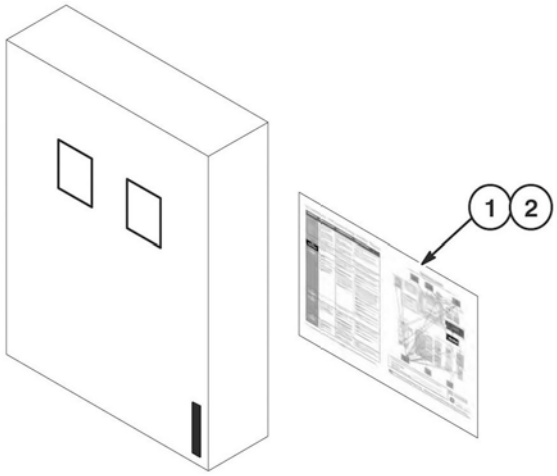
Prerequisites

Tools and test equipment			
Item	**Quantity**	**Part number**	**Manufacturer**
HDv Lock Out Tag Out Placard, English	1	5197122	-

About this task

The LOTO placard must be secured to the wall next to the MDP.

Figure 3-2 LOTO placard



Procedure

1. Remove the covering from the double-sided tape on the rear side of the placard.
2. Press and secure the placard to the surface next to the MDP.

3.4 Installing RF screen room wall mounting frame(s) and Secondary Pen Wall (SPW) or Penetration Panel (PP)

Refer to architectural site layout drawings to determine the location of the Secondary Pen Wall (SPW) and/or Penetration (PEN) panel frames.

The customer contractor is responsible for installing the SPW and/or PEN panel frames to the screen room wall.

⚠ CAUTION

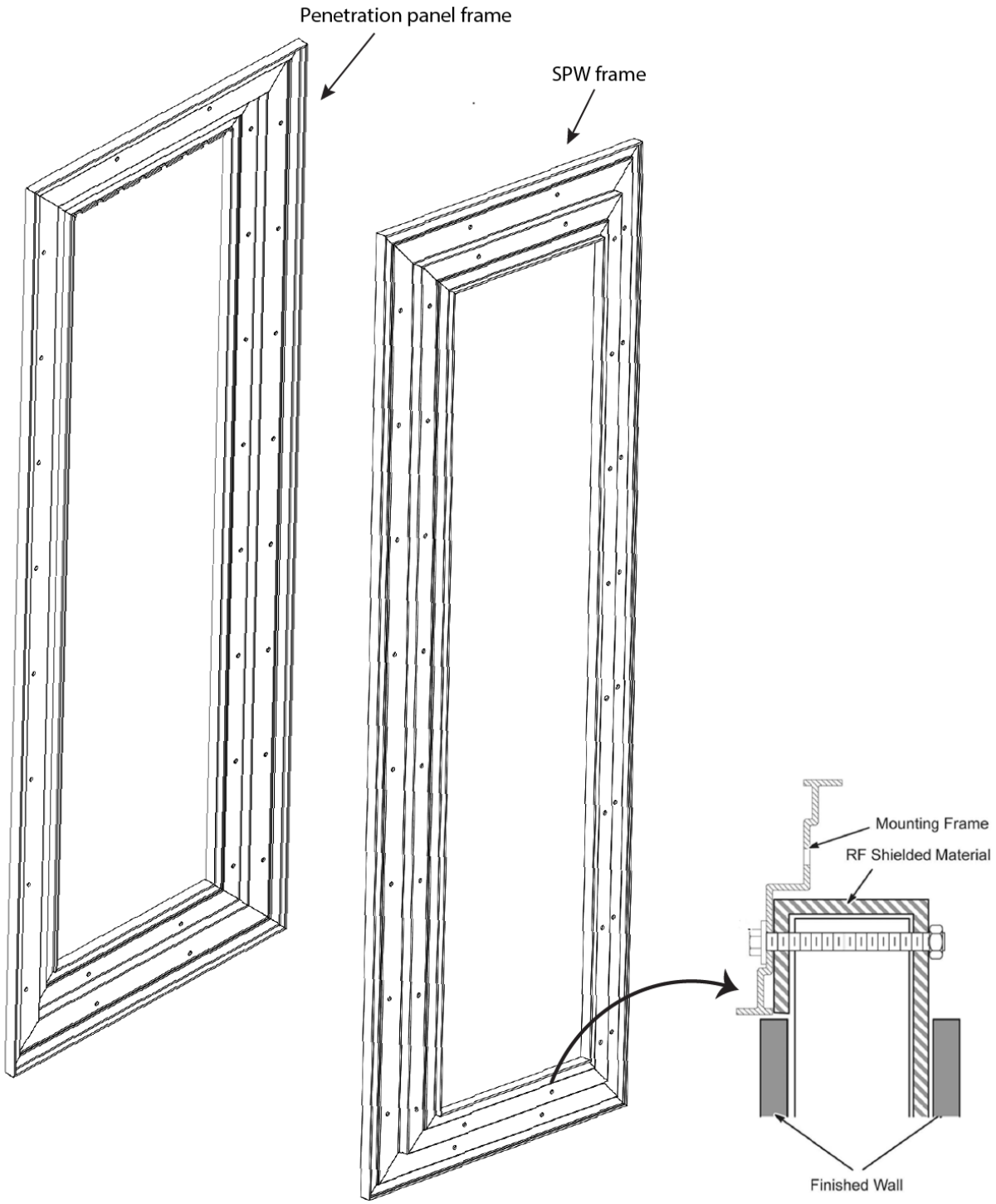
POTENTIAL INJURY HAZARD!

Secondary Pen Wall (SPW) weight is significant.

At least two people are required to lift and mount the SPW into the frame.

Installing the mounting frames in the RF screen room opening

Figure 3-3 Installing the mounting frames



NOTE
Artist platform configuration will not have an SPW frame.

1. From the equipment room side of the RF screen room wall, install the SPW and PEN panel frames. The PEN panel and SPW frames can be used as templates for hole locations. Make sure that the "This side up" label is in the up position when the frames are installed.
2. The customer contractor must secure all required frames to the screen room wall. The customer should provide fasteners and instructions for installation to achieve RF integrity.

Installing the SPW or PEN (if supplied at this time)

Replacement parts			
Item	**Quantity**	**Part number**	**Manufacturer**
Collector, Penetration Installation Hardware	1	5212657	-

NOTE
All parts listed in the procedure below are part of the collector 5212657.

Figure 3-4 Installing the SPW (For MR450w, MR450w GEM, MR750, MR750w, Artist legacy configuration, Architect, and PET/MR)

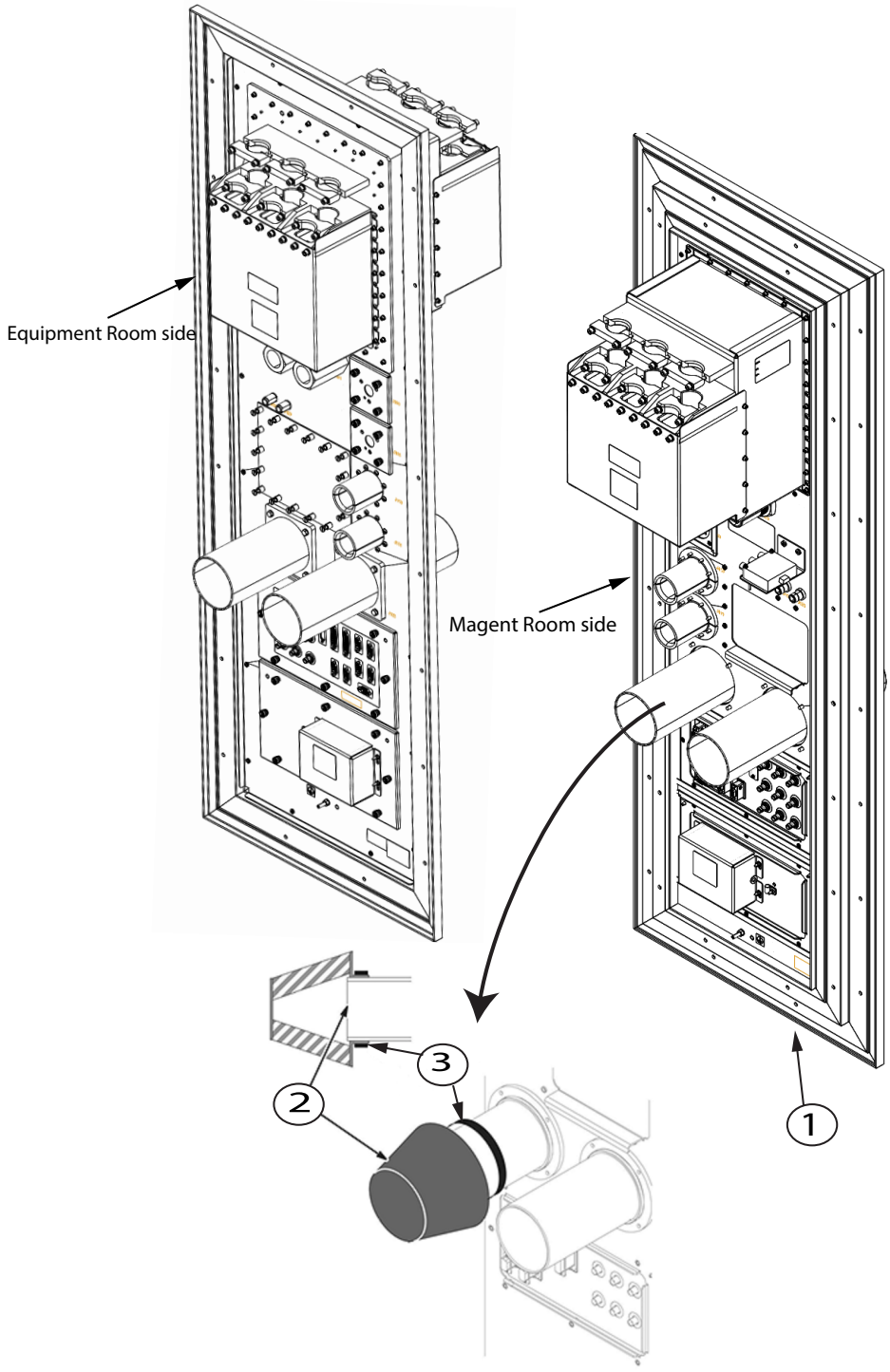
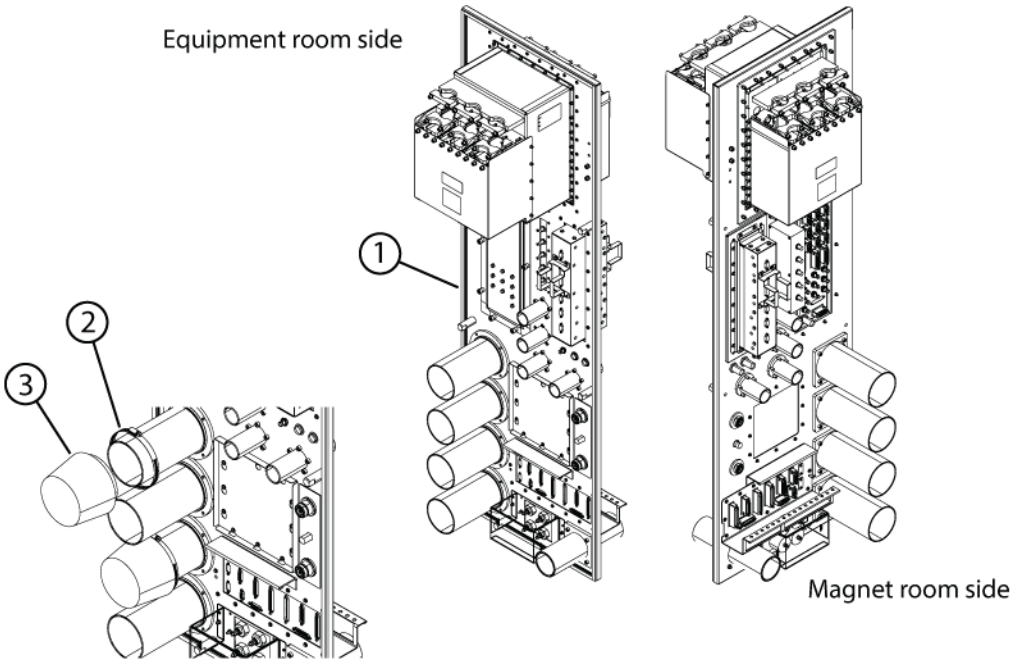


Figure 3-5 Installing the Penetration Panel (For Artist platform configuration)



1. Move the SPW or PP into the designated opening and mount it to the frame using 20 M5 x 12 mm stainless steel hex head screws (2381274-2) and M5 stainless steel flat washers (2381270-6).
2. Slide an air inlet filter (5290917) on to the end of the J105 waveguide and **(For Artist platform configuration)** the J103 waveguide.

   NOTICE

   Do NOT slide the filter mounting flange past the end of the waveguide or the filter may be damaged.
3. Secure the air filter firmly in place with a 4 inch plastic hose clamp (5263772-3).

3.5 Preparing the Integrated Cooling Cabinet (ICC) or the Platform Integrated Cooling Cabinet (pICC) for the magnet installation

About this task

Check the ICC unit and complete one of the following:

- 3.5.1 Uncrating and positioning the Integrated Cooling Cabinet (ICC) on page 64
- 3.5.2 Uncrating and positioning the Platform Integrated Cooling Cabinet (pICC) on page 78

3.5.1 Uncrating and positioning the Integrated Cooling Cabinet (ICC)

Procedure

1. Put the crate in position. Make sure there is a minimum clearance of 1219 mm (4 ft) behind the crate and 4267 mm (14 ft) in front of the crate.

⚠ WARNING

POTENTIAL CRUSH HAZARD

The crate and ICC are heavy. During crate disassembly, the front panel can fall. During ICC positioning, the ICC can tip. Both situations can cause injury upon impact.

Make sure that two people are present to disassemble the crate and move the ICC.

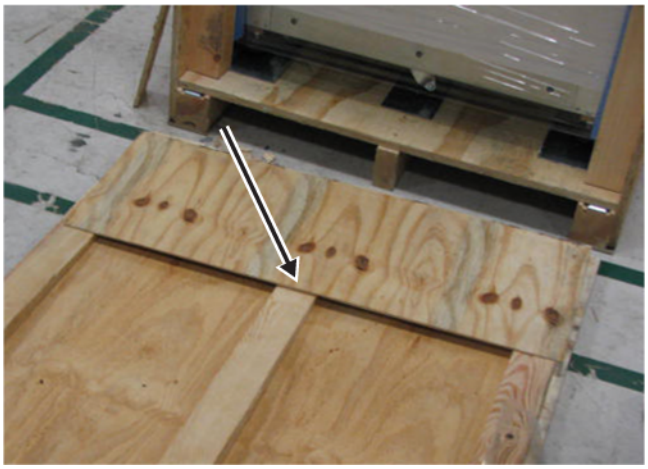
NOTE
Weight of ICC is 560 kg (1,235 lbs).

2. Remove the eight screws from the bottom of the front panel.

NOTE
The screws that you need to remove are marked in red on the crate.

3. On the left side panel, remove the six upper screws along the front edge.
4. On the right side panel, remove the six upper screws along the front edge.
5. With an assistant holding the front panel in position, remove the eight screws from the top of the front panel.
6. Remove the front panel and lay it on the floor, front side down, in front of the crate.
7. Remove the screw from the folding subpanel that is located at the bottom of the front panel.

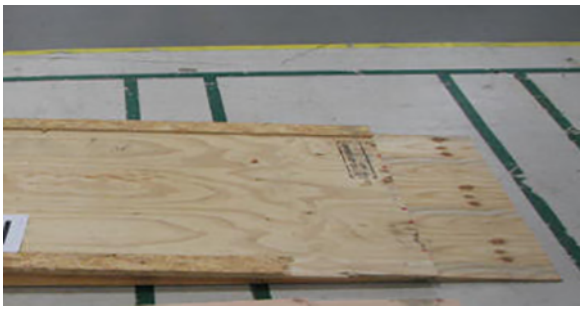
Figure 3-6 Folding subpanel



8. Lift the subpanel away from the front panel, extending it from the end of the front panel.

9. Turn the front panel over, making it into a ramp for the cabinet. The subpanel should still extend out from the end of the ramp.

Figure 3-7 Cabinet ramp



10. Engage the two hooks on the opposite end of the ramp with the two brackets on the crate base.

Figure 3-8 Crate hook (left) and ramp hook (right)

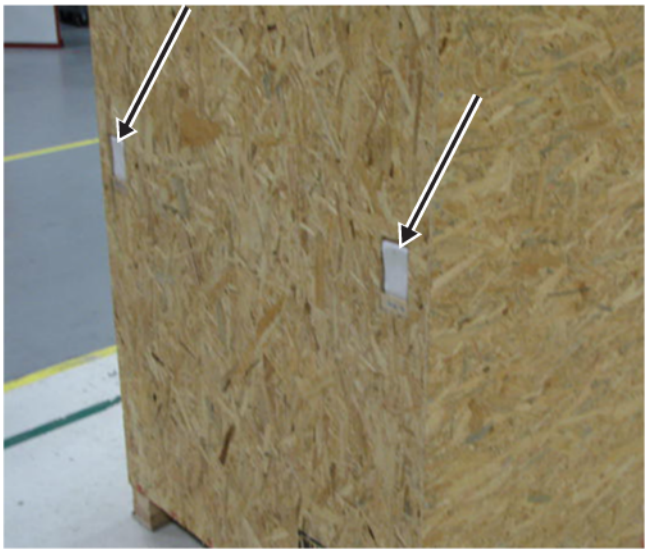
11. Make sure the ramp is secure and flush with the base.

Figure 3-9 Cabinet ramp and crate base

12. Remove the six screws from the lower front edge of the left panel to release the left wooden brace that holds the cabinet. Remove and discard the brace.

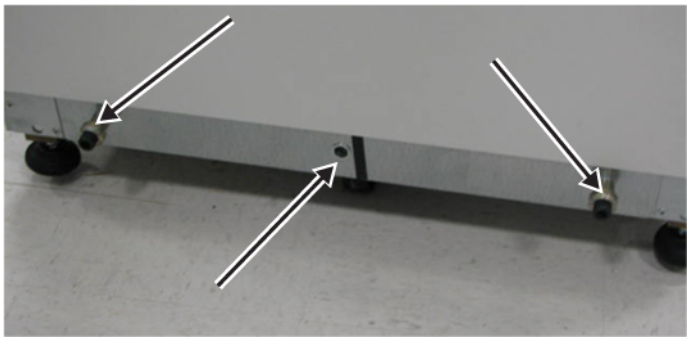
13. Remove the six screws from the lower front edge of the right panel to release the right wooden brace that holds the cabinet. Remove and discard the brace.
14. Remove the eight screws from the bottom of the left panel.
15. Remove the eight screws from the bottom of the right panel.
16. Remove the eight screws from the bottom of the rear panel.
17. Pull the two webbed handles on the rear of the crate until the crate clears the cabinet and crate base.

Figure 3-10 Crate webbed handles



18. With a minimum of two people, roll the cabinet straight down the ramp.
19. Break down and discard the crate.
20. Remove the wrapper, shipping tape, and protective foam from the cabinet.
21. Install three bushings along the bottom of the left side of the cabinet.

Figure 3-11 Installing the bushings



22. Install three bushings along the bottom of the right side of the cabinet.

23. If not already done, remove the two screws with wing nuts from the opposite ends of the dolly to separate the two dolly halves.

Figure 3-12 Separating the two dolly halves

24. Put one half of the dolly against the left side of the cabinet, engaging the bushings in the wide openings at the attachment point. Slide the dolly sideways to move the bushings to the thin slots.

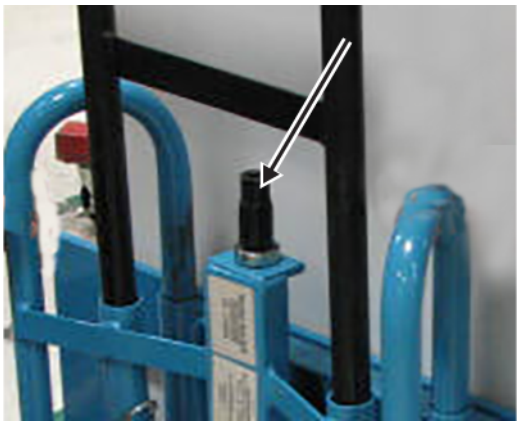
Figure 3-13 Mounting lugs and dolly keyhole slots

25. Put the other half of the dolly against the right side of the cabinet, engaging the bushing in the wide opening at the attachment point. Slide the dolly sideways to move the bushing to the thin slot.

NOTE
Use the dolly to move the cabinet. The wheels on the cabinet are only suitable for moving short distances when the cabinet is near its final install location.

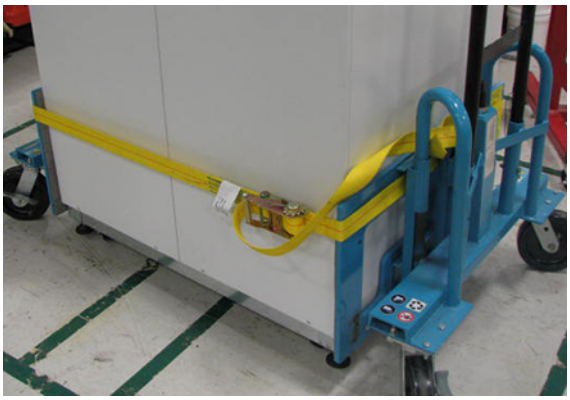
26. Using an adjustable wrench or socket wrench to rotate the jacking screws, raise the dolly until there is pressure or the cabinet just starts to lift.

Figure 3-14 Adjusting the dolly



27. Then raise the dolly in 6 mm (0.25 inch) increments on each side until the cabinet is raised 25.40 mm (1.00 inch).
28. Wrap the strap around the cabinet and through the slots on the two dollies. Put the red stripe on the jack strap to face outward (away from the cabinet).

Figure 3-15 Securing the cabinet on the dolly



29. Tighten the strap.
30. Use the dolly to roll the cabinet into position in the equipment room until the cabinet is parallel to the wall and close to its final install location.
31. Remove the strap.
32. Rotate the jack screws to lower the cabinet until it rests on the floor.
33. Loosen the bushings.
34. Disengage the dollies from the bushings.
35. Remove the bushings from the cabinet.

36. Make sure the Integrated Cooling Cabinet (ICC) has the following part numbers:

    NOTE
    If any of the part numbers do not match the ones in the list, the ICC is not configured for the Architect or Artist system. If the cabinet part number is incorrect, the correct cabinet must be ordered prior to installation. If a component part number is incorrect, replace the component with the correct component.

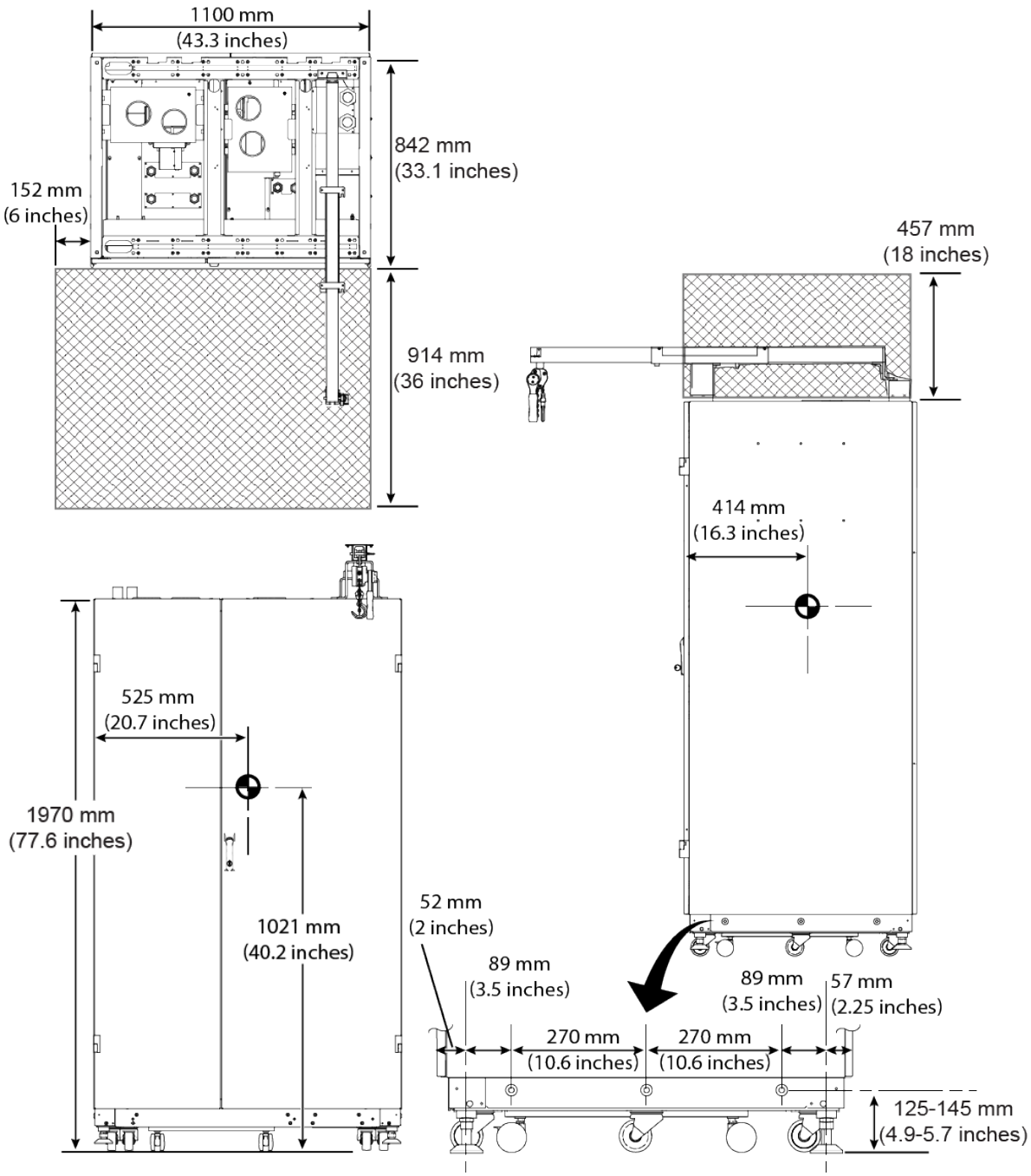
    - Cabinet: 5599329-10
    - Control box: 5599333-12
    - Gradient Cooling Unit: 5599336-12
    - Cabinet Cooling Unit: 5599337-12

37. Move the cabinet into its final install position.
38. If you can get to the adjusters, lower the four adjusters on the ICC so that they reach to the floor.

    NOTE
    At a minimum, the two front adjusters need to be lowered.

39. If the site is a seismic site, attach the ICC side anchor brackets according to the illustration below.

Figure 3-16 Attaching the ICC side anchor brackets



40. Check the level of the cabinet as described in the next task.

3.5.1.1 Checking the level of the Integrated Cooling Cabinet (ICC)

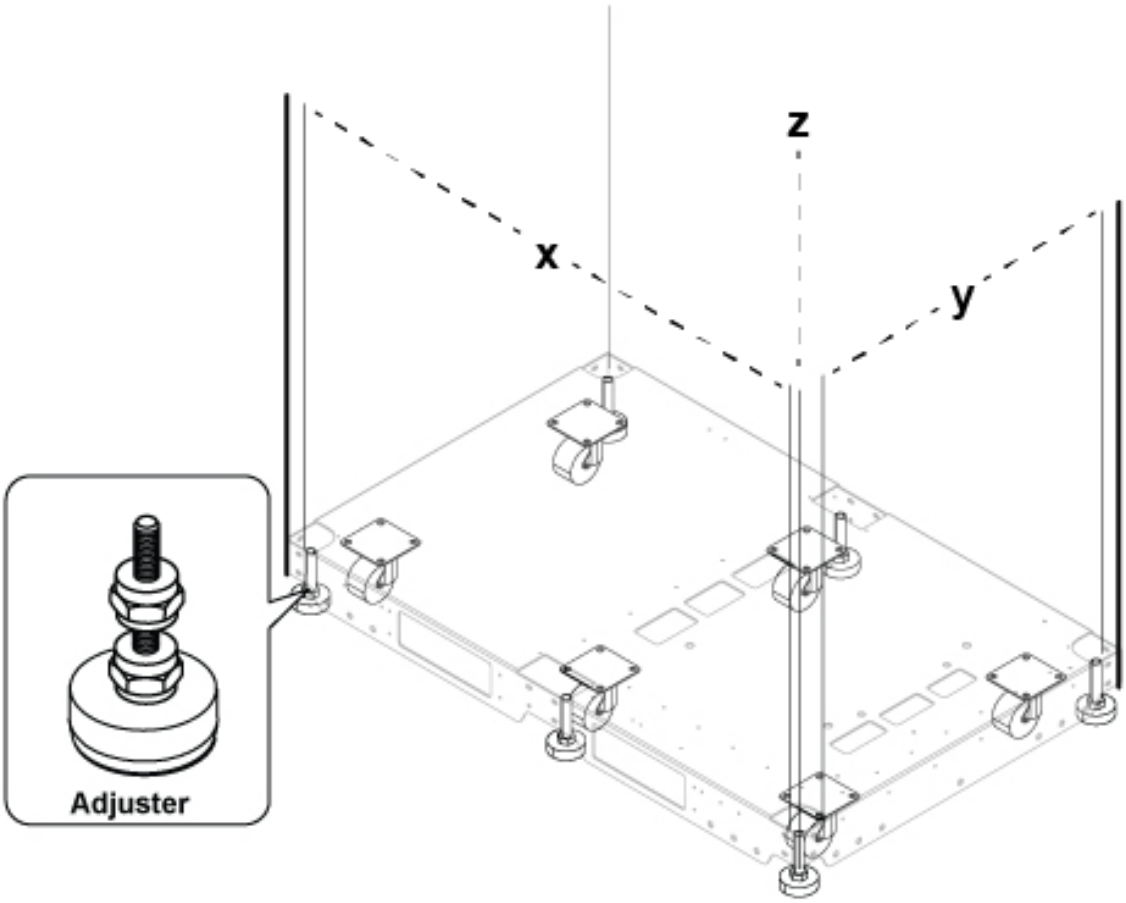
Prerequisites

Tools and test equipment			
Item	**Quantity**	**Part number**	**Manufacturer**
Level	1	-	-

Procedure

1. Put the level on the top front frame, and measure the level of the X-Z plane. Check that the bubble is centered between the lines.
2. Put the level on the top side frame (left or right), and measure the level of the Y-Z plane. Check that the bubble is centered between the lines.
3. If the cabinet is not leveled, adjust the cabinet using the front adjusters.

Figure 3-17 Adjusting the cabinet height

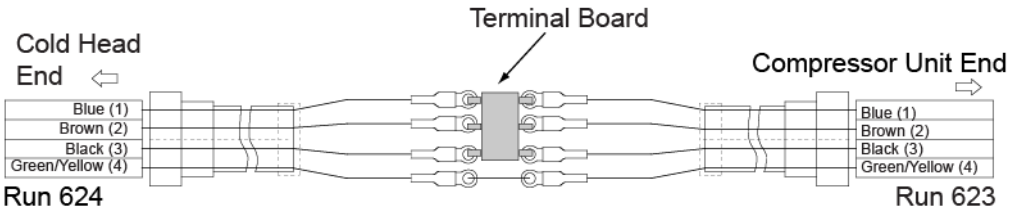


3.5.1.2 Connecting the cryocooler hoses and cables (equipment room) [Integrated Cooling Cabinet (ICC)]

Procedure

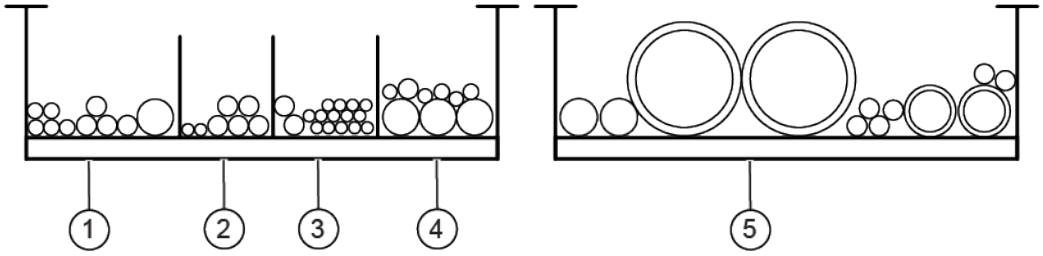
1. Connect **Cable Run 623** to **Cable Run 624** using the provided terminal board.

Figure 3-18 Cable Run connections



2. Before routing the hoses and cables, do a check of the hose/cable alignment on the tray.

Figure 3-19 Equipment room overhead cable assignments



Location	Cable type	Cable Runs
1	≥ 600V Coax/RF and AC power cables	E0003, E0004, E0009, E1001, E1002, E1003, E1004, E1005, E1050, E1051, E4008
2	Fiber optic	E1307, E2002 (XGD only), P2003, P2004[1], P2006[2], E2020/P2020, E2023[3], P2026, P5001[4]
3	300V signal, 300V power, and 300V power/signal cables	623, E0007[6], E0010[6], E3002, E3006, E3008, E3009, E3011, E3013[5], E3014, E3015, E3017, E3018, E3020, E3022, E3023, E3025, E3026, E3028[5], E3030, E3031, E3037, E3040[6], E3391[2]
4	Gradient cables and RF common ground	E3317, E3318, E3319, E4002, E4005, E4007[5], E4009, E4010
5	Water, gas, and air hoses	621, 622, 4-inch gradient coil air supply hose, 4-inch patient air supply hose, 4-inch air return, facility water supply, facility water return, red hose, green hose, blue hose, black hose, gray hose, yellow hose

[1]-All except Architect T

[2]-Architect and Architect XT only

[3]-Architect T only

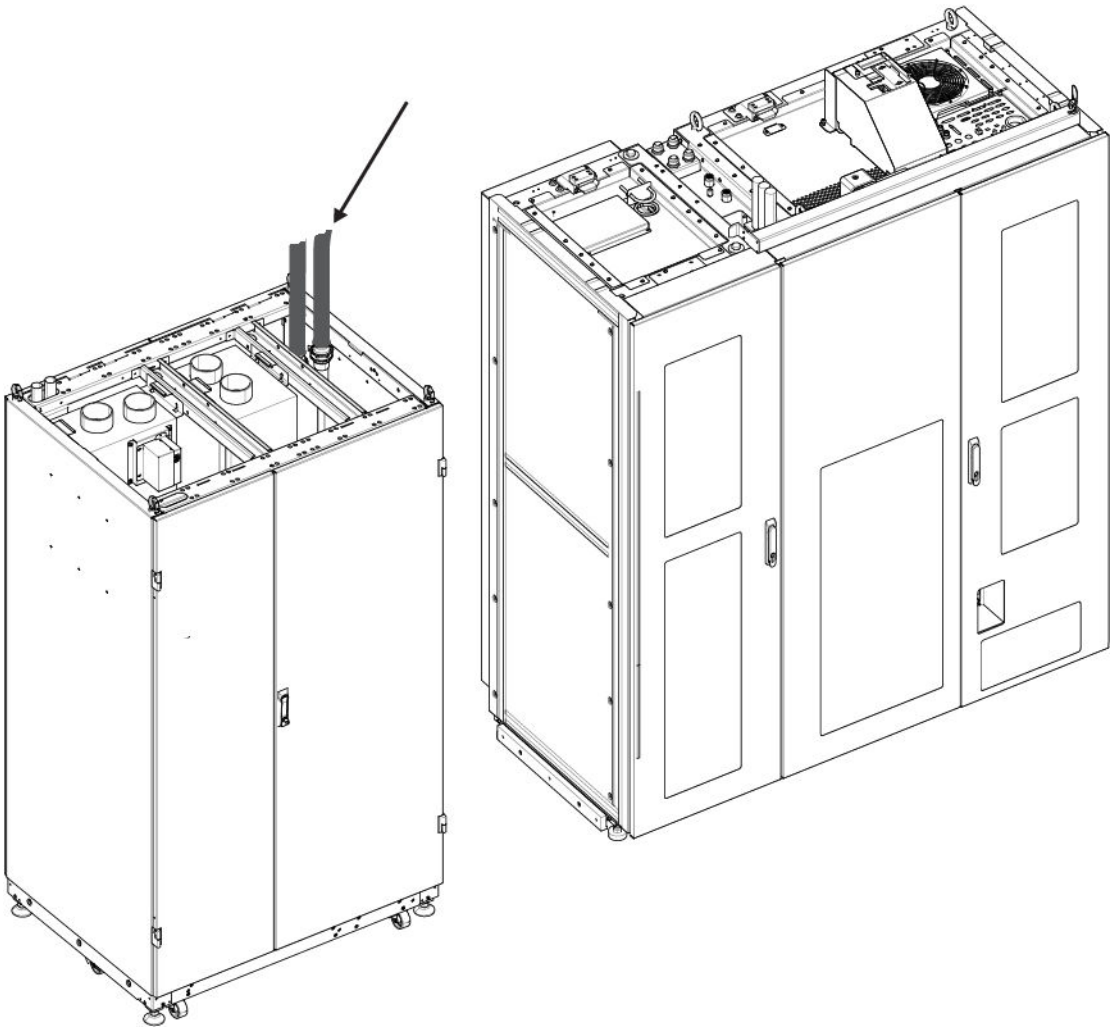
[4]-Architect and Architect XT only, on systems without a CFB

[5]-Systems with a Heat Exchanger Cabinet (HEC)

[6]-Systems with an Integrated Cooling Cabinet (ICC)

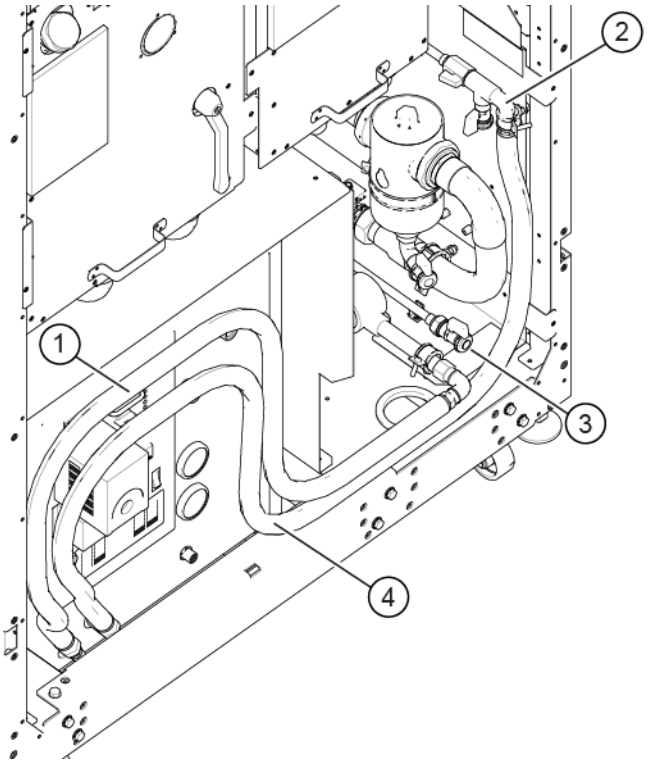
3. If the facility water hoses are not already connected, have the site connect them to the 1-1/2 inch female NPT fittings on top of the Integrated Cooling Cabinet (ICC).

Figure 3-20 Connecting the facility water hoses to the ICC



4. Connect two elbow hose nipples and extension (supplied with the ICC) to the F-50 water supply and return ports.

Figure 3-21 Connecting the water hoses

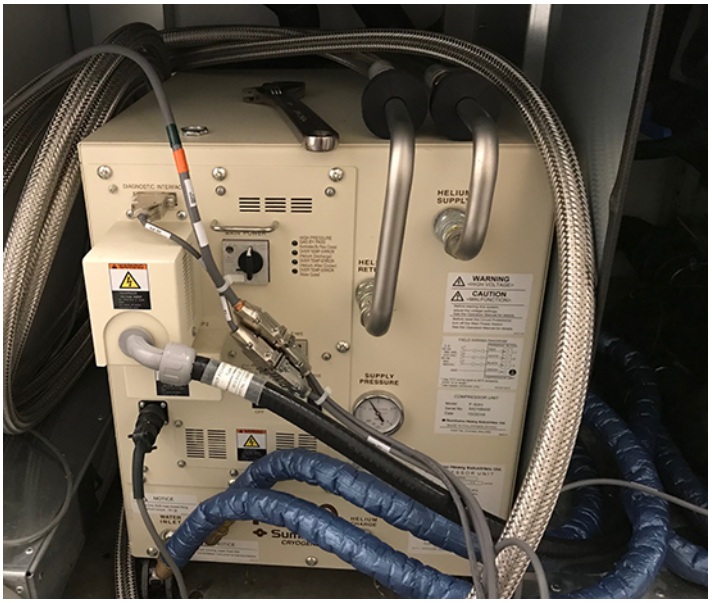


Item	Description
1	Inlet (supply 90-degree elbow and extension)
2	FPU drain line, upper/city water return
3	FPU drain line, bottom/city water supply
4	Outlet (return 90-degree elbow)

5. Connect the water hoses in between the Facility Plumbing Unit (FPU) and the F-50.
   5.1. Use the gray hose for the supply line and the yellow hose for the return line.
   5.2. Secure the hose connections to the F-50 with a wrench.

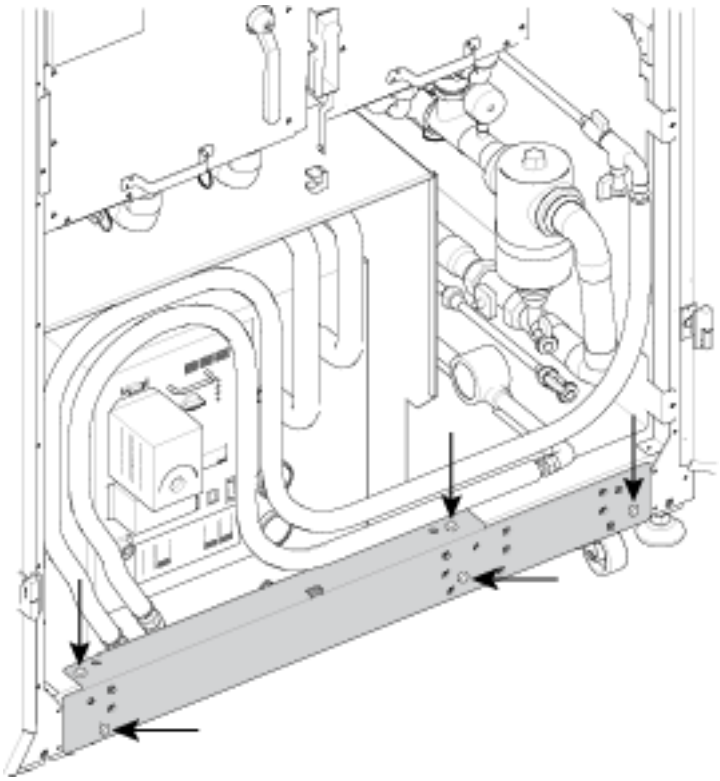
6. Rearrange insulation already in place from the ICC vendor to provide maximum coverage.

Figure 3-22 Arranging the hose insulation



7. Install the bottom reinforcement bar.

Figure 3-23 Installing the reinforcement bar



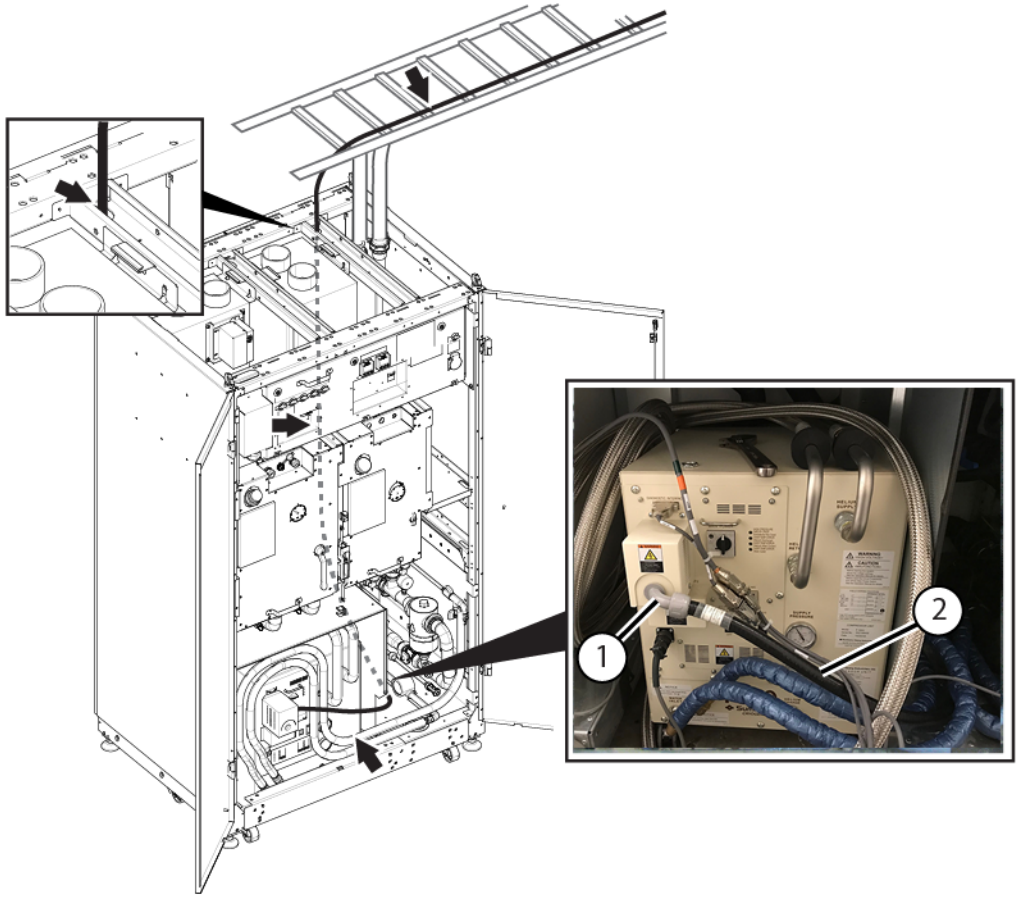
8. Route and connect the following cables:
   - The customer should route the F-50 power cable (Run E0009) from GE **MDP** > **CB4/C1** to **ICC** > **F-50 Cryocooler** > **Power** and connect the cable to the cryocooler using a 90-degree

elbow fitting. Include a service loop in the cable at the cryocooler to allow the cryocooler to be pulled out for servicing.

- Route the sensor cables (Run 833) and connect them to the magnet monitor.
- Connect the cables between the magnet monitor and the SPW.

NOTE
The F-50 power is provided by the GE Main Disconnect Panel (MDP) with a 30A breaker. If the customer purchased their own MDP, a 30A breaker or equivalent is required.

Figure 3-24 Routing the F-50 power cable for the ICC



Item	Description
1	90° elbow fitting
2	F-50 power cable

3.5.2 Uncrating and positioning the Platform Integrated Cooling Cabinet (pICC)

Prerequisites

Personnel requirements			
Required persons	**Preliminary requirements**	**Procedure**	**Finalization**
2	-	2 hours	-

Tools and test equipment			
Item	**Quantity**	**Part number**	**Manufacturer**
Pair: Nonferrous Safety Shoes	1	-	-
Pair: Insulated Leather Gloves	1	-	-
Screwdriver (power tool recommended)	1	-	-

Required conditions
The floor under the pICC is leveled per the .
For seismic areas, anchor holes for the pICC have been drilled by a pre-installation vendor. Refer to the for the anchor locations.

Table 3-1 Safety

Before working in any GE HealthCare MR suite or doing any GE HealthCare service procedure, you must:

- Have read and understood all hazard conditions and safety requirements in the latest revision of the GE HealthCare *MR Service Safety Manual* (5452735).
- Have successfully completed all relevant GE HealthCare Environmental Health and Safety (EHS) courses (or for non-GE employees, equivalent workplace training courses).
- Comply with all site-specific training and workplace safety requirements.

If you have any safety concerns at any time, do not begin work or immediately stop work and move to a safe location. Immediately contact your supervisor or site safety officer for instructions on how to proceed.

About this task

⚠ WARNING

POTENTIAL CRUSH HAZARD

The crate and pICC are heavy. During pICC positioning, the pICC can tip. This situation can cause injury upon impact.

Make sure that two people disassemble the crate and move the pICC. Prior to removing the shipping brackets, make sure the pICC is resting on its feet and not the wheels to prevent movement of the pICC when attaching the cabinet dolly.

Procedure

1. Uncrate the disposable pICC packaging, and recycle at the site.

NOTE
The pICC is secured to the base of the crate using two shipping brackets (on the left and right sides). Prior to removing the shipping brackets, make sure the pICC is resting on its feet and not on the wheels, to prevent movement of the pICC when attaching the cabinet dolly.

Figure 3-25 pICC packaging

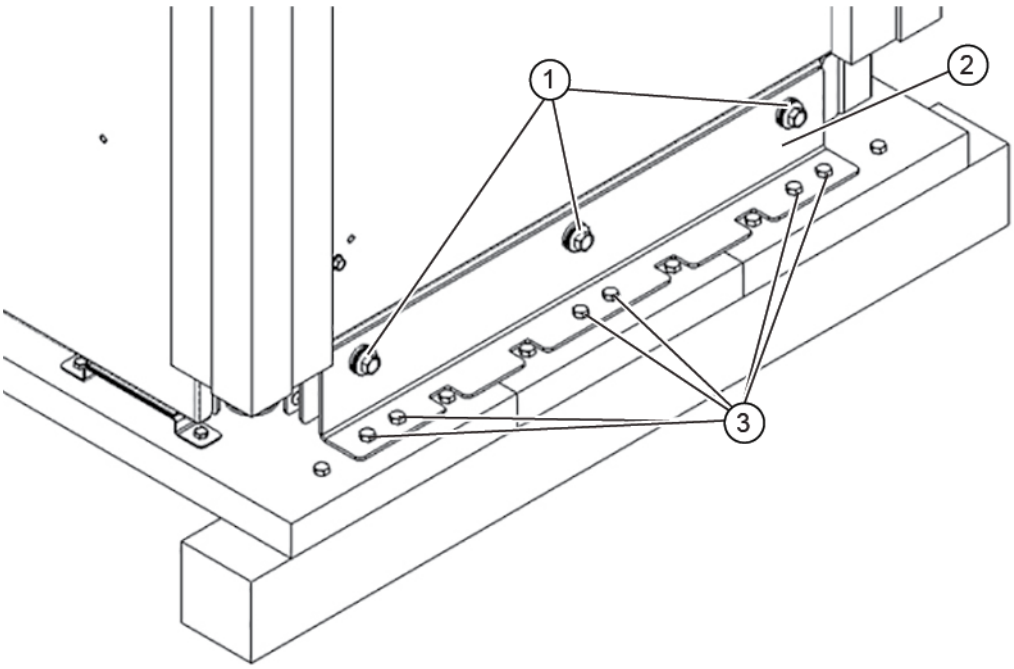
NOTE
Make sure the chains and straps are rated for the weight of the pICC, and that they are securely fastened to the eyebolts and the lifting mechanism.

The weight of the pICC:

- Uncrated weight: 425 kg (935 lbs)
- Global crated weight: 486 kg (1071 lbs)

2. Remove the shipping bracket mounting hardware and crate base fasteners to release the pICC from the base of the crate as shown below. After these fasteners have been removed, the pICC can be lifted off the base.

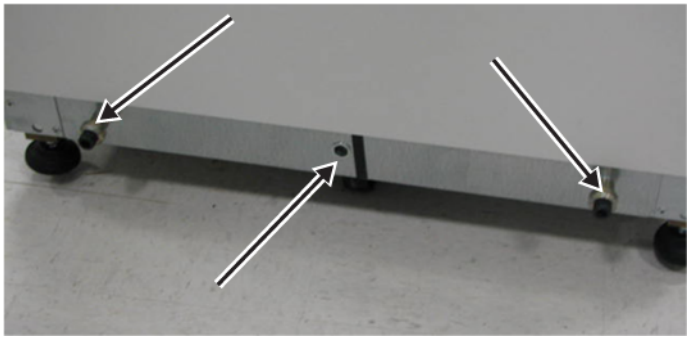
Figure 3-26 Crate base mounting



1	Mounting hardware
2	Shipping bracket
3	Base crate fasteners

3. Install three bushings along the bottom of the left side of the cabinet.

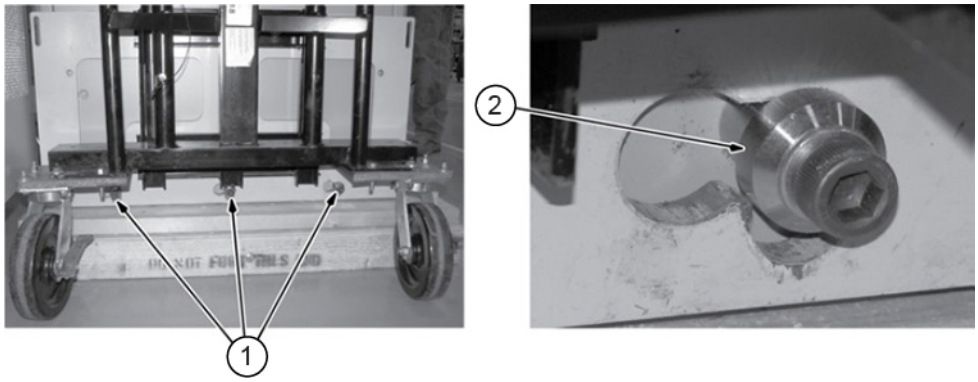
Figure 3-27 Installing the bushings



4. Install three bushings along the bottom of the right side of the cabinet.

5. Maneuver the dolly so that all three bushings slip into the slide lock on the attachment plate.

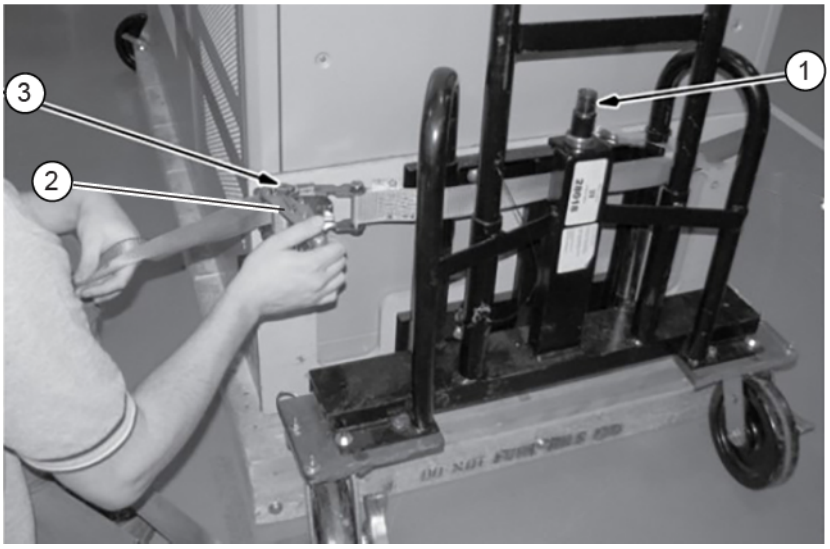
Figure 3-28 Bushings and slide lock on attachment plate



1	Bushings
2	Bushing in slide lock on attachment plate

6. Raise the dolly by turning the jack screw clockwise to lock the dolly into position.

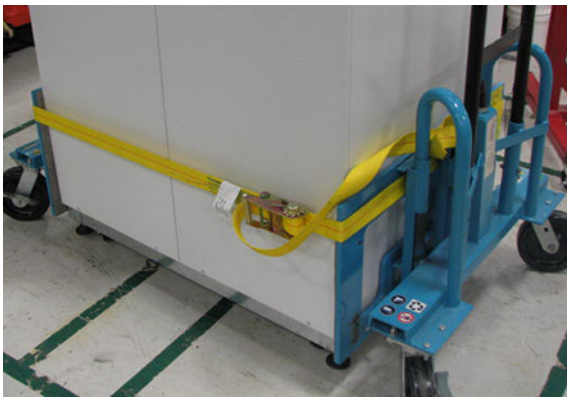
Figure 3-29 Securing pICC to dolly



1	Jack screw
2	Clamp
3	Strap

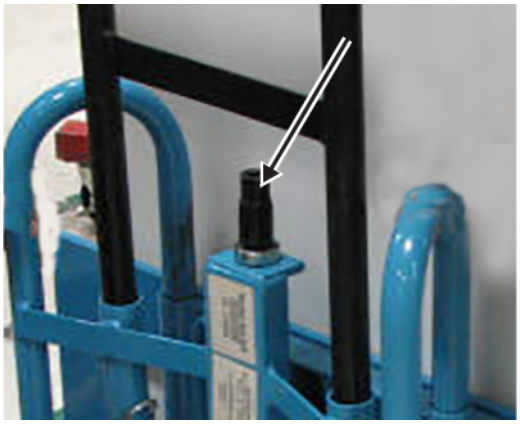
7. Fasten the pICC to the dollies with the strap. Put the jack strap through the slot of the attachment plate, with the red stripe facing out (away from the cabinet). Make sure the clamp is on a flat surface of the dolly.

Figure 3-30 Jack strap



8. Using an adjustable wrench or socket wrench to rotate the jacking screws, raise the dolly until there is pressure or the cabinet just starts to lift.

Figure 3-31 Adjusting the dolly

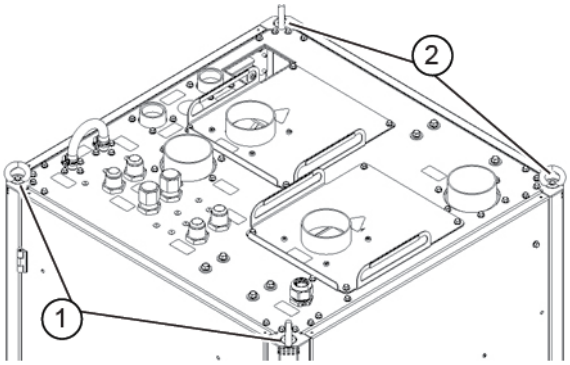


9. Lift the pICC off the pallet by turning the jack screw clockwise until the cabinet is raised.
10. Alternate raising each dolly in 6 mm (0.25 inch) increments until the cabinet is raised above the pallet.
11. Slide the pallet out from under the cabinet.
12. Alternate lowering each side of the cabinet by turning the jack screw counterclockwise until the cabinet is 25.40 mm (1.00 inch) above the floor.
13. Move the ICC on the dolly into the equipment room.

14. Move the cabinet into its final install position using the four swivel casters.

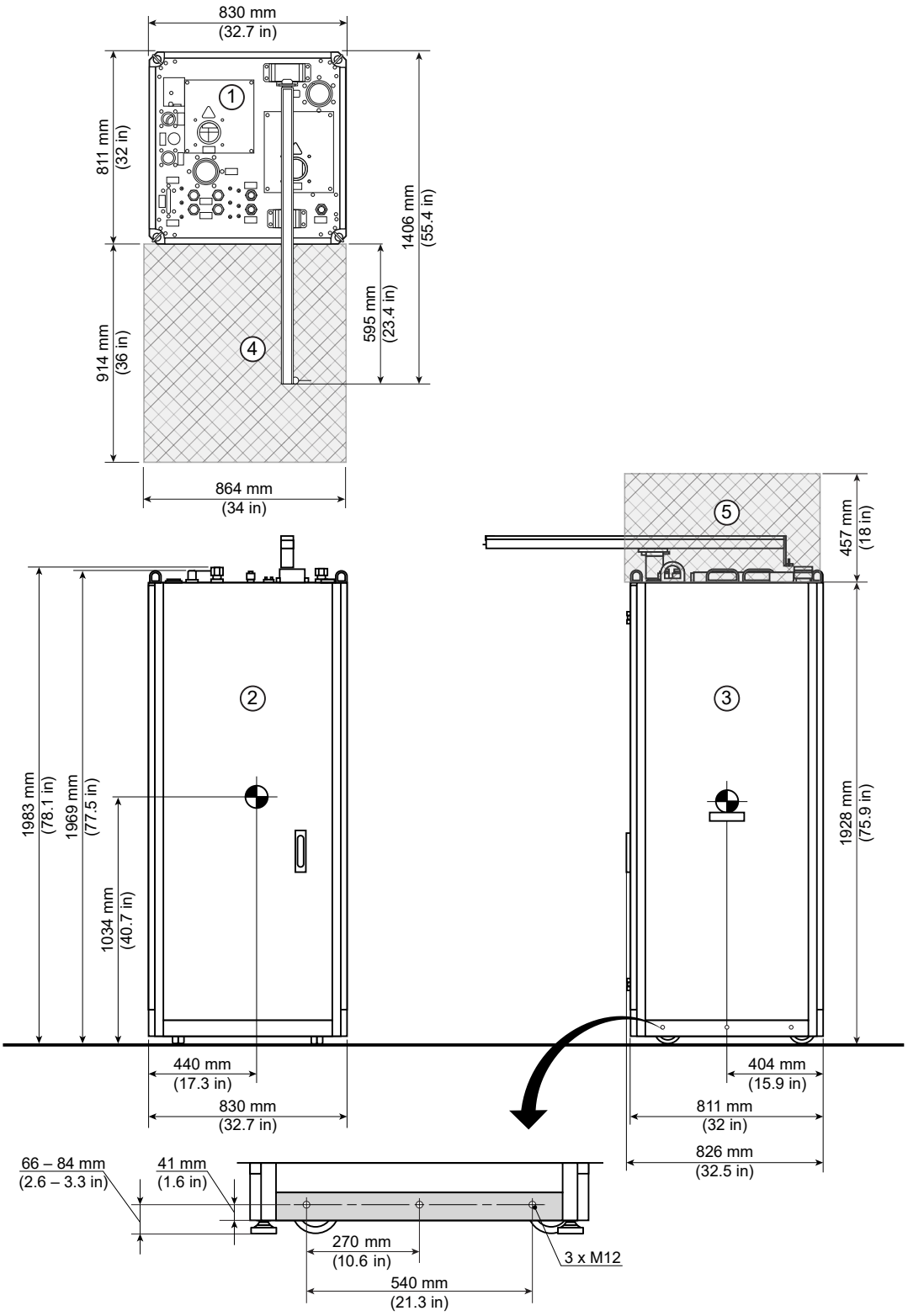
NOTE
The pICC can also be lifted vertically using the eyebolts on the lid. Make sure the chains or straps are rated for the weight of the pICC, and that they are securely fastened to the eyebolts and the lifting mechanism.

Figure 3-32 Lifting eyebolts



1	Front eyebolts
2	Rear eyebolts

Figure 3-33 Platform Integrated Cooling Cabinet (pICC)



1	Top view
2	Front view
3	Side view

4	Service area
5	Air flow and cables

15. **NOTICE**

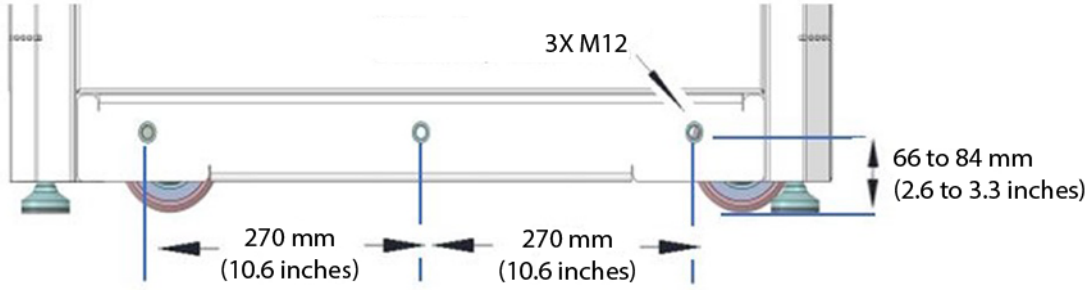
INSTALL BRACKETS FOR SEISMIC LOCATIONS

You must install brackets to secure the pICC to the floor using the three M12 threads.

If the site is a seismic site, attach the pICC side anchor brackets as shown below. The pICC allows for the installation of seismic brackets onto the left, right, and rear sides of the pICC. At minimum, seismic brackets must be installed on the left and right side of the pICC.

NOTE
The minimum full thread depth of the 3X M12 threads is 12.5 mm (.49 inches); the minimum clearance depth is 50.8 mm (2.00 inches).

Figure 3-34 Attaching the pICC side anchor brackets



15.1. Align the seismic bracket with the mounting nuts on the desired side of the pICC.

15.2. Install the seismic bracket to the pICC using the hardware supplied with the shipping bracket.

15.3. Install the seismic bracket to the ground using the hardware procured and installed locally per site architectural drawings.

15.4. Repeat steps for the other sides.

16. Check the level of the cabinet. See 3.5.2.1 Checking the level of the Platform Integrated Cooling Cabinet (pICC) on page 85.

3.5.2.1 Checking the level of the Platform Integrated Cooling Cabinet (pICC)

Prerequisites

Tools and test equipment			
Item	**Quantity**	**Part number**	**Manufacturer**
Level	1	-	-

⚠ WARNING

TIPPING HAZARD

If the incline is greater than 15 degrees, the pICC can tip and fall causing injury upon impact.

Use the limiting hex nut to prevent the feet from extending beyond 30 mm off the ground. If the cabinet must be lifted to the maximum height, ensure the incline is less than 15 degrees.

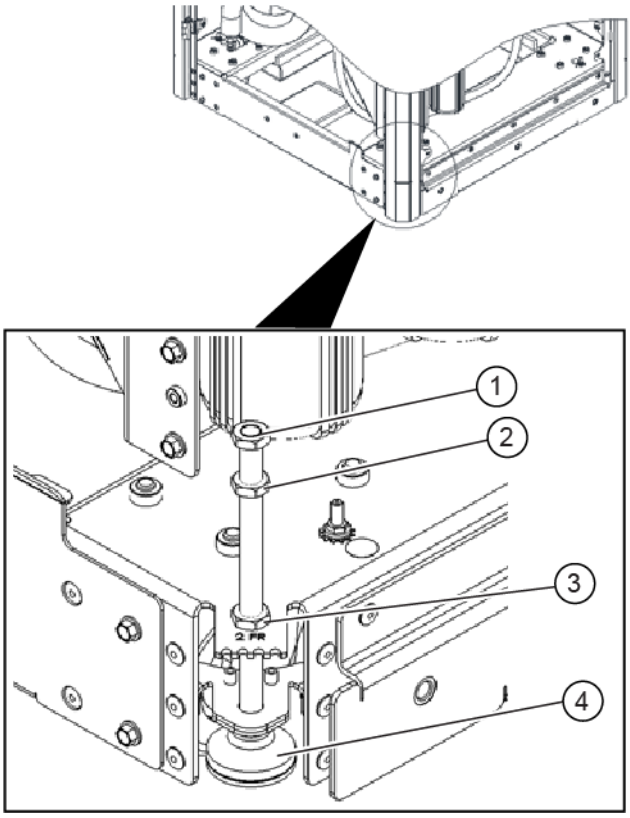
About this task

The pICC has four leveling feet that are used to level the pICC. Lower the four leveling feet on the pICC so they reach the ground.

Procedure

1. Access the pICC through the front door.
2. Locate the four threaded rods in each corner.

Figure 3-35 Threaded rods on pICC



1	Hex nut driver
2	Limiting nut
3	Locking hex nut
4	Leveling foot

3. Using a 19 mm wrench, turn the locking hex nut counterclockwise to free the threaded rod. Repeat on all required rods as necessary.
4. Using a 19 mm wrench, gradually turn the hex nut driver clockwise on each threaded rod, alternating between rods and turning no more than two full rotations for each rod until the pICC is leveled. The locking hex nut may need to be further recessed up the threaded rod. Repeat on all required rods as necessary.

   The locking hex nut might need to be recessed up the threaded rod for all of the required rods.

3.5.2.2 Connecting the cryocooler hoses and cables (equipment room) [Platform Integrated Cooling Cabinet (pICC)]

About this task

⚠ WARNING

COOLANT LEAKAGE HAZARD

This procedure involves a risk of coolant leakage that could cause property damage, injury and/or death. All plumbing connections should only be completed by properly trained and certified technicians wearing proper protective gear and using the proper tools.

Make sure external plumbing connections have been closed/turned off prior to installing or uninstalling plumbing connections. Complete all plumbing connection installation procedures prior to opening/turning on external plumbing connections. Always make sure that all plumbing connections are free of leaks after installation to prevent property damage or hazardous slip and fall conditions that may lead to injury or death.

⚠ WARNING

SUPPLY PRESSURE HAZARD

The supply pressure for the facility side circuit must not exceed 6 bar.

NOTICE

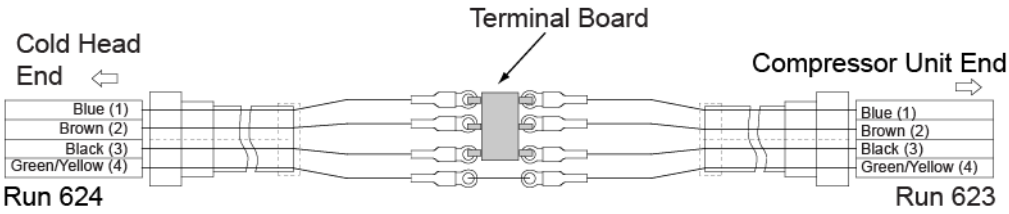
USE THE CORRECT INSTALLATION INSTRUCTIONS

Consult the cryogen compressor's installation manual for the correct installation procedures. Make sure the cooling water supply and return labels are correct prior to installation.

Procedure

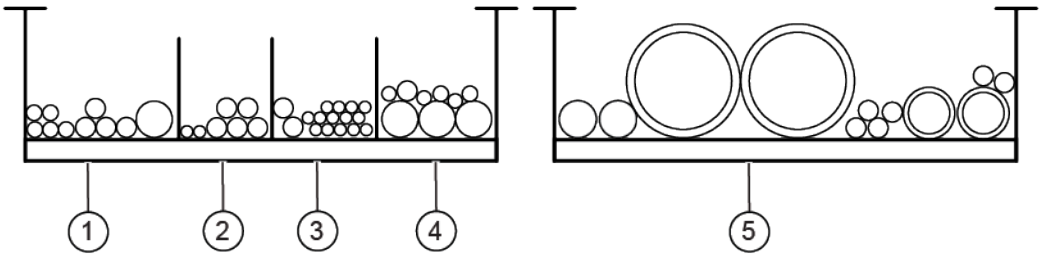
1. Connect **Cable Run 623** to **Cable Run 624** using the provided terminal board.

Figure 3-36 Cable Run connections



2. Before routing the hoses and cables, do a check of the hose/cable alignment on the tray.

Figure 3-37 Equipment room overhead cable assignments



Location	Cable type	Cable Runs
1	≥ 600V Coax/RF and AC power cables	E0003, E0004, E0009, E1001, E1002, E1003, E1004, E1005, E1050, E1051, E4008
2	Fiber optic	E1307, E2002 (XGD only), P2003, P2004[1], P2006[2], E2020/P2020, E2023[3], P2026, P5001[4]
3	300V signal, 300V power, and 300V power/signal cables	623, E0007[6], E0010[6], E3002, E3006, E3008, E3009, E3011, E3013[5], E3014, E3015, E3017, E3018, E3020, E3022, E3023, E3025, E3026, E3028[5], E3030, E3031, E3037, E3040[6], E3391[2]
4	Gradient cables and RF common ground	E3317, E3318, E3319, E4002, E4005, E4007[5], E4009, E4010
5	Water, gas, and air hoses	621, 622, 4-inch gradient coil air supply hose, 4-inch patient air supply hose, 4-inch air return, facility water supply, facility water return, red hose, green hose, blue hose, black hose, gray hose, yellow hose

[1]-All except Architect T

[2]-Architect and Architect XT only

[3]-Architect T only

[4]-Architect and Architect XT only, on systems without a CFB

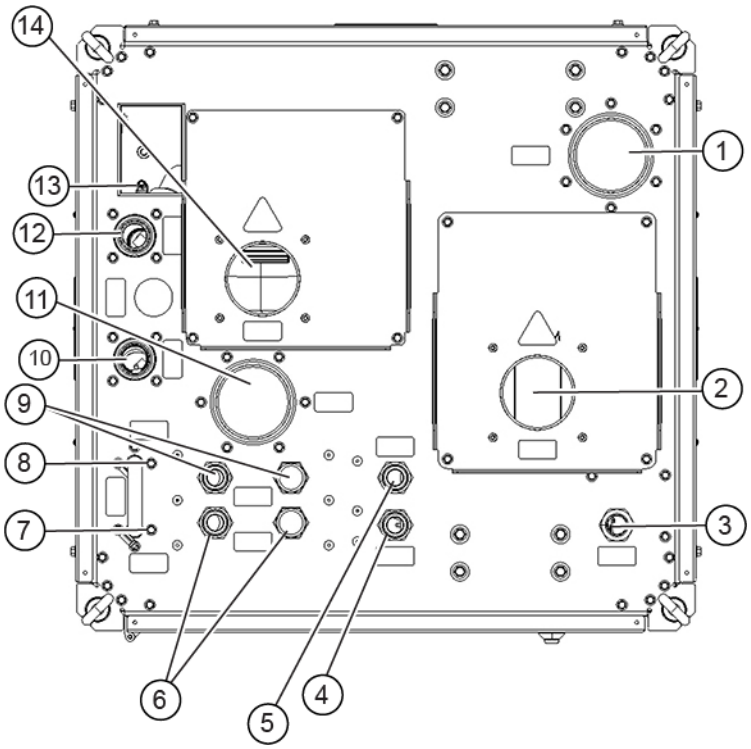
[5]-Systems with a Heat Exchanger Cabinet (HEC)

[6]-Systems with an Integrated Cooling Cabinet (ICC)

3. If the facility water hoses are not already connected, have the site connect them to the 1-1/2 inch female NPT fittings on top of the pICC.

4. Connect the facility supply (typically chiller) to the pICC port labeled FAC PRIM SPY on the lid using PFTE (Teflon) tape. Wrap the PTFE (Teflon) tape, one-and-a-half wraps around the male portion of the thread. Start two threads up from the end of the male portion of the fitting.

Figure 3-38 pICC lid connection diagram

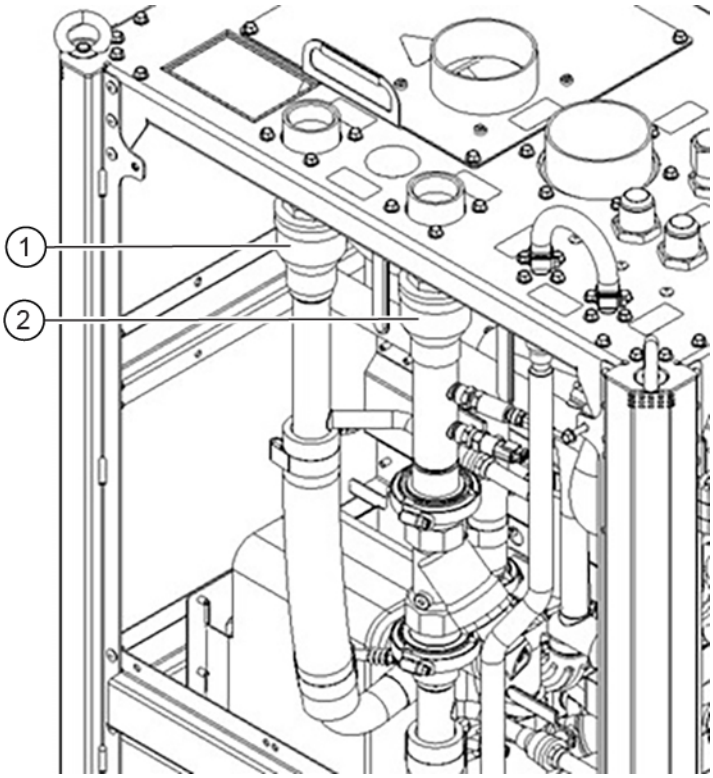


1	PAT AIR RTN	4 inch hose duct	PB air return from MR to pICC
2	BC AIR SPY	4 inch hose duct	BB air supply from pICC to MR
3	J1	Cord grip	Incoming power cable to pICC
4	GC SEC RTN	1 inch 37° JIC male (size 16)	GCU coolant return from MR to pICC
5	GC SEC SPY	1 inch 37° JIC male (size 16)	GCU coolant supply from pICC to MR
6	ISC SEC RTN	1 inch 37° JIC male (size 16)	CCU coolant return from ISC to pICC
7	CW SPY	½ inch hose bead	Emergency backup coolant supply from pICC CRY circuit
8	CW RTN	½ inch hose bead	Emergency backup coolant return to pICC CRY circuit
9	ISC SEC SPY	1 inch 37° JIC male (size 16)	CCU coolant supply from pICC to ISC
10	FAC PRIM SPY	1 ½ inch FPT	FPU coolant supply from chiller to pICC

11	BC AIR RTN	4 inch hose duct	BB air return from MR to pICC
12	FAC PRIM RTN	1 ½ inch FPT	FPU coolant return from pICC to chiller
13	N/A	Opening	Helium hose connections to and from cryogen compressor, serial cable (44-pin D-sub) connection to electrical enclosure, PHPS2 signal cable to PB
14	PAT AIR SPY	4 inch hose duct	PB air supply from pICC to MR

5. Connect the facility return (typically chiller) to the pICC port labeled FAC PRIMRTN on the lid using PFTE (Teflon) tape.
6. Install the NPT plumbing connections per ASME B1.20.3 standards.

Figure 3-39 pICC FPU valves for adjustment



1	Facility return valve
2	Facility supply valve

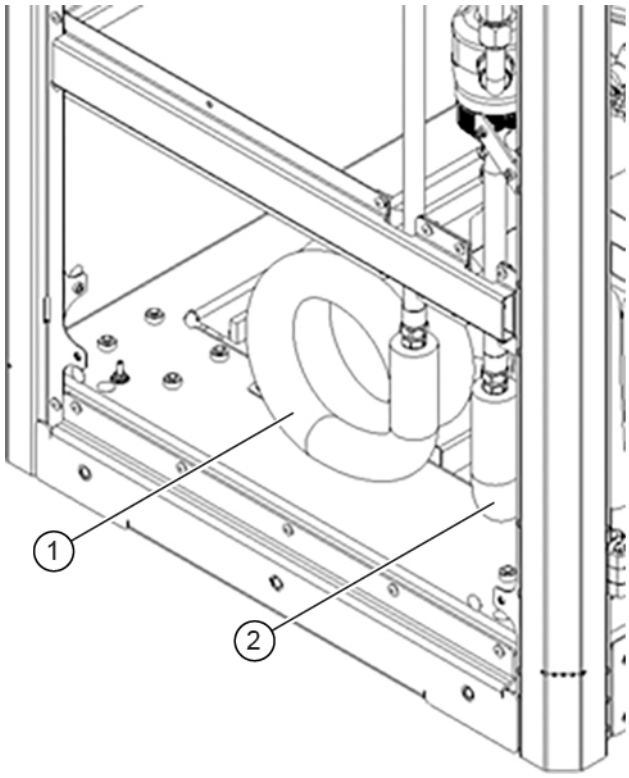
7. Configure the valves in the pICC to enable coolant flow to the FPU circuit:
   7.1. Locate the FPU supply and return valves in the pICC.
   7.2. Open both valves with the handle parallel to the direction of the flow.
8. The cryogen compressor fittings kit is supplied within the ship loose box and contains the following: 2 stainless steel 90° ½ inch (size -8) JIC male adapter to 3/8 inch BSPT male elbow

adapters, and 1 stainless steel 3/8 inch BSPT male-to-female bushing. To install the cryogen compressor cooling connections, complete the following:

8.1. Access the pICC through the front door.

8.2. Locate the CRY cooling hoses and clip cable ties on each hose to unravel them.

Figure 3-40 Cryogen compressor cooling hoses



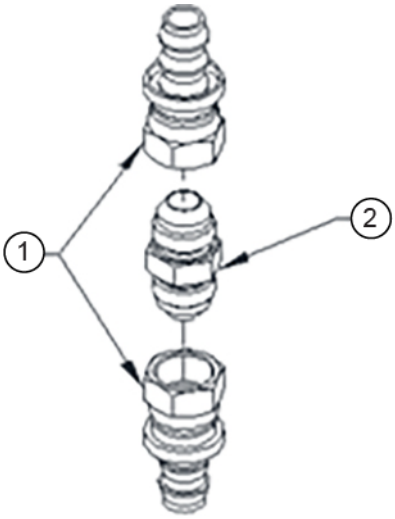
1	CRY cooling return hose
2	CRY cooling supply hose

8.3. Use the gray hose for the supply line and the yellow hose for the return line.

8.4. The hoses are connected from the factory by a male-to-male adapter (jumper connection). Use a 7/8 inch wrench (for the JIC 37° hose swivel connectors) and a 13/16 inch wrench (for

the male-to-male adapter) to disconnect the hoses from each other and the adapter, and discard the male-to-male adapter.

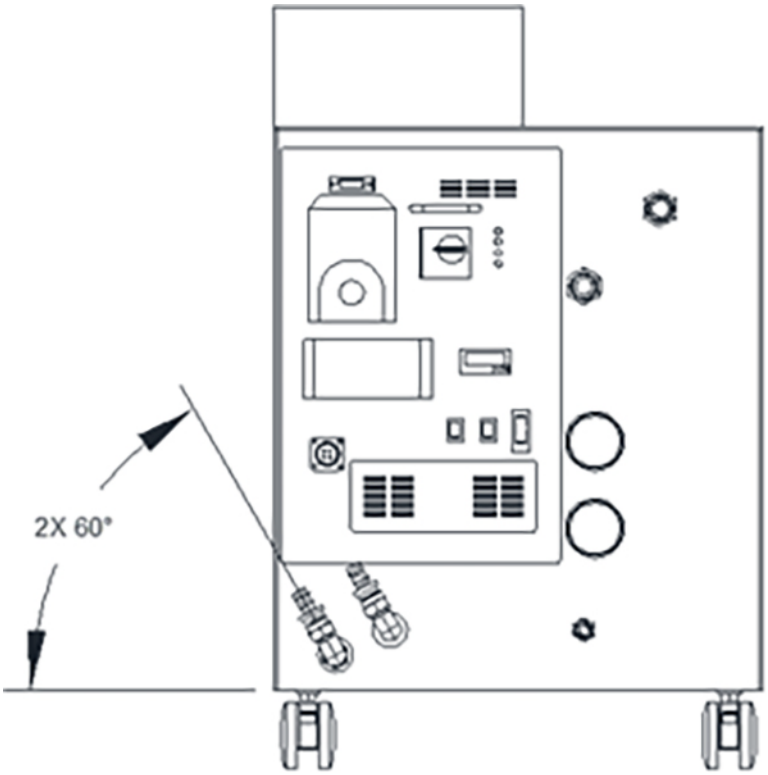
Figure 3-41 Cryogen compressor cooling jumper connection removal



1	JIC 37° swivel fittings
2	Male-to-male adapter

8.5. Use a 19 mm wrench to install an elbow at the cooling return port on the cryogen compressor and orient the fitting as shown below. Install the CRY cooling supply hose (labeled **CRY PRIM SPY**) to the other end of the elbow.

Figure 3-42 Cryogen compressor cooling plumbing orientation



8.6. Use a 7/8 inch wrench to install the bushing at the cooling supply port on the cryogen compressor. Install an elbow on the other end of the bushing and orient the fitting as indicated in Figure 3-42 Cryogen compressor cooling plumbing orientation on page 93. Install the CRY cooling return hose (labeled **CRY PRIM RTN**) to the other end of the elbow.

8.7. Configure the valves in the pICC as follows to enable coolant flow to the cryogen compressor:

8.7.1. Locate the CRY supply and return valves. Open both valves (handle parallel to direction of flow).

8.7.2. Locate the CW supply and return valves. Make sure both valves are closed (handle perpendicular to direction of flow).

9. To install the cryogen compressor in the pICC, complete the following:

9.1. Access the pICC through the front door.

9.2. Disconnect the auxiliary tank return quick connect hose.

9.3. Uninstall the front gusset:

9.3.1. Use a 10 mm wrench to unfasten the two M6 front gusset bolts A.

9.3.2. Use a 10 mm wrench to unfasten the two M6 front gusset bolts B.

9.3.3. Use a 10 mm wrench to unfasten the four M6 front gusset bolts C.

9.3.4. Remove the front gusset.

9.4. Uninstall the front brace:

9.4.1. Use a 10 mm wrench to unfasten the four M6 front brace bolts.

9.4.2. Remove the front brace.

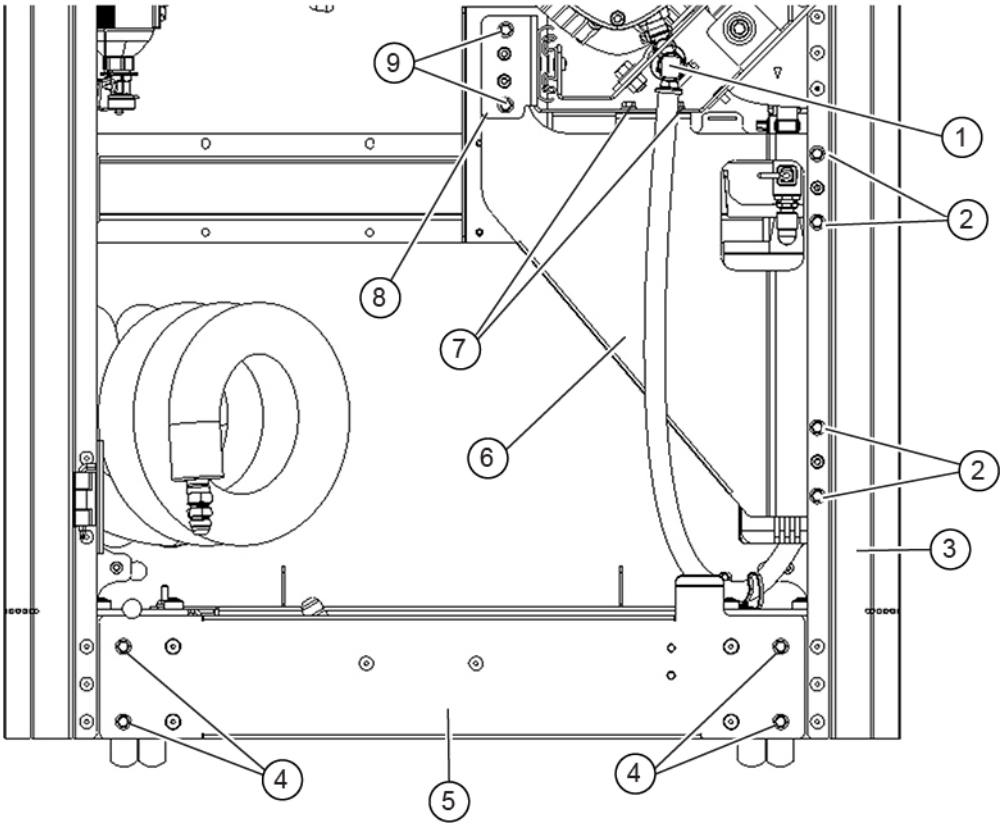
9.5. Remove the ship loose box and ship loose bracket, or proceed to the next step if these have previously been removed.

9.6. Maneuver the cryogen compressor into the pICC opening. The front of the cryogen compressor should face the front of the pICC. The cryogen compressor should contact foam strips in the pICC at each of its three edges (left, right and rear).

9.7. Reinstall the front brace and its bolts.

The lower door stop of the brace should face upwards. See Figure 3-43 Cryogen compressor installation (front view) on page 95.

Figure 3-43 Cryogen compressor installation (front view)

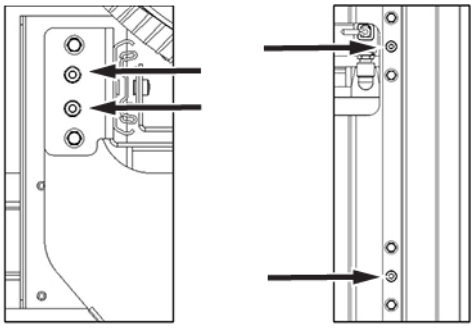


1	Auxiliary tank return quick connect
2	Front gusset bolts C
3	Front right corner
4	Front brace bolts
5	Front brace
6	Front gusset
7	Front gusset bolts A
8	CCU pump slide
9	Front gusset bolts B

9.8. Reinstall the front gusset and its bolts to the CCU pump slide base and front right corner.

NOTE
The front gusset fits behind the CCU pump slide base and front right corner.

Figure 3-44 Positioning studs for front gusset



9.8.1. Align the front gusset with the positioning studs shown above.

9.8.2. Use a 10 mm wrench to install the two M6 front gusset bolts B.

9.8.3. Use a 10 mm wrench to install the four M6 front gusset bolts C.

9.8.4. Use a 10 mm wrench to install the two M6 front gusset bolts A.

9.9. Reinstall the auxiliary tank return quick connect hose to the CCU pump drain port. See Figure 3-43 Cryogen compressor installation (front view) on page 95.

3.6 Installing the magnet enclosure cable concealment kit

The Cable Concealment Kit is available for Artist and Architect sites.

- For Artist, see Artist cable concealment kit installation on page 96.
- For Architect, see Architect cable concealment kit installation on page 99.

Artist cable concealment kit installation

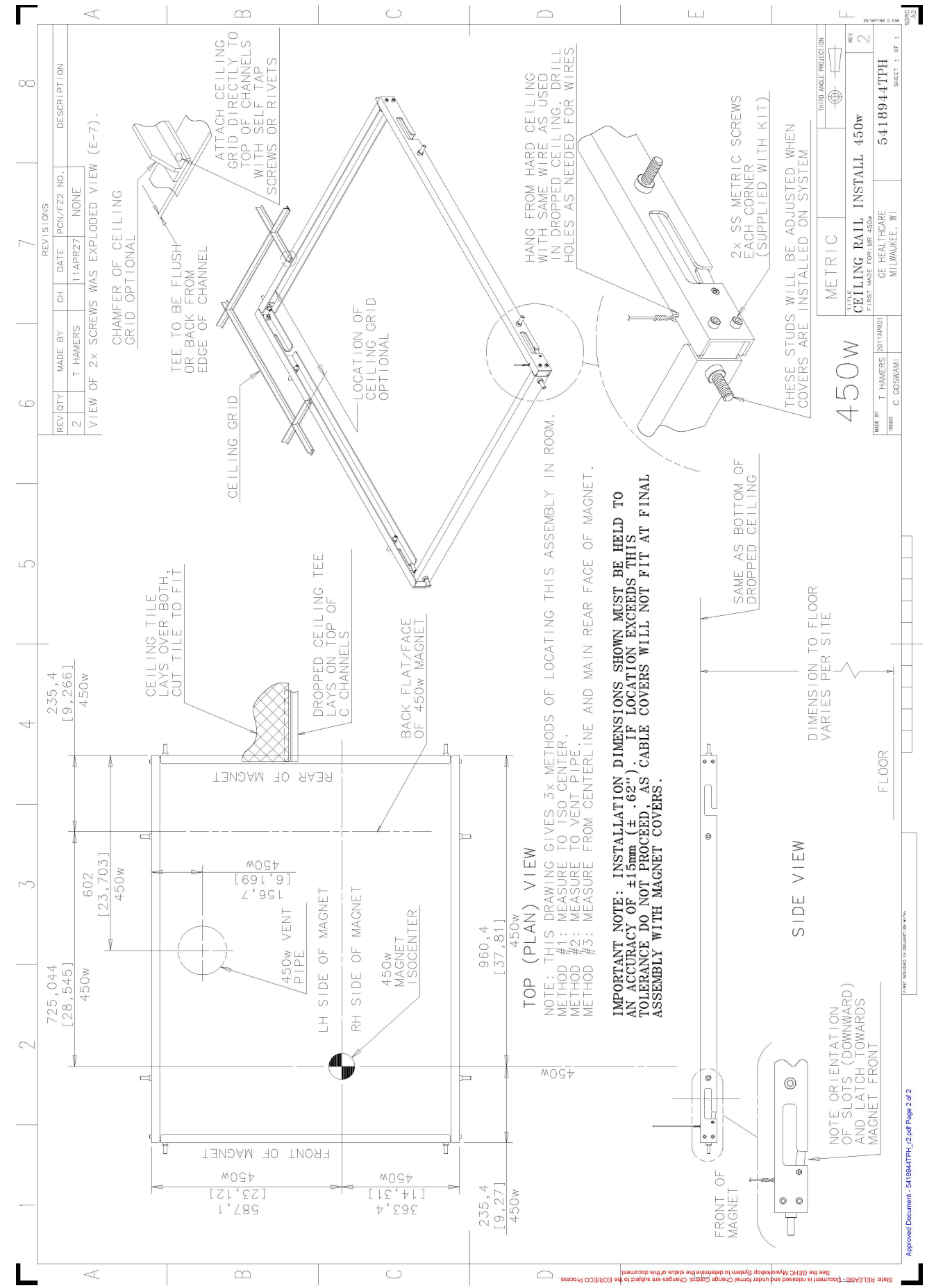
The Artist Cable Concealment Kit is an option delivered with this installation. It is provided if the customer site plans to install the kit.

If the concealment kit is to be installed, the installation instructions for the ceiling frame are found on the following page as part of 5418944TPH. The cable concealment kit is installed in two stages:

- **First Stage** - The Ceiling Frame Kit (5418561) is to be installed prior to the delivery of the remaining system cabinets and cables, which will be delivered to site after the magnet installation. Refer to the instructions on the next page for location dimensions of the curtain rail. There are three methods for locating the curtain rail in the ceiling. They are:
  - Measure to the magnet isocenter
  - Measure to the center of the vent pipe
  - Measure from the centerline and main rear face of the magnet
- **Second Stage** - The four side covers are installed after the magnet enclosure has been installed and the curtain frame is in place in the ceiling. Refer to the *Optima MR450w, Optima MR450w GEM, and SIGNA Artist System Installation Manual* (5670002) for the Artist side cover installation procedures.

NOTICE

Installation dimensions shown on the following illustration must be held to an accuracy of ± 15 mm (± 0.62 inches). If the location exceeds this tolerance do not proceed, as cable covers will not fit at final assembly with the magnet covers.


REVISIONS
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TEE TO BE FLUSH OR BACK FROM EDGE OF CHANNEL
ATTACH CEILING GRID DIRECTLY TO TOP OF CHANNELS WITH SELF TAP SCREWS OR RIVETS
CEILING GRID
LOCATION OF CEILING GRID OPTIONAL
HANG FROM HARD CEILING WITH SAME WIRE AS USED IN DROPPED CEILING. DRILL HOLES AS NEEDED FOR WIRES
2x SS METRIC SCREWS EACH CORNER (SUPPLIED WITH KIT)
THESE STUDS WILL BE ADJUSTED WHEN COVERS ARE INSTALLED ON SYSTEM
450w
METRIC
CEILING RAIL INSTALL 450w
5418944TPH
GE HEALTHCARE MILWAUKEE, WI
T HAMERS 2011APR01
C GOSWAMI
CEILING TILE LAYS OVER BOTH, CUT TILE TO FIT
DROPPED CEILING TEE LAYS ON TOP OF C CHANNELS
BACK FLAT/FACE OF 450w MAGNET
SAME AS BOTTOM OF DROPPED CEILING
DIMENSION TO FLOOR VARIES PER SITE
FLOOR
235,4 [9,266] 450w
602 [23,703] 450w
725,044 [28,545] 450w
450w VENT PIPE
LH SIDE OF MAGNET
RH SIDE OF MAGNET
450w MAGNET ISOCENTER
960,4 [37,811] 450w
REAR OF MAGNET
FRONT OF MAGNET
587,1 [23,12] 450w
363,4 [14,31] 450w
235,4 [9,27] 450w
TOP (PLAN) VIEW
NOTE: THIS DRAWING GIVES 3x METHODS OF LOCATING THIS ASSEMBLY IN ROOM.
METHOD #1: MEASURE TO ISO CENTER.
METHOD #2: MEASURE TO VENT PIPE.
METHOD #3: MEASURE FROM CENTERLINE AND MAIN REAR FACE OF MAGNET.
IMPORTANT NOTE: INSTALLATION DIMENSIONS SHOWN MUST BE HELD TO AN ACCURACY OF ±15mm (±.62"). IF LOCATION EXCEEDS THIS TOLERANCE DO NOT PROCEED, AS CABLE COVERS WILL NOT FIT AT FINAL ASSEMBLY WITH MAGNET COVERS.
SIDE VIEW
FRONT OF MAGNET
NOTE ORIENTATION OF SLOTS (DOWNWARD) AND LATCH TOWARDS MAGNET FRONT
Approved Document - 5418944TPH_r2.pdf Page 2 of 2
State: RELEASE - Document is released and under formal Change Control. Changes are subject to the ECR/ECO Process. See the GEHC Mykronos System to determine the status of this document.

Architect cable concealment kit installation

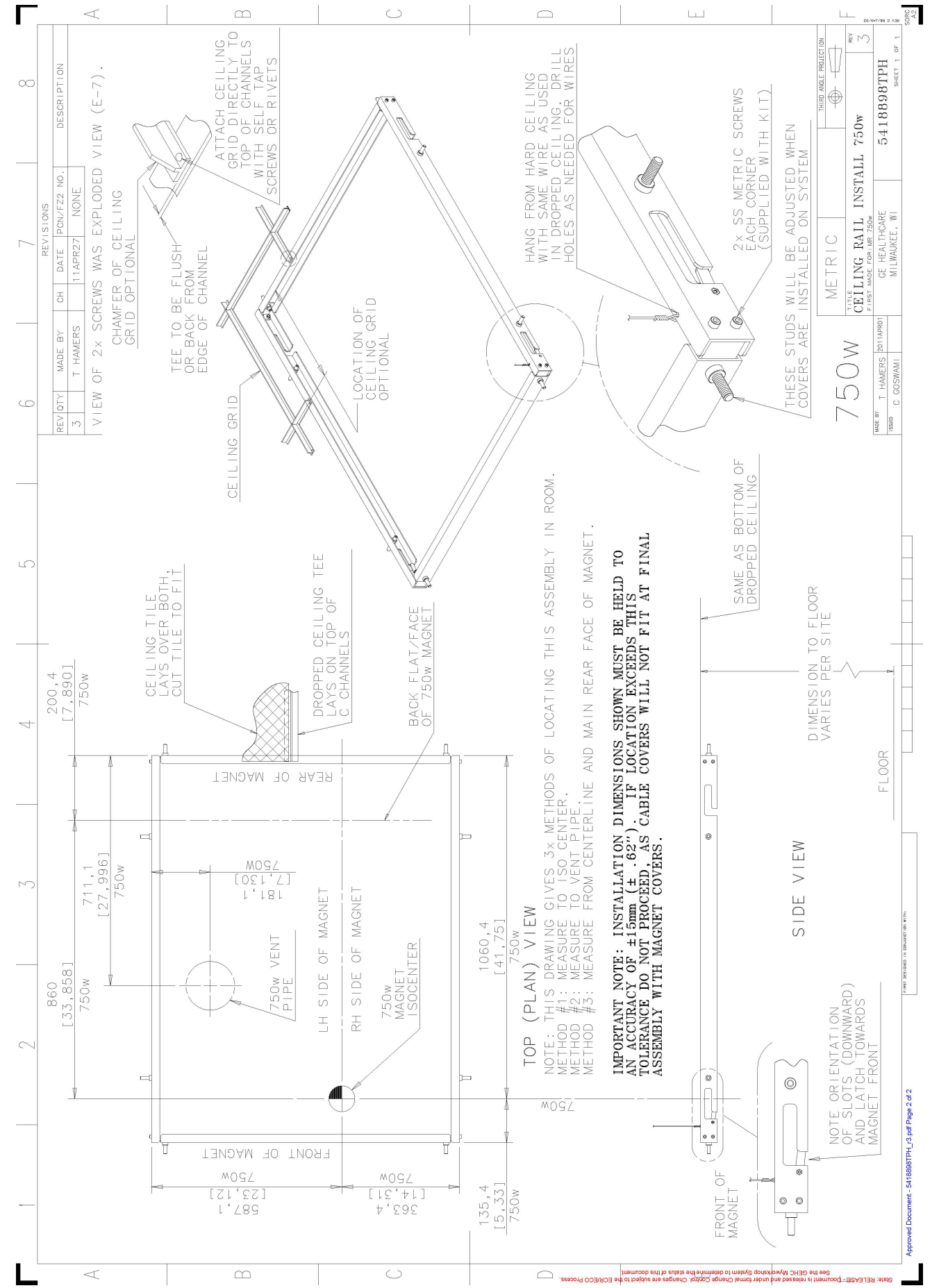
The Architect Cable Concealment Kit is an option delivered with this installation. It is provided if the customer site plans to install the kit.

If the concealment kit is to be installed, the installation instructions for the ceiling frame are found on the following page as part of 5418898TPH. The cable concealment kit is installed in two stages:

- **First Stage** - The Ceiling Frame Kit (5418561) is to be installed prior to the delivery of the remaining system cabinets and cables, which will be delivered to the site after the magnet installation. Refer to the instructions on the next page for location dimensions of the curtain rail. There are three methods for locating the curtain rail in the ceiling. They are:
  - Measure to the magnet isocenter
  - Measure to the center of the vent pipe
  - Measure from the centerline and main rear face of the magnet
- **Second Stage** - The four side covers are installed after the magnet enclosure has been installed and the curtain rail is in place in the ceiling. Refer to the *Discovery MR750w GEM and SIGNA Architect 3.0T Installation Manual* (5670010) for the Architect side cover installation procedures.

NOTICE

Installation dimensions shown on the following illustration must be held to an accuracy of ± 15 mm (± 0.62 inches). If the location exceeds this tolerance do not proceed, as cable covers will not fit at final assembly with the magnet covers.


REVISIONS
REV QTY MADE BY CH DATE PCN/FZ2 NO. DESCRIPTION
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VIEW OF 2x SCREWS WAS EXPLODED VIEW (E-7).
CHAMFER OF CEILING GRID OPTIONAL
TEE TO BE FLUSH OR BACK FROM EDGE OF CHANNEL
ATTACH CEILING GRID DIRECTLY TO TOP OF CHANNELS WITH SELF TAP SCREWS OR RIVETS
CEILING GRID
LOCATION OF CEILING GRID OPTIONAL
HANG FROM HARD CEILING WITH SAME WIRE AS USED IN DROPPED CEILING. DRILL HOLES AS NEEDED FOR WIRES
2x SS METRIC SCREWS EACH CORNER (SUPPLIED WITH KIT)
THESE STUDS WILL BE ADJUSTED WHEN COVERS ARE INSTALLED ON SYSTEM
750w
METRIC
TITLE
CEILING RAIL INSTALL 750w
FIRST MADE FOR: MR 750w
GE HEALTHCARE MILWAUKEE, WI
5418898TPH
SHEET 1 OF 1
REV 3
THIRD ANGLE PROJECTION
MADE BY T HAMERS 2011APR01
ISSUED C GOSWAMI
CEILING TILE LAYS OVER BOTH, CUT TILE TO FIT
DROPPED CEILING TEE LAYS ON TOP OF C CHANNELS
BACK FLAT/FACE OF 750w MAGNET
SAME AS BOTTOM OF DROPPED CEILING
DIMENSION TO FLOOR VARIES PER SITE
FLOOR
200,4 [7,890] 750w
711,1 [27,996] 750w
860 [33,858] 750w
1060,4 [41,75] 750w
135,4 [5,33] 750w
750w [7,1,30]
750w VENT PIPE
LH SIDE OF MAGNET
RH SIDE OF MAGNET
750w MAGNET ISOCENTER
REAR OF MAGNET
FRONT OF MAGNET
750w [23,12]
750w [14,31]
587,1
363,4
TOP (PLAN) VIEW
NOTE: THIS DRAWING GIVES 3x METHODS OF LOCATING THIS ASSEMBLY IN ROOM.
METHOD #1: MEASURE TO ISO CENTER.
METHOD #2: MEASURE TO VENT PIPE.
METHOD #3: MEASURE FROM CENTERLINE AND MAIN REAR FACE OF MAGNET.
IMPORTANT NOTE: INSTALLATION DIMENSIONS SHOWN MUST BE HELD TO AN ACCURACY OF ±15mm (±.62"). IF LOCATION EXCEEDS THIS TOLERANCE DO NOT PROCEED, AS CABLE COVERS WILL NOT FIT AT FINAL ASSEMBLY WITH MAGNET COVERS.
SIDE VIEW
FRONT OF MAGNET
NOTE ORIENTATION OF SLOTS (DOWNWARD) AND LATCH TOWARDS MAGNET FRONT
Approved Document - 5418898TPH_r3.pdf Page 2 of 2
State: RELEASE=Document is released and under formal Change Control. Changes are subject to the ECR/ECO Process. See the GEHC Mykonos System to determine the status of this document.

Chapter 4 Completing the installation

4.1 Making sure the pre-magnet delivery installation is complete

About this task

The following steps need to be reviewed and completed by a GE HealthCare Field Engineer, especially if the system was installed by non-GE HealthCare personnel.

Procedure

1. Make sure all steps in the flowchart are complete.
2. Resolve any shipment shortages.
3. Resolve any omissions made by the mechanical contractors.

4.2 Completing the GE HealthCare Field Engineer responsibilities

Procedure

1. Record and enter applicable data into applicable site configuration files and records.
2. Complete product locator information for all installed serialized components, new or updated, using one of the following methods:
   - **(U.S. Only)** FE Site Verification website
   - Process and return product locater installation cards for all serialized components to: **Product Locator File, P.O. Box 414, W-523, Milwaukee, WI 53201-0414**

   See 1.3 Product locator on page 19 for details on submitting Product Locator information.

   NOTE
   Failure to fill out and return product locator cards may result in failure of your site to receive future FMIs.
3. Store the delivered site's set of service tools and spare kit in the service cabinet at the site.
4. Set up and organize a reference cabinet for the service manuals. Leave all service manuals on-site.
5. Locate any Material Safety Data Sheets (MSDS). They must be retained on-site. Inform the customer that material with MSDS was brought on-site, as the customer should know/decide where on-site the MSDS should be retained.
6. Make sure that the entire site is clean from any install debris before handing it over to the customer for clinical scanning. Also inform customer to follow the instructions given in the Operator Manual for cleaning and disinfection prior to starting the clinical scanning.

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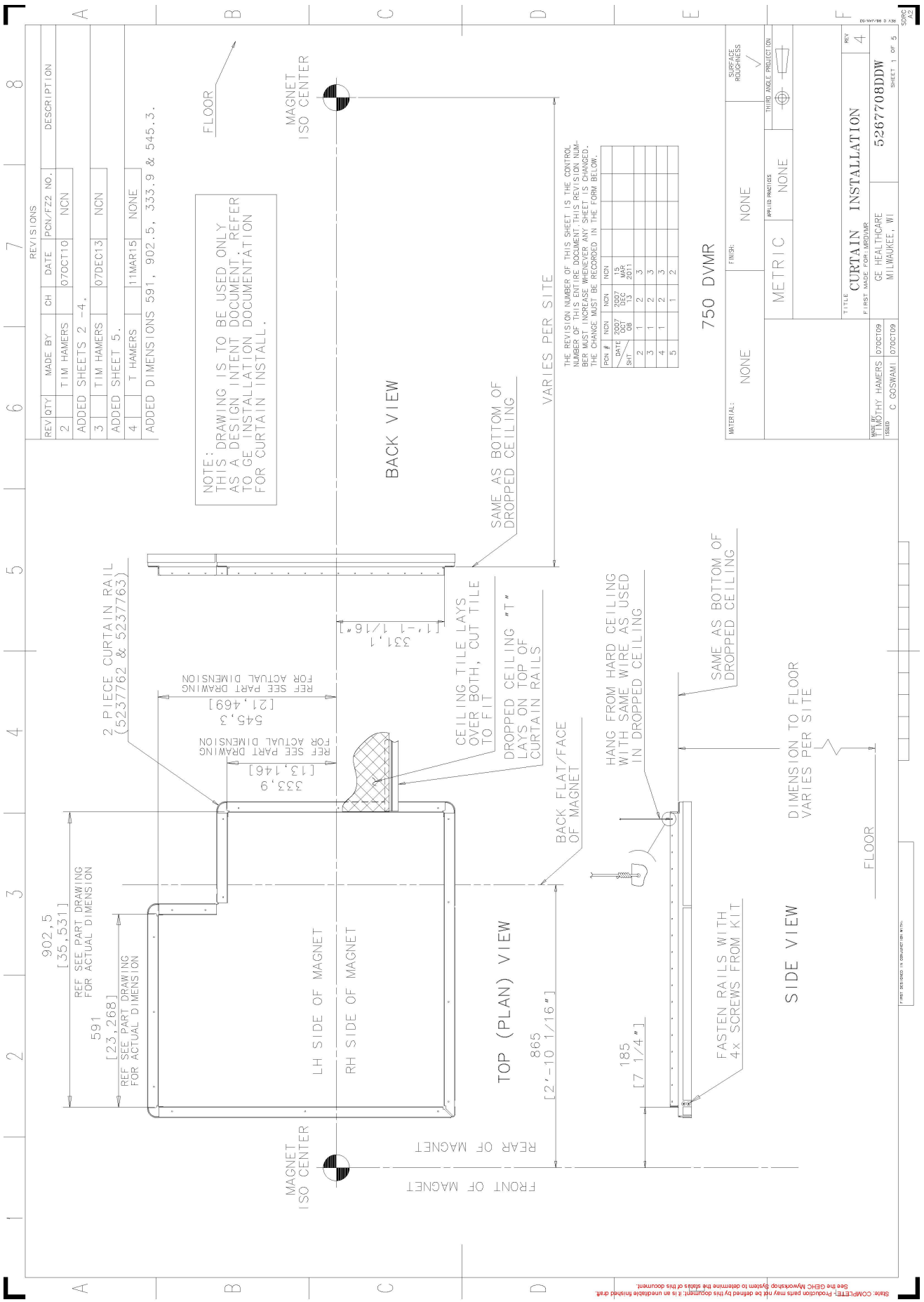
Appendix A MR750 and MR450w cable curtain installation

MR750 cable curtain installation

The Curtain Kit Collector (5241434) is delivered with this installation. It is provided if the customer site plans to install the curtain. This option is only installed for MR750.

If the curtain is to be installed, the installation instructions are found in the following pages as part of 5267708DDW. The curtain kit is installed in two stages:

- **First Stage** - The curtain rail front and rear assemblies (5237762 and 5237763) are to be installed prior to the delivery of the remaining system cabinets and cables, which will be delivered to site after magnet installation. Refer to sheet one of 5267708DDW on the next page for location dimensions of the curtain rail from the magnet isocenter or rear flange.
- **Second Stage** - The front and rear curtain covers (5241217 and 5241217-2) are installed after the magnet enclosure has been installed and the curtain rail is in place in the ceiling. Refer to the *Discovery MR450 & MR750 System Installation* (5500102) for curtain cover installation procedures.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ADDED SHEETS 2 -4.
3 TIM HAMERS 07DEC13 NCN
ADDED SHEET 5.
4 T HAMERS 11MAR15 NONE
ADDED DIMENSIONS 591, 902.5, 333.9 & 545.3.
NOTE:
THIS DRAWING IS TO BE USED ONLY AS A DESIGN INTENT DOCUMENT. REFER TO GE INSTALLATION DOCUMENTATION FOR CURTAIN INSTALL.
FLOOR
MAGNET ISO CENTER
BACK VIEW
VARIES PER SITE
SAME AS BOTTOM OF DROPPED CEILING
THE REVISION NUMBER OF THIS SHEET IS THE CONTROL NUMBER OF THIS ENTIRE DOCUMENT. THIS REVISION NUMBER MUST INCREASE WHENEVER ANY SHEET IS CHANGED. THE CHANGE MUST BE RECORDED IN THE FORM BELOW.
PCN # NCN NCN NCN
DATE 07OCT 08 07DEC 13 15 MAR 2011
SHT
2 1 2 3
3 1 2 3
4 1 2 3
5 1 2
750 DVMR
MATERIAL: NONE
FINISH: NONE
SURFACE ROUGHNESS
METRIC
APPLIED PRACTICES NONE
THIRD ANGLE PROJECTION
TITLE CURTAIN INSTALLATION
FIRST MADE FOR: MRDVMR
GE HEALTHCARE MILWAUKEE, WI
5267708DDW
REV 4
SHEET 1 OF 5
MADE BY: T HAMERS 07OCT09
CHKD C GOSWAMI 07OCT09
2 PIECE CURTAIN RAIL (5237762 & 5237763)
REF SEE PART DRAWING FOR ACTUAL DIMENSION
545,3 [21,469]
333,9 [13,146]
CEILING TILE LAYS OVER BOTH, CUT TILE TO FIT
DROPPED CEILING "T" LAYS ON TOP OF CURTAIN RAILS
BACK FLAT/FACE OF MAGNET
HANG FROM HARD CEILING WITH SAME WIRE AS USED IN DROPPED CEILING
SAME AS BOTTOM OF DROPPED CEILING
DIMENSION TO FLOOR VARIES PER SITE
FLOOR
902,5 [35,531]
REF SEE PART DRAWING FOR ACTUAL DIMENSION
591 [23,268]
REF SEE PART DRAWING FOR ACTUAL DIMENSION
LH SIDE OF MAGNET
RH SIDE OF MAGNET
TOP (PLAN) VIEW
865 [2'-10 1/16"]
185 [7 1/4"]
FASTEN RAILS WITH 4x SCREWS FROM KIT
SIDE VIEW
REAR OF MAGNET
FRONT OF MAGNET
MAGNET ISO CENTER
State: COMPLETE+ Production parts may not be defined by this document; it is an unreliable finished draft.
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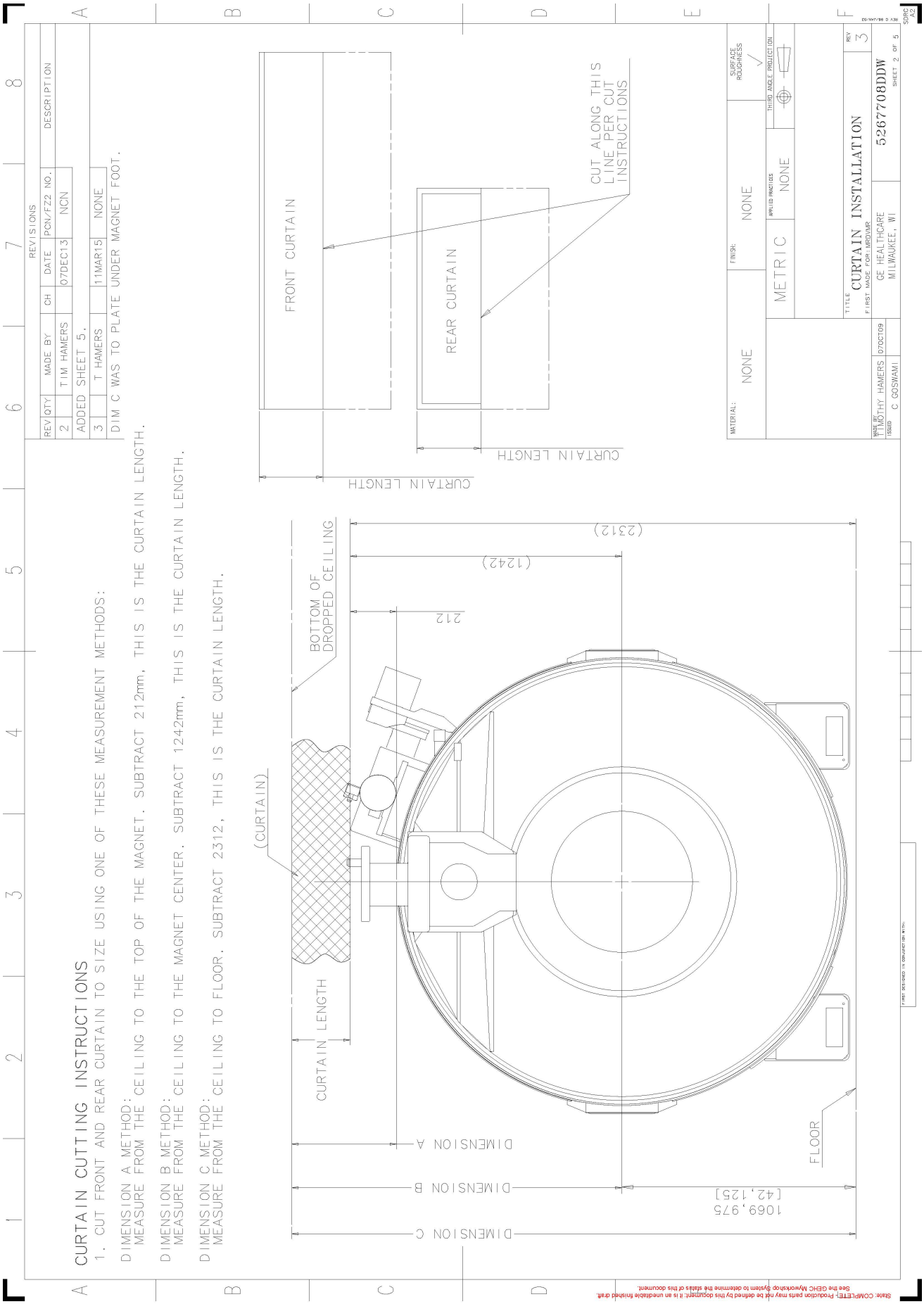
REVISIONS
REV | QTY | MADE BY | CH | DATE | PCN/FZ2 NO. | DESCRIPTION
2 | | TIM HAMERS | | 07DEC13 | NCN | ADDED SHEET 5.
3 | | T HAMERS | | 11MAR15 | NONE | DIM C WAS TO PLATE UNDER MAGNET FOOT.
CURTAIN INSTRUCTIONS
1. CUT FRONT AND REAR CURTAIN TO SIZE USING ONE OF THESE MEASUREMENT METHODS:
DIMENSION A METHOD:
MEASURE FROM THE CEILING TO THE TOP OF THE MAGNET. SUBTRACT 212mm, THIS IS THE CURTAIN LENGTH.
DIMENSION B METHOD:
MEASURE FROM THE CEILING TO THE MAGNET CENTER. SUBTRACT 1242mm, THIS IS THE CURTAIN LENGTH.
DIMENSION C METHOD:
MEASURE FROM THE CEILING TO FLOOR. SUBTRACT 2312, THIS IS THE CURTAIN LENGTH.
FRONT CURTAIN
REAR CURTAIN
CUT ALONG THIS LINE PER CUT INSTRUCTIONS
CURTAIN LENGTH
CURTAIN LENGTH
BOTTOM OF DROPPED CEILING
(CURTAIN)
CURTAIN LENGTH
(2312)
(1242)
212
DIMENSION A
DIMENSION B
DIMENSION C
FLOOR
1069,975
[42,125]
MATERIAL: NONE
FINISH: NONE
METRIC
APPLIED PRACTICES NONE
THIRD ANGLE PROJECTION
SURFACE ROUGHNESS
TITLE
CURTAIN INSTALLATION
FIRST MADE FOR: MRDVMR
GE HEALTHCARE
MILWAUKEE, WI
5267708DDW
REV 3
SHEET 2 OF 5
MADE BY TIMOTHY HAMERS 07OCT09
ISSUED C GOSWAMI
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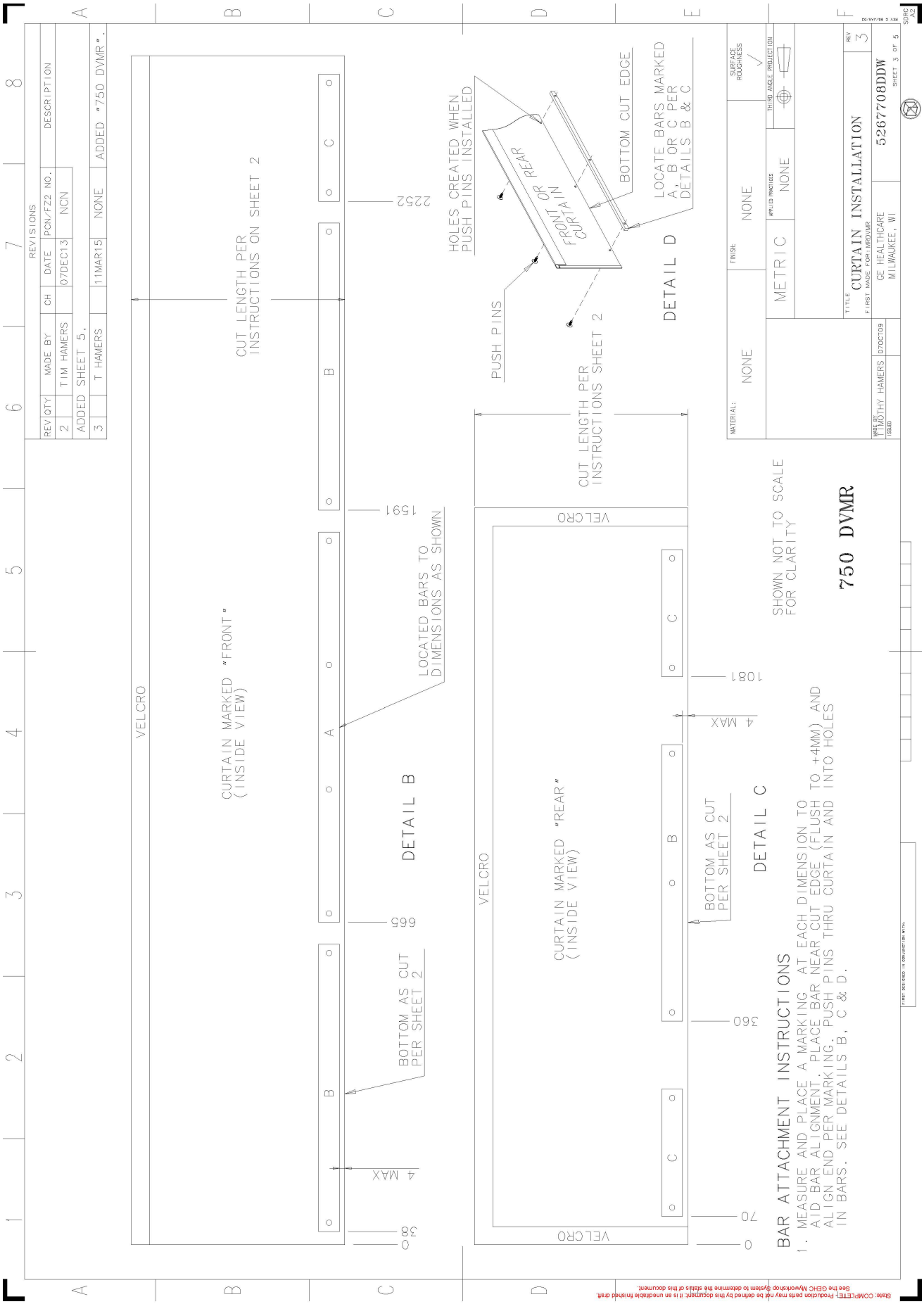
REVISIONS
REV QTY MADE BY CH DATE PCN/FZ2 NO. DESCRIPTION
2 TIM HAMERS 07DEC13 NCN
ADDED SHEET 5,
3 T HAMERS 11MAR15 NONE ADDED "750 DVMR".
CUT LENGTH PER INSTRUCTIONS ON SHEET 2
2252
CURTAIN MARKED "FRONT" (INSIDE VIEW)
VELCRO
LOCATED BARS TO DIMENSIONS AS SHOWN
1591
DETAIL B
BOTTOM AS CUT PER SHEET 2
4 MAX
650
30
0
HOLES CREATED WHEN PUSH PINS INSTALLED
PUSH PINS
FRONT OR REAR CURTAIN
BOTTOM CUT EDGE
LOCATE BARS MARKED A, B OR C PER DETAILS B & C
DETAIL D
CUT LENGTH PER INSTRUCTIONS SHEET 2
VELCRO
CURTAIN MARKED "REAR" (INSIDE VIEW)
VELCRO
1081
4 MAX
BOTTOM AS CUT PER SHEET 2
DETAIL C
560
70
0
SHOWN NOT TO SCALE FOR CLARITY
750 DVMR
BAR ATTACHMENT INSTRUCTIONS
1. MEASURE AND PLACE A MARKING AT EACH DIMENSION TO AID BAR ALIGNMENT. PLACE BAR NEAR CUT EDGE (FLUSH TO +4MM) AND ALIGN END PER MARKING. PUSH PINS THRU CURTAIN AND INTO HOLES IN BARS. SEE DETAILS B, C & D.
MATERIAL: NONE
FINISH: NONE
METRIC
APPLIED PRACTICES NONE
THIRD ANGLE PROJECTION
SURFACE ROUGHNESS
TITLE CURTAIN INSTALLATION
FIRST MADE FOR MRDVMR
GE HEALTHCARE MILWAUKEE, WI
5267708DDW
REV 3
SHEET 3 OF 5
SDRC 252
DRAWN BY TIMOTHY HAMERS 07OCT09
ISSUED
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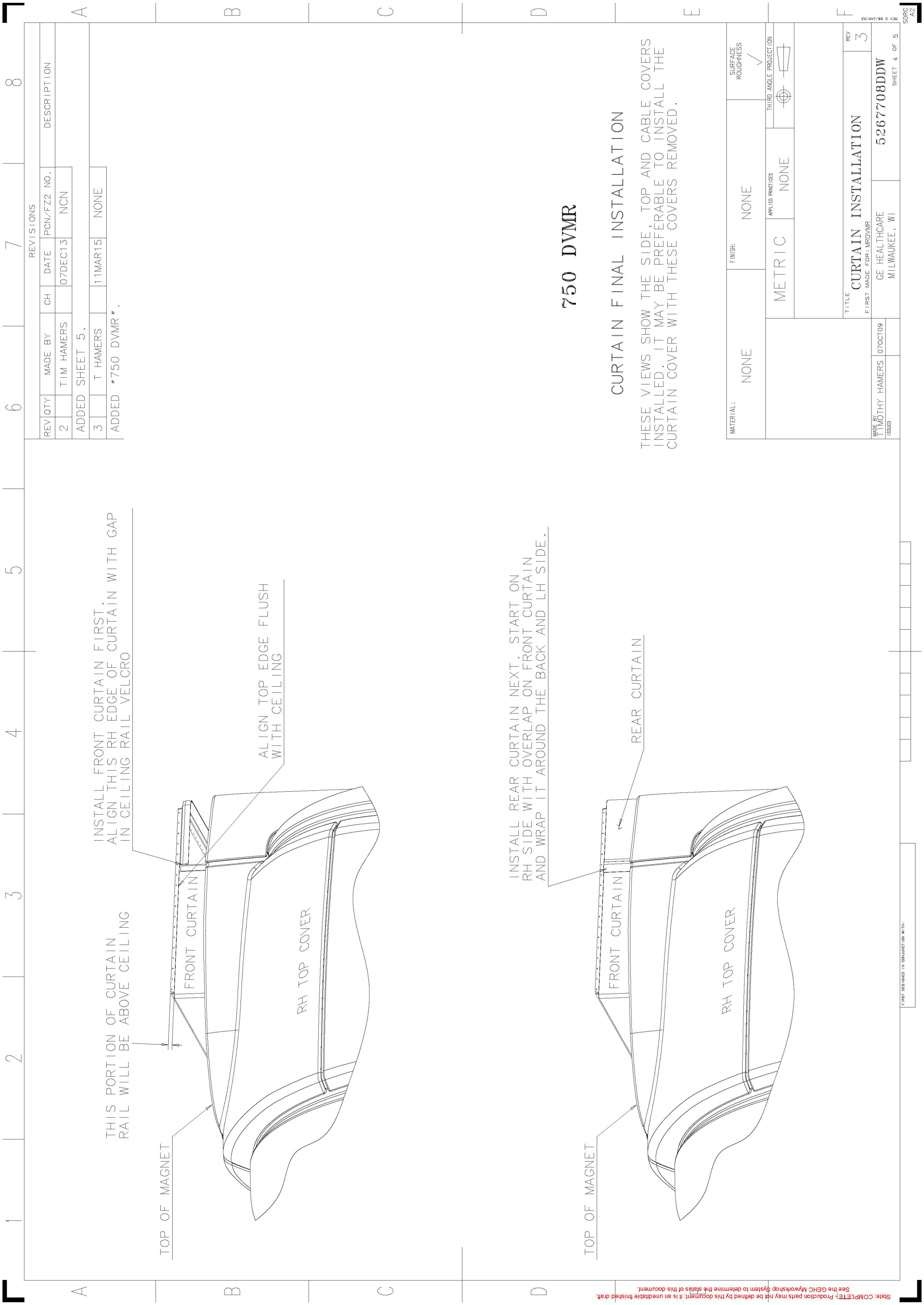
REVISIONS
REV QTY MADE BY CH DATE PCN/FZ2 NO. DESCRIPTION
2 TIM HAMERS 07DEC13 NCN
ADDED SHEET 5.
3 T HAMERS 11MAR15 NONE
ADDED "750 DVMR".
750 DVMR
CURTAIN FINAL INSTALLATION
THESE VIEWS SHOW THE SIDE, TOP AND CABLE COVERS INSTALLED. IT MAY BE PREFERABLE TO INSTALL THE CURTAIN COVER WITH THESE COVERS REMOVED.
INSTALL FRONT CURTAIN FIRST. ALIGN THIS RH EDGE OF CURTAIN WITH GAP IN CEILING RAIL VELCRO
ALIGN TOP EDGE FLUSH WITH CEILING
THIS PORTION OF CURTAIN RAIL WILL BE ABOVE CEILING
FRONT CURTAIN
RH TOP COVER
TOP OF MAGNET
INSTALL REAR CURTAIN NEXT. START ON RH SIDE WITH OVERLAP ON FRONT CURTAIN AND WRAP IT AROUND THE BACK AND LH SIDE.
REAR CURTAIN
FRONT CURTAIN
RH TOP COVER
TOP OF MAGNET
MATERIAL: NONE
FINISH: NONE
SURFACE ROUGHNESS
METRIC
APPLIED PRACTICES NONE
THIRD ANGLE PROJECTION
MADE BY TIMOTHY HAMERS 07OCT09
TITLE CURTAIN INSTALLATION
FIRST MADE FOR: MRDVMR
GE HEALTHCARE MILWAUKEE, WI
5267708DDW
REV 3
SHEET 4 OF 5
SDRC A2
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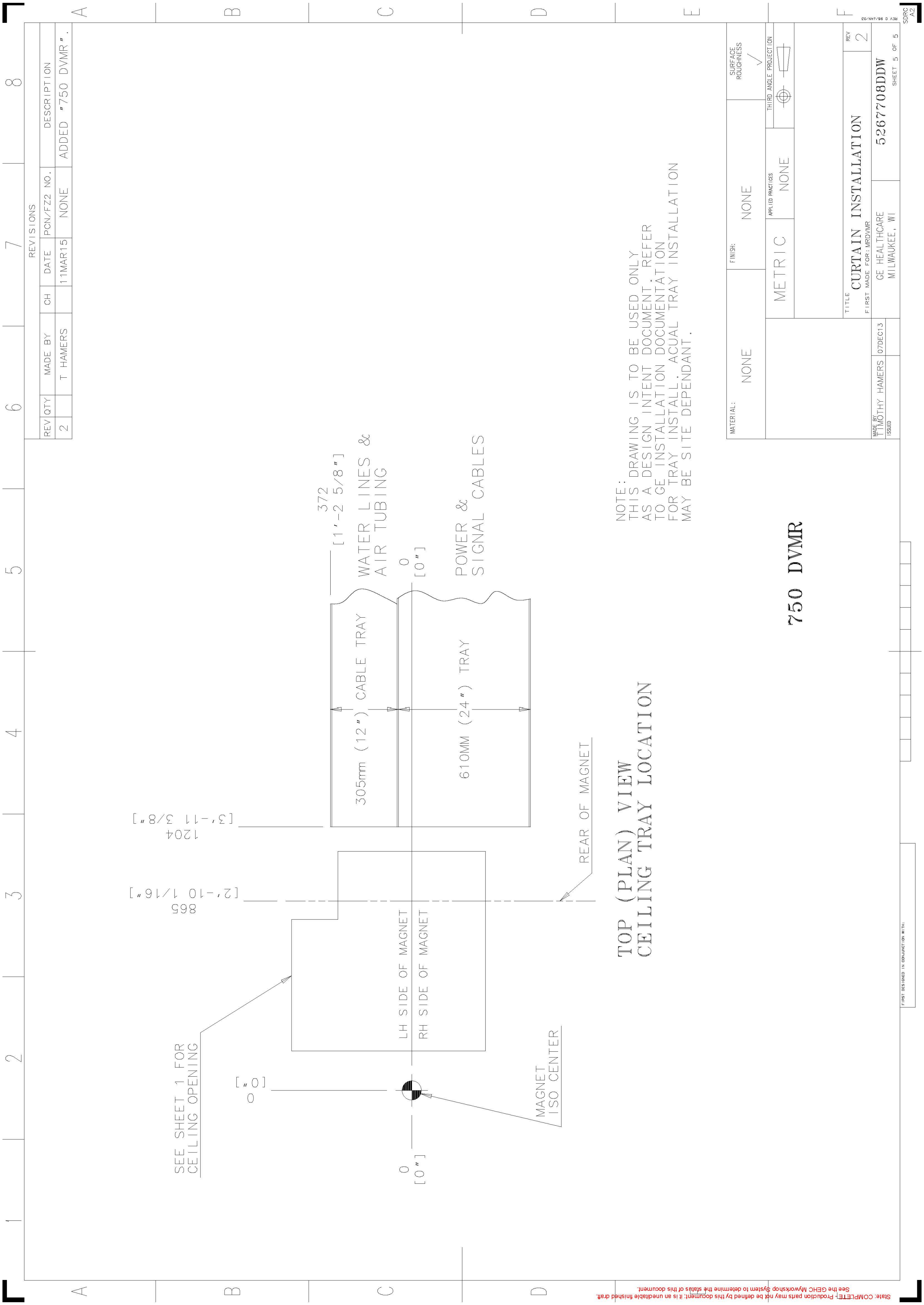
REVISIONS
REV | QTY | MADE BY | CH | DATE | PCN/FZ2 NO. | DESCRIPTION
2 | | T HAMERS | | 11MAR15 | NONE | ADDED "750 DVMR".
372
[1'-2 5/8"]
WATER LINES &
AIR TUBING
0
[0"]
POWER &
SIGNAL CABLES
NOTE:
THIS DRAWING IS TO BE USED ONLY
AS A DESIGN INTENT DOCUMENT. REFER
TO GE INSTALLATION DOCUMENTATION
FOR TRAY INSTALL. ACUAL TRAY INSTALLATION
MAY BE SITE DEPENDANT.
750 DVMR
305mm (12") CABLE TRAY
610MM (24") TRAY
1204
[3'-11 3/8"]
865
[2'-10 1/16"]
REAR OF MAGNET
LH SIDE OF MAGNET
RH SIDE OF MAGNET
TOP (PLAN) VIEW
CEILING TRAY LOCATION
SEE SHEET 1 FOR
CEILING OPENING
0
[0"]
MAGNET
ISO CENTER
MATERIAL: NONE
FINISH: NONE
SURFACE ROUGHNESS
APPLIED PRACTICES NONE
THIRD ANGLE PROJECTION
METRIC
TITLE
CURTAIN INSTALLATION
FIRST MADE FOR: MRDVMR
GE HEALTHCARE
MILWAUKEE, WI
MADE BY TIMOTHY HAMERS 07DEC13
ISSUED
REV 2
5267708DDW
SHEET 5 OF 5
SDRC A2
FIRST DESIGNED IN CONJUNCTION WITH:
State: COMPLETE - Production parts may not be defined by this document; it is an uneditable finished draft.
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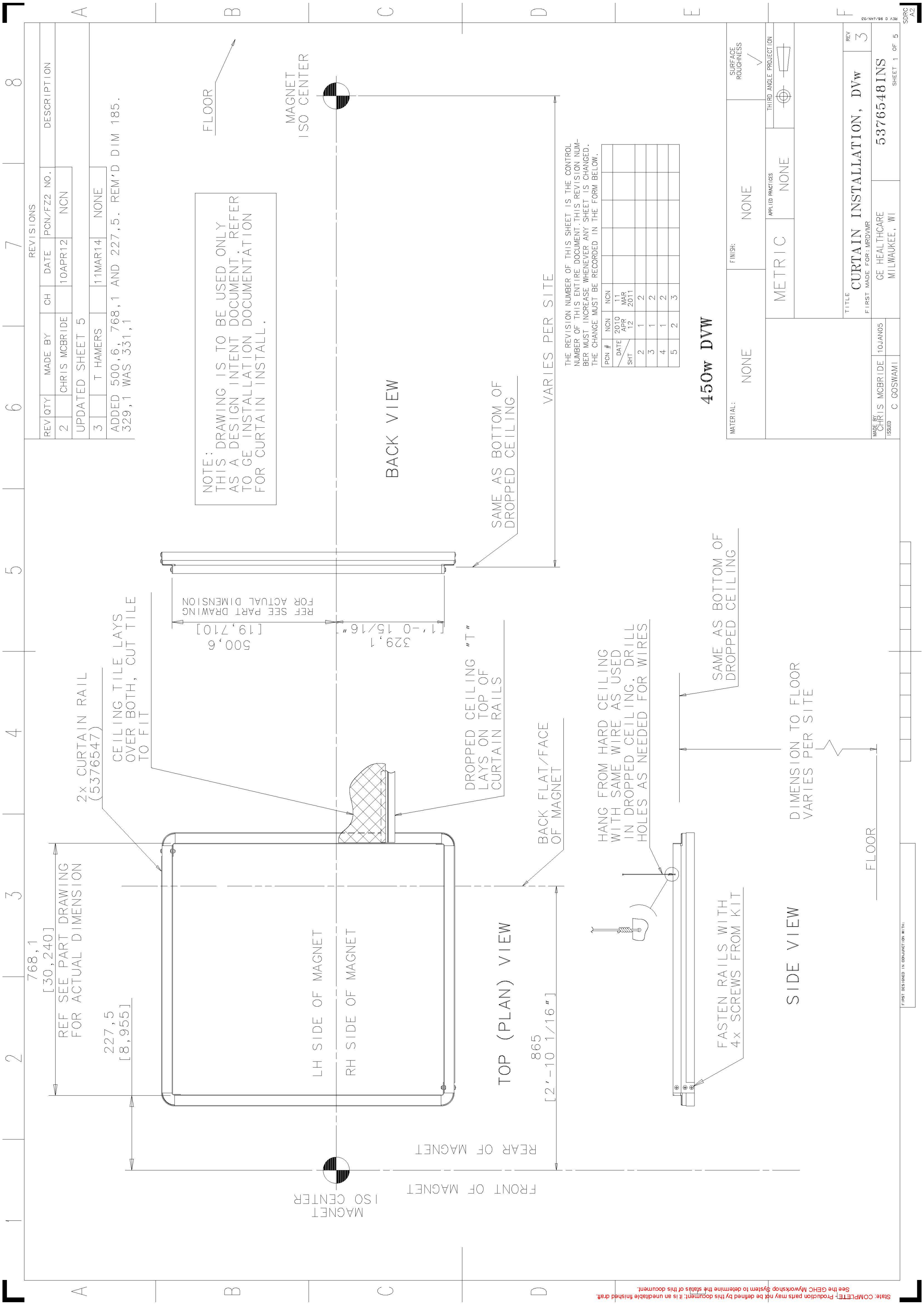
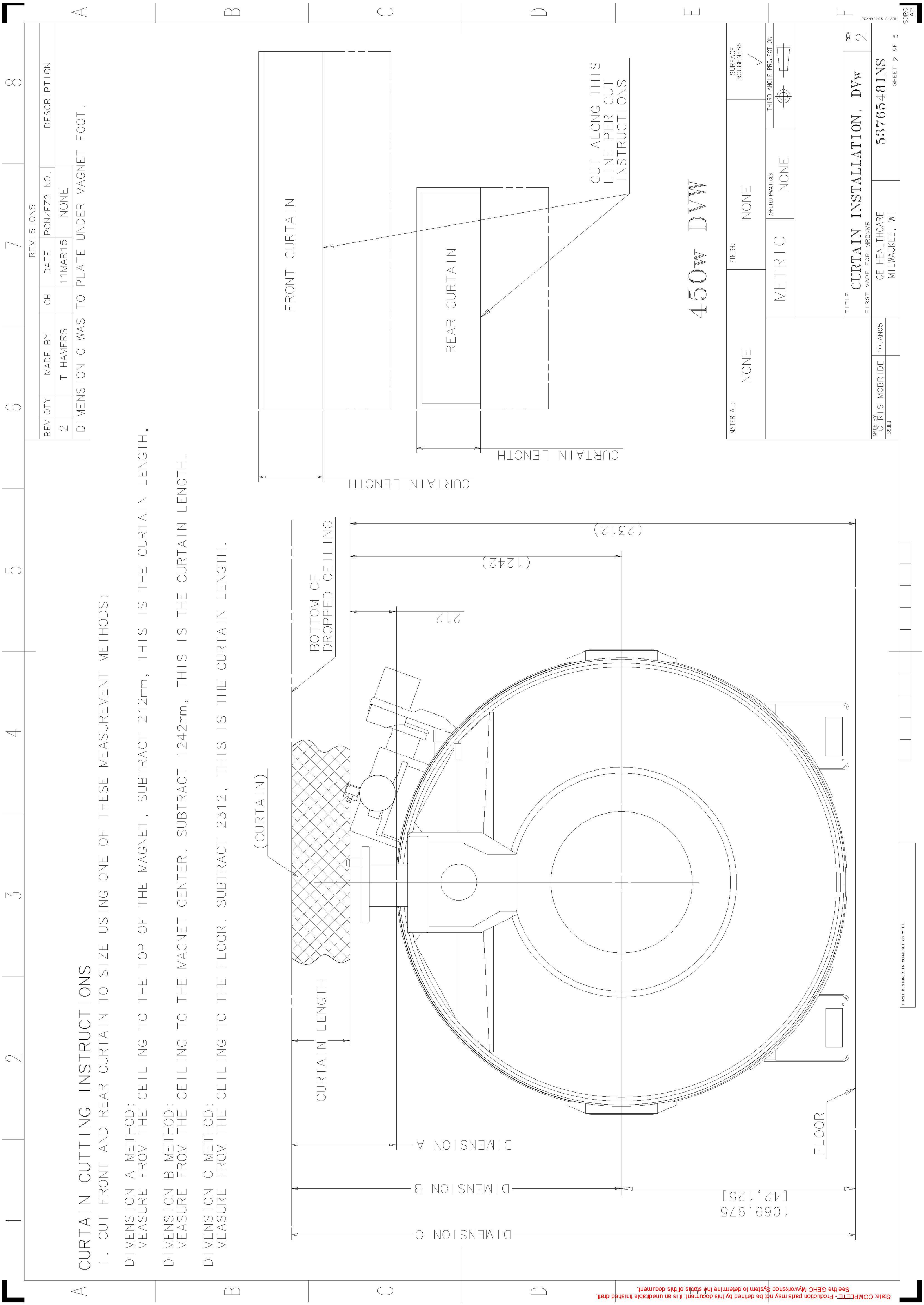
MR450w cable curtain installation

The Curtain Kit (5376552) is delivered with this installation. It is provided if the customer site plans to install the curtain. This option is only installed for MR450w.

If the curtain is to be installed, the installation instructions are found in the following pages as part of 5376548INS. The kit is installed in two stages:

- **First Stage** - The two-piece curtain rail assembly (5376547), for the front and rear, is to be installed prior to the delivery of the remaining system cabinets and cables, which will be delivered to site after the magnet installation. Refer to sheet one of 5376548INS on the next page for the location dimensions of the curtain rail from the magnet isocenter or rear flange.
- **Second Stage** - The front and rear curtain covers (5376553 and 5376553-2) are installed after the magnet enclosure has been installed and the curtain rail is in place in the ceiling. Refer to the *Optima MR450w, Optima MR450w GEM, and SIGNA Artist System Installation Manual* (5670002) for curtain cover installation procedures.


REVISIONS
REV QTY MADE BY CH DATE PCN/FZ2 NO. DESCRIPTION
2 CHRIS MCBRIDE 10APR12 NCN
UPDATED SHEET 5
3 T HAMERS 11MAR14 NONE
ADDED 500,6, 768,1 AND 227,5. REM'D DIM 185.
329,1 WAS 331,1
FLOOR
MAGNET ISO CENTER
NOTE:
THIS DRAWING IS TO BE USED ONLY AS A DESIGN INTENT DOCUMENT. REFER TO GE INSTALLATION DOCUMENTATION FOR CURTAIN INSTALL.
BACK VIEW
SAME AS BOTTOM OF DROPPED CEILING
VARIES PER SITE
THE REVISION NUMBER OF THIS SHEET IS THE CONTROL NUMBER OF THIS ENTIRE DOCUMENT. THIS REVISION NUMBER MUST INCREASE WHENEVER ANY SHEET IS CHANGED. THE CHANGE MUST BE RECORDED IN THE FORM BELOW.
450w DVW
MATERIAL: NONE
FINISH: NONE
SURFACE ROUGHNESS
METRIC
APPLIED PRACTICES NONE
THIRD ANGLE PROJECTION
TITLE CURTAIN INSTALLATION, DVw
FIRST MADE FOR: MRDVMR
GE HEALTHCARE MILWAUKEE, WI
5376548INS
SHEET 1 OF 5
REV 3
MADE BY CHRIS MCBRIDE 10JAN05
ISSUED C GOSWAMI
REF SEE PART DRAWING FOR ACTUAL DIMENSION
500,6 [19,710]
329,1 [1'-0 15/16"]
2x CURTAIN RAIL (5376547)
CEILING TILE LAYS OVER BOTH, CUT TILE TO FIT
DROPPED CEILING "T" LAYS ON TOP OF CURTAIN RAILS
BACK FLAT/FACE OF MAGNET
HANG FROM HARD CEILING WITH SAME WIRE AS USED IN DROPPED CEILING. DRILL HOLES AS NEEDED FOR WIRES
SAME AS BOTTOM OF DROPPED CEILING
DIMENSION TO FLOOR VARIES PER SITE
FLOOR
768,1 [30,240]
REF SEE PART DRAWING FOR ACTUAL DIMENSION
227,5 [8,955]
LH SIDE OF MAGNET
RH SIDE OF MAGNET
TOP (PLAN) VIEW
865 [2'-10 1/16"]
FASTEN RAILS WITH 4x SCREWS FROM KIT
SIDE VIEW
REAR OF MAGNET
FRONT OF MAGNET
MAGNET ISO CENTER


CURTAIN CUTTING INSTRUCTIONS
1. CUT FRONT AND REAR CURTAIN TO SIZE USING ONE OF THESE MEASUREMENT METHODS:
DIMENSION A METHOD:
MEASURE FROM THE CEILING TO THE TOP OF THE MAGNET. SUBTRACT 212mm, THIS IS THE CURTAIN LENGTH.
DIMENSION B METHOD:
MEASURE FROM THE CEILING TO THE MAGNET CENTER. SUBTRACT 1242mm, THIS IS THE CURTAIN LENGTH.
DIMENSION C METHOD:
MEASURE FROM THE CEILING TO THE FLOOR. SUBTRACT 2312, THIS IS THE CURTAIN LENGTH.
REVISIONS
REV
QTY
MADE BY
CH
DATE
PCN/FZ2 NO.
DESCRIPTION
2
T HAMERS
11MAR15
NONE
DIMENSION C WAS TO PLATE UNDER MAGNET FOOT.
FRONT CURTAIN
REAR CURTAIN
CUT ALONG THIS LINE PER CUT INSTRUCTIONS
CURTAIN LENGTH
CURTAIN LENGTH
450w DVW
BOTTOM OF DROPPED CEILING
(CURTAIN)
CURTAIN LENGTH
212
(1242)
(2312)
DIMENSION A
DIMENSION B
DIMENSION C
1069,975
[42,125]
FLOOR
MATERIAL:
NONE
FINISH:
NONE
SURFACE ROUGHNESS
THIRD ANGLE PROJECTION
APPLIED PRACTICES
NONE
METRIC
TITLE
CURTAIN INSTALLATION, DVw
FIRST MADE FOR: MRDVMR
GE HEALTHCARE
MILWAUKEE, WI
MADE BY
CHRIS MCBRIDE
10JAN05
ISSUED
REV
2
5376548INS
SHEET 2 OF 5
SDRC A2
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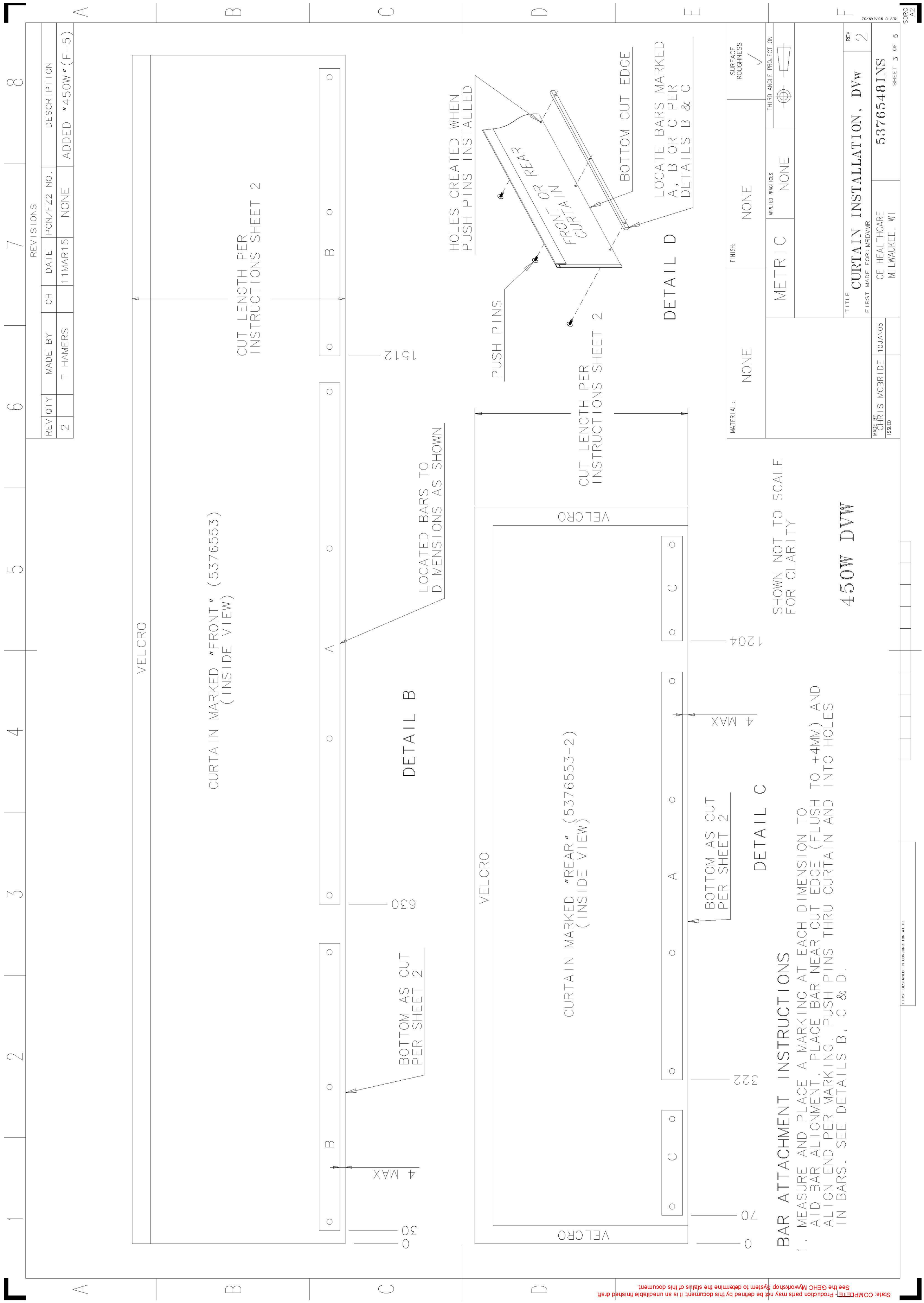
REVISIONS
REV | QTY | MADE BY | CH | DATE | PCN/FZ2 NO. | DESCRIPTION
2 | | T HAMERS | | 11MAR15 | NONE | ADDED "450W"(F-5)
VELCRO
CURTAIN MARKED "FRONT" (5376553)
(INSIDE VIEW)
CUT LENGTH PER
INSTRUCTIONS SHEET 2
LOCATED BARS TO
DIMENSIONS AS SHOWN
BOTTOM AS CUT
PER SHEET 2
DETAIL B
4 MAX
0
30
630
1512
HOLES CREATED WHEN
PUSH PINS INSTALLED
FRONT OR REAR
CURTAIN
BOTTOM CUT EDGE
LOCATE BARS MARKED
A, B OR C PER
DETAILS B & C
PUSH PINS
CUT LENGTH PER
INSTRUCTIONS SHEET 2
DETAIL D
CURTAIN MARKED "REAR" (5376553-2)
(INSIDE VIEW)
BOTTOM AS CUT
PER SHEET 2
DETAIL C
4 MAX
0
70
322
1204
SHOWN NOT TO SCALE
FOR CLARITY
450W DVW
BAR ATTACHMENT INSTRUCTIONS
1. MEASURE AND PLACE A MARKING AT EACH DIMENSION TO AID BAR ALIGNMENT. PLACE BAR NEAR CUT EDGE (FLUSH TO +4MM) AND ALIGN END PER MARKING. PUSH PINS THRU CURTAIN AND INTO HOLES IN BARS. SEE DETAILS B, C & D.
MATERIAL: NONE
FINISH: NONE
METRIC
APPLIED PRACTICES NONE
THIRD ANGLE PROJECTION
SURFACE ROUGHNESS
TITLE CURTAIN INSTALLATION, DVw
FIRST MADE FOR: MRDVMR
GE HEALTHCARE
MILWAUKEE, WI
5376548 1INS
REV 2
SHEET 3 OF 5
MADE BY CHRIS MCBRIDE 10JAN05
SDRC A2
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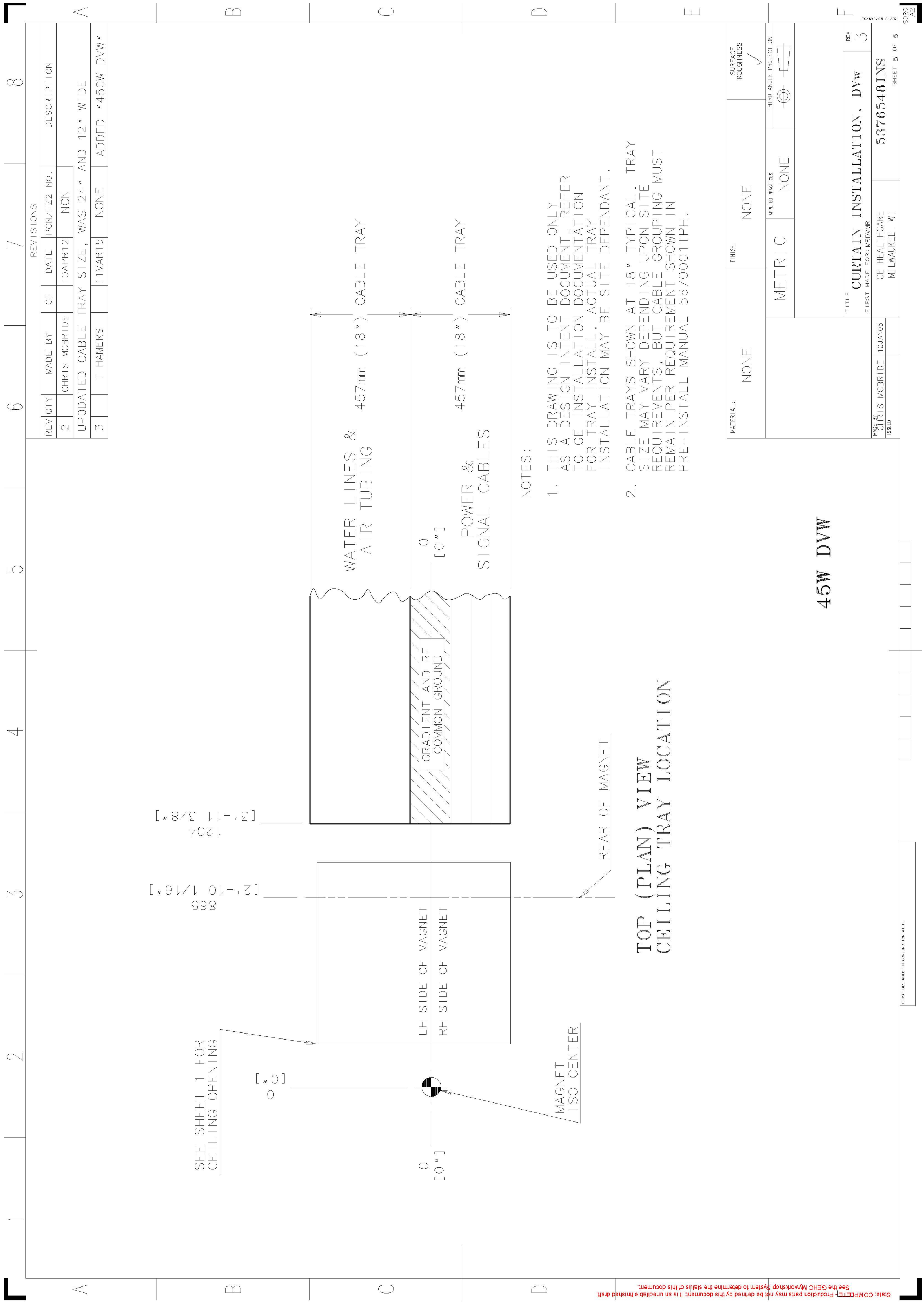
REVISIONS
REV | QTY | MADE BY | CH | DATE | PCN/F22 NO. | DESCRIPTION
2 | | T HAMERS | | 11MAR15 | NONE | ADDED "450W DVW".
450W DVW
CURTAIN FINAL INSTALLATION
THESE VIEWS SHOW THE SIDE, TOP AND CABLE COVERS INSTALLED. IT MAY BE PREFERABLE TO INSTALL THE CURTAIN COVER WITH THESE COVERS REMOVED.
MATERIAL: NONE
FINISH: NONE
METRIC
APPLIED PRACTICES NONE
SURFACE ROUGHNESS
THIRD ANGLE PROJECTION
TITLE CURTAIN INSTALLATION, DVw
FIRST MADE FOR: MRDVMR
GE HEALTHCARE MILWAUKEE, WI
5376548INS
REV 2
SHEET 4 OF 5
INSTALL FRONT CURTAIN FIRST. ALIGN THIS RH EDGE OF CURTAIN WITH GAP IN CEILING RAIL VELCRO
ALIGN TOP EDGE FLUSH WITH CEILING
THIS PORTION OF CURTAIN RAIL WILL BE ABOVE CEILING
FRONT CURTAIN
RH TOP COVER
TOP OF MAGNET
INSTALL REAR CURTAIN NEXT, START ON RH SIDE WITH OVERLAP ON FRONT CURTAIN AND WRAP IT AROUND THE BACK AND LH SIDE.
REAR CURTAIN
FRONT CURTAIN
RH TOP COVER
TOP OF MAGNET


REVISIONS
REV | QTY | MADE BY | CH | DATE | PCN/FZ2 NO. | DESCRIPTION
2 | CHRIS MCBRIDE | 10APR12 | NCN
UPODATED CABLE TRAY SIZE, WAS 24" AND 12" WIDE
3 | T HAMERS | 11MAR15 | NONE | ADDED "450W DVW"
WATER LINES & AIR TUBING
457mm (18") CABLE TRAY
POWER & SIGNAL CABLES
457mm (18") CABLE TRAY
0 [0"]
GRADIENT AND RF COMMON GROUND
1204 [3'-11 3/8"]
865 [2'-10 1/16"]
REAR OF MAGNET
LH SIDE OF MAGNET
RH SIDE OF MAGNET
SEE SHEET 1 FOR CEILING OPENING
0 [0"]
0 [0"]
MAGNET ISO CENTER
TOP (PLAN) VIEW
CEILING TRAY LOCATION
NOTES:
1. THIS DRAWING IS TO BE USED ONLY AS A DESIGN INTENT DOCUMENT. REFER TO GE INSTALLATION DOCUMENTATION FOR TRAY INSTALL. ACTUAL TRAY INSTALLATION MAY BE SITE DEPENDANT.
2. CABLE TRAYS SHOWN AT 18" TYPICAL. TRAY SIZE MAY VARY DEPENDING UPON SITE REQUIREMENTS, BUT CABLE GROUPING MUST REMAIN PER REQUIREMENT SHOWN IN PRE-INSTALL MANUAL 5670001TPH.
45W DVW
MATERIAL: NONE
FINISH: NONE
SURFACE ROUGHNESS
METRIC
APPLIED PRACTICES NONE
THIRD ANGLE PROJECTION
TITLE CURTAIN INSTALLATION, DVw
FIRST MADE FOR: MRDVMR
GE HEALTHCARE MILWAUKEE, WI
MADE BY CHRIS MCBRIDE 10JAN05
REV 3
5376548INS
SHEET 5 OF 5
SDRC A2
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Revision History

Revision	Date	Description
Controlled document for English is posted as DOC1406443.		

Revision	Date	Description
10	March 2024	• Removed references to MR450 throughout the manual. • Removed occurrences of "GEM" from "750w GEM" throughout the manual. • In Chapter 1 Getting started: ◦ Section *1.1 Preparing the site*: • *Table 1-2 Required conditions*: updated manual references. • Updated list of pre-magnet delivery items shipped before magnet delivery. • Removed *Figure 1-1 DVMR systems*. • Added the following figures: *Figure 1-1 Architect platform configuration*, *Figure 1-2 Artist platform configuration*, *Figure 1-3 MR450w, MR450w GEM, Artist legacy configuration*, *Figure 1-4 MR750, MR750w, Architect legacy configuration*, and *Figure 1-5 PET/MR*. ◦ Section *1.2 Doing an inspection of the product delivery*: added step 6 for systems with an ICC. ◦ Section *1.4 Pre-magnet delivery system installation workflow*: • *Figure 1-8 Prerequisites for system installation*: updated manual references. • Updated figure title for *Figure 1-9 Pre-magnet delivery mechanical installation - MR450w, MR450w GEM, MR750, MR750w, Artist legacy configuration, Architect legacy configuration, and PET/MR*. • Added *Figure 1-10 Pre-magnet delivery mechanical installation - Artist platform configuration and Architect platform configuration*. • In Chapter 2 Installing components - MR450w, MR450w GEM, MR750, MR750w, Artist legacy configuration, Architect legacy configuration, and PET/MR: the chapter title was updated to include a list of applicable products. ◦ Section *2.2 Installing the Heat Exchanger Cabinet (HEC)*, subsection *Cabinet moving dollies*: updated contact information for ordering dollies. ◦ Section *2.3 Installing the Main Disconnect Panel (MDP)*, a Note was added after *Figure 2-9 Main Disconnect Panel (MDP).* ◦ Updated section title in *2.10 Installing RF screen room wall mounting frame(s) and Secondary Pen Wall (SPW) or Penetration Panel (PP)*: • Subsection *Installing the mounting frames in the RF screen room opening*: • *Figure 2-26 Installing the mounting frames*: added note about Artist platform configuration. • Step 2: changed "both" frames to "all required" frames. • Updated subsection title in *Installing the SPW or PEN (if supplied at this time)*: • Updated figure title in *Figure 2-27 Installing the SPW (For MR450w, MR450w GEM, MR750, MR750w, Artist legacy configuration, Architect, and PET/MR)*. • Added *Figure 2-28 Installing the Penetration Panel (For Artist platform configuration)*. • Step 2: added information on Artist platform configuration. ◦ Section *2.11 Magnet enclosure cable curtain installation (customer option)*: consolidated MR750 and MR450w bullet points into one bullet point. • Added Chapter 3 Installing components - Artist and Architect platform configuration. • In Chapter 4 Completing the installation, section *4.2 Completing the GE HealthCare Field Engineer responsibilities* (was previously chapter 3): added step 6. • Appendix A MR750 and MR450w cable curtain installation: added MR450w to title and content.

Revision	Date	Description
9.0	30-Mar-2022	Routed in MyWorkshop as DOC1406443, Revision 2. • Document format updated to reflect SIMS standards. • Document title updated to remove MR450, which is no longer shipped, and MR750w, which is a duplicate of MR750w GEM. Title was also updated to include SIGNA PET/MR, Artist, and Architect. • In section 1.1, Preparing the site, the following changes were made: ◦ In Table 1-1, Tools and test equipment: • The tool kit parts listed under the heading "Nonmagnetic Tool Kit, Inch/Metric" (and the associated footnote) were replaced with 5112581 and 5113258. • Part 2319156 was removed since it is supplied with the system, and not available during the procedures mentioned in this manual. ◦ The information previously in section 1.2, Site Ready Check for Mechanical Installation, was moved to Table 1-2, Required conditions. The MR450 Preinstallation Manual Direction was removed. The SIGNA PET/MR Direction was added. ◦ The ferrous material hazard previously in 1.4, Required Tools, was replaced with Table 1-3, Safety. This table references the *MR Service Safety Manual* (5452735), which covers working with ferrous materials. ◦ In the Introduction, the list of systems was updated. Reference to M7000WM was removed. ◦ In Basic systems, removed the list of components, as they are represented visually in the figure. Also removed mention of MR450 from Figure 1-1, DVMR systems, and added SIGNA Artist, Architect, and PET/MR. Also removed the SPT Phantom Set Storage Cart from this figure. • Previous section 1.3, Non-English Label Installation, was removed. • Previous sections 1.6, Product Delivery Instructions, and 1.7, Damage in transportation, updated to section 1.2, Doing an inspection of the product delivery, which now has consistent language for all product systems, including updated phone number instructions for documenting damage in shipment, and updated packing box label information. • Section 1.3, Product locator, has been revised to reflect the use of the gib web interface or the MyPLCReader app to confirm model and serial numbers of assets. • Previous sections 1.9, Installation Procedure, and 1.10, Installation Flowchart, were updated to section 1.4, Pre-magnet delivery system installation workflow. ◦ Mentions of Tab numbers were removed, since there were no references to Tabs in the existing flowcharts. ◦ Figure 1-4, Prerequisites for system installation, and Figure 1-5, Premagnet delivery mechanical installation, were updated to remove references to MR450; to reflect correct section numbers; and to reflect current graphics standards. ◦ Figure 1-4, Prerequisites for system installation, was updated to include more prerequisites. ◦ Removing LOTO from the HEC was removed from Figure 1-5, Premagnet delivery mechanical installation. • In section 2.3, Installing the Main Disconnect Panel (MDP), added a Prerequisites section. • Section 2.5, Applying LOTO - HEC, has been revised to reflect the same content as the *MR Service Safety Manual* (5452735). • In section 2.6, Customer connections to the HEC cabinet, removed the note about needing a a step-up transformer. • In section 2.7, Connecting the cryocooler compressor power cord to the HEC, removed the bullet about CSW-71D from the note in step 2.

Revision	Date	Description
		• In section 2.8, Routing the HEC-to-cryocooler hose kit, the phrase "shown below" was removed from step 7.a. • Previous section 1.10, Removing LOTO for the HEC, has been removed. • In section 2.10, Installing RF screen room wall mounting frames and Secondary Pen Wall (SPW), the following changes were made: ◦ In "Installing the mounting frames in the RF screen room opening," the following changes were made: • A note about the orientation of the PEN panel and SPW frames was removed. • Figure 2-26, Installing the mounting frames, was updated. • In step 1, the notice about frame position was replaced with a sentence about the "This side up" label. ◦ In "Installing the SPW (if supplied at this time)," the following changes were made: • Figure 2-27, Installing the SPW, was updated. • Previous steps 2 through 5, regarding the gradient cable strain relief bracket (5182786), were removed. • Previous section 1.12.1, MR750 Cable Curtain Installation has been moved to Appendix A. • Section 3.1, Mechanical Installation Completion, was renamed to Making sure the pre-magnet delivery installation is complete, and the rating plate and wiring connection checks removed.
8.0	22–Apr-2013	Section 1–10: Updated installation flowchart by designating the penetration panel be installed by customer contractor (HCSDM00092520).
7.0	15–Dec-2011	Added new Section 2-5: Installation of HEC LOTO. Inserted new Section 2-10: Removal of HEC LOTO. Updated installation flowchart in Section 1-10 to reflect HEC LOTO information (PR 6307987).
6.0	22–Jul-2011	Updated document title to MR450, MR750, MR450w, MR450w GEM, MR750w & MR750w GEM Pre-Magnet Delivery System Installation due to introduction of new products. Updated information throughout manual accordingly. Section 2-10: Added section 2-10-3 and 2-10-4.
5.0	21–Jun-2010	Section 2-3: Removed MDP part number (MRIhc47301). Section 2-4-2: Added note for retaining cabinet shipping brackets for seismic anchoring (MRIhc49004). Section 2-5: Created sub-sections for customer facililty power and facility waer. Sec 2-5-1: Updated connection of power wiires in HEC power box (SCR DOC0622354). Sec 2-5-2: Added Caution to make sure connections are secure before performing leak test (MRIhc50333). Updated views with new HEC where applicable (ECO 2100354). Section 2-6: Added instructions for installing HEC-CRY power cord (MRIhc48837 & MRIhc49393) and using the power box strain relief for securing the cord (MRIhc49317). Section 2-7: Added instructions for installing HEC-CRY cooling hose kit (SPR's MRIhc48837 and MRIhc49003). Added instruction for installing insulation sleeves and duct tape between sections before routing hoses in overhead cable trays (MRIhc50838). Revised flare fitting connectoin instructions at IN and OUT ports (MRIhc49318). Section 2-8: Added this new section for installing hose insulation kit and applying duct tape between sections (SPR MRIhc48856). Section 2-9-2: Added equipment room side and magnet room side designation (MRIhc51461). Section 2-10: Added section 2-10-2, Cable Curtain installation for MR450w magnet enclosure (ECO 2099113 & SPR MRIhc48838).
4.0	2–Nov-2009	Updated document title to Discovery MR450, MR750& MR450w Pre-Magnet Delivery System Installation. Section 2-7-1: Updated instuctions for installing PEN and SPW mounting frames (PQR 13280034).

Revision	Date	Description
3.0	17–Apr-2009	Updated document title to Discovery MR450 & MR750 Pre-Magnet Delivery System Installation. Section 2-6: Added illustrationshowing service loop on top of power box and the power wire connections to the terminal strip inside the power box (PQR's 13233956, 13236584). Section 2-7-1: Revised section to clarify the orientation of the SPW and Penetration Panel frames. Section 2-9: Added instructions to refer to Direction 5500102 for instructions on installing the curtain covers in the magnet room (PQR 13224769).
2.0	15–May-2008	Section 1: Minor changes to wording. Section 2: Corrected spelling errors. Added power cord service loop in HEC cabinet. Release for validation.
1.0	12—May–2008	Initial verification release.

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