



Cisco R-Series Rack and RP-Series PDU Installation Guide

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Preface

Conventions

This document uses the following conventions:

Convention	Indication
bold font	Commands and keywords and user-entered text appear in bold font .
<i>italic font</i>	Document titles, new or emphasized terms, and arguments for which you supply values are in <i>italic font</i> .
[]	Elements in square brackets are optional.
{ x y z }	Required alternative keywords are grouped in braces and separated by vertical bars.
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
<code>courier font</code>	Terminal sessions and information the system displays appear in <code>courier font</code> .
< >	Non printing characters such as passwords are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.



Note

Means *reader take note*.



Tip

Means *the following information will help you solve a problem*.



Caution

Means *reader be careful*. In this situation, you might perform an action that could result in equipment damage or loss of data.

**Timesaver**

Means *the described action saves time*. You can save time by performing the action described in the paragraph.

**Warning**

Means *reader be warned*. In this situation, you might perform an action that could result in bodily injury.

Safety warnings appear throughout this publication in procedures that, if performed incorrectly, can cause physical injuries. A warning symbol precedes each warning statement.

**Warning****IMPORTANT SAFETY INSTRUCTIONS**

This warning symbol means danger. You are in a situation that could cause bodily injury. Before you work on any equipment, be aware of the hazards involved with electrical circuitry and be familiar with standard practices for preventing accidents. Use the statement number provided at the end of each warning to locate its translation in the translated safety warnings that accompanied this device. Statement 1071

SAVE THESE INSTRUCTIONS**Waarschuwing****BELANGRIJKE VEILIGHEIDSINSTRUCTIES**

Dit waarschuwingssymbool betekent gevaar. U verkeert in een situatie die lichamelijk letsel kan veroorzaken. Voordat u aan enige apparatuur gaat werken, dient u zich bewust te zijn van de bij elektrische schakelingen betrokken risico's en dient u op de hoogte te zijn van de standaard praktijken om ongelukken te voorkomen. Gebruik het nummer van de verklaring onderaan de waarschuwing als u een vertaling van de waarschuwing die bij het apparaat wordt geleverd, wilt raadplegen.

BEWAAR DEZE INSTRUCTIES**Varoitus****TÄRKEITÄ TURVALLISUUSOHJEITA**

Tämä varoitusmerkki merkitsee vaaraa. Tilanne voi aiheuttaa ruumiillisia vammoja. Ennen kuin käsittelet laitteistoa, huomioi sähköpiirien käsittelemiseen liittyvät riskit ja tutustu onnettomuuksien yleisiin ehkäisytapoihin. Turvallisuusvaroitusten käännökset löytyvät laitteen mukana toimitettujen käännettyjen turvallisuusvaroitusten joukosta varoitusten lopussa näkyvien lausuntonumeroiden avulla.

SÄILYTÄ NÄMÄ OHJEET

Attention IMPORTANTES INFORMATIONS DE SÉCURITÉ

Ce symbole d'avertissement indique un danger. Vous vous trouvez dans une situation pouvant entraîner des blessures ou des dommages corporels. Avant de travailler sur un équipement, soyez conscient des dangers liés aux circuits électriques et familiarisez-vous avec les procédures couramment utilisées pour éviter les accidents. Pour prendre connaissance des traductions des avertissements figurant dans les consignes de sécurité traduites qui accompagnent cet appareil, référez-vous au numéro de l'instruction situé à la fin de chaque avertissement.

CONSERVEZ CES INFORMATIONS

Warnung WICHTIGE SICHERHEITSHINWEISE

Dieses Warnsymbol bedeutet Gefahr. Sie befinden sich in einer Situation, die zu Verletzungen führen kann. Machen Sie sich vor der Arbeit mit Geräten mit den Gefahren elektrischer Schaltungen und den üblichen Verfahren zur Vorbeugung vor Unfällen vertraut. Suchen Sie mit der am Ende jeder Warnung angegebenen Anweisungsnummer nach der jeweiligen Übersetzung in den übersetzten Sicherheitshinweisen, die zusammen mit diesem Gerät ausgeliefert wurden.

BEWAHREN SIE DIESE HINWEISE GUT AUF.

Avvertenza IMPORTANTI ISTRUZIONI SULLA SICUREZZA

Questo simbolo di avvertenza indica un pericolo. La situazione potrebbe causare infortuni alle persone. Prima di intervenire su qualsiasi apparecchiatura, occorre essere al corrente dei pericoli relativi ai circuiti elettrici e conoscere le procedure standard per la prevenzione di incidenti. Utilizzare il numero di istruzione presente alla fine di ciascuna avvertenza per individuare le traduzioni delle avvertenze riportate in questo documento.

CONSERVARE QUESTE ISTRUZIONI

Advarsel VIKTIGE SIKKERHETSINSTRUKSJONER

Dette advarselssymbolet betyr fare. Du er i en situasjon som kan føre til skade på person. Før du begynner å arbeide med noe av utstyret, må du være oppmerksom på farene forbundet med elektriske kretser, og kjenne til standardprosedyrer for å forhindre ulykker. Bruk nummeret i slutten av hver advarsel for å finne oversettelsen i de oversatte sikkerhetsadvarslene som fulgte med denne enheten.

TA VARE PÅ DISSE INSTRUKSJONENE

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. Você está em uma situação que poderá ser causadora de lesões corporais. Antes de iniciar a utilização de qualquer equipamento, tenha conhecimento dos perigos envolvidos no manuseio de circuitos elétricos e familiarize-se com as práticas habituais de prevenção de acidentes. Utilize o número da instrução fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham este dispositivo.

GUARDE ESTAS INSTRUÇÕES

¡Advertencia! INSTRUCCIONES IMPORTANTES DE SEGURIDAD

Este símbolo de aviso indica peligro. Existe riesgo para su integridad física. Antes de manipular cualquier equipo, considere los riesgos de la corriente eléctrica y familiarícese con los procedimientos estándar de prevención de accidentes. Al final de cada advertencia encontrará el número que le ayudará a encontrar el texto traducido en el apartado de traducciones que acompaña a este dispositivo.

GUARDE ESTAS INSTRUCCIONES**Varning! VIKTIGA SÄKERHETSANVISNINGAR**

Denna varningssignal signalerar fara. Du befinner dig i en situation som kan leda till personskada. Innan du utför arbete på någon utrustning måste du vara medveten om farorna med elkretsar och känna till vanliga förfaranden för att förebygga olyckor. Använd det nummer som finns i slutet av varje varning för att hitta dess översättning i de översatta säkerhetsvarningar som medföljer denna anordning.

SPARA DESSA ANVISNINGAR**FONTOS BIZTONSÁGI ELOÍRÁSOK**

Ez a figyelmeztető jel veszélyre utal. Sérülésveszélyt rejtő helyzetben van. Mielőtt bármely berendezésen munkát végezte, legyen figyelemmel az elektromos áramkörök okozta kockázatokra, és ismerkedjen meg a szokásos balesetvédelmi eljárásokkal. A kiadványban szereplő figyelmeztetések fordítása a készülékhez mellékelt biztonsági figyelmeztetések között található; a fordítás az egyes figyelmeztetések végén látható szám alapján kereshető meg.

ORIZZE MEG EZEKET AZ UTASÍTÁSOKAT!**Предупреждение ВАЖНЫЕ ИНСТРУКЦИИ ПО СОБЛЮДЕНИЮ ТЕХНИКИ БЕЗОПАСНОСТИ**

Этот символ предупреждения обозначает опасность. То есть имеет место ситуация, в которой следует опасаться телесных повреждений. Перед эксплуатацией оборудования выясните, каким опасностям может подвергаться пользователь при использовании электрических цепей, и ознакомьтесь с правилами техники безопасности для предотвращения возможных несчастных случаев. Воспользуйтесь номером заявления, приведенным в конце каждого предупреждения, чтобы найти его переведенный вариант в переводе предупреждений по безопасности, прилагаемом к данному устройству.

СОХРАНИТЕ ЭТИ ИНСТРУКЦИИ**警告 重要的安全性说明**

此警告符号代表危险。您正处于可能受到严重伤害的工作环境中。在您使用设备开始工作之前，必须充分意识到触电的危险，并熟练掌握防止事故发生的标准工作程序。请根据每项警告结尾提供的声明号码来找到此设备的安全性警告说明的翻译文本。

请保存这些安全性说明

警告 安全上の重要な注意事項

「危険」の意味です。人身事故を予防するための注意事項が記述されています。装置の取り扱い作業を行うときは、電気回路の危険性に注意し、一般的な事故防止策に留意してください。警告の各国語版は、各注意事項の番号を基に、装置に付属の「Translated Safety Warnings」を参照してください。

これらの注意事項を保管しておいてください。

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이 지시 사항을 보관하십시오.

Aviso INSTRUÇÕES IMPORTANTES DE SEGURANÇA

Este símbolo de aviso significa perigo. Você se encontra em uma situação em que há risco de lesões corporais. Antes de trabalhar com qualquer equipamento, esteja ciente dos riscos que envolvem os circuitos elétricos e familiarize-se com as práticas padrão de prevenção de acidentes. Use o número da declaração fornecido ao final de cada aviso para localizar sua tradução nos avisos de segurança traduzidos que acompanham o dispositivo.

GUARDE ESTAS INSTRUÇÕES

Advarsel VIGTIGE SIKKERHEDSANVISNINGER

Dette advarselssymbol betyder fare. Du befinder dig i en situation med risiko for legemeskadedigelse. Før du begynder arbejde på udstyr, skal du være opmærksom på de involverede risici, der er ved elektriske kredsløb, og du skal sætte dig ind i standardprocedurer til undgåelse af ulykker. Brug erklæringsnummeret efter hver advarsel for at finde oversættelsen i de oversatte advarsler, der fulgte med denne enhed.

GEM DISSE ANVISNINGER

تحذير

إرشادات الأمان الهامة

يوضح رمز التحذير هذا وجود خطر. وهذا يعني أنك متواجد في مكان قد ينتج عنه التعرض لإصابات. قبل بدء العمل، احذر مخاطر التعرض للصدمات الكهربائية وكن على علم بالإجراءات القياسية للحيولة دون وقوع أي حوادث. استخدم رقم البيان الموجود في آخر كل تحذير لتحديد مكان ترجمته داخل تحذيرات الأمان المترجمة التي تأتي مع الجهاز. قم بحفظ هذه الإرشادات

Upozorenje VAŽNE SIGURNOSNE NAPOMENE

Ovaj simbol upozorenja predstavlja opasnost. Nalazite se u situaciji koja može prouzročiti tjelesne ozljede. Prije rada s bilo kojim uređajem, morate razumjeti opasnosti vezane uz električne sklopove, te biti upoznati sa standardnim načinima izbjegavanja nesreća. U prevedenim sigurnosnim upozorenjima, priloženima uz uređaj, možete prema broju koji se nalazi uz pojedino upozorenje pronaći i njegov prijevod.

SAČUVAJTE OVE UPUTE**Upozornění DŮLEŽITÉ BEZPEČNOSTNÍ POKYNY**

Tento upozorňující symbol označuje nebezpečí. Jste v situaci, která by mohla způsobit nebezpečí úrazu. Před prací na jakémkoliv vybavení si uvědomte nebezpečí související s elektrickými obvody a seznamte se se standardními opatřeními pro předcházení úrazům. Podle čísla na konci každého upozornění vyhledejte jeho překlad v přeložených bezpečnostních upozorněních, která jsou přiložena k zařízení.

USCHOVEJTE TYTO POKYNY**Προειδοποίηση ΣΗΜΑΝΤΙΚΕΣ ΟΔΗΓΙΕΣ ΑΣΦΑΛΕΙΑΣ**

Αυτό το προειδοποιητικό σύμβολο σημαίνει κίνδυνο. Βρίσκεστε σε κατάσταση που μπορεί να προκαλέσει τραυματισμό. Πριν εργαστείτε σε οποιοδήποτε εξοπλισμό, να έχετε υπόψη σας τους κινδύνους που σχετίζονται με τα ηλεκτρικά κυκλώματα και να έχετε εξοικειωθεί με τις συνήθειες πρακτικές για την αποφυγή ατυχημάτων. Χρησιμοποιήστε τον αριθμό δήλωσης που παρέχεται στο τέλος κάθε προειδοποίησης, για να εντοπίσετε τη μετάφρασή της στις μεταφρασμένες προειδοποιήσεις ασφαλείας που συνοδεύουν τη συσκευή.

ΦΥΛΑΞΤΕ ΑΥΤΕΣ ΤΙΣ ΟΔΗΓΙΕΣ**אזהרה****הוראות בטיחות חשובות**

סימן אזהרה זה מסמל סכנה. אתה נמצא במצב העלול לגרום לפציעה. לפני שתעבוד עם ציוד כלשהו, עליך להיות מודע לסכנות הכרוכות במעגלים חשמליים ולהכיר את הנהלים המקובלים למניעת תאונות. השתמש במספר ההוראה המסופק בסופה של כל אזהרה כדי לאתר את התרגום באזהרות הבטיחות המתורגמות שמצורפות להתקן.

שמור הוראות אלה**Opomena VAŽNI BEZBEDNOSNI NAPATSTVIJA**

Симболот за предупредување значи опасност. Се наоѓате во ситуација што може да предизвика телесни повреди. Пред да работите со опремата, бидете свесни за ризикот што постои кај електричните кола и треба да ги познавате стандардните постапки за спречување на несреќни случаи. Искористете го бројот на изјавата што се наоѓа на крајот на секое предупредување за да го најдете неговиот период во prevedените безбедносни предупредувања што се испорачани со уредот.

ЧУВАЈТЕ ГИ ОБИЕ НАПАТСТВИЈА

Ostrzeżenie WAŻNE INSTRUKCJE DOTYCZĄCE BEZPIECZEŃSTWA

Ten symbol ostrzeżenia oznacza niebezpieczeństwo. Zachodzi sytuacja, która może powodować obrażenia ciała. Przed przystąpieniem do prac przy urządzeniach należy zapoznać się z zagrożeniami związanymi z układami elektrycznymi oraz ze standardowymi środkami zapobiegania wypadkom. Na końcu każdego ostrzeżenia podano numer, na podstawie którego można odszukać tłumaczenie tego ostrzeżenia w dołączonym do urządzenia dokumencie z tłumaczeniami ostrzeżeń.

NINIEJSZE INSTRUKCJE NALEŻY ZACHOWAĆ**Upozornenie DÔLEŽITÉ BEZPEČNOSTNÉ POKYNY**

Tento varovný symbol označuje nebezpečenstvo. Nachádzate sa v situácii s nebezpečenstvom úrazu. Pred prácou na akomkoľvek vybavení si uvedomte nebezpečenstvo súvisiace s elektrickými obvodmi a oboznámte sa so štandardnými opatreniami na predchádzanie úrazom. Podľa čísla na konci každého upozornenia vyhľadajte jeho preklad v preložených bezpečnostných upozorneniach, ktoré sú priložené k zariadeniu.

USCHOVAJTE SI TENTO NÁVOD**Opozorilo POMEMBNI VARNOSTNI NAPOTKI**

Ta opozorilni simbol pomeni nevarnost. Nahajate se v situaciji, kjer lahko pride do telesnih poškodb. Preden pričnete z delom na napravi, se morate zavedati nevarnosti udara električnega toka, ter tudi poznati preventivne ukrepe za preprečevanje takšnih nevarnosti. Uporabite obrazložitevno številko na koncu posameznega opozorila, da najdete opis nevarnosti v priloženem varnostnem priročniku.

SHRANITE TE NAPOTKE!**警告****重要安全性指示**

此警告符號代表危險，表示可能造成人身傷害。使用任何設備前，請留心電路相關危險，並熟悉避免意外的標準作法。您可以使用每項警告後的聲明編號，查詢本裝置隨附之安全性警告譯文中的翻譯。請妥善保留此指示

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For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation* at: <http://www.cisco.com/c/en/us/td/docs/general/whatsnew/whatsnew.html>.

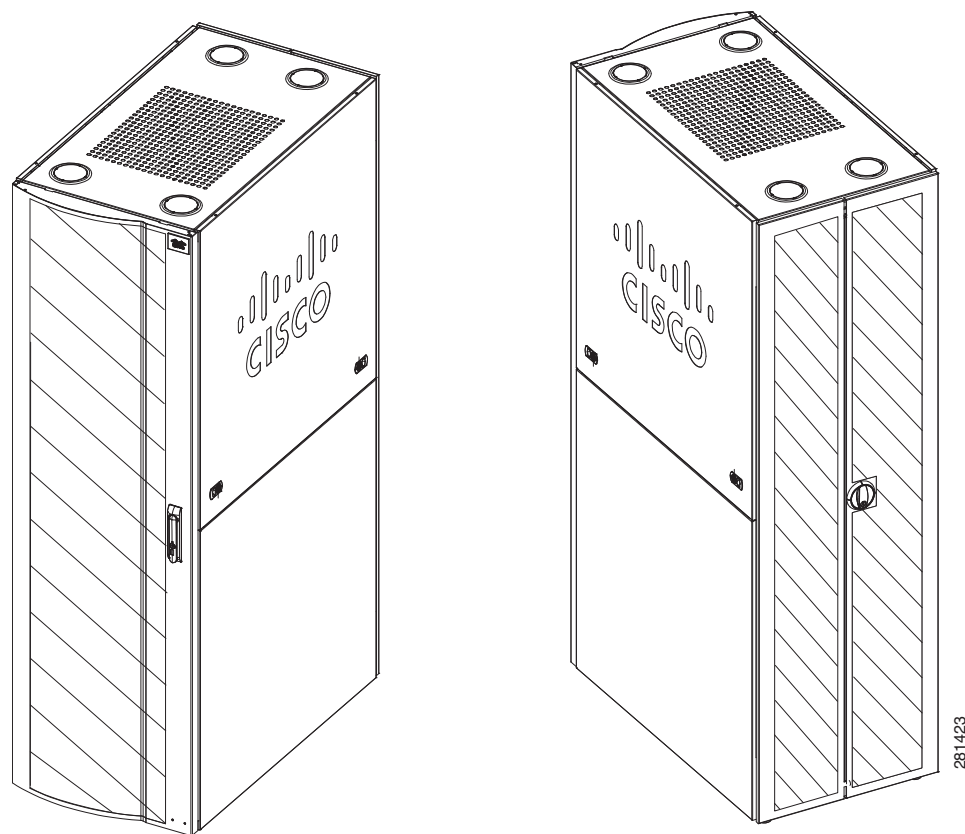
Subscribe to *What's New in Cisco Product Documentation*, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.

Overview

Cisco R-Series Racks

Cisco R-Series Racks are an ideal solution for mission-critical environments, which require the highest levels of reliability, structural integrity, and security. The modern design delivers exceptional power, cooling, and cable management features as well as the strength and stability required in today's rack enclosures, offering peace of mind for the most important infrastructure elements. The Cisco R-Series Racks (shown in [Figure 1-1](#)) are certified for use with the Cisco Unified Computing System and allow Cisco to offer a complete infrastructure solution, including computing, networking, rack, power, and services.

Figure 1-1 Cisco R-Series Rack



These industry standard, EIA-310-D racks have been optimized for the Cisco Unified Computing System (UCS) but will work with most equipment meant to mount in a square-holed rack. Standard and expansion racks are available for single-rack or multiple-rack UCS deployments.

The front and rear doors have 80% perforation to maximize air flow. Locks are included for added security. The doors also feature tool less removal for convenient servicing. Split rear doors minimize the clearance required at the rear of rack, and the adjustable front door can swing from right to left or left to right.

The lightweight, 2-piece side panels are easy to install and remove, and locks provide extra security. The ventilated top panel has optional cutouts for large cables.

The sidewall spaces and PDU trays allow quick installation of 0RU and 1RU PDUs. Integrated PDU trays enable tool less mounting for the optional 0RU Cisco RP-Series PDUs.

Front and side stabilizer brackets are included with the racks. A joining kit connects adjacent expansion racks within a row. Casters permit mobility if needed. A removable rear cable access bar speeds cable routing. RU markings on all rack rails simplify equipment installation.

Platform Support and Compatibility

A list of Cisco products that have been tested with Cisco R-Series Racks is maintained on an internal Cisco website. Please contact your Cisco representative to access the most recent information.

Specifications

[Table A-1](#) lists the specifications for Cisco R-Series Racks.

Cisco RP-Series Power Distribution Units

Cisco RP-Series Power Distribution Units (PDUs) offer flexible, reliable, easy-to-deploy power distribution with branch circuit protection.

Cisco RP-Series PDU models cost effectively and efficiently distribute power to up to 24 outlets. The ready-to-use architecture organizes power distribution, simplifies cable management, and enables you to move, add, and change rack equipment without an electrician.

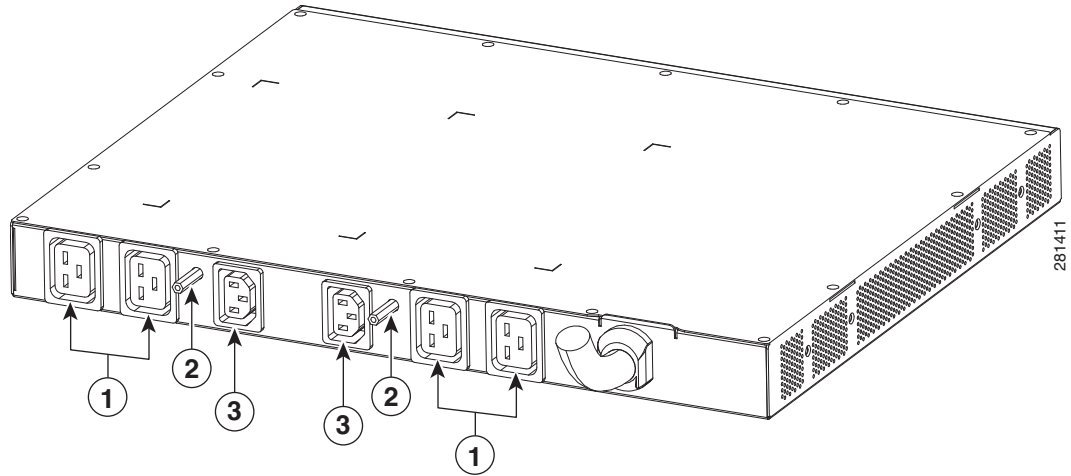
With a Cisco RP-Series PDU in the rack, you can replace up to two dozen input power cords with just one. The fixed input cord connects to the power source from overhead or under-floor distribution. Your IT equipment is then powered by PDU outlets in the rack using short, easy-to-manage power cords. With far fewer cables between the power source and the rack, these PDUs alleviate clutter, improve airflow, and simplify power distribution.

Lightweight Cisco RP-Series PDU models are easy to install and display. Zero-rack-unit (0RU, see [Figure 1-3](#)) and 1RU (see [Figure 1-2](#)) designs preserve valuable rack space for IT equipment.

Cisco RP-Series PDU models provide two 20-ampere (A) circuit breakers for groups of receptacles. The effects of a tripped circuit are limited to a receptacle group. Simply press a button to reset that circuit.

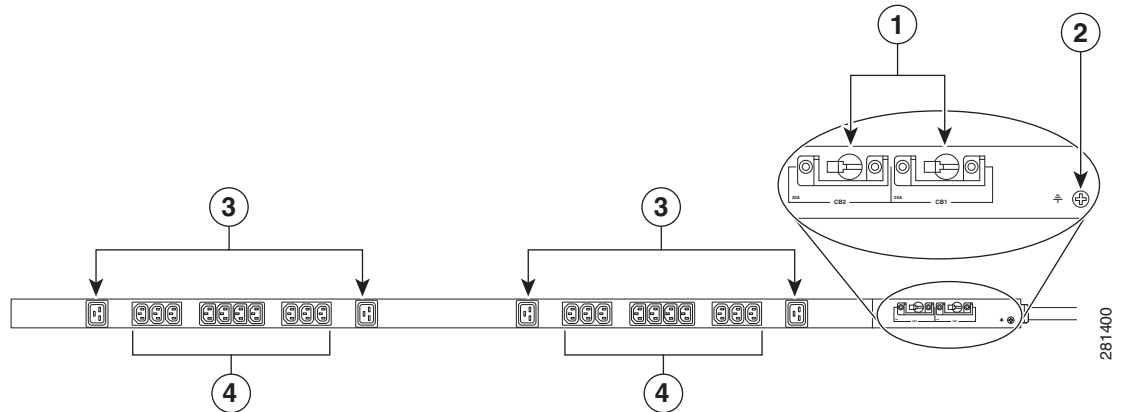
Designed, tested, and approved for use with Cisco solutions, budget-friendly Cisco PDUs can extend the value of your existing power systems while improving system reliability and availability.

Figure 1-2 1 RU PDU (RP208-30-1P-U-1 or Cisco RP230-32-U-1)



1	C19 Plug
2	Breaker reset
3	C13 Plug

Figure 1-3 Zero-RU PDU (RP208-30-2P-U-2 or Cisco RP230-30-U-2)



1	Breakers	3	C19 plugs
2	Ground connection	4	C13 plugs

Specifications

Table A-2 lists the specifications for Cisco RP-Series PDUs.

Site Preparation

General Site Requirements and Recommendations

Consider the following issues when planning your installation site for the Cisco R-Series Rack:

- The unpacking and installation process requires 3 logistical steps:
 - Unloading the unit from the vehicle in which it is shipped
 - Using a forklift or similar device to move the unit to an unpacking site
 - Moving the unpacked unit to the installation site
- Select an unpacking location with adequate surrounding space for the unloading process. You must allow for the pallet.
- Choose an installation site that can accommodate your Cisco R-Series Rack. To provide for future installation of a joined configuration, you should plan enough space for additional cabinets that occupy the same amount of space as the initial cabinet.
- Make sure you have enough people to help you safely unload and install the system. A fully loaded cabinet can weigh over 2000 lbs (907 kilograms); even an empty cabinet is approximately 300 pounds (136 kilograms) and moving it can present dangers to both personnel and the incorporated equipment.
- Plan a smooth and unobstructed route from the off-loading site to the installation site. You should only move the rack when it is empty of all equipment.

Imperfections or obstructions in the floor between the unloading and installation site might hamper the movement of the unit. If you encounter an obstacle such as a sill or carpet, exercise care in navigating over it.

- Verify that you have adequate standard tools on hand. See the [“Tools Required”](#) section.
- Ensure that your site contains an adequate power infrastructure

Tools Required

You may need the following tools and equipment to install the Cisco R-Series Rack:

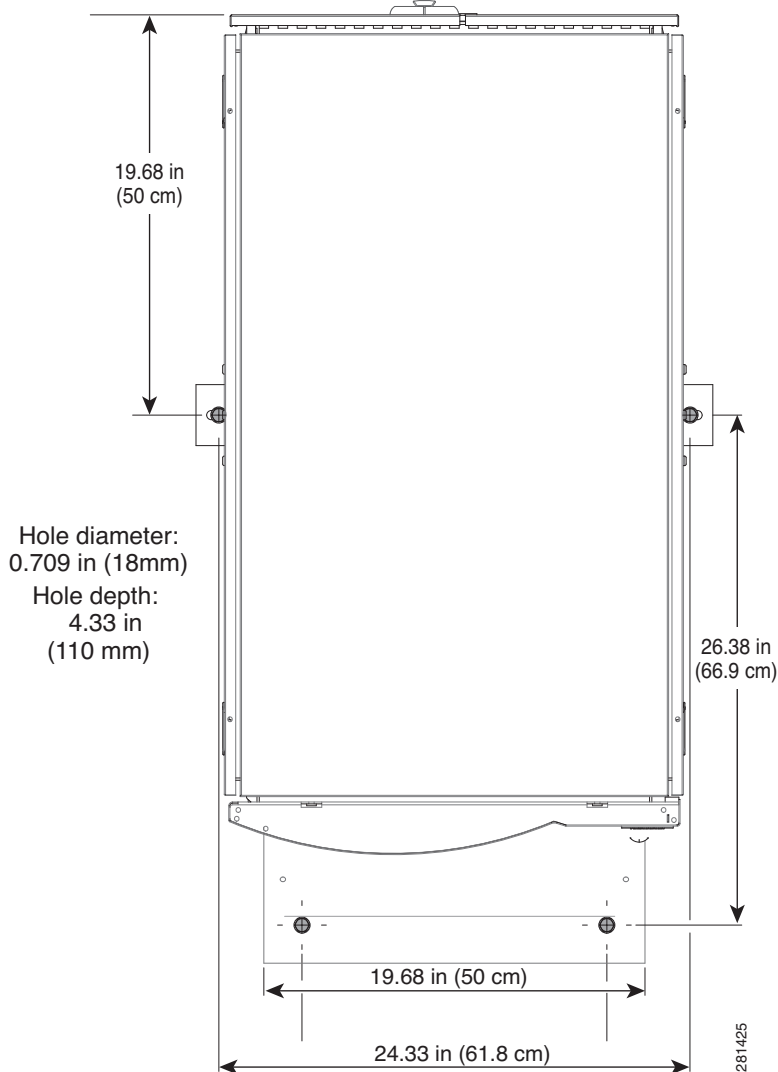
- Documentation for the devices you plan to install in the rack
- ESD-preventive wrist straps for each person
- Phillips head screwdriver (#2)
- 4mm Hex driver

- Pozidriv screwdriver (#3)
- 3/8" or 1/2" flat-head screwdriver (to lower and raise stabilizers)
- Adjustable wrench (for unbolting system)
- Allen wrench (to disassemble caster assembly after unit is sited)
- Standard clippers or knife (to cut packaging binding)
- Tape measure
- Level
- Anchoring bolts
- Rotary hammer drill
- Fork lift
- Chain hoist

Prepare the Subflooring (optional)

To prepare your site for installation of the Cisco R-Series Rack you may need to reinforce the floor to support the Cisco R-Series Rack when fully loaded with equipment. Refer to [Figure 2-1](#) to assure that the reinforcement will have secure anchoring for the rack.

Figure 2-1 Anchoring Pattern for the Cisco R-Series Rack



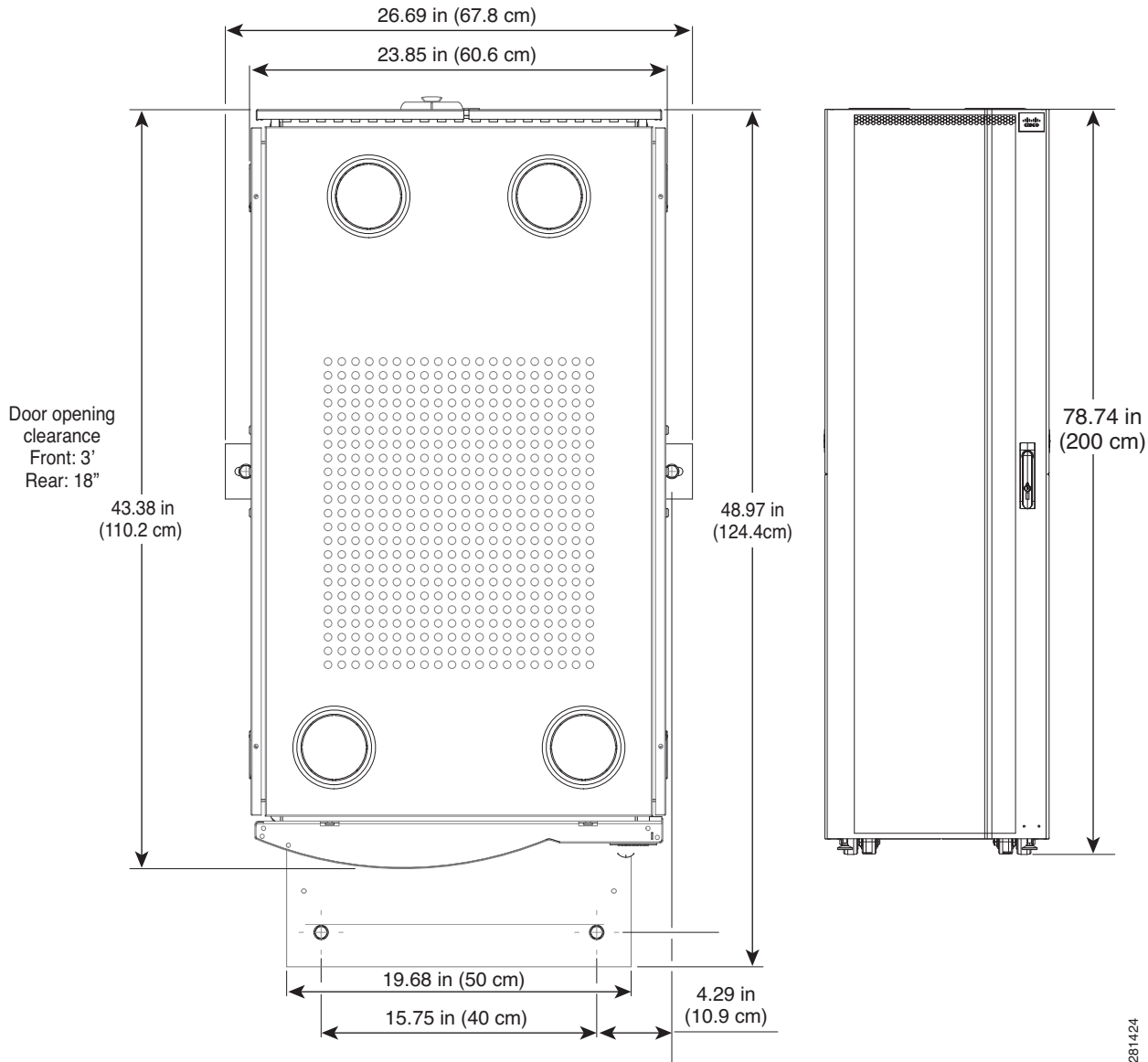
Note

It is your responsibility to fulfill local seismic safety standards.

Space and Clearances

Figure 2-2 shows the dimensions and space requirements for the Cisco R-Series Rack.

Figure 2-2 Space Footprint



Plan for at least 3 feet of clearance in front of the Cisco R-Series Rack to install servers or networking equipment. Refer to the documentation for the equipment you plan to use to find out how much clearance is needed at the rear for ventilation or other uses.

Safety Recommendations

The following guidelines will help to ensure your safety and protect the equipment. This list does not cover all potentially hazardous situations, so be alert.

- Review the safety warnings listed in [Appendix B, “Translated Safety Warnings”](#) of this guide before installing, configuring, troubleshooting, or maintaining the Cisco R-Series Rack.
- Keep the area clear and dust free during and after installation.
- Keep tools and components away from areas where people might accidentally step on or kick them.
- Do not wear loose clothing, jewelry (including rings and chains), or other items that might become trapped in the chassis. Fasten your tie or scarf and roll up your sleeves.
- The Cisco PDUs ship with locking 3-wire electrical grounding-type plugs, which will only fit into grounding-type power outlets. This is a safety feature. The equipment grounding should be in accordance with national and local electrical codes.
- Be sure to use the installed products in accordance with their marked electrical ratings and product usage instructions to guarantee safe operation.

Moving the Unit Safely



Note

Before you install the system, make sure that your site is properly prepared so you can avoid having to move the Cisco R-Series Rack later. Specifically, choose your installation site to accommodate existing power sources and network connections.

Whenever you move the Cisco R-Series Rack or any heavy object, follow these guidelines:

- Always disconnect all external cables before moving the Cisco R-Series Rack.
- Do not attempt to move the unit by yourself. Never attempt to lift an object that might be too heavy for 1 person to lift alone. If you are not sure how much a particular object or device weighs, refer to the appropriate device specifications.
- Ensure that your footing is solid, and balance the weight of the object between your feet. (See [Figure 2-3](#).)

Figure 2-3 *Unsafe Lifting Practices*



- Move the system slowly; never move suddenly or twist your body as you push.
- Keep your back straight and push with your legs, not your back. If you must bend down to move the Cisco R-Series Rack, bend at the knees and not at the waist to reduce the strain on your lower back muscles.
- Move the rack from the middle. Grasp the middle of the Cisco R-Series Rack exterior with both hands.

Safety with Electricity

Most networking and data center devices are designed to be removed and replaced without presenting an electrical hazard or damage. Refer to the documentation for individual components for the few procedures that require completely removing power to a component, but in those situations you should *always* remove the plug on the component side first, and unplug all components connected to a PDU before unplugging a PDU.

Follow these basic guidelines when working with any electrical equipment:

- The installation of your Cisco R-Series Rack should be in compliance with national and local electrical codes. In the United States, the relevant code is National Fire Protection Association (NFPA) 70, United States National Electrical Code. In Canada, it is Canadian Electrical Code, part I, CC22.1. In other countries, you should observe the standards of the International Electrotechnical Commission (IEC) 364, part 1 through part 7.
- Before working on equipment that is connected to power lines, remove jewelry (including rings, necklaces, and watches). Metal objects will heat up when connected to power and ground and can cause serious burns or weld the metal object to the terminals.
- Before beginning any procedures requiring access to the Cisco R-Series Rack interior, locate the emergency power-off or breaker switch for the room in which you are working.
- Disconnect all power and external cables before installing or removing a PDU or Cisco R-Series Rack.
- Do not work alone when potentially hazardous conditions exist.
- Never assume that power has been disconnected from a circuit; always check.
- Do not perform any action that creates a potential hazard to people or makes the equipment unsafe.
- Never install equipment that appears damaged.
- Carefully examine your work area for possible hazards such as moist floors, ungrounded power extension cables, and missing safety grounds.

In addition, use the following guidelines when working with any equipment that is disconnected from a power source, but still connected to network cabling.

- Never install network wiring during a lightning storm.
- Never install network jacks in wet locations unless the jack is specifically designed for wet locations.
- Never touch non insulated wires or terminals unless the line has been disconnected at the network interface.
- Use caution when installing or modifying lines.
- Read the installation instructions before you connect the system to its power source.



Warning

Connect the device to a grounded power outlet. Statement 25



Warning

For Nordic countries (Norway, Finland, Sweden and Denmark) this system must be installed in a Restricted Access Location, where the voltage of the main ground connection of all equipment is the same (equipotential earth) and the system is connected to a grounded electrical outlet. Statement 328



Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001



Warning

Read the installation instructions before connecting the system to the power source. Statement 1004



Warning

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 30 A in the US and Canada and 32 A International. Statement 1005



Warning

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024

Preventing Electrostatic Discharge Damage

Electronic components are sensitive to Electrostatic discharge (ESD). ESD precautions should always be taken when handling electronic components. Electrostatic discharge (ESD) damage occurs when electronic cards or components are improperly handled and can result in complete or intermittent system failures. Use an antistatic strap whenever handling electronic components, carrier edges only; never touch the boards or connector pins.



Note

Always tighten the captive installation screws when present. These screws prevent accidental removal, provide proper grounding for the system, and help ensure that the bus connectors are properly seated.

Following are guidelines for preventing ESD damage:

- Always use an ESD wrist strap or ankle strap and ensure that it makes good skin contact.
- When handling a removed component, make sure the equipment end of your ESD strap is attached to an unfinished chassis surface of the device in which it is housed. Do not touch the printed circuit board, and avoid contact between the printed circuit board and your clothing.
- Always place the component side up on an antistatic surface or in a static shielding bag. If you are returning the item to the factory, immediately place it in a static shielding bag.
- Ensure that any plug in devices are fully inserted and their captive installation screws are tightened. The captive installation screws prevent accidental removal and provide proper grounding for the system.

**Note**

For safety, periodically check the resistance value of the antistatic strap. The measurement should be between 1 and 10 megaohms (Mohms).

Plant Wiring

When setting up the plant wiring and cabling at the site of the new system, consider the distance limitations imposed by power cable lengths and connector compatibility.

Planning Considerations

When planning your rack installation, consider the following guidelines:

- Make sure that the system has adequate ventilation.
- Always install heaviest equipment as low as possible in the Cisco R-Series Rack to maintain a low center of gravity and prevent the Cisco R-Series Rack from falling over.
- Use the cable management brackets and straps orderable for use with this system to keep cables organized and out of the way of the exhaust fans.
- Make sure that cables do not impair access to the fabric extenders and expansion modules or require you to disconnect cables unnecessarily to perform equipment maintenance or upgrades.
- To prevent device overheating, never install networking devices in a room that is not properly ventilated or air conditioned.

Environment Required

The Cisco R-Series Rack and PDUs are operable well beyond the specifications of the servers or networking equipment you are likely to install in them. Refer to the user documentation of the devices you will install to determine the required environment for those devices.

Cisco PDU specifications are in [Table 2-1](#):

Table 2-1 *Environmental Specifications for the Cisco PDUs*

Item	Specification
Shipping or storage temperature	–40 to 60° C
Operating temperature	10 to 50° C
Shipping or storage relative humidity	5 to 95% (including condensing) with no droplets of liquid
Operating relative humidity	5 to 90% (including condensing)
Shipping or storage elevation	0 to 50,000 feet (0 to 15,240 meters)
Operating elevation	0 to 10,000 feet (0 to 3048 meters.)
Acoustics	The unit does not produce significant sound.

Most compute and networking equipment is designed to operate within the conditions as specified by The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE).

ASHRAE has published a common set of guidelines for equipment manufacturers and data center designers to standardize on the following issues relating to a data center site:

- Operating environments for classes of equipment
- Equipment placement for optimum reliability and airflow
- Tests of performance and the operational health of the data center
- Equipment installation evaluations
- Methodology for reporting power, cooling, and environmental specifications

These guidelines were developed by an industry consortium as part of the ASHRAE Technical Committee 9.9 and are presented in the 2004 report Thermal Guidelines for Data Processing Environment. These guidelines were updated in 2008 by the ASHRAE Environmental Guidelines for Datacom Equipment.

For information about ASHRAE and the report, refer to the ASHRAE website (<http://www.ashrae.org>).

Dust and Particles

Exhaust fans cool power supplies and system fan trays cool equipment by drawing in air and exhausting air out through various openings in the chassis. However, fans also ingest dust and other particles, causing contaminant buildup in the equipment and increased internal chassis temperature. A clean operating environment can greatly reduce the negative effects of dust and other particles, which act as insulators and interfere with the mechanical components in the equipment.

Corrosion

The corrosion of equipment connectors is a gradual process that can eventually lead to intermittent failures of electrical circuits. The oil from your fingers or prolonged exposure to high temperature or humidity can corrode the gold-plated edge connectors and pin connectors on various components in the equipment. To prevent corrosion, avoid touching contacts on modules and protect the equipment from extreme temperatures and moist, salty environments.

Electromagnetic and Radio Frequency Interference

To reduce the possibility of EMI and RFI, follow these guidelines:

- Cover all open slots with a metal filler.
- Always use shielded cables with metal connector shells for attaching peripherals to the equipment.



Note

To predict and prevent strong EMI, you might need to consult experts in radio frequency interference (RFI).

Grounding

Electronic equipment is sensitive to variations in voltage supplied by the AC-power source. Over-voltage, under voltage, and transients (or spikes) can erase data from the memory or cause components to fail. To protect against these types of problems, you should always make sure that the racks that hold the servers or networking devices are grounded. When the racks are grounded, the equipment installed in them are automatically grounded. Refer to the instructions specific to the products you install in the rack for grounding steps.

Power Source

You should use dedicated power circuits (rather than sharing circuits with other heavy electrical equipment) for each PDU you install in the Cisco R-Series Rack. The circuits must be rated for 30 A or 32 A, 200 to 250 VAC. The receptacles for these circuits should be within 6 feet (1.8 m) of each PDU unit when it is installed in the Cisco R-Series Rack. Check the power at your site before installation and periodically after installation to ensure that you are receiving clean power. Install a power conditioner if necessary.

Power Requirements

Refer to the documentation for the devices you plan to install in the Cisco R-Series Rack.

Site Preparation Checklist

Planning the location and layout of your equipment rack or wiring closet is essential for successful network operation, ventilation, and accessibility. [Table 2-2](#) lists the site planning tasks that we recommend completing before installing a Cisco R-Series Rack or PDU.

Table 2-2 Site Planning Checklist

Task No.	Planning Activity	Verified By	Time	Date
1	Space evaluation: <ul style="list-style-type: none"> • Space and layout • Floor covering • Impact and vibration • Lighting • Maintenance access 			
2	Environmental evaluation: <ul style="list-style-type: none"> • Ambient temperature • Humidity • Altitude • Atmospheric contamination • Air flow 			
3	Power evaluation: <ul style="list-style-type: none"> • Input power type • Power receptacles¹ • Receptacle proximity to the equipment • Dedicated circuit for power supply • Dedicated (separate) circuits for redundant power supplies • UPS² for power failures 			
4	Grounding evaluation: <ul style="list-style-type: none"> • Circuit breaker size • Ground 			
5	Cable and interface equipment evaluation: <ul style="list-style-type: none"> • Cable type • Connector type • Cable distance limitations • Interface equipment (transceivers) 			
6	EMI ³ evaluation: <ul style="list-style-type: none"> • Distance limitations for signaling • Site wiring • RFI⁴ levels 			

1. Verify that the power supply installed in the chassis has a dedicated AC source circuit.
2. UPS: uninterruptable power supply.
3. EMI: electromagnetic interference.
4. RFI: radio frequency interference.

Unpacking the Cisco R-Series Rack

Unpacking a Cisco R-Series Rack

This section describes how to unpack and prepare a Cisco R-Series Rack to be moved to its installation site. The Cisco R-Series Rack ships on a wooden pallet with cardboard and plastic covering the rack.

**Note**

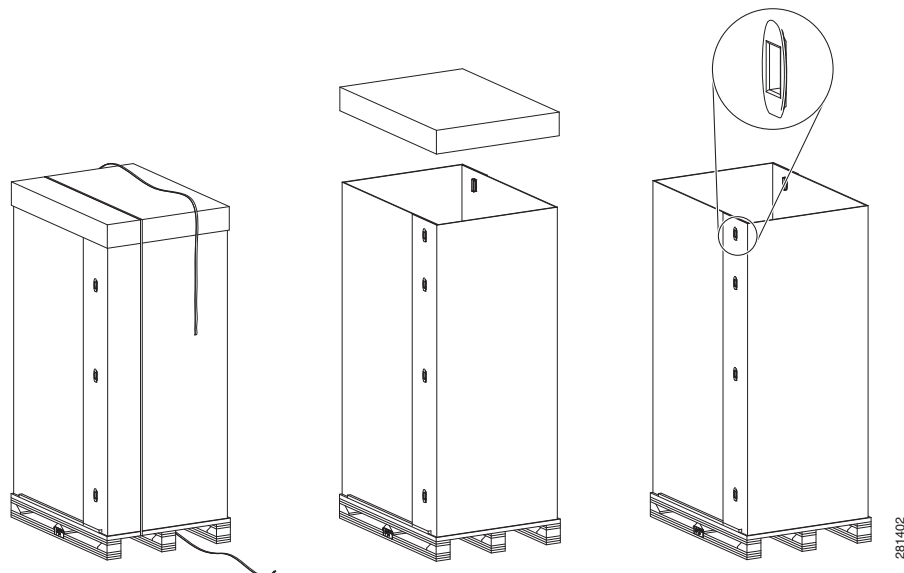
You will most likely need to perform this procedure in the loading dock of the building. A fork lift or chain hoist may be needed.

Remove the Packaging

To remove the protective packaging from the Cisco R-Series Rack, complete the following steps:

- Step 1 Remove the nylon straps securing the cardboard sheathing.
- Step 2 Remove the cardboard top piece.
- Step 3 Remove the plastic latches holding the cardboard sheathing together as shown in [Figure 3-1](#).

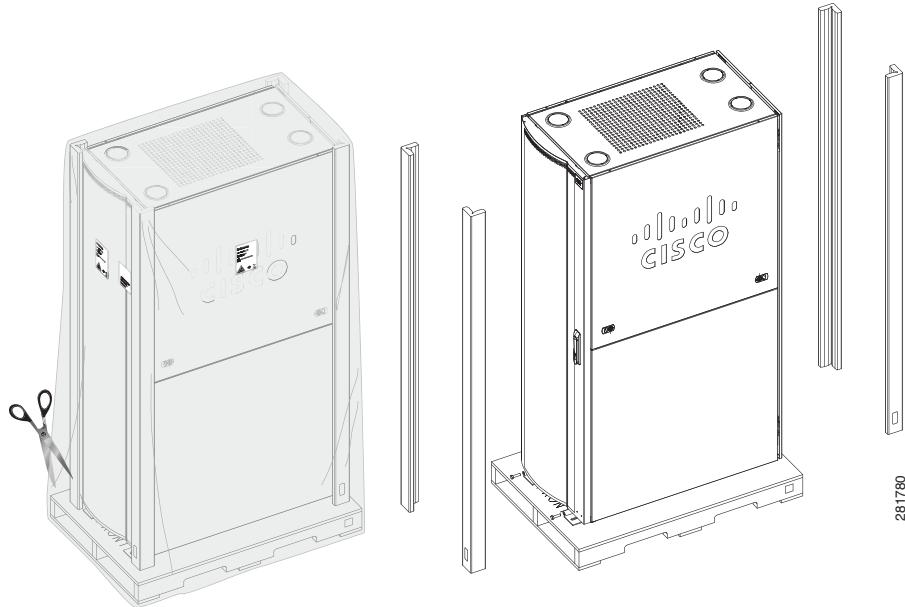
Figure 3-1 Plastic Latches on Cardboard Sheathing



281402

- Step 4** Remove the clear plastic covering the rack and pallet as shown in [Figure 3-2](#).

Figure 3-2 Remove the Packing Materials



- Step 5** Remove the four cardboard corner frames and other packaging material that covers the Cisco R-Series Rack.
- Step 6** For pre installed systems, the packaging will include a two piece ramp. Set these pieces aside until they are needed,

Remove the Cisco R-Series Rack from the Pallet












Before you move the Cisco R-Series Rack cabinet off the pallet and to its final location, read the following important safety guidelines.



Warning

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006

-  **Warning** **Stability hazard. The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over.** Statement 250
-  **Warning** **If you are installing more than one chassis, install the slide assemblies so that the first chassis is installed in the lowest available position in the rack.** Statement 252
-  **Warning** **Make sure that your equipment rack is properly ventilated.** Statement 220
-  **Warning** **After installing system components in a rack, never pull more than one component out of the rack on its slide assemblies at one time. The weight of more than one extended component could cause the rack to tip over and injure someone.** Statement 249
-  **Warning** **Make sure that your rack is bolted to the floor.** Statement 219
-  **Warning** **Three people are required to lift the rack. Grasp the rack underneath the lower edge and lift with both hands. To prevent injury, keep your back straight and lift with your legs, not your back.** Statement 334
-  **Warning** **Never attempt to lift the rack with the handles on the power supplies or the modules. These handles are not designed to support the weight of the rack. Using them to lift or support the rack can result in severe damage to the equipment and serious bodily injury.** Statement 333
-  **Caution** **The Cisco R-Series Rack weighs over 300 pounds. You will need a forklift, chain hoist, or professional movers to remove the rack from the pallet and move it to the installation location.**
-  **Caution** **If you must move the Cisco R-Series Rack after installation, remove UCS and other installed components and move them separately.**
-  **Caution** **Install the heaviest devices at the bottom of the Cisco R-Series Rack.**
-  **Caution** **If you have multiple cabinets joined together, they must be disconnected before moving.**

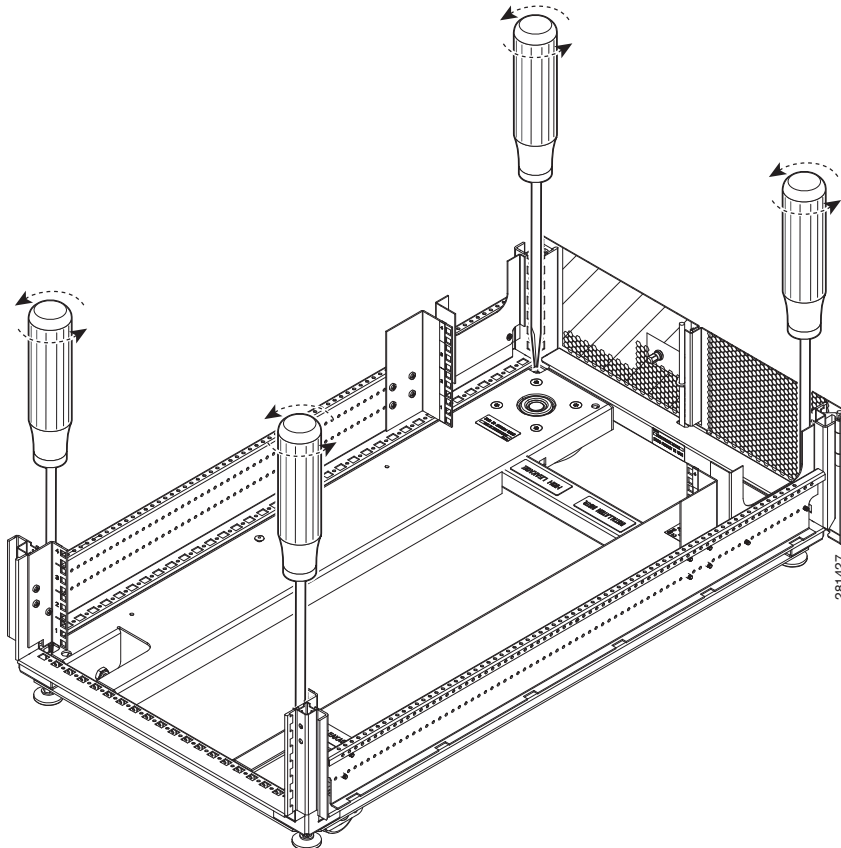
[Table 3-1](#) lists the contents of a Cisco R-Series Rack accessory kit.

Table 3-1 Contents of Hardware Accessory Kit

Quantity	Item
50	M6 Cage nuts
1	Cage nut insert tool
50	M6 mounting screws
1	4mm Allen key
2	M6 socket head screws
20	Velcro cable management straps

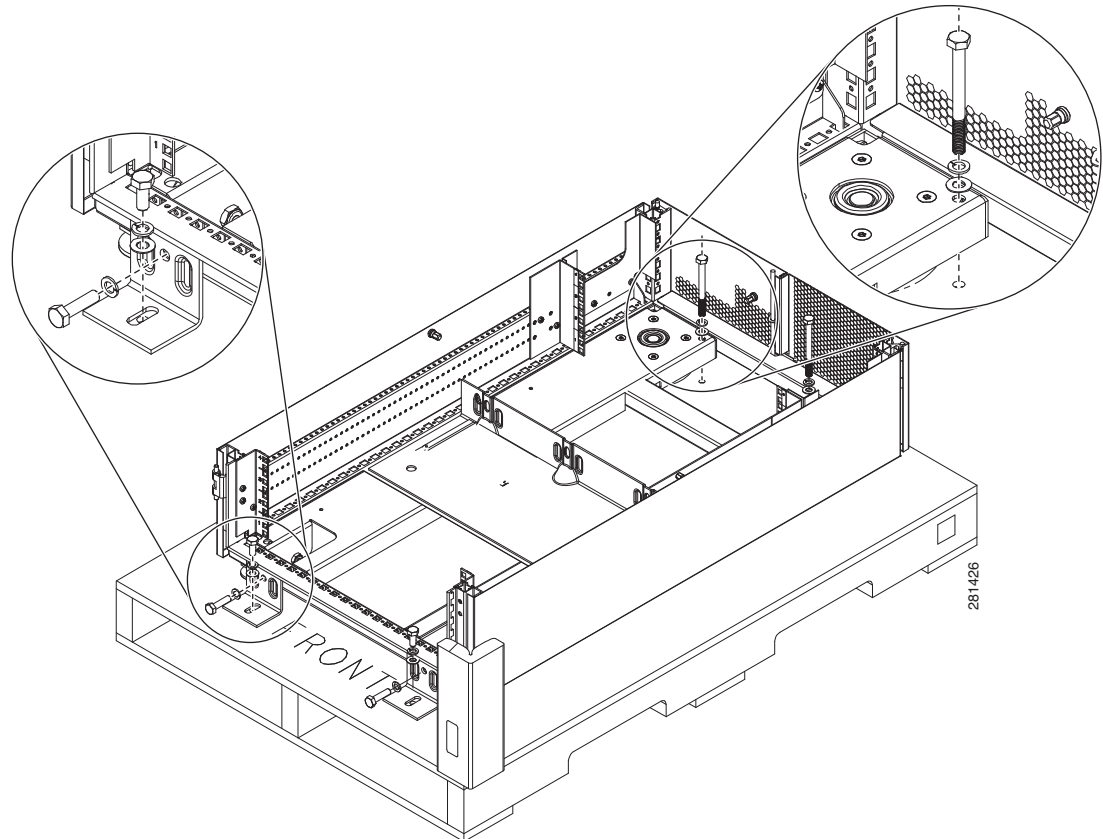
To remove the Cisco R-Series Rack from the pallet, complete the following steps:

-
- Step 1** Read the safety information before you move the Cisco R-Series Rack off the pallet.
 - Step 2** The weight of the empty or populated Cisco R-Series Rack cabinet is significant, be sure to have enough trained movers to move the cabinet off the pallet and to its installation site.
 - Step 3** Use a 3/8" or 1/2" flat headed screwdriver to raise the four leveling feet (one per corner) shown in [Figure 3-3](#) to their highest position so that you can roll the rack on its casters.

Figure 3-3 Raising the Leveling Feet

- Step 4** Open the doors and remove the bolts that hold the rack-retaining brackets to the pallet and the Cisco R-Series Rack. Save the brackets and the bolts. (See [Figure 3-4](#).)

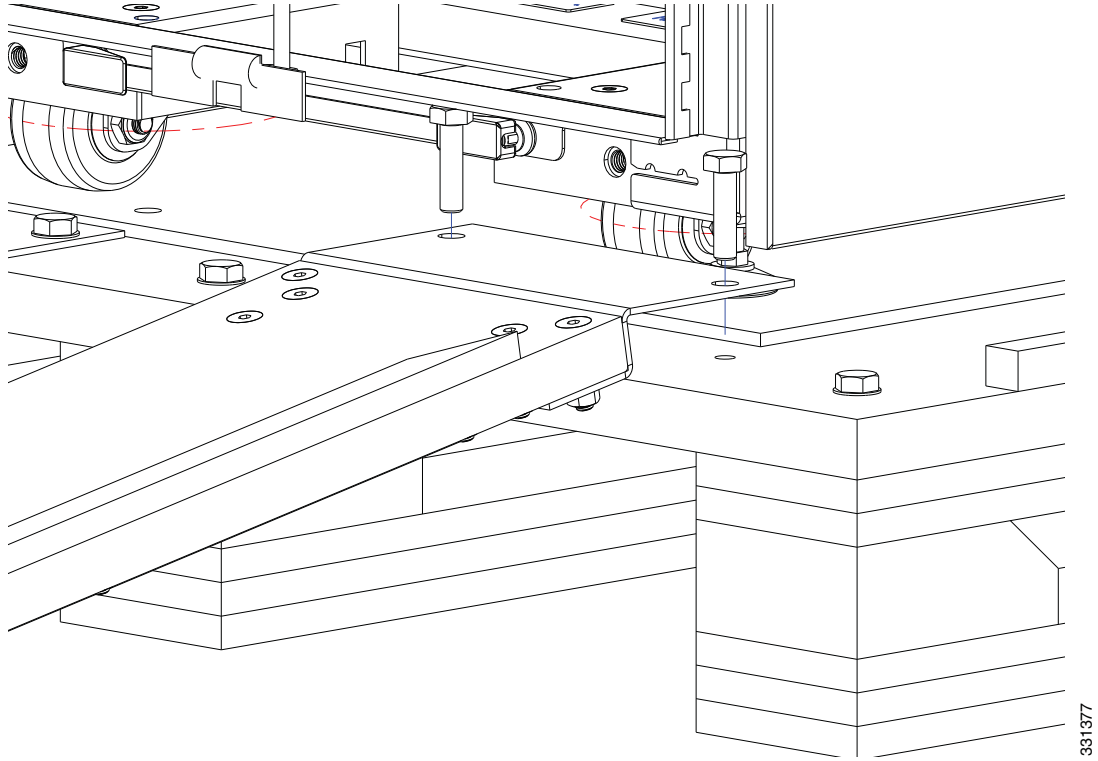
Figure 3-4 Removing the Brackets



- Step 5** (Optional) To reduce the weight of the rack for easier handling, remove the side panels (if included). See [Removing and Installing Side Panels \(if included\)](#), page 6-2.
- Step 6** (Optional) To reduce the weight of the rack for easier handling, remove the front door. See [Removing and Installing a Front Door](#), page 6-3.
- Step 7** (Optional) To reduce the weight of the rack for easier handling, remove the rear doors. See [Removing and Installing Rear Doors](#), page 6-6.

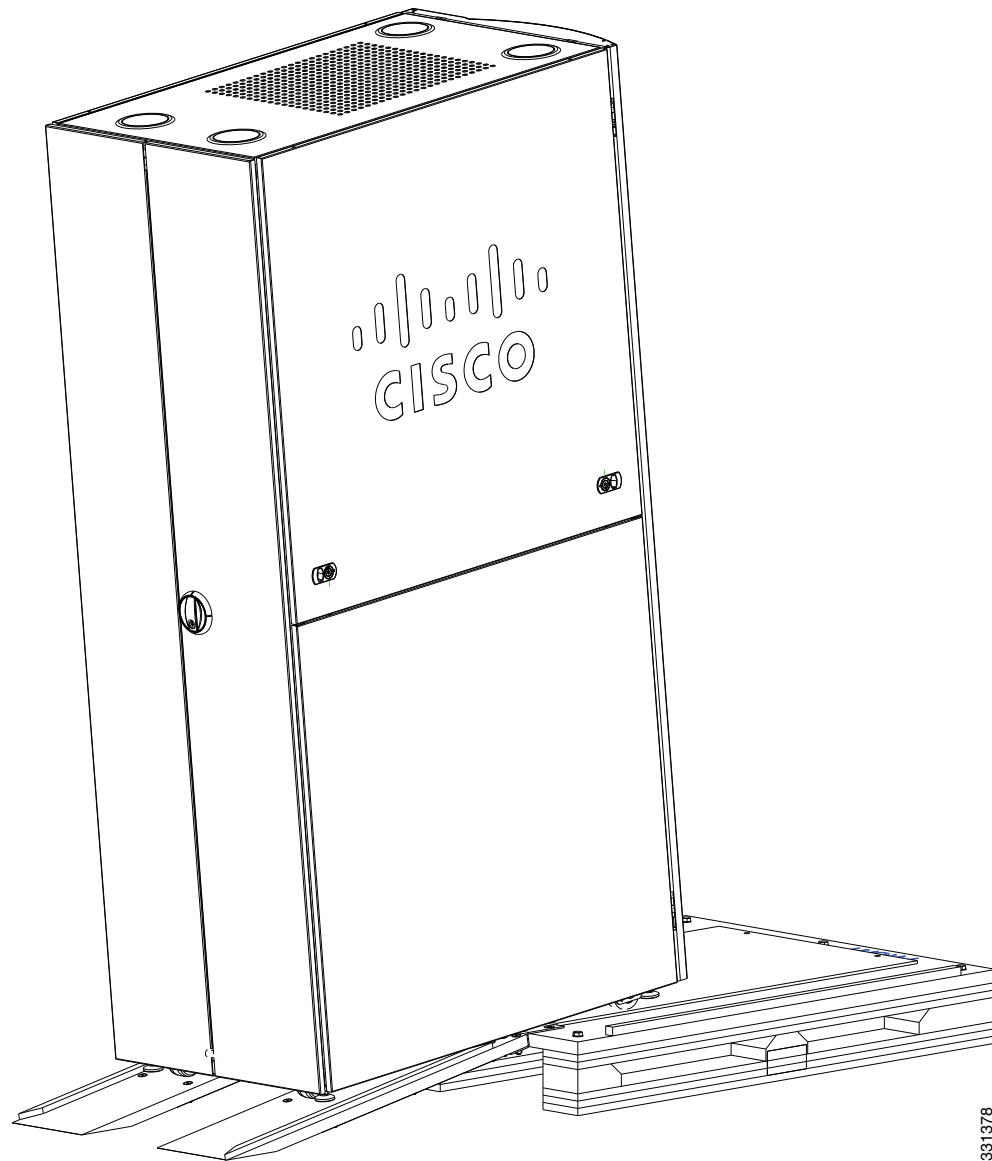
- Step 8** For racks with pre installed equipment, use the four bolts from the front of the rack set aside in Step 4 to secure the two ramps to the pallet at the rear of the rack. Pre drilled holes and hardware are provided there. See [Figure 3-5](#).

Figure 3-5 *Installing the Ramps*



- Step 9** Remove the rack from the pallet.
For racks with pre installed equipment, roll the rack to the rear of the pallet and down the ramps.

Figure 3-6 Using the Ramps



For empty racks, carefully roll the Cisco R-Series Rack toward the front of the pallet; then, lift the rack enough to slide the pallet out from under it. We recommend lifting the Cisco R-Series Rack with a fork lift, a chain hoist, or professional movers. Empty racks are not shipped with ramps.



Caution

Allocate one person whose only job is to slide the pallet out from under the Cisco R-Series Rack. Remember that the rack is much too heavy for two or even three people to lift; use a forklift, a chain hoist, or professional movers.

- Step 10** Store the pallet and packaging material for future use if you have to ship the empty Cisco R-Series Rack cabinet.
- Step 11** Make sure the installation location has the power you will need and meets the description detailed in [Chapter 2, “Site Preparation.”](#)

- Step 12** Verify that the doors along the route to the installation location are wide and tall enough to accommodate the Cisco R-Series Rack on its wheels.
- Step 13** Verify that the flooring is ready. Refer to [Figure 2-1 on page 2-3](#).
- Step 14** Roll the Cisco R-Series Rack to the location where it will be installed.
-

Installing the Cisco R-Series Rack

Securing the Cisco R-Series Rack to the Floor

For information about how to unpack and place the Cisco R-Series Rack, refer to [Unpacking a Cisco R-Series Rack, page 3-1](#). Once the Cisco R-Series Rack is off the pallet, roll it to the desired location. To assure you have enough room at the intended location, refer to the footprint diagram ([Figure 2-2](#)).

Complete the following steps to lower the leveling feet and install the front stabilizer bracket:

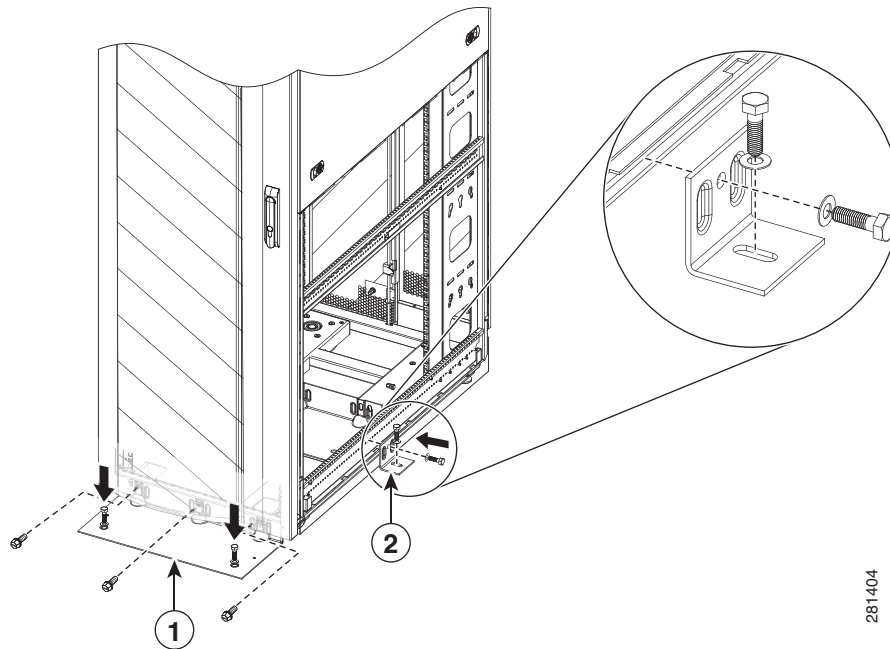
-
- Step 1** Use a flat-head screwdriver to lower each of the leveling feet so that they touch the floor (refer to [Figure 3-3](#) if needed). The rack casters support the weight of the rack, while the leveling feet prevent the rack from rolling.



Caution Unless you are moving the Cisco R-Series Rack, the leveling feet should always be extended.

- Step 2** Remove the stabilizer plate from the bottom floor of the rack.
- Step 3** Attach the stabilizer plate to the front of the Cisco R-Series Rack with the bolts in the accessory kit. (Refer to [Figure 4-1](#), callout 1.)

Figure 4-1 Attaching the Rack to the Floor



281404

- Step 4** If this is a stand-alone rack that will be loaded with less than 68 kg (150 lb.) of equipment, complete the following steps:
- a. Remove the side panels.
 - b. Attach the side stabilizer brackets to the center cage nut on each side of the rack using the provided hex bolts and washers. (Refer to [Figure 4-1](#), callout 2.)
- Step 5** Bolt the Cisco R-Series Rack to the floor surface through the holes in the front and side stabilizer brackets and reinstall the side panels.

The Cisco R-Series Rack itself is now installed. You may now:

- Join additional racks to the installed rack as described in [“Joining Cisco R42610 Racks into a Suite”](#)
- Install optional Cisco PDUs as described in [Chapter 5, “Installing a Cisco RP-Series PDU \(Optional\)”](#)
- Install devices in the rack as described in their documentation.

Joining Cisco R42610 Racks into a Suite

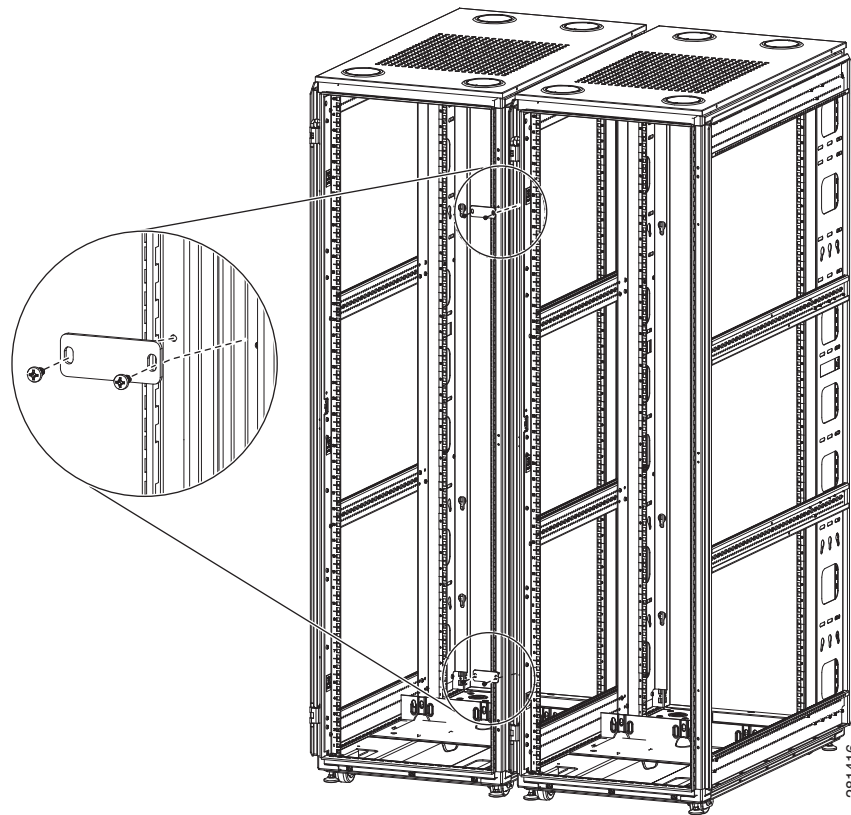
Available for your Cisco R42610 Racks is an optional rack joining kit (RACK-JOIN-001) with all the hardware required for you to attach two or more racks together. You do not have to remove the doors to attach the racks together. Joining racks into a suite will remove the need for the side stabilizers.

Before you join racks together in a suite, make sure that the floor will support the weight of all the equipment and the racks themselves.

To attach Cisco R42610 Racks together, follow these steps:

- Step 1 Install the first rack as described in [“Securing the Cisco R-Series Rack to the Floor”](#).
- Step 2 Remove all doors as described in [“Removing and Installing a Front Door”](#) and [“Removing and Installing Rear Doors”](#).
- Step 3 Secure the racks together using the bracket as shown in [Figure 4-2](#). Use two brackets in the front and two in the rear of the rack.

Figure 4-2 Connecting Two Racks



- Step 4 Install the front stabilizer for the rack you have just added as described in [“Securing the Cisco R-Series Rack to the Floor”](#).
- Step 5 Repeat this procedure to attach additional racks to the suite.

Installing Devices in the Rack

Installation instructions on the optional Cisco PDUs are located in [Chapter 5, “Installing a Cisco RP-Series PDU \(Optional\).”](#)

Refer to the documentation for the devices you intend to install. Always observe the following guidelines:

- A list of Cisco products that have been tested with Cisco R-Series Racks is maintained on an internal Cisco website. Please contact your Cisco representative to access the latest information.
- Prior to the certification of components to ship pre racked, a component must be shipped in its original packaging. The shipment of a non-certified component in a rack will void the warranty. Please contact your Cisco representative to determine whether a component has been certified to ship pre racked.
- Always install devices in the bottom of the rack first, heaviest devices in the lowest possible RU space. A top heavy rack can be extremely dangerous.
- If installed devices can slide forward, only extend one device at a time. Never extend any device that weighs over 176 pounds (80 kilograms).
- Never install devices that are not approved by independent national safety labs appropriate for your country.
- Do not use the top of a rack-mounted device as a shelf unless it is intended for that use.

CHAPTER 5

Installing a Cisco RP-Series PDU (Optional)

The Cisco PDUs are engineered to be conveniently installed in a Cisco R-Series Rack, though other racks may be used with the provided they are square-hole racks. All illustrations assume an installation in the Cisco R-Series Rack.

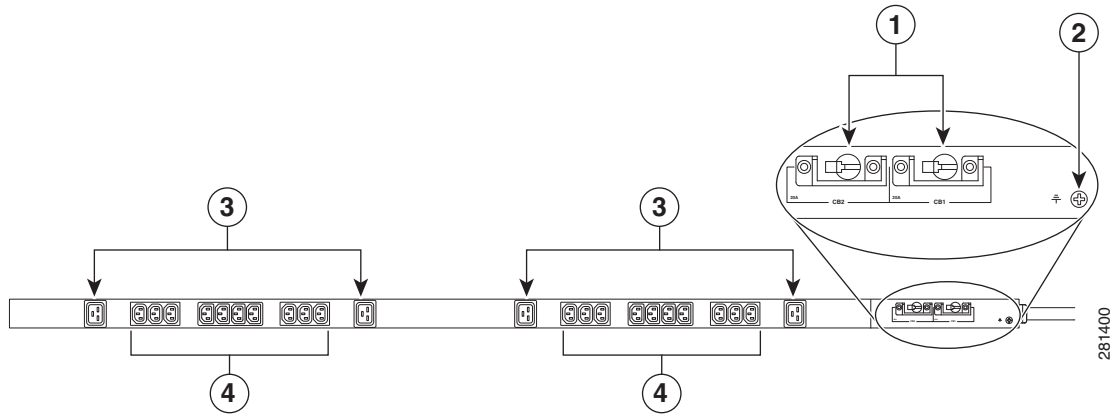
Preparing to Install an RP-Series PDU

Before you install a PDU, plan how to route the power cable, which can be routed through the bottom of the Cisco R-Series Rack (refer to [“Using the Rear Cable Access Bar”](#)), or through the four knockout cabling portholes on the top of the Cisco R-Series Rack enclosure (refer to [“Using the Cabling Portholes”](#)).

Installing a Cisco RP230-32-1P-U-2 or RP208-30-1P-U-2 PDU

The Cisco RP230-32-U-2 Single Phase PDU (EUR) and the Cisco RP208-30-U-2 Single Phase PDU (US) has 20 C13 connectors and 4 C19 connectors (see [Figure 5-1](#)). They differ in the cord used to plug into facility power and in voltage and amperage specification (see [Figure 5-2](#) and [Figure 5-3](#)). These PDUs are intended to be installed on the plates to the rear of the Cisco R-Series Rack without requiring any RU spaces, so they are also referred to as zero-RU PDUs.

Figure 5-1 Zero-RU PDUs



1	Breakers	3	C19
2	Grounding point	4	C13

Figure 5-2 US Plug (NEMA L6-30P)

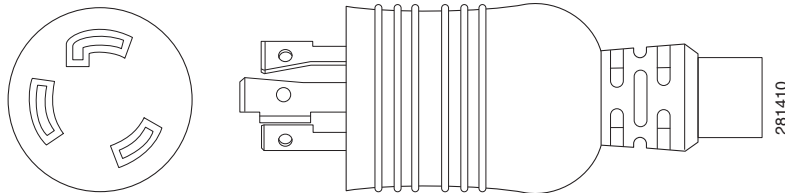
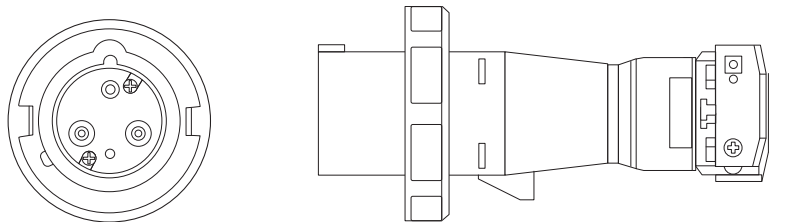


Figure 5-3 European Plug (IEC309-32)



Warning

No user-serviceable parts inside. Do not open. Statement 1073


Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity.
Statement 1001


Warning

Read the installation instructions before connecting the system to the power source. Statement 1004


Warning

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 30 A Statement 1005


Warning

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024


Warning

For Nordic countries (Norway, Finland, Sweden and Denmark) this system must be installed in a Restricted Access Location, where the voltage of the main ground connection of all equipment is the same (equipotential earth) and the system is connected to a grounded electrical outlet. Statement 328


Warning

Connect the device to a grounded power outlet. Statement 25

You can install up to six zero-RU PDUs in the Cisco R-Series Rack. No tools are required. To install a zero-RU PDU, follow these steps:

- Step 1** Open the rear of the rack, and as appropriate for your situation, route the PDU power cable either through the top porthole or the bottom utilizing the cable access bar.
- Step 2** Insert the two studs on the rear of the PDU into a pair of slots on the sides of the rack. See [Figure 5-4](#). The PDU breakers can either be on the top or bottom of the rack, as appropriate for how you route the power cable. If necessary for equipment clearances, use the alternate 90 degree mounting position shown in [Figure 5-4](#) for one of the PDUs.

Figure 5-4 Zero-RU PDUs Mounted (Top Installation Shown)

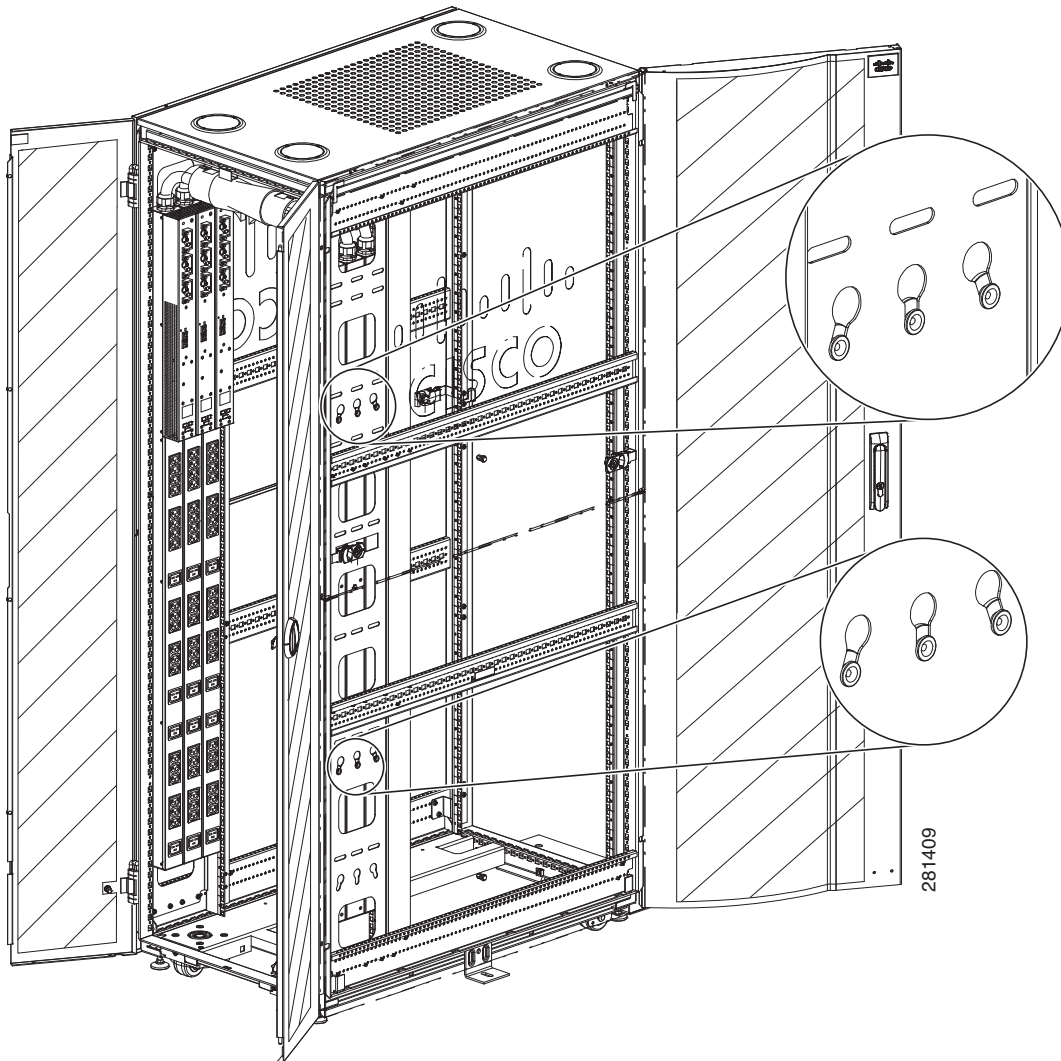
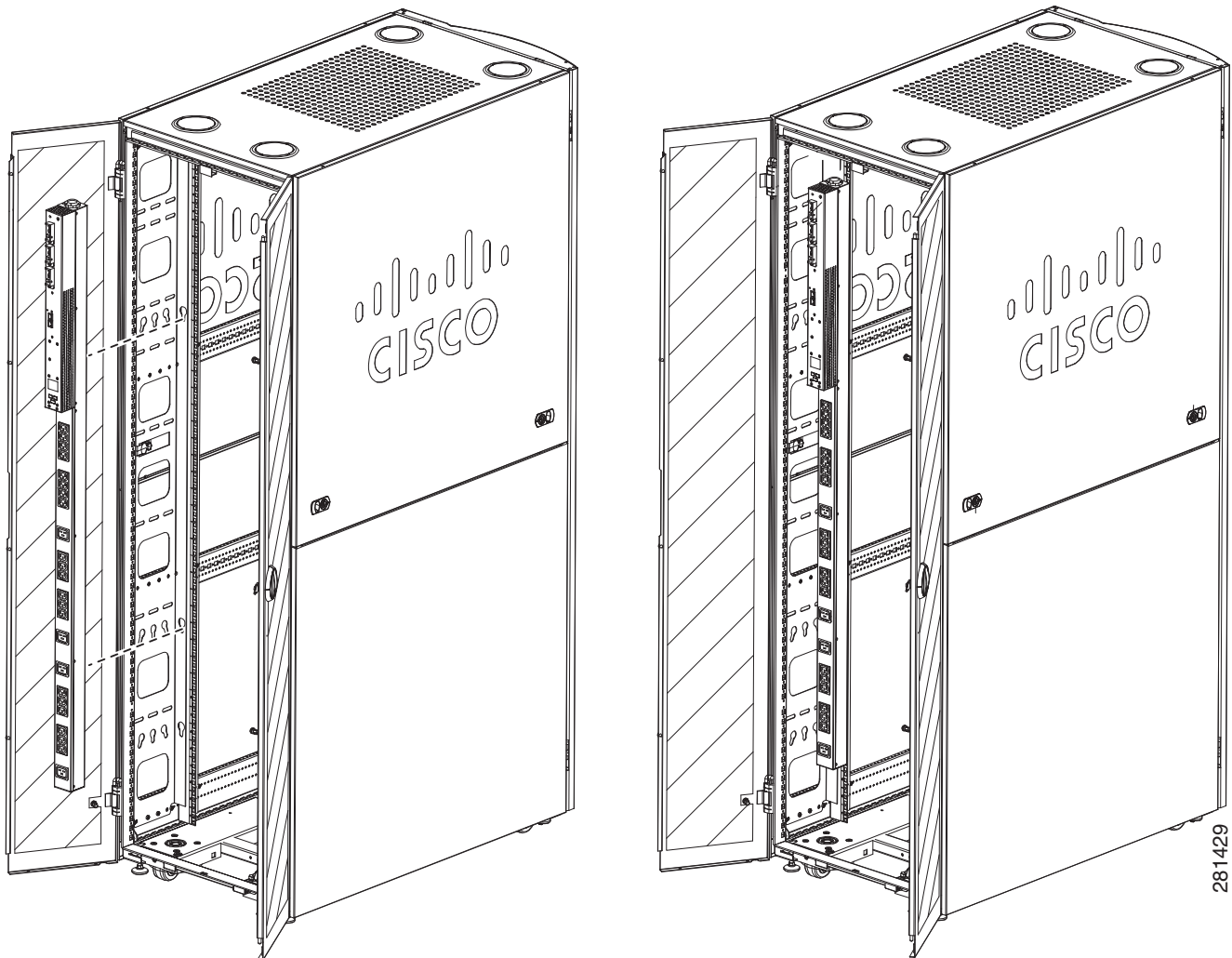


Figure 5-5 Alternate 90 Degree Mounting Position



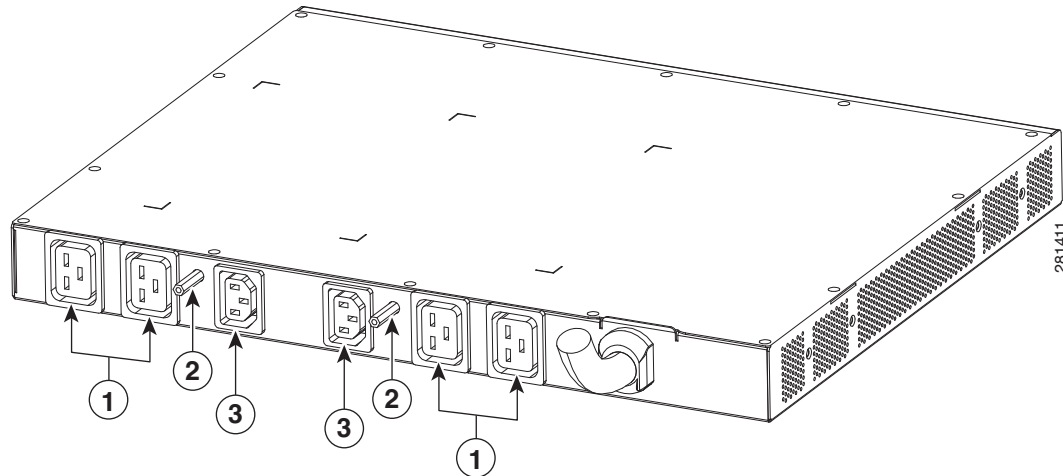
281429

- Step 3** Slide the PDU down slightly so that the PDU can hang in place within the Cisco R-Series Rack.
- Step 4** Secure the PDU to the Cisco R-Series Rack using one of the provided cable ties. If necessary, remove the side panels to make access easier.
- Step 5** Loosen the ground connector and either wrap around it the end of a 10 AWG wire with 1" of the end stripped, or attach a wire that has a ring connector attached.
- Step 6** Connect the other end of the grounding wire to the Cisco R-Series Rack.
- Step 7** Connect the PDU power cord to the AC source.

Installing an Cisco RP230-32-U-1 or RP208-30-U-1 PDU

The Cisco RP230-32-U-1 Single Phase PDU (Eur) and the Cisco RP208-30-U-1 Single Phase PDU (US) both have 2 C13 connectors and 4 C19 connectors (see [Figure 5-6](#)). They differ in the cord used to plug into facility power (see [Figure 5-2](#) and [Figure 5-3](#)). These PDUs can be installed inside the side walls of the Cisco R-Series Rack in a tower configuration without requiring any RU spaces, or in one of the available RU spaces.

Figure 5-6 1-RU PDU Front Panel



1	C19 (4)	3	C13 (2)
2	Breaker reset (2)		


Warning

No user-serviceable parts inside. Do not open. Statement 1073


Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity. Statement 1001


Warning

Read the installation instructions before connecting the system to the power source. Statement 1004


Warning

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than: 30 A Statement 1005


Warning

This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024



Warning

For Nordic countries (Norway, Finland, Sweden and Denmark) this system must be installed in a Restricted Access Location, where the voltage of the main ground connection of all equipment is the same (equipotential earth) and the system is connected to a grounded electrical outlet. Statement 328



Warning

Connect the device to a grounded power outlet. Statement 25

Installing in a Tower Configuration

To install the Cisco PDU in a Cisco R-Series Rack in a tower configuration, follow these steps:

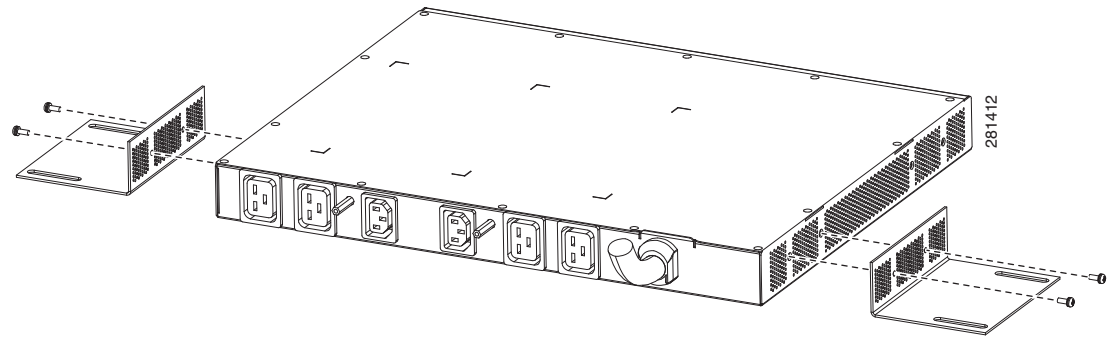
- Step 1** Prepare for installation:
- Place the PDU on the floor or on a sturdy table as close as possible to the Cisco R-Series Rack. Leave enough clearance to allow you to move around the chassis.
 - Open the rack-mount kit, and refer to the component checklist to verify that all parts are included.

Table 5-1 Rack-Mount Kit Checklist

Quantity	Part Description	Received
2	Front L brackets (1 RU install)	
4	Rear L brackets (static and sliding for 1 RU install)	
2	Tower brackets (tower install)	
8	M4 Phillips pan-head screws	
4	12-24 x 3/4-inch Phillips binder-head screws	
4	10-32 x 3/4-inch Phillips binder-head screws	

- Step 2** Attach the left and right L brackets using four of the M4 Phillips pan-head screws provided in the rack-mount kit. (See [Figure 5-7](#).)

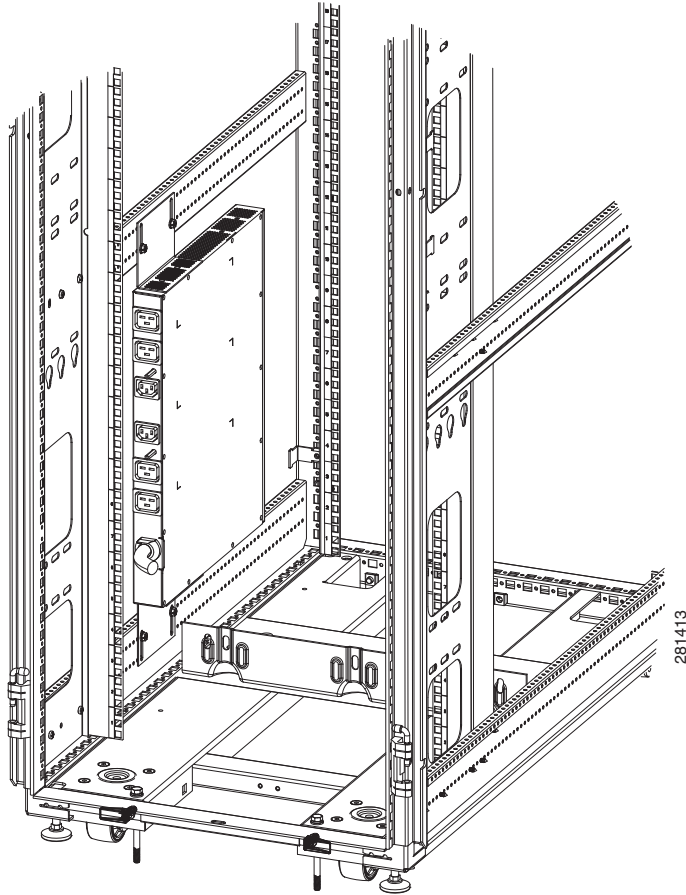
Figure 5-7 Attaching the Brackets to the Cisco PDU for a Tower Mount



- Step 3** Install the PDU in the Cisco R-Series Rack with the outlets facing the rear of the rack. (See [Figure 5-8](#).)
- Position the PDU in the rack at either the top or bottom of the rack:

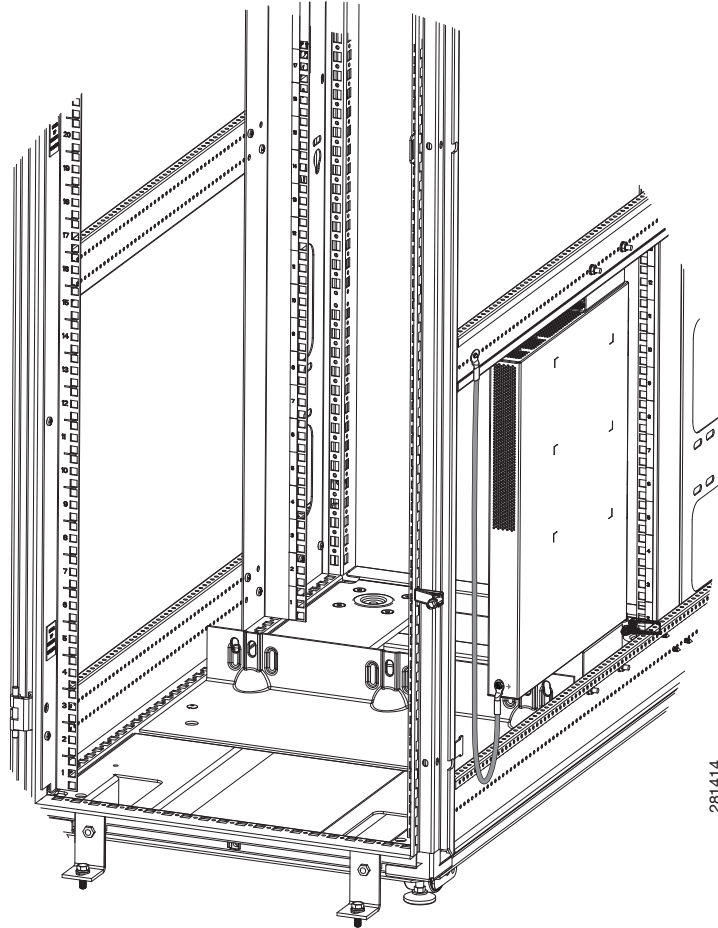
- b. Align the mounting holes in the L brackets with the mounting holes in the rack supports.
- c. Secure the PDU using four (two on each side) no. 12 self-tapping screws through the holes in the L bracket and rack frame.

Figure 5-8 Tower Mounting a Cisco 1-RU PDU



- Step 4** Ground the Cisco PDU to the Cisco R-Series Rack as shown in [Figure 5-9](#). This example shows a connection to the frame using a no. 12 self-tapping screw.

Figure 5-9 Grounding a 1-RU Tower Mount



Step 5 Connect the PDU power cord to the AC source.

Installing in a 1RU Configuration

The 1 RU configuration will work in most square hole rack cabinets, and does not require a Cisco R-Series Rack. Follow these steps to install the Cisco PDU in a rack in a 1 RU configuration:

- Step 1 Prepare for installation:
- Place the PDU on the floor or on a sturdy table as close as possible to the rack. Leave enough clearance to allow you to move around the chassis.
 - Open the rack-mount kit, and refer to the component checklist to verify that all parts are included.

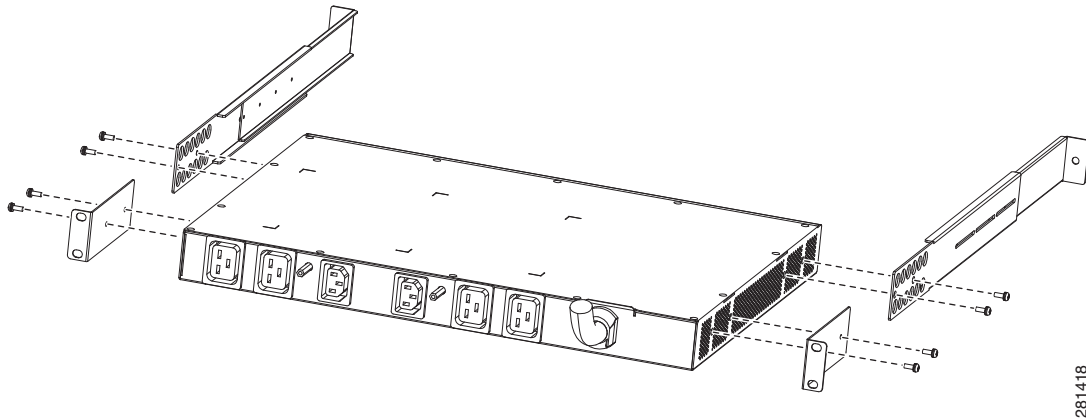
Table 5-2 Rack-Mount Kit Checklist

Quantity	Part Description	Received
2	Front L brackets (1 RU install)	
4	Rear L brackets (static and sliding for 1 RU install)	
2	Tower brackets (tower install)	
8	M4 Phillips pan-head screws	
4	12-24 x 3/4-inch Phillips binder-head screws	
4	10-32 x 3/4-inch Phillips binder-head screws	



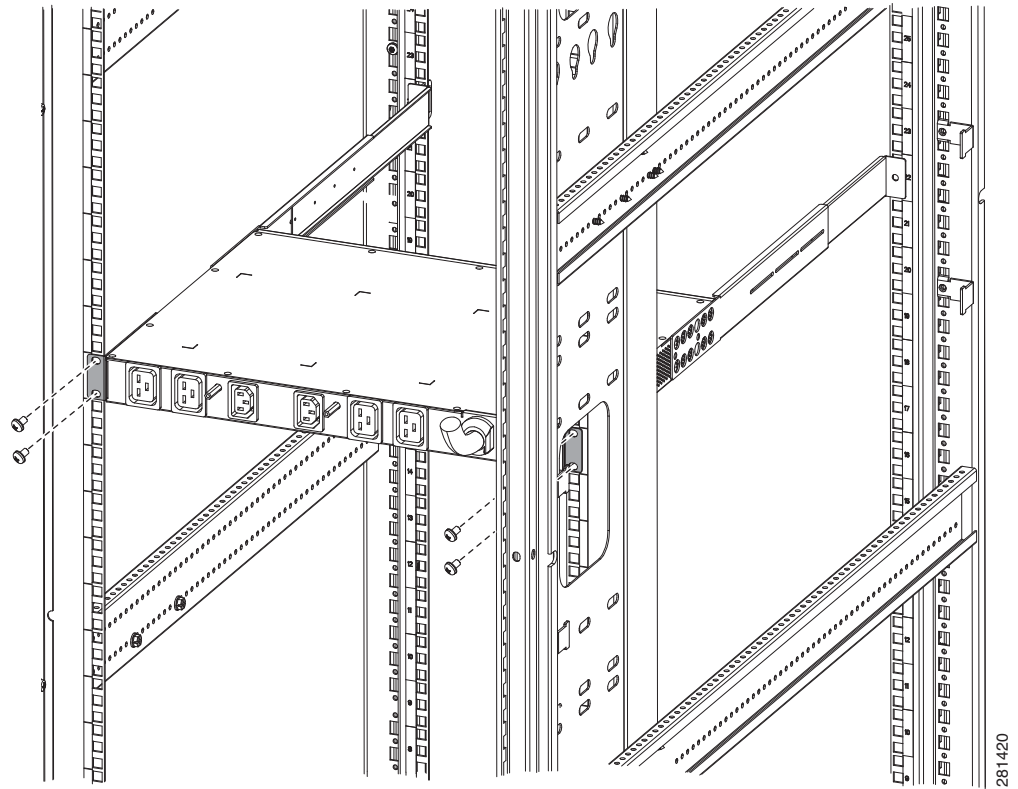
Note Some equipment racks provide a power strip along the length of one of the rear posts. If the rack has this feature, consider the position of the strip when planning fastener points. Before installing the L brackets on the chassis, determine whether to install the chassis from the front or the rear of the rack.

Step 2 Attach the left and right brackets using eight of the M4 Phillips pan-head screws provided in the rack-mount kit. (See [Figure 5-10](#).)

Figure 5-10 Attaching the Brackets to the Cisco PDU for a 1 RU Mount

- Step 3** Slide the rear L bracket onto the rear bracket.
- Step 4** Install 8 cage nuts as needed into the square holes in the desired RU of the rack.
- Step 5** Install the PDU in the rack with the outlets facing the rear of the rack as shown in [Figure 5-11](#) and [Figure 5-12](#).
- Position the PDU in the rack at either the top or bottom of the rack:
 - Align the mounting holes in the L brackets with the mounting holes in the rack. Slide the rear L bracket to the length needed.
 - Secure the PDU using eight (two on each bracket) 12-24 x 3/4-inch screws through the elongated holes in the L bracket and into the cage nuts in the mounting post.

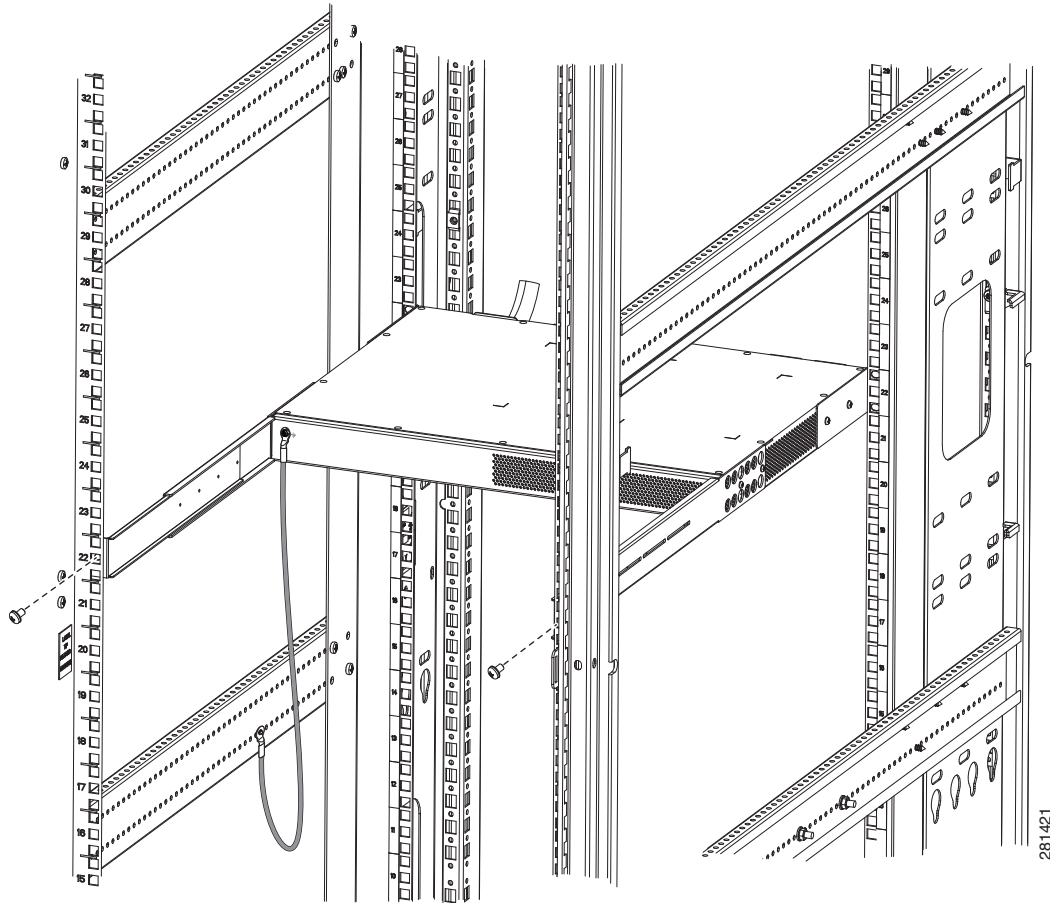
Figure 5-11 RU Mounting a Cisco 1-RU PDU



- Step 6** Ground the Cisco PDU to the rack as shown in [Figure 5-12](#). This example shows a connection to the frame using a no. 12 self-tapping screw.

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Figure 5-12 Grounding a 1-RU Mount



Step 7 Connect the PDU power cord to the AC source.

Replacing Components

The Cisco R-Series Rack has several replaceable components, and the following procedures are possible:

- [Removing and Installing a Front Door](#)
- [Reversing a Front Door](#)
- [Removing and Installing Rear Doors](#)
- [Removing and Installing Side Panels \(if included\)](#)
- [Using the Cabling Portholes](#)
- [Using the Rear Cable Access Bar](#)

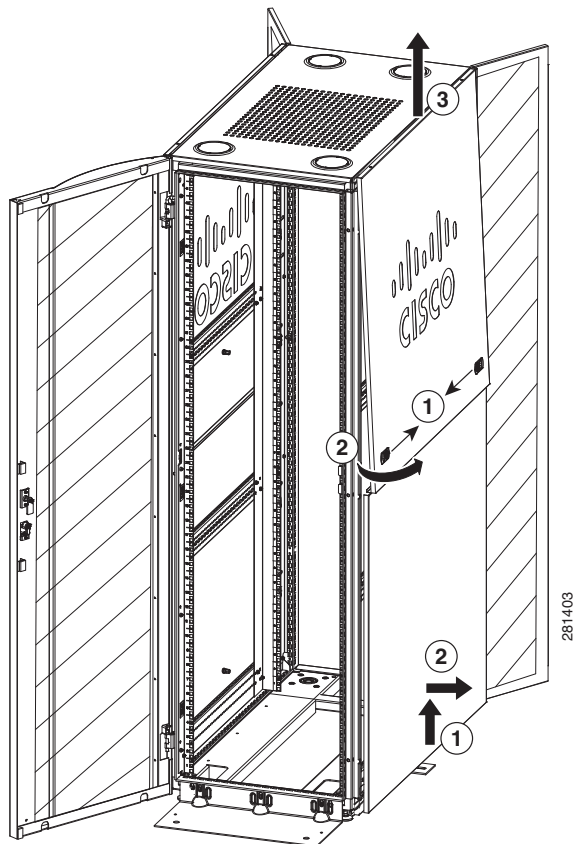
Removing and Installing Side Panels (if included)

The Cisco R-Series Racks may come with side panels installed. You may find it easier to remove the panels as you are unpacking the rack or before installing PDUs, servers, and other devices.

Installation of the panels is the reverse of the removal. Complete the following steps to remove the side panels from a Cisco R-Series Rack:

- Step 1** Unlock both button locks with the provided key and then slide the latches toward each other as shown in [Figure 6-1](#), upper callout 1.

Figure 6-1 Removing Side Panels



- Step 2** Holding it by the sides, pull the bottom of the top panel slightly toward you (as shown in [Figure 6-1](#), upper callout 2); then, lift the side panel and pull it away from the ridge on the top of the rack (as shown in [Figure 6-1](#), upper callout 3).
- Step 3** Holding it by the sides, pull the bottom of the bottom panel slightly up (as shown in [Figure 6-1](#), lower callout 1), then lift the bottom panel and pull it away from the ridge on the middle of the rack (as shown in [Figure 6-1](#), lower callout 2).



Note After removing a side panel, store it in an upright position against a flat surface.

Removing and Installing Cisco R-Series Rack Doors

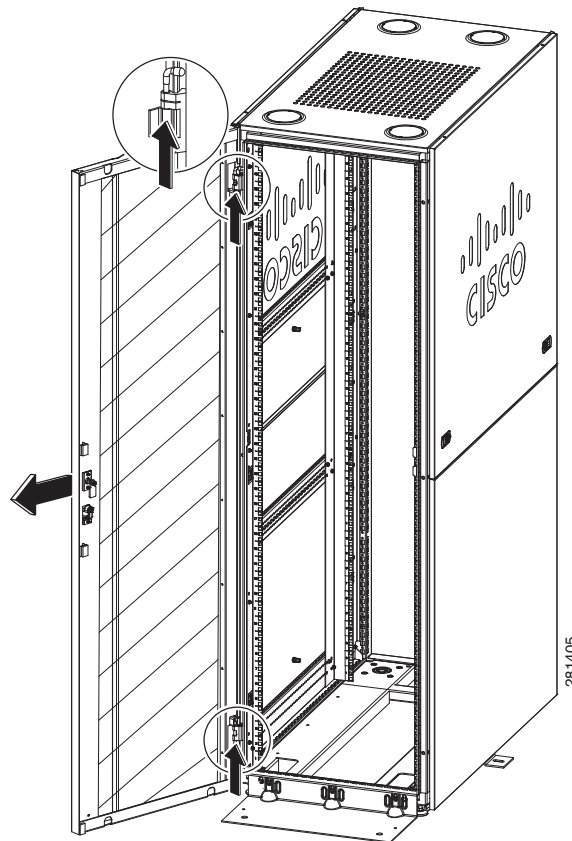
All Cisco R42610 Racks come with front and rear doors installed. Removing the doors when installing and removing devices in the rack is only required if part of the rack is obstructed by the door as you install the device. Most devices can be installed without removing the doors.

Removing and Installing a Front Door

Installing a front door is the reverse of removal. Complete the following steps to remove a front door from the Cisco R42610 Rack.

-
- Step 1** Unlock and open the door by pulling the handle bottom out and rotating the handle 90° clockwise.
 - Step 2** While holding the door steady, lift both captive hinge pin(s) until they unlock (see [Figure 6-2](#)).

Figure 6-2 Removing the Front Door



Timesaver

One person should be able to remove a front door unassisted, but having one person hold the door while the other slides the pins will be slightly quicker.

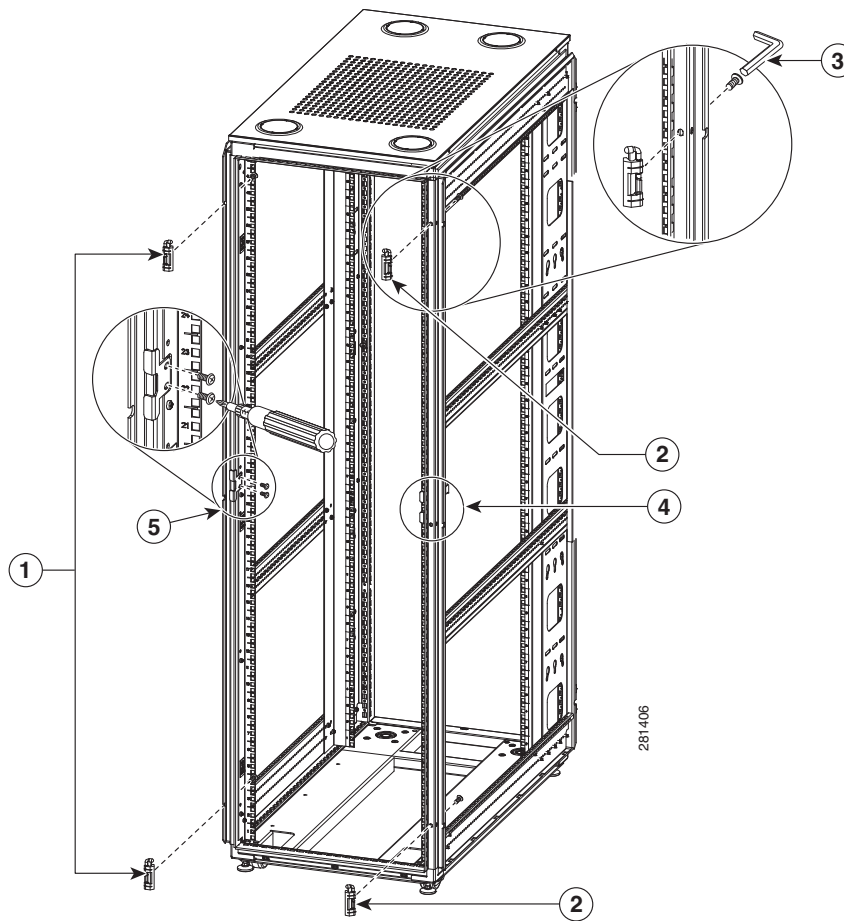
-
- Step 3** Hold the door with both hands and pull it away from the hinges (see [Figure 6-2](#)), then store it in an upright position against a flat surface.
 - Step 4** If you are replacing the front door, you might have to remove the old lock latch (see [Figure 6-3](#), callout 5) and replace it with the new lock latch that comes with the new door (see [Figure 6-4](#), callout 2).
-

Reversing a Front Door

To reverse a front door on a Cisco R42610 Rack so that it opens in the opposite direction, follow these steps:

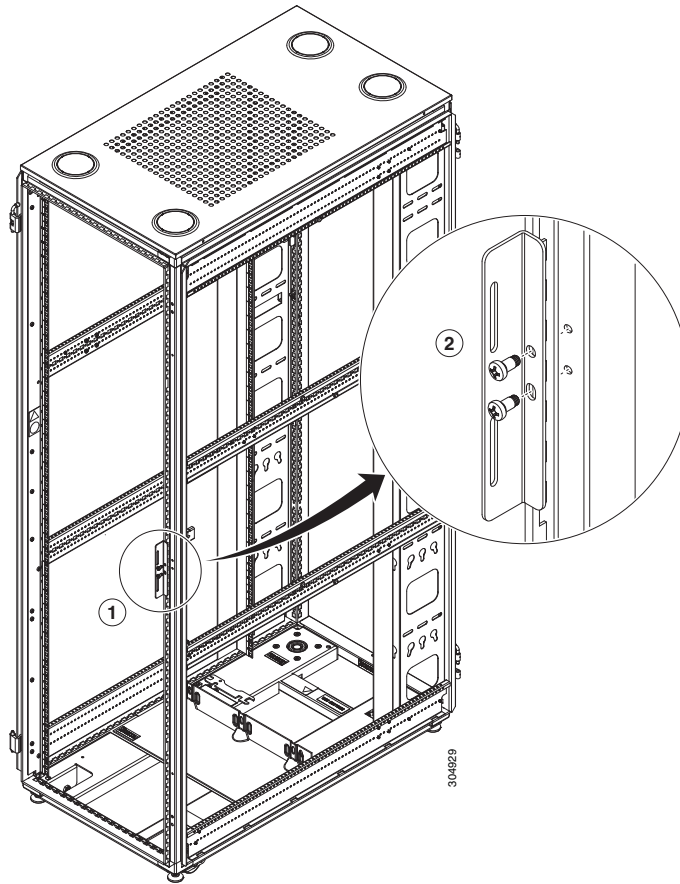
- Step 1 Remove the door as described in “[Removing and Installing a Front Door](#)”.
- Step 2 Use a 4 mm hex wrench to remove the top and bottom hinges from the rack. See callout 1 in [Figure 6-3](#).
- Step 3 Install the hinges on the other side of the rack. See callout 2 and callout 3 in [Figure 6-3](#).
- Step 4 Remove the front door latch. See callout 4 in [Figure 6-3](#).
- Step 5 Attach the front door latch to the other side of the rack. See callout 5 in [Figure 6-3](#) or [Figure 6-4](#).

Figure 6-3 Reversing Front Door Hinges and Door Latch



1	Starting position of hinges	4	Starting position of door latch
2	Moved position of hinges on opposite post	5	Moved position of door latch on opposite post
3	Close-up view of hinge		

Figure 6-4 Door Latch on Right-Front Rack Post



1	Door latch on right-front rack post	2	Enlarged view of door latch and screws
---	-------------------------------------	---	--

Step 6 Rotate the door 180°; then install the door on the other side of the rack.

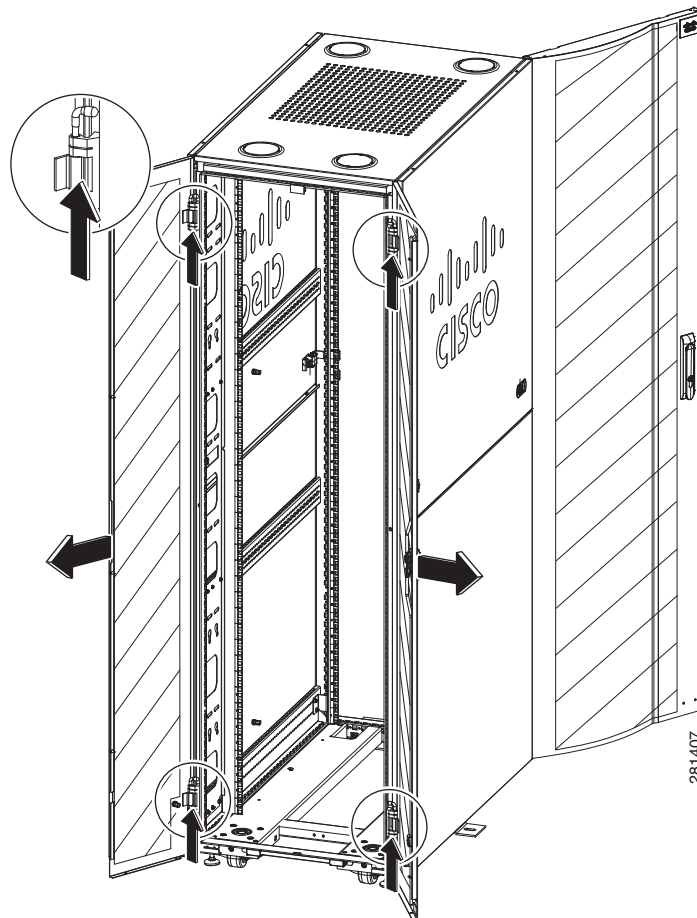
Step 7 Remove the Cisco logo from the bottom of the door; then snap it into the holes near the top of the door.

Removing and Installing Rear Doors

Installing the rear doors is the reverse of removal. Complete the following steps to remove the rear doors from the Cisco R42610 Rack.

- Step 1 Unlock and open the right-side door.
- Step 2 While holding the right door steady, lift both captive hinge pins until they unlock (as shown in [Figure 6-5](#)).
- Step 3 Hold the door steady with both hands and pull it away from the hinges; then store it in an upright position against a flat surface.
- Step 4 Open the left-side door.
- Step 5 Hold the left-side door steady with one hand, then lift both captive hinge pins until they unlock (as shown in [Figure 6-5](#)).
- Step 6 Hold the door steady with both hands and pull it away from the hinges, then store it in an upright position against a flat surface.

Figure 6-5 Removing the Rear Doors

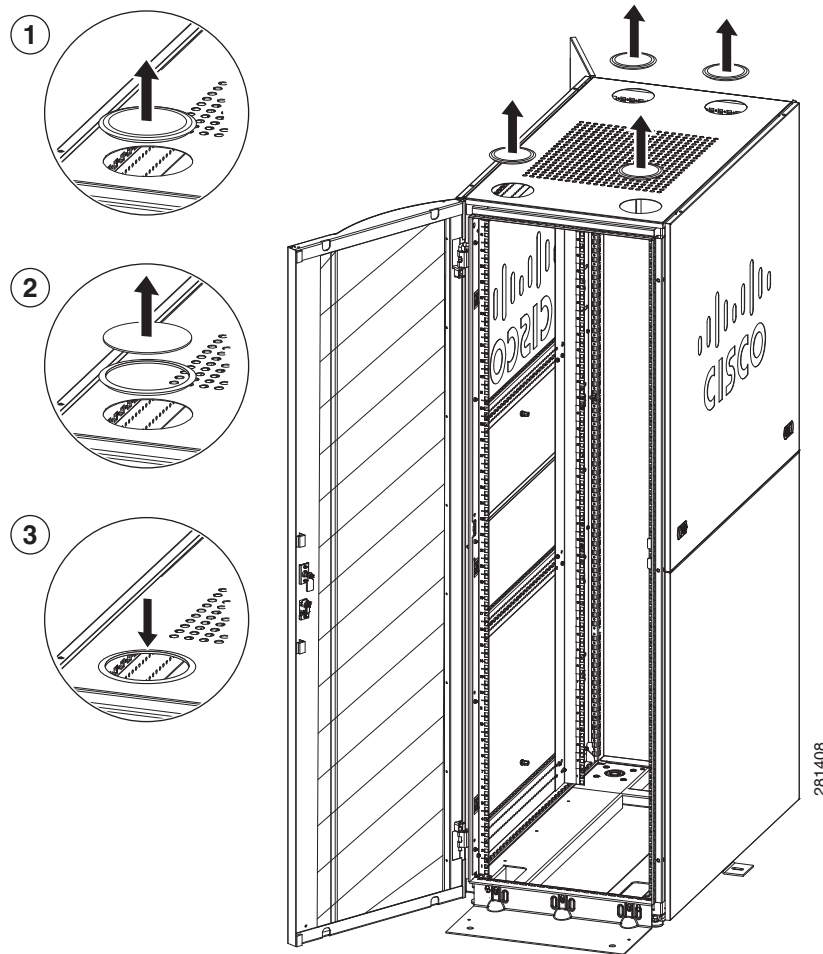


Using the Cabling Portholes

To use knockout cabling portholes on the top panel:

-
- Step 1** Use a flat-blade screwdriver to pry a knockout cabling porthole off the Cisco R-Series Rack top panel. (See [Figure 6-6](#), callout 1.)
 - Step 2** Snap out and discard the center of the cabling porthole. (See [Figure 6-6](#), callout 2.)
 - Step 3** Replace the grommet ring of the cabling porthole in the opening. (See [Figure 6-6](#), callout 3.)

Figure 6-6 Access Ports on the Cisco R-Series Rack Top



Caution

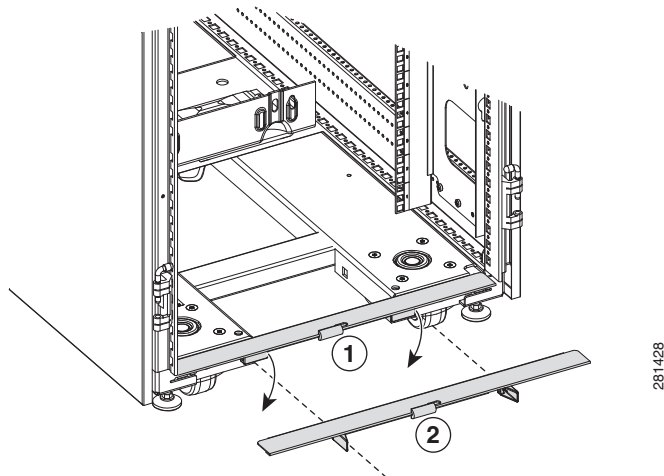
Failing to replace the ring may lead to damaged power or network cables.

Using the Rear Cable Access Bar

To use the rear cable access bar in the bottom of the Cisco R-Series Rack:

-
- Step 1** Release the two swell latches securing the cable access bar to the rear of the rack. (See the Arrows and callout 1 in [Figure 6-7](#).)
 - Step 2** Pull the bar away from the rack as shown in callout 2 of [Figure 6-7](#).

Figure 6-7 *Removing the Cable Access Bar*



- Step 3** Route the cables through the opening.
 - Step 4** Reattach the rear cable access bar to the rack by pressing it into place and tightening the swell latches. Make sure that you do not pinch or cut any cables.
-

Specifications

Rack Specifications

Table A-1 lists the specifications for Cisco R-Series Racks.

Table A-1 *Specifications*

Cisco R42610 Rack	Standard	Expansion	Dynamic
Dimensions (H x W x D)	78.74 x 24 x 43.38 in. (2000 x 610 x 1102 mm)	78.74 x 23.58 x 43.38 in. (2000 x 599 x 1102 mm)	78.74 x 24 x 43.38 in. (2000 x 610 x 1102 mm)
Dimensions (H x W x D) with packaging	89 x 33 x 47 in. (2261 x 838 x 1194 mm)	89 x 33 x 47 in. (2261 x 838 x 1194 mm)	85 x 39 x 47 in. (2169 x 992 x 1200 mm)
Distance from front mounting rail to rear mounting rail	29.2 in (741 mm)	29.2 in (741 mm)	29.2 in (741 mm)
Weight	299.83 lb. (136 kg)	231. 49 lb. (105 kg)	299.83 lb. (136 kg)
Weight with packaging	354 lb. (161 kg)	284 lb. (129 kg)	473 lb. (215 kg)
Side panels included	Yes	No	Yes
Equipment mounting capacity	42RU	42RU	42RU
Static load capacity	3000 lb. (1360 kg)	3000 lb. (1360 kg)	3000 lb. (1360 kg)
Dynamic load capacity	Not applicable	Not applicable	2150 lb. (975 kg)

PDU Specifications

Table A-2 to Table A-4 list the specifications for Cisco RP-Series PDUs.

Table A-2 PDU Specifications

Description	0RU strip PDU 20 C13 and 4 C19	1RU PDU 2 C13 and 4 C19
Cisco option part number	RP208-30-1P-U-2 (US) or RP230-30-U-2 (EU)	RP208-30-1P-U-1 (US) or RP230-32-U-1 (EU)
RU size	0	0 or 1
Input voltage	200 to 240 VAC \pm 10%	200 to 240 VAC \pm 10%
Frequency	50 to 60 Hz	50 to 60 Hz
Amperage	30 A (US) or 32 A (EU)	30 A (US) or 32 A (EU)
UL rating	24 A	24 A
Input plug	NEMA L6-30P (US) or IEC309-32 EU	NEMA L6-30P (US) or IEC309-32 (EU)
Cord length	3m	3m
Output voltage	200 to 240 VAC	200 to 240 VAC
Receptacles	20 IEC 320 C13 4 IEC 320 C19	2 IEC 320 C13 4 IEC 320 C19
Circuit breakers ^{1 2}	2 two-pole 30A (UL 489/ CSA C22.2 No. 5.1)	2 two-pole 30A (UL 489/ CSA C22.2 No. 5.1)
Safety and Environmental		
Operating temperature	50 to 122° F (10 to 50° C)	
Operating relative humidity	5 to 90% (non-condensing)	
Operating elevation	0 to 10,000 ft. (0 to 3048m)	
Storage temperature	-40 to 140°F (-40 to 60° C)	
Storage relative humidity	5 to 95% (including condensing)	
Storage elevation	0 to 50,000 ft. (0 to 15,240m)	
Acoustics	No fan; measure 1m from surface of PDU.	
Safety	IEC 60950-1 EN 60950-1 UL/CSA 60950-1	IEC 60950-1 EN 60950-1 UL/CSA 60950-1

Table A-2 PDU Specifications (continued)

Description	0RU strip PDU 20 C13 and 4 C19	1RU PDU 2 C13 and 4 C19
Unit dimensions (L x W x H)	60.6 x 17.4 x 3.4 in. (1540 x 44 x 85 mm)	17.6 x 13.8 x 18 x 11.1 (447 x 350 x 45 x 5 mm)
Unit weight	12.1 lb. (5.5 kg)	11.1 lb. (5 kg)
Packaging size (H x W x D)	170 x 170 x 1720 mm	180 x 495 x 565 mm
Total weight with packaging	15.5 lb. (7 kg)	18.3 lb. (8.3 kg)

1. To reduce the risk of fire, connect only to a circuit provided with branch circuit overcurrent protection with an ampere rating in accordance with the National Electrical Code (NEC), ANSI/NFPA 70 or your local electrical code.
2. The circuit breaker must be wall mounted and easily accessible to the operator.



This symbol indicates that you should not discard waste electrical or electronic equipment (WEEE) in the trash. For proper disposal, contact your local recycling/reuse or hazardous waste center.



Safety Earthing Terminal This symbol indicates the primary safety ground.

The PDU requires a dedicated branch circuit that meets the diagram in [Figure A-1](#) and the PDU specifications:

Figure A-1 PDU Circuit

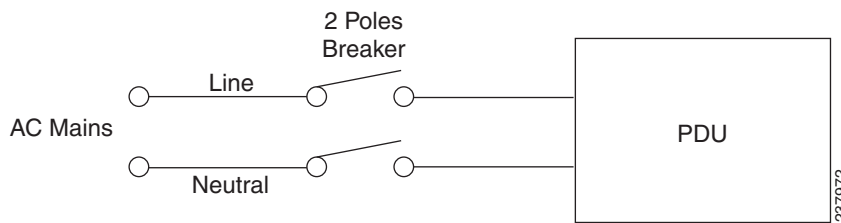


Table A-3 PDU Power Efficiency

Current (A)	1U Power loss (W)	0U Power loss (W)
0	>0.3	>0.2
5	3	4
32	100	80

Table A-4 **Connector Specifications**

Connector	Server Inlet	Rated Continuous Current
C13	C14	10 A
C19	C20	16 A

Translated Safety Warnings

Statement 25—Warning for Norway and Sweden



Warning Connect the device to a grounded power outlet. Statement 25

Advarsel Apparatet skal kobles til en jordet stikkontakt.

Varning! Apparatet skall anslutas till jordat nätuttag.

Statement 219—Bolted Rack Warning



Warning Make sure that your rack is bolted to the floor. Statement 219

Waarschuwing Het rek moet aan de vloer zijn vergrendeld.

Varoitus Varmista, että teline on kiinnitetty pulteilla lattiaan.

Attention Assurez-vous que l'armoire est fixée au sol.

Warnung Vergewissern Sie sich, dass das Gestell verankert ist.

Avvertenza Verificare che il rack sia avvitato al pavimento.

Advarsel Forsikre deg om at racket er boltet fast til gulvet.

Aviso Certifique-se de que o suporte está aparafusado ao chão.

¡Advertencia! Asegúrese de el soporte de su equipo está bien fijado al suelo.

Varning! Kontrollera att stativet är fastsatt i golvet.

Statement 220—Rack Ventilation Warning



Warning Make sure that your equipment rack is properly ventilated. Statement 220

Waarschuwing Het apparatuurrek moet voldoende ventilatie krijgen.

Varoitus Varmista, että laitteistoteline on kunnolla ilmastoitu.

Attention Assurez-vous que l'armoire de votre équipement est correctement ventilée.

Warnung Vergewissern Sie sich, dass das Gerätegestell ausreichend belüftet ist.

Avvertenza Verificare che l'apparecchiatura sia ventilata in modo adeguato.

Advarsel Forsikre deg om at utstyrsracket er grundig ventilert.

Aviso Certifique-se de que o suporte do equipamento é devidamente ventilado.

¡Advertencia! Asegúrese de que el soporte de su equipo posee una ventilación adecuada.

Varning! Kontrollera att utrustningen har tillräcklig ventilation.

Statement 250—Rack Stabilization Warning



Warning Stability hazard. The rack stabilizing mechanism must be in place, or the rack must be bolted to the floor before you slide the unit out for servicing. Failure to stabilize the rack can cause the rack to tip over. Statement 250

Waarschuwing Kantelgevaar. Als u een eenheid uitschuift ten behoeve van service-werkzaamheden, moet het rek met de speciaal daarvoor bedoelde voorzieningen zijn gestabiliseerd of met bouten in de vloer zijn vastgezet. Het rek kan kantelen als het niet afdoende is gestabiliseerd.

Varoitus Stabiiliusvaara. Telineen stabilointimekanismin on oltava paikallaan tai telineen on oltava ruuvattu lattiaan, ennen kuin liu'utat yksikön ulos huoltoa varten. Ellei telinettä stabiloida, se voi kaatua.

Attention	Stabilisation de l'armoire : le mécanisme de stabilisation doit être installé correctement ou l'armoire doit être solidement fixée au sol avant d'être utilisée. Sans cette précaution, elle risque de basculer.
Warnung	Umstürzgefahr. Bevor Sie die Einheit zur Wartung herausziehen, sollten Sie die Stabilisierungsvorrichtung des Gestells aktivieren oder das Gestell am Boden festschrauben. Wenn das Gestell nicht entsprechend gesichert ist, kann es umkippen.
Avvertenza	Pericolo di stabilità. Prima di estrarre l'unità per la manutenzione, accertarsi che il meccanismo di stabilizzazione del rack sia in funzione oppure che il rack sia affrancato al pavimento. La mancata stabilità del rack può causarne il rovesciamento.
Advarsel	Stabilitetsfare. Stabiliseringsmekanismen for stativet må være på plass, eller stativet må være skrudd fast i gulvet, før du drar ut enheten for å utføre service. Hvis du ikke stabiliserer stativet, kan det hende at stativet velter.
Aviso	Risco de estabilidade. O mecanismo de estabilização da prateleira tem de estar colocado no devido lugar ou, então, a prateleira tem de estar aparafusada ao chão antes de fazer deslizar a unidade para fora, para reparação. A falha na estabilização da prateleira pode fazê-la virar.
¡Advertencia!	Equilibrio inestable. El mecanismo de equilibrio del bastidor debe estar colocado en su lugar correcto; de lo contrario, atornille el bastidor al suelo antes de deslizar la unidad para su manipulación. Si no equilibra el bastidor, éste podrá volcarse.
Varning!	Stabilitetsfara. Rackets stabiliseringsmekanism måste sitta på plats, eller också måste racket skruvas fast i golvet innan du drar ut en enhet för underhåll. Om racket inte stabiliseras, kan det välta.

Statement 252—Chassis Installation Warning



Warning

If you are installing more than one chassis, install the slide assemblies so that the first chassis is installed in the lowest available position in the rack. Statement 252

Waarschuwing	Plaats de uitschuifmechanismen bij het installeren van meer dan één chassis zodanig dat het als eerste te installeren chassis in de laagst mogelijke positie wordt aangebracht.
Varoitus	Jos asennat useamman kuin yhden asennuspohjan, asenna kiskot niin, että ensimmäinen asennuspohja asetetaan telineen alimpaan mahdolliseen paikkaan.
Attention	Si vous installez plusieurs châssis, commencez par utiliser la partie la plus basse de l'armoire.
Warnung	Wenn Sie mehr als ein Chassis installieren, sollten die Führungsschienen so angebracht werden, daß das erste Chassis in der untersten Position des Gestells montiert wird.
Avvertenza	Se si installa più di un telaio, installare gli alloggiamenti per il montaggio in modo che il primo telaio venga installato all'estremità inferiore del rack.

Advarsel	Hvis du installerer mer enn ett kabinet, må du installere skinnene slik at det første kabinettet kan installeres lavest mulig på stativet.
Aviso	Se pretende instalar mais do que um chassis, instale os conjuntos deslizantes de modo a que o primeiro chassis seja instalado na posição mais baixa na prateleira.
¡Advertencia!	Si instala más de un chasis, comience por la ranura de ensamblaje de forma que el primer chasis esté instalado en el lugar más inferior que se encuentre libre en el bastidor.
Varning!	Om du monterar mer än ett chassi, ska du montera skenfästena så att det första chassit monteras i den nedersta lediga platsen i racket.

Statement 328—Main Ground Connection Warning



Warning

For Nordic countries (Norway, Finland, Sweden and Denmark) this system must be installed in a Restricted Access Location, where the voltage of the main ground connection of all equipment is the same (equipotential earth) and the system is connected to a grounded electrical outlet. Statement 328

Waarschuwing

Voor de Noord-Europese landen (Noorwegen, Finland, Zweden en Denemarken) dient dit systeem geïnstalleerd te worden in een locatie met beperkte toegang, waarbij het voltage van de hoofdaardingsaansluiting van alle apparatuur hetzelfde is (equipotentiale aarding) en het systeem aangesloten is op een gearde elektrische contactdoos.

Varoitus

Pohjoismaissa (Norja, Ruotsi, Suomi ja Tanska) tämä järjestelmä on asennettava paikkaan, johon on rajoitettu pääsy ja jossa kaikkien laitteiden päämaadoituksen jännite on sama (tasapotentialinen maa) ja järjestelmä on kytketty maadoitettuun pistorasiaan.

Attention

Dans les pays scandinaves (Norvège, Finlande, Suède et Danemark), ce système doit être installé dans un local à accès restreint, où le voltage de la prise de terre principale de tous les appareils est le même (" terre équipotentielle ") et où le système est connecté à une prise électrique mise à la terre.

Warnung

In nordischen Ländern (Norwegen, Finnland, Schweden und Dänemark) muss dieses System an einem Standort mit beschränktem Zugang installiert werden, an dem die Spannung der Haupterdungsverbinding aller Geräte gleich ist (Äquipotential-Erdung) und das System an eine geerdete Steckdose angeschlossen ist.

Avvertenza

In Scandinavia (Norvegia, Finlandia, Svezia e Danimarca) questo sistema deve essere installato in un'Area ad Accesso Limitato, in cui il livello di tensione della connessione di terra della rete è lo stesso per tutti gli apparecchi (terra equipotenziale) e il sistema è connesso ad un impianto di messa a terra.

Advarsel

I de nordiske land (Norge, Finland, Sverige og Danmark) må dette systemet installeres på et sted merket begrenset adgang, der spenningen i apparatjordforbindelsen for alt utstyr er den samme (ekvipotensial jord) og der systemet er koblet til et jordet elektrisk uttak.

Aviso	Para países Nórdicos (Noruega, Finlândia, Suécia e Dinamarca) este sistema deve ser instalado em um local de acesso restrito onde a voltagem do aterramento principal de todos os equipamento é o mesmo (equipotential earth) e o sistema está conectado a uma tomada elétrica aterrada.
¡Advertencia!	En los países nórdicos (Noruega, Finlandia, Suecia y Dinamarca), este sistema debe ser instalado en una ubicación de acceso restringido donde el voltaje de la conexión principal a tierra de todo el equipamiento sea el mismo (tierra equipotencial) y el sistema se conecte a un enchufe con descarga a tierra.
Varning!	I de nordiska länderna (Norge, Finland, Sverige och Danmark) måste detta system installeras på en plats med begränsad åtkomst, där spänningen i huvudjordningsanslutningen för all utrustning är densamma (ekvipotentiell jordning) och där systemet är anslutet till ett jordat eluttag.

Statement 333—Rack Lifting Warning



Warning

Never attempt to lift the rack with the handles on the power supplies or the modules. These handles are not designed to support the weight of the rack. Using them to lift or support the rack can result in severe damage to the equipment and serious bodily injury. Statement 333

Waarschuwing

Het rek mag nooit met de hendels aan de voedingsbronnen of modules opgetild worden. Deze hendels zijn niet ontworpen om het gewicht van het rek te kunnen dragen. Als de hendels gebruikt worden om het rek op te tillen of te ondersteunen, kan dit ernstige beschadiging van de apparatuur en zwaar lichamelijk letsel veroorzaken.

Varoitus

Älä yritä milloinkaan nostaa telinettä virtalähteiden tai moduulien kahvoista. Näitä kahvoja ei ole suunniteltu kestäämään telineen painoa. Niiden käyttö telineen nostamiseen tai kannattamiseen voi aiheuttaa vakavan laiteaurion ja vakavan ruumiinvamman.

Attention

N'essayez jamais de lever le rack à l'aide des poignées du module d'alimentation ou de commutation. Ces poignées ne sont pas conçues pour résister à de fortes charges. Les utiliser pour lever le rack risque de provoquer des dommages importants à l'appareil et des blessures corporelles graves.

Warnung

Das Rack niemals an den Griffen der Stromversorgung oder der Module anheben. Diese Griffe können das Gewicht des Racks nicht tragen. Wenn sie zum Anheben oder Stützen des Racks benutzt werden, besteht Gefahr schwerer Geräteschäden und Personenverletzungen.

Avvertenza

Non tentare mai di sollevare il rack utilizzando i manici degli alimentatori o dei moduli. Questi manici non sono stati progettati per sostenere il peso del rack e il loro utilizzo per sollevare o sostenere il rack può causare gravi lesioni e danni all'apparecchio.

Advarsel

Forsøk aldri å løfte stativet ved hjelp av håndtakene på strømforsyningsenhetene eller omkoblingsmodulene. Disse håndtakene er ikke konstruert for å tåle vekten av stativet. Ved å bruke disse til å løfte eller støtte opp stativet, kan du forårsake alvorlig skade på mennesker og utstyr.

Aviso	Nunca tente levantar o bastidor pelas alças das fontes de energia ou dos módulos. As alças não foram projetadas para sustentar o peso do bastidor. Usá-las para erguer ou sustentar o bastidor poderá danificar significativamente o equipamento e causar lesão física grave.
¡Advertencia!	No intentar nunca levantar el soporte por las asas de las fuentes de alimentación o de los módulos. Las asas no han sido diseñadas para sostener el peso del soporte. Si se usan para levantar o sostener el soporte pueden producirse serios daños a los equipos y lesiones físicas graves.
Varning!	Försök inte lyfta racket i handtagen på strömförsörjningsaggregaten eller modulerna. Dessa handtag är inte konstruerade för rackets vikt. Om de används för att lyfta eller stödja racket kan allvarliga materiella skador samt kroppsskador uppstå.

Statement 334—Rack Lifting Warning



Warning

Three people are required to lift the rack. Grasp the rack underneath the lower edge and lift with both hands. To prevent injury, keep your back straight and lift with your legs, not your back.

Statement 334

Waarschuwing

Er zijn drie personen nodig om het rek op te tillen. Het rek dient onder de onderrand vastgegrepen en met beide handen opgetild te worden. Om te voorkomen dat u letsel oploopt, dient u uw rug recht te houden en met uw benen in plaats van met uw rug te tillen.

Varoitus

Telineen nostamiseen tarvitaan kolme henkilöä. Ota kiinni telineen alareunan alta ja nosta molemmin käsin. Pidä selkäsi suorana ja nosta jalkojen (ei selän) avulla loukkaantumisen välttämiseksi.

Attention

Il faut trois personnes pour soulever le rack. Le saisir par son rebord inférieur et soulever des deux mains. Pour éviter tout traumatisme de la région lombaire, garder le dos droit et soulever la charge en redressant les jambes.

Warnung

Zum Anheben des Racks werden drei Personen benötigt. Fassen Sie das Rack unterhalb der unteren Kante an und heben es mit beiden Händen an. Um Verletzungen zu vermeiden, ist der Rücken aufrecht zu halten und das Gewicht mit den Beinen, nicht mit dem Rücken, anzuheben.

Avvertenza

Il rack va sollevato da tre persone. Afferrare il rack al di sotto del bordo inferiore e sollevare con entrambe le mani. Per evitare infortuni, tenere la schiena dritta e sollevare facendo forza sulle gambe, non sulla schiena.

Advarsel

Det er nødvendig at tre personer løfter stativet. Ta tak under den nedre kanten på stativet og løft det med begge hender. Hold ryggen rett og løft med beina - ikke ryggen - for å unngå personskade. Unngå skade på kabinettet og komponentene.

Aviso

São necessárias três pessoas para levantar o bastidor. Segure o bastidor por baixo da borda inferior, e levante-o usando as duas mãos. Para evitar lesão física, mantenha as costas retas e levante o peso usando as duas pernas, sem forçar as costas.

¡Advertencia!	Se necesitan tres personas para levantar el soporte. Sujete el soporte con las dos manos por debajo del borde inferior y levántela. Para evitar lesiones, mantenga la espalda recta y levántela con la fuerza de las piernas y no de la espalda.
Varning!	Det krävs tre personer för att lyfta racket. Fatta tag i racket under den nedre kanten och lyft med båda händerna. För att undvika skador skall du hålla ryggen rak och lyfta med benen, inte ryggen.

Statement 1001—Work During Lightning Activity



Warning

Do not work on the system or connect or disconnect cables during periods of lightning activity.
Statement 1001

Waarschuwing

Tijdens onweer dat gepaard gaat met bliksem, dient u niet aan het systeem te werken of kabels aan te sluiten of te ontkoppelen.

Varoitus

Älä työskentele järjestelmän parissa äläkä yhdistä tai irrota kaapeleita ukkosilmalla.

Attention

Ne pas travailler sur le système ni brancher ou débrancher les câbles pendant un orage.

Warnung

Arbeiten Sie nicht am System und schließen Sie keine Kabel an bzw. trennen Sie keine ab, wenn es gewittert.

Avvertenza

Non lavorare sul sistema o collegare oppure scollegare i cavi durante un temporale con fulmini.

Advarsel

Utfør aldri arbeid på systemet, eller koble kabler til eller fra systemet når det tordner eller lyner.

Aviso

Não trabalhe no sistema ou ligue e desligue cabos durante períodos de mau tempo (trovoada).

¡Advertencia!

No operar el sistema ni conectar o desconectar cables durante el transcurso de descargas eléctricas en la atmósfera.

Varning!

Vid åska skall du aldrig utföra arbete på systemet eller ansluta eller koppla loss kablar.

Figyelem

Villámlás közben ne dolgozzon a rendszeren, valamint ne csatlakoztasson és ne húzzon ki kábeleket!

Предупреждение

Не следует работать с устройством, а также подключать или отключать кабели во время грозы.

警告

请勿在发生雷电时操作系统，也不要在此期间连接或断开电缆。

警告

雷が発生しているときは、システムに手を加えたり、ケーブルの接続や取り外しを行わないでください。

주의	번개가 치는 동안에는 시스템에서 작업하거나 케이블을 연결 또는 해제하지 마십시오.
Aviso	Não trabalhe no sistema ou conecte e desconecte os cabos durante tempestades com raios.
Advarsel	Der må ikke arbejdes på systemet eller til-/frakobles kabler ved risiko for torden eller lynnedslag.
تحذير	ممنوع العمل في النظام أو توصيل كابلات أو فصلها أثناء حدوث البرق.
Upozorenje	Dok se javljaju munje, ne radite u sustavu ili priključite ili odspojite kabele.
Upozornění	Nepracujte se systémem ani neodpojujte či nepřipojujte kabely v průběhu hromobití.
Προειδοποίηση	Μην εργάζεστε στο σύστημα και μη συνδέετε ή αποσυνδέετε καλώδια κατά τη διάρκεια καταιγίδας με κεραυνούς.
אזהרה	אין לעבוד על המערכת או לחבר או לנתק כבלים בעת סופת ברקים.
	Не работете со системот, не поврзувајте ги или не исклучувајте ги каблите при функција на осветлување.
Ostrzeżenie	Nie należy pracować na systemie lub podłączać czy rozłączać kabli w czasie wyładowań atmosferycznych.
Upozornenie	Ak sa blýska, nepracujte na systéme a nepripájajte ani neodpájajte káble.
Opozorilo	Ne uporabljajte sistema in ne priključujte ali izključujte kablov, kadar se bliska.
警告	
Предупреждение	Не работете със системата, не свързвайте и не разкачвайте кабели по време на гръмотевична буря.

Statement 1004—Installation Instructions



Warning

Read the installation instructions before connecting the system to the power source. Statement 1004

Waarschuwing

Raadpleeg de installatie-instructies voordat u het systeem op de voedingsbron aansluit.

Varoitus	Lue asennusohjeet ennen järjestelmän yhdistämistä virtalähteeseen.
Attention	Avant de brancher le système sur la source d'alimentation, consulter les directives d'installation.
Warnung	Vor dem Anschließen des Systems an die Stromquelle die Installationsanweisungen lesen.
Avvertenza	Consultare le istruzioni di installazione prima di collegare il sistema all'alimentatore.
Advarsel	Les installasjonsinstruksjonene før systemet kobles til strømkilden.
Aviso	Leia as instruções de instalação antes de ligar o sistema à fonte de energia.
¡Advertencia!	Lea las instrucciones de instalación antes de conectar el sistema a la red de alimentación.
Varning!	Läs installationsanvisningarna innan du kopplar systemet till strömförsörjningsenheten.
Figyelem	Mielőtt áramforráshoz csatlakoztatná a rendszert, olvassa el az üzembe helyezési útmutatót!
Предупреждение	Перед подключением устройства к источнику электропитания ознакомьтесь с данной инструкцией по установке.
警告	在将系统与电源连接之前，请仔细阅读安装说明。
警告	必ず設置手順を読んでから、システムを電源に接続してください。
주의	시스템을 전원에 연결하기 전에 설치 지침을 읽으십시오.
Aviso	Leia as instruções de instalação antes de conectar o sistema à fonte de energia.
Upozornění	Před připojením systému k elektrické síti si prostudujte pokyny k instalaci.
Προειδοποίηση	Διαβάστε τις οδηγίες εγκατάστασης προτού συνδέσετε το σύστημα στην πηγή τροφοδοσίας ρεύματος.
אזהרה	יש לקרוא את הוראות ההתקנה לפני חיבור המערכת למקור המתח.
Ostrzeżenie	Przed podłączeniem systemu do źródła zasilania należy przeczytać instrukcje dotyczące instalacji.
Upozornenie	Pred pripojením systému k napájaciemu zdroju si prečítajte inštaláčne pokyny.

Opozorilo Preden sistem priključite, preberite navodila za priključitev.

警告 將系統連接供電系統前，請先閱讀安裝指南。

Statement 1005—Circuit Breaker



Warning

This product relies on the building's installation for short-circuit (overcurrent) protection. Ensure that the protective device is rated not greater than:
30 A in the US and Canada and 32 A International. Statement 1005

Waarschuwing

Dit product is afhankelijk van de installatie van het gebouw voor beveiliging tegen kortsluiting (overstroom). Controleer of de beschermingsinrichting niet meer dan:
30 A in the US and Canada and 32 A International. is.

Varoitus

Tämä tuote on riippuvainen rakennukseen asennetusta oikosulkusuojuuksesta (ylivirtasuojauksesta). Varmista, että suojalaitteen mitoitus ei ole yli:
30 A in the US and Canada and 32 A International.

Attention

Pour ce qui est de la protection contre les courts-circuits (surtension), ce produit dépend de l'installation électrique du local. Vérifiez que le courant nominal du dispositif de protection n'est pas supérieur à :
30 A in the US and Canada and 32 A International.

Warnung

Dieses Produkt ist darauf angewiesen, dass im Gebäude ein Kurzschluss- bzw. Überstromschutz installiert ist. Stellen Sie sicher, dass der Nennwert der Schutzvorrichtung nicht mehr als:
30 A in the US and Canada and 32 A International. beträgt.

Avvertenza

Questo prodotto dipende dall'impianto dell'edificio per quanto riguarda la protezione contro cortocircuiti (sovracorrente). Assicurarsi che il dispositivo di protezione non abbia un rating superiore a:
30 A in the US and Canada and 32 A International.

Advarsel

Dette produktet er avhengig av bygningens installasjoner av kortslutnings (overstrøm)-beskyttelse. Påse at verneenheten ikke er merket høyere enn:
30 A in the US and Canada and 32 A International.

Aviso

Este produto depende das instalações existentes para proteção contra curto-circuito (sobrecarga). Assegure-se de que o fusível ou disjuntor não seja superior a:
30 A in the US and Canada and 32 A International.

¡Advertencia!

Este equipo utiliza el sistema de protección contra cortocircuitos (o sobrecorrientes) del edificio. Asegúrese de que el dispositivo de protección no sea superior a:
30 A in the US and Canada and 32 A International.

Varning!	Denna produkt är beroende av i byggnaden installerat kortslutningskydd (överströmsskydd). Kontrollera att skyddsanordningen inte har högre märkvärde än: 30 A in the US and Canada and 32 A International.
Figyelem	A termék védelmi rendszerének része az épület kábelezésébe épített rövidzárlat (túláram) elleni védelem is. Gondoskodjon róla, hogy a készüléket védő eszköz legfeljebb a következő áramerősségre legyen méretezve: 30 A in the US and Canada and 32 A International.
Предупреждение	Защита устройства от короткого замыкания (перегрузки) осуществляется с помощью оборудования, являющегося частью электропроводки здания. Убедитесь, что номинал защитного устройства не превышает: 30 A in the US and Canada and 32 A International.
警告	此产品的短路（过载电流）保护由建筑物的供电系统提供。确保短路保护设备的额定电流不大于： 30 A in the US and Canada and 32 A International.
警告	この製品は、設置する建物にショート（過電流）保護機構が備わっていることを前提に設計されています。保護装置の定格が以下の値を超えないことを確認してください。 30 A in the US and Canada and 32 A International.

Statement 1006—Chassis Warning for Rack-Mounting and Servicing



Warning

To prevent bodily injury when mounting or servicing this unit in a rack, you must take special precautions to ensure that the system remains stable. The following guidelines are provided to ensure your safety:

- This unit should be mounted at the bottom of the rack if it is the only unit in the rack.
- When mounting this unit in a partially filled rack, load the rack from the bottom to the top with the heaviest component at the bottom of the rack.
- If the rack is provided with stabilizing devices, install the stabilizers before mounting or servicing the unit in the rack. Statement 1006

Waarschuwing

Om lichamelijk letsel te voorkomen wanneer u dit toestel in een rek monteert of het daar een servicebeurt geeft, moet u speciale voorzorgsmaatregelen nemen om ervoor te zorgen dat het toestel stabiel blijft. De onderstaande richtlijnen worden verstrekt om uw veiligheid te verzekeren:

- Dit toestel dient onderaan in het rek gemonteerd te worden als het toestel het enige in het rek is.
- Wanneer u dit toestel in een gedeeltelijk gevuld rek monteert, dient u het rek van onderen naar boven te laden met het zwaarste onderdeel onderaan in het rek.
- Als het rek voorzien is van stabiliseringshulpmiddelen, dient u de stabilisatoren te monteren voordat u het toestel in het rek monteert of het daar een servicebeurt geeft.

- Varoitus** Kun laite asetetaan telineeseen tai huolletaan sen ollessa telineessä, on noudatettava erityisiä varotoimia järjestelmän vakavuuden säilyttämiseksi, jotta vältetään loukkaantumiselta. Noudata seuraavia turvallisuusohjeita:
- Jos telineessä ei ole muita laitteita, aseta laite telineen alaosaan.
 - Jos laite asetetaan osaksi täytettyyn telineeseen, aloita kuormittaminen sen alaosasta kaikkein raskaimmalla esineellä ja siirry sitten sen yläosaan.
 - Jos telinettä varten on vakaimet, asenna ne ennen laitteen asettamista telineeseen tai sen huoltamista siinä.
- Attention** Pour éviter toute blessure corporelle pendant les opérations de montage ou de réparation de cette unité en casier, il convient de prendre des précautions spéciales afin de maintenir la stabilité du système. Les directives ci-dessous sont destinées à assurer la protection du personnel:
- Si cette unité constitue la seule unité montée en casier, elle doit être placée dans le bas.
 - Si cette unité est montée dans un casier partiellement rempli, charger le casier de bas en haut en plaçant l'élément le plus lourd dans le bas.
 - Si le casier est équipé de dispositifs stabilisateurs, installer les stabilisateurs avant de monter ou de réparer l'unité en casier.
- Warnung** Zur Vermeidung von Körperverletzung beim Anbringen oder Warten dieser Einheit in einem Gestell müssen Sie besondere Vorkehrungen treffen, um sicherzustellen, daß das System stabil bleibt. Die folgenden Richtlinien sollen zur Gewährleistung Ihrer Sicherheit dienen:
- Wenn diese Einheit die einzige im Gestell ist, sollte sie unten im Gestell angebracht werden.
 - Bei Anbringung dieser Einheit in einem zum Teil gefüllten Gestell ist das Gestell von unten nach oben zu laden, wobei das schwerste Bauteil unten im Gestell anzubringen ist.
 - Wird das Gestell mit Stabilisierungszubehör geliefert, sind zuerst die Stabilisatoren zu installieren, bevor Sie die Einheit im Gestell anbringen oder sie warten.
- Avvertenza** Per evitare infortuni fisici durante il montaggio o la manutenzione di questa unità in un supporto, occorre osservare speciali precauzioni per garantire che il sistema rimanga stabile. Le seguenti direttive vengono fornite per garantire la sicurezza personale:
- Questa unità deve venire montata sul fondo del supporto, se si tratta dell'unica unità da montare nel supporto.
 - Quando questa unità viene montata in un supporto parzialmente pieno, caricare il supporto dal basso all'alto, con il componente più pesante sistemato sul fondo del supporto.
 - Se il supporto è dotato di dispositivi stabilizzanti, installare tali dispositivi prima di montare o di procedere alla manutenzione dell'unità nel supporto.
- Advarsel** Unngå fysiske skader under montering eller reparasjonsarbeid på denne enheten når den befinner seg i et kabinett. Vær nøye med at systemet er stabilt. Følgende retningslinjer er gitt for å verne om sikkerheten:
- Denne enheten bør monteres nederst i kabinettet hvis dette er den eneste enheten i kabinettet.
 - Ved montering av denne enheten i et kabinett som er delvis fylt, skal kabinettet lastes fra bunnen og opp med den tyngste komponenten nederst i kabinettet.
 - Hvis kabinettet er utstyrt med stabiliseringsutstyr, skal stabilisatorene installeres før montering eller utføring av reparasjonsarbeid på enheten i kabinettet.

- Aviso** Para se prevenir contra danos corporais ao montar ou reparar esta unidade numa estante, deverá tomar precauções especiais para se certificar de que o sistema possui um suporte estável. As seguintes directrizes ajudá-lo-ão a efectuar o seu trabalho com segurança:
- Esta unidade deverá ser montada na parte inferior da estante, caso seja esta a única unidade a ser montada.
 - Ao montar esta unidade numa estante parcialmente ocupada, coloque os itens mais pesados na parte inferior da estante, arrumando-os de baixo para cima.
 - Se a estante possuir um dispositivo de estabilização, instale-o antes de montar ou reparar a unidade.

- ¡Advertencia!** Para evitar lesiones durante el montaje de este equipo sobre un bastidor, o posteriormente durante su mantenimiento, se debe poner mucho cuidado en que el sistema quede bien estable. Para garantizar su seguridad, proceda según las siguientes instrucciones:
- Colocar el equipo en la parte inferior del bastidor, cuando sea la única unidad en el mismo.
 - Cuando este equipo se vaya a instalar en un bastidor parcialmente ocupado, comenzar la instalación desde la parte inferior hacia la superior colocando el equipo más pesado en la parte inferior.
 - Si el bastidor dispone de dispositivos estabilizadores, instalar éstos antes de montar o proceder al mantenimiento del equipo instalado en el bastidor.

- Varning!** För att undvika kroppsskada när du installerar eller utför underhållsarbete på denna enhet på en ställning måste du vidta särskilda försiktighetsåtgärder för att försäkra dig om att systemet står stadigt. Följande riktlinjer ges för att trygga din säkerhet:
- Om denna enhet är den enda enheten på ställningen skall den installeras längst ned på ställningen.
 - Om denna enhet installeras på en delvis fylld ställning skall ställningen fyllas nedifrån och upp, med de tyngsta enheterna längst ned på ställningen.
 - Om ställningen är försedd med stabiliseringsdon skall dessa monteras fast innan enheten installeras eller underhålls på ställningen.

- Figyelem** A készülék rackbe történő beszerelése és karbantartása során bekövetkező sérülések elkerülése végett speciális óvintézkedésekkel meg kell őrizni a rendszer stabilitását. A személyes biztonsága érdekében tartsa be a következő szabályokat:
- Ha a rackben csak ez az egy készülék található, a rack aljába kell beszerelni.
 - Ha nincs teljesen tele az a rack, amelybe beszerelik a készüléket, alulról fölfelé haladva tölts fel a racket úgy, hogy a legnehezebb készülék kerüljön a rack aljába.
 - Ha stabilizáló eszközök is tartoznak a rackhez, szerelje fel a stabilizátorokat, mielőtt beszerelné az egységet a rackbe, vagy karbantartást végezne rajta.

- Предупреждение** Во избежание травм при монтаже и обслуживании устройства в стойке следует принять особые меры предосторожности, чтобы убедиться в устойчивости оборудования. Для обеспечения безопасности работ необходимо соблюдать следующие правила.
- Если в стойке находится одно устройство, оно должно быть установлено в нижней части.
 - При монтаже устройств в частично заполненную стойку устанавливайте оборудование снизу вверх, размещая наиболее тяжелые устройства в нижней части.
 - Если стойка снабжена приспособлениями для стабилизации, их необходимо установить до начала монтажа или обслуживания оборудования.

- 警告** 为避免在机架中安装或维修该部件时使身体受伤，您必须采取特殊的预防措施确保系统固定。以下是确保安全的原则：
- 如果此部件是机架中唯一的部件，应将其安装在机架的底部。
 - 如果在部分装满的机架中安装此部件，请按从下往上的顺序安装各个部件，并且最重的组件应安装在机架的底部。
 - 如果机架配有固定装置，请先装好固定装置，然后再在机架中安装或维修部件。

- 警告** この装置をラックに設置したり保守作業を行ったりするときは、人身事故を防ぐため、システムが安定しているかどうかを十分に確認する必要があります。次の注意事項に従ってください。
- ラックにこの装置を単独で設置する場合は、ラックの一番下に設置します。
 - ラックに別の装置がすでに設置されている場合は、最も重量のある装置を一番下にして、重い順に下から上へ設置します。
 - ラックに安定器具が付属している場合は、その安定器具を取り付けてから、装置をラックに設置するか、またはラック内の装置の保守作業を行ってください。
- 주의** 이 장치를 랙에 장착하거나 서비스할 때 신체 부상을 방지하려면, 시스템이 안정된 상태를 유지하도록 특별히 주의해야 합니다. 사용자의 안전을 위해 다음 지침 사항을 준수하십시오.
- 이 장치가 랙에 장착되는 유일한 것일 경우, 랙의 맨 아래 부분에 장착되어야 합니다.
 - 부분적으로 차 있는 랙에 이 장치를 장착할 경우, 가장 무거운 장치를 랙의 맨 아래 부분부터 차례로 장착하십시오.
 - 안정기가 랙과 함께 제공되는 경우, 이 안정기를 설치한 후 이 장치를 랙에 장착하거나 서비스하십시오.
- Aviso** Para evitar lesões corporais ao montar ou dar manutenção a esta unidade em um rack, é necessário tomar todas as precauções para garantir a estabilidade do sistema. As seguintes orientações são fornecidas para garantir a sua segurança:
- Se esta for a única unidade, ela deverá ser montada na parte inferior do rack.
 - Ao montar esta unidade em um rack parcialmente preenchido, carregue-o de baixo para cima com o componente mais pesado em sua parte inferior.
 - Se o rack contiver dispositivos estabilizadores, instale-os antes de montar ou dar manutenção à unidade existente.
- Advarsel** For at forhindre legemesbeskadigelse ved montering eller service af denne enhed i et rack, skal du sikre at systemet står stabilt. Følgende retningslinjer er også for din sikkerheds skyld:
- Enheden skal monteres i bunden af dit rack, hvis det er den eneste enhed i racket.
 - Ved montering af denne enhed i et delvist fyldt rack, skal enhederne installeres fra bunden og opad med den tungeste enhed nederst.
 - Hvis racket leveres med stabiliseringsenheder, skal disse installeres for enheden monteres eller serviceres i racket.
- تحذير** لتجنب حدوث أي إصابات عند تركيب هذه الوحدة، يجب اتباع بعض الاحتياطات لضمان عمل النظام بشكل سليم. يتم ذكر الإرشادات التالية لضمان الأمان.
- يجب تركيب هذه الوحدة في الجزء السفلي من الدولاب المتضمن قضبان إذا كانت هذه الوحدة هي الوحدة الوحيدة في الدولاب الذي يحتوي على قضبان.
- عند تركيب هذه الوحدة في دولاب شبه ممتلئ، قم برفع الدولاب من الجزء السفلي لأعلى بحيث يكون الجزء الأثقل وزناً أسفل الدولاب.
- إذا كان الدولاب المتضمن قضباناً يحتوي على أجهزة حفظ التوازن، قم بتثبيت هذه الأجهزة قبل تركيب الوحدة في الدولاب.

Upozorenje	<p>Kako ne bi došlo do tjelesnih ozljeda kod postavljanja ili servisiranja uređaja na polici, potrebno je poduzeti mjere predostrožnosti kako bi sustav uvijek bio stabilan. Sigurnost se može osigurati poštivanjem sljedećih smjernica:</p> <ul style="list-style-type: none"> • Ovaj uređaj treba ugraditi na dno police, ukoliko je to jedini uređaj na polici. • Kod ugradnje uređaja u policu na kojoj se već nalaze drugi uređaji, policu treba opremiti počevši od dna, te tako da se na dno stave najteži dijelovi. • Ukoliko su na polici ugrađeni stabilizatori, njih montirajte prije ugradnje ili servisiranja uređaja na polici.
Upozornění	<p>Abyste předešli poranění osob při montáži nebo opravě zařízení v montážním rámu, musíte dodržovat zvláštní preventivní opatření pro zajištění udržení stability systému. Pro zajištění bezpečnosti obsluhy jsou určeny následující zásady:</p> <ul style="list-style-type: none"> • Pokud je toto zařízení jedinou jednotkou v montážním rámu, musí být namontováno na nejnižší místo rámu. • Pokud je toto zařízení montováno do částečně obsazeného montážního rámu, obsazujte montážní rám ve směru zdola nahoru tak, aby byla nejtěžší součást nejnižší. • Pokud je montážní rám vybaven stabilizačními zařízeními, nainstalujte stabilizátory ještě před montáží nebo opravou zařízení v montážním rámu.
Προειδοποίηση	<p>Για να αποφύγετε τον τραυματισμό κατά την τοποθέτηση ή τη συντήρηση αυτής της συσκευής σε αρθρωτό σύστημα, πρέπει να λάβετε ειδικές προφυλάξεις για να διασφαλίσετε τη σταθερότητα του συστήματος. Οι παρακάτω οδηγίες παρέχονται για να εξασφαλίσουν την ασφάλειά σας:</p> <ul style="list-style-type: none"> • Αυτή η συσκευή πρέπει να τοποθετείται στο κάτω μέρος του αρθρωτού συστήματος αν είναι η μοναδική συσκευή σε αυτό. • Όταν τοποθετείτε αυτήν τη συσκευή σε εν μέρει γεμάτο αρθρωτό σύστημα, τοποθετήστε συσκευές στο αρθρωτό σύστημα από κάτω προς τα επάνω, με τη βαρύτερη συσκευή στο κάτω μέρος του συστήματος. • Εάν το αρθρωτό σύστημα διαθέτει διατάξεις σταθεροποίησης, τοποθετήστε τους σταθεροποιητές πριν τοποθετήσετε ή συντηρήσετε τη συσκευή στο αρθρωτό σύστημα.
אזהרה	<p>כדי למנוע פציעה בעת הרכבת יחידה זו במעמד או טיפול בה, עליך לנקוט אמצעי זהירות מיוחדים כדי להבטיח את יציבות המערכת. הקווים המנחים הבאים ניתנים על מנת להבטיח את ביטחונך:</p> <ul style="list-style-type: none"> • אם יחידה זו היא יחידה בודדת במעמד, יש להרכיב את היחידה בחלקו התחתון של המעמד. • בעת הרכבת יחידה זו במעמד המלא בחלקו, טען את המעמד החל בחלק התחתון וכלפי מעלה כאשר הרכיב הכבד ביותר נמצא בחלקו התחתון של המעמד. • אם המעמד מסופק עם התקני ייצוב, התקן את המייצבים לפני הרכבה היחידה במעמד או טיפול בה. <p>За да се не повредите кога го монтирате или го сервисирате уредот на полица, мора да бидете особено претпазливи за да ја обезбедите стабилноста на системот. Следите напатствија се дадени за да ја осигураат Вашата безбедност:</p> <ul style="list-style-type: none"> • Уредот треба да се монтира најдолу на полицата ако е единствен уред на полицата. • Кога го монтирате уредот на делумно пополнета полица, полнете ја полицата од дното кон врвот со најтешката компонента на дното на полицата. • Ако полицата има стабилизаторски делови, наместете ги стабилизаторите пред да го монтирате или сервисирате уредот на полицата.

Ostrzeżenie	<p>Aby zapobiec urazom podczas montażu lub serwisowania tego urządzenia w stojaku, należy zastosować szczególne środki ostrożności w celu zapewnienia stabilności układu. Poniżej przedstawiono wskazówki, których przestrzeganie zapewni bezpieczeństwo:</p> <ul style="list-style-type: none"> • Jeśli urządzenie to jest jedynym urządzeniem w stojaku, powinno być zamontowane na dole. • W przypadku montażu urządzenia w częściowo zapełnionym stojaku należy instalować kolejne urządzenia od najniższego do najwyższego, przy czym element najcięższy powinien być zamontowany najniżej w stojaku. • Jeśli stojak jest wyposażony w elementy stabilizujące, należy zamontować stabilizatory przed przystąpieniem do montażu lub serwisowania urządzeń w stojaku.
Upozornenie	<p>Aby ste predišli poraneniu osôb pri montáži alebo oprave zariadenia v montážnom ráme, musíte dodržiavať zvláštne preventívne opatrenia na zaistenie udržania stability systému. Na zaistenie bezpečnosti obsluhy sú určené nasledujúce zásady:</p> <ul style="list-style-type: none"> • Pokiaľ je toto zariadenie jedinou jednotkou v montážnom ráme, musí byť namontované na najnižšie miesto v ráme. • Pokiaľ je toto zariadenie montované do čiastočne obsadeného montážneho rámu, obsadzujte montážny rám v smere zdola nahor tak, aby bola najťažšia súčasť najnižšie. • Pokiaľ je montážny rám vybavený stabilizačnými zariadeniami, nainštalujte stabilizátory ešte pred montážou alebo opravou zariadenia v montážnom ráme.
警告	<p>在機架上裝載或維修本裝置時，為避免人身傷害，請務必採取特殊措施以確保系統保持穩固。下列指導方針為確保您的安全而提供：</p> <ul style="list-style-type: none"> • 如果只在機架上裝載一個裝置，必須裝載在機架底部。 • 如果機架上已經裝載其他裝置，請從底到頂依序裝載最重到最輕的裝置。 • 如果機架附有穩定設備，請先安裝該設備，再於機架上裝載或維修裝置。

Statement 1017—Restricted Area



Warning

This unit is intended for installation in restricted access areas. A restricted access area can be accessed only through the use of a special tool, lock and key, or other means of security.
Statement 1017

Waarschuwing

Deze eenheid is bestemd voor installatie in plaatsen met beperkte toegang. Toegang tot een dergelijke plaats kan alleen verkregen worden door middel van een speciaal instrument, een slot en sleutel of een ander veiligheidsmiddel.

Varoitus

Tämä laite on tarkoitettu asennettavaksi paikkaan, johon pääsy on rajoitettua. Tällaiseen paikkaan pääsee vain erikoistyökäluä, lukkoon sopivaa avainta tai jotakin muuta turvalaitetta käyttämällä.

Attention

Cet appareil est à installer dans des zones d'accès réservé. L'accès à une zone d'accès réservé n'est possible qu'en utilisant un outil spécial, un mécanisme de verrouillage et une clé, ou tout autre moyen de sécurité.

Warnung	Diese Einheit ist zur Installation in Bereichen mit beschränktem Zutritt vorgesehen. Der Zutritt zu derartigen Bereichen ist nur mit einem Spezialwerkzeug, Schloss und Schlüssel oder einer sonstigen Sicherheitsvorkehrung möglich.
Avvertenza	Questa unità è prevista per essere installata in un'area ad accesso limitato, vale a dire un'area accessibile solo mediante l'uso di un attrezzo speciale, come lucchetto e chiave, o altri dispositivi di sicurezza.
Advarsel	Denne enheten er beregnet på installasjon i områder med begrenset tilgang. Et begrenset tilgangsområde kan bare nås ved hjelp av et spesielt verktøy, lås og nøkkel, eller andre sikkerhetsanordninger.
Aviso	Esta unidade foi concebida para instalação em áreas de acesso restrito. Uma área de acesso restrito é uma área à qual apenas tem acesso o pessoal de serviço autorizado, que possua uma ferramenta, chave e fechadura especial, ou qualquer outra forma de segurança.
¡Advertencia!	Esta unidad ha sido diseñada para instalación en áreas de acceso restringido. Sólo puede obtenerse acceso a una de estas áreas mediante la utilización de una herramienta especial, cerradura con llave u otro medio de seguridad.
Varning!	Denna enhet är avsedd för installation i områden med begränsat tillträde. Ett område med begränsat tillträde kan endast tillträdas med hjälp av specialverktyg, lås och nyckel eller annan säkerhetsanordning.
Figyelem	A készülék korlátozottan hozzáférhető területre történő beszerelésre készült. A korlátozottan hozzáférhető területekhez csak speciális szerszám, zár és kulcs vagy más biztonsági berendezés segítségével lehet hozzáférni.
Предупреждение	Данное устройство предназначено для установки в помещениях с ограниченным доступом. В такие помещения можно попасть, только имея специальное устройство доступа, карту или ключ или пройдя проверку другими средствами обеспечения безопасности.
警告	此部件应安装在限制进出的场所。限制进出的场所指只能通过使用特殊工具、锁和钥匙或其它安全手段进出的场所。
警告	この装置は立ち入り制限区域内に設置することが前提になっています。立ち入り制限区域とは、鍵、錠、またはその他の保全手段を使用しないと立ち入ることができない区域です。
주의	이 장치는 접근이 제한된 영역에 설치하도록 제작되었습니다. 특수 도구, 잠금 장치 및 키, 또는 기타 보안 수단을 통해서만 이 접근 제한 영역에 액세스할 수 있습니다.
Aviso	Esta unidade deve ser instalada em áreas de acesso restrito. Uma área de acesso restrito só pode ser acessada com o uso de uma ferramenta especial, cadeado e chave ou outros meios de segurança.
Advarsel	Denne enhed er beregnet til installation i områder med begrænset adgang. Der kan kun opnås adgang til et begrænset område ved at bruge et særligt stykke værktøj, lås og nøgle, eller en anden form for sikkerhed.

تحذير تم تخصيص هذه الوحدة ليتم تشيبتها في مناطق محظور الوصول إليها. يمكن الوصول إلى المنطقة المحظورة فقط من خلال استخدام أداة خاصة أو قفل أو مفتاح أو أي وسيلة أخرى من التأمين.

Upozorenje Uređaj je namijenjen ugradnji na teško dostupnim mjestima. Teško su dostupna mjesta takva mjesta koja su dostupna samo uz pomoć posebnih alata, lokota i ključa, ili nekog drugog načina osiguravanja sigurnosti.

Upozornění Toto zařízení je určeno pro instalaci v prostorech s omezeným přístupem. Do prostoru s omezeným přístupem lze získat přístup pouze pomocí zvláštního nástroje, zámku a klíče nebo jiných zabezpečovacích prostředků.

Προειδοποίηση Αυτή η συσκευή προορίζεται για να τοποθετηθεί σε χώρους στους οποίους η πρόσβαση είναι περιορισμένη. Η πρόσβαση σε ένα χώρο με περιορισμένη πρόσβαση είναι δυνατή μόνο με τη χρήση ενός ειδικού εργαλείου, κλειδαριάς και κλειδιού ή άλλου μέσου ασφαλείας.

אזהרה יחידה זו מיועד להתקנה באזורים עם גישה מוגבלת. הגישה לאזורים המיועדים לגישה מוגבלת אפשרית רק באמצעות כלי מיוחד, מנעול ומפתח, או אמצעי בטיחות אחרים.

Уредот е наменет за местење во области со ограничен пристап. Во областите со ограничен пристап може да се влезе само со употреба на специјална алатка, брава и клуч или со други средства за обезбедување.

Ostrzeżenie To urządzenie jest przystosowane do instalacji w miejscach o ograniczonym dostępie. Przez miejsce o ograniczonym dostępie rozumie się miejsce, do którego dostęp uzyskać można wyłącznie za pomocą specjalnego narzędzia, zamka z kluczem lub innego zabezpieczenia.

Upozornenie Toto zariadenie je určené na inštaláciu v priestoroch s obmedzeným prístupom. Do priestoru s obmedzeným prístupom je možné získať prístup iba pomocou špeciálneho nástroja, zámku a kľúča, alebo iných zabezpečovacích prostriedkov.

Opozorilo Ta enota je namenjena priključitvi na območjih z omejenim dostopom. Dostop do območja z omejenim dostopom je mogoč le z uporabo posebnega orodja, ključavnice, ključa ali kakšnega drugega varnostnega pripomočka.

警告 本裝置最好安裝於限制區域。限制區域只能透過特殊工具、鎖/鑰匙或其他保全工具出入。

Statement 1024—Ground Conductor



Warning	This equipment must be grounded. Never defeat the ground conductor or operate the equipment in the absence of a suitably installed ground conductor. Contact the appropriate electrical inspection authority or an electrician if you are uncertain that suitable grounding is available. Statement 1024
Waarschuwing	Deze apparatuur dient geaard te zijn. De aardingsleiding mag nooit buiten werking worden gesteld en de apparatuur mag nooit bediend worden zonder dat er een op de juiste wijze geïnstalleerde aardingsleiding aanwezig is. Neem contact op met de bevoegde instantie voor elektrische inspecties of met een elektricien als u er niet zeker van bent dat er voor passende aarding gezorgd is.
Varoitus	Laitteiden on oltava maadoitettuja. Älä koskaan ohita maajohdinta tai käytä laitteita ilman oikein asennettua maajohdinta. Ota yhteys sähkötarkastusviranomaiseen tai sähköasentajaan, jos olet epävarma maadoituksen sopivuudesta.
Attention	Cet équipement doit être mis à la masse. Ne jamais rendre inopérant le conducteur de masse ni utiliser l'équipement sans un conducteur de masse adéquatement installé. En cas de doute sur la mise à la masse appropriée disponible, s'adresser à l'organisme responsable de la sécurité électrique ou à un électricien.
Warnung	Dieses Gerät muss geerdet sein. Auf keinen Fall den Erdungsleiter unwirksam machen oder das Gerät ohne einen sachgerecht installierten Erdungsleiter verwenden. Wenn Sie sich nicht sicher sind, ob eine sachgerechte Erdung vorhanden ist, wenden Sie sich an die zuständige Inspektionsbehörde oder einen Elektriker.
Avvertenza	Questa apparecchiatura deve essere dotata di messa a terra. Non escludere mai il conduttore di protezione né usare l'apparecchiatura in assenza di un conduttore di protezione installato in modo corretto. Se non si è certi della disponibilità di un adeguato collegamento di messa a terra, richiedere un controllo elettrico presso le autorità competenti o rivolgersi a un elettricista.
Advarsel	Dette utstyret må jordes. Omgå aldri jordingslederen og bruk aldri utstyret uten riktig montert jordingsleder. Ta kontakt med fagfolk innen elektrisk inspeksjon eller med en elektriker hvis du er usikker på om det finnes velegnet jordning.
Aviso	Este equipamento deve ser aterrado. Nunca anule o fio terra nem opere o equipamento sem um aterramento adequadamente instalado. Em caso de dúvida com relação ao sistema de aterramento disponível, entre em contato com os serviços locais de inspeção elétrica ou um eletricista qualificado.
¡Advertencia!	Este equipo debe estar conectado a tierra. No inhabilite el conductor de tierra ni haga funcionar el equipo si no hay un conductor de tierra instalado correctamente. Póngase en contacto con la autoridad correspondiente de inspección eléctrica o con un electricista si no está seguro de que haya una conexión a tierra adecuada.
Varning!	Denna utrustning måste jordas. Koppla aldrig från jordledningen och använd aldrig utrustningen utan en på lämpligt sätt installerad jordledning. Om det föreligger osäkerhet huruvida lämplig jordning finns skall elektrisk besiktningsauktoritet eller elektriker kontaktas.

Figyelem	A berendezés csak megfelelő védőföldeléssel működtethető. Ne iktassa ki a földelés csatlakozóját, és ne üzemeltesse a berendezést szabályosan felszerelt földelő vezeték nélkül! Ha nem biztos benne, hogy megfelelő földelés áll rendelkezésbe, forduljon a helyi elektromos hatóságokhoz vagy egy villanyszerelőhöz.
Предупреждение	Данное устройство должно быть заземлено. Никогда не отключайте провод заземления и не пользуйтесь оборудованием при отсутствии правильно подключенного провода заземления. За сведениями об имеющихся возможностях заземления обратитесь к соответствующим контролирующим организациям по энергоснабжению или к инженеру-электрику.
警告	此设备必须接地。切勿使接地导体失效，或者在没有正确安装接地导体的情况下操作该设备。如果您不能肯定接地导体是否正常工作，请咨询有关电路检测方面的权威人士或电工。
警告	この装置はアース接続する必要があります。アース導体を破損しないよう注意し、アース導体を正しく取り付けないまま装置を稼働させないでください。アース接続が適正であるかどうか分からない場合には、電気検査機関または電気技術者に相談してください。
주의	이 장비는 접지되어야 합니다. 접지 도체를 결코 파기하거나 적절히 설치된 접지 도체 없이 장비를 작동하지 마십시오. 사용 가능한 적절한 접지가 확실치 않은 경우 해당 전기 검사 관청 또는 전기 기술자에게 문의하십시오.
Aviso	Este equipamento deve ser aterrado. Nunca anule o fio terra nem opere o equipamento sem um fio terra adequadamente instalado. Fale com uma autoridade de fiscalização de instalações elétricas apropriada ou com um eletricista se você não tiver certeza quanto à eficiência do aterramento.
Upozornění	Toto zařízení musí být uzemněno. Nikdy nepřerušujte zemnicí vodič ani nepoužívejte zařízení bez odpovídajícího zemnicího vodiče. Nejste-li si jisti, zda je zařízení vhodně uzemněno, obraťte se na revizního technika či elektrikáře.
Προειδοποίηση	Ο παρών εξοπλισμός πρέπει να είναι γειωμένος. Μην καταστρέψετε ποτέ τον αγωγό γείωσης και μη χρησιμοποιήσετε ποτέ τον εξοπλισμό χωρίς να υπάρχει κατάλληλα εγκατεστημένος αγωγός γείωσης. Εάν δεν είστε βέβαιοι ότι υπάρχει κατάλληλη γείωση, επικοινωνήστε με τις αρμόδιες αρχές ή συμβουλευθείτε έναν ηλεκτρολόγο.
אזהרה	ציוד זה חייב להיות מוארק. לעולם אין לנתק את מוליך הארקה או להפעיל את הציוד בהעדר מוליך הארקה מותקן כראוי. אם אינך בטוח שקיימת הארקה הולמת, פנה לרשות המפקחת על החשמל או לחשמלאי.
Ostrzeżenie	Sprzęt ten musi być uziemiony. Nigdy nie należy usuwać przewodu uziemiającego lub używać sprzętu bez prawidłowo zainstalowanego przewodu uziemiającego. W przypadku braku pewności czy zapewnione jest prawidłowe uziemienie, należy skontaktować się z odpowiednim urzędem inspekcji elektrycznych lub elektrykiem.

Upozornenie	Toto zariadenie musí byť uzemnené. Uzemňovací vodič nikdy neodpájajte a zariadenie nikdy neprevádzkujte bez správne pripojeného uzemňovacieho vodiča. Ak máte pochybnosti o dostupnosti vhodného uzemnenia, obráťte sa na príslušný úrad na kontrolu elektrických zariadení alebo na elektrikára.
Opozorilo	Ta naprava mora biti ozemljena. Nikoli ne odklapljajte ozemljitve oz. upravljajte naprave, ki ni primerno ozemljena. V primeru, da niste sigurni, ali imate primerno ozemljitev, nemudoma pokličite pooblaščen električni servis ali električarja.
警告	本設備必須接地。切勿使接地連接器失效，或缺乏適當安裝的接地連接器就貿然操作裝置。若您不確定是否有適當的接地安排，請聯絡合適的專業電氣檢查機構或電氣專家。

Statement 1030—Equipment Installation



Warning	Only trained and qualified personnel should be allowed to install, replace, or service this equipment. Statement 1030
Waarschuwing	Deze apparatuur mag alleen worden geïnstalleerd, vervangen of hersteld door bevoegd geschoold personeel.
Varoitus	Tämän laitteen saa asentaa, vaihtaa tai huoltaa ainoastaan koulutettu ja laitteen tunteva henkilökunta.
Attention	Il est vivement recommandé de confier l'installation, le remplacement et la maintenance de ces équipements à des personnels qualifiés et expérimentés.
Warnung	Das Installieren, Ersetzen oder Bedienen dieser Ausrüstung sollte nur geschultem, qualifiziertem Personal gestattet werden.
Avvertenza	Questo apparato può essere installato, sostituito o mantenuto unicamente da un personale competente.
Advarsel	Bare opplært og kvalifisert personell skal foreta installasjoner, utskiftninger eller service på dette utstyret.
Aviso	Apenas pessoal treinado e qualificado deve ser autorizado a instalar, substituir ou fazer a revisão deste equipamento.
¡Advertencia!	Solamente el personal calificado debe instalar, reemplazar o utilizar este equipo.
Varning!	Endast utbildad och kvalificerad personal bör få tillåtelse att installera, byta ut eller reparera denna utrustning.

Figyelem	A berendezést csak szakképzett személyek helyezhetik üzembe, cserélhetik és tarthatják karban.
Предупреждение	Установку, замену и обслуживание этого оборудования может осуществлять только специально обученный квалифицированный персонал.
警告	只有经过培训且具有资格的人员才能进行此设备的安装、更换和维修。
警告	この装置の設置、交換、保守は、訓練を受けた対応の資格のある人が行ってください。
주의	교육을 받고 자격을 갖춘 사람만 이 장비를 설치, 교체, 또는 서비스를 수행해야 합니다.
Aviso	Somente uma equipe treinada e qualificada tem permissão para instalar, substituir ou dar manutenção a este equipamento.
Advarsel	Kun uddannede personer må installere, udskifte komponenter i eller servicere dette udstyr.
تحذير	يسمح للمنيين المتخصصين فقط بتركيب المعدة أو استبدالها أو إجراء الصيانة عليها.
Upozorenje	Uređaj smije ugrađivati, mijenjati i servisirati samo za to obučeno i osposobljeno servisno osoblje.
Upozornění	Instalaci, výměnu nebo opravu tohoto zařízení smějí provádět pouze proškolené a kvalifikované osoby.
Προειδοποίηση	Η τοποθέτηση, η αντικατάσταση και η συντήρηση του εξοπλισμού επιτρέπεται να γίνονται μόνο από καταρτισμένο προσωπικό με τα κατάλληλα προσόντα.
התראה	Местењето, заменувањето и сервисирањето на оваа опрема треба да му биде дозволено само на обучен и квалификуван персонал.
Ostrzeżenie	Do instalacji, wymiany i serwisowania tych urządzeń mogą być dopuszczone wyłącznie osoby wykwalifikowane i przeszkolone.
Upozornenie	Inštaláciu, výmenu alebo opravu tohto zariadenia smú vykonávať iba vyškolené a kvalifikované osoby.

Opozorilo **Opremo lahko priključi, zamenja ali popravi le za to usposobljeno osebje.**

警告 唯有經訓練的合格人員才能安裝、替換或維修該設備。

