



# Rack Side Air Distribution Unit

ACF202BLK

Installation and  
Quick Start





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This manual is available in English on the enclosed CD.

Dieses Handbuch ist in Deutsch auf der beiliegenden CD-ROM verfügbar.

Deze handleiding staat in het Nederlands op de bijgevoegde cd.

Este manual está disponible en español en el CD-ROM adjunto.

Ce manuel est disponible en français sur le CD-ROM ci-inclus.

Questo manuale è disponibile in italiano nel CD-ROM allegato.

Instrukcja Obsługi w języku polskim jest dostępna na CD.

**Инструкция по использованию на русском языке прилагается на диске (CD).**

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# General Information

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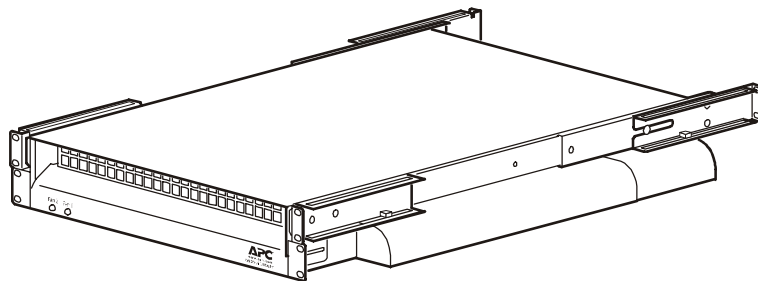
## Introduction

The Rack Side Air Distribution Unit is a rack mountable fan system that installs within most EIA-310-D enclosures. The Rack Side Air Distribution Unit moves air from the front of the rack enclosure to the side intake of the networking equipment. Lowering the inlet air temperature significantly improves the availability and life expectancy of your network equipment. Installing the Rack Side Air Distribution Unit increases rack density by eliminating the need for air space around networking equipment and dismissing the concern of overheating.

## Features

Features of the Rack Side Air Distribution Unit include the following:

- Compact 2U size
- Dual fans with status indicators
- Independent fan controls
- A-B redundant power input feeds
- Panel-mounted, resettable circuit breakers
- Configurable air distribution for network equipment with left or right airflow intake vents
- Configurable air-turning vane directs air up or down, which allows you the flexibility to place network equipment above or below the unit
- Adjustable mounting slide rails



## Safety information



**Read and save this manual. This manual contains important safety instructions for the proper installation and use of this product.**

**Disconnect power to the enclosure before installing the Rack Side Air Distribution Unit. Failure to do so may result in personal injury or damage to equipment.**

**Do not apply power to the unit until the installation is complete. The Rack Side Air Distribution Unit contains moving parts, which are potentially hazardous when operated outside of the enclosure.**

**Keep fingers and clothing away from the fans. When power is applied, they have moving parts which can cause personal injury.**

**Do not attempt to move a heavily loaded enclosure by yourself. Doing so introduces risk of injury due to muscle strain or the tipping of the enclosure. Fully loaded enclosures require at least two people to move safely.**

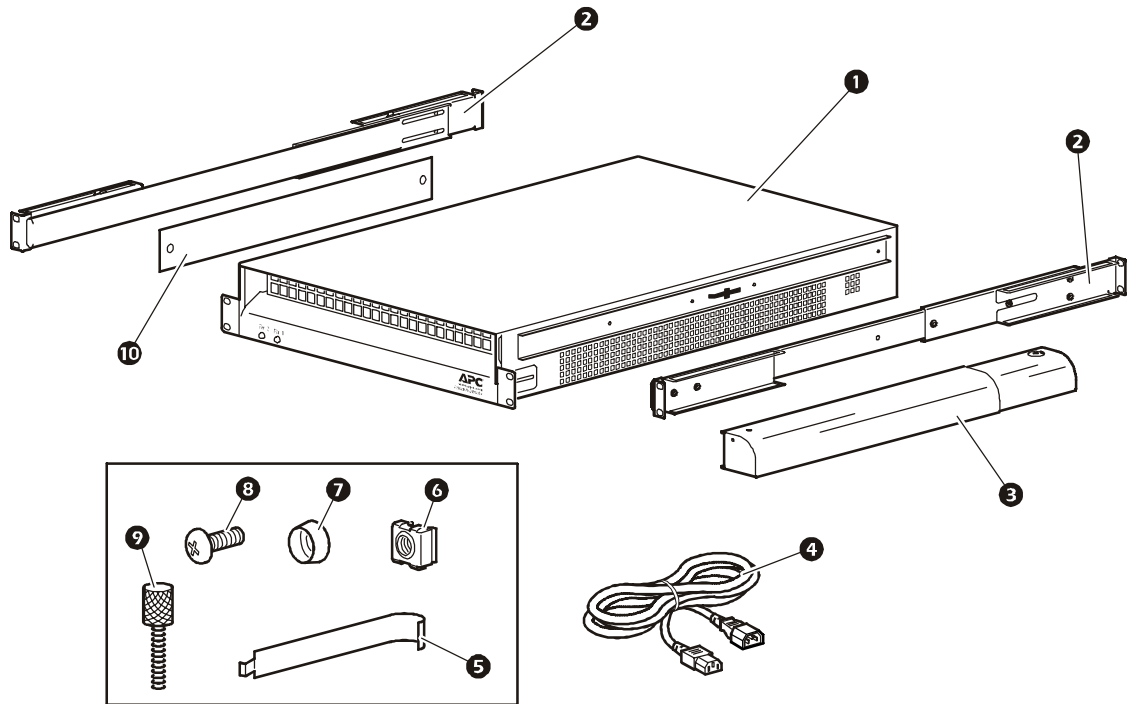
**Check that the power cord plugs and sockets are in good condition before installation.**

**Connect the Rack Side Air Distribution Unit to a IEC-320-C13 outlet. Connection to any other type of outlet may result in a shock hazard. Each outlet must be connected to appropriate branch circuit/mains protection (fuse or circuit breaker).**

**This equipment contains hazardous voltages. Do not attempt to disassemble or modify the unit.**

**Always install and operate the Rack Side Air Distribution Unit as shown in this manual.**

## Inventory



Item	Description	Quantity
1	Fan assembly	1
2	Mounting rails	2
3	Configurable air-turning vane	1
4	Input power cord (IEC-320-C13)	2
5	Cage nut installation tool	1
6	M6 cage nut	15*
7	M6 plastic washer	13*
8	M6 × 16mm screw	13*
9	Thumb screw	2
10	Air discharge plate (attached to unit)	1

\* one extra has been included

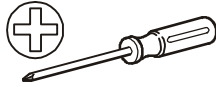
## Receiving and inspection

Inspect the shipping package and its contents for shipping damage and make sure that all parts were received. Report any damage immediately to the shipping agent, and report missing contents, product damage, or other problems immediately to APC® or your APC reseller.

# Installation

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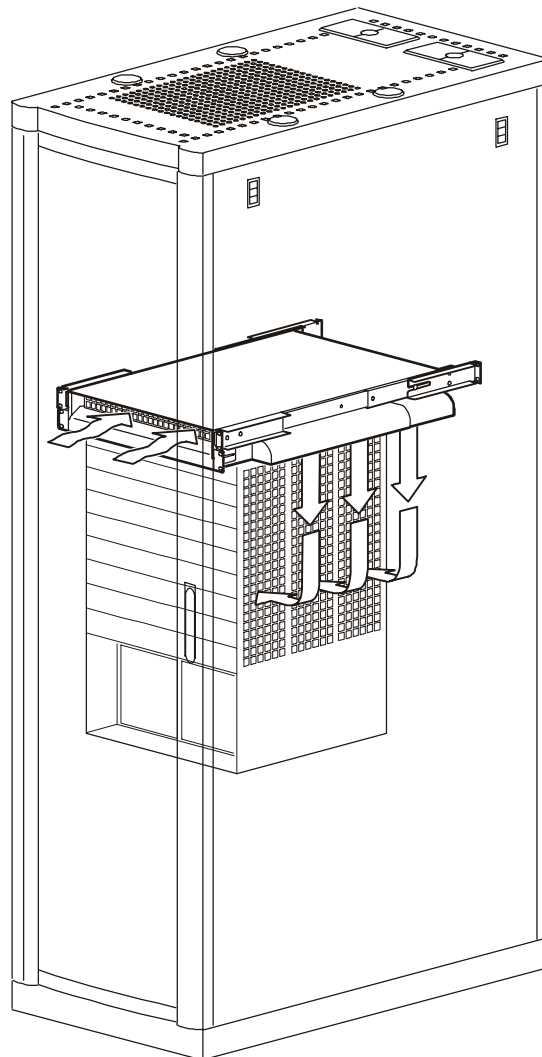
## Tools required—not provided



P2 Phillips screwdriver

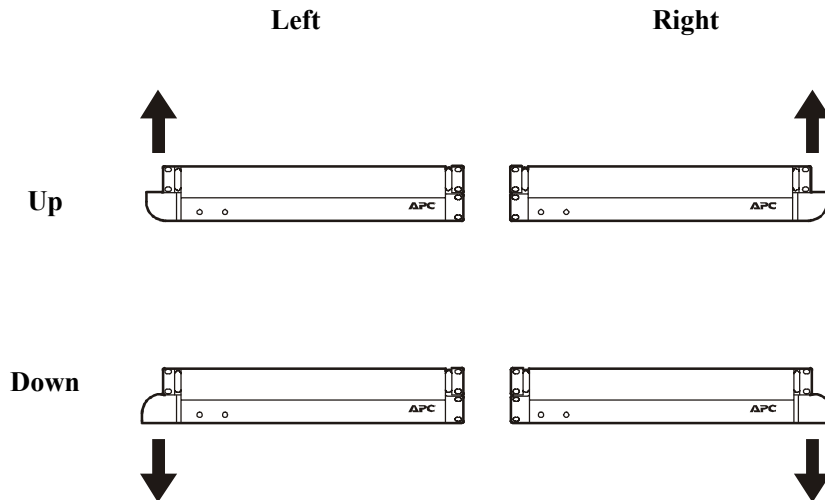
## Equipment placement considerations

The Rack Side Air Distribution Unit moves conditioned air from the front of the rack enclosure to the side intake of the networking equipment. Do not block the Rack Side Air Distribution Unit air intake and air discharge vents. Keep network equipment cables secured away from the Rack Side Air Distribution Unit vents.



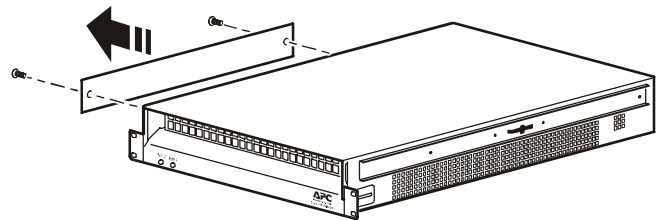
## Air-turning vane configurations

The Rack Side Air Distribution Unit is configured at the factory to discharge air out the right side of the unit. Check your product airflow needs and, if necessary, adjust the air-turning vane configuration during the installation procedure.

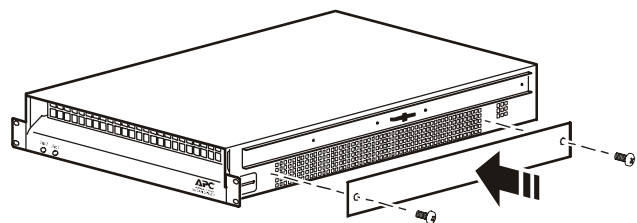


### Change the air discharge to the left side of the unit.

1. Remove the air discharge plate by removing the two screws.



2. Install the discharge plate on the right side of the fan assembly.



3. Install the air-turning vane on the left side of the fan assembly.

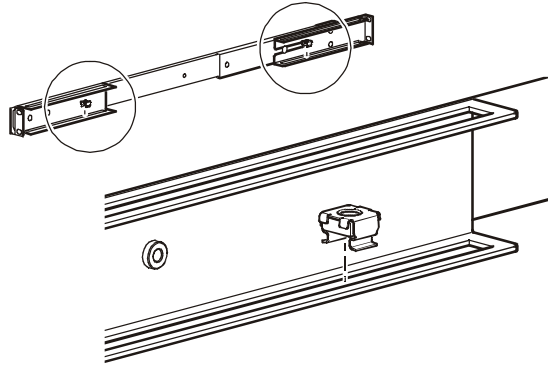


See “Assemble the air-turning vane to the mounting rail” on page 6 for instructions on how to install the turning vane.

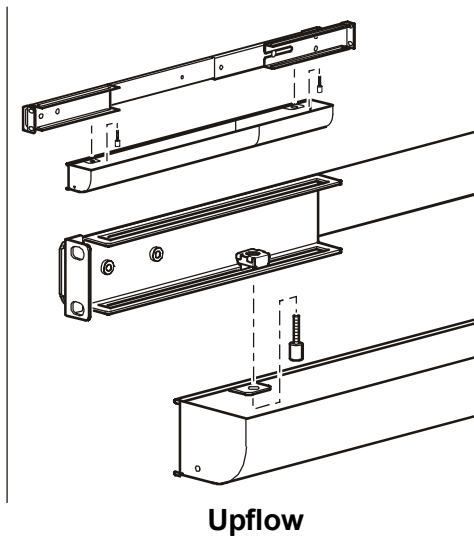
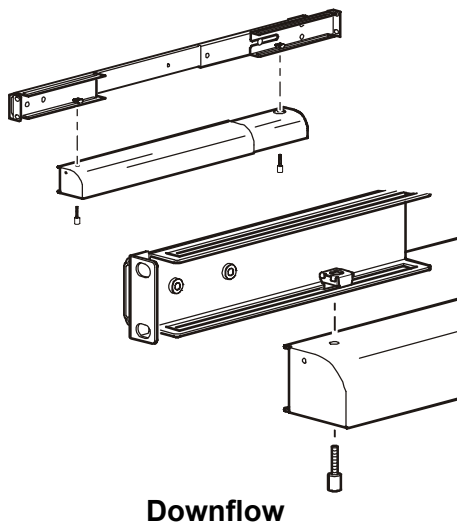


### Assemble the air-turning vane to the mounting rail

1. Install two caged nuts into the mounting rail.



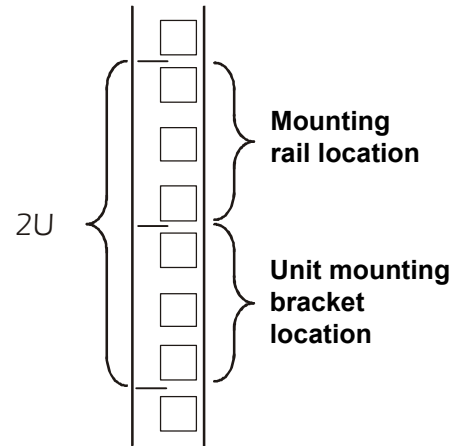
2. Attach the turning vane to the mounting rails using two thumb screws.



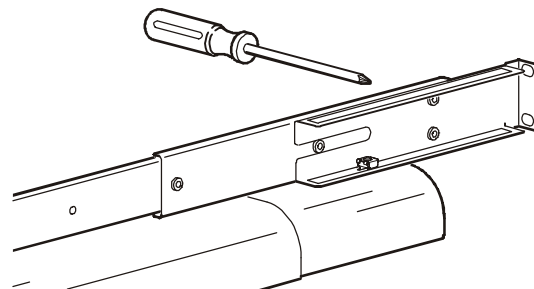
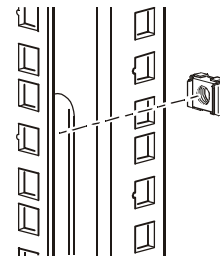
## Installing the mounting rails

The Rack Side Air Distribution Unit mounts to the rack in a 2U-space with the option of allowing the user to easily pull the unit out on the mounting rails, or to lock it in place with the additional screws provided.

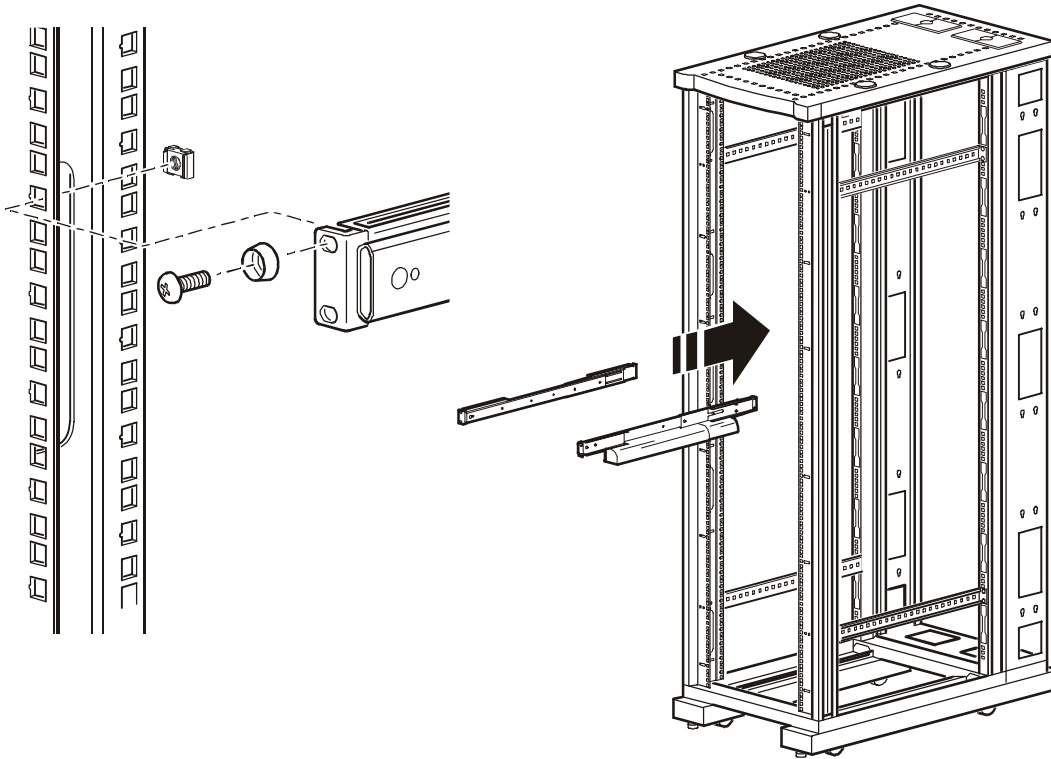
1. Locate a 2U-space where the Rack Side Air Distribution Unit will be installed. The mounting rails will be installed in the upper U of the 2U-space. The bottom U of the 2U-space will be used to lock the Rack Side Air Distribution Unit to the enclosure (optional).



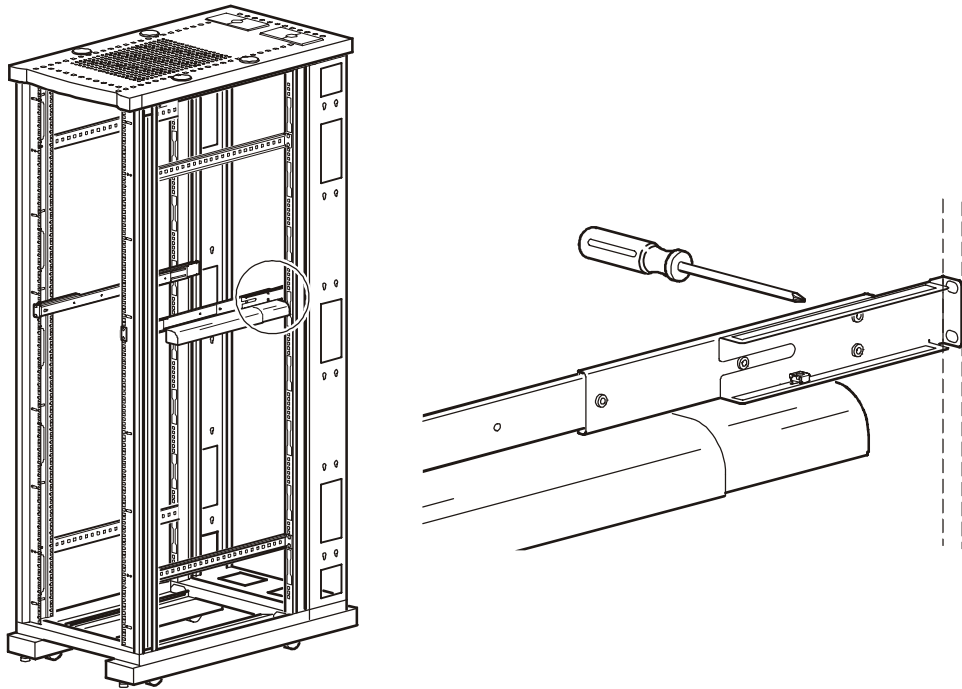
2. Using the caged nut tool (provided), install the caged nuts in the corresponding mounting holes on the interior of each vertical rail.
  - a. Use the upper U-space holes in the front and the back of the rack for the mounting rails.
  - b. Use the lower U-space holes in the front only to lock the Rack Side Air Distribution Unit to the enclosure (optional). See “Lock the unit to the enclosure” on page 11.
3. Loosen the two adjusting screws located at the rear of each mounting rail.



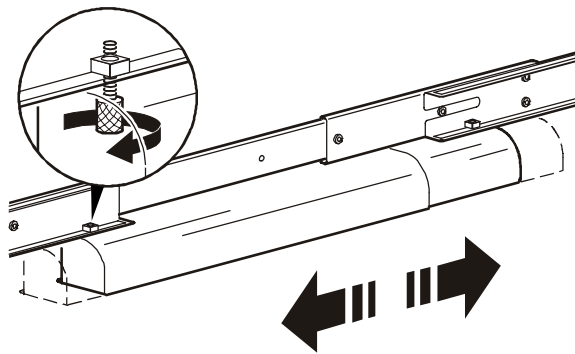
4. Attach the Rack Side Air Distribution Unit mounting rails to the vertical mounting rails of the enclosure, using four M6 × 16mm Phillips head screws and four plastic washers for each rail. Be sure to place the adjusting screws of the mounting rail towards the rear of the enclosure.



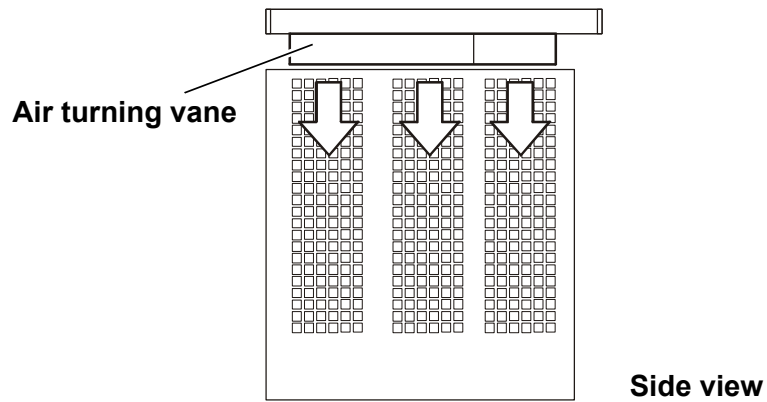
5. Tighten the two adjustment screws as shown.



6. Loosen the air-turning vane thumb screws to adjust the width of the air-turning vane.

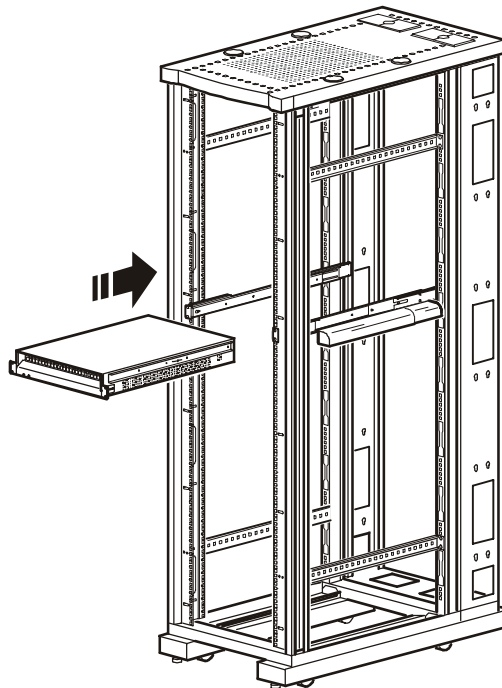


7. Adjust the width and position of the air-turning vane to direct air flow over the side air intakes of your equipment. Retighten the thumb screws.

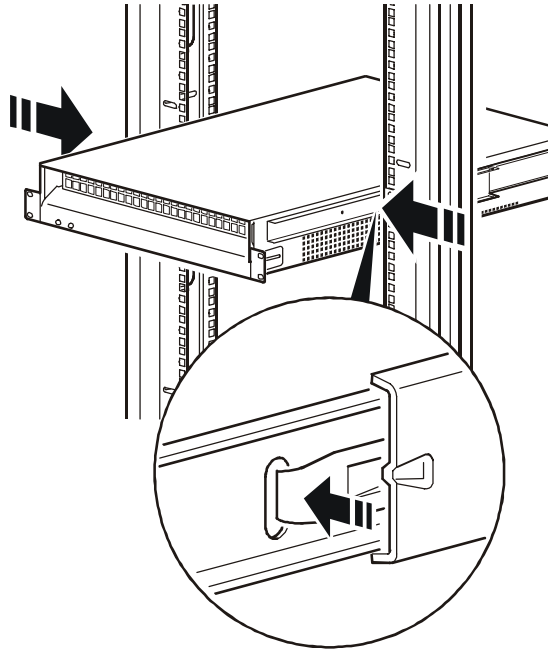


### Install the fan assembly into the mounting rails

1. With the front of the fan assembly facing the front of the enclosure, insert the rails on the sides of the fan assembly into the mounting rails.

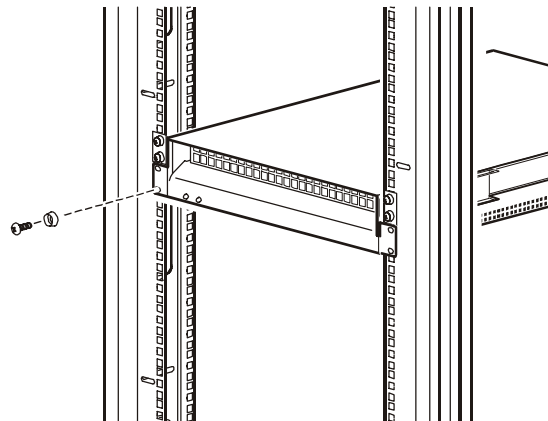


2. Slide the fan assembly towards the rear of the enclosure. Press in the locking tabs on each side of the unit, and slide the unit back as far as it will go.



### Lock the unit to the enclosure

1. Use four M6 × 16mm Phillips head screws and four plastic washers to lock the fan assembly to the enclosure.



### Blanking panels

Blanking panels are necessary to prevent hot exhaust air from entering the intake vents of your network and IT equipment. For proper operation, all openings in the enclosure should be covered using standard blanking plates (not provided).

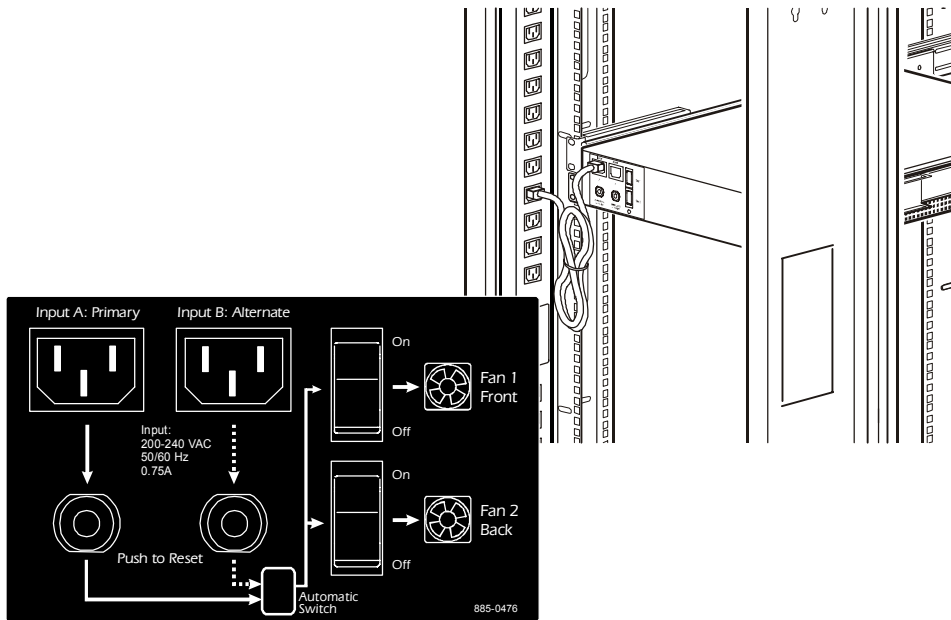


If you are using a U-space for cable routing, use a brush guard panel to reduce air loss through the opening.

Note

### Connect the power supply

1. Using one of the supplied power cords, connect the female end to one of the input sockets on the rear of the unit. Plug the male end into the UPS or other socket that provides protected power.



2. To provide redundant power to the unit, use the remaining socket to connect to a second source of protected power.
3. You may bundle and tie-wrap the cords to provide clearance for other components.

# Operation



Before applying power to the Rack Side Air Distribution Unit, make sure any debris is removed from the fan intake and fan exhaust areas. Failure to remove debris can result in damage to equipment or cause bodily harm.

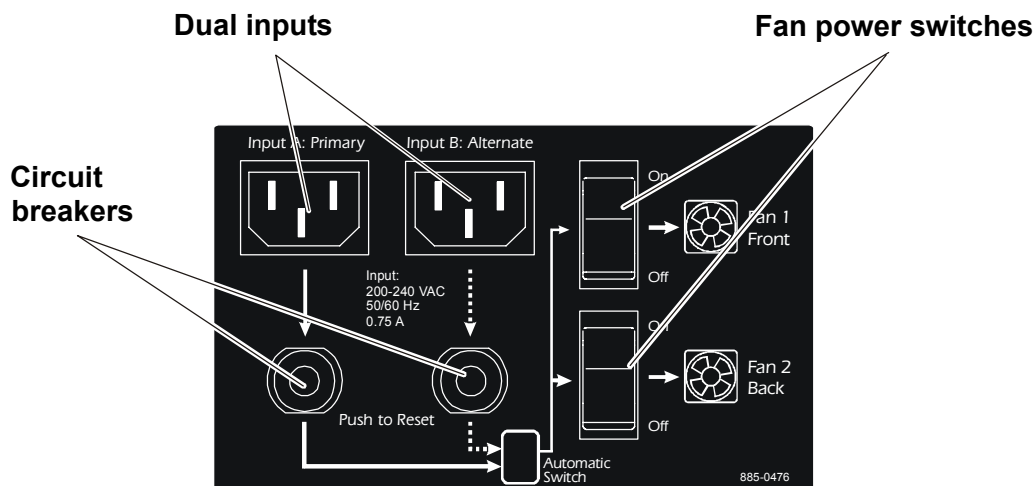
## Features and controls

The Rack Side Air Distribution Unit has two LEDs on the front that indicate the status of the fans. Each fan is controlled by a switch located on the back of the unit. Each line is protected by a separate circuit breaker.

### LED fan status

LED color	Fan Status
Green	Receiving power and running
Red	Receiving power and not running
None	No power

### Fan power switches, dual inputs, and circuit breaker locations



### Fan designation

Fan number	Air flow exhaust location
Fan 1	Side of unit—front half
Fan 2	Side of unit—back half



## Start-Up and fan test



**Before applying power to the Rack Side Air Distribution Unit, remove any debris that may be located in or near the fan rotors. Failure to remove debris can result in damage to equipment or cause bodily harm.**

- **This unit has no serviceable parts.**
- **Never operate the Rack Side Air Distribution Unit with its covers removed.**
- **Do not operate the fan unit in the extended position.**

1. Apply power to Fan 1 by pressing the corresponding switch on the rear of the unit.
2. Listen for the fan to start running and check the fan LED on the front panel. The LED is green during normal fan operation.
3. Turn off Fan 1, and repeat steps 1 and 2 for Fan 2.

# Warranty and Service

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## Limited warranty

APC warrants the Rack Side Air Distribution Unit to be free from defects in materials and workmanship for a period of two years from the date of purchase. Its obligation under this warranty is limited to repairing or replacing, at its own sole option, any such defective products. This warranty does not apply to equipment that has been damaged by accident, negligence, or misapplication or has been altered or modified in any way. This warranty applies only to the original purchaser.

## Warranty limitations

**Except as provided herein, APC makes no warranties, express or implied, including warranties of merchantability and fitness for a particular purpose.** Some jurisdictions do not permit limitation or exclusion of implied warranties; therefore, the aforesaid limitation(s) or exclusion(s) may not apply to the purchaser.

Except as provided above, in no event will APC be liable for direct, indirect, special, incidental, or consequential damages arising out of the use of this product, even if advised of the possibility of such damage.

Specifically, APC is not liable for any costs, such as lost profits or revenue, loss of equipment, loss of use of equipment, loss of software, loss of data, costs of substitutes, claims by third parties, or otherwise. This warranty gives you specific legal rights and you may also have other rights, which vary according to jurisdiction.

## Obtaining service

To obtain support for problems with your Rack Side Air Distribution Unit:

1. Note the serial number and date of purchase. This is found on the back of the Fan Assembly.
2. Contact Customer Support at a phone number on the back cover of this document. A technician will try to help you solve the problem by phone.
3. If you must return the product, the technician will give you a return material authorization (RMA) number. If the warranty expired, you will be charged for repair or replacement.
4. Pack the unit carefully. The warranty does not cover damage sustained in transit. Enclose a letter with your name, address, RMA number and daytime phone number; a copy of the sales receipt; and a check as payment, if applicable.
5. Mark the RMA number clearly on the outside of the shipping carton.
6. Ship by insured, prepaid carrier to the address provided by the Customer Support technician.

There are no customer serviceable items on the Rack Side Air Distribution Unit. Do not attempt to open or repair the Rack Side Air Distribution Unit.

# Specifications

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## Electrical

Power source	200–240V; 50/60Hz
Rated current (both fans)	0.75A

## Dimensions

Shipping carton (H×W×D)	9.5×26×31 in (241×660×787mm)
Fan assembly (H×W×D)	3.44×16.98×26.34 in (87.38×431.29×668.99mm)

## Weights

Net weight (unit only)	32lb (14.5kg)
Shipping weight	43lb (19.5kg)

## Airflow

Both fans running	230V 50Hz—230 CFM 208V 60Hz—240 CFM
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## Sound level

Both fans running	73dB @ 1m
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## APC Worldwide Customer Support

Customer support for this or any other APC product is available at no charge in any of the following ways:

- Visit the APC Web site to access documents in the APC Knowledge Base and to submit customer support requests.
  - **www.apc.com** (Corporate Headquarters)  
Connect to localized APC Web sites for specific countries, each of which provides customer support information.
  - **www.apc.com/support/**  
Global support searching APC Knowledge Base and using e-support.
- Contact an APC Customer Support center by telephone or e-mail.
  - Regional centers:

Direct InfraStruXure Customer Support Line	(1)(877)537-0607 (toll free)
APC headquarters U.S., Canada	(1)(800)800-4272 (toll free)
Latin America	(1)(401)789-5735 (USA)
Europe, Middle East, Africa	(353)(91) 702000 (Ireland)
Japan	(0) 3 5434-2021
Australia, New Zealand, South Pacific area	(61) (2) 9955 9366 (Australia)

- Local, country-specific centers: go to **www.apc.com/support/contact** for contact information.

Contact the APC representative or other distributor from whom you purchased your APC product for information on how to obtain local customer support.

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## Installation Addendum: Rack Side Air Distribution

### Mounting rail installation overview

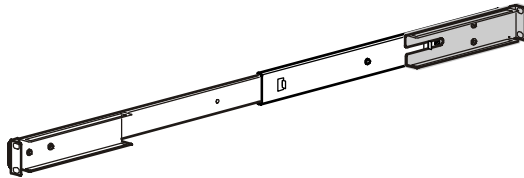


**Note**

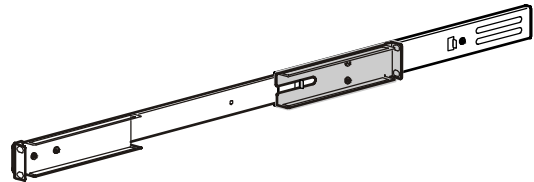
These instructions apply only to shallow vertical-rail spacing applications.

The mounting rails can be adjusted to fit a wide range of enclosure depths. Before installing the rails, measure the distance between the front and rear vertical-rails of the enclosure. **The repositioning of the rear mounting bracket is necessary when mounting rails are used in shallow vertical-rail spacing applications.**

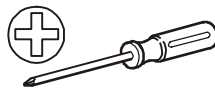
**Deep vertical-rail distance — 27.5 to 30.0 in (698.5 to 762 mm)**  
(no adjustments necessary)



**Shallow vertical-rail distance — 16.25 to 19.0 in (412.8 to 482.6 mm)**  
(relocation of the rear mounting bracket is necessary)



### Tools required—not provided



P2 Phillips screwdriver

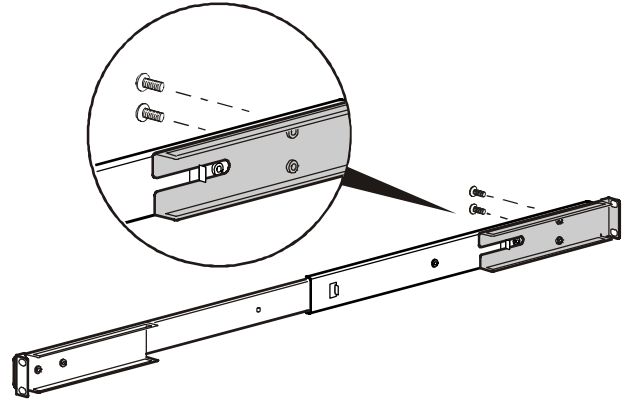
## How to modify the mounting rails



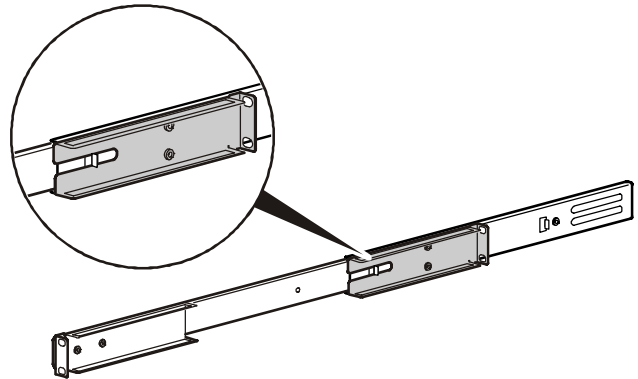
### Note

Perform this procedure for both the left and the right mounting brackets.

1. Remove and discard the two adjusting screws that attach the rear mounting bracket to the mounting rail.



2. Reposition the rear mounting bracket by sliding it onto the forward tab of the mounting rail.



### Note

The rear mounting bracket will slide freely on the forward tab of the mounting rail until the rail assembly is attached to the enclosure.



Refer to the Rack Side Air Distribution installation instructions for information on how to install the mounting rails in the enclosure.

