APC®

Rack *Side* Air Distribution Unit

ACF201BLK

Installation, Operation, and Maintenance

Contents

General Information

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 supplies conditioned air from the front of the enclosure to the side intake vents of your networking equipment. The availability and life expectancy of your network equipment is significantly improved by lowering the inlet air temperature. 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:

- 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, allowing you the flexibility to place network equipment above or below the unit.
- Adjustable mounting slide rails
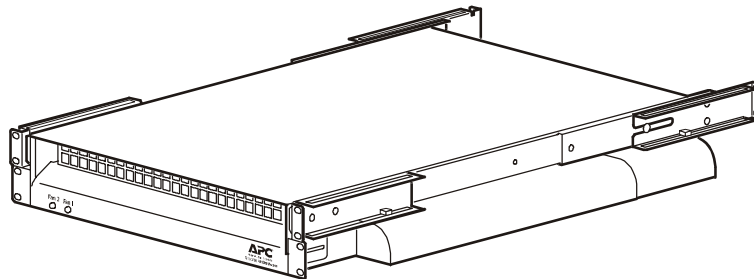
Safety information

⚠️
Warning

Disconnect power to the enclosure before installing the 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 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 powered on, 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 Side Air Distribution Unit to a NEMA 5-15 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 Side Air Distribution Unit as shown in this manual.**

Inventory
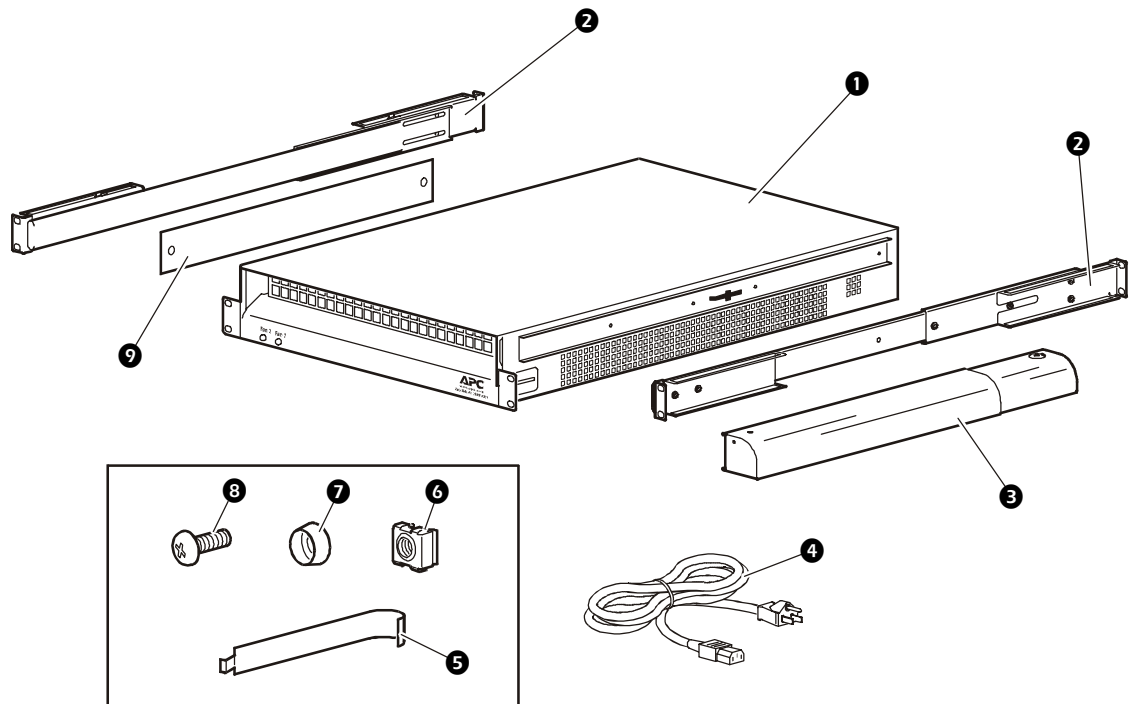
Item	Description	Quantity
❶	Fan assembly	1
❷	Mounting rails	2
❸	Configurable air-turning vane	1
❹	Input power cords (NEMA 5-15)	2
❺	Cage nut installation tool	1
❻	M6 Cage nut	14
❼	M6 Plastic washers	12
❽	M6 x 12mm Screw	12
❾	Air discharge plate (attached to unit)	1

Receiving and inspection

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

Installation

## Tools required—not provided
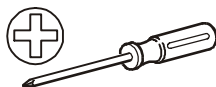
P2 Phillips screw
driver

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.
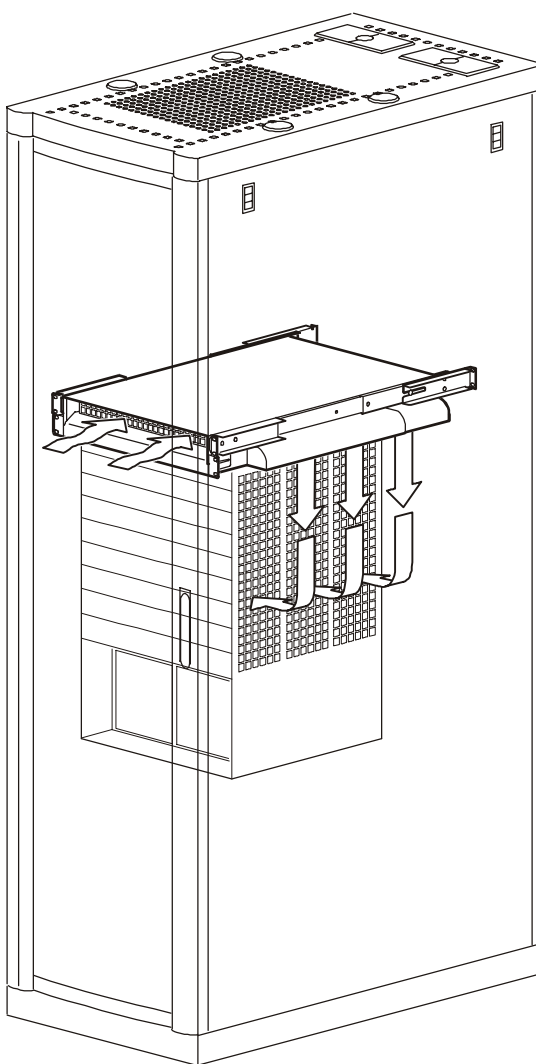
Air-turning vane configurations

The Rack Side Air Distribution Unit is configured from 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.
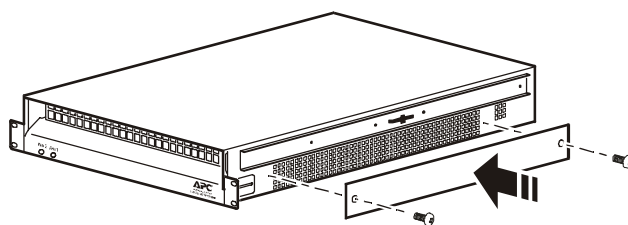
Left **Right**

Up

Down
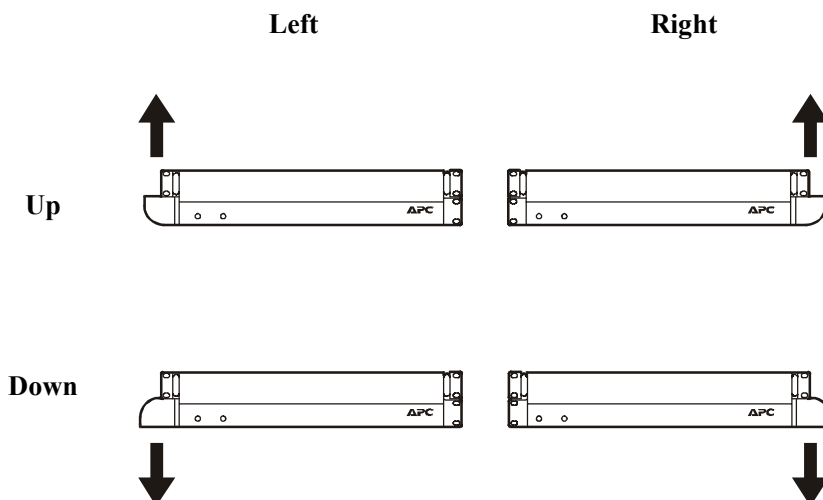
Changing the air discharge to the left side of the unit.

1. Remove the air discharge plate by removing two screws.
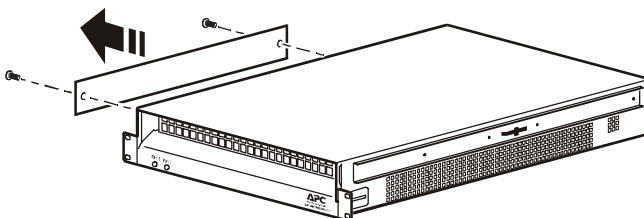
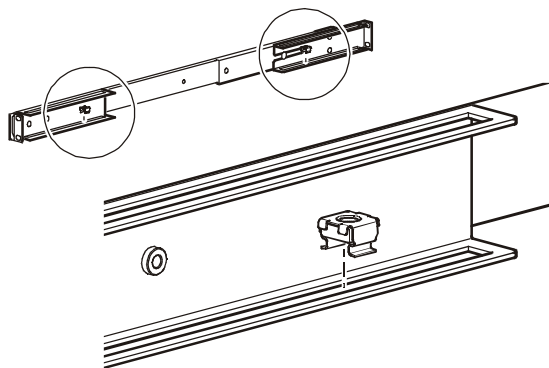2. Install the discharge plate on the right side of the fan assembly.

3. Install the air-turning vane on the left side of the fan assembly.
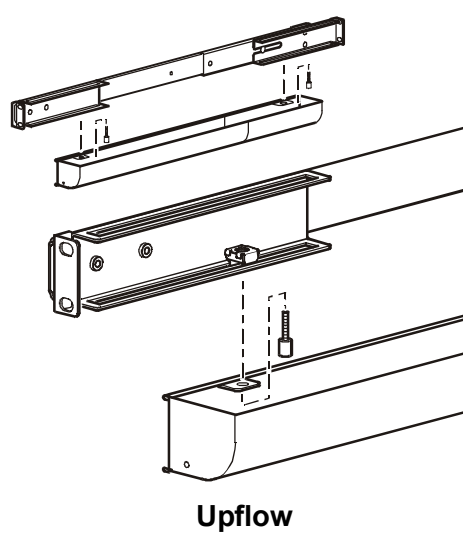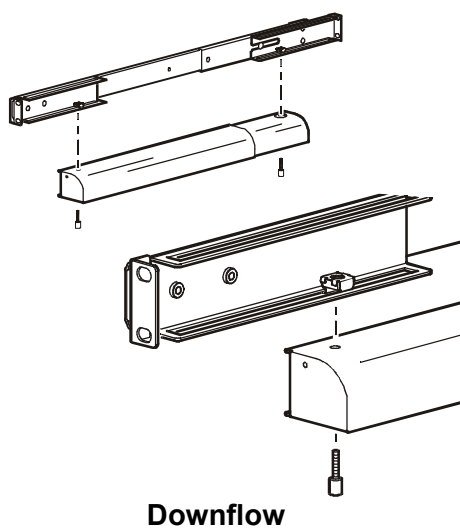
   See "Assemble the air-turning vane to the mounting rail" on page 6 for instructions on how to install the turning vane.

Assemble the air-turning vane to the mounting rail

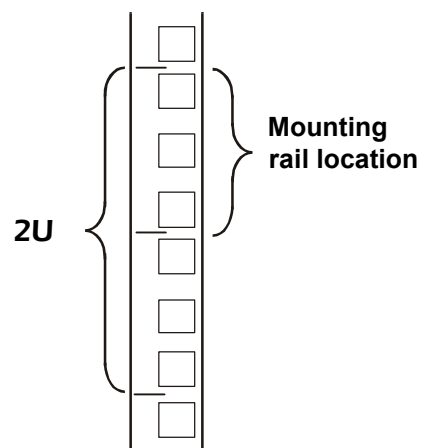1. Install two caged nuts into the mounting rail.

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

Downflow   **Upflow**

Installing the mounting rails

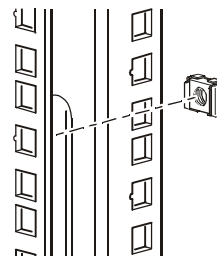1. Locate a 2U space were the Rack Side Air Distribution Unit will be installed. The mounting rails will be installed in the upper U of the 2U space.

Mounting rail location

2U

2. Using the caged nut tool (provided), install the caged nuts in the corresponding mounting holes on the interior of each vertical rail.

3. Loosen the two adjusting screws located at the rear of each mounting rail.
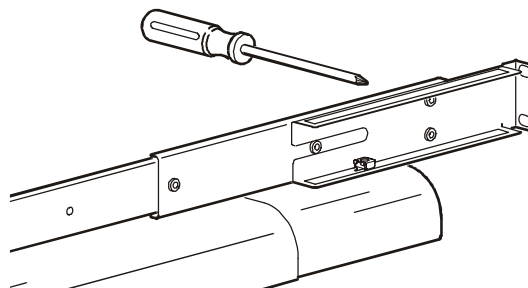
4. Attach the mounting rails to the vertical mounting rails of the enclosure, using four M6 × 12 mm Phillips head screws and four plastic washers for each rail. Be sure to locate the adjusting screws of the mounting rail to the rear of the enclosure.
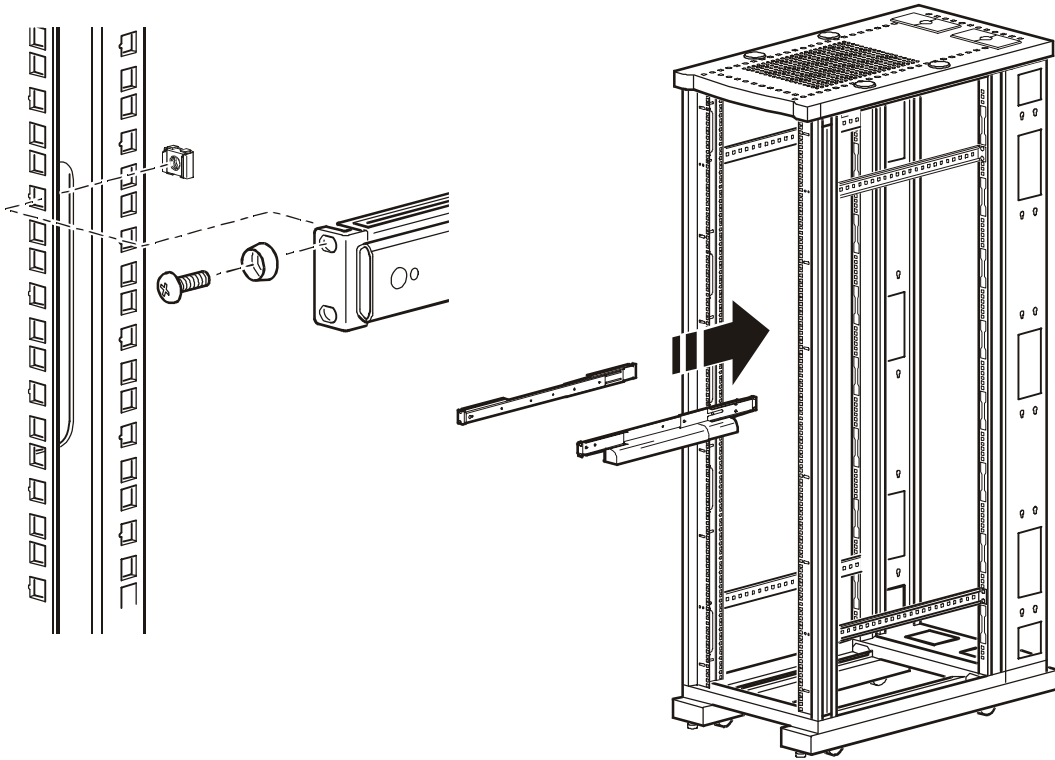
5. Tighten the two adjustment screws as shown.
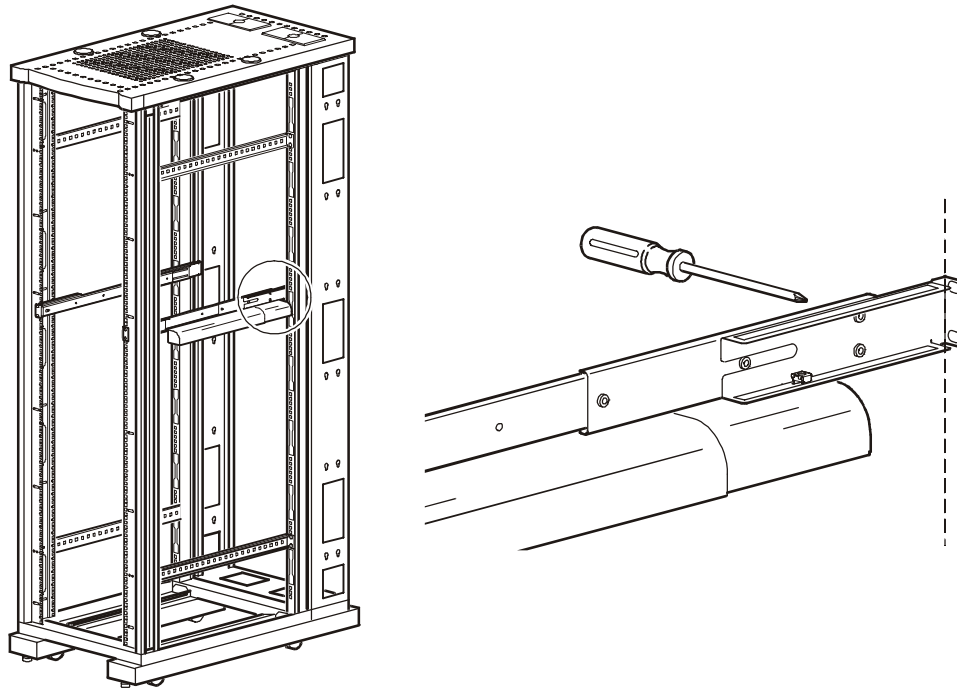
6. Loosen the air-turning vane thumb screws to adjust the width of the air-turning vane.
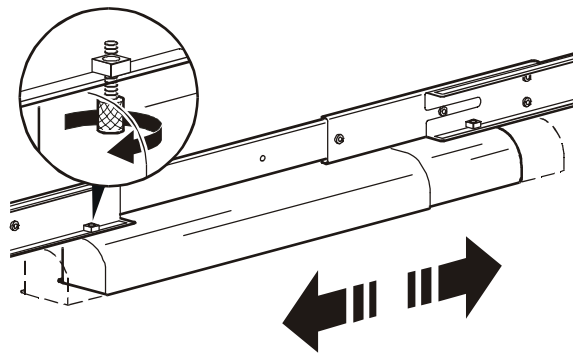
7. Adjust the width and position of the air-turning vane to direct air flow over your equipment's side air intakes. Retighten the thumb screws.

Air turning vane

Side view
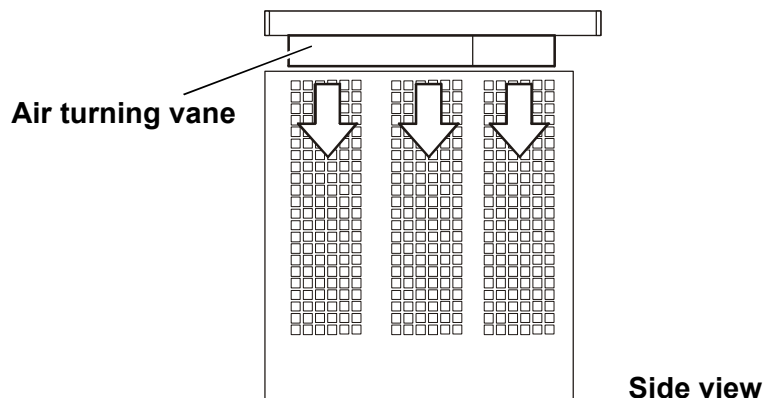
Install the fan assembly into the mounting rails

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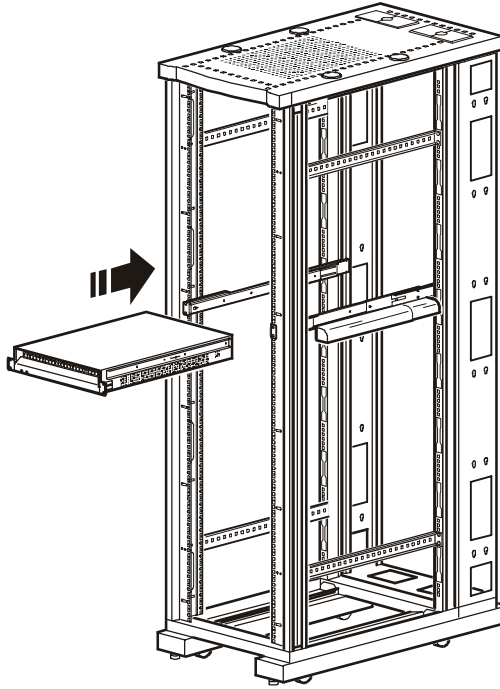
2. Slide the fan assembly towards the rear of the enclosure. Press in the locking tabs on each side of the unit and slide the unit back as far as it will go.
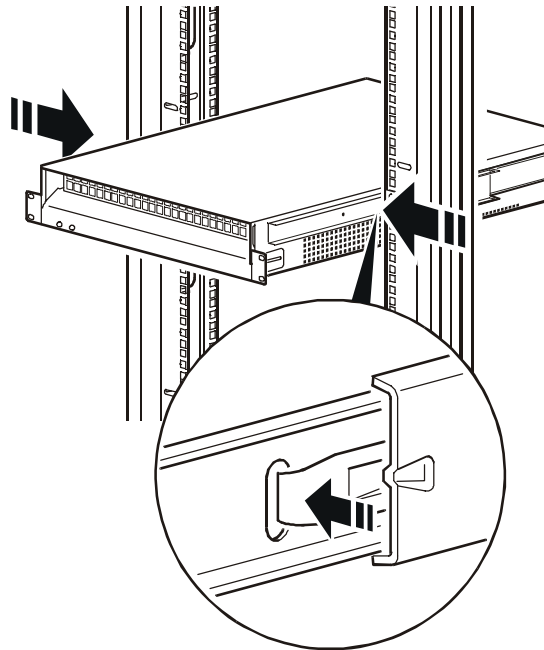
Blanking panels

Blanking panels are necessary to prevent the re-circulation of 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).

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

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.
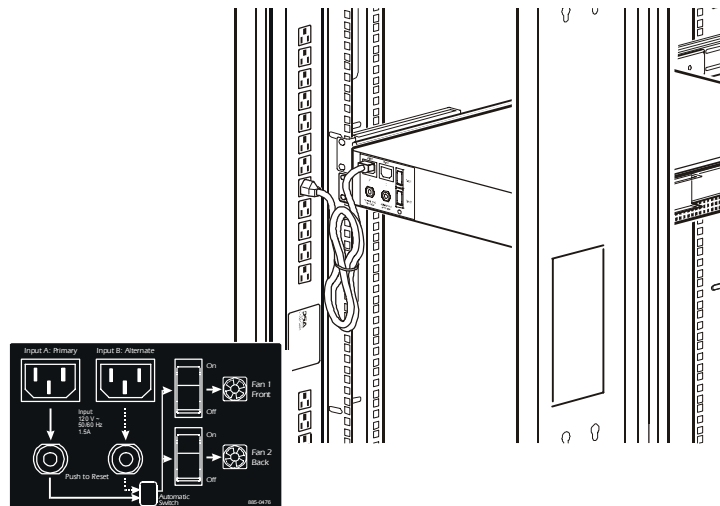
2. To provide redundant power to the unit, use the remaining socket to connect to a second source of protected power.
3. Cords may be bundled and tie-wrapped to provide clearance for other components.

Operation

⚠️ **Warning**

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	Powered and running
Red	Powered and not running
None	No power

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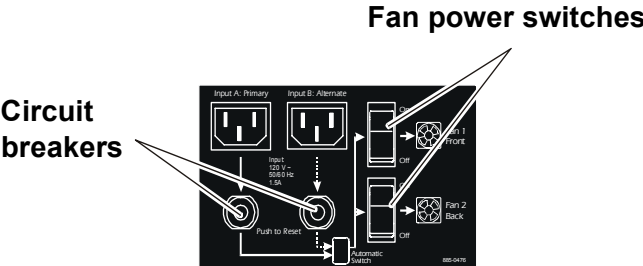
Fan designation

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

⚠️ **Warning**

Before applying power to the Rack Side Air Distribution Unit, remove any debris that may 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 Side Air Distribution Unit with 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 indicator on the front panel. The indicator is green during normal fan operation.

3. Turn off Fan 1 and repeat for Fan 2.

Warranty and Service

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

Electrical

Power source	115 V; 50/60 Hz
Rated current (both fans)	1.25A

Dimensions

Shipping carton (h × w × d)	9.5 × 26 × 31 in (241 × 660 × 787 mm)
Fan assembly (h × w × d)	3.44 × 16.98 × 26.34 in (87.38 × 431.29 × 668.99 mm)

Weights

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

Airflow

Both fans running	260 CFM

Sound level

Both fans running	73 dB @ 1 m

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.