



**BARack
Rackmount kit
Instructions**



071-3503-00



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Service safety summary

The *Service safety summary* section contains additional information required to safely perform service on the product. Only qualified personnel should perform service procedures. Read this *Service safety summary* and the *General safety summary* before performing any service procedures.

To avoid electric shock. Do not touch exposed connections.

Do not service alone. Do not perform internal service or adjustments of this product unless another person capable of rendering first aid and resuscitation is present.

Disconnect power. To avoid electric shock, switch off the product power and disconnect the power cord from the mains power before removing any covers or panels, or opening the case for servicing.

Use care when servicing with power on. Dangerous voltages or currents may exist in this product. Disconnect power, remove battery (if applicable), and disconnect test leads before removing protective panels, soldering, or replacing components.

Verify safety after repair. Always recheck ground continuity and mains dielectric strength after performing a repair.

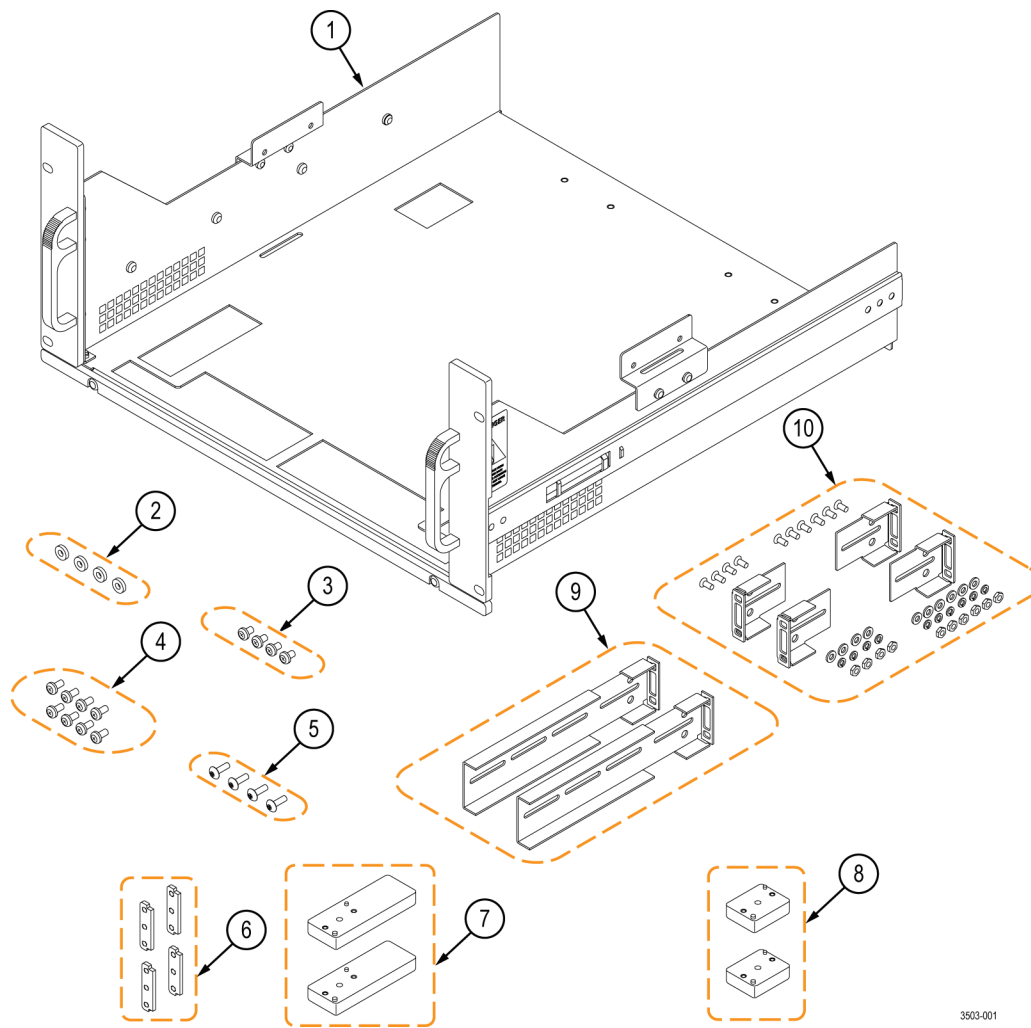
Introduction

This document describes the installation of the BARACK rackmount kit for the BA1500 and BA1600 products. The kit instructions are a collection of parts that, once installed, configure the instrument for mounting into a standard 19-inch instrument rack. An additional pair of extended length brackets are available for mounting the instrument into a deep rack.

The following table and figure show the parts list for the rackmount kit.

Table 1: Parts list

Item number	Quantity	Part number	Description
-	1	BARACK	Rackmount kit: BERTScope Series, consisting of the following items:
-	1	071-3503-xx	Technical manual: Instructions, this document
1	1	650-5976-xx	Rackmount kit; BA1500/BA1600 series, preassembled
2	4	210-1596-xx	Flat washer, #12 x 0.5 outer diameter X 0.12 thick
3	4	212-0004-xx	Screw, mach; 8-32 x 0.312, PNH, Steel, zinc plated, T20 TORX
4	8	212-0260-xx	Screw, mach; 10-32 x 0.375, PNH, Steel, zinc plated, T25 TORX
5	4	212-0577-xx	Screw, mach; 10-32 x 0.625, TRH, Steel, zinc plated head, Phillips
6	4	220-0337-xx	Nut bar strip, 10-32 THD x3
7	2	348-2256-xx	Foot, locating, short front
8	2	348-2257-0xx	Foot, locating, short rear
9	2	407-5608-xx	Bracket, slide, extension, 7.48 in.
10	1	351-1139-xx	Slide assemblies, telescoping, two (2) front and two (2) rear brackets, with hardware



3503-001

Figure 1: Rackmount kit parts

Warranted characteristics

When the instrument is installed according to the instructions in this document, the rack-mounted instrument meets all warranted requirements listed in the instrument specification except for those listed in Environmental Requirements.

Instruments mounted using methods other than those described in these instructions may not meet their warranted requirements.

See *Specifications* in the user manual that apply to your instrument.

Cooling air enters from the bottom-front and both sides. You must provide adequate cool air to meet the ambient temperature requirements.

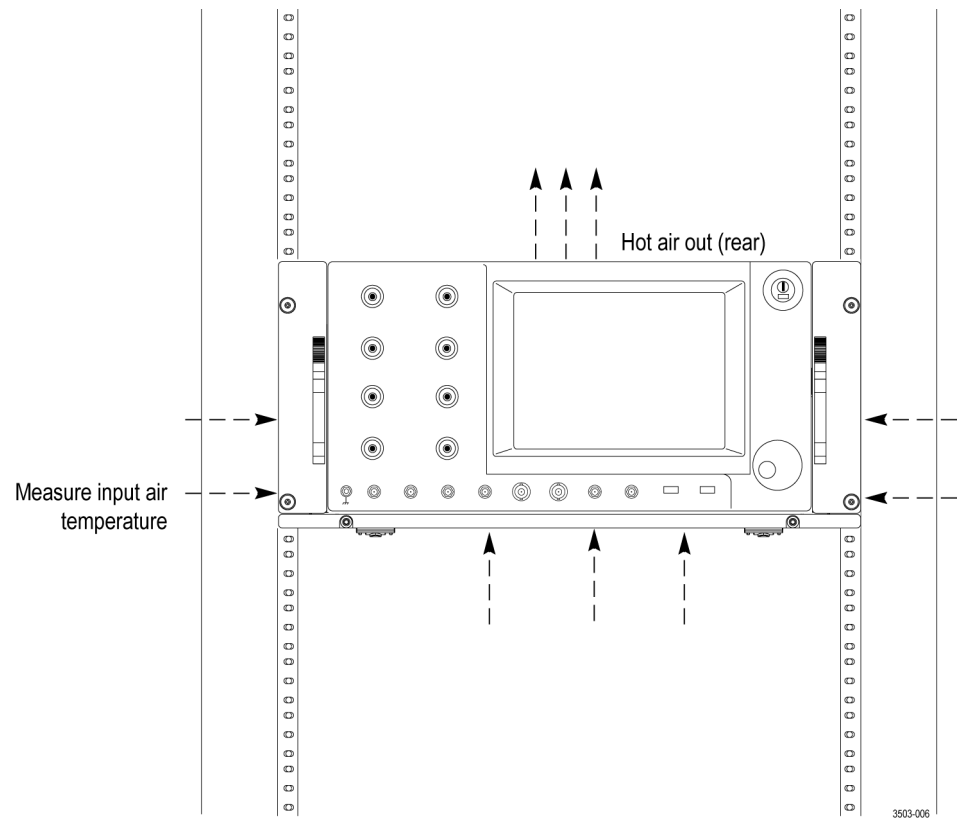


Figure 2: Instrument cooling

Clearance requirements

The rack in which the rack-adapted instrument is mounted must provide the following clearance requirements:

- A minimum of 10.5 inches (266.7 mm) of vertical space
- A minimum of 19 inches (482.6 mm) between the left and right front rails of the rack
- A minimum depth of 25 inches (635 mm)



CAUTION. Failure to adhere to the clearance requirements can result in overheating and cause instrument faults or failure. Air temperature at the instrument's intake air vents must be maintained within the specified ambient temperature range (+10 °C to +35 °C) during instrument operation. Always adhere to the clearance requirements to provide the rack-mounted instrument with enough clearance for air circulation and accommodation of the power cord, cables, and mounting hardware.

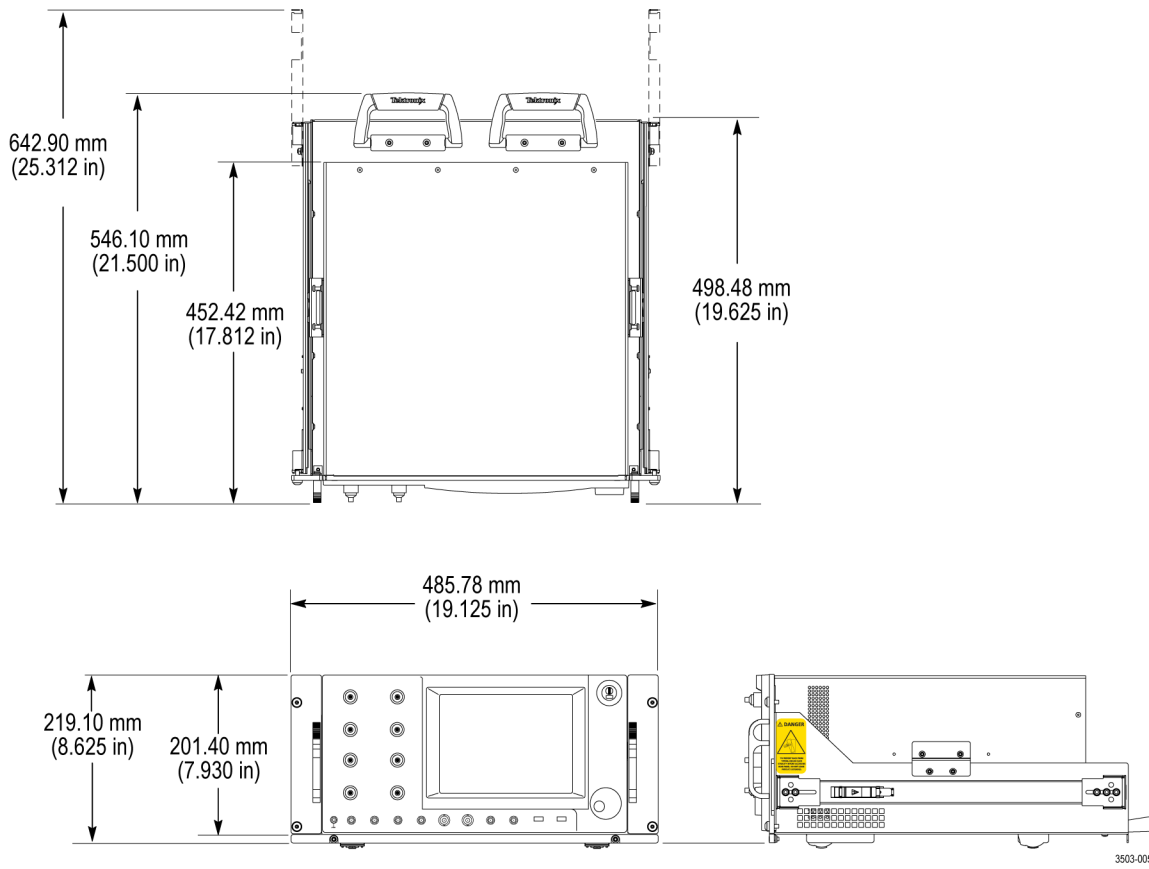


Figure 3: Instrument dimensions with clearance requirements in the rack

Installation instructions

This section contains the procedures needed to rack mount a BERTScope instrument. The following steps are involved in the installation process:

- Install the slide bracket kit and hardware to the rack.
- Install the rack tray into the rack cabinet.
- Replace the front and rear feet on the instrument (Optional)
- Install the instrument onto the rack tray.
- Attach remaining hardware to the instrument and rack assembly and then secure the instrument in place.

Minimum tool and equipment list

The following table lists the readily-available tools for the installation process.

Table 2: Tools required for rackmount installation

Name	Description
No. 2 Phillips or Pozidriv tip	Phillips or Pozidriv-driver tip for number 2 screw heads
T-15 Torx tip	Torx®-driver tip for T-15 size screw heads
T-20 Torx tip	Torx®-driver tip for T-20 size screw heads
T-25 Torx tip	Torx®-driver tip for T-25 size screw heads

These instructions are for personnel who are familiar with servicing the product. Contact your local Tektronix Service Center or Tektronix Factory Service for installation information.

Assemble the rack slides and brackets and install them in the rack cabinet

Complete the following steps to remove the outer member of the rack slides from the pre-assembled rack tray and install the rack slides with the brackets in the rack cabinet.

1. Locate the pre-assembled rack tray from the kit contents (Item 1) and place it on an open and clean working surface.
2. Refer to the following figure and remove the outer members of the rack slide assemblies from both sides of the pre-assembled rack tray. (First push the button latch near the bottom rear edge of each rack slide assembly to disengage the rack slide from the rack tray. Then remove the rack slide assembly.)

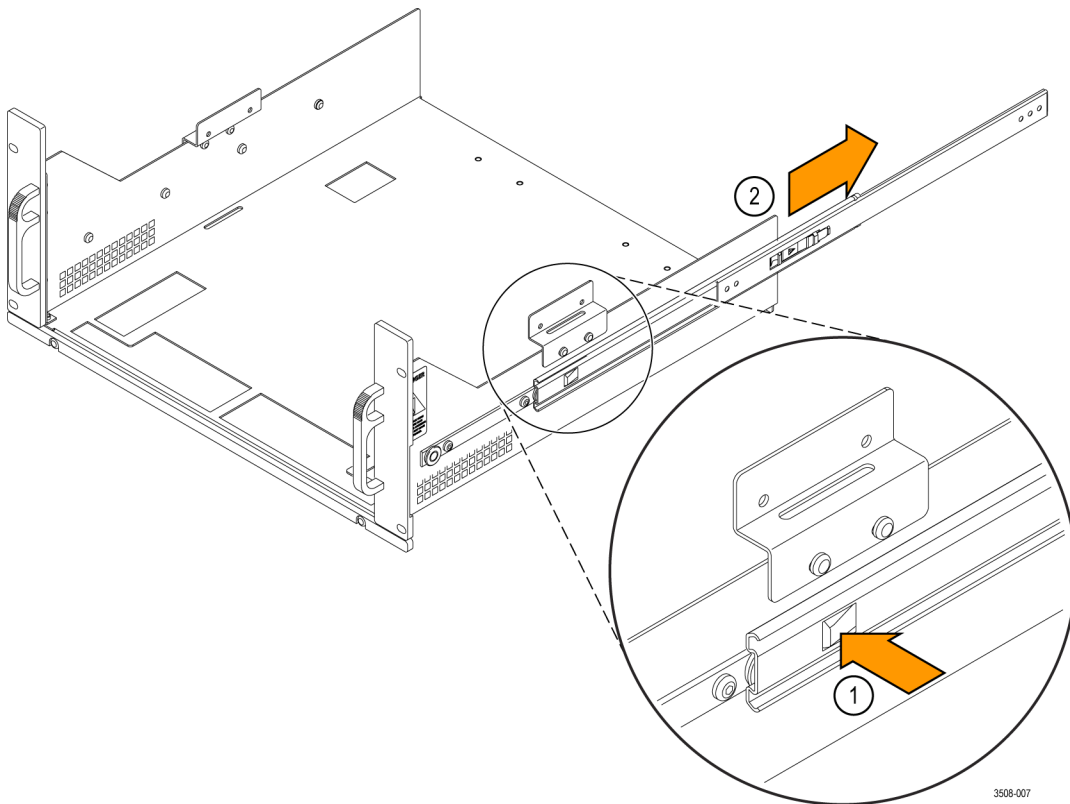
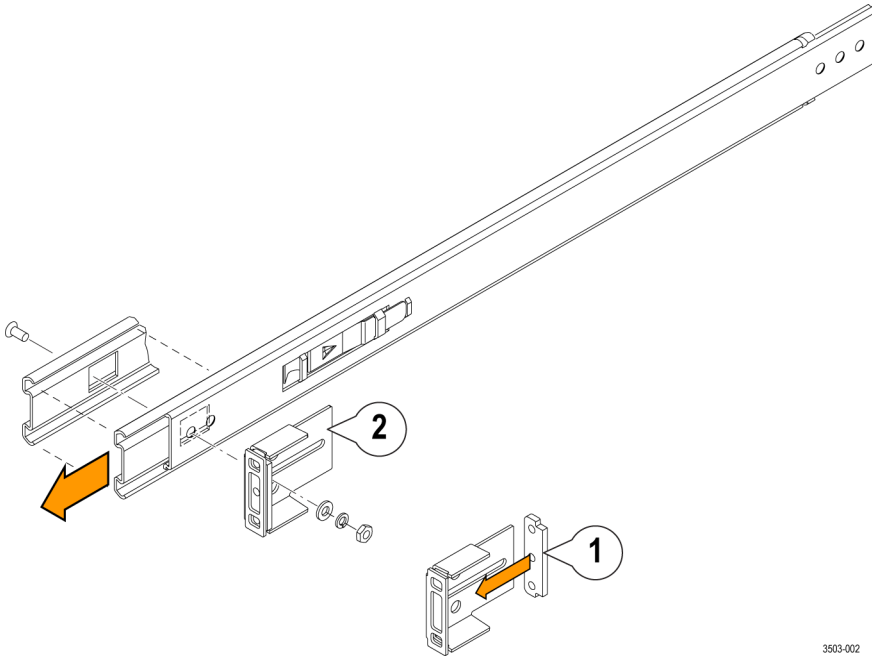


Figure 4: Removing the rack slides from the rack tray

3. Set the rack tray aside and place the rack slides on the work surface to install the front and rear brackets.

4. Locate one of the nut bars from the kit (Item 7) and one of the brackets from the Bracket kit.
5. Refer to Step 1 in the following figure and install the nut bar inside the bracket as shown.



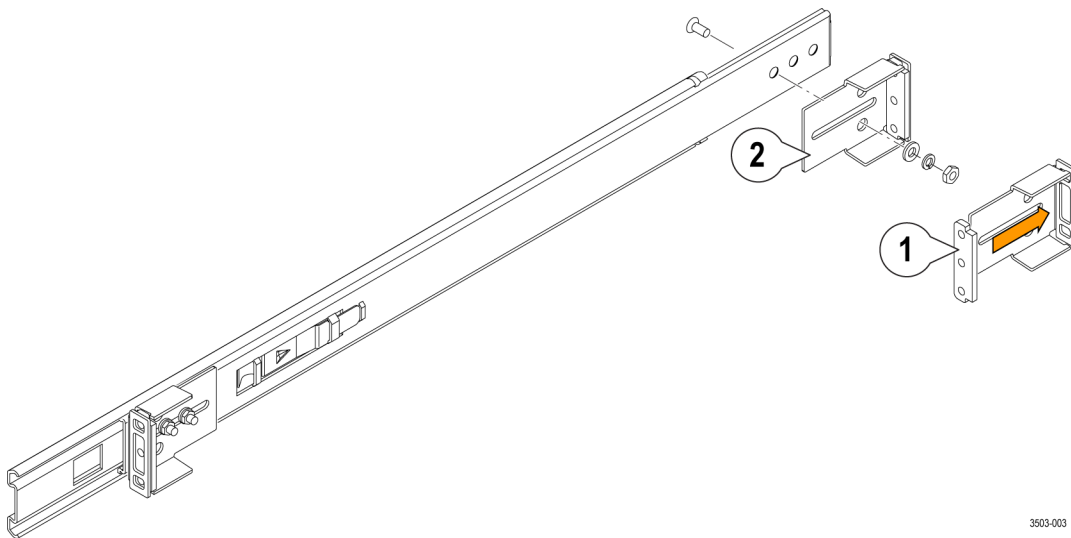
3503-002

Figure 5: Install the nut bar inside one of the front brackets and then secure the bracket assembly to the front of the rack slide.

6. Using the hardware from the Bracket kit, secure the bracket assembly to the rack slide as shown. (Install the two screws through the rectangular hole in the inner rack slide.)
7. Determine whether you need to install the rear rack slide extension brackets (Item 11) for deep racks or install the short rear brackets (from the Bracket kit).

NOTE. The following steps and figures assume that you are installing the short rear brackets. The steps for installing either set of brackets are the same. If you are installing the extension brackets, use the hardware from the Bracket kit to secure them to the slides.

8. Refer to Step 1 in the following figure and install the nut bar inside the bracket as shown.



3503-003

Figure 6: Install the nut bar inside one of the rear brackets and then secure the bracket assembly to the end of the rack slide.

9. Using the hardware from the Bracket kit, secure the bracket assembly to the rack slide as shown.

10. Complete the following steps to install the rack slides in the rack cabinet.
Refer to the following figure as needed.

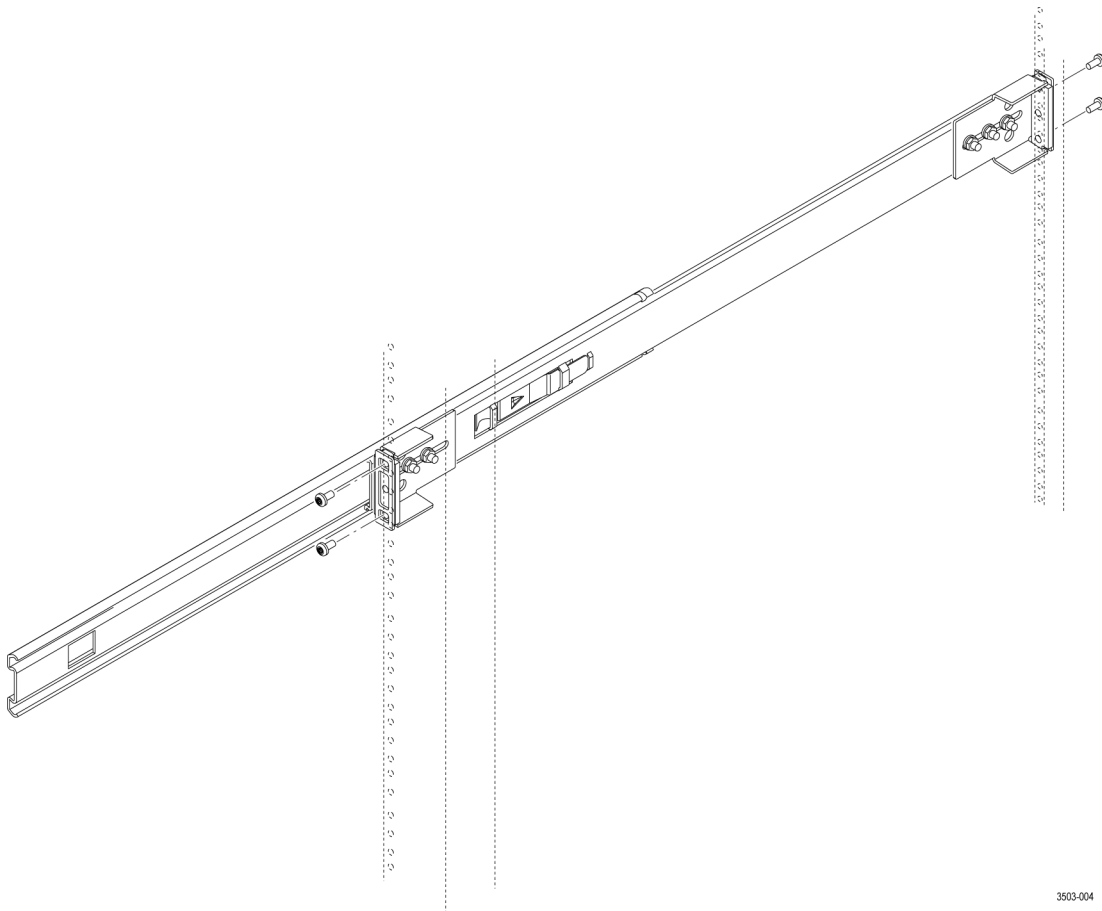


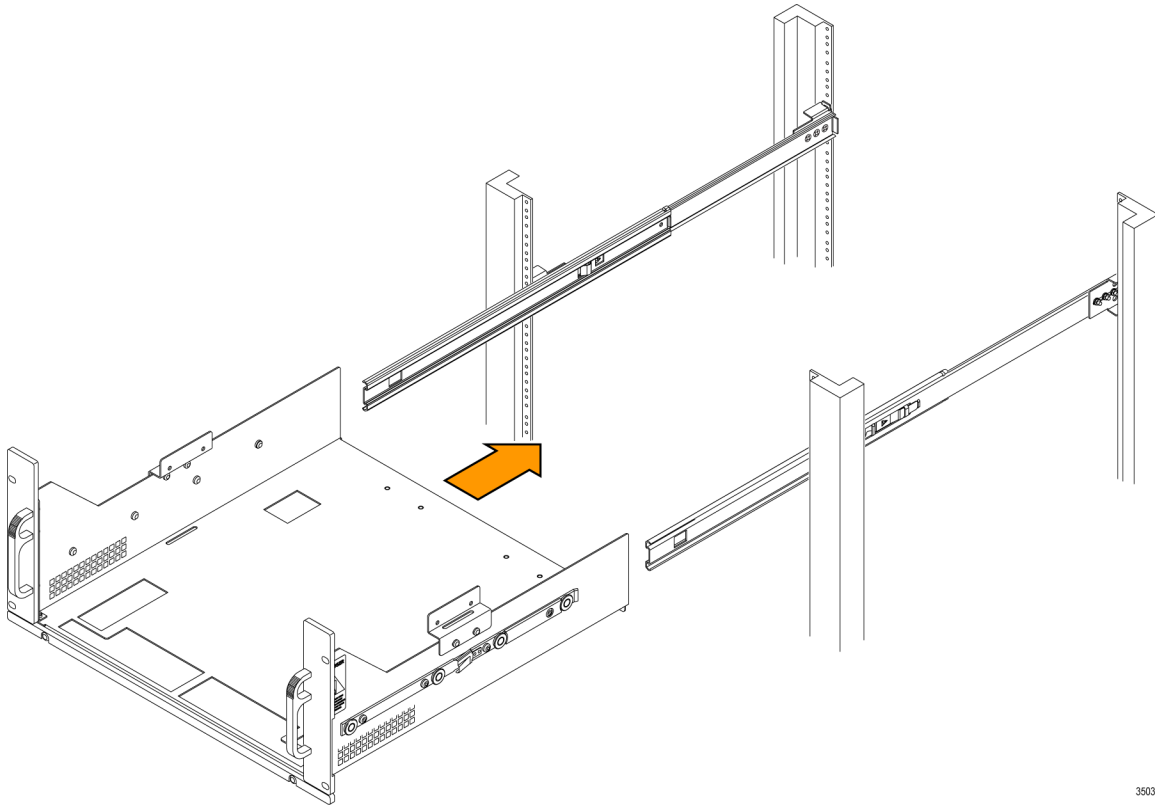
Figure 7: Installing the rack slides to the rack cabinet

- a. Use two machine screws (Item 4) to secure one of the rack slide assemblies to the rear of the rack cabinet.
- b. Use two machine screws (Item 4) to secure the rack slide assembly to the front of the rack cabinet.
- c. Repeat the above steps to install the other rack slide assembly in the rack cabinet.

Install the rack tray assembly into the rack cabinet

Complete the following steps to install the rack tray assembly into the rack cabinet:

1. Grab the rack tray assembly and slide it into rack slides in the cabinet as shown in the following figure.



3503-008

Figure 8: Slide the rack tray assembly into the rack slides in the rack cabinet

2. Push the rack tray into the cabinet until it locks in place.

Replace the front and rear feet on the instrument (Optional)

If there is no instrument installed directly below the rack tray, you can skip these steps.

If an instrument is installed directly below the rack tray, there will not be enough vertical clearance between the rack tray and the instrument. To avoid the clearance problems, you need to replace the front and rear feet of the BA instrument with those provided with the kit instructions.

The feet need to be replaced before installing the BA instrument into the rack.

NOTE. *To replace the feet, remove the covers from the chassis and replace the feet secured to the bottom of the covers.*



CAUTION. *Many components within the chassis are susceptible to static discharge damage. To avoid damaging the instrument, observe standard handling precautions for static-sensitive devices while servicing the chassis.*

Always wear a grounded wrist strap, or equivalent, while servicing the chassis.

The circuit boards and cables can be damaged if you incorrectly install the covers. Make sure that you do not damage any circuit boards or cables when you slide the chassis into the covers.

Install the instrument onto the rack tray

Complete the following procedures to install the instrument onto the rack tray.
Refer to the figure for an overview of the final installation process. (See Figure 9.)

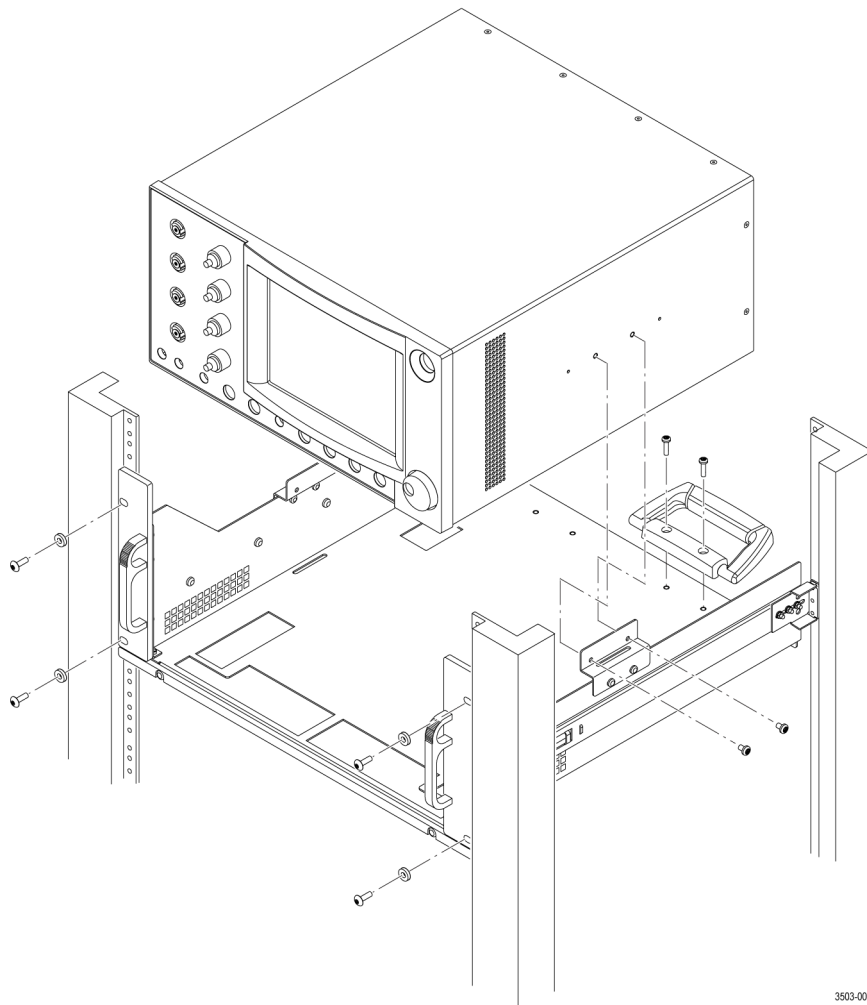


Figure 9: Final installation steps



WARNING. To prevent the instrument from tipping or dropping onto the installers, two or more people should install the instrument into the rack cabinet.

After completing the installation procedure, the installers should verify that the instrument and the rack cabinet will not tip forward while the instrument is in the extended position.

Do not leave the instrument extended in the rack when finished accessing the rear panel.

1. Pull the rack tray out of the rack cabinet until it locks in place.
2. Remove the handles from both sides of the instrument and secure them to the optional storage location on rear of the rack tray using the screws that you just removed.
3. With the help of another individual, carefully place the instrument on the extended rack tray, making sure that the feet of the instrument fit into the holes on the bottom of the rack tray and the brackets on the sides of the rack tray line up with screw holes of the handles that you just removed.
4. Locate the four T-20 Torx screws from the parts lists (Item 4) and install two of the screws on each side of the instrument into holes where the handles used to be.

NOTE. *The remaining steps in this document secure the rack tray to the rack cabinet. Be sure to connect the power cord and any cables to the rear of the instrument.*

5. Connect the instrument power cord to the rear of the instrument and any cables that may be required for certain instrument configurations.
 6. Push the rack tray all of the way into the rack cabinet.
 7. Locate two pairs of 10-32 Phillips screws (Item 5) and washers (Item 3) from the kit. Install them on one of the sides of the instrument through the rack kit side plates and into the rack; repeat for the other side of the instrument.
- **End of Document**