

# Scalar i40 and Scalar i80 Rack Mount Installation Instructions

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The instructions for installing the rails are the same for both the Scalar<sup>®</sup> i40 and the Scalar i80.

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**WARNING:** If the rack is empty at the time of installation, do NOT install the library too high in the rack. The weight of the library may cause the rack to become “top heavy” and unstable if installed in the top of an empty rack.

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**WARNING:** Do not stack objects on top of the library such as cables or other computer equipment. The additional weight could exceed the amount supported by the rack shelves.

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**Caution:** Make sure the rack mounting rails are level, both left to right and front to back. If the library is not level in the rack, it will not work properly.

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## Supported Rack Types

The Scalar i40 and Scalar i80 libraries are designed to fit in most standard 19-inch equipment cabinets, including:

- Dell, 08P157 (US-08P157910-3AU-0900), square, 2.48 - 2.72 mm thick
- SUN, 38U, NGR900R, M6
- Emcor, 10 Series, round hole
- IBM, Machine Type 9306, Model 900, square, 28.25-inch deep, 2.0-2.25 mm thick
- HP, 10K, PN 245169-001, Asm 10642U GR Metallic, square, 2.0-2.2 mm thick



- EMC CX500
- Rittal Cable Tester Rack Frame, square

Rack depth of 34 in. (86.3 cm) minimum is recommended; however, rack depths of 24 to 36 in. (60.9 to 91.4 cm) are supported.

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## Space Requirements

Please note:

The following specification depths exclude drive sleds. Drive sleds will add up to 50 mm to the overall length of the library depending on version (half-height, full-height, Fibre Channel, SAS).

When planning space requirements, please also take into account installed cables (particularly fibre-optic cable radius on Fibre Channel tape drives).

[Table 1](#) provides dimensions and air clearance requirements for the Scalar i40; [Table 2](#) provides dimensions and air clearance requirements for the Scalar i80.

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Table 1 Scalar i40 Dimensions and Air Clearance Requirements

Dimension	Scalar i40
Height	5.183 in. (131.65 mm)
Width (excluding "rack ears")	17.52 in. (445 mm)
Depth (from back of rack ears to back of library; excluding drive sleds)	29.843 in. (758 mm)
Air clearance	Open 4 in. (10 cm) in front of and behind library for proper air flow

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Table 2 Scalar i80 Dimensions and Air Clearance Requirements

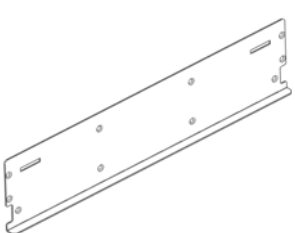
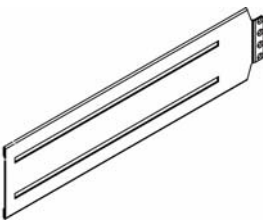
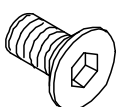
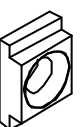
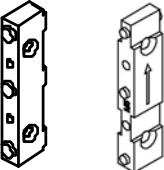
Dimension	Scalar i80
Height	10.423 in. (264.75 mm)
Width (excluding "rack ears")	17.52 (445 mm)
Depth (from back of rack ears to back of library; excluding drive sleds)	29.843 in. (758 mm)
Air clearance	Open 4 in. (10 cm) in front of and behind library for proper air flow



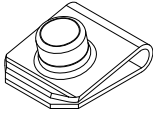
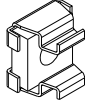
## Tools Required

- Allen wrench (2.5 mm) — provided in the library accessory kit
- Allen wrench (3 mm) — provided in the library accessory kit
- Magazine lock override tool — an opened paperclip, small screwdriver, or other object (3.5 mm or less in diameter that will not break off)

## Rack Mount Kit Contents

The following items are included in the rack mount kit:

Qty	Figure	Description
2		Shelf
2		Shelf Extender
16		Allen head screw, countersunk (M5 x 10) – for shelf assembly
8		T- nut (M5) – for shelf assembly
8 total		Rail adapter – 4 each of two types are included. You need 4 for installation; choose the type appropriate for your rack (for more information, see <a href="#">Figure 3</a> on page 7)

Qty	Figure	Description
8		Allen head screw, countersunk (M4 x 12) – for mounting shelves to rack
8		Washer, countersunk – for mounting shelves to rack
4		Clip nut (M5 x 0.8) – for securing library in rack
4		Cage nut (M5) – to secure library to rack. Used in racks with square or round non-threaded holes.

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## Installing the Rack Mount Shelves

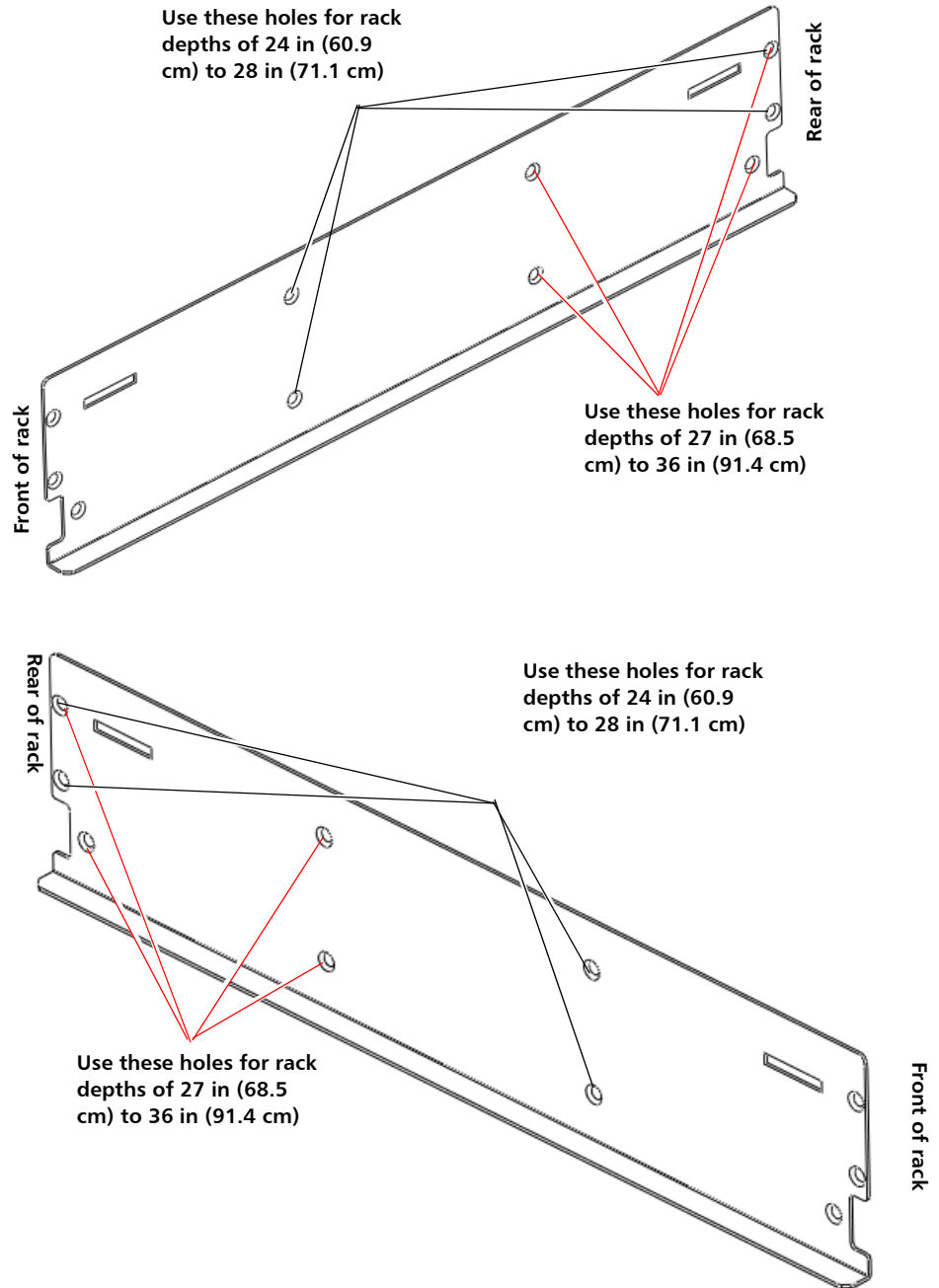
Before installing the rack mount shelves, you must collect the following information:

- Type of rack mount rails (square hole, through hole, or threaded hole)
- Depth of rack

**1** Assemble the rack mount shelves included in the accessory kit (left and right):

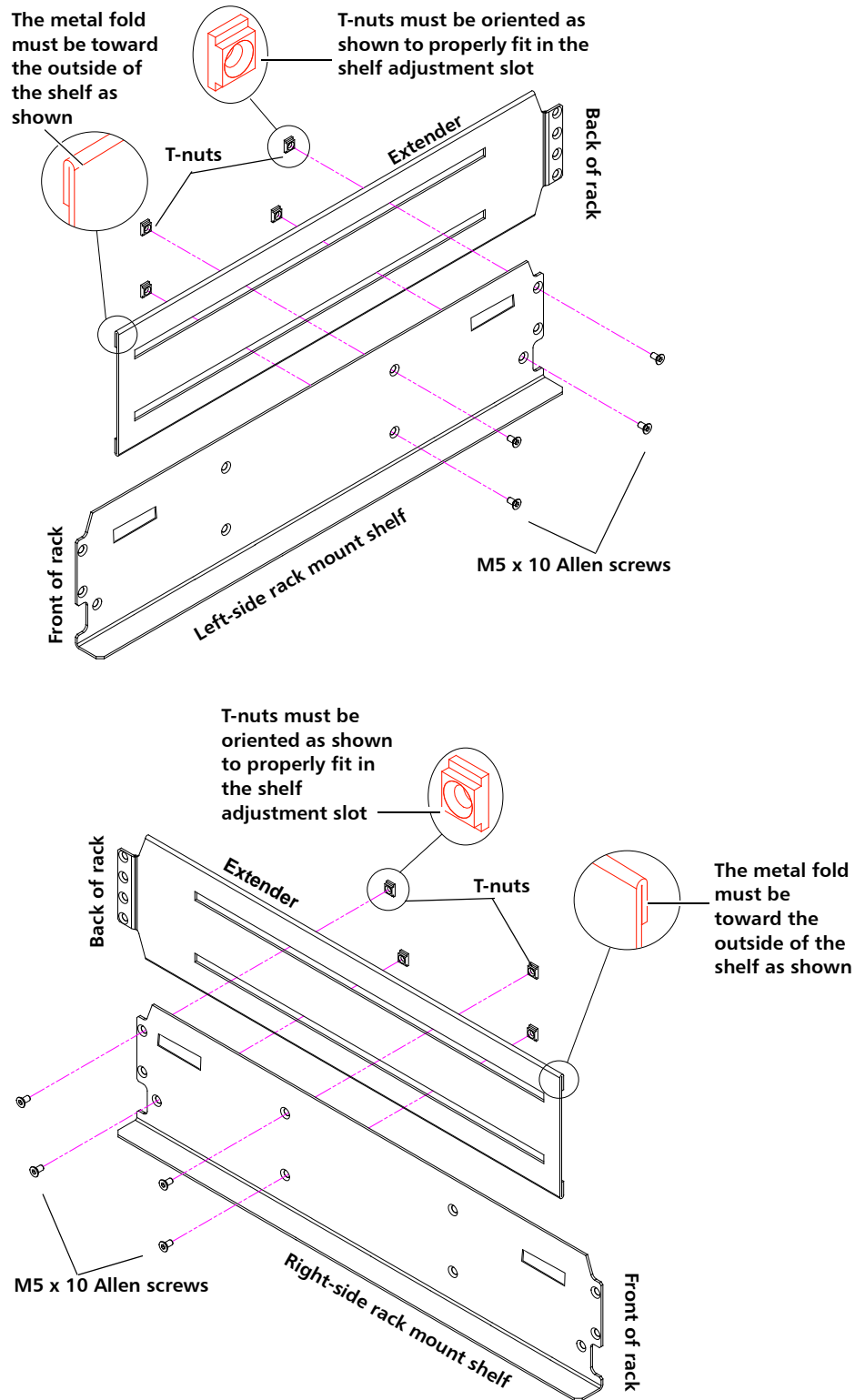
- a The holes used to attach the two halves of the rack mount shelves differ depending on the depth of the rack (see [Figure 1](#)). It is recommended that you use the ones that are exposed and have the widest spacing.

Figure 1 Rack Mount Shelf  
Depth Requirements



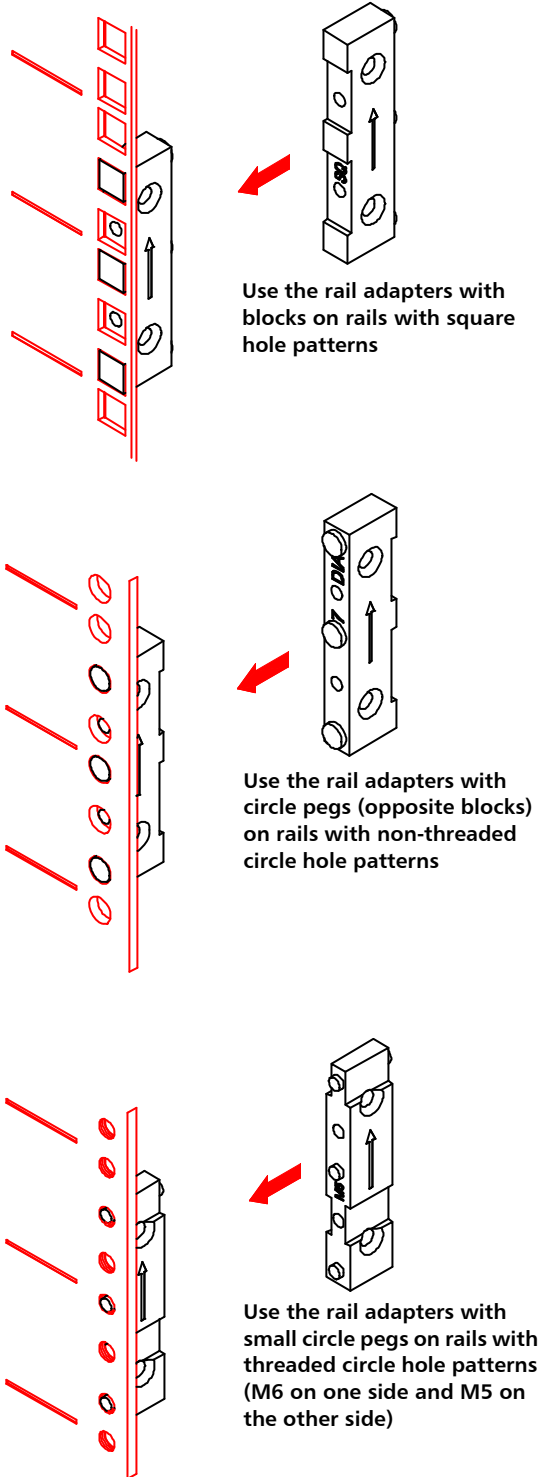
- b Loosely attach the rack mount shelves to the extenders with 4 M5 x 10 Allen screws and T-nuts (see [Figure 2](#)).

Figure 2 Assembling the Left and Right Rack Mount Shelves



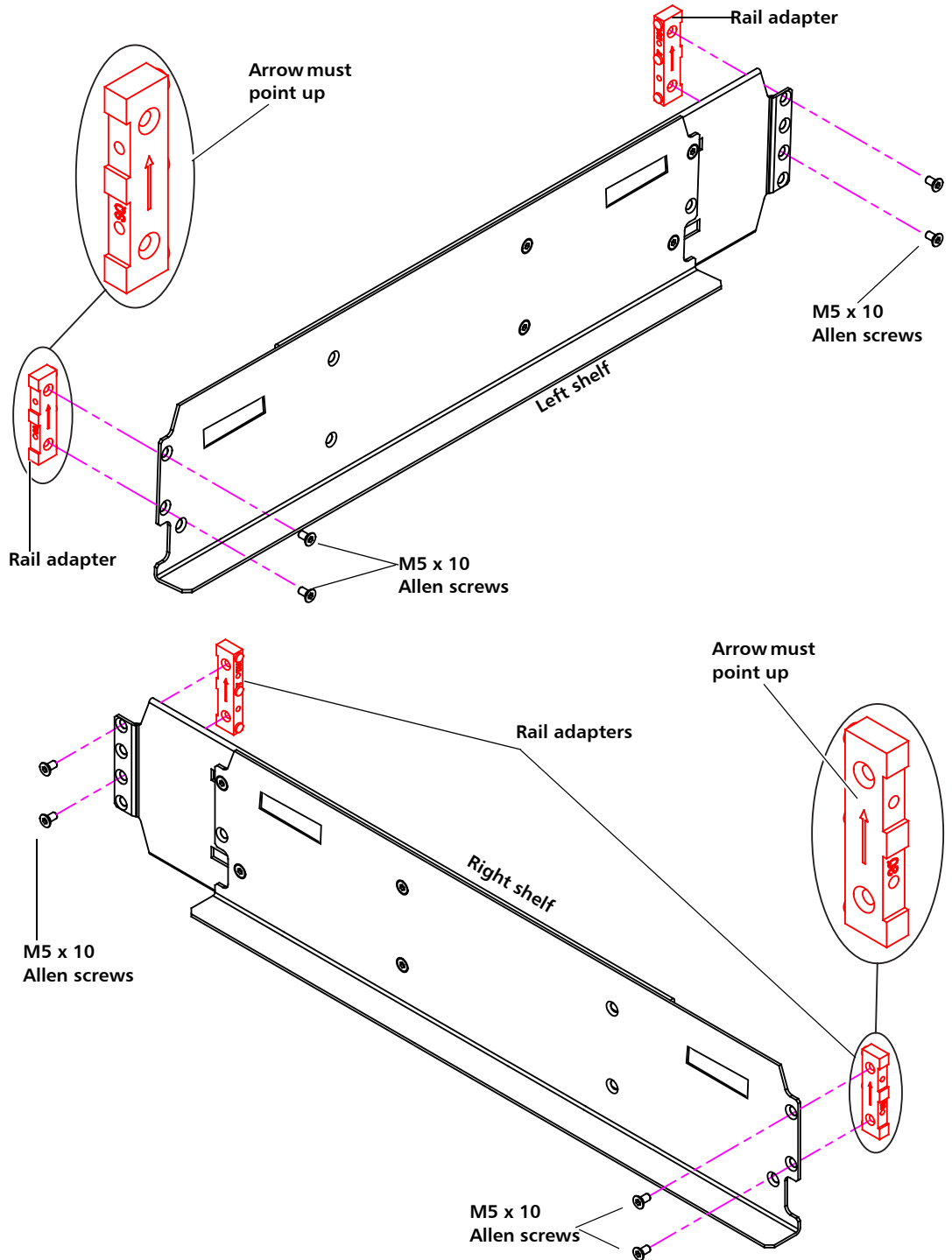
- c Determine the type of rail adapter required for your rack. Each rail adapter is marked with the specific hole type supported (see [Figure 3](#)).

Figure 3 Rail Adapter Types



- d Attach the appropriate rail adapter to the front and back of the rack mount shelves (right and left) with 2 M5 x 10 Allen screws per adapter (see [Figure 4](#)).

Figure 4 Assembling the Left-Hand Rack Mount Shelf



2 Install the left and right rack mount shelves into the rack (the rack mount shelves adjust 24 to 36 in.) and secure with the following parts in four locations (see [figure 5](#)):

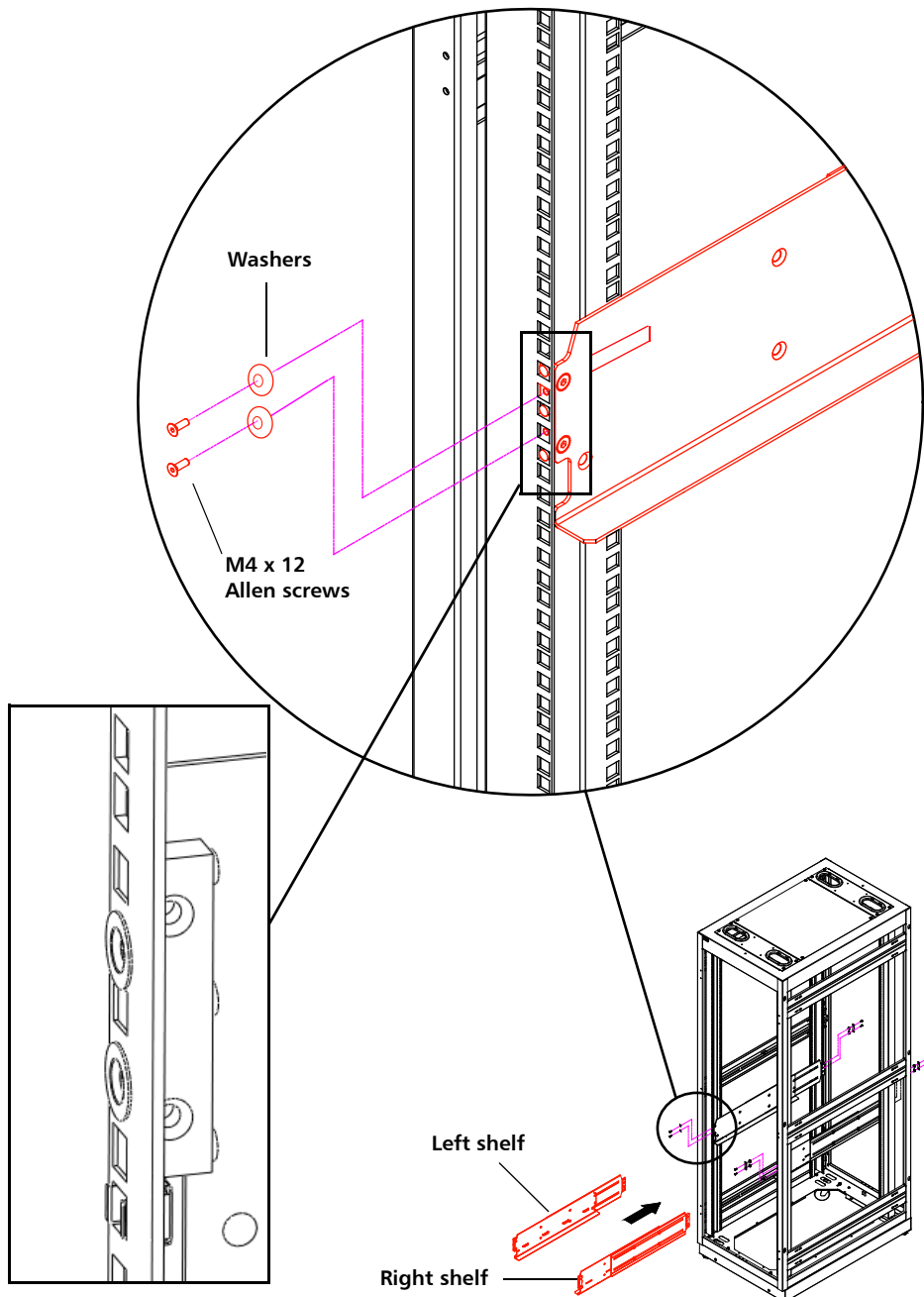
- 2 washers
- 2 M4 x 12 Allen screws

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**Note:** The rack mount shelves must be installed on the inside rack rails.

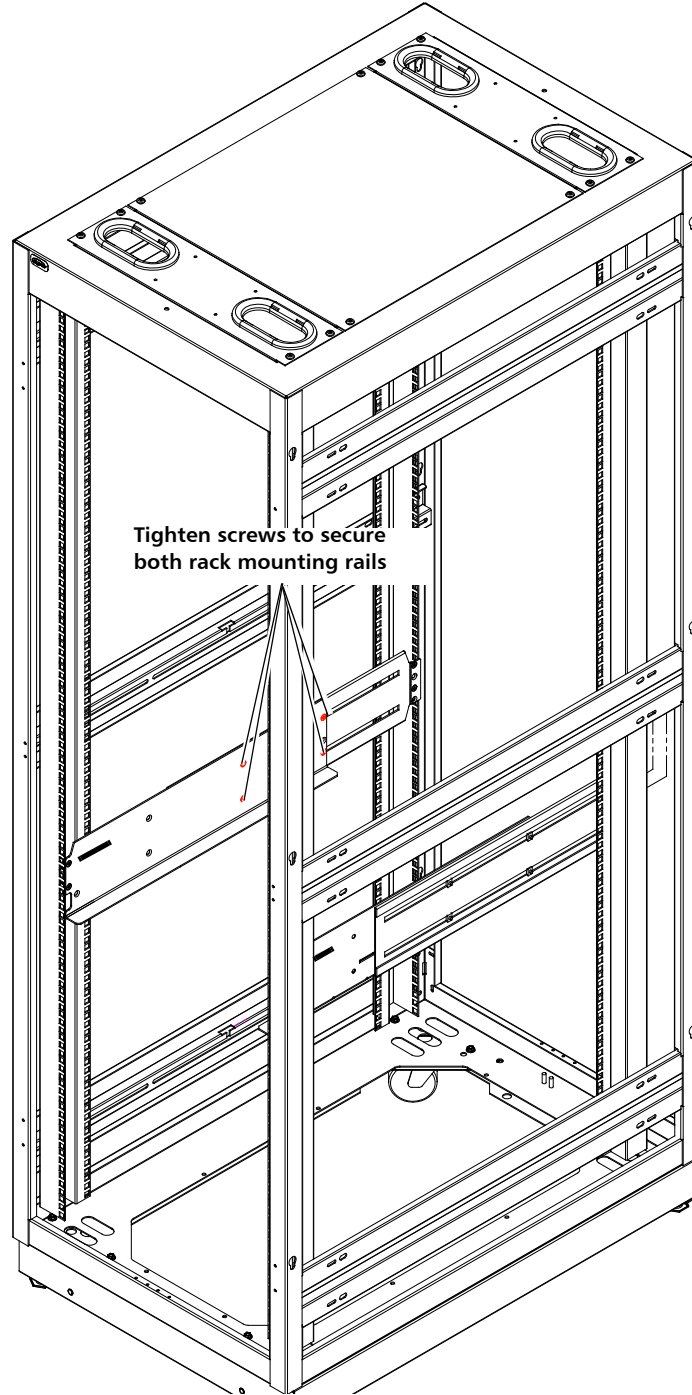
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Figure 5 Installing the Rack Mount Shelves



- 3 Once the rack mount shelves are secured to the rack, tighten the Allen screws securing the adjustable shelves (right and left) together (see [Figure 6](#)).

Figure 6 Tightening the Rack Mount Shelves



- 4 If the rack does not have threaded holes, install a clip nut or a cage nut in the back side of the rail, in the first empty hole below the rail adapter. This is what you will screw the library thumbscrews into to secure the library in the rack. See table below for type of nut, and [Figure 7](#) for installation location.

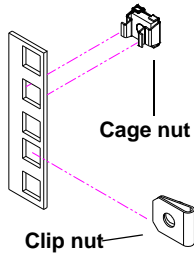
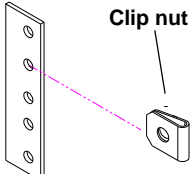
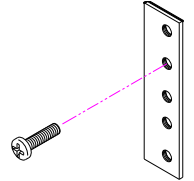
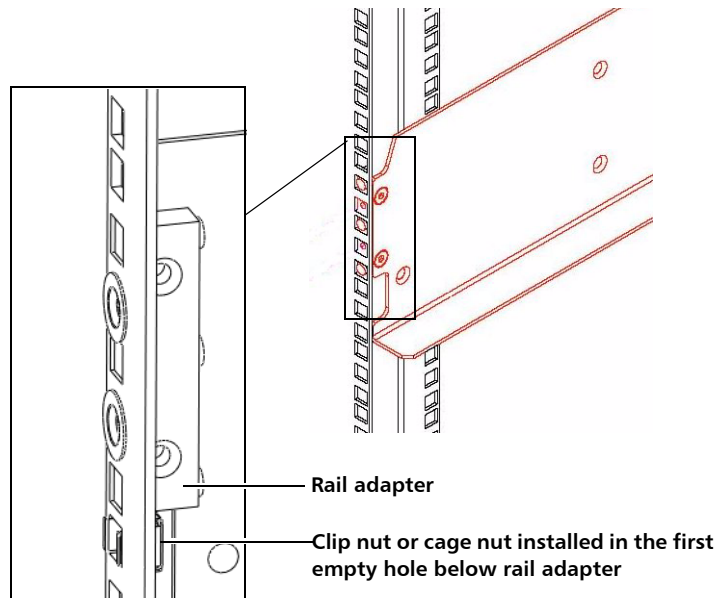
Type of Rail/Type of Nut	Description
	<p>Square rack holes are the most common type of rack holes. They can accept either cage nuts which mount from the back of the rail or clip nuts which clip on from the side of the rack rail.</p>
	<p>Round, unthreaded holes require clip nuts to accept mounting hardware.</p>
	<p>Threaded holes require neither cage nuts nor clip nuts to accept mounting hardware.</p>

Figure 7 Location for Installing the Clip Nut or Cage Nut



## Installing the Library Chassis

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**Caution:** Make sure the rack mounting rails are level, both left to right and front to back. If the library is not level in the rack, it will not work properly.

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**WARNING:** At least two people are required to lift and install the library.

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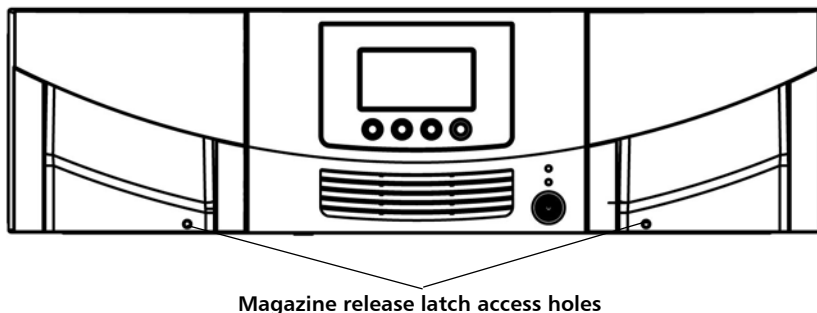
- 1 If tape drives are installed in the library, you may wish to remove them to reduce weight. To remove tape drives, unscrew the two captive thumbscrews securing them to the back of the library and slide them out of the library. Set them down gently on a stable surface.
- 2 Lift the library, place it on the rack shelves, and slide it into the rack as far as it will go.
- 3 Open one of the magazine doors slightly to access the captive thumbscrew that is attached to the library chassis. You will use this thumbscrew to secure the library to the rack. To open the magazine door, insert the magazine lock override tool into the access hole in the bottom of the magazine bezel (see [Figure 8](#)). Use the tool to depress the release latch while gently pulling outward on the magazine bezel handle.

Right-side magazines will only slide out as far as the I/E station (one column of slots). To release the right-side magazines fully:

- On the Scalar i40 and the bottom right magazine of the Scalar i80, reach under the open magazine and insert the tool directly into the access hole in the library chassis to depress the release latch, while pulling out on the magazine bezel handle.
- On the top right magazine of the Scalar i80, reach under the open magazine and press the release latch directly with your finger, while pulling out on the magazine bezel handle.

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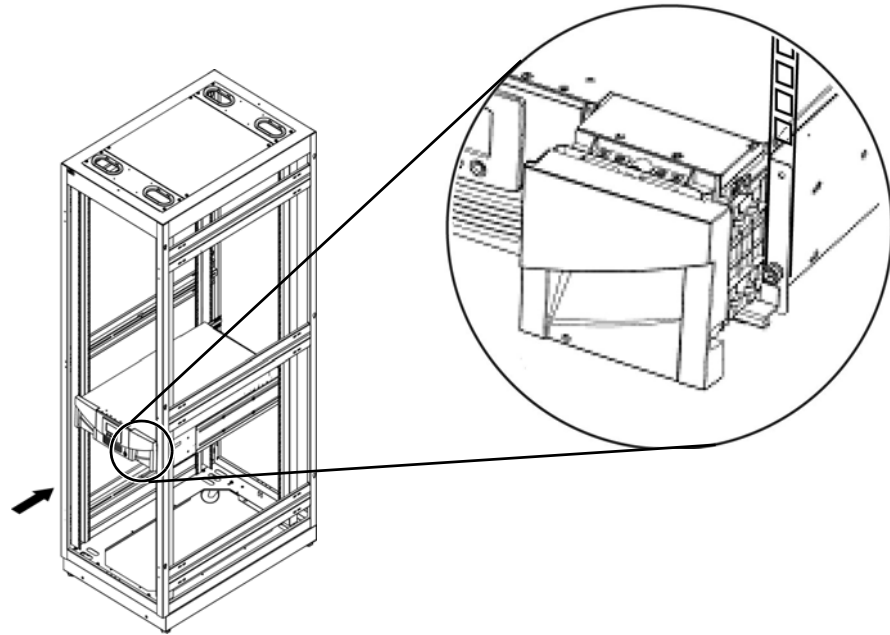
Figure 8 Magazine Release Latch Access Holes



- 4 Screw the captive thumbscrew finger-tight into the rack (and through the clip nut or cage nut, if installed).
- 5 Repeat [Step 3](#) and [Step 4](#) for the remaining thumbscrews.

6 Close all the magazine doors by pushing them in until they click shut.

Figure 9 Securing the  
Scalar i40 and Scalar i80 in the  
Rack



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