

# Enclosure Solutions

Rack Cabinets, Accessories, and Rackmount Kits



## Table of Contents

|  |    |
|--|----|
| Rack Solution for Keysight Systems .....   | 4  |
| Keysight Rack Features .....               | 4  |
| Rack Specifications .....                  | 7  |
| E7590A Configurations.....                 | 8  |
| E3661Band E3662BConfigurations .....       | 9  |
| Multi-Bay System Configurations .....      | 11 |
| Rack Accessories.....                      | 12 |
| Power Distribution Units .....             | 12 |
| PDU Specifications.....                    | 13 |
| Plexiglas® Front Door .....                | 14 |
| Rear Doors .....                           | 15 |
| Extractor Fans .....                       | 16 |
| Drawers .....                              | 17 |
| Stationary Shelf .....                     | 18 |
| Sliding Shelf.....                         | 18 |
| Work Surface.....                          | 19 |
| Ballast .....                              | 20 |
| Monitor and Keyboard Rack Mount Kits ..... | 21 |
| Monitor Rackmount Kit .....                | 21 |
| Keyboard and Mouse Rackmount Kits.....     | 22 |
| Instrument Rackmount Kits.....             | 24 |
| Instrument Compatibility with Racks .....  | 24 |
| Handles and Rackmount Flange Kits .....    | 25 |
| Rackmount Adapter Kits.....                | 28 |
| Rail and Slide Kits.....                   | 32 |
| Small Parts .....                          | 34 |
| Feedthrough Panels .....                   | 34 |
| Rack Filler Panels.....                    | 35 |
| IEC-320 Female-Male Power Cables.....      | 35 |
| Testmobiles and Accessories .....          | 36 |
| Testmobile Key Features.....               | 37 |
| Testmobile Scope Cart, 1180CZ .....        | 37 |
| Testmobile System Cart, 1181BZ .....       | 38 |

Ordering information for Testmobile Carts ..... 38  
Testmobile Printer/Plotter Stand..... 39  
Testmobile Work Surface ..... 40  
Storage Drawer ..... 41

## Rack Solution for Keysight Systems

Keysight Technologies offers 19-inch EIA (Electronics Industries Association) rack cabinets tailored to meet the needs of test and measurement instrumentation customers. Rack mounting is fast and easy with unique design features. A selection of options and accessories provides flexibility to meet the vast majority of racking applications.



Standard rack cabinet (E3661B)

### Keysight Rack Features

- Vented top and rear door (with lock)
- Solid base
- Leveling screws
- Retractable anti-tip foot
- 4 Concealed lifting hooks. Each hook can support 227 kg (500 lbs).
- One Keysight System II rail kit, including a pair of rails.
- 3-Inch heavy duty casters
- Power distribution Unit (PDU) – must specify 110 V or 220 V
- Easy to remove side panels



Standard rack cabinets: E3661B (32 EIA), E7590A (25 EIA), E3662B (41 EIA)

### Shipping Features

All racks and accessories are shipped with basic assembly completed, as shown.

### Keysight Rack Value

Keysight racks have been designed and engineered to save time and money for our customers:

- Package design — Designed for easy unloading from the pallet.
- Pallet re-use — Racks are sent out with double pallets, as well as a ramp. Racks can be integrated on the pallet, which adds a convenient system for integrating the rack. The pallet has been tested up to 1000 pounds and can also be used to ship an integrated system.
- Fully assembled rack — Keysight ships racks fully assembled and ready for

equipment installation saving time and money. Accessories can be ordered and will be shipped ready to be integrated onto the rack.

- Unique column and rail design — Equipment installation time is cut in half because of Keysight's unique column and support rail design. Our special cutouts in the columns, spaced at EIA intervals and rail hooks assure instruments are mounted easily in the right place the first time!

### Enhance Your Instrument Investment

Keysight racks are specifically designed for Keysight's test and measurement equipment, virtually ensuring a perfect fit. They will also accommodate non-Keysight equipment making them suitable for a mixed instrument environment.

## Load a Rack in Less Time

The design of Keysight support rails can cut in half the time required to install equipment in a rack. The rails hang on discrete slots on the vertical mounting columns, corresponding to each EIA unit in the rack. Vertical adjustment between instruments is minimized by selecting the proper rail. Rails are available for Keysight System II instruments and for flat bottom instrument chassis (see page 34). The system was specifically designed to minimize the time required to install instruments.

## Rack Systems Fast and Easily

Racks are shipped with all basic materials assembled. No time is lost preparing a rack with basic assembly. Accessories, kits and supplementary small parts are shipped separately, as ordered, and are ready for immediate configuration.

More than just a way of storing instruments, the racks reflect Keysight's reputation for quality and design. A sturdy frame provides structural integrity, which allows lightweight, easy-to-lift off side panels that allow for installation and easy access to equipment and cables. Rails are placed into keyed slots in the vertical columns, resulting in quick and accurate positioning.

## Use Vertical Space Efficiently

Vertical space within a rack is measured in industry-standard EIA units, where 1 EIA unit = 1.75 inches (44.5 mm). Equipment height is also specified in EIA units. System configuration is made easier by counting EIA units from the base of the rack. A seamless fit of instrument and rail is ensured.

## Manage Power Requirements

A power management system must be ordered. Option AW3 (110V) or option AW5 (220V). It is vertically mounted behind the rack rear column and supplies

power to the cabinet. An illuminated master switch, which is conveniently located on the front of the rack, provides easy access to turn the power on and off to the Power Distribution Unit (PDU) outlets.

To completely remove power from the PDU and the rack system, the PDU power cord needs to be removed electrical system, or if the rack system is connected to a dedicated circuit breaker, the breaker needs to be opened.

## Protect from Heat Buildup

It is important for racks to efficiently dispose of heat. Instruments increasingly generate more heat, and in a compact rack mounted system the heat buildup can be detrimental to the system.

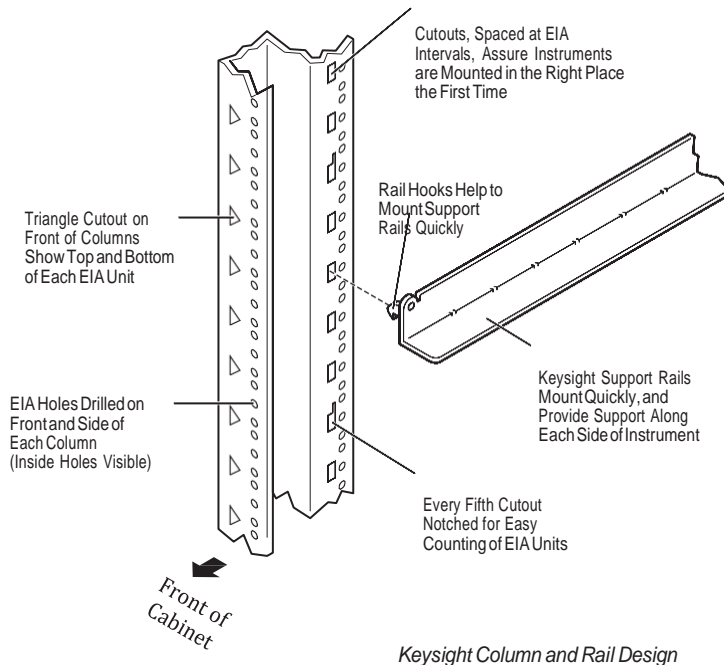
System-generated heat is removed by natural convection through a ventilation path incorporated in the roof of the racks. The vented rear door also helps reduce the heat captured within the rack. For greater heat dissipation, an optional top-mounted extractor fan is available. (see page 16)

## Secure Instruments During Test

Both the rear door and the optional Plexiglas front door can be locked to secure against disruption of tests or unauthorized removal of system components. The symmetrical rear door design allows it to be mounted for opening to either left or right, useful for multi-bay configurations.

## Move Racks Easily

Each rack is provided with four 3-inch diameter, smooth-rolling, heavy-duty casters to facilitate moving racks over short distances. Four lifting hooks conveniently concealed in the top of the rack allow for transport, even when fully loaded. Each hook can support 227 kg (500 lbs) to easily handle the maximum recommended gross weight for a loaded rack of 816 kg (1800 lbs).





## Enhance Stability

A front mounted retractable anti-tip stabilizer that can be extended into place with ease is standard on all racks. It provides temporary anti-tip capability for slide mounted products when they are in their extended position. Use the optional anti-tip ballast kit when permanent antitip capability is desired.

## Improve Cable Management

Keysight racks, including the 1.3 m, 1.6 m and 2.0 m, have an additional 100 mm of internal space that is available at the rear of the rack. This convenient space is available for the installation of power distribution units (PDUs) and as a convenient location for cables, which are routed out the bottom of the rack. The added rear space also enhances air flow.

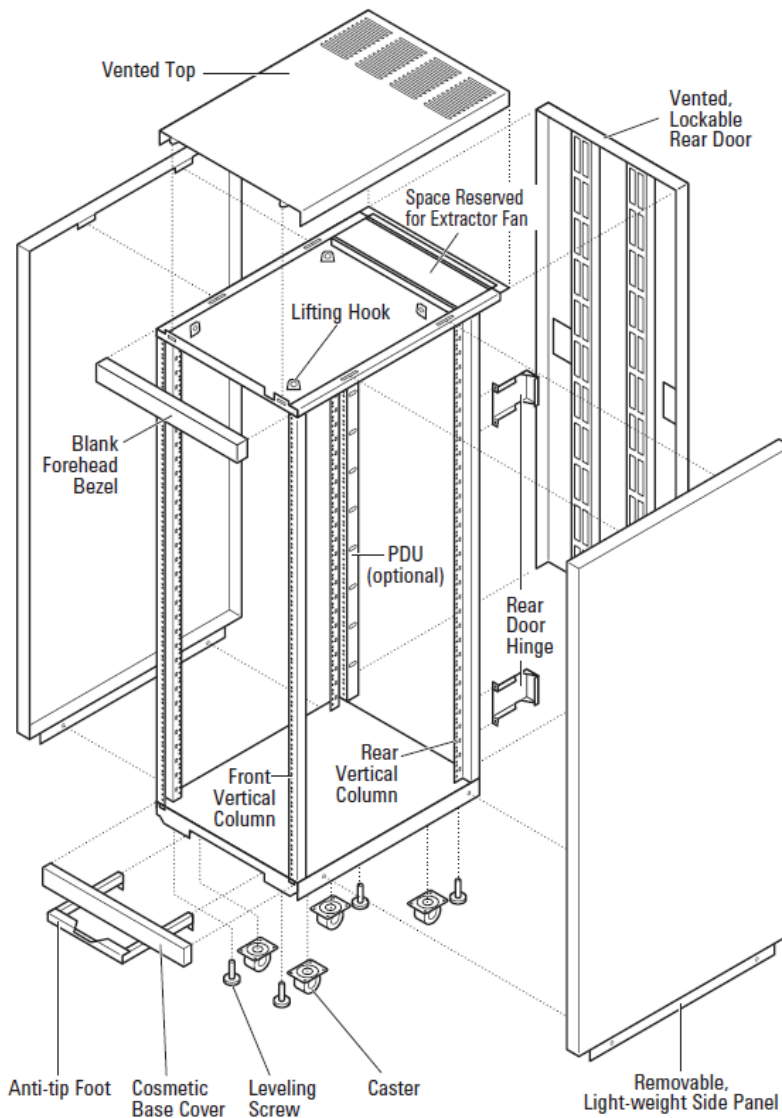
## Ventilation

Keysight standard racks include a vented top cap and 100 mm additional internal rear space enhancing air flow.

## Material

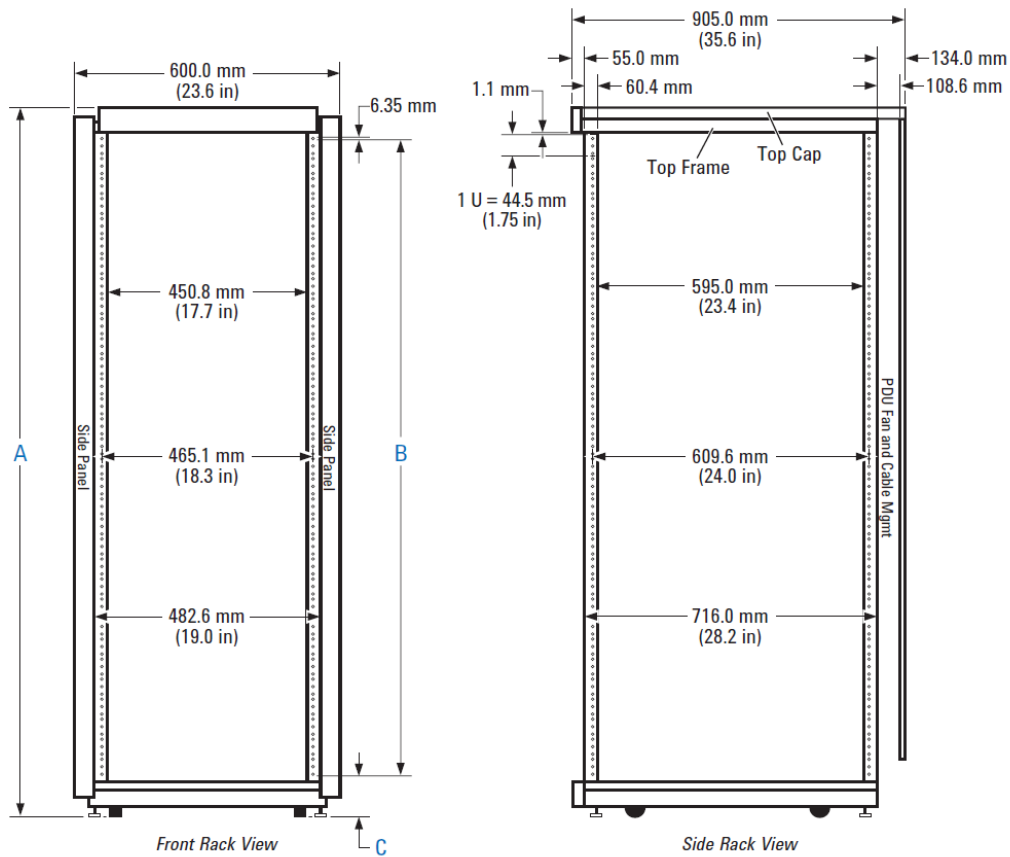
Frame/columns: 13 Ga. cold rolled steel.

Side Panels: 18 Ga. cold rolled steel.



*Exploded View of Standard Rack*

## Rack Specifications



| E7590A                | E3661B                | E3662B                |
|-----------------------|-----------------------|-----------------------|
| A 1320 mm (51.9 in)   | A 1620 mm (63.8 in)   | A 2020 mm (79.5 in)   |
| B 1111.3 mm (43.8 in) | B 1422.4 mm (56.0 in) | B 1822.5 mm (71.8 in) |
| C 120.8 mm (4.8 in)   | C 131.8 mm (5.2 in)   | C 131.8 mm (5.2 in)   |

### Rack Specifications

|                         |   |
|-------------------------|---|
| <b>Casters Rating</b>   | 318 kg (700 lbs) each, 816 kg (1800 lbs) total<br>Casters have a point contact convex cross section                                     |
| <b>Lift Hook Rating</b> | 227 kg (500 lbs) each<br>Total system and cabinet weight is a maximum 816 kg (1800 lbs), static. Lift cabinet using all four (4) hooks. |

### Ordering Information

| Prod. No. | Description | EIA Units |
|-----------|-------------|-----------|
| E7590A    | 1.3 m rack  | 25        |
| E3661B    | 1.6 m rack  | 32        |
| E3662B    | 2.0 m rack  | 41        |

### Rack Dimensions, Weight and Load Ratings

| Prod. No. |           | Dim | Height               | Width              | Depth            | Weight                 | Load capacity     | EIA Units |
|-----------|-----------|-----|----------------------|--------------------|------------------|------------------------|-------------------|-----------|
| E7590A    | Exterior  | A   | 1320 mm (51.9 in)    | 600 mm (23.6 in)   | 905 mm (35.6 in) | 89 kg (196 lbs) empty  | 816 kg (1800 lbs) | 25        |
|           | Interior* | B   | 1111.25 mm (43.8 in) | 450.8 mm (17.8 in) | 851 mm (33.5 in) |                        |                   |           |
| E3661B    | Exterior  | A   | 1620 mm (63.8 in)    | 600 mm (23.6 in)   | 905 mm (35.6 in) | 100 kg (221 lbs) empty | 816 kg (1800 lbs) | 32        |
|           | Interior* | B   | 1422.5 mm (56.0 in)  | 450.8 mm (17.8 in) | 851 mm (33.5 in) |                        |                   |           |
| E3662B    | Exterior  | A   | 2020 mm (79.5 in)    | 600 mm (23.6 in)   | 905 mm (35.6 in) | 116 kg (255 lbs) empty | 816 kg (1800 lbs) | 41        |
|           | Interior* | B   | 1822.5 mm (71.8 in)  | 450.8 mm (17.8 in) | 851 mm (33.5 in) |                        |                   |           |

\*Interior = EIA units = Rack-mountable space.

Front to rear column hole spacing: 610 mm (24 in)

Note: Local versions – order E7590AA, E3661BA, E3662BA for Asia, or E7590AE, E3661BE, E3662BE for Europe.

## E7590A Configurations

Solid side panels and a lockable vented rear door are standard equipment on the Keysight E7590A (1.3 m, 25 EIA Units) rack cabinet. To provide better value and save integration time, choose a variety of power distribution unit (PDU) options. Choose the PDU option you want, and your rack will arrive fully assembled and ready for use.

## Power Distribution Unit (PDU) Options:

Factory installed PDUs are available in a 100-120V North American configuration (AW3) or a 200-240V International configuration (AW5). See the table below for descriptions and ordering information.

PDUs mount vertically behind the rear column and do not reduce the mounting space in the rack. Factory installation includes the specified PDU and a lighted, low-voltage power switch mounted in the rack's forehead bezel.

The low voltage switch only removes power from the PDU outlet receptacles. To completely remove power from the PDU and the rack system, the PDU power cord needs to be removed from the premise electrical system or, if the rack system is connected to a dedicated circuit breaker, the breaker needs to be opened.

You can add a second PDU easily at a later date. See Page 12 for details.



### What you get in the box

- Rack cabinet (assembled with vented, lockable rear door,
- 2 removable side panels, vented top, solid base)
- Leveling screws
- Retractable anti-tip foot
- Four 3-inch heavy duty casters
- One System II rail kit (one set of Keysight instrument rails)
- Factory installed PDU (110 V option AW3 or 220 V option AW5)
- Forehead bezel with lighted safety switch

### Must Read Box

Racks must specify a PDU Option: (AW3 or AW5)



IEC 320 C13



NEMA 5-15R



5-20 P non-locking

### Factory Installed PDU Option Description

|  |                                 |
|--|---------------------------------|
| <b>PDUs include:</b> Forehead bezel with lighted switch, supplemental circuit breakers, IEC-320 upper receptacle for fan or other use.   | <b>1.3m<br/>25 EIA North</b>    |
| <b>American PDU</b> 100-120V, 16A<br>1 IEC-320 C-13 and 5 NEMA 5-15R Receptacles<br>2 m cord with 5-20P non-locking plug<br>(To add a 2nd PDU by yourself, order accessory E4451-67000)          | <b>E7590A+<br/>Option AW3</b>   |
| <b>European PDU</b> 200-240 V, 16 A<br>1 IEC-320 C-19 and 10 C-13 Receptacles<br>,2 m cord with no plug,<br>user installs local plug (To add a 2nd PDU by yourself, order accessory E4457-67000) | <b>E7590AE +<br/>Option AW5</b> |
| <b>International PDU</b> 200-240 V, 16 A<br>6 IEC-320 C-13 Receptacles<br>2 m cord with no plug, user installs local plug<br>(To add a 2nd PDU by yourself, order accessory E4453-67000)         | <b>E7590A +<br/>Option AW5</b>  |



## E3661B and E3662B Configurations

The Keysight E3661B (1.6 m, 32 EIA Units) and E3662B (2.0 m, 41 EIA Units) rack cabinets have a variety of options. Each rack is delivered fully assembled and ready to use. Each rack comes with sides, vented rear door, and one PDU (either 110 V or 220 V).

Factory installed PDUs are available in a 100-120 V North American configuration (AW3) or a 200-240 V International configuration (AW5). See the table on page 10 for descriptions and ordering information.

You can add a second PDU easily at a later date. See page 12 for details.



E3661B

### What you get in the box

Rack cabinet (assembled with vented top, solid base)

Leveling screws Retractable anti-tip foot

Four 3-inch heavy duty casters

One System II rail kit (one set of Keysight instrument rails)

Factory installed vented, lockable rear door.

Factory installed solid side panels. Easily removable.

Factory installed PDU

Option AW3 for 110 V or option AW5 for 220 V

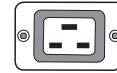
Forehead bezel with lighted safety switch

## Power Distribution Unit (PDU) Options

| Description of Factory Installed Options   | E3661B*                     | E3662B*                     |
|--|-----------------------------|-----------------------------|
| <b>PDU's include:</b> Forehead bezel with lighted switch, dual circuit breakers, IEC-320 upper receptacle for fan or other use.  | <b>1.6 m 32 EIA</b>         | <b>2.0 m 41 EIA</b>         |
| <b>North American PDU</b> 100-120 V, 15 A<br>1 IEC-320 C-13 and 9 NEMA 5-15R Receptacles, 2 m cord with 5-20 P non-locking plug<br>(To add a 2nd PDU by yourself, order accessory E4455-67000)     | <b>E3661B + Option AW3</b>  | <b>E3662B + Option AW3</b>  |
| <b>For European PDU</b> 200-240 V, 15 A<br>1 IEC-320 C-19 and 10 C-13 Receptacles, 2 m cord with no plug, user installs local plug<br>(To add a 2nd PDU by yourself, order accessory E4457-67000)  | <b>E3661BE + Option AW5</b> | <b>E3662BE + Option AW5</b> |
| <b>International PDU</b> 200-240 V, 15 A<br>1 IEC-320 C-19 and 10 C-13 Receptacles, 2 m cord with no plug, user installs local plug<br>(To add a 2nd PDU by yourself, order accessory E4457-67000) | <b>E3661B + Option AW5</b>  | <b>E3662B + Option AW5</b>  |



IEC-320 C13



IEC-320 C19



NEMA 5-15R



5-20 P non-locking

### Must read box

**E3661B & E3662B Racks require one option**

PDU option (AW3 or AW5)

\*NOTE: order option AW1 for a rack with no sides, rear door, or PDU.

If AW1 is ordered, then the accessories must be purchased and installed separately.

### Configuration Examples

**Rack with sides, rear door and PDU (100-120 V):**  
*model+ AW3 (100-120V PDU)*

**Rack with sides, rear door and PDU (200-220 V):**  
*model+ AW5 (200-240 V PDU)*

| Keysight Rack Model | Ht. (m) | EIA Units | Power Distribution Options |                         |
|---------------------|---------|-----------|----------------------------|-------------------------|
|                     |         |           | AW3 – 100-120 V US plug    | AW5 – 200-220 V no plug |
| <b>E3662B</b>       | 2.0     | 41        | AW3                        | AW5                     |
| <b>E3661B</b>       | 1.6     | 32        | AW3                        | AW5                     |

## Multi-Bay System Configurations

Keysight tie kits allow you to create multi-bay solutions. These kits connect rack columns, and provide clearance for front and rear door operation. Start by filling in the configuration guide (left) and then select the kits for your application.

### Multi-bay System Tie Kits

Tie kits include cosmetic panels which connect and finish the front, rear and top of adjacent racks. Order one tie kit for each pair of racks to be joined.

### Tie Kit Ordering Information

E4468BZ 1.6 m  
E7792AZ 2.0 m

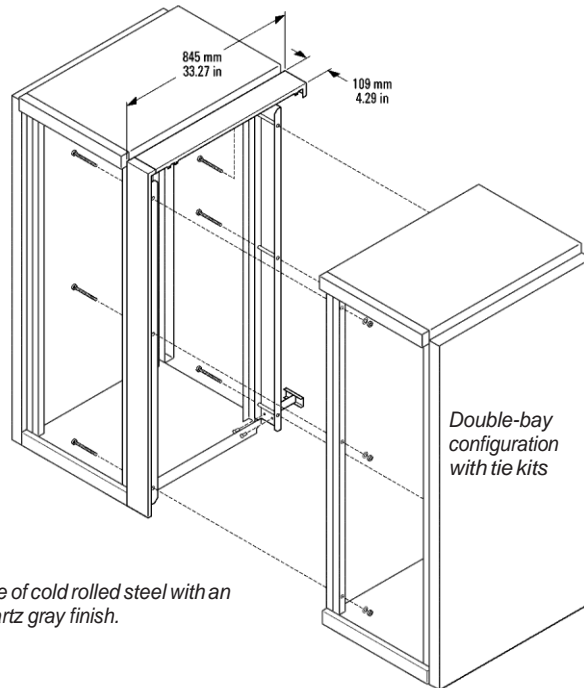


T



#### What you get in the box

- One Reartie
- One Frontie
- One Top tie



*Kits are made of cold rolled steel with an attractive quartz gray finish.*

## Rack Accessories

### Power Distribution Units

The power distribution unit conveniently supplies power to equipment mounted in the rack. The PDU is available in 110- or 220-volt options to accommodate American and international environments. The PDU is mounted vertically behind the rear column and does not reduce vertical mounting space in the rack.

A lighted master power switch is supplied with the PDU. The switch controls a relay in 1 or 2 PDUs. The system's power can be conveniently switched on and off using the master switch. The switch also provides rapid system shutdown in case of emergency. It uses low voltage signal lines for safety and to minimize electrical noise.

- Supplemental circuit breakers are provided on both hot (live) and neutral lines.
- All PDUs are single phase.
- A maximum of two PDUs can be installed in one rack.
- The top receptacle of all PDUs is configured as IEC-320 and is intended for the extractor fan. It can be used for other purposes if no fan is installed.
- Keysight offers various power cords. See the power cord selection to select the power cord that is appropriate for your location and rack solution.



#### Must Read Box

All racks come with a PDU (option AW3, 110 V or AW5, 220 V). A second PDU can be ordered per the chart below.

#### What you get in the box

- Power distribution unit
- Master power switch
- Power cord and plug

#### Ordering Information for Racks without Factory-Installed PDUs



| Part No.    | Description                 | Voltage   |               |
|-------------|-----------------------------|-----------|---------------|
| E4451-67000 | PDU for 1.3 m racks         | 100-120 V | North America |
| E4453-67000 | PDU for 1.3 m racks         | 200-240 V | International |
| E4455-67000 | PDU for 1.6 and 2.0 m racks | 100-120 V | North America |
| E4457-67000 | PDU for 1.6 and 2.0 m racks | 200-240 V | International |

**NOTE:** E7685AZ PDU Install Kit is required for mounting a PDU in a bare rack.

## PDU Specifications



| PDU Specifications    |  |                               |
|-----------------------|--|-------------------------------|
| PDU for               | E4451-   | E445                          |
| Voltage               | 100-120 V  | 200-240 V                     |
| Maximum Total Current | 15amps   | 15amps                        |
| Power Cord Length     | 2m(78.74in)  | 2m(78.74in)                   |
| Plug                  | 5-20P non-locking<br> | No plug; cord is undetermined |

Receptacle Types:

|   |                             |                                 |
|---|-----------------------------|---------------------------------|
|  N           | 5                           |                                 |
|  IEC-320 C13 | 1<br>IEC-320 C13 Receptacle | 6<br>IEC-320 C13 Receptacles    |
| Standards   | Meets UL/CSA standards      | Meets IEC-950 and VDE standards |

| PDU Specifications    |  |                               |
|-----------------------|--|-------------------------------|
| PDU for               | E4455-   | E445                          |
| Voltage               | 100-120 V  | 200-240 V                     |
| Maximum Total Current | 15amps   | 15amps                        |
| Power Cord Length     | 2m(78.74in)  | 2m(78.74in)                   |
| Plug                  | 5-20P non-locking<br> | No plug; cord is undetermined |

Receptacle Types:

|   |                             |                                 |
|---|-----------------------------|---------------------------------|
|  N           | 9                           |                                 |
|  IEC-320 C13 | 1<br>IEC-320 C13 Receptacle | 10                              |
|  IEC-320 C19 | —                           | 1<br>IEC-320 C19 Receptacle     |
| Standards   | Meets UL/CSA standards      | Meets IEC-950 and VDE standards |



## Plexiglas® Front Door



Plexiglas® front door (E4462BZ)

Protect your equipment with a full length Plexiglas front door. An attractive, transparent smoke-colored Plexiglas front door provides a consistent appearance to the rack and is lockable to control access to the instruments and peripherals mounted in the rack. The front door is also useful for keeping equipment free from dust.

The Plexiglas Front Door offers the following features:

- Can be installed to hinge on either the left or right side for maximum flexibility.
- Fast, easy customer installation.
- Doors include all necessary mounting hardware.
- Provides 64 mm (2.52 in) space to accommodate instrument front panels.
- Does not interfere with access to the master power switch.
- Mounts into an outer set of holes on the front columns and does not interfere with EIA mounting holes.
- Spacers between the door frame and Plexiglas create an airflow space.

### Must Read Box

*An extractor fan is strongly recommended to assist cooling when a front door is mounted. See page 17.*

### Ordering Information

| Part No. | Description                         |
|----------|-------------------------------------|
| E4461BZ  | Plexiglas front door for 1.3 m rack |
| E4462BZ  | Plexiglas front door for 1.6 m rack |
| E4463BZ  | Plexiglas front door for 2.0 m rack |

### What you get in the box

Door assembly with Plexiglas window

Mounting hardware

### Specifications

|               | E4461BZ               | E4462BZ               | E4463BZ               |
|---------------|-----------------------|-----------------------|-----------------------|
| Material      | Cold-rolled steel     | Cold-rolled steel     | Cold-rolled steel     |
| Weight        | 10 kg (22 lbs)        | 10.4 kg (23 lbs)      | 10.8 kg (24 lbs)      |
| Color         | Quartz gray           | Quartz gray           | Quartz gray           |
| Height        | 1114 mm (43.9 in)     | 1425 mm (56.1 in)     | 1825 mm (71.9 in)     |
| Depth         | 60 mm (2.4 in)        | 60 mm (2.4 in)        | 60 mm (2.4 in)        |
| Width         | 513 mm (20.2 in)      | 513 mm (20.2 in)      | 513 mm (20.2 in)      |
| Compatibility | 1.3 m rack, bare rack | 1.6 m rack, bare rack | 2.0 m rack, bare rack |

## Rear Doors

Standard racks include vented rear doors. To replace, a solid door should be ordered.

Features of the rear door kit include:

- Can be installed to hinge on either the left or right side for maximum flexibility.

- Easy customer installation.
- All necessary mounting hardware.
- Lockable for access security.

Mounting hardware is included with the rear door. However, you may also purchase a separate rear door hinge (see p/n C2786-00012C) if desired.

### What you get in the box

1 Solid rear door

1 Latch catch

Mounting hardware

### Specifications – Solid Rear Doors

|               | E4476-67000           | E4478-67000           |
|---------------|-----------------------|-----------------------|
| Material      | Cold-rolled steel     | Cold-rolled steel     |
| Weight        | 15.4 kg (34 lbs)      | 21.3 kg (47 lbs)      |
| Color         | Quartz gray           | Quartz gray           |
| Height        | 1425.6 mm (57.2 in)   | 1852.7 mm (72.9 in)   |
| Width         | 599 mm (23.6 in)      | 599 mm (23.6 in)      |
| EIA Units     | 32                    | 41                    |
| Compatibility | 1.6 m rack, bare rack | 2.0 m rack, bare rack |

### Ordering Information – Solid Rear Doors

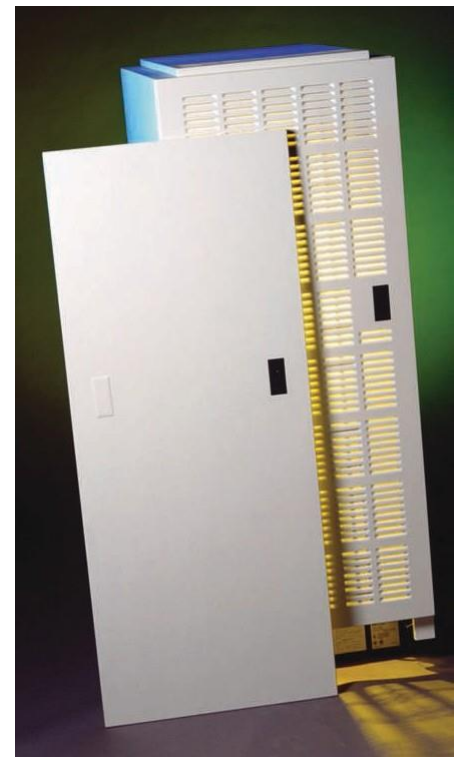
| Part No.    | Description                    |
|-------------|--------------------------------|
| E4476-67000 | Solid rear door for 1.6 m rack |
| E4478-67000 | Solid rear door for 2.0 m rack |

### Specifications – Vented Rear Doors

|               | E4477-67000           | E4479-67000           |
|---------------|-----------------------|-----------------------|
| Material      | Cold-rolled steel     | Cold-rolled steel     |
| Weight        | 14.1 kg (31 lbs)      | 20 kg (44 lbs)        |
| Color         | Quartz gray           | Quartz gray           |
| Height        | 1425.6 mm (57.2 in)   | 1852.7 mm (72.9 in)   |
| Width         | 599 mm (23.6 in)      | 599 mm (23.6 in)      |
| EIA Units     | 32                    | 41                    |
| Compatibility | 1.6 m rack, bare rack | 2.0 m rack, bare rack |

### Ordering Information – Vented Rear Doors

| Part No.    | Description                     |
|-------------|---------------------------------|
| E4477-67000 | Vented rear door for 1.6 m rack |
| E4479-67000 | Vented rear door for 2.0 m rack |



Solid and vented rear doors (E4476-67000, E4477-67000)

### What you get in the box

1 Vented rear door

1 Latch catch  
Mounting hardware

## Extractor Fans

Extractor fans are used to increase air flow through the rack cabinet. Keysight's fan improves natural convection cooling by increasing the airflow in the rack.

Use of the fan enhances the movement of warm air from the bottom of the rack up and out through the vented top cap, providing cooling to the entire length of the rack.

The customer installable extractor fan mounts easily under the top cap into the top frame of the rack. It moves air at 342 cubic meters per hour (200 cubic feet per minute). The fan does not reduce the space available for rack mounting instruments.

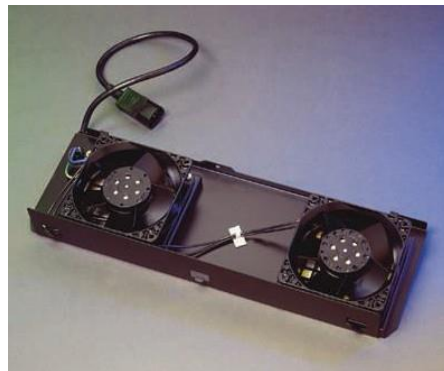
- Use when rack internal temperatures are 15°C (27°F) above ambient.
- Fans are highly recommended for racks with a front door.
- One fan per rack.
- Select an appropriate fan that fits your local AC voltage.
- Fans plug into the upper IEC 320 outlet on PDU.

### Ordering Information

| Part No.       | Description                                     |
|----------------|---|
| <b>E4470AZ</b> | 100/120 V 200 cfm extractor fan, fits all racks |
| <b>E4471AZ</b> | 200/240 V 200 cfm extractor fan, fits all racks |

### What you get in the box

1 Fan

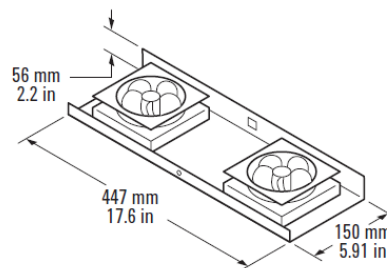


Extractor fan assembly (E4470AZ)

### Specifications

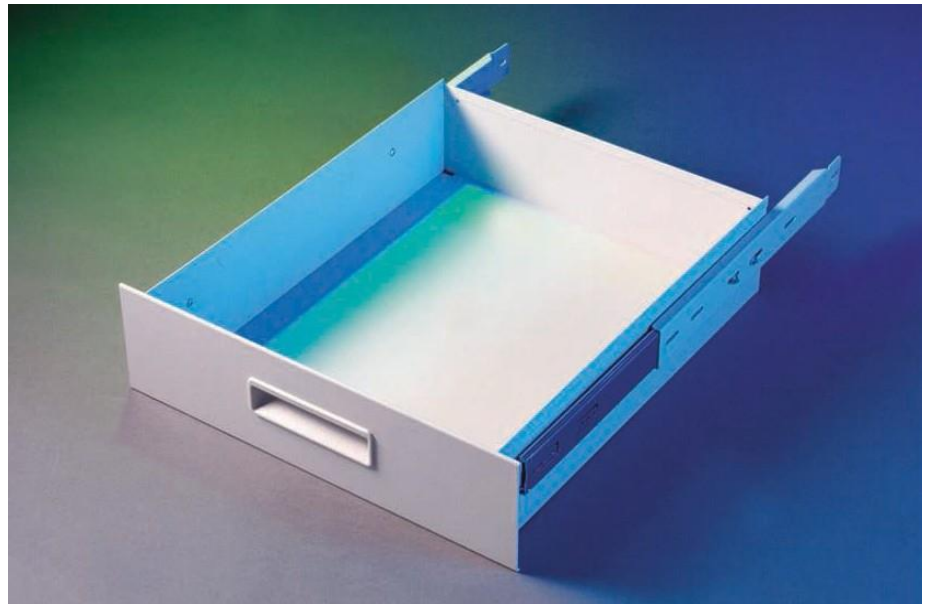
| E4470AZ/E4471AZ (200 cfm) |                                   |
|---------------------------|-----------------------------------|
| Airflow                   | 200 cfm (342 cmh)                 |
| Acoustic noise            | 43 dB                             |
| AC input                  | 100/120 V or 200/240 V (50-60 Hz) |
| AC current                | 1 ampere maximum                  |

| E4470AZ/4471AZ |                   |
|----------------|-------------------|
| Material       | Cold-rolled steel |
| Weight         | 3.6 kg (8 lbs)    |
| Color          | Quartz gray       |
| Length         | 150 mm (5.91 in)  |
| Height         | 56 mm (2.2 in)    |
| Width          | 447 mm (17.6 in)  |



## Drawers

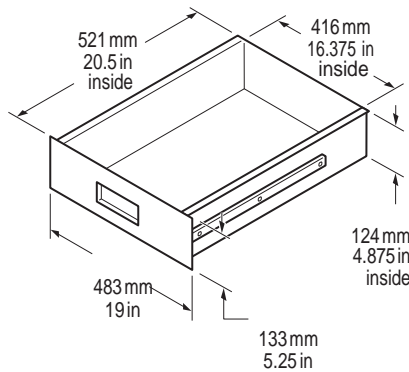
Mount a drawer in the rack to keep manuals or spare cables close to where they are needed. Two drawer sizes are available. Sliding rails and mounting hardware are included.



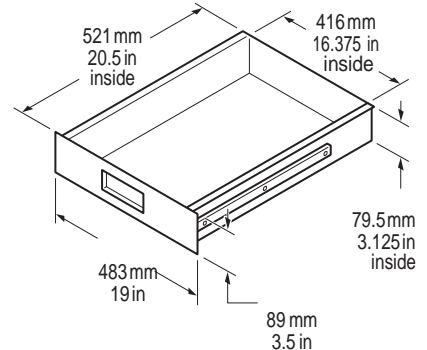
Drawer (35181M)



Drawer installed in rack



35181M Drawer



35181J Drawer

### What you get in the box

Drawer with slides attached

Mounting hardware

### Specifications

### Ordering Information

|          | 35181J            | 35181M            | Part No.      | Description           | Height Dimensions | EIA Units |
|----------|-------------------|-------------------|---------------|-----------------------|-------------------|-----------|
| Material | Cold-rolled steel | Cold-rolled steel | <b>35181J</b> | Storage drawer, 3.5"  | 89 mm (3.5 in)    | 2         |
| Weight   | 7.26 kg (16 lbs)  | 8.16 kg (18 lbs)  | <b>35181M</b> | Storage drawer, 5.25" | 133 mm (5.25 in)  | 3         |
| Color    | Quartz gray       | Quartz gray       |               |                       |                   |           |
| Length   | 521 mm (20.5 in)  | 521 mm (20.5 in)  |               |                       |                   |           |
| Height   | 89 mm (3.5 in)    | 133 mm (5.25 in)  |               |                       |                   |           |
| Width    | 483 mm (19 in)    | 483 mm (19 in)    |               |                       |                   |           |

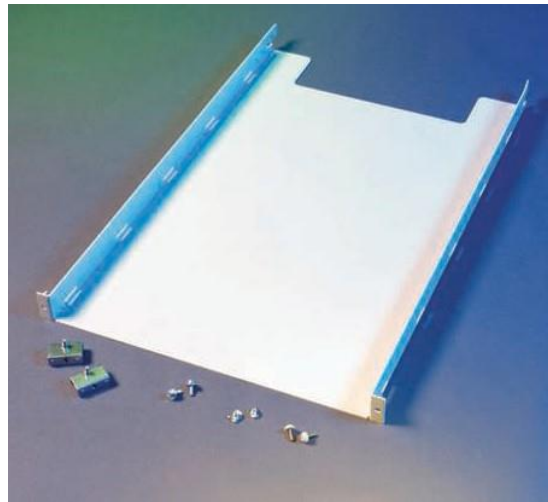


## Stationary Shelf

This light-duty fixed shelf is designed to support equipment that does not have a rackmount kit. The shelf can be used in all standard Keysight racks. The stationary shelf is mounted securely into place using the supplied hardware and is designed to sit at the bottom of the EIA increment.

Attractive features of the stationary shelf include:

- Snap-in design for easy installation
- Smooth edges



Stationary shelf (J1520AC)

### Ordering Information

| Part No. | Description      | EIA Units |
|----------|------------------|-----------|
| J1520AC  | Stationary shelf | 1         |

## Sliding Shelf

The sliding shelf provides a flat surface with full product accessibility. It can be used in all Keysight racks to support equipment that may not have its own rackmount kit. The shelf and slides are preassembled for easy installation.

Attractive features of the sliding shelf include:

- Snap-in design for easy installation
- Smooth edges

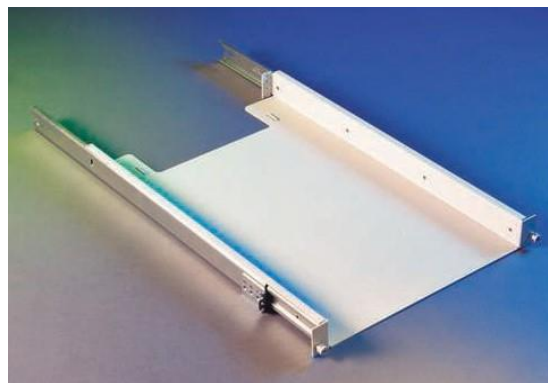
Consider purchasing the steel ballast (C2790AC) to use with the sliding shelf. The ballast provides anti-tip capability when the shelf is extended.



Sliding shelf installed in rack

### Ordering Information

| Part No. | Description   | EIA Units |
|----------|---------------|-----------|
| J1526AC  | Sliding shelf | 2         |



Sliding shelf (J1526AC)

| J1520AC       |                    |
|---------------|--------------------|
| Material      | Cold-rolled steel  |
| Weight        | 8 kg (17.6 lbs)    |
| Color         | Quartz gray        |
| Length        | 733 mm (28.86 in)  |
| Height        | 44 mm (1.73 in)    |
| Width         | 482.6 mm (19 in)   |
| Inside Width  | 441 mm (17.375 in) |
| Load Capacity | 68 kg (150 lbs)    |

### What you get in the box

- 1 Stationary shelf
- 2 Rear brackets
- Mounting hardware

### Specifications

| J1526         |                   |
|---------------|-------------------|
| Material      | Cold-rolled steel |
| Weight        | 9.9 kg (22 lbs)   |
| Color         | Quartz gray       |
| Length        | 674 mm (26.55 in) |
| Height        | 44.5 mm (1.75 in) |
| Width         | 482.6 mm (19 in)  |
| Inside Width  | 413 mm (16.25 in) |
| Load Capacity | 68 kg (150 lbs)   |

### What you get in the box

- 1 Sliding shelf
- 2 Rear brackets
- 1 Cable strap
- Mounting hardware



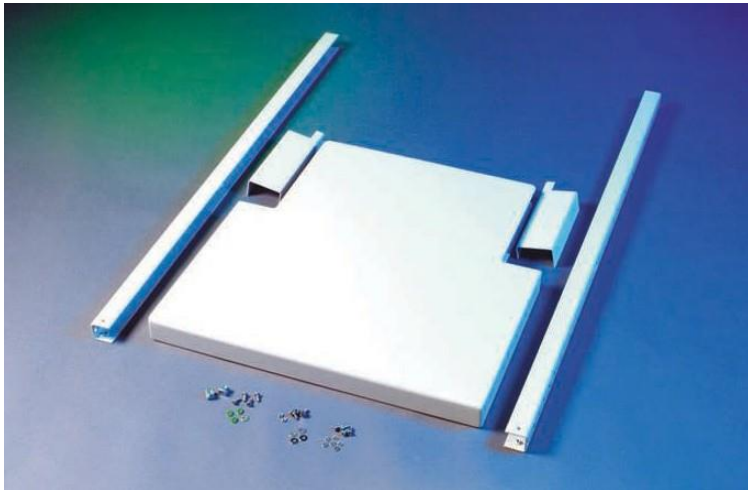
## Work Surface

The work surface is stationary and is designed to remain securely in place. The work surface provides a convenient work shelf/utility area at the front of the rack. It can be used as a writing space or to hold accessories.

Consider purchasing the steel ballast (C2790AC) to use with the work surface. The ballast provides anti-tip capability.



Work surface installed in rack



Work surface (46298SZ)

### What you get in the box

Work surface

Support rails

2 Left, 2 right filler rail panels

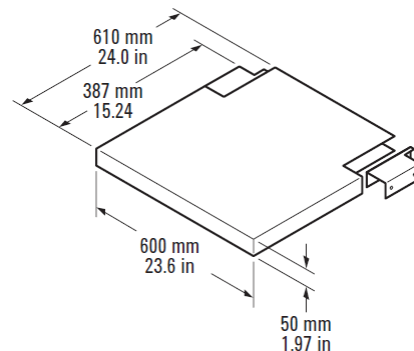
Mounting hardware

### Ordering Information

| Part No. | Description  | EIA Units |
|----------|--------------|-----------|
| 46298SZ  | Work surface | 2         |

### Specifications

| 46298SZ       |                                       |
|---------------|---------------------------------------|
| Material      | Cold-rolled steel                     |
| Weight        | 12.7 kg (28 lbs)                      |
| Color         | Quartz gray                           |
| Depth         | 610 mm (24 in.) to 387 mm (15.24 in.) |
| Width         | 600 mm (23.6 in.)                     |
| Load Capacity | 22.7 kg (50 lbs)                      |



## Ballast

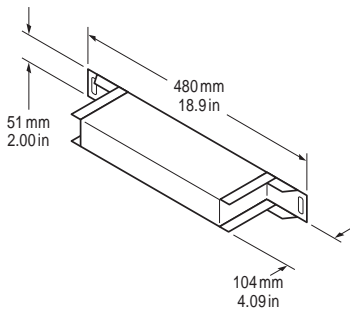
A ballast kit includes a 30 pound weight to provide anti-tip protection. Ballast deters the cabinet from tipping forward if heavy slide-mounted devices are extended from the rack.

Keysight rack cabinets include a standard, pull-out anti-tip foot that can be extended temporarily for servicing. Ballast provides an extra margin of safety to counteract the extra weight incurred when an accessory extends from the rack, such as a work surface.

- Each ballast kit contains a 30 lb. ballast and mounting hardware.
- The ballast mounts on the rear columns of the rack and provides a counterweight for equipment that extends out from the front of the rack.

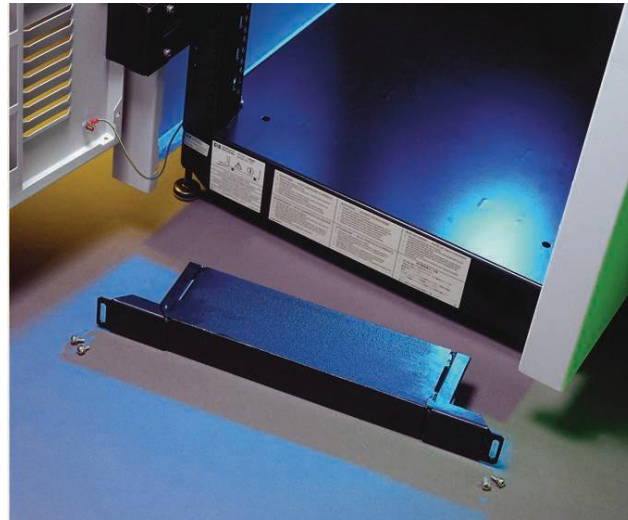
Ballast should be employed when using the following rack accessories:

- Slide mounted instruments
- Work surface
- Monitor
- Keyboard

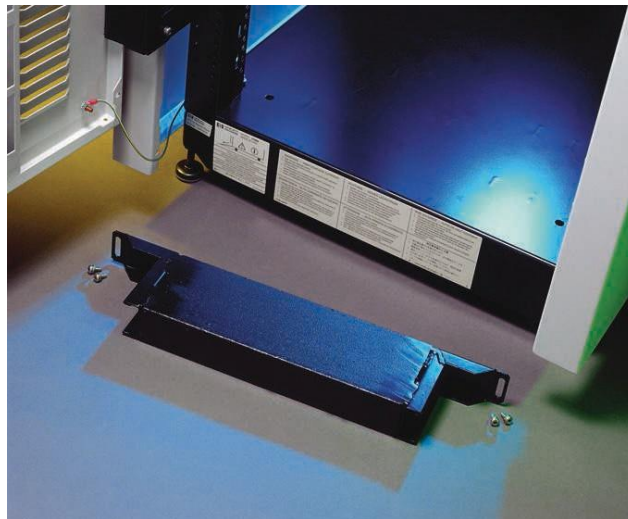


### Specifications

|          |                   |
|----------|-------------------|
| Material | Cold-rolled steel |
| Weight   | 13.6 kg (30 lb)   |
| Color    | Quartz gray       |
| Length   | 104 mm (4.1 in)   |
| Height   | 51 mm (2.0 in)    |
| Width    | 480 mm (18.9 in)  |



Ballast standard mounting (C2790AC)



Ballast, alternate mounting (C2790AC)

### Must Read Box

Always mount ballast in the rear of the rack. Racks should not be shipped with ballast installed.

### What you get in the box

- Ballast
- Mounting hardware

### Ordering Information

| Part No. | Description                        |
|----------|------------------------------------|
| C2790AC  | 30 lb steel, fits all rack heights |

# Monitor and Keyboard Rack Mount Kits

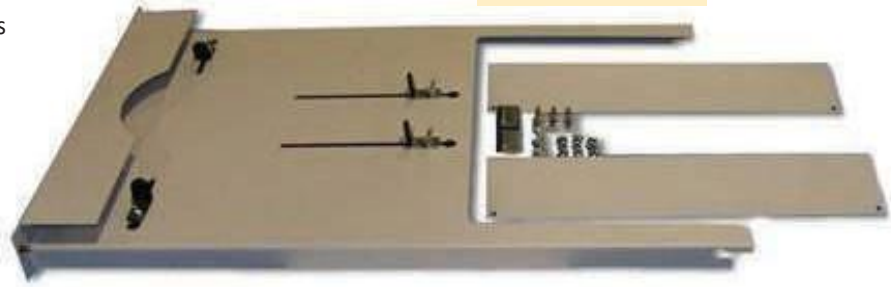
## Monitor Rackmount Kit

Safely and securely install your monitor with the Keysight monitor rackmount kit. The Keysight monitor rackmount kit can accommodate 14" to 19" monitors. The kit consists of a shelf, all required mounting hardware, and cosmetic panels for the sides of the monitor. (Note: No top bevel is included in the kit.)

Consider purchasing the steel ballast (C2790AC) to use with the monitor rackmount kit. The ballast provides anti-tip capability when the shelf is extended.

### What you get in the box

- 1 Monitor base
- 2 Decorative panels
- 2 Rearbrackets
- Mounting hardware



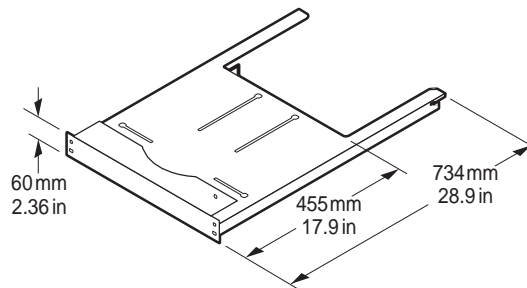
Monitor rackmount kit (J1519BC)

### Specifications

| J1519BC       |                    |
|---------------|--------------------|
| Material      | Cold-rolled steel  |
| Weight        | 5.9 kg (13 lbs)    |
| Color         | Quartz gray        |
| Height        | 427.5 mm (16.83mm) |
| Depth         | 734 mm (28.9 in.)  |
| Width         | 482.6 mm (19 in.)  |
| Load Capacity | 45 kg (100 lbs)    |
| EIA Units     | 11                 |

### Ordering Information

| Part No. | Description                                     | EIA Units |
|----------|---|-----------|
| J1519BC  | Monitor rackmount kit, fits 14-19 inch monitors | 11        |

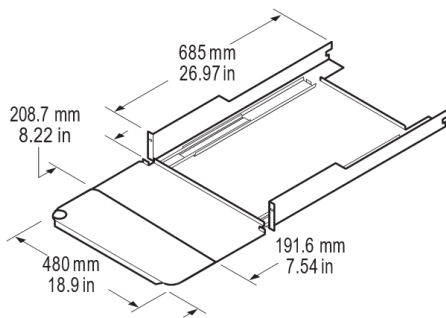


## Keyboard and Mouse Rackmount Kits

Select a fixed or retractable keyboard and mouse kit appropriate for your needs (keyboard and mouse not included). Consider purchasing the ballast kit for added stability (C2790AC)

### Retractable Keyboard Kit

Keysight's compact shelving kit provides a convenient enclosed keyboard system that requires minimum rack space, saving valuable space for your instruments. The kit can accommodate any standard keyboard and mouse. The retractable keyboard shelf slides into the rack when not in use. When retracted, the shelf does not extend from the rack. Keyboard security is available by using a front door on the rack cabinet. The keyboard kit includes all mounting hardware.

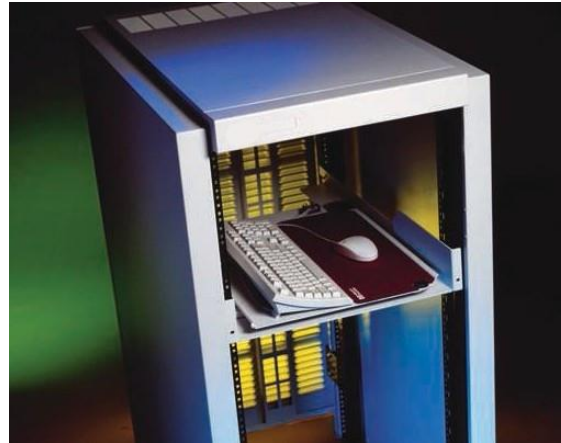


### Specifications

| J1518AC       |                    |
|---------------|--------------------|
| Material      | Cold-rolled steel  |
| Weight        | 12.9 kg (28.5 lbs) |
| Color         | Quartz gray        |
| Depth         | 685 mm (26.97 in.) |
| Width         | 480 mm (18.9 in.)  |
| Load Capacity | 22.7 kg (50 lbs)   |
| EIA Unit      | 2                  |

### Ordering Information

| Part No. | Description                              | EIA Units |
|----------|--|-----------|
| J1518AC  | Retractable keyboard kit, fits all racks | 2         |



Retractable keyboard kit, retracted in rack



Retractable keyboard kit installed in rack



Retractable keyboard kit (J1518AC)

- What you get in the box**
- 1 keyboard kit assembly
  - 2 Rear brackets
  - Mounting hardware
  - Mouse pad

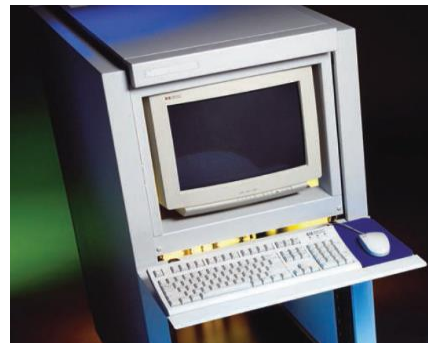
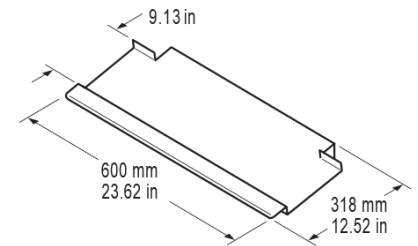


## Fixed Keyboard

The keyboard kit includes all mounting hardware. In an environment where the keyboard is not required to retract, a fixed keyboard shelf is available. The fixed keyboard shelf mounts on the outside of the front rack columns.



Fixed keyboard kit installed in rack



Fixed keyboard kit installed in rack with monitor rackmount kit (Note - current versions of monitor rackmount kit do not ship with top bevel) (monitor not included)

### Must Read Box

The fixed keyboard cannot be used with a front door installed on the rack.

### What you get in the box

- 1 Fixed keyboard kit assembly
- Mounting hardware



Fixed keyboard kit (E7714AC)

### Specifications

| E7714AC  |                    |
|----------|--------------------|
| Material | Cold-rolled steel  |
| Color    | Quartz gray        |
| Depth    | 318 mm (12.52 in)  |
| Width    | 600 mm (23.62 in.) |
| EIA Unit | 1                  |

### Ordering Information

| Part No. | Description                        | EIA Units |
|----------|------------------------------------|-----------|
| E7714AC  | Fixed keyboard kit, fits all racks | 1         |



## Instrument Rackmount Kits

### Instrument Compatibility with Racks

Keysight’s modular cabinet system offers bench-stacking and rackmounting versatility. These cabinets are designed for compatibility with EIA and IEC standards, both in width and height.

Modular cabinets are currently defined as System II and System II Plus instruments. These are identical in form, fit and function. The only difference is the color.

System II and System II Plus cabinets are available in standard sizes. As shown in the illustration, instrument depths have 5 sizes and instrument heights have 6 sizes. They are measured in millimeters and inches.

The instrument width is measured in module width (MW). The module width measurement is an important feature for determining rackmounting requirements. 1 MW is equivalent to the full width of the rack.

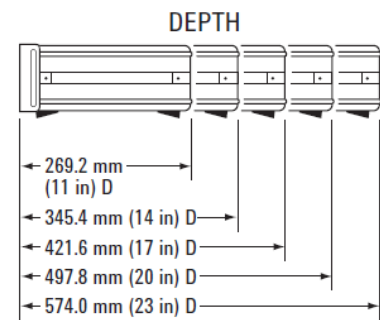
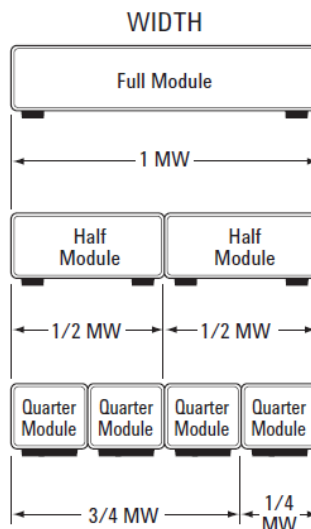
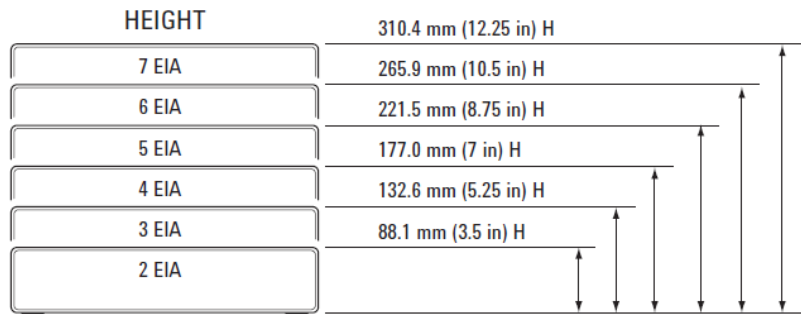
Most equipment can be ordered with handles and flanges at the time the equipment is ordered. If you have an instrument without the necessary hardware, then use the following pages to add flanges and handles.

### Mounting Other Instruments

Some Keysight instruments are use non-System II cabinets. These products typically have rackmounting options.

See the specific product’s data sheet for those details.

Non-Keysight instruments that comply with the industry-standard units may be easily rackmounted as well.



*kits, shown on pages 25-30, include metric fasteners*

*to make them compatible with metric-fastener cabinets. Metric-fastener cabinets are identified with a "metric" embossment*

*in the front bezel casting under the plastic trim strip and on the middle of the rear bezel casting.*

## Handles and Rackmount Flange Kits

Handles and rack flanges are available for all System II cabinets. They find most use on full width modules or combinations of narrower modules locked together to form one module width (MW). See page 23 for information about module widths and instrument heights and depths.

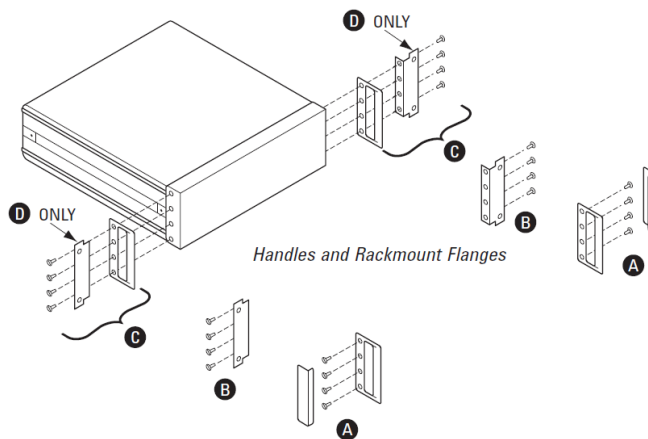
Flanges secure the instrument to the front mounting column of the rack. All Keysight flange kits attach to the instrument using pre-existing holes in

the instrument case. Flanges alone will not support the weight of an instrument in the rack. The appropriate rails or slides must be purchased for support.

Certain instruments are supplied with front handles as part of the selling price. Handles and rack flanges can be supplied with most instruments for an added cost by specifying the appropriate option at the time of order.

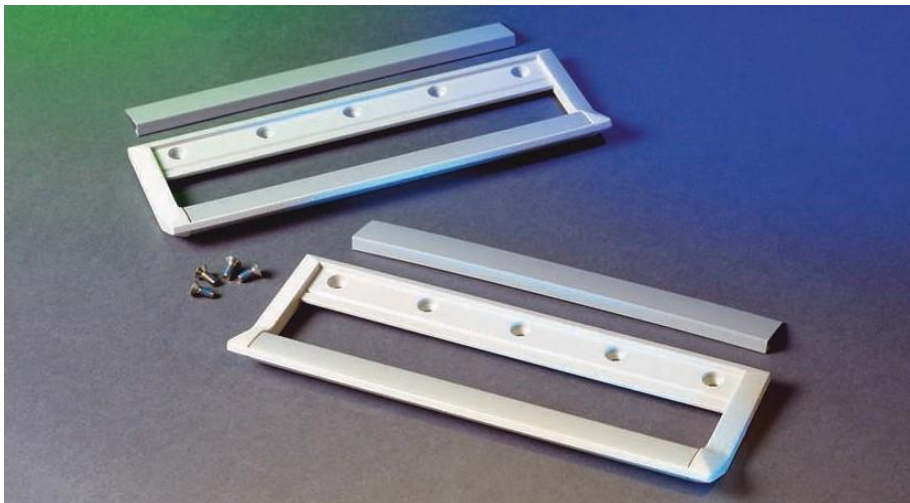
Alternatively, the equivalent mounting hardware may be ordered after receipt of the instrument using the information listed on the following page. These order options include:

- Ⓐ Front Handle Kit
- Ⓑ Rackmount Flange Kits
- Ⓒ Handles with Rack Flanges
- Ⓓ Flange Kit for Instruments with Previously Supplied Handles



### Must Read Box

The rackmount flange kits secure your instrument to the front columns of the rack. You must also select the appropriate rails or slides to support the weight of the instrument in the rack. See pages 33 & 34 for rail and slide information.



Front handle kit (5063-9229) (1CN005A)

### What you get in the box

- 2 Handles
- 2 Trim strips Metric fasteners

## Front Handle Kit

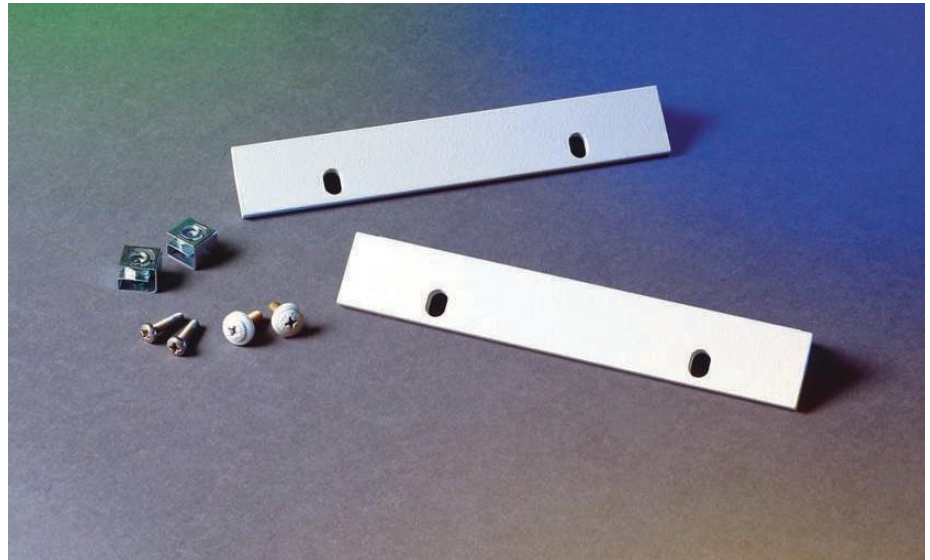
Order a front handle kit when your instrument does not come with pre-installed handles. Check to make sure your instrument requires handles, as many instruments are supplied with previously installed handles.

- Flanges attach to pre-existing holes in the instrument case

## Rackmount Flange Kits

Flange kits are available for all System II instruments. Flanges attach to pre-existing holes in the instrument case. These flanges do not have a notch for handles, and therefore cannot be used for instruments that have handles.

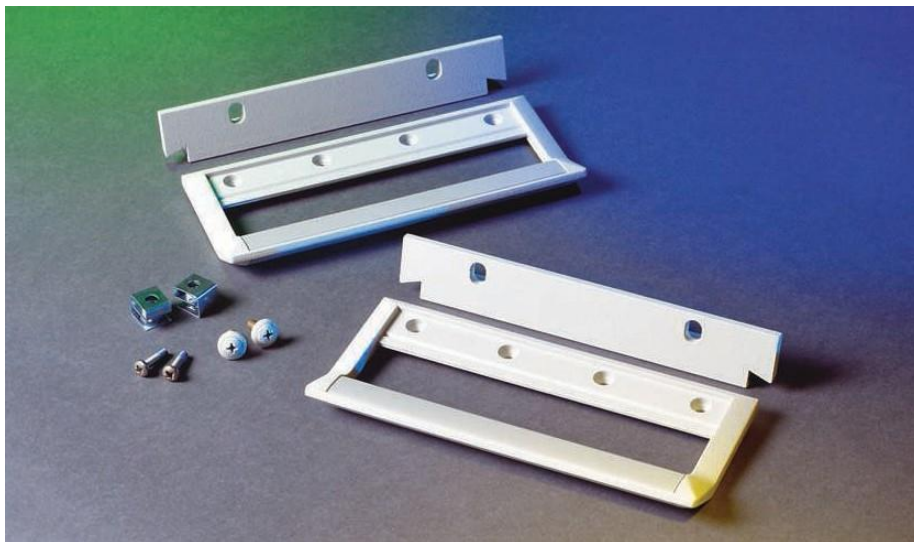
- Flanges attach to pre-existing holes in the instrument case



Rackmount flange kit (5063-9216) (1CM015A)

### What you get in the box

2 Flanges Metric fasteners  
Mounting screws



Flange kit with handles (5063-9223) (1CP020A)

## Flange Kits with Handles

This kit includes both flanges and handles.

- Flanges attach to pre-existing holes in the instrument case

### What you get in the box

2 Handles  
2 Flanges Metric fasteners  
Mounting screws

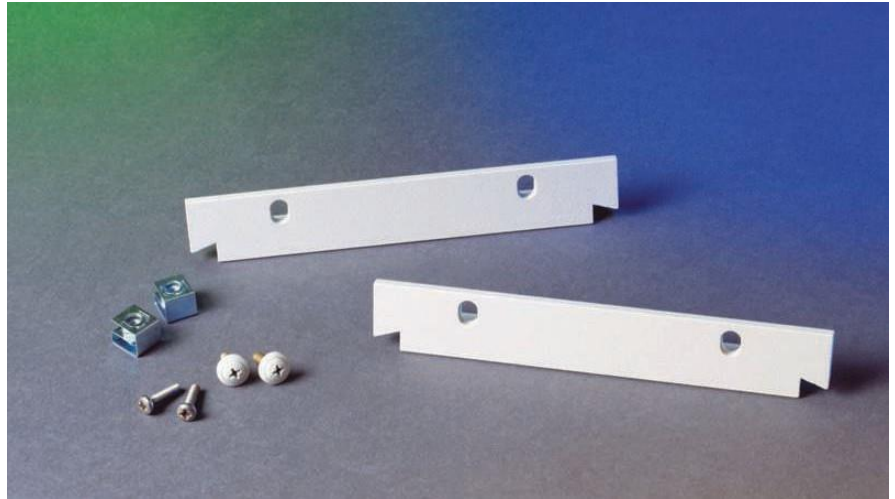
## Rackmount Flange Kit for Instruments with Previously Supplied Handles

Certain Keysight instruments are supplied with front handles. These flange kits have a special cut out to accommodate the handles.

- Flanges attach to pre-existing holes in the instrument case

### What you get in the box

- 2 Flanges
- Metric fasteners
- Mounting screws



Rackmount flange kit for instruments with previously supplied handles (5063-9236) (1CM043A)

## Selecting a Rackmount Flange or Handle Kit

The table below lists the kits available for use after receipt of the equipment. Field installation is straightforward.

- A plastic trim strip is easily removed and the handle or flange attaches with screws supplied in the kit.
- Before rackmounting, bottom feet must be removed.

### Ordering Information (New Phantom Gray (Quartz Gray))

| Instrument Module Height | A Front Handle Kit                             | B Rackmount Flange Kit <sup>1</sup>              | C Flange Kit with Handles                                     | D Flange Kit for Instruments w/Previously Supplied Handles |
|--------------------------|--|--|---|--|
| 88.1 mm (3.5 in)         | 1CN106A (1CN006A)                              | 5063-9212 <sup>1</sup> (34191A)                  | CP001A  | 5063-9232 <sup>1</sup>                                     |
| 88.1 mm (3.5 in)         | --   | --   | 5063-9220 <sup>2</sup>  | --   |
| 132.6 mm (5.25 in)       | 1CN107A (1CN007A)                              | 1CM104A (34192A)                                 | 1CP108A (1CP008A)   | 1CM104A  |
| 177.0 mm (7.0 in)        | 1CN103A (1CN003A)                              | 1CM113A (1CM013)                                 | 1CP105A (1CP005A)   | (1CM034)   |
| 221.5 mm (8.75 in)       | 1CN105A (1CN005A)                              | 1CM115A (1CM015A)                                | 1CP120A (1CP020A)   | 1CM143A (1CM043A)  |
| 265.9 mm (10.5 in)       | (1CN020A)                                      | 1CM1042 (1CM042A)                                | 1CP119A (1CP019A)   | 5063-9237  |
| 310.4 mm (12.25 in)      | --   | 1CM133A (1CM033A) <sup>3</sup>                   | 5063-9225   | --   |
| Kit includes             | 2 handles<br>2 trim strips<br>metric fasteners | 2 flanges<br>metric fasteners<br>mounting screws | 2 handles<br>2 flanges<br>metric fasteners<br>mounting screws | 2 flanges<br>metric fasteners<br>mounting screws           |

<sup>1</sup>Includes standard flanges with 1.75-inch hole spacing

<sup>2</sup>Includes special flange with 3-inch hole spacing

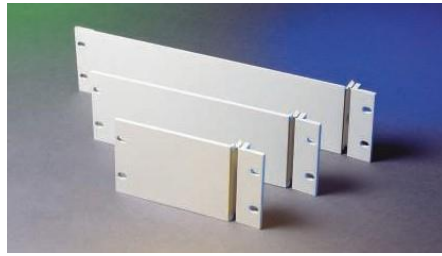
<sup>3</sup>Will not fit onto instruments with previously supplied handles |



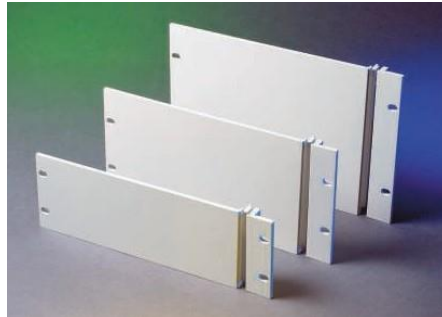
## Rackmount Adapter Kits

Rackmount adapter kits are available to mount an instrument, or combination of instruments, that is less than one full module width (MW).

- Individual 1/4 MW or 1/2 MW modules use the kits shown in the table below.
- Combinations of 1/4 MW or 1/2 MW (of equal depth) are first joined side-by-side with the Lock Link Kit (see page 30) for PN 5061-9694). Combinations joined side-by-side must be the same depth and height. Then the rackmount adapter kit is applied. If modules are of unequal depth or height, a support shelf (as shown on page 28) can be used.
- For combinations of instruments adding to 1 MW, use the rackmount flange kit (see Selecting a Rackmount Flange or Handle Kit, page 26).
- Hole patterns conform to EIA and IEC standards.



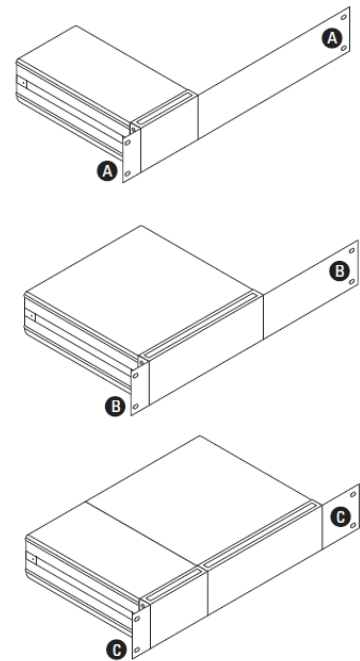
Rackmount adapter kits for 88.1 mm instrument module height (5063-9239, 5063-9240 (34190A), 5063-9241) (1CM019A)



Rackmount adapter kits for 1/2 MW (5063-9240 (34190A), 5063-9243 (34193A), 5063-9245)



Rackmount adapter kit with mounting hardware (5063-9239)



### What you get in the box

- 1 Standard flange
- 1 Adapter flange
- Attaching screws
- Front-panel rackmounting screws

### Ordering Information

| Instrument Module  | <b>A</b> Mounts 1/4  | <b>B</b> Mounts 1/2 MW or  | <b>C</b> Mounts 3/4 MW   |
|--------------------|--|--|--|
| Height             | MW Modules   | 2 each 1/4   | (3 each 1/4 MW <sup>2</sup> or 1/4   |
| 88.1 mm (3.5 in)   | 5063-9239  | 5063-9240 (34190A)   | 5063-9241 (1CM019A)  |
| 132.6 mm (5.25 in) | -  | 5063-9243 (34193A)   | -  |
| 177.0 mm (7.0 in)  | -  | 5063-9245  | -  |
| Kit includes       | 1 rack flange + <sup>3</sup> / <sub>4</sub> MW extension adapter flange + screws | 1 rack flange + <sup>1</sup> / <sub>2</sub> MW extension adapter flange + screws | 1 rack flange + <sup>1</sup> / <sub>4</sub> MW extension adapter flange + screws |

<sup>1</sup>Side by side modules of equal depth require a Lock Link Kit (5061-9694)

<sup>2</sup>1/4 MW can be center mounted using two of these kits



## Support Shelf

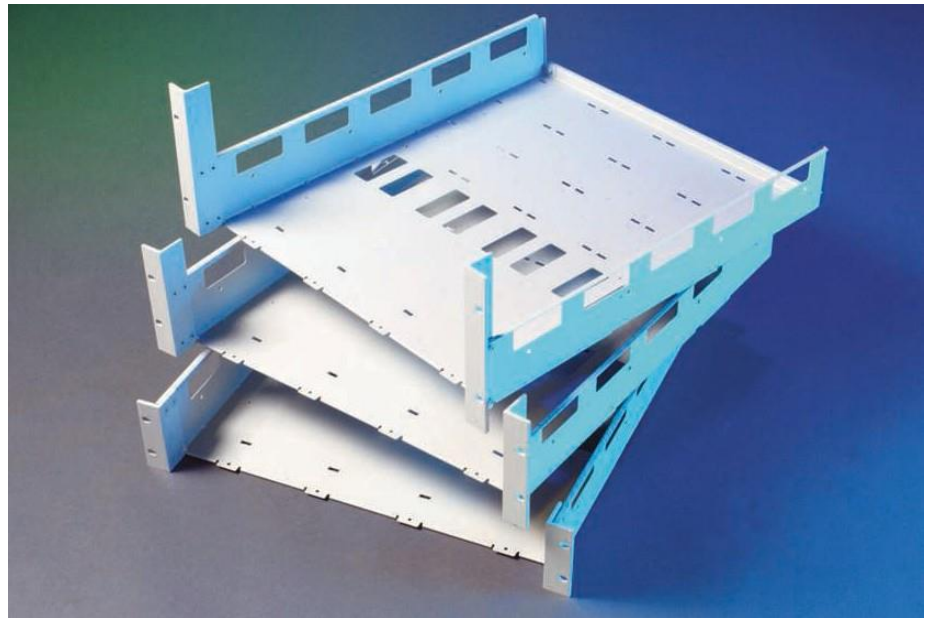
These shelves are available for instruments less than 1 MW.

- Submodules of differing heights, widths, and depths (up to 20 inches deep) can be rackmounted using these support shelves. Any combination of 1/4 MW and 1/2 MW will fit side-by-side up to 1 MW.

- The slide kit is required for installation of the support shelf. It provides ready access to internal shelf areas. The slide kit includes brackets and mounting hardware.

### What you get in the box

- Shelf
- Tie down clips



Support shelves, 3 different sizes

### Ordering Information – Support Shelf

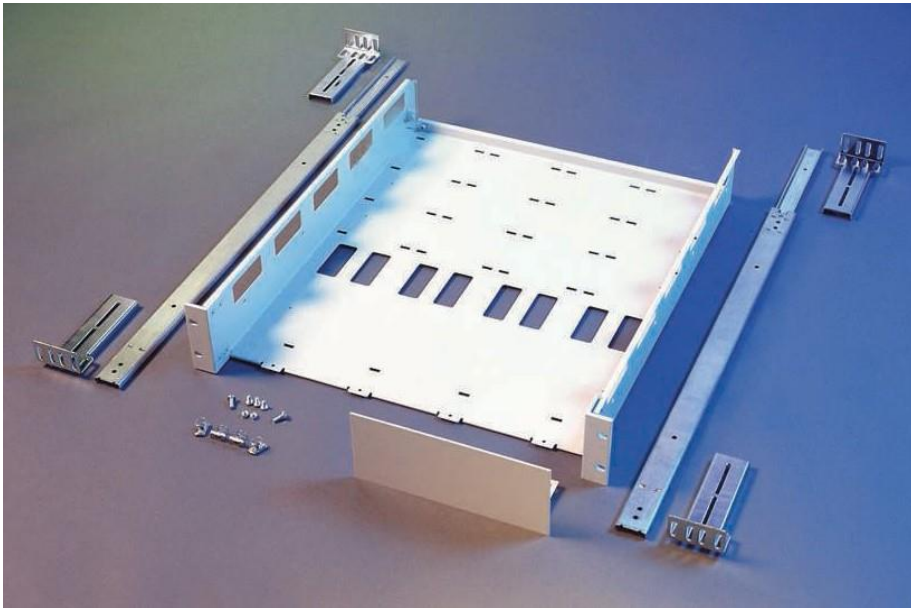
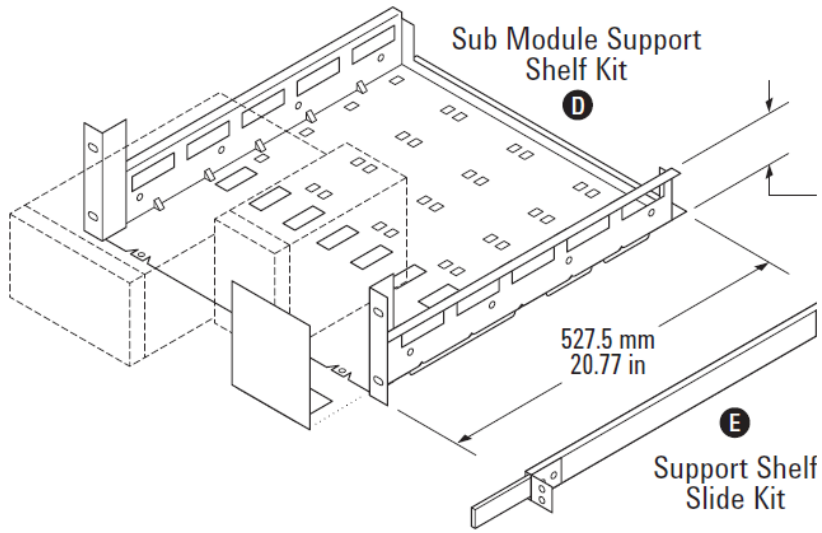
| Instrument Module Height | Part No.  | Description                    |
|--------------------------|-----------|--------------------------------|
| 88.1 mm (3 1/2 in)       | 5063-9255 | Support shelf                  |
| 132.6 mm (5 1/4 in)      | 5063-9256 | Support shelf                  |
| 177.0 mm (7 in)          | 5063-9257 | Support shelf                  |
|                          | 1600-1424 | Tie down clip replacement part |

### Specifications – Support Shelf

|               | 5063-9255             | 5063-9256            | 5063-9257            |
|---------------|-----------------------|----------------------|----------------------|
| Material      | Cold-rolled steel     | Cold-rolled steel    | Cold-rolled steel    |
| Weight        | 4.5 kg (10 lbs)       | 4.5 kg (10 lbs)      | 4.5 kg (10 lbs)      |
| Color         | Quartz gray           | Quartz gray          | Quartz gray          |
| Length        | 527.6 mm (20.77 in.)  | 527.6 mm (20.77 in.) | 527.6 mm (20.77 in.) |
| Height        | 88.9 mm (3.5 in.)     | 133.4 mm (5.25 in.)  | 177.8 mm (7 in.)     |
| Width         | 447.5 mm (17.618 in.) | 489 mm (19.25 in.)   | 489 mm (19.25 in.)   |
| Load Capacity | 22.7 kg (50 lbs)      | 22.7 kg (50 lbs)     | 22.7 kg (50 lbs)     |

### Must Read Box

Adapter kits, handles or flanges are not required if a support shelf is used.



Support shelf (5063-9255) and slide kit (1494-0015)

**Ordering Information – Support Shelf Slide Kit**

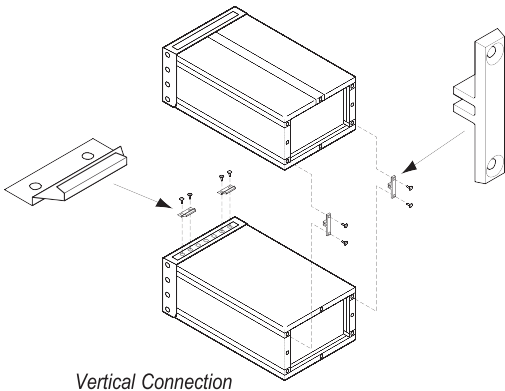
| Instrument    | Part No.  | Description  |
|---------------|-----------|--|
| Module Height |           |  |
| All heights   | 1494-0015 | Support shelf slide kit, required for installation of the support shelf. |

**What you get in the box**

Slide kit

Mounting hardware

## Lock Link Kits and Locking Feet Kits

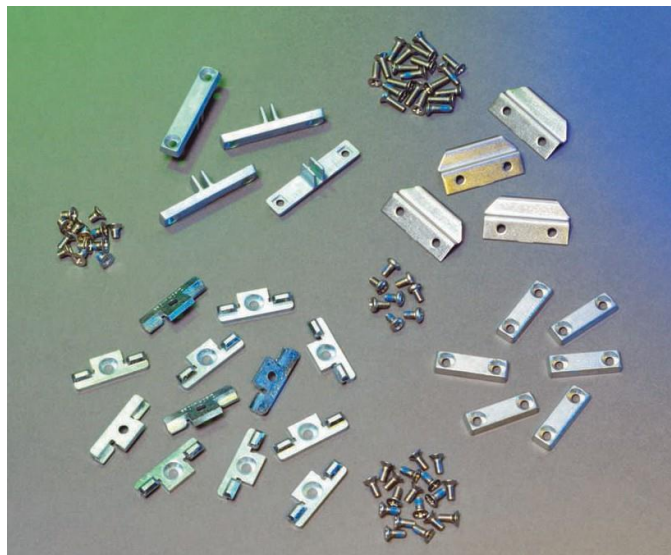
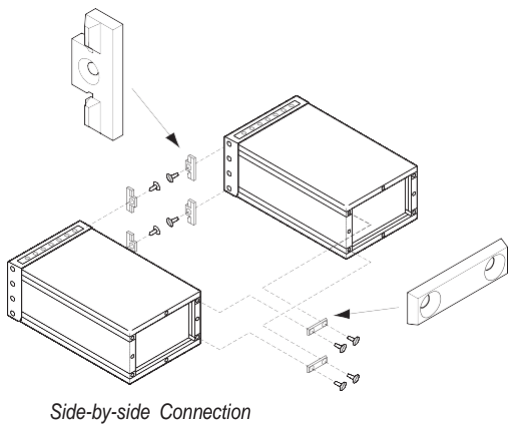


All submodule cabinets of equal depths can be linked together vertically or side-by-side with hardware in the lock link kit. Cabinet frames are already pre-threaded to allow quick assembly.

For side-by-side connections, the Lock Link Kit contains 12 front hooks and 6 rear links, enough for 3 side-by-side joints. For submodule vertical connections, the kit also contains

4 front hooks and 4 rear links, enough for 2 over/under joints. The kit includes metric screws.

The Locking Feet Kit (5062-3999) is designed to accommodate full module vertical combinations of greater weight. The Lock Link Kit is recommended for only submodule vertical combinations, as well as side-by-side combinations.



Locking link kit (5061-9694)

### What you get in the box

#### – Lock Link Kits

12 Front hooks

6 Rear links

Mounting hardware



Locking feet kit (5062-3999)

### Ordering Information

| Part No.  | Description  |
|-----------|--|
| 5061-9694 | Lock link kit for linking submodule cabinets of equal height |
| 5062-3999 | Locking feet kit for full module vertical combinations       |

### What you get in the box

#### – Locking Feet Kits

Locking feet

Mounting hardware

## Rail and Slide Kits

Keysight offers a variety of rail kits to meet instrument and controller rack mounting requirements.

Instrument rackmount kits alone are not designed to support the full weight of most instruments and may deform or break. Rails and slides are available to support the rear of the instrument.

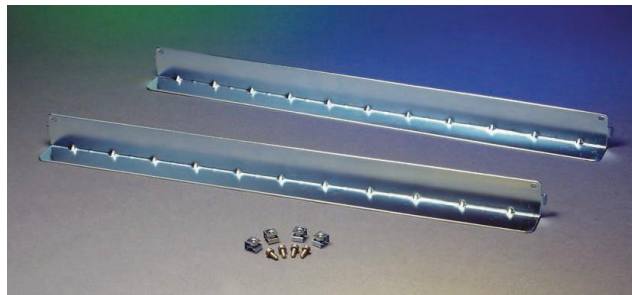
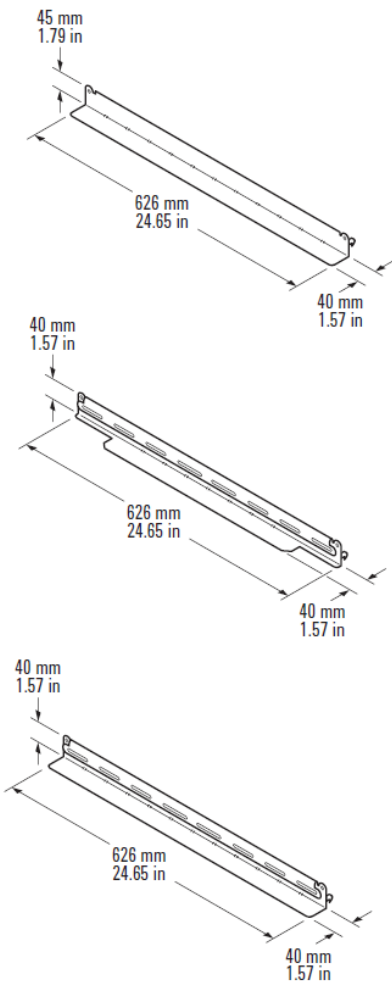
Proper rail selection is important to maximize the use of all EIA units in a rack and to assure proper fit vertically between instrument front panels.

Keysight offers a set of support rails that can cut in half the time required to install equipment in a rack. The rails hang on discrete slots on the vertical mounting columns, corresponding

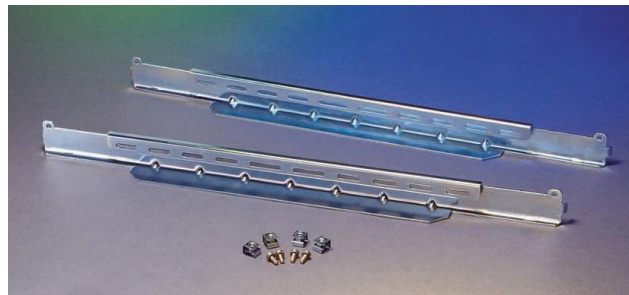
to each EIA unit in the rack. Vertical adjustment between instruments is minimized by selecting the proper rail. The system was specifically designed to minimize the time required to install

Keysight instrumentation, and can be used with other equipment.

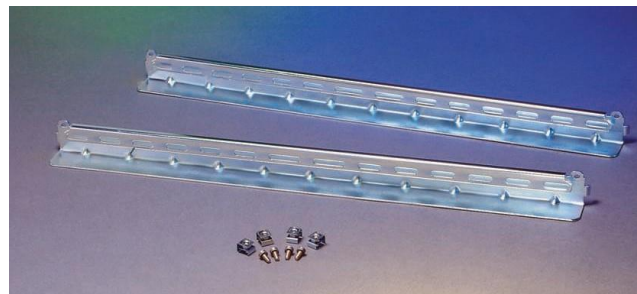
Rails will support up to 113 kg (250 lbs).



3rd party rail kit (E3664AC)



VXI rail kit (E3665AC)



Basic rail kit (E3663AC)

**What you get in the box**  
2 Rails  
Mounting hardware

### Ordering Information

| Part No. | Description                                |
|----------|--|
| E3663AC  | Basic Rail Kit (for System II instruments) |
| E3664AC  | 3rd Party Rail Kit                         |
| E3665AC  | VXI Rail Kit                               |



## Slide Kits

Rack slides are available for full width System II cabinets to permit easy access to internal spaces. Each kit consists of two slides that mount directly to System II cabinet slide handle recess spaces (after removing the side handles). The slides also mount directly to vertical support columns in Keysight racks.

- Non-tilting standard-duty slides carry 38.6 kg (85 lb) maximum load.
- Non-tilting heavy-duty slides carry 79.3 kg (175 lb) maximum load.
- Slide kits are compatible with inch and metric instruments.



Heavy-duty slide kit (B) and non-Keysight rack slide bracket kit (D)



End brackets



Non-Keysight heavy-duty slide bracket dimensions

## Ordering Information

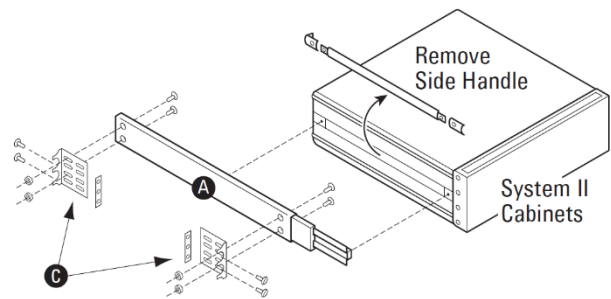
| PartNo.   | Description                           | Instrument Depth         |
|-----------|---------------------------------------|--------------------------|
| 1494-0060 | Slide kit: Non-tilting, standard duty | Fits 345.4 D and 421.6 D |
| 1494-0059 | Slide kit: Non-tilting, standard duty | Fits 497.8 D and 574.0 D |
| 1494-0058 | Slide kit: Non-tilting, heavy duty    | Fits 345.4 D and 421.6 D |



Slide kits (1494-0060, 1494-0059, 1494-0058, top to bottom)

### What you get in the box

- 1 Slide assembly
- Mounting hardware



Slide kit (A) and standard slide bracket kit (C)

## End Brackets

For non-Keysight racks, end-bracket kits are available for both Keysight standard- and heavy-duty slide kits. Slotted hole arrays in the brackets provide for front- to-back rack column spacing of up to a maximum of 609.45 mm (24 in) for standard slides and 688.9 mm (27.12 in) for the heavy-duty slides. These general purpose mounting brackets fit most common non-Keysight



Standard slide bracket dimensions

### What you get in the box

- 4 Adapter brackets
- Mounting hardware

## Ordering Information

| PartNo.   | Description                 |
|-----------|-----------------------------|
| 1494-0061 | End brackets, standard duty |
| 1494-0064 | End brackets, heavy duty    |

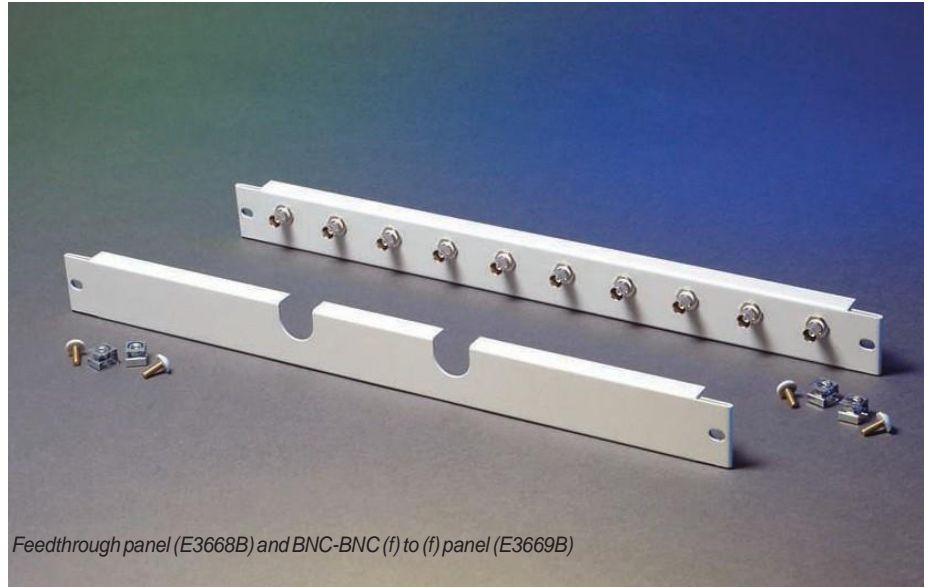


## Small Parts

### Feedthrough Panels

Feedthrough panels are available for use when cables or probes need to pass through from inside the rack to the front. Feedthrough panels include the necessary mounting hardware.

The feedthrough panel is 44 mm (1.74 in) high with two cutout grooves.



#### Specifications – Feedthrough Panel

|           | E3668B            |
|-----------|-------------------|
| Material  | Cold-rolled steel |
| Weight    | .45 kg (1 lb)     |
| Color     | Quartz gray       |
| Length    | 439 mm (19 in)    |
| Height    | 44 mm (1.74 in)   |
| Width     | 44 mm (1.74 in)   |
| EIA Units | 1                 |

#### What you get in the box

1 feedthrough panel  
Mounting hardware

### BNC-BNC (f) to (f) Panel

Useful for transmitting data signals. It is 44 mm (1.74 in) high with ten floating, isolated connectors.

#### Specifications – BNC-BNC (f) to (f) Panel

|                    | E3669B  |
|--------------------|---|
| Material           | Cold-rolled steel                                       |
| Weight             | .45 kg (1 lb)   |
| Color              | Quartz gray   |
| Length             | 439 mm (19 in)  |
| Height             | 44 mm (1.74 in)   |
| Width              | 44 mm (1.74 in)   |
| EIA Units          | 1   |
| Ground             | Outer shield isolated from panel                        |
| Nominal impedance  | 50 ohms   |
| Voltage rating     | 500 V RMS   |
| Frequency range    | DC to 300 MHz   |
| Contact resistance | Center: 1.5 Milliohm (max)<br>Outer: 0.2 Milliohm (max) |
| Life               | Minimum 10,000<br>insertion/withdrawal cycles           |
| BNC specifications | Meets MIL-C-39012                                       |

#### Ordering Information

| Part No. | Description  | Height          | EIA units |
|----------|--|-----------------|-----------|
| E3668B   | Feedthrough panel with 2 cutout grooves                        | 44 mm (1.74 in) | 1         |
| E3669B   | BNC-BNC (f) to (f) panel with 10 floating, isolated connectors | 44 mm (1.74 in) | 1         |

#### What you get in the box

BNC panel assembly  
Mounting hardware

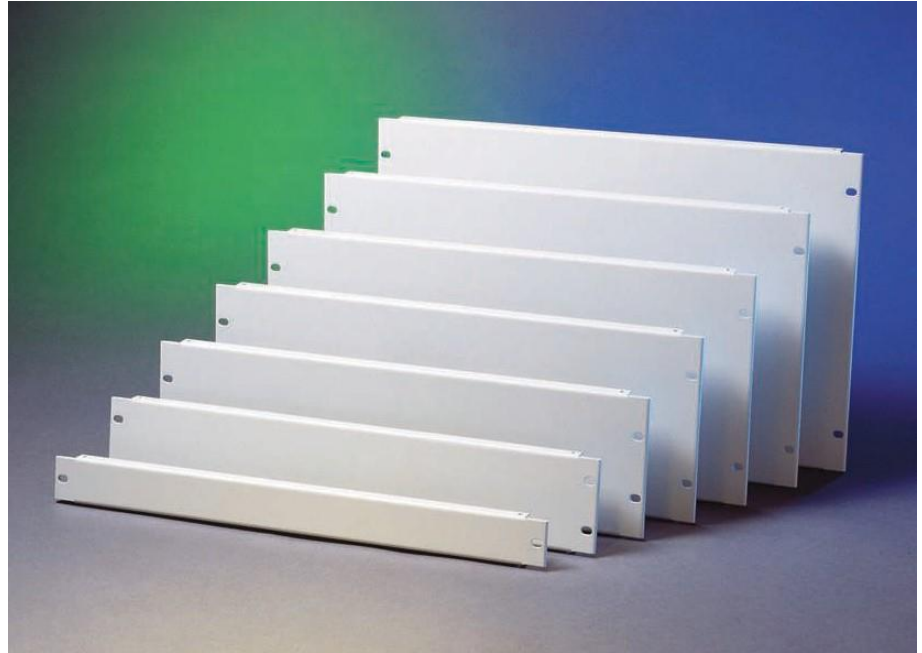
## Rack Filler Panels

Spaces between instruments on the front face of the Keysight rack cabinet can be filled with metal filler panels. Filler panels provide an attractive system and eliminate dust from gathering on equipment.

- Quartz gray
- Each panel is 19 inches wide.
- Includes mounting hardware.

### Ordering Information

| Part No. | Description             | EIA Units |
|----------|-------------------------|-----------|
| E7731A   | 1 EIA unit filler panel | 1         |
| E7732A   | 2 EIA unit filler panel | 2         |
| E7733A   | 3 EIA unit filler panel | 3         |
| E7734A   | 4 EIA unit filler panel | 4         |
| E7735A   | 5 EIA unit filler panel | 5         |
| E7736A   | 6 EIA unit filler panel | 6         |
| E7737A   | 7 EIA unit filler panel | 7         |



Filler panels, from smallest to largest



IEC-320 female-male power cables (8120-1860)

## IEC-320 Female-Male Power Cables

Most Keysight products are shipped with detachable power cords with a localized male plug on one end and an IEC-320 female connector to plug into the instrument. Substitute the regular power cord with one of the following to connect your Keysight instrument/controller to the IEC-320 versions of our PDUs.

### Ordering Information

| Part No.   | Description                      |
|------------|----------------------------------|
| 8120-1575C | 762 mm (30 in) gray power cable  |
| 8120-1860  | 1524 mm (60 in) gray power cable |

#### What you get in the box

1 Power cable

## Testmobiles and Accessories

Keysight Testmobile Carts add protection and mobility to test instruments and systems. The convenience of mobility makes instruments readily available when needed. The cart effectively extends the amount of lab bench space. Ergonomic cart and accessory design makes test equipment accessible to the operator, whether seated or standing at the test area. Additionally, several operators can cost effectively share expensive equipment that has been mounted on a Testmobile Cart.

Keysight testmobile carts are offered in cart capacities to provide optimum instrument test configuration:

- Scope cart, 59 kg (130 lb)
- System cart, 227 kg (500 lb).

A variety of easy-to-mount accessories are available for customized solutions.

### Add Mobility to Your Instruments

Keysight Testmobile carts provide convenient mobility of test equipment, PCs, or workstations to make them readily available when needed. This capability effectively extends the amount of lab bench space available. Mar-resistant, heavy-duty 5-inch hard rubber casters make moving instruments easy. All casters swivel, which lets the cart move right up to the workbench.

### Bring the Equipment to the Test

Rather than bringing the test to the equipment, Keysight Testmobile carts bring the equipment to the test, to save time and get right to the task. Testmobile carts provide a convenient way to move everything from a small oscilloscope to a complete test system to the work to be tested.

### Share Expensive Instruments

Keysight Testmobile carts allow several operators in a work group to cost-effectively share expensive equipment. In the case of a small test system,

all instruments can be conveniently combined in one place through the sufficient space, load capacity, and rackmount capability of the testmobile system cart.

### Protect Your Investment

Unlike general-purpose cart design, Keysight testmobile carts have a nylon strap and steel buckle that secure instruments to the cart, and instrument feet fit securely in slots in both upper tilt tray and lower fixed tray. Expensive instruments are prevented from sliding or tipping off the cart. Locking brakes on rear wheels provide added safety and convenience.

### Use Instruments with Ease

The ergonomically designed tilt tray adjusts 30-plus degrees for viewing and using instruments in comfort whether seated or standing. Lifting and carrying heavy instruments is no longer necessary with the mobility provided by Keysight testmobile carts.

## Testmobile Key Features

Keysight's Testmobile Carts offer the following attractive features:

- Ergonomic design. Test equipment is operator-accessible whether seated or standing.
- Heavy-duty casters make moving instruments easy.
- Includes a nylon strap and steel buckles to secure instruments to the cart.
- Tilt tray adjusts 30-plus degrees for viewing comfort.

## Enhance Instrument Output

Keysight Testmobile system and instrument carts can be customized with a range of easy-to-mount accessories:

- Work surface and antistatic mat that provide a secure, static free work area in front of the instrument
- Plotter/printer stand, which can be set up either 305 mm or 381 mm (12 in or 15 in) high, enables hardcopy output on the spot
- Storage drawer (3.5 inch or 5.25 inch) for a convenient place to store probes, cables, and manuals
- Angle rails for supporting rack mounted instruments
- Attractive quartz gray color

## Testmobile Cart Selection Criteria

A key criterion for cart selection is instrument depth. For instruments with a depth up to 17 inches, select the Keysight 1180CZ testmobile scope cart. The Keysight 1181BZ testmobile system cart should be used for instruments up to 24 inches. Static drag chain is supplied on the 1181BZ.



Testmobile scope cart (1180CZ Plus accessories)

## Testmobile Scope Cart, 1180CZ

The Scope Cart is conveniently shipped virtually assembled, except for its handle and casters.

- Tilt tray load capacity = 29.5 kg (65 lb)
- Total load capacity = 59 kg (130 lb)
- Tilt tray = 457 mm W x 457 mm D (18 in W x 18 in D)

**What you get in the box** Scope cart assembly with tray

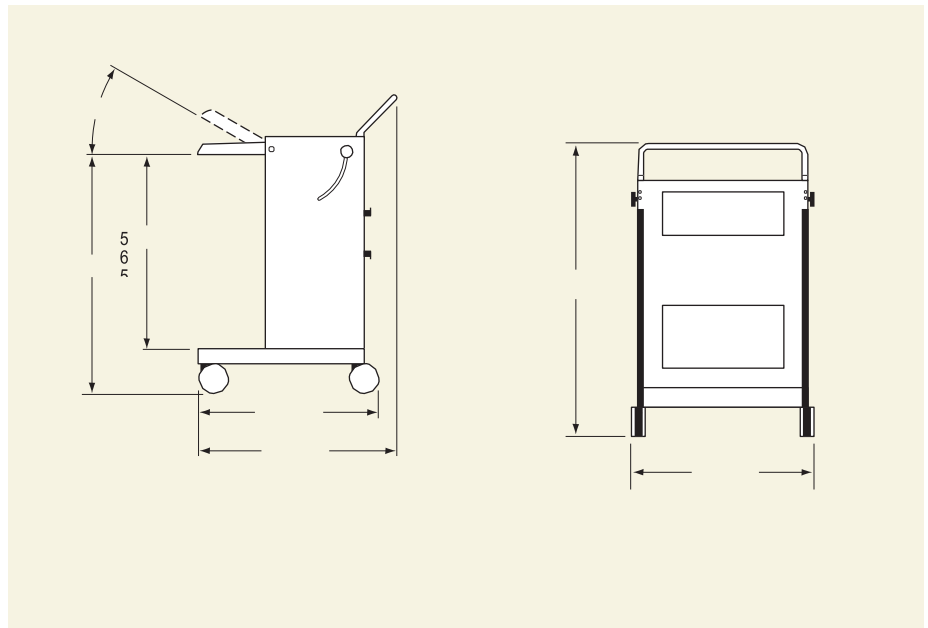
Tubular handle

4 Casters

Mounting hardware

Torx T25 screwdriver

Nylon strap with steel buckle





Testmobile system cart (1181BZ Plus accessories)

## Testmobile System Cart, 1181BZ

The System Cart is a small mobile rack that allows for additional equipment to be installed. That cart has space for the rackmounting of any 19" EIA instrument up to 24" deep. The cart is conveniently shipped virtually assembled, except for its handle.

- Tilt tray load capacity = 90.7 kg (200 lb)
- Total load capacity = 226.8 kg (500 lb)

- Tilt tray = 559 mm W x 660 mm D (22 in W x 26 in D)
- Rackmount any 19-inch EIA instrument up to 24 inches deep beneath the tilt tray in EIA columns.
- 12 EIA units available for rackmounting.
- Includes one set of 5957-8476C angle rails to support rackmounted instruments.

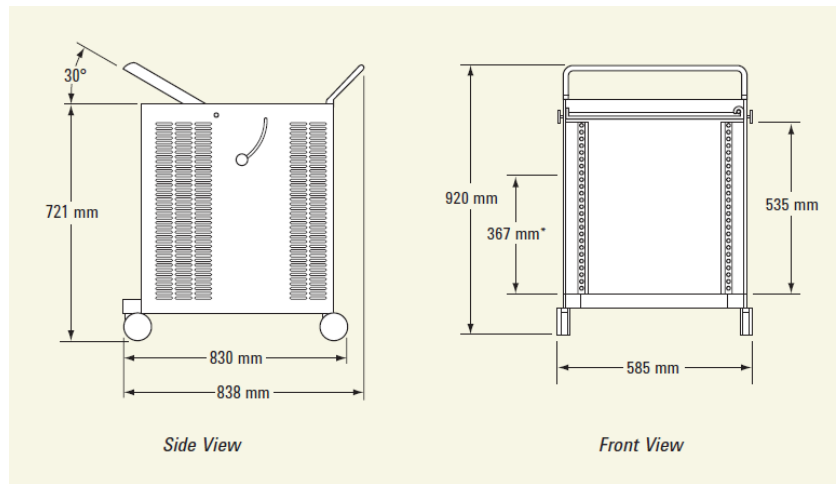
### What you get in the box

System cart assembly with tray and casters

Tubular handle

One set of support rails Mounting hardware Torx T25 screwdriver

Nylon strap with steel buckle



## Ordering information for Testmobile Carts

### Ordering Information

| Prod. No. | Description |
|-----------|-------------|
| 1180CZ    | Scope cart  |
| 1181BZ    | System cart |

### Specifications

|                                 | 1180CZ Scope Cart         | 1181BZ System             |
|---------------------------------|---------------------------|---------------------------|
| <b>Capabilities</b>             |                           |                           |
| Tilt tray load                  | 29.5 kg (65 lb)           | 90.7 kg (200 lb)          |
| Total load                      | 59.0 kg (130 lb)          | 226.8 kg (500 lb)         |
| Cart net weight                 | 18.1 kg (40 lb)           | 39.0 kg (86 lb)           |
| <b>Dimensions</b>               |                           |                           |
| Tilt tray size (w x d)          | 457 x 457 mm (18 x 18 in) | 559 x 660 mm (22 x 26 in) |
| Height                          | 721 mm (28.4 in)          | 721 mm (28.4 in)          |
| Width                           | 475 mm (18.7 in)          | 566 mm (22.3 in)          |
| Depth                           | 508 mm (20.0 in)          | 737 mm (29.0 in)          |
| Vertical rack space*            | n/a                       | 533 mm (21.0 in –         |
| <b>Maximum Instrument Depth</b> | 432 mm (17.0 in)          | 635 mm (25.0 in)          |
| <b>Casters</b>                  | 101 mm (4 in) diameter    | 127 mm (5 in)             |

\* Vertical rack space is reduced the more the tilt tray is angled.

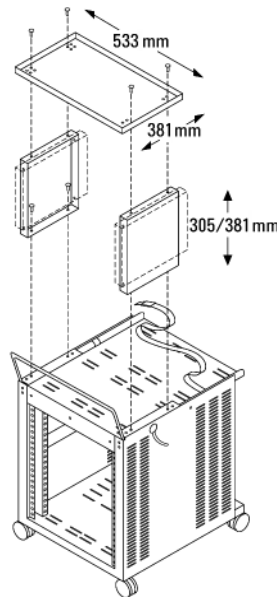


## Testmobile Accessories Selection Chart

| Part No.                | Description                               | 1180CZ     | 1180CZ     |
|-------------------------|---|------------|------------|
|                         |   | Scope Cart | Scope Cart |
| 35181HZ                 | Printer/plotter stand                     | n/a        | yes        |
| 35181KZ                 | Work surface                              | n/a        | yes        |
| 35181J                  | Storage drawer 3.5" high                  | n/a        | yes        |
| 35181M                  | Storage drawer 5.25" high                 | n/a        | yes        |
| 35181E                  | Antistatic mat for 35181K                 | n/a        | yes        |
| <b>Shelf and Rails</b>  |   |            |            |
| 5181-8723               | Support cover/shelf for drawers           | n/a        | yes        |
| 5957-8476               | Angle rails for rackmounting              | n/a        | yes        |
| <b>Cables and Plugs</b> |   |            |            |
| 8120-1575C              | IEC-320 cable, 762 mm (30 in.)            | yes        | yes        |
| 8120-1860               | IEC-320 cable, 1.5 m (60 in.)             | yes        | yes        |
| 5181-8707               | IEC-320 male power cable replacement plug | yes        | yes        |

## Testmobile Printer/Plotter Stand

Conveniently mount a printer or plotter on top of a system or instrument testmobile with the Keysight testmobile printer/plotter stand.



### What you get in the box

- Printer tray
- Vertical side supports
- Torx T15 screwdriver

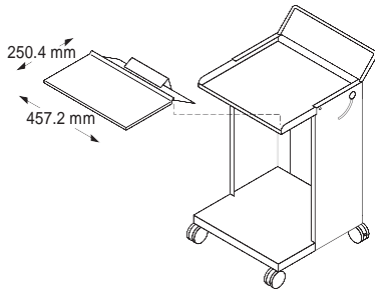
### Specifications

| 35181HZ       |                                     |
|---------------|-------------------------------------|
| Material      | Cold-rolled steel                   |
| Weight        | 8.16 kg (18 lbs)                    |
| Color         | Quartz gray                         |
| Length        | 533 mm (21 in)                      |
| Height        | 305 mm (12 in)<br>or 381 mm (15 in) |
| Width         | 381 mm (15 in)                      |
| Load Capacity | 11.34 kg (25 lbs)                   |
| Compatibility | 1181BZ                              |

### Ordering Information

| Part No. | Description                      |
|----------|----------------------------------|
| 35181HZ  | Testmobile printer/plotter stand |

## Testmobile Work Surface



Keysight's testmobile work surface provides additional work space on a testmobile cart. It can be used for accessories, writing, or a keyboard and mouse. The work surface attaches to the testmobile tilt tray.

### Specifications

|               | 35181KZ           |
|---------------|-------------------|
| Material      | Cold-rolled steel |
| Weight        | 4.99 kg (11 lbs)  |
| Color         | Quartz gray       |
| Length        | 533 mm (21 in)    |
| Width         | 305 mm (12 in)    |
| Compatibility | 1181BZ            |

### What you get in the box

Work surface  
Torx T15 screwdriver  
Mounting hardware

### Ordering Information

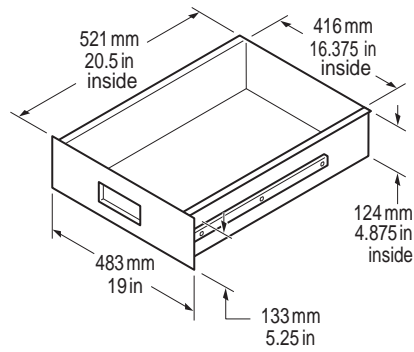
| Part No. | Description             |
|----------|-------------------------|
| 35181KZ  | Work surface for 1181BZ |

## Storage Drawer

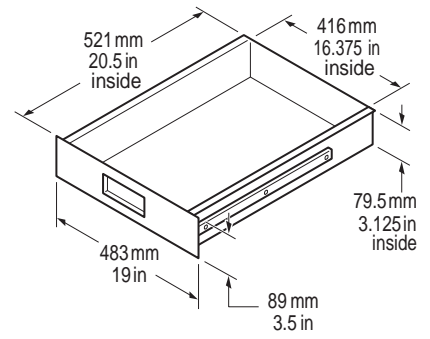
Keysight's testmobile storage drawer provides storage space for miscellaneous items such as tools, manuals, probes or cables.



Drawer installed in rack



35181M Drawer



35181J Drawer

**What you get in the box**  
 Drawer with slides attached  
 Mounting hardware

### Specifications

|          | 35181J            |                   |
|----------|-------------------|-------------------|
| Material | Cold-rolled steel | Cold-rolled steel |
| Weight   | 7.26 kg (16 lbs)  | 8.16 kg (18 lbs)  |
| Color    | Quartz gray       | Quartz gray       |
| Length   | 521 mm (20.5 in)  | 521 mm (20.5 in)  |
| Height   | 89 mm (3.5 in)    | 133 mm (5.25 in)  |
| Width    | 483 mm (19 in)    | 483 mm (19 in)    |

### Ordering Information

| Part No. | Description          |
|----------|----------------------|
| 35181J   | 3.5" Storage Drawer  |
| 35181M   | 5.25" Storage Drawer |

## Conclusion

Keysight Technologies offers 19-inch EIA (Electronics Industries Association) rack cabinets tailored to meet the needs of test and measurement instrumentation customers. Keysight racks are specifically designed for Keysight's test and measurement equipment, virtually ensuring a perfect fit. They will also accommodate non-Keysight equipment making them suitable for a mixed instrument environment. Rack mounting is fast and easy with unique design features. A selection of options and accessories provides flexibility to meet the vast majority of racking applications.

Learn more at: [www.keysight.com](http://www.keysight.com)

For more information on Keysight Technologies' products, applications or services, please contact your local Keysight office. The complete list is available at: [www.keysight.com/find/contactus](http://www.keysight.com/find/contactus)



## Данный компонент на территории Российской Федерации

### Вы можете приобрести в компании MosChip.

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9