

ETC® Installation Guide



Unison® DRd Semi-Recessed Installation Kit

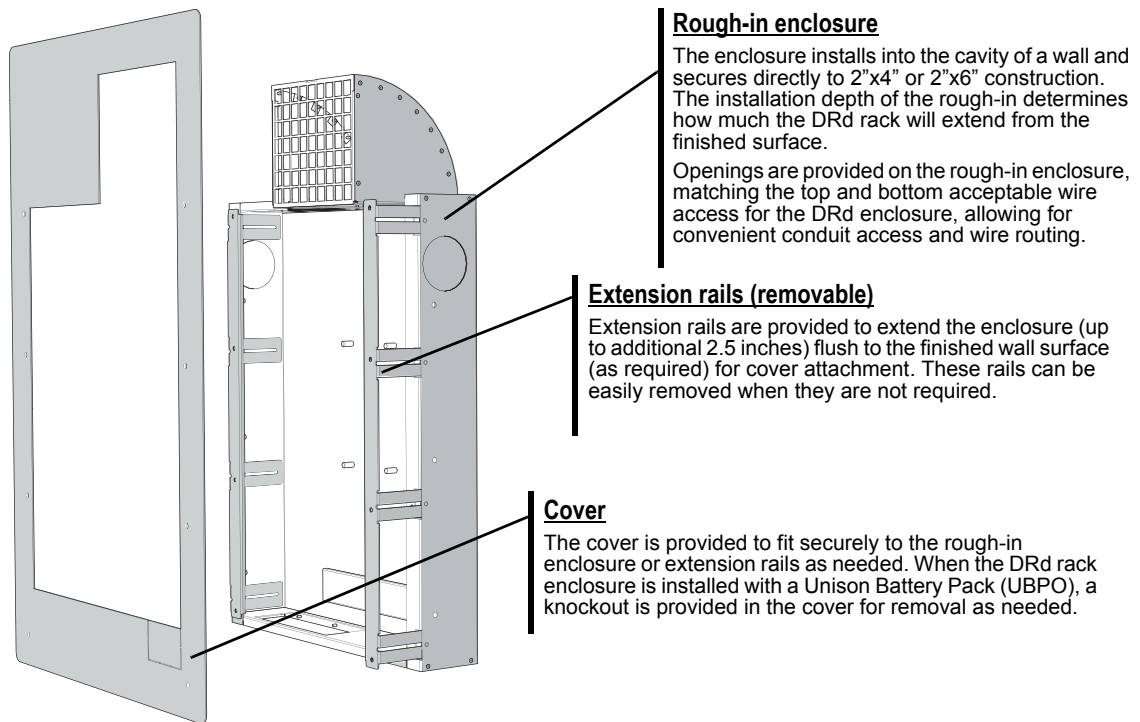
Using this Guide

This document is intended to guide you through the installation of the DRd Semi-Recessed installation kit. Reference the *Unison DRd Rack Enclosure Installation Manual* for instructions that are specific to the installation of the DRd rack including conduit entry, wire specification and termination, installing rack options, checking the rack installation, sealing air leaks, etc.

Return to this guide to finish up the installation including setting the fan speed switch on the dimming engine, re-attaching the DRd rack door, and attaching the cover.

Overview

The Unison DRd Semi-Recessed installation kit provides the ability to partially recess a Unison DRd rack enclosure into a wall.



Two kits are available:

Model	Part Number	Description
DRd6-RIK	7183K1003	DRd 6 Semi-Recessed Installation kit
DRd12-RIK	7183K1002	DRd 12 Semi-Recessed Installation kit

Each kit ships with the following:

- rough-in enclosure with extension rails attached (rails are removable as needed)
- cover
- hardware including:
 - 4 each 5/16 nuts and washers to attach the DRd rack
 - 8 each 10-32 screws to attach the cover
- this installation guide



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Prepare for Installation

Where to Install the Rough-in

The DRd Semi-Recessed installation kit is designed to allow installation of a DRd rack into a wall cavity, between 2"x4" or 2"x6" framed wall studs. The installation depth of the rough-in enclosure determines how much the DRd rack enclosure will extend from the finished surface.



CAUTION: *Unison DRd rack enclosures require at least 17" (432mm) of front clearance and 6" (152mm) of clearance to the left of the DRd rack door hinge from walls or other equipment to allow for installation and removal of modules after installation.*

If you do not allow this clearance, energization, operation and maintenance of your DRd rack enclosure will be significantly difficult.

DRd Rack Enclosure Specification and Installation

Reference the *DRd Rack Enclosure Installation Manual* for rack installation details, including all mechanical, electrical and control wire requirements.

Rough-in Dimensions

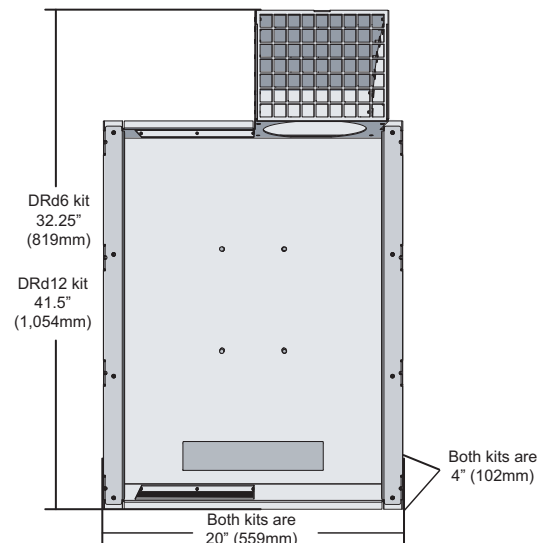
The dimensions in the table below are provided for the rough-in only and do not include the cover or DRd rack measurements for depth.

It is recommended that you install the rough-in at least 36" (915mm) off the floor surface to ensure clear view of the user interface.

The wall framing and blocking must be strong enough to hold the semi-recessed kit and DRd rack fully populated with modules, conduit and wire (approximately 140 lbs / 63.5kg).

The weights noted below are specific to the rough-in only and do not include conduit, hardware, cable, rack and module weights.

For accurate, application-specific, DRd rack enclosure and module weights, reference the *Unison DRd Rack Enclosure Installation Manual*.

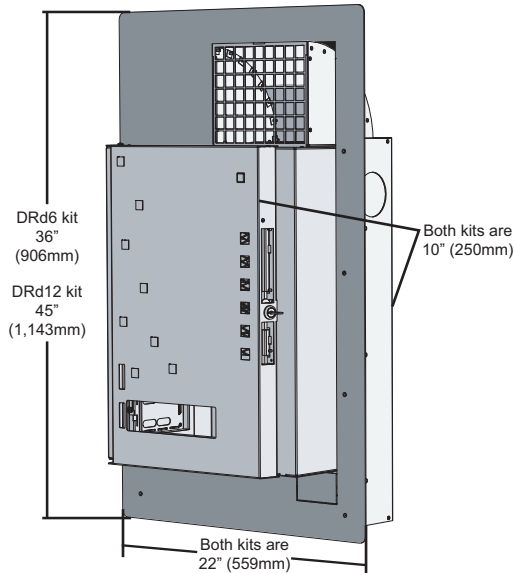


Kit Type	Height		Width		Depth		Semi-recessed kit Product Weight	
	inches	mm	inches	mm	inches	mm	lbs	kgs
DRd6 Semi-Recessed kit	32.25	819	20	448	4	102	15	6.8
DRd12 Semi-Recessed kit	41.5	1,054	20	448	4	102	19	9

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Finished Installation Dimensions



The dimensions in the table below are provided as an estimation of the final installation including a DRd rack enclosure and cover.

Kit / Rack Type	Height		Width		Depth	
	inches	mm	inches	mm	inches	mm
DRd6 Semi-Recessed kit with DRd6 installed	36	906	22	559	10	250
DRd12 Semi-Recessed kit with DRd12 installed	45	1,143	22	559	10	250

Required Tools and Hardware

The items listed below are required (not provided) to install the Semi-Recessed installation kit.

- 6 each 1/4" mounting hardware (lag bolts preferred) for securing the recessed enclosure to framing
- adjustable wrench to secure the DRd rack into the enclosure
- #10 nut driver or socket for extension rail adjustment or removal
- #2 Philips head screwdriver to secure the front cover during final installation

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Installation

Mounting the Rough-in

The wall frame and blocking must be strong enough to hold the Semi-Recessed installation kit and the DRd rack enclosure fully populated with modules, conduit and wire.

Store the cover in a safe location for installation during final installation.

Step 1: Determine where your rack will be installed. It is recommended that you install the rack at least 36" (915mm) off the floor surface to ensure clear view of the user interface.

Step 2: Prepare and construct framing / blocking to the rough opening dimensions specified in [Rough-in Dimensions on page 2](#).



WARNING: Once installed, this product may be in contact with a wall surface in the room behind it.

This could subject a person to electrical shock as well as damage the DRd if objects could be installed, nailed to, or screwed into the opposite wall surface.

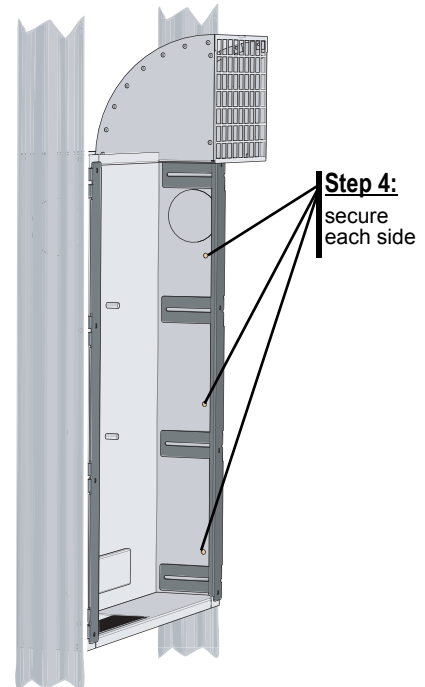
If this risk exists, install a suitable barrier between the recessed enclosure and the opposite wall surface.

Step 3: Align the enclosure between the framed studs, ensuring it is level (flush is not required) to the surface.

Step 4: Locate the three screw holes provided on each side of the enclosure and secure the rough-in enclosure to the wall studs using 1/4" hardware (lag bolts recommended but not provided).

Step 5: Adjust or Remove the extension rails depending on the type of construction framing used for this installation.

- For installations utilizing 2"x4" construction, the extension rails are not required and should be removed. Remove the 10-32 nuts (four per side) that secure the rails to the enclosure.
- For installations utilizing 2"x6" construction, adjust the extension rails to be flush with the drywall or finished surface. Loosen the 10-32 nuts that secure the rails and adjust the rail to the required depth, then re-tighten the 10-32 nuts.



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Plan Conduit Entry and Wire Routing

This section is specific to preparation of the DRd rack for installation into the recessed enclosure. Openings are provided on the top and bottom of the recessed enclosure, providing conduit access to the DRd enclosure.

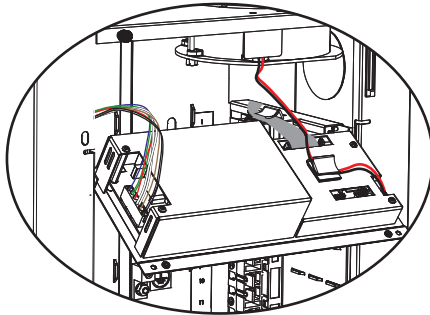


Note:

It may be helpful to temporarily install the DRd rack into the recessed enclosure and mark the opening. This allows for certain placement of conduit entry.

Components on the bottom of the DRd rack prohibit conduit entry in certain locations. A label denoting acceptable conduit access on the bottom panel of the DRd rack defines the acceptable conduit access.

- Step 1: Plan conduit and wire routing to the DRd rack enclosure. Reference the *Unison DRd Rack Enclosure Installation Manual* “Wire Routing and Specification” section to plan wire routing.
- Step 2: Mark the desired conduit access (top, bottom) on the DRd rack. Be sure to read and comply with the label inside the DRd rack which details the recommended access locations for conduit entry into the bottom of the rack.
- Step 3: Remove the power supply/dimming engine access panel to allow for better access in the top of the DRd rack enclosure while roughing-in conduit and cable.



- a: Loosen the two captured screws that secure the access panel.
- b: Gently pull the panel straight down until the top of the access panel is clear of the rack.
- c: Tilt the supply access panel away from the rack.
- d: Disconnect the three cables that are attached to the unit.
- For the cable bundle on the left side, squeeze the tabs on either side of the connector and gently pull the cable until it is free.
 - For the ribbon cable connected on the right rear side, release the tabs on either side of the connector by sliding them opposite the connector then gently pull the cable free.
 - For the two wire cable on the right side, gently pull the connector straight out.

Step 4: Punch holes into the planned conduit entry location of the DRd rack and install conduit fittings or insert lining materials in the conduit opening.

Step 5: Be sure there are minimal air gaps. Reference the *Unison DRd Rack Enclosure Installation Manual*, “Sealing Rack Air Leaks” for instruction.



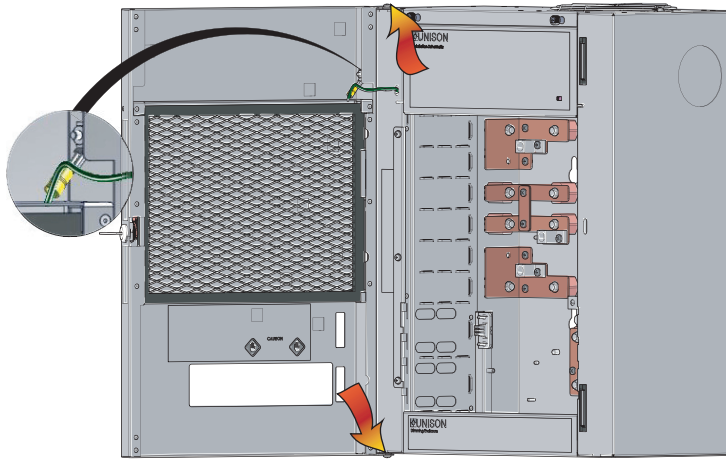
CAUTION:

Wire openings must have fittings, bushings, grommets or fiche paper lining material to protect the wire and cable insulation from damage by sharp metal edges, and to prevent air leaks.

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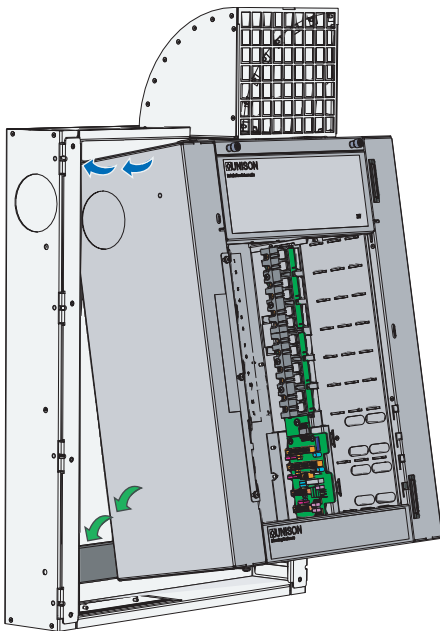
Install DRd Rack Enclosure



Step 1: Remove the DRd rack enclosure door before installing the DRd into the recessed enclosure.

- Open the rack door and separate the ground cable between the rack and the door by pulling the faston tab free.
- Remove the screw securing the bottom of the rack.
- Remove the screw securing the top of the rack and the door should be free.

Step 2: Store the rack door and hardware in a safe location until final installation.



Step 3: Insert the DRd rack into the recessed enclosure.

- a: Angle the DRd rack top side first into the recessed enclosure first, clearing the fan grill and any conduit fittings (if any).
- b: Then rest the bottom edge of the DRd on the small ledge that is provided on the back pane of the enclosure. The keyholes on the rear panel of the DRd should align to the threaded studs on the recessed enclosure.

Step 4: Secure the DRd rack into place using four 5/16" nuts and washers provided. Tighten the hardware securely.

Complete DRd Rack Installation

Refer to the *Unison DRd Rack Enclosure Installation Manual*, to complete the DRd rack installation.

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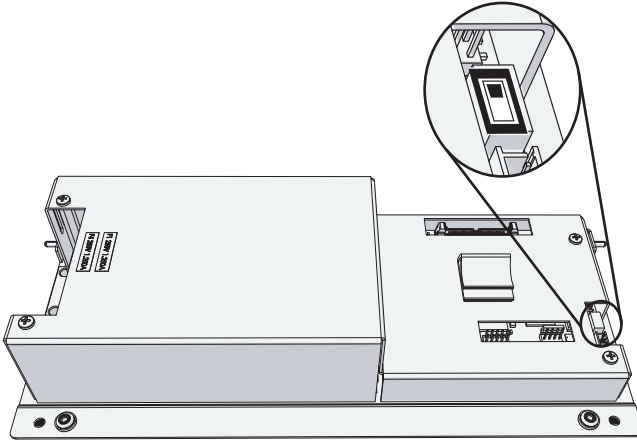
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Final Installation

Power Supply / Dimming Engine Access Panel

The power supply/dimming engine was removed from the DRd rack prior to installing conduit and termination wires. Before reinstalling this access panel you must change the fan speed switch setting.

Set Fan Speed Switch



Set the fan speed switch to the aft position, away from the 2-pin wire harness connector.

This switch must be set prior to power up as it determines what the fan speed will be when run in a recessed rack mode.

Re-install the Power Supply / Dimming Engine Access Panel

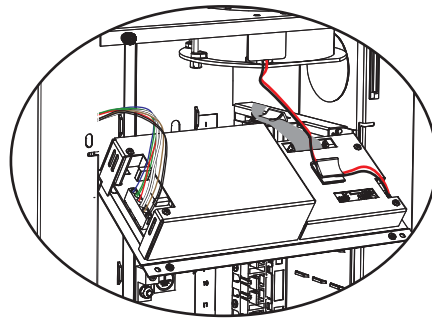
Step 1: Replace the dimming engine.

a: Align the panel perpendicular to the enclosure.

b: Align the guide pins into the top of the guide slots on the DRd.

c: Slide the panel down the guided slots.

Step 2: Reconnect the three cables to the panel:



a: For the cable bundle on the left side, push the cable into the connector. The black wire will be closest to you and the blue will be farthest away. The first and sixth pins are flat on one side to prevent the cable from being connected the wrong way.

b: For the ribbon cable on the right rear side, gently push the cable into the connector. The tabs on the sides of the connector will close when the cable is properly connected. The ribbon cable has a small tab to prevent it from being connected the wrong way. The tab will be toward the rear of the enclosure.

c: For the two-wire cable on the right side, gently push the connector straight down. The black wire will be toward the right side of the rack, and the red will be toward the left.

Step 3: Rotate / tilt the dimming engine toward the rack enclosure.

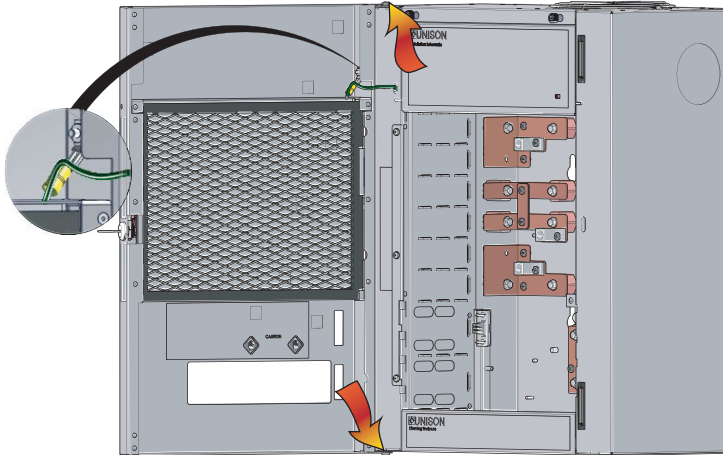
Step 4: Gently push the dimming engine up.

Step 5: Tighten the two captured screws to secure the panel to the rack.

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Install DRd Rack Door



Use whichever sequence you prefer to re-attach the DRd rack door to the enclosure, ensuring the top screw and bottom screw, as well as the ground spade are re-installed. The following sequence has proven to be successful.

- Step 1: Align the door to the enclosure in the closed position. The top and bottom hinge brackets should be aligned over the screw holes.



Note:

The DRd enclosure and rack door are provided with magnets that help maintain the door in a closed position during unlocked operation. DO NOT rely on this magnet to hold the door when it is unassisted and unattached.

Step 2: Install the top and bottom screws.

Step 3: Re-attach ground spade to its receptacle on the rack door.

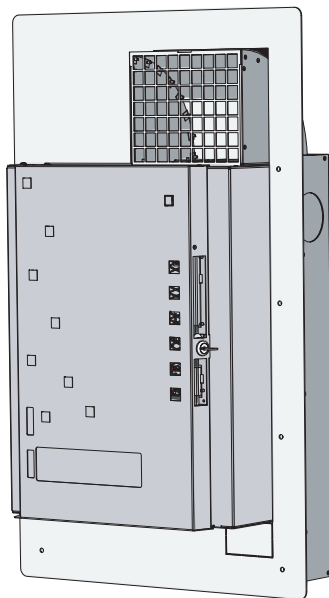
Install Semi-Recessed Finished Cover

The finished cover for this installation kit simply installs over the DRd rack, securing with screws directly to the rough-in enclosure or the extension rails, if they are used.



Note:

*Before attaching the cover, notice that it is provided with a removable panel located on the lower right hand corner. Remove this panel (similar to a knockout) **ONLY** if the DRd rack is installed with a Unison Battery Pack (UBPO).*



Attach the cover using the eight 10-32 screws provided.