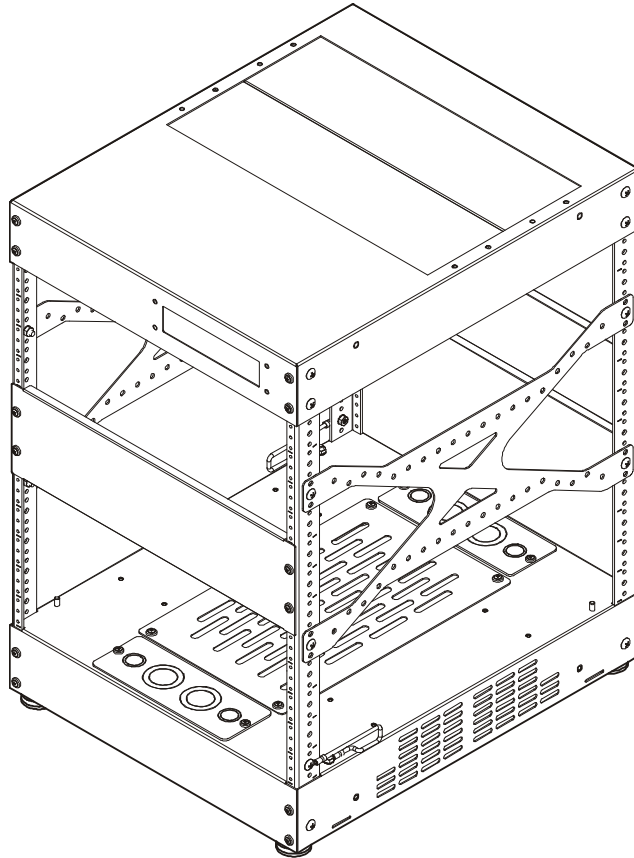


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# INSTALLATION INSTRUCTIONS

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## Knockdown Racks

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**! IMPORTANT WARNINGS AND CAUTIONS!**

**! WARNING:** A WARNING alerts you to the possibility of serious injury or death if you do not follow the instructions.

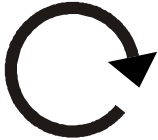
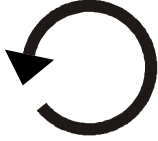


**! CAUTION:** A CAUTION alerts you to the possibility of damage or destruction of equipment if you do not follow the corresponding instructions.

**! WARNING:** Failure to read, thoroughly understand, and follow all instructions can result in serious personal injury, damage to equipment, or voiding of factory warranty! It is the installer's responsibility to make sure all components are properly assembled and installed using the instructions provided.

**! WARNING:** Exceeding the weight capacity can result in serious personal injury or damage to equipment! It is the installer's responsibility to make sure the combined weight of all components located within the rack does not exceed 500 lbs (226.8 kg). Use with products heavier than the maximum weight indicated may result in instability or collapse of the rack causing possible injury.

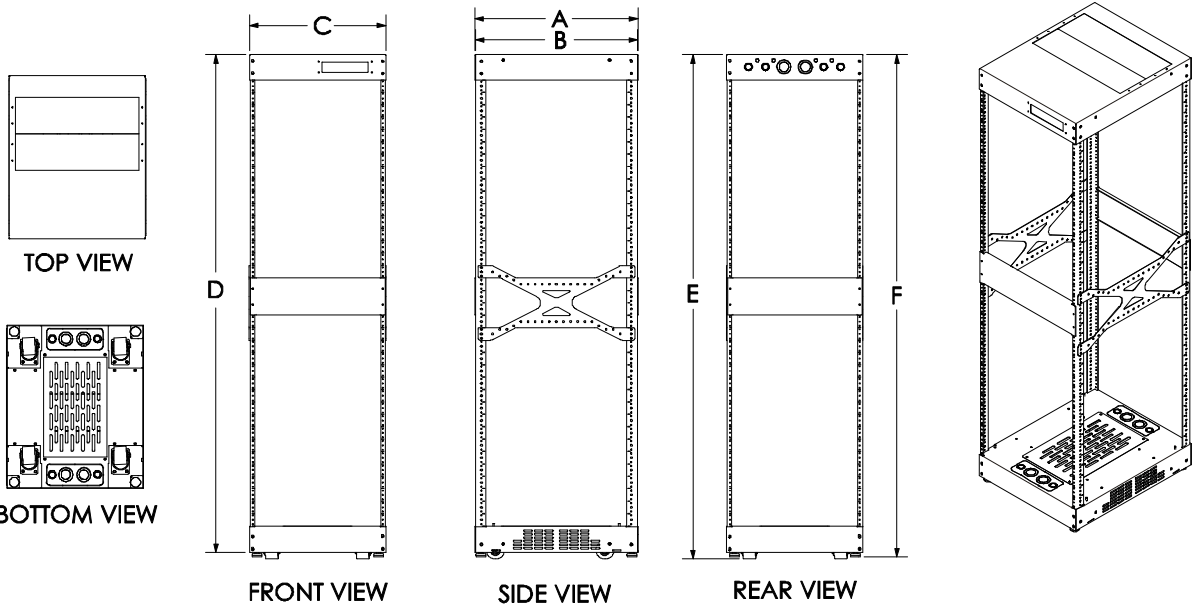
**IMPORTANT ! :** Minimum spacings between the Accessories and components and the (ITC/AV) Rack Enclosure shall be maintained for safe operation of the equipment when installed in accordance with the National Electric Code, ANSI/NFPA 70-2008. Operating temperature inside rack shall not exceed 104° F.

**LEGEND**

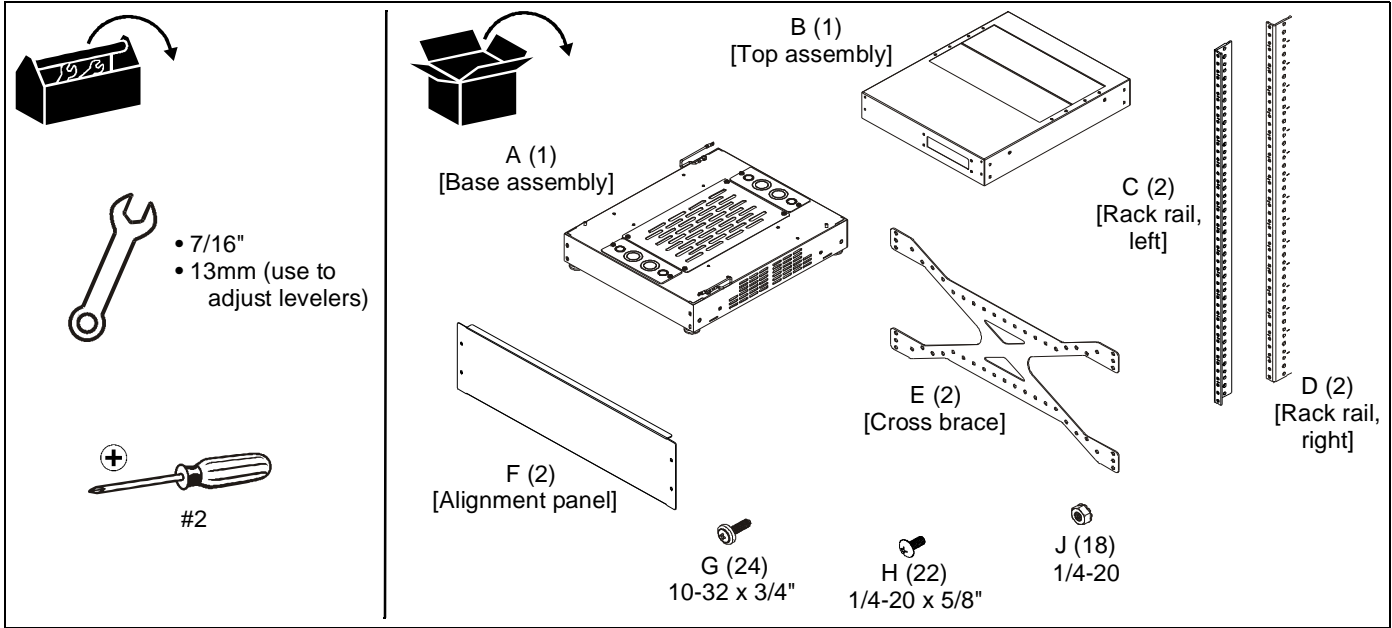
	<b>Tighten Fastener</b>
	Apretar elemento de fijación
	Befestigungsteil festziehen
	Apertar fixador
	Serrare il fissaggio
	Bevestiging vastdraaien
Serrez les fixations	
	<b>Loosen Fastener</b>
	Aflojar elemento de fijación
	Befestigungsteil lösen
	Desapertar fixador
	Allentare il fissaggio
	Bevestiging losdraaien
Desserrez les fixations	
	<b>Open-Ended Wrench</b>
	Llave de boca
	Gabelschlüssel
	Chave de bocas
	Chiave a punte aperte
	Steeksleutel
Clé à fourche	
	<b>Phillips Screwdriver</b>
	Destornillador Phillips
	Kreuzschlitzschraubendreher
	Chave de fendas Phillips
	Cacciavite a stella
	Kruiskopschroevendraaier
Tournevis à pointe cruciforme	

**DIMENSIONS**

MODEL	WEIGHT CAPACITY LBS (KG)	RACKING HEIGHT UNITS	OVERALL DEPTH (A) IN (MM)	USABLE DEPTH (B) IN (MM)	WIDTH (C) IN (MM)	HEIGHT (D) IN (MM)	HEIGHT W/CASTERS (E) IN (MM)	HEIGHT W/MIN. LEVELER (F) IN (MM)
NS1F1223	500 LBS (226.8)	12	23 (584.2)	22.6 (574.0)	19.25 (489.0)	28.4 (720.3)	29.2 (742.4)	29.1 (741.7)
NS1F2023	500 LBS (226.8)	20	23 (584.2)	22.6 (574.0)	19.25 (489.0)	42.4 (1077)	43.2 (1097.3)	43.1 (1094.7)
NS1F2823	500 LBS (226.8)	28	23 (584.2)	22.6 (574.0)	19.25 (489.0)	56.4 (1432.6)	57.2 (1452.9)	57.1 (1450.3)
NS1F3623	500 LBS (226.8)	36	23 (584.2)	22.6 (574.0)	19.25 (489.0)	70.4 (1788.2)	71.2 (1808.5)	71.1 (1805.9)
NS1F4123	500 LBS (226.8)	41	23 (584.2)	22.6 (574.0)	19.25 (489.0)	84.4 (2143.8)	85.2 (2164.1)	85.1 (2161.5)
NS1F1228	500 LBS (226.8)	12	28 (711.2)	27.6 (701.0)	19.25 (489.0)	28.4 (720.3)	29.2 (742.4)	29.1 (741.7)
NS1F2028	500 LBS (226.8)	20	28 (711.2)	27.6 (701.0)	19.25 (489.0)	42.4 (1077)	43.2 (1097.3)	43.1 (1094.7)
NS1F2828	500 LBS (226.8)	28	28 (711.2)	27.6 (701.0)	19.25 (489.0)	56.4 (1432.6)	57.2 (1452.9)	57.1 (1450.3)
NS1F3628	500 LBS (226.8)	36	28 (711.2)	27.6 (701.0)	19.25 (489.0)	70.4 (1788.2)	71.2 (1808.5)	71.1 (1805.9)
NS1F4128	500 LBS (226.8)	41	28 (711.2)	27.6 (701.0)	19.25 (489.0)	84.4 (2143.8)	85.2 (2164.1)	85.1 (2161.5)



**PARTS AND TOOLS REQUIRED**



**ASSEMBLY**

**NOTE:** If optional casters will be added to the base assembly, install them now following instructions included with the optional casters. Leave levelers installed and adjust them using a 13mm wrench so they are as close to the floor as possible, yet still allow movement of the rack on the casters.

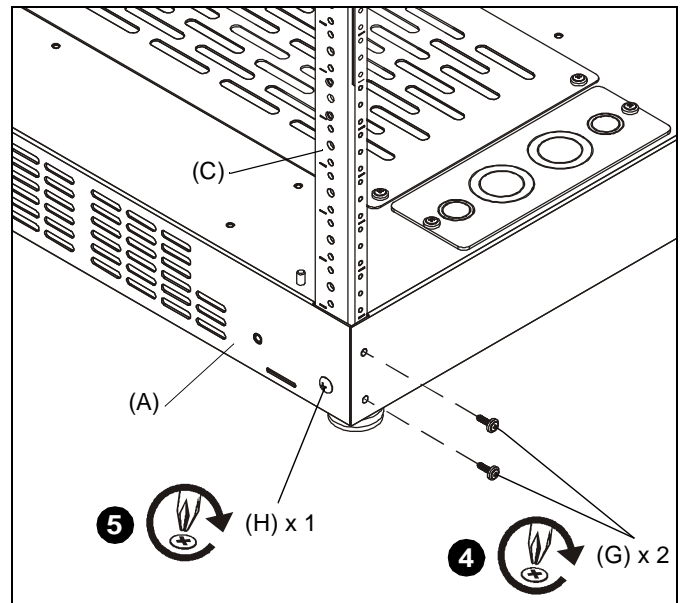
- Install two 10-32 x 3/4" Phillips head screws (G) through base assembly (A) into rack rail (C) and tighten. (See Figure 2)
- Tighten Phillips truss head machine screw (H) which was partially installed in Step 3. (See Figure 2)
- Repeat Steps 2-5 for three remaining corners of base assembly.

**Adding Rack Rails**

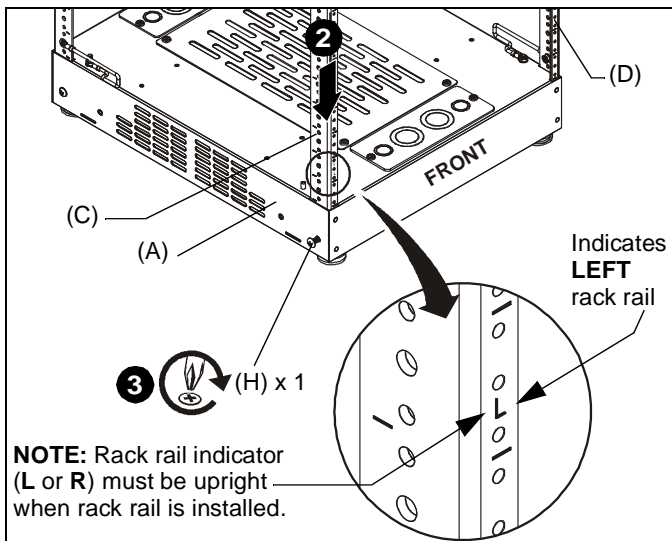
- Place base assembly upright onto foot levelers or optional casters.
- Lower one left rack rail (C) into one corner of base assembly (A). (See Figure 1)

**IMPORTANT ! :** Partial install of Phillips truss head machine screw (H) should be done **BY HAND** before completing Steps 4 through 6.

- Partially install (by hand) one 1/4-20 x 5/8" Phillips truss head machine screw (H) (approximately five turns) into the base assembly (A). (See Figure 1)



**Figure 2**



**Figure 1**

### Attaching Top Assembly

1. Place top assembly (B) onto the four installed rack rails. (See Figure 3)
2. Insert and tighten two 10-32 x 3/4" Phillips head screws (G) through top assembly (B) into rack rail. (See Figure 3)
3. Insert two 1/4-20 x 5/8" Phillips truss head machine screws (H) through top assembly (B) and rail rack, into two 1/4-20 keps nuts (J). (See Figure 3)

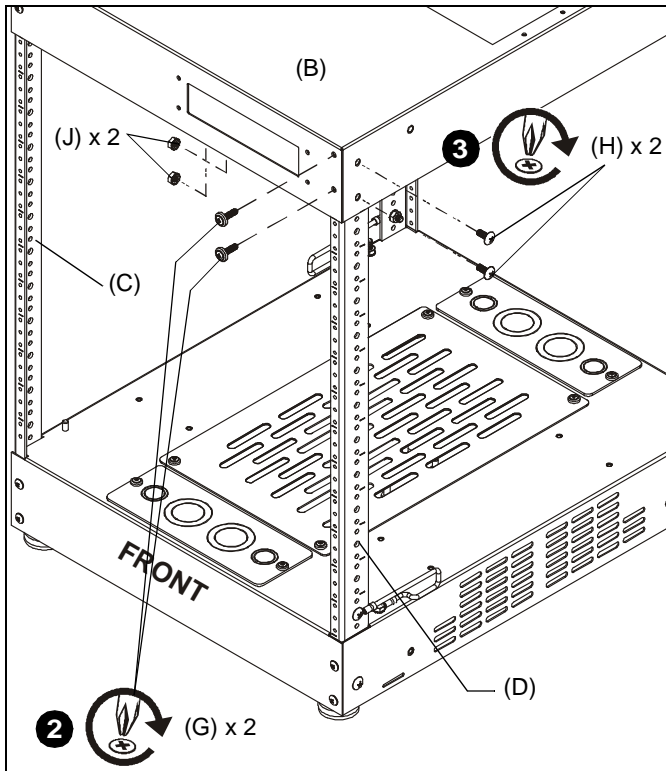


Figure 3



**CAUTION:** Install alignment panels and cross braces, VERTICALLY CENTERED on the rack rails, BEFORE loading components into the rack.

### Attaching Cross Braces

1. Attach cross brace (E) to side of S1 rack using four 1/4-20 x 5/8" Phillips truss head machine screws (H) with four 1/4-20 keps nuts (J). (See Figure 4)
2. Repeat for opposite side of S1 rack. (See Figure 4)

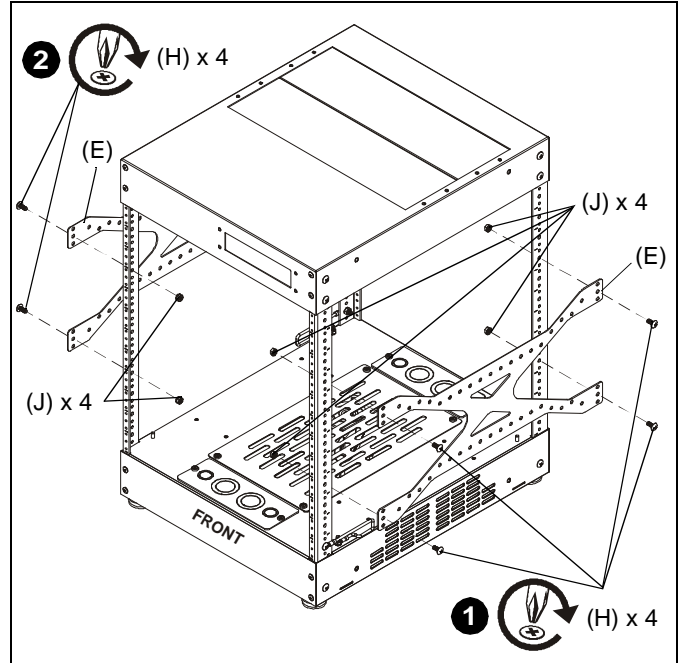


Figure 4

### Attaching Alignment Panels

1. Vertically center the alignment panel (F) on the rack rails, and attach using four 10-32 x 3/4" Phillips head screws (G). (See Figure 5)
2. Repeat for back of S1 rack. (See Figure 5)

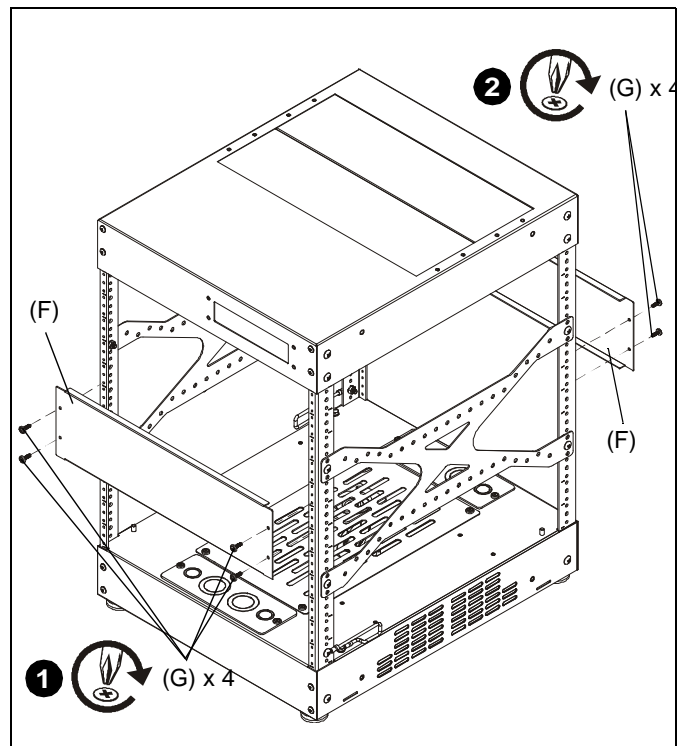


Figure 5

**Attaching Optional Side Panels, Optional Doors**

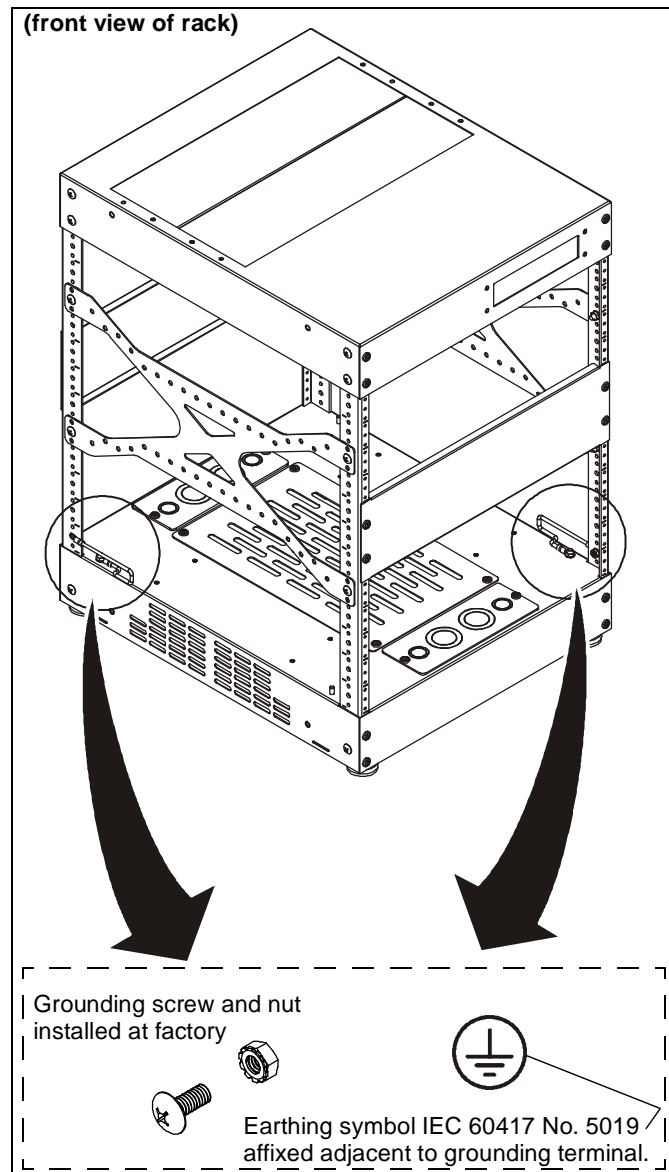
**IMPORTANT !** : If installing doors (not included) and side panels (not included) on an S1 rack, the doors must be installed **before** installing the side panels.

1. If desired, add optional door(s) (not included) to the rack following instructions included with the door(s).

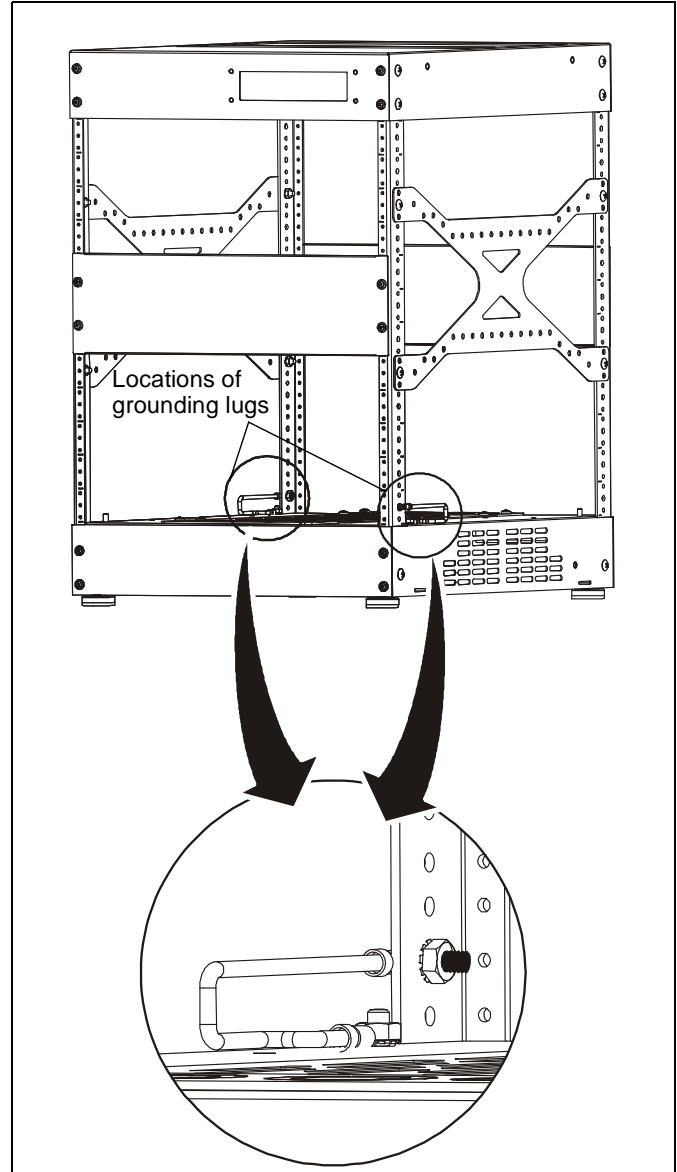
**IMPORTANT !** : If the door(s) are to be attached with the pull-ring handle on the right side, the grounding screw, washer and wire already installed on the door must be removed and reinstalled on the opposite end of the door before the door is installed. See instructions included with the door(s).

2. If desired, add optional side panels (not included) to the rack following instructions included with the panel(s).

**NOTE:** If NOT adding door(s), proceed to Step 4 of **Completing Installation** section.



**Figure 6**



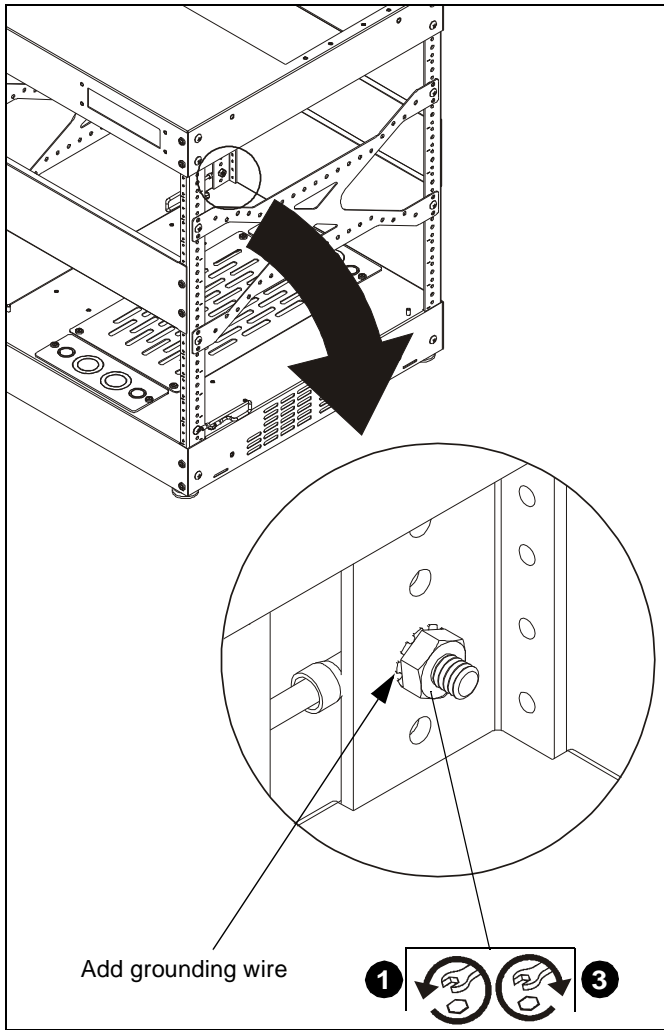
**Figure 7**



**DANGER:** IMPROPER WIRING CAN LEAD TO DEATH OR SEVERE PERSONAL INJURY! Grounding must be installed by qualified personnel using a UL Recognized No. 12AWG Green and Yellow grounding wire connected to grounding lug on rack.

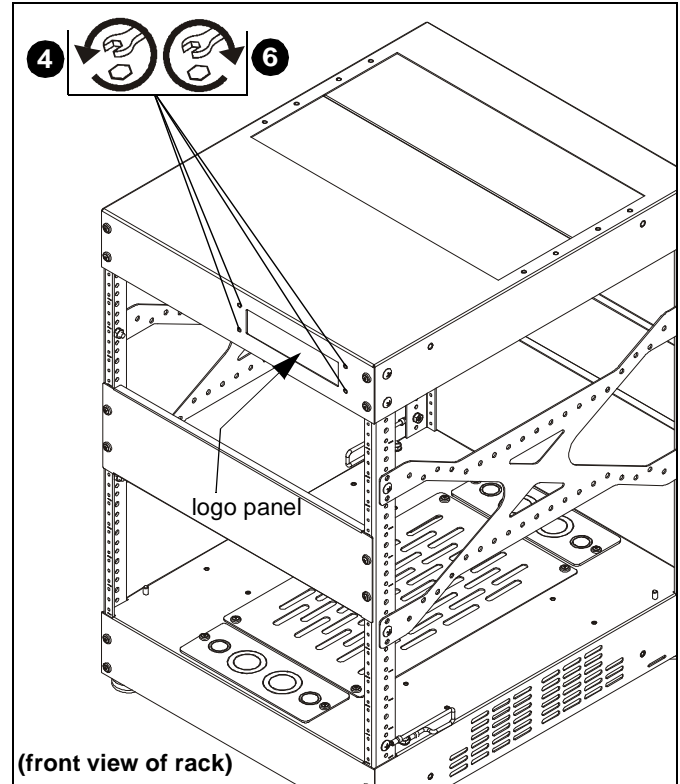
**Completing Installation**

1. Remove and save 1/4" nut from the grounding lug on rack rail. (See Figure 8)
2. Attach grounding wire from door to the grounding lug. (See Figure 8)
3. Replace and tighten nut onto grounding lug. (See Figure 8)



**Figure 8**

4. Change optional logo panel by removing and saving 4 nuts from studs at inside top of front. (See Figure 9)
5. Remove blank panel and replace with optional personalized logo panel. (See Figure 9)
6. Replace and tighten four nuts removed in Step 4.



**Figure 9**

**LOADING THE RACK**

**Load Distribution**



**CAUTION:** BEGIN PLACEMENT OF LOAD AT BOTTOM OF RACK! Load rack, moving from bottom toward top of rack. Loading rack incorrectly may result in instability causing possibly injury and/or damage to components.

1. Begin placement of components into the rack at the lowest point.
2. Continue placing items into the rack, moving from the bottom upward.



**CAUTION:** DISTRIBUTE LOAD CORRECTLY! Load rack with 2/3 total weight of components in the lower half of rack. Loading rack incorrectly may result in instability causing possible injury and/or damage to components.



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<b>USA/International</b>	<b>A</b> 6436 City West Parkway, Eden Prairie, MN 55344
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	<b>F</b> 877.894.6918 / 952.894.6918
<b>Europe</b>	<b>A</b> Franklinstraat 14, 6003 DK Weert, Netherlands
	<b>P</b> +31 (0) 495 580 852
	<b>F</b> +31 (0) 495 580 845
<b>Asia Pacific</b>	<b>A</b> Office No. 1 on 12/F, Shatin Galleria 18-24 Shan Mei Street Fotan, Shatin, Hong Kong
	<b>P</b> 852 2145 4099
	<b>F</b> 852 2145 4477

