

INSTALLATION INSTRUCTIONS

Integris® B Lite Rail From Hill-Rom



Product No. P2003B

For Parts or Technical Assistance

is443rd

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Integris® B Lite Rail Installation Instructions

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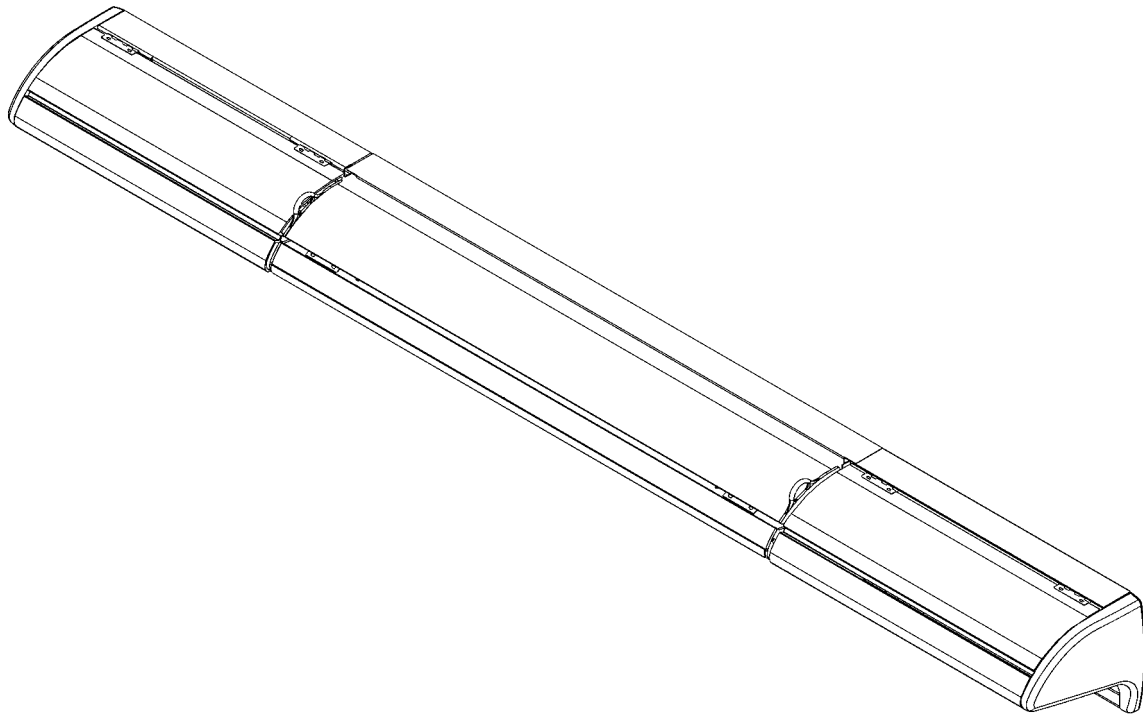
NOTES:

Subject: **Integris® B Lite Rail Installation Instructions**

Introduction

Prior to installation, carefully read all of the installation instructions for the components you are installing. This installation instruction sheet describes how to install the Integris® B Lite Rail either as a stand-alone light or as part of an Integris® Headwall System (see figure 1 on page 1).

Figure 1. Integris® B Lite Rail



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Tools required:	Standard drill/power screwdriver	#2 phillips head screwdriver
	¼" drill bit	Medium screwdriver
	3/8" drill bit	Large screwdriver
	7/8" spade bit	11/32" open end wrench
	1" spade bit	5/16" hex head nutdriver
	Ratchet wrench	3/8" hex head nutdriver
	Tape measure	Level
	Chalk line	Ladder
	Rubber mallet or block and hammer	Putty knife

Related Documents: *Integris® Patient Light Service Manual (man139)*
Integris® Headwall System (P2002B), Vertical Chase (with and without Breaker Panel), and Bed Locator (P201603) Installation Instructions (is432)
Integris® Headwall System (P2002B) (Chaseless) and Bed Locator (P201603) Installation Instructions (is433)
Integris® Headwall System (P2001B) and Vertical Chase Installation Instructions (is444)
Integris® Headwall System (2001B) Installation Instructions (is445)

Order of Installation

1. Ensure that the wall meets the required specifications:
 - On **non-seismic** construction, make certain the walls are constructed of at least 20 gauge steel studs on 16" (41 cm) centerlines and covered with a minimum of 5/8" (15.9 mm) dry wall.
 - On **seismic** construction requirements, contact Hill-Rom Technical Support at 800-445-3720.
2. On the Integris® B Lite Rail **without** a vertical chase, perform the following:
 - a. Install the rough-in.
 - b. Install the hanger bracket(s).
 - c. Install the Integris® B Lite Rail.
3. On the Integris® B Lite Rail **with** a vertical chase, perform the following:
 - a. Install the hanger bracket(s).
 - b. Install the Integris® B Lite Rail.
4. Mount multiple sections (see “Mounting Multiple Sections” on page 18).
5. Perform **one** of the following:
 - Adjust the service cover support bracket.
 - Install the transition tie plate (see “Installing the Transition Tie Plate (Optional)” on page 20).
6. Install the accessories.

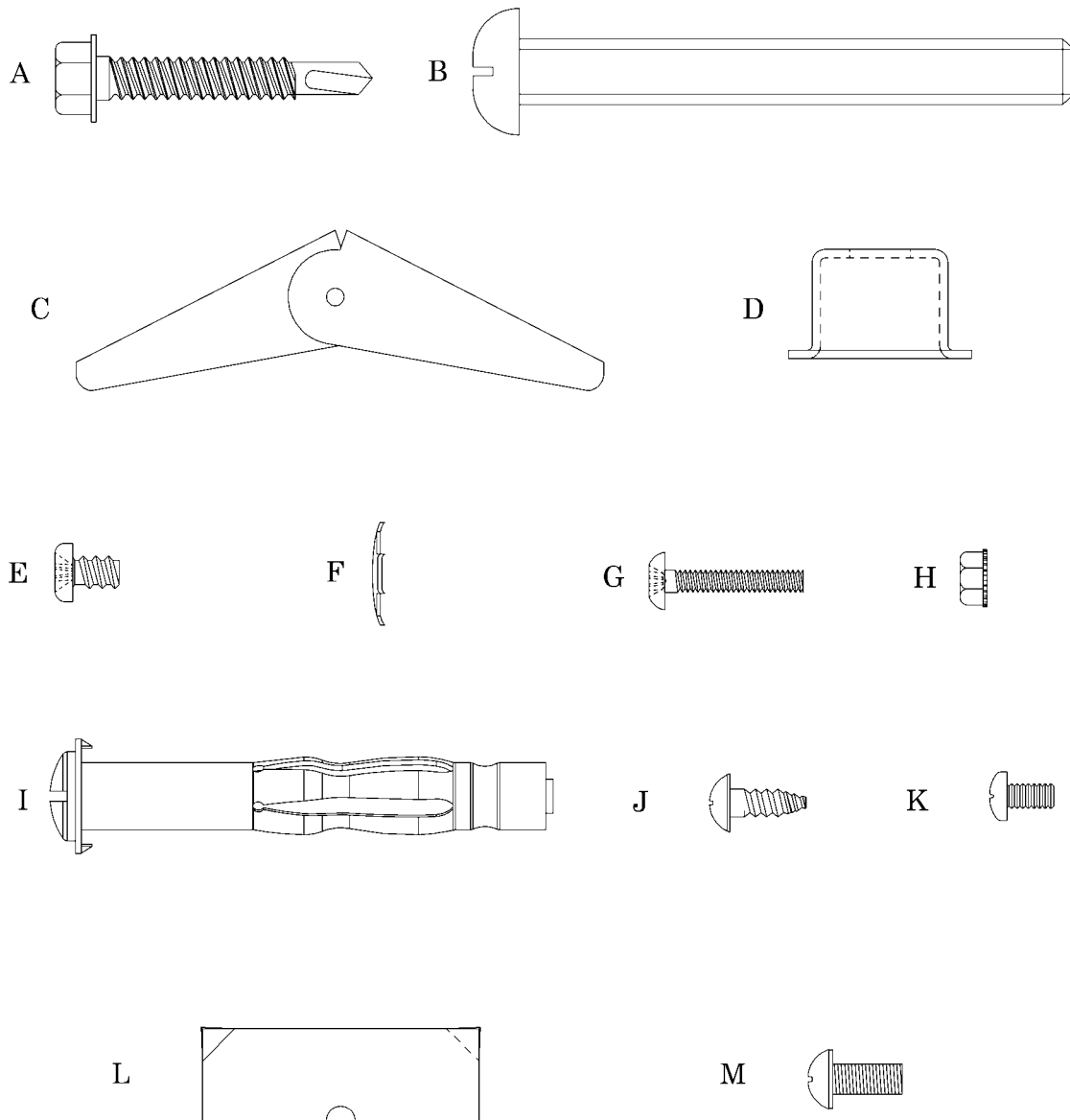
Fastener Identification

In the following installation instructions, the fasteners are referred to by callout letter (see table 1 on page 3) (see figure 2 on page 4).

Table 1. Fastener Callout Letters

Callout Letter	Description
A	Screw, #12-14 x 1½", self-drilling, hex head
B	Screw, 3/8"-16 x 3", slotted, round
C	3/8"-16 toggle wing
D	Cup washer
E	Screw, #8-¼", pan head
F	#8 lockwasher—dish-type
G	Screw, #6-32 x ¾", truss head
H	#8-32 locknut
I	3/16" screw anchor, long-type
J	Screw, #8-36 x 3/8", pan head
K	Screw, #6 x ¼", pan head
L	Locking plate
M	Screw, #6 x 3/8", type B, truss head

Figure 2. Fasteners



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Determining the Wall and Construction Type



WARNING:

The installation method differs for each wall and construction type. Failure to determine the wall and construction type could result in the collapse of the Integris® B Lite Rail. Personal injury or equipment damage could occur.

1. Before proceeding, refer to the local or state building codes, and determine the wall type and construction type:
 - **Seismic** walls are constructed to prevent damage from an earthquake.
 - **Non-seismic** walls are **not** constructed to prevent damage from an earthquake.
 - **Fire-rated** walls are constructed to prevent the spread of fire.
 - **Non-fire-rated** walls are **not** constructed to prevent the spread of fire.
2. Perform **one** of the following:
 - On **seismic** walls, contact Hill-Rom Technical Support at 800-445-3720.
 - For **non-seismic** walls (both **fire-rated** and **non-fire-rated**), install wall backing plates according to the Office of Statewide Health, Planning, and Development (OSHPD)-approved drawings and the as-built drawings, and then go to “Installing the Electrical Rough-In” on page 5.

Installing the Integris® B Lite Rail (without a Vertical Chase)

Installing the Electrical Rough-In

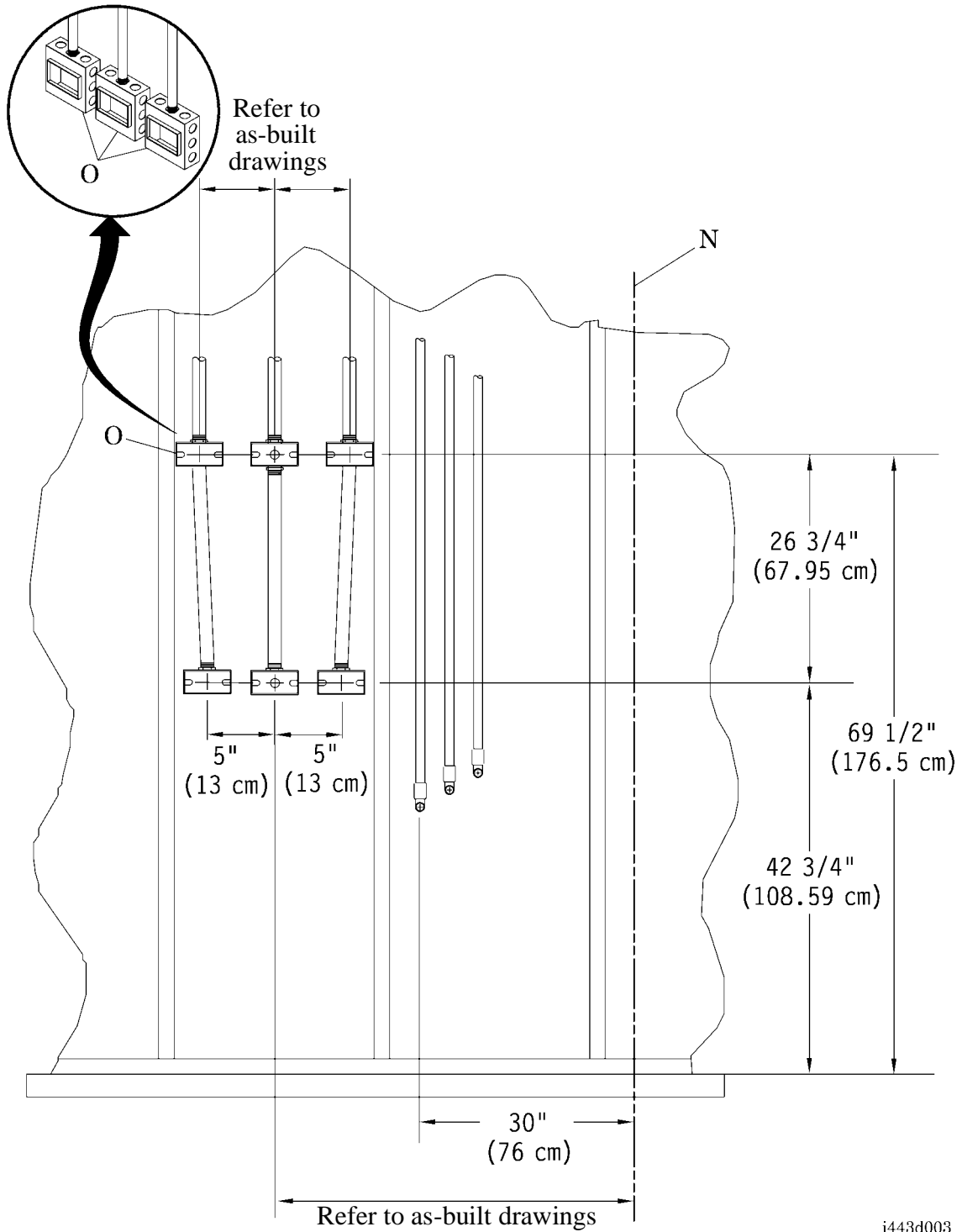
NOTE:

When there is no vertical chase, install the electrical rough-in before installing the hanger bracket and Integris® B Lite Rail.

1. To determine the bed centerline (N), refer to the as-built drawings for the Integris® B Lite Rail (see figure 3 on page 6).
2. Install the Integris® B Lite Rail electrical rough-in (O) according to section 517 of the *National Electrical Code*®¹ (NEC®²), NFPA 70.

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Figure 3. Integris® B Lite Rail Electrical Rough-In



Installing the Hanger Bracket(s)



WARNING:

Ensure that no electrical power is supplied to the installation site. Personal injury or equipment damage could occur.

1. Remove electrical power to the installation site.



WARNING:

The installation method differs for each wall and construction type. Failure to determine the wall and construction type could result in the collapse of the Integris® B Lite Rail. Personal injury or equipment damage could occur.

NOTE:

When installing multiple Integris® B Lite Rails, do not allow the breaks between the hanger brackets to align with the breaks between the Integris® B Lite Rail assemblies, and ensure that all hanger brackets are level with the first one installed.

2. Ensure that the wall meets the required specifications:
 - On **non-seismic** construction, make certain the walls are constructed of at least 20 gauge steel studs on 16" (41 cm) centerlines and covered with a minimum of 5/8" (15.9 mm) dry wall.
 - On **seismic** construction requirements, contact Hill-Rom Technical Support at 800-445-3720.
3. Position the hanger bracket(s) (P) and (Q) on the wall as follows (see figure 4 on page 8):
 - a. To determine the distance to the end of the Integris® B Lite Rail (R) from the bed centerline (N), refer to the as-built drawing.
 - b. Measure in 1" (3 cm) from the end of the Integris® B Lite Rail (R) to position the end of the Integris® B Lite Rail hanger bracket (P).
 - c. At 1 5/16" (3.33 cm) up from the centerline of the wall box (S), strike a horizontal line (T) to indicate the bottom of the Integris® B Lite Rail hanger bracket (P).

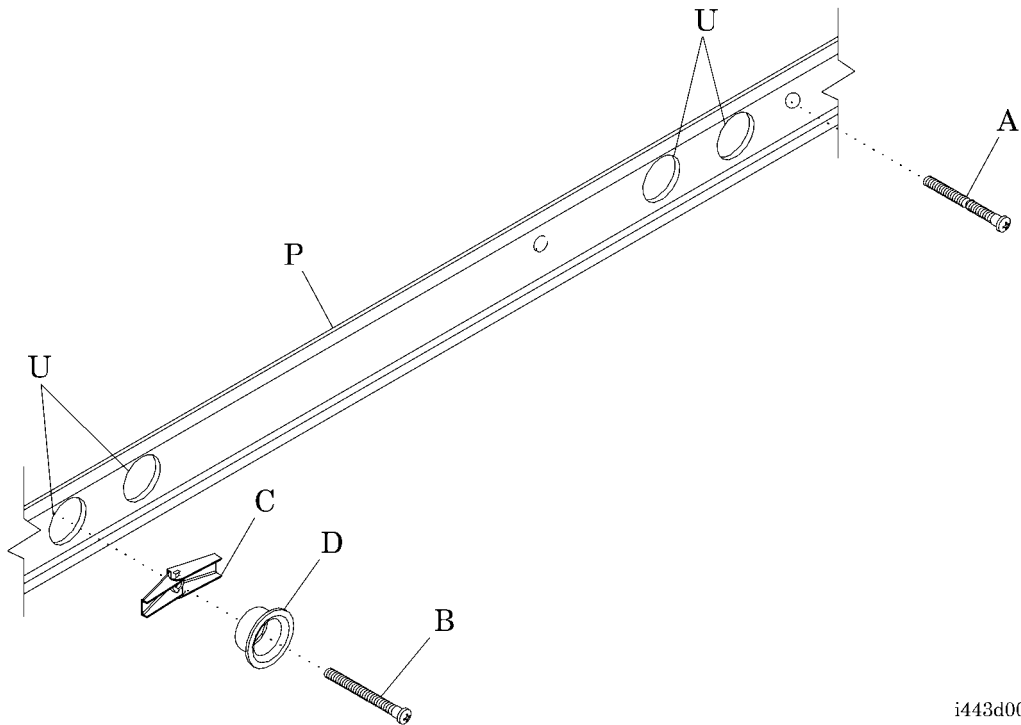
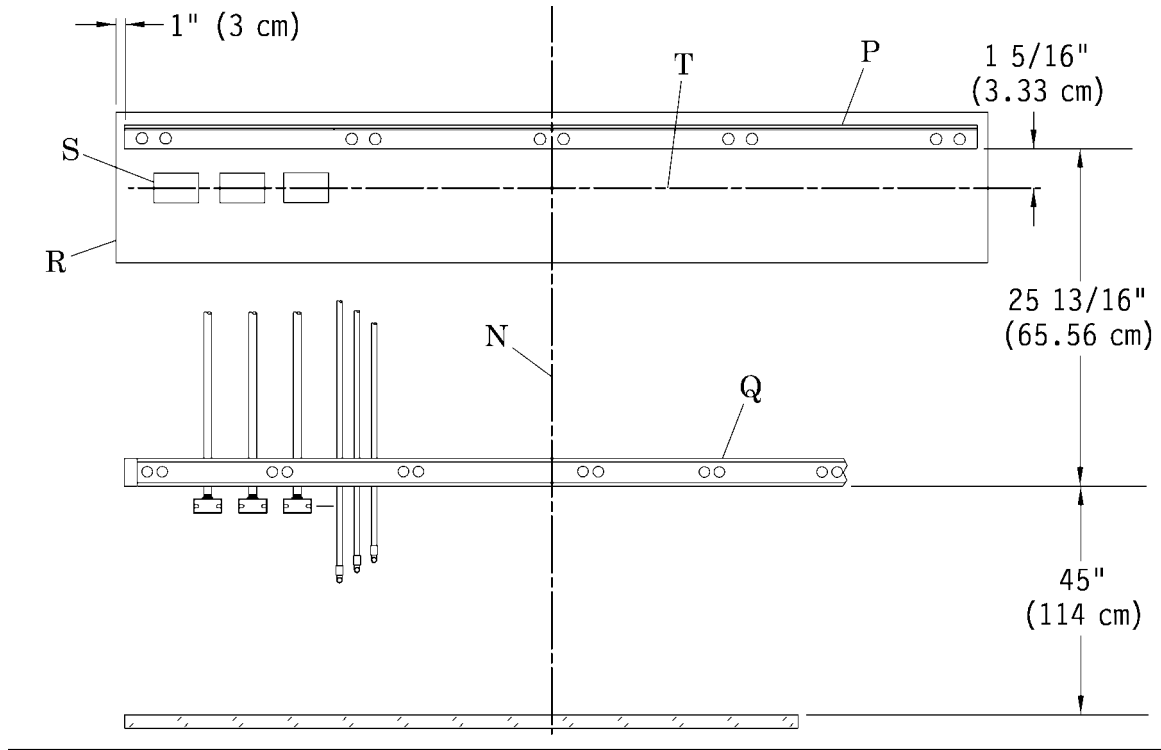


CAUTION:

The distance from the bottom of the Integris® B Lite Rail hanger bracket to the bottom of the raceway hanger bracket is 25 13/16" (65.56 cm). This dimension is critical. Failure to hold this dimension could result in some accessories not fitting properly.

4. Ensure that the distance from the bottom of the Integris® B Lite Rail hanger bracket (P) to the bottom of the raceway hanger bracket (Q) is 25 13/16" (65.56 cm).

Figure 4. Hanger Bracket Installation



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5. For **non-seismic** and **non-fire-rated walls**, perform the following:
 - a. Mark both pairs of 1" (3 cm) holes (U) in the Integris® B Lite Rail hanger bracket (P).
 - b. Drill only one 1" (3 cm) hole in the dry wall at each pair of 1" (3 cm) holes (U) in the Integris® B Lite Rail hanger bracket (P). If an obstruction or wall stud is in the way, use the alternate 1" (3 cm) hole (U).
6. Align the bottom of the Integris® B Lite Rail hanger bracket (P) with the horizontal line (T), and secure the Integris® B Lite Rail hanger bracket (P) using the appropriate fasteners:
 - On **seismic** construction, install the self-drilling hex head screws (A) to secure the Integris® B Lite Rail hanger bracket (P) to the wall.
 - On **non-seismic, non-fire-rated** construction, install the slotted round screws (B), toggle wings (C), and cup washers (D) to secure the Integris® B Lite Rail hanger bracket (P) to the wall.
 - On **fire-rated** walls, install the self-drilling hex head screws (A) to secure the Integris® B Lite Rail hanger bracket (P) to the wall stud or backing plate.



WARNING:

Install one fastener approximately every 16" (41 cm) to the wall stud or backing plate along the hanger bracket. Failure to properly anchor the hanger bracket could cause the Integris® B Lite Rail to collapse. Personal injury or equipment damage could occur.

7. Verify that a fastener is installed approximately every 16" (41 cm) to the wall stud or backing plate along the Integris® B Lite Rail hanger bracket (P).



CAUTION:

When installing multiple hanger brackets, ensure that they are all level with the first hanger bracket installed. Failure to do so could result in equipment damage.

8. Verify that hanger bracket(s) (P) and/or (Q) are level.
9. If the wall has waviness exceeding 1/16" (1.6 mm) per Integris® B Lite Rail hanger bracket (P), perform the following:
 - a. At the low spot(s), loosen the toggle wing (C).
 - b. Shim behind the Integris® B Lite Rail hanger bracket (P).
 - c. Tighten the toggle bolt (C).

Installing the Integris® B Lite Rail

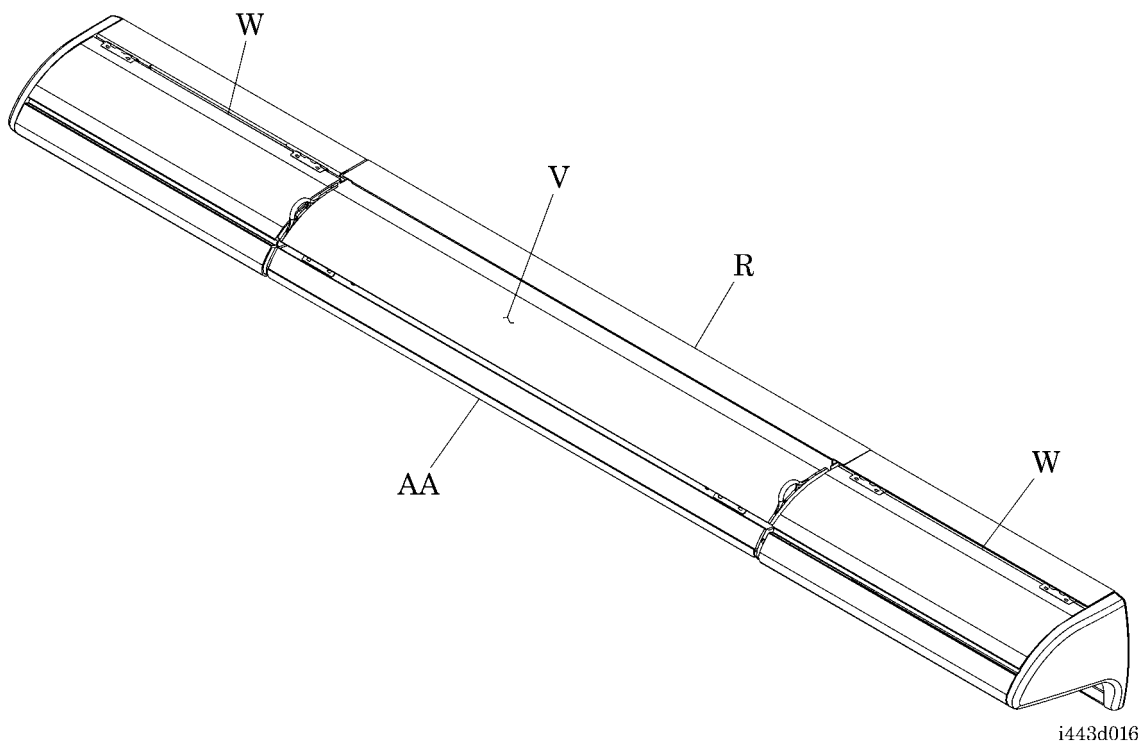


SHOCK HAZARD:

Ensure that no electrical power is supplied to the installation site. Personal injury or equipment damage could occur.

1. Remove electrical power to the installation site.
2. Check the location of the rough-in (O) (see figure 3 on page 6). If the rough-in (O) (see figure 3 on page 6) is located **behind** the patient light (AA), perform the following to remove the patient light (AA) (see figure 5 on page 10):

Figure 5. Patient Light



- a. Raise the indirect/examination light (V), and remove the center electrical cover.
 - b. Disconnect the plug connections to the Integris® B Lite Rail (R).
 - c. **Loosen**, but do **not** remove, the four screws that secure the patient light (AA) to the Integris® B Lite Rail hanger bracket (R).
 - d. Remove the patient light (AA) from the Integris® B Lite Rail (R).
3. Hang the Integris® B Lite Rail (R) on the Integris® B Lite Rail hanger bracket (P), and align the Integris® B Lite Rail (R) with the wall boxes (S) (see figure 4 on page 8).

- Lift the fill cover (W) (see figure 6 on page 11).

Figure 6. Integris® B Lite Rail Installation



- Remove the faceplate to access the junction box (X).
 - Install the truss head screws (G) and dish-type lockwashers (F) through the junction box (X) and into the wall box.
- NOTE:**
Installation of the truss head screws is required to meet National Electrical Code®¹ (NEC®²) Article 517, *Redundant Ground Requirements*.
- Remove the upper high pressure laminate (HPL) strip (Y) from the bottom of the Integris® B Lite Rail (R) by pushing up on the HPL strip (Y) and inserting a putty knife into the gap.
 - Locate the wall studs, and drill 3/8" (9.525 mm) holes through the frame of the Integris® B Lite Rail (R) and into the wall studs.
 - Install the screw anchors (I) to secure the Integris® B Lite Rail (R) to the wall studs.

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WARNING:

Install one screw anchor at every stud location along the Integris® B Lite Rail frame. Failure to anchor the rail to every stud could cause the rail to collapse. Personal injury or equipment damage could occur.

10. Verify that one screw anchor (I) is installed at every stud location, approximately every 16" (41 cm), along the frame of the Integris® B Lite Rail (R).
11. Install the HPL strip (Y) on the bottom of the Integris® B Lite Rail (R) by sliding the top of the HPL strip (Y) into the slot and guiding its bottom into the bottom slot.
12. Make electrical connections according to Section 517 of the NEC®¹ per American National Standards Institute (ANSI)/NFPA 70.
13. Install the faceplate.
14. If needed, perform the following to install the patient light (AA) (see figure 5 on page 10):
 - a. Hang the patient light (AA) onto the Integris® B Lite Rail (R).
 - b. Center the patient light (AA) between the fill covers (W).
 - c. Tighten the four screws, and ensure that the patient light (AA) cannot be lifted off of the Integris® B Lite Rail (R).
 - d. Lift the indirect/examination light (V), and make the plug connections to the Integris® B Lite Rail (R).
 - e. Replace the center electrical cover onto the patient light (AA).
15. If installing more than one section, go to “Mounting Multiple Sections” on page 18.

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Installing the Integris® B Lite Rail (with a Vertical Chase)

Installing the Hanger Bracket(s)

NOTE:

When there is a vertical chase, install only the hanger bracket and the Integris® B Lite Rail.



WARNING:

Ensure that no electrical power is supplied to the installation site. Personal injury or equipment damage could occur.

1. Remove electrical power to the installation site.



WARNING:

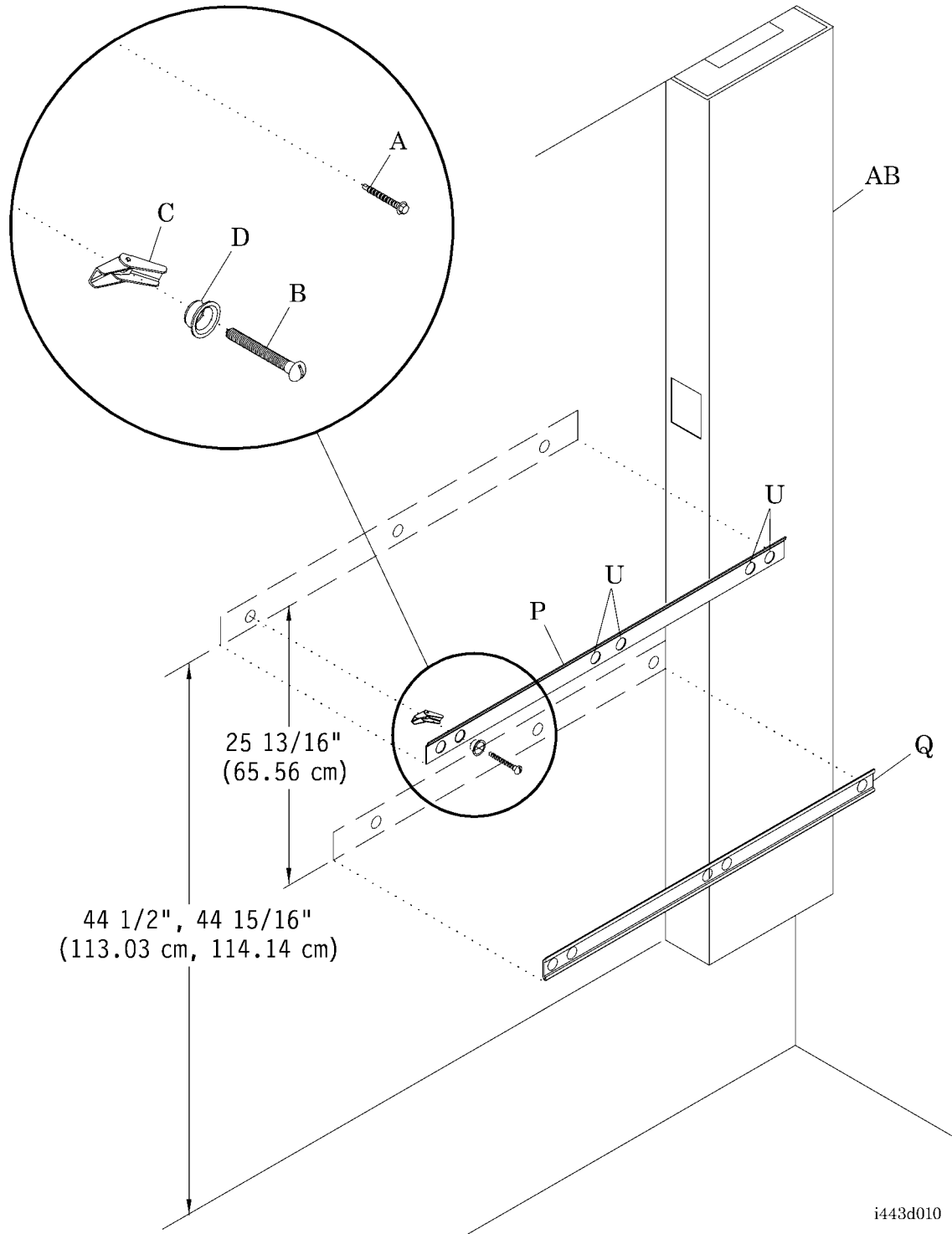
The installation method differs for each wall and construction type. Failure to determine the wall and construction type could result in the collapse of the Integris® B Lite Rail. Personal injury or equipment damage could occur.

NOTE:

When installing multiple Integris® B Lite Rails, do not allow the breaks between the hanger brackets to align with the breaks between the Integris® B Lite Rails.

2. Ensure that the wall meets the required specifications:
 - On **non-seismic** construction, make certain the walls are constructed of at least 20 gauge steel studs on 16" (41 cm) centerlines and covered with a minimum of 5/8" (15.9 mm) dry wall.
 - On **seismic** construction requirements, contact Hill-Rom Technical Support at 800-445-3720.
3. Position the hanger bracket(s) (P) and (Q) on the wall as follows (see figure 7 on page 14):
 - On units **with** a breaker panel, locate the bottom of the Integris® B Lite Rail hanger bracket (P) 44½" (113.03 cm) from the bottom of the vertical chase (AB).
 - On units **without** a breaker panel, locate the bottom of the Integris® B Lite Rail hanger bracket (P) 44 15/16" (114.14 cm) from the bottom of the vertical chase (AB).

Figure 7. Hanger Bracket Installation



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4. If installing the optional Integris® Headwall System, ensure that the distance from the bottom of the Integris® B Lite Rail hanger bracket (P) to the bottom of the raceway hanger bracket (Q) is 25 13/16" (65.56 cm).
5. On **non-seismic** and **non-fire-rated walls**, perform the following:
 - a. Mark both pairs of 1" (3 cm) holes (U) in the Integris® B Lite Rail hanger bracket (P).
 - b. At each pair of 1" (3 cm) holes (U) in the Integris® B Lite Rail hanger bracket (P), drill only one 1" (3 cm) hole in the dry wall. If an obstruction or wall stud is in the way, use the alternate 1" (3 cm) hole (U).
6. Using the appropriate fasteners, secure the Integris® B Lite Rail hanger bracket (P):
 - For **seismic** construction, install the self-drilling hex head screws (A) to secure the Integris® B Lite Rail hanger bracket (P) to the wall.
 - For **non-seismic, non-fire-rated** construction, install the slotted round screws (B), toggle wings (C), and cup washers (D) to secure the Integris® B Lite Rail hanger bracket (P) to the wall.
 - For **fire-rated** walls, install the self-drilling hex head screws (A) to secure the Integris® B Lite Rail hanger bracket (P) to the wall stud or backing plate.



WARNING:

Install one fastener approximately every 16" (41 cm) to the wall stud or backing plate along the hanger bracket. Failure to properly anchor the hanger bracket could cause the Integris® B Lite Rail to collapse. Personal injury or equipment damage could occur.

7. Verify that one fastener is installed approximately every 16" (41 cm) to the wall stud or backing plate along the Integris® B Lite Rail hanger bracket (P).



CAUTION:

When installing multiple hanger brackets, ensure that they are all level with the first hanger bracket installed. Failure to do so could result in equipment damage.

8. Verify that hanger bracket(s) (P) and/or (Q) are level.
9. If the wall has waviness exceeding 1/16" (1.6 mm) per Integris® B Lite Rail hanger bracket (P), perform the following:
 - a. At the low spot(s), loosen the toggle bolt (C).
 - b. Shim behind the Integris® B Lite Rail hanger bracket (P).
 - c. Tighten the toggle bolt (C).

Installing the Integris® B Lite Rail

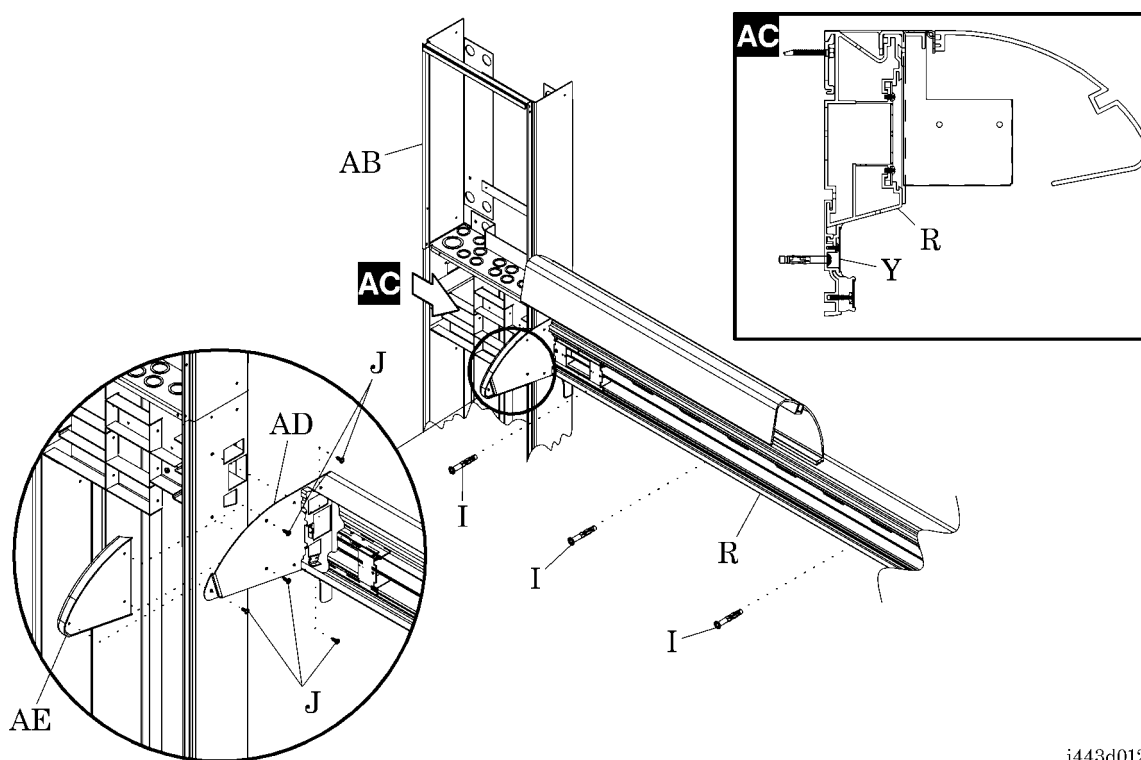


SHOCK HAZARD:

Ensure that no electrical power is supplied to the facility wiring. Personal injury or equipment damage could occur.

1. Remove electrical power from the facility wiring.
2. Hang the Integris® B Lite Rail (R) (see figure 8 on page 16) on the Integris® B Lite Rail hanger bracket (P) (see figure 7 on page 14).

Figure 8. Integris® B Lite Rail Installation (with Vertical Chase)



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3. Feed the wiring laterally from the Integris® B Lite Rail (R) through the opening in the vertical chase (AB) (see figure 8 on page 16).
4. Slide the Integris® B Lite Rail (R) against the vertical chase (AB).
5. Remove the upper HPL strip (Y) from the bottom of the Integris® B Lite Rail (R) by pushing up on the HPL strip (Y) and inserting a putty knife into the gap (see view AC).
6. Lift the HPL strip (Y) out of the slot.
7. Locate the wall studs, and drill 3/8" (9.525 mm) holes through the frame of the Integris® B Lite Rail (R) and into the wall studs.

8. Install the screw anchors (I) to secure the Integris® B Lite Rail (R) to the wall studs.



WARNING:

Install one screw anchor at every stud location along the Integris® B Lite Rail frame. Failure to anchor the rail to every stud could cause the rail to collapse. Personal injury or equipment damage could occur.

9. Verify that one screw anchor (I) is installed at every stud location, approximately every 16" (41 cm) along the frame of the Integris® B Lite Rail (R).
10. Install the HPL strip (Y) on the bottom of the Integris® B Lite Rail (R) by sliding the top of the HPL strip (Y) into the slot and guiding the bottom into the bottom slot.
11. Make all of the electrical connections.
12. Insert the vertical chase front cover.
13. Drill two 9/64" (3.571 mm) holes through the clearance holes on the end plate (AD) and into the vertical chase (AB).
14. Install two pan head screws (J) through the end plate (AD) to secure the Integris® B Lite Rail (R) to the vertical chase (AB).

NOTE:

Installation of these screws is required to meet National Electrical Code®¹ (NEC®²) Article 517, *Redundant Ground Requirements*.

15. Install one pan head screw (J) to secure the end cap (AE).

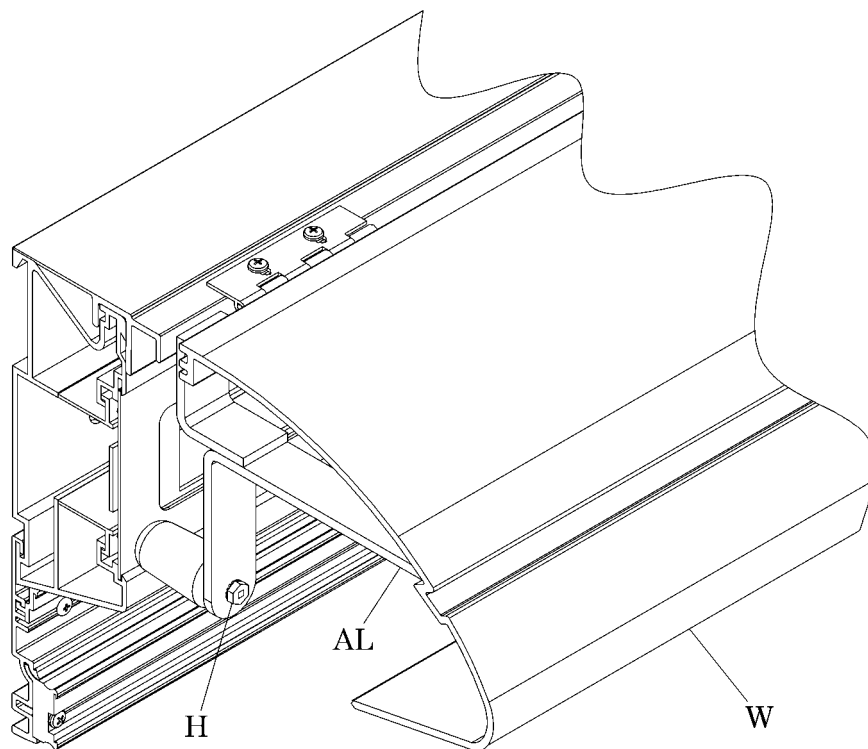
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8. Slide the cover trim (AJ) onto the ends of the transition fascia cover (AK).
9. Slide the transition fascia cover (AK) into place between the two sections of the Integris® B Lite Rail (R).

Adjusting the Fill Cover Support Bracket

Loosen the #8-32 locknut (H) to adjust the fill cover support bracket (AL) to correct the alignment of the fill cover (W) (see figure 10 on page 19).

Figure 10. Fill Cover Support Bracket

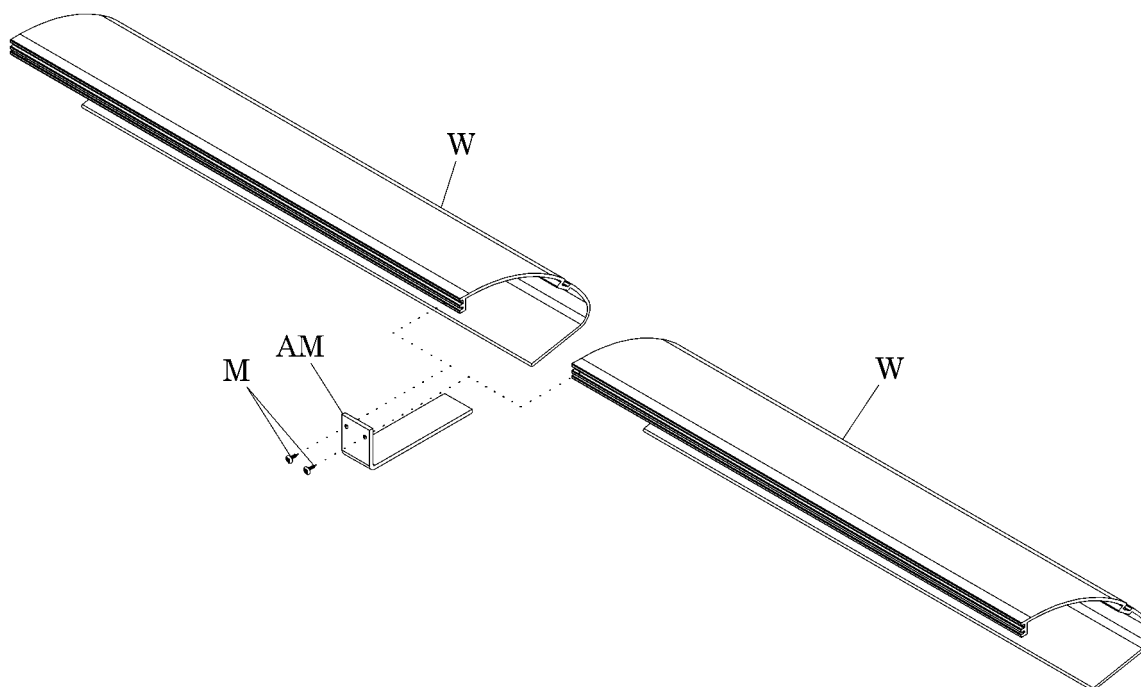


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Installing the Transition Tie Plate (Optional)

When the fill cover support bracket (AL) is **not** installed (see figure 10 on page 19), use the transition tie plate (AM) (see figure 11 on page 20). To secure the fill covers (W) together, install the truss head screws (M) through the transition tie plate (AM).

Figure 11. Transition Tie Plate Installation



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Installing Accessories

For installation of optional Integris® B Lite Rail accessories, refer to the [Integris® Patient Light Service Manual \(man139\)](#).