METALWORKS™ Clip-on

Installation Instructions

1. GENERAL

1.1 Product Description

MetalWorks™ Clip-on is a downward accessible aluminum ceiling panel available in standard 24" x 24" and 24" x 48" sizes. It is designed to install on a 15/16" Prelude® suspension system. All non-cut panels are 100% downward accessible without a special tool. (*Figs 1 and 2*)

1.2 Standard Installation

MetalWorks Clip-on uses a standard 15/16" suspension system. The elements of the system include Prelude® XL® 15/16" main beams along with standard Prelude XL cross tees. The installation shall in all cases conform to the requirements of the International Building Code and its referenced standards.
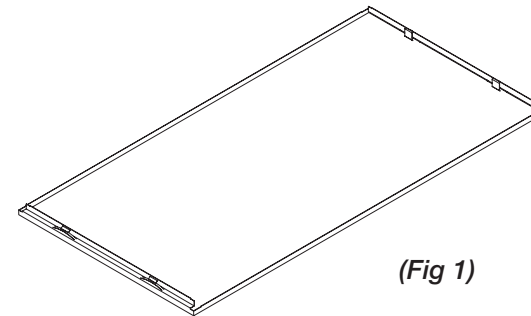
1.3 Surface Finish

MetalWorks Clip-on panels are pre-coated aluminum and available in six standard perforations or unperforated in standard Whitelume (WHA), Silverlume (SIA), Gun Metal (MYA), Satin Anodized (SAA), Lacquer Mill (LMA), and Brushalume (BAA) finishes. The perforated finishes have a black acoustical fleece factory-applied to the backside of the panel. Optional fiberglass (item 8200T10) infill panel is available for increased sound absorption.
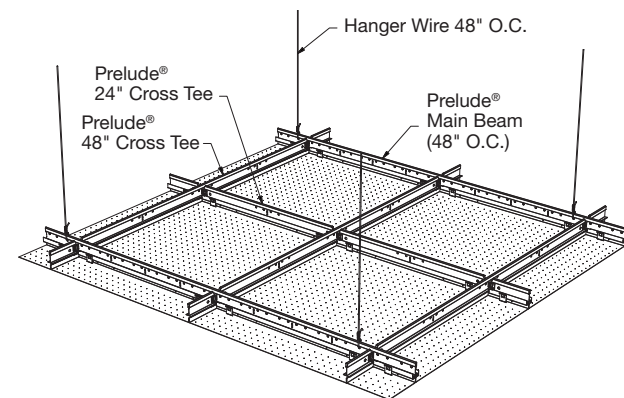
1.4 Storage and Handling

Ceiling panels shall be stored in a dry interior location and shall remain in cartons prior to installation to avoid damage. The cartons shall be stored in a vertical position. Proper care should be taken when handling to avoid damage or soiling.

NOTE: MetalWorks Clip-on panels may be packaged with the face of the panel toward the outside of the carton. Exercise care in moving and opening cartons to prevent damage to the panel face.

(Fig 1)

Hanger Wire 48" O.C.
Prelude® 24" Cross Tee
Prelude® 48" Cross Tee
Prelude® Main Beam (48" O.C.)

(Fig 2)

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1.5 Site Conditions – Painted Panels

Areas to receive ceilings shall be free of construction dust and debris. Panels should only be installed in closed and acclimatized buildings. Interior systems cannot be used in exterior applications, where standing water is present, or where moisture will come in direct contact with the ceiling.

1.5.1 HVAC Design & Operation
Proper design for both supply air and return air, maintenance of the HVAC filters and building interior space are essential to minimize soiling. Before starting the HVAC system, make sure supply air is properly filtered and the building interior is free of construction dust.

1.6 Plenum

Since panels are installed from below, MetalWorks™ Clip-on panels require no clearance above the suspension system. Panels never need to travel into the plenum space during installation or removal.

NOTE: Light fixtures and air handling systems require more space and will usually determine the minimum plenum height for the installation.

1.7 Panel Offset

The panel face sits 1" lower than the suspension system. (F*ig 3)*

Some light, sprinkler, and other components will have to account for this to be installed at the proper height.

1.8 Directionality

Panels have a slightly directional finish that may be visible in certain low-raking light conditions. Panels that ship with a protective film will have directional arrows on the film.

Clip orientation can also be used to ensure panel directionality is consistent. Panels should be installed so that clips are always in the same orientation (not quarter-turned).

1" Panel Offset
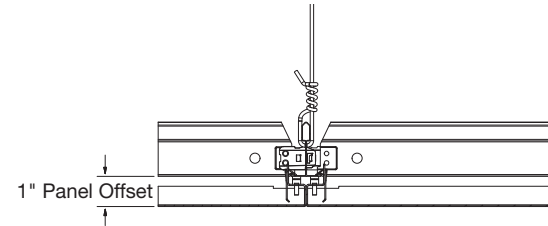
(Fig 3)

2. SUSPENSION SYSTEM

2.1 Suspension System Requirements

The suspension system shall be standard 15/16" exposed tee grid. The suspension system, whether new or existing, shall be properly installed and leveled using not less than 12-gauge galvanized steel wire. Suspension system installation shall conform to ASTM C636 requirements.

Hangers and bracing are to comply with all local code requirements. **The suspension system for all panel sizes must be leveled to within 1/4" in 10' and must be square to within 1/16" in 2'.**

2.2 Grid Layout

For 24" x 24" and 24" x 48" panels, the main beams shall be spaced 48" on center. Then 48" cross tees shall intersect the main beams at 90° every 24". For 24" x 24" panels, the 24" cross tees shall be installed at the midpoints of the 48" tees. Hanger wires shall be installed not more than 48" on center along the length.

2.3 First Main Beam

Location of the first main beam shall be as detailed on the reflected ceiling plan, so as to provide borders that are equal in size and greater than one-half of the full panel width. Pay close attention when cutting this first main beam to length.

2.4 Wall Perimeters

Wall perimeters are trimmed with item 7112 Box Molding attached with appropriate fasteners. The suspension system will rest on the upper 1" flange of the box molding and the panel edges will rest on the bottom 1" flange. (*Fig 4*)
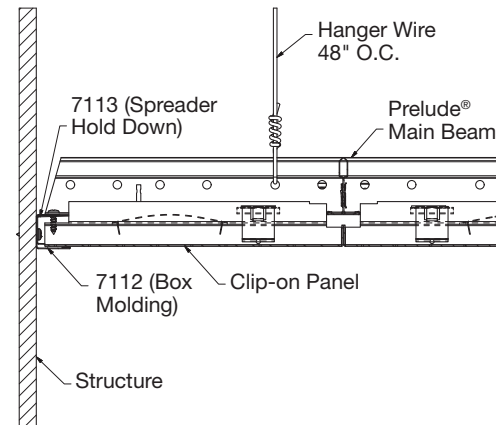
2.5 Cut Perimeter Panels

Cut edges are held down against the molding by inserting a 7113 Spreader Hold Down into the molding, between the upper and lower flanges, over each cut panel. The 7113 Spreader Hold Down is 10.625" long, so use the appropriate amount of hold downs for the panel edge dimension. (One hold down per 2 foot of panel edge.) *(Figs 5 and 6)*

(Fig 4)

(Fig 5)

(Fig 6)

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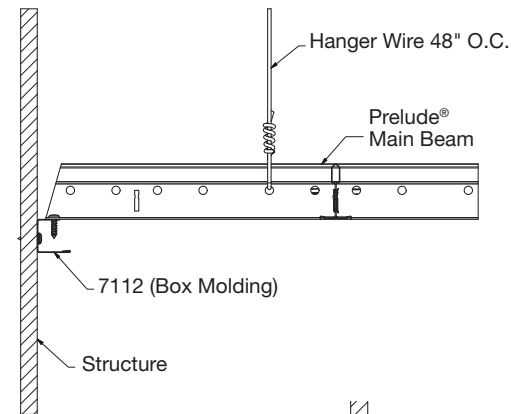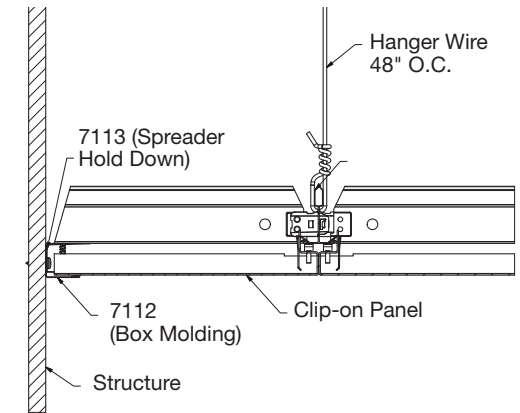
2.6. Floating Perimeters

2.6.1 Formed Perimeter Trim (7223 - Full panels only)

The Formed Perimeter Trim is designed for straight perimeters with full size panels and should not be curved.

The suspension layout for floating end perimeters should be the same as what is detailed in Sections 2.3 – 2.5. Please note that main beams and cross tees need to frame the perimeter of the installation so that the Formed Perimeter Trim has a surface to attach to.

This trim utilizes a Trim Bracket (7223BRK - included with trim) to attach to grid. Trim Brackets rest on the flange of the grid and are screw attached 6" from the ends and roughly 2' O.C. along where each piece of trim will be attached. Next, the trim pieces are installed by fastening to the brackets with two screws. (*Fig 7*)

Where pieces of trim must be spliced together, center a bracket at the splice locations and screw both trim pieces to the already attached bracket for proper alignment.
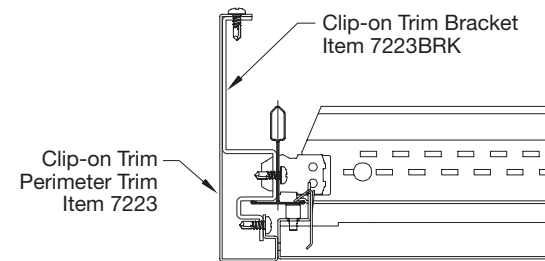
2.7 Axiom® Perimeter Trim

Axiom® Perimeter Trim can be used with MetalWorks™ Clip-on by utilizing the Adjustable Trim Clip (7239).
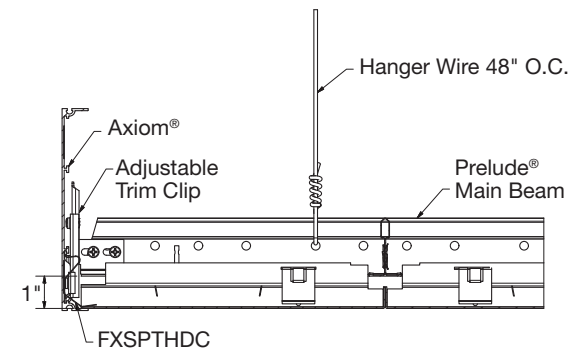
This clip will allow the Axiom trim to be offset 1" below the grid face to match 1" panel offset, and allows Axiom to be used with full size or cut panels. (*Fig 8*)

Refer to the Axiom Classic installation instructions for additional details and instructions for installing Axiom trim.

If cut panels will interface with the trim, use Hold Down Clips (FXSPTHDC) which engage into the boss of the trim and apply pressure to hold the cut edge against the trim flange.

Clip-on Trim Bracket Item 7223BRK

Clip-on Trim Perimeter Trim Item 7223

(Fig 7)

Hanger Wire 48" O.C.

Axiom®

Adjustable Trim Clip

Prelude® Main Beam

1"

FXSPTHDC

(Fig 8)

3. PANEL INSTALLATION

Panels are mechanically directional. Two opposite sides feature a set amount of gravity clips and springs that engage the main beam and retain the panel.
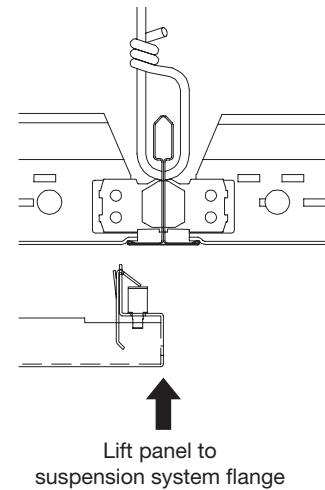
3.1 Gravity Clip Engagement

Lift the MetalWorks™ Clip-on panel up to the suspension system flange and press upwards. The panel will snap into place and the gravity clip will rotate back down and lock onto the suspension system. (*Figs 9-12*)
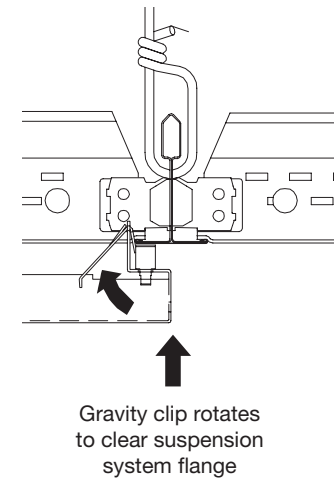
3.2 Cut Panels

Cut panels should never occur within the field of the ceiling. All ceiling mounted services must either replace a full panel, install into a hole that is cut into a panel, or be mounted through the face of a panel.

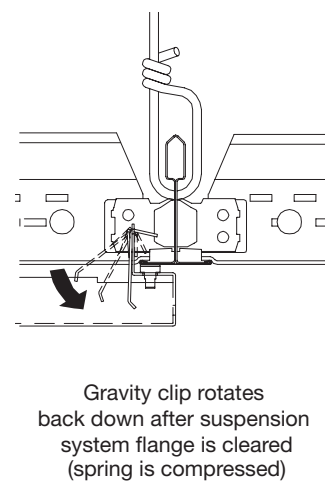**3.2.1** Panels can be cut to size at the perimeters using standard tools and methods for aluminum panels.

• For straight cuts, it is recommended to use a metal cutting circular saw with a non-ferrous metal cutting blade (consult blade manufacturer for specific recommendation).

• For curved cuts, it is recommended to use a jig saw with an aluminum cutting blade or electric metal cutting shears.

• The quality of the cut can impact the flatness of the cut edge, which may require additional Spreader Hold Downs or Effects™ Hold-Down Clips (FXSPTHDC).
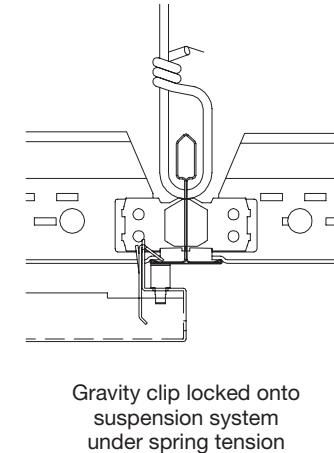
Lift panel to
suspension system flange

(Fig 9)

Gravity clip rotates
to clear suspension
system flange

(Fig 10)

Gravity clip rotates
back down after suspension
system flange is cleared
(spring is compressed)

(Fig 11)

Gravity clip locked onto
suspension system
under spring tension

(Fig 12)

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3.3 Panel Removal

All panels are removable without moving up into the plenum. Look for the holes for removal.

3.3.1 For panel removal, insert a pop rivet or finish nail at least 2" long that's less than the diameter of the hole. Push the pop rivet in to release the gravity clip. You may need to slightly lift the panel you are removing to keep the gravity clip from catching on the hem of the grid flange.
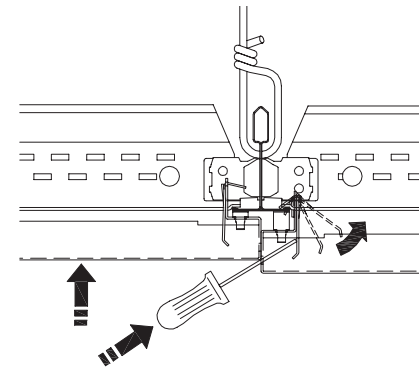
Once one side of the panel is disengaged, push up on the opposite side of the panel to lift the gravity clips off the grid flange. (*Fig 13*)

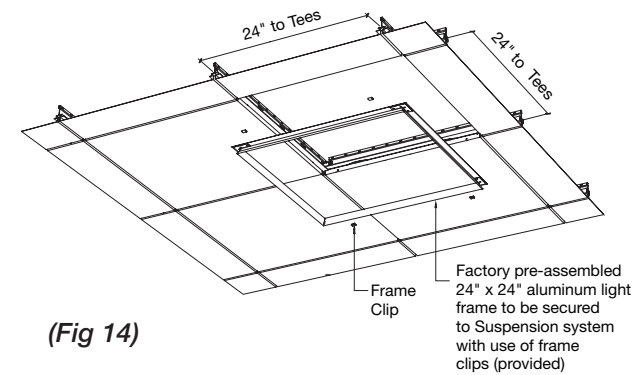*(Fig 13)*

4. LIGHT FRAME INSTALLATION

Before the surrounding panels are installed, set the frame flush with the underside of the grid opening and attach the frame to the grid with frame clips. The frame clips should attach to grid sides that do not engage with the gravity clips and springs. The flush sides of the frame clips face toward the finished side of the ceiling. (*Fig 14*)

NOTE: Fixture frames can be installed over an existing fixture, as the attachment occurs in the adjacent grid openings.

The panel face sits 1" lower than the suspension system. In renovation applications, some lights and sprinklers may need to be height adjusted during retrofitting.

24" to Tees

24" to Tees

Frame Clip

Factory pre-assembled 24" x 24" aluminum light frame to be secured to Suspension system with use of frame clips (provided)

(Fig 14)

5. SEISMIC

MetalWorks™ Clip-on has been engineered and tested for application in all seismic areas when installed as indicated in these instructions.

The grid must be installed in accordance with the requirements of the Armstrong® Seismic Rx system suspension system.

5.1 Attached Walls

Grid connections to the perimeter at attached walls can be screw attached to the 7112 Box Molding as previously shown.

5.2 Unattached Walls

Grid connections to the perimeter at unattached walls must utilize the BERC2 clip. To attach the BERC2 clip, attach 7/8" Angle Molding (7800) to the wall directly above the 7112 Box Molding. This will allow for the standard attachment of the BERC2 to the 7/8" angle molding. A screw is then inserted through the slot of the BERC2 and the web of the grid. (*Figs 15 and 16*)
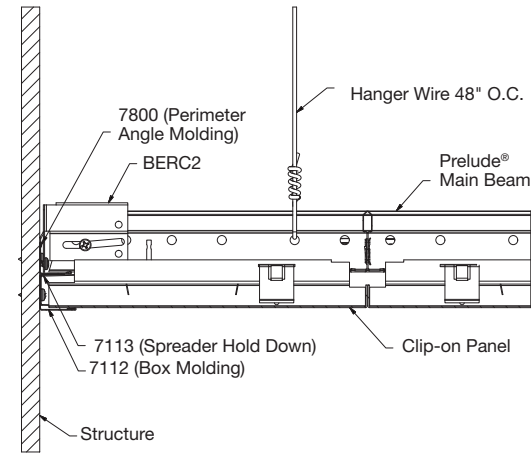
(Fig 15)
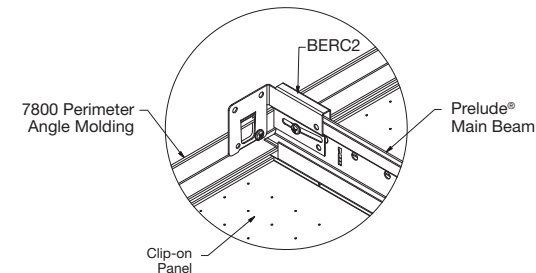
(Fig 16)

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