

ULTIMA® Plank

Assembly and Installation Instructions

1. GENERAL

These installation instructions are divided into sections based on the Ultima Plank edge detail – lay-in, Tegalor or Shiplap. The last section details the installation of the Armstrong Acoustical Locking Molding system, developed especially for use in corridors up to eight feet wide. Please review the general information and then refer to the section appropriate for your application.

1.1. Product Description

The Ultima Plank products referenced in these instructions are made from mineral fiber. Panels are designed to be installed on a conventional 15/16" or 9/16" wide suspension system. Plank panels are available in 24" x 60" and 24" x 72" sizes. Ultima Plank panels can be used with standard Ultima 12" x 24", 24" x 24", and 24" x 48" panel sizes. The same edge detail – lay-in or Tegalor – should be used to maintain a consistent visual with standard size panels.

1.2. Surface Finish

Ultima Plank features the Armstrong DuraBrite® finish. The surface of these panels is scratch and soil-resistant, washable and non-directional. The panel edges are finished with a factory-applied paint finish.

1.3. Storage and Handling

The 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 flat position. Proper care should be taken when handling to avoid damage or soiling.

NOTE: Shiplap edges are exposed. Exercise appropriate care to avoid unnecessary contact with the panel edges. The grid flanges will not conceal panel edge damage.

1.3.1. Working With Fiberglass & Mineral Fiber Products

FIBERGLASS CEILINGS

MAN-MADE VITREOUS FIBER CEILING PANELS

▲ W A R N I N G THIS PRODUCT CONTAINS MAN-MADE VITREOUS FIBERS, A POSSIBLE CANCER AND RESPIRATORY TRACT HAZARD. CAN CAUSE TEMPORARY RESPIRATORY, SKIN AND EYE IRRITATION.

1.3.2. Precautionary Measures: During the installation be certain that the work site is well ventilated and avoid breathing dust. If high dust levels are anticipated during installation such as with the use of power tools, use appropriate NIOSH designated dust respirator. All power cutting tools must be equipped with dust collectors. Avoid contact with skin or eyes. Wear long-sleeve, loose fitting clothes, gloves and eye protection.

1.3.3. First Aid Measures: If contact occurs flush eyes and skin irritation with plenty of water for at least 15 minutes and remove contaminated clothing. After installing material, wash with warm water and mild soap. Wash work clothes separately from other clothing. Rinse washer thoroughly. Refer to Armstrong MSDS (which includes information on established occupational exposure limits) which are available from Armstrong or your employer.

1.4. Site Conditions

Building areas to receive ceilings shall be free of construction dust and debris. Products with HumiGuard® Plus performance can be installed in conditions between 32°F (0°C) and 120°F (49°C) and in spaces before the building is enclosed, where HVAC systems are cycled or not operating. These products are not recommended for exterior applications or where standing water is present or where moisture will come in direct contact with the ceiling.

2. APPLICATION CONSIDERATIONS

The physical size of these panels can impact installation in several ways.

Larger panel size increases the replacement cost associated with damage caused during access through the ceiling system. Single panels running wall to wall require more space above the grid than is normally necessary. Sixteen inches (16") of clear space is needed at one side to allow a five foot or six foot long panel to clear the grid when installed wall to wall. Consider using a short border or shadow molding to ease plenum clearance issues.

Shiplap panels are installed and removed from the grid in one direction, which can limit access. Inclusion of light fixtures or other ceiling mounted hardware that uses outriggers that rest on the bulb of the grid will prevent access through the panel with the cutout and one adjacent panel. Panels with sprinkler penetrations are more difficult to install because the panel can move in one direction and because the face dimension is greater than that of a Tegular or lay-in panel.

Consider constructing bulkheads at turns in corridors to facilitate changing the direction of the installed panels.

The grid layout should provide continuous lines of grid running across the ceiling plane in both directions. Ashlar designs (staggered panels) are not recommended unless detailed by a design professional familiar with the project. These patterns provide significantly lower connection strength and are more difficult to keep straight and square.

Please refer to the section appropriate for your panel type.

SECTION 1 – Lay-in or Tegular Edges All Sides

1a – Full Room Installations

1b – Installations Narrower than 8'

SECTION 2 – Shiplap Long Sides & Tegular Short Sides

2a – Full Room Installations

2b – Installations Narrower than 8'

SECTION 3 – Shiplap Long Sides K2C2 Short Sides

3a – Full Room Installations

3b – Installations Narrower than 8'

SECTION 4 – Acoustical Locking Molding Installation

SECTION 1 – LAY-IN OR TEGULAR EDGES ALL SIDES

SECTION 1a – Lay-in or Tegular Edges – Full Room Installations

Plenum

Installation requires a minimum of space in the plenum; primarily that which is required to install the hanger wires for the suspension system. Three inches (3") is generally accepted as the minimum practical space that is needed to attach these wires.

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

Grid Installation

The suspension system shall be standard 15/16" (lay-in or Tegular) or 9/16" wide (Tegular only).

Install the specified suspension system to meet all of the requirements outlined in ASTM C636 and local building codes. Carefully follow allowable load information available in our printed literature or from TechLine (877 276-7876). Add supplemental wires or provide independent support when ceiling loads exceed published limits.

Panel Installation

Aside from panel dimensions, there are no unique requirements for installing this ceiling. Thoroughly clean hands or wear gloves to avoid soiling the finished surface of the panels. Work carefully to avoid contact with hanger wires and other obstructions that may cause damage to the panel face.

Carefully measure and neatly trim panels that meet the wall molding. Treat Tegular edges as detailed in the construction documents.

SECTION 1b – Lay-in or Tegular Edges – Installations Narrower than 8'

Plenum

A single panel resting on angle molding at both ends requires significantly more clearance to install than one placed in a wider application. Please refer to the dimensions listed in the Application Considerations section located at the top of this page.

This clearance is not required over the entire ceiling area, only where a panel is resting on angle molding. If the recommended clearance is not possible, panels will need to be positioned above the grid at accessible locations and then moved through the plenum to drop into the grid. This condition should be avoided because it can increase the risk of damage and limit the ability to access the plenum after installation.

Grid Installation

Each end of each main beam must be secured so that the grid cannot spread and allow a panel to drop from the ceiling. This may be achieved by using the Armstrong Locking Acoustical Molding system or by securing one end of each main to the molding and capturing the opposite end with a BERC or BERC2 clip. When the BERC/BERC2 solution is used, insert a screw through the clip and molding so that the grid cannot slide along the wall.

Refer to SECTION 4 for installation of the Locking Acoustical Molding system.

Panel Installation

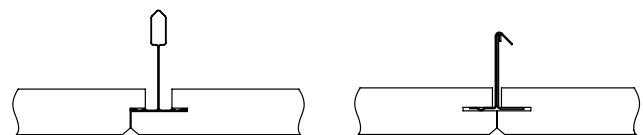
Carefully measure and neatly trim panels that meet the wall molding. Treat Tegular edges as detailed in the construction documents.

SECTION 2 – SHIPLAP LONG SIDES & TEGULAR SHORT SIDES

GENERAL

Panel installation is directional. Once the first panel has been placed in the grid all others must have the Shiplap edge facing in the same direction.

Work carefully to avoid damage, because the Shiplap edge will be exposed to view in the completed installation.



SECTION 2a – Shiplap Long Sides & Tegular Short Sides – Full Room Installation

Panels installed in areas two panels wide or greater will require more clearance between the top of the grid and an overhead obstruction. About four inches (4") of space is required to get this slightly wider panel through the grid opening.

SECTION 2b – Shiplap Long Sides & Tegular Short Sides – Installations Narrower than 8'

A single panel resting on angle molding requires significantly more clearance to install. Please refer to the dimensions listed in the Application Considerations section located at the top of page 2.

Grid Installation

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-gage galvanized steel wire. Suspension system installation shall conform to ASTM C636 requirements and local building codes.

Ultima® Plank panels install in a 2' x 6' (24" x 72") or 2' x 5' (24" x 60") module. The main beams and cross tees must be installed to create the Ultima Plank module sizes as detailed on the reflected ceiling plan.

Panel Installation

There are no unique requirements for the installation of these panels other than those listed above, under the heading of general information.

Measure and cut carefully, treating perimeter conditions as detailed in the construction documents.

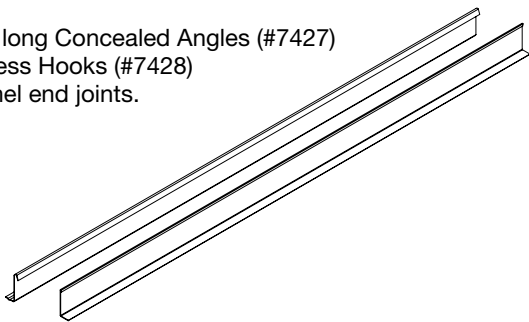
SECTION 3 – SHIPLAP LONG SIDES K2C2 SHORT SIDES

GENERAL

The Shiplap/Tegular edges of these panels will be supported on the flanges of main beams.

Actual panel face dimensions are 24" x 71-3/4".

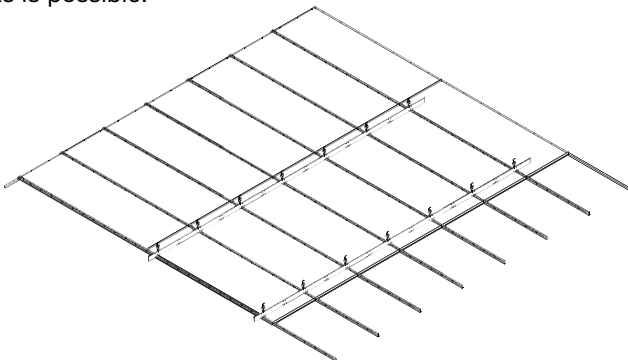
Install 2' long Concealed Angles (#7427) and Access Hooks (#7428) at all panel end joints.



Ultima Plank panels with Shiplap edge are directional. Once the first panel is installed in the grid, all others must be installed in the same direction. Tegular cuts must be provided on all panel edges that meet the Locking Angle Molding.

SECTION 3a – Shiplap Long Sides K2C2 Short Sides – Full Room Installation

To support a full room installation, StrongBack™ support channels must be installed over each end of each panel in every other row. The placement of the StrongBack will limit the ability to access these panels. Plan the layout carefully to preserve as much access through the remaining panels as is possible.



Grid Installation

Hang the main beams on two foot centers with wires located 48 inches (48") on center, or by calculation based on total ceiling weight. Each end of each main beam must be secured so that the grid cannot spread and allow a panel to drop from the ceiling. This may be achieved by using the Armstrong Locking Acoustical Molding system or by securing one end of each main to the molding and capturing the opposite end with a BERC or BERC2 clip. When the BERC/BERC2 solution is used, insert a screw through the clip and molding so that the grid cannot slide along the wall.

Refer to SECTION 4 for installation of the Locking Acoustical Molding system.

Install StrongBack™ (Item # SH12) perpendicular to the mains near both ends of every other row of panels. Overlap the ends of the StrongBack and screw together when the length of the run is greater than 12 feet long.

NOTE: PANELS INSTALLED UNDER THE STRONGBACK WILL NOT BE ACCESSIBLE.

Panel Installation

Panel installation is directional. Once the first panel has been placed in the grid, all others must have the Shiplap edge facing in the same direction.

Pull a string line across the space perpendicular to the length of the main beams. Position this line at the desired location for the panel joints. All panel edges that touch molding must have field cut Tegular edges or use Item #7878 shadow molding.

Use the string line to accurately measure and cut the border panels to the required dimension.

Install 2' long Concealed Angles (#7427) and Access Hooks (#7428) at all panel end joints. Arrange these components such that the Access Hook (#7428) is inserted into the removable panel (not the one under the StrongBack).

Continue installing panels and access components to complete the ceiling assembly.

SECTION 3b – Shiplap Long Sides K2C2 Short Sides– Installations Narrower than 8'

Installations in spaces less than 100 inches (100") wide do not need to use the StrongBack.

Each end of each main beam must be secured so that the grid cannot spread and allow a panel to drop from the ceiling. This may be achieved by using the Armstrong Locking Acoustical Molding system or by securing one end of each main to the molding and capturing the opposite end with a BERC or BERC2 clip. When the BERC/BERC2 solution is used, insert a screw through the clip and molding so that the grid cannot slide along the wall.

Refer to SECTION 4 for installation of the Locking Acoustical Molding system.

For installations greater than one panel length, position the access angles and hooks such that the shortest section of panel in a run will be the first to be removed.

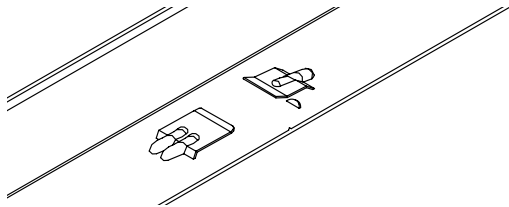
SECTION 4 – LOCKING ACOUSTICAL MOLDING INSTALLATION

Install the mounting rail, Locking Angle Molding and gussets.

How to Install Locking Angle Molding

Lay out the space to provide equal borders at opposite ends of the room. Borders should be greater than one half the dimension of the plank whenever possible. Establish a level line at the elevation shown in the construction documents.

Cut and install the first section of Locking Angle Molding so that the center mark at the first lock is positioned to receive the first main beam. Attach the molding to the walls with fasteners appropriate for the construction. The locking details must be on the horizontal leg of the molding.



Continue to install sections of molding along this first wall by butting factory-cut ends together. Trim shorter sections of molding carefully to maintain 12" from the cut end to the center mark of the first lock.

Extend a line (laser or string) across the space at the center mark of the first lock. Make sure that this line is set 90° to the surface of the wall where molding has been attached.

Trim a length of molding to position the center mark at the reference line on the opposite wall. Continue installing sections of molding butted end to end.

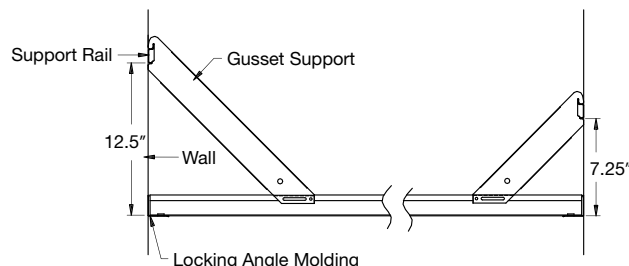
The molding installed on the walls parallel to the mains should be oriented with the locking details on the vertical flange, or use standard angle molding.

How to Install Support Track

Attach support tracks to the wall above the Locking Angle Molding.

Hold the bottom edge of the support track 7-1/4" for 8" gusset, or 12-1/2" for 12" gusset above the horizontal flange of the Locking Angle Molding.

Fasten the support tracks to the structure of the wall using fasteners appropriate for the construction. The support track sections have pre-punched holes spaced every 4" along their length to facilitate attachment.



How to Install Main Beams

Cut and install main beams to extend across the space.

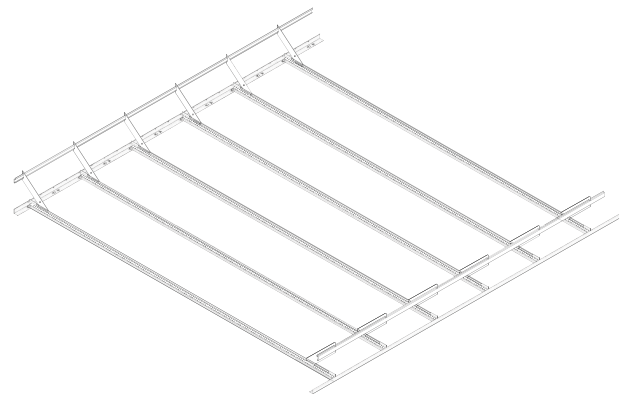
Measure and cut carefully. Rout placement is not important when a single ceiling plank is extended wall to wall, or when using planks with K2C2 short sides. However, when more than one Tegular or lay-in plank will span the space, main beams must be cut to maintain alignment of the rout holes.

Engage the ends of the mains into the locking details on the molding by first sliding the grid flange under the tab to the left, then back under the right-hand tab.

How to Install Gussets

Hang the gussets on the support track over every end of every main beam.

Insert a #6 x 7/16" long sheet metal screw through the hole provided in the gusset and into the web of the main beam. There will be a hole and slot in the gusset. On one end of the mains the screw will be placed in the hole. It will go into the slot on the opposite end. Specified ceiling panels can now be cut and installed to complete the installation.



Using Alternate Suspension Systems with Locking Acoustical Molding

When the specified suspension system is one other than Prelude®, substitute a standard 7/8" x 7/8" molding (Item #7800) and BERC2 clips for the Locking Acoustical Molding. Install the support rail and gussets as described above. Fasten the BERC2 clips to the molding by inserting a screw through each clip into the molding so that the grid cannot slide along the wall.

MORE INFORMATION

For more information, or for an Armstrong representative, call 1 877 ARMSTRONG.

For complete technical information, detail drawings, CAD design assistance, installation information, and many other technical services, call TechLine™ customer support at 1 877 ARMSTRONG or FAX 1 800 572 TECH.

For the latest product selection and specification data, visit armstrong.com/ceilings.

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