# Assembly and Installation Instructions

## VERTICAL PANEL ITEMS:

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Panel Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3920</td>
<td>Vertical Panel Rectangular – 10&quot; x 46&quot; x 2&quot;</td>
</tr>
<tr>
<td>3921</td>
<td>Vertical Panel Rectangular – 10&quot; x 94&quot; x 2&quot;</td>
</tr>
<tr>
<td>3922</td>
<td>Vertical Panel Rectangular – 22&quot; x 46&quot; x 2&quot;</td>
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<tr>
<td>3923</td>
<td>Vertical Panel Rectangular – 22&quot; x 94&quot; x 2&quot;</td>
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<tr>
<td>7190</td>
<td>Vertical Panel Rectangular – 5&quot; x 46&quot; x 2&quot;</td>
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<tr>
<td>7191</td>
<td>Vertical Panel Rectangular – 5&quot; x 94&quot; x 2&quot;</td>
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<tr>
<td>7192</td>
<td>Vertical Panel Rectangular – 16&quot; x 46&quot; x 2&quot;</td>
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<tr>
<td>7193</td>
<td>Vertical Panel Rectangular – 16&quot; x 94&quot; x 2&quot;</td>
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<td>7194</td>
<td>Vertical Panel Rectangular – 28&quot; x 46&quot; x 2&quot;</td>
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<tr>
<td>7195</td>
<td>Vertical Panel Rectangular – 28&quot; x 94&quot; x 2&quot;</td>
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<tr>
<td>7240</td>
<td>Vertical Panel 8 Ft. Wavelength Concave – 7.5&quot; x 46&quot; x 2&quot;</td>
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<tr>
<td>7241</td>
<td>Vertical Panel 8 Ft. Wavelength Convex – 10.5&quot; x 46&quot; x 2&quot;</td>
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<tr>
<td>7242</td>
<td>Vertical Panel 8 Ft. Wavelength Concave – 19.5&quot; x 46&quot; x 2&quot;</td>
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<tr>
<td>7243</td>
<td>Vertical Panel 8 Ft. Wavelength Convex – 22.5&quot; x 46&quot; x 2&quot;</td>
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<td>7244</td>
<td>Vertical Panel 8 Ft. Wavelength Wave – 10.5&quot; x 94&quot; x 2&quot;</td>
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<td>7245</td>
<td>Vertical Panel 8 Ft. Wavelength Wave – 22.5&quot; x 94&quot; x 2&quot;</td>
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<td>7246</td>
<td>Vertical Panel 4 Ft. Wavelength Wave – 10&quot; x 46&quot; x 2&quot;</td>
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<td>Vertical Panel 4 Ft. Wavelength Wave – 22&quot; x 46&quot; x 2&quot;</td>
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<td>7248</td>
<td>Vertical Panel 4 Ft. Wavelength Wave – 10&quot; x 94&quot; x 2&quot;</td>
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<tr>
<td>7249</td>
<td>Vertical Panel 4 Ft. Wavelength Wave – 22&quot; x 94&quot; x 2&quot;</td>
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</tbody>
</table>

## SUSPENSION SYSTEM ITEMS:

<table>
<thead>
<tr>
<th>Item Code</th>
<th>Item Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7301</td>
<td>Prelude® XL® – 144&quot; Main Beam</td>
</tr>
<tr>
<td>XL7341</td>
<td>Prelude XL – 48&quot; Cross Tees</td>
</tr>
<tr>
<td>XL8320</td>
<td>Prelude XL – 24&quot; Cross Tees</td>
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<tr>
<td>7800</td>
<td>Angle Molding – 7/8&quot; x 7/8&quot; x 144&quot;</td>
</tr>
<tr>
<td>6655</td>
<td>Hanging Kit (includes height adjustable fork grippers and 96&quot; cables)</td>
</tr>
<tr>
<td>QSUTC</td>
<td>Rigid Attachment Clip</td>
</tr>
<tr>
<td>ARBRKT</td>
<td>Adjustable Hanger Bracket</td>
</tr>
<tr>
<td>STAC</td>
<td>Single Tee Adapter Clip</td>
</tr>
</tbody>
</table>

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**DO NOT REMOVE SOUNDSCAPES® BLADES™ PANELS FROM THE CARTON UNTIL YOU HAVE READ THESE INSTRUCTIONS IN THEIR ENTIRETY.**

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### 1.0 GENERAL

**1.1 Product Description**

SoundScapes® Blades™ panels are vertical, acoustical fiberglass panels designed to be suspended from a Prelude® XL® Heavy-duty suspension system, or independent cables/wires.

SoundScapes Blades panels are engineered for use in seismic areas only when indicated components are used and installed in accordance with these installation instructions.

**1.2 Materials and Finishes**

SoundScapes Blades panels are made from fiberglass and finished on all edges and surfaces (except for the top edge) with a DuraBrite® acoustically transparent membrane.

There are 14 standard color options for the finished Blades™ panels. Premium and Custom finishes can also be manufactured. Contact TechLine™ customer support, Architectural Specialties, or an Armstrong Representative for additional information. Field painting will void the product warranty.

**1.3 Design Consideration for Sag**

SoundScapes Blades panels might exhibit a natural bow that may be noticeable when installed 2" or less apart, end-to-end. Deflection up to 1/8" has been documented in some cases. Do not butt Blades™ panels end-to-end.

**1.3.1 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 an appropriate NIOSH designated dust respirator. Avoid contact with skin or eyes. Wear long-sleeve, loose fitting clothes, gloves, and eye protection.

**1.3.2 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 hands 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 Storage and Handling
SoundScapes® Blades™ panels shall be stored in a dry interior location and shall remain in their original cartons prior to installation to avoid damage. The cartons shall be stored in a flat, horizontal position. The vertical panels should not be removed from the carton until the suspension system is installed. Proper care should be taken when handling Blades™ panels to avoid damage and soiling. White cotton or latex gloves are recommended for handling. It is recommended that two installers handle 94" Blades™ panels.

NOTE: Blades™ panels in colors other than white are paper wrapped. To avoid fingerprints, do not remove paper wrapping until installation is complete.

1.5 Temperature During Installation
SoundScapes Blades panels can be installed where the temperature is between 40°F (4°C) and 120°F (49°C). Panels cannot be used in exterior applications, where standing water is present, or where moisture will come in direct contact with the Blades™ panel.

1.6 Fire Performance
SoundScapes Blades panels may obstruct or skew the existing or planned fire sprinkler water distribution pattern, or possibly delay the activation of the fire sprinkler, or fire detection system. Designers and installers are advised to consult a fire protection engineer, NFPA 13, and their local codes for guidance on the proper installation techniques where fire detection or suppression systems are present.

2.0 INSTALLATION

2.1 Suspension Systems
There are three different types of suspension options for use with SoundScapes Blades panels. These methods are:

- Suspended individually from the deck with aircraft cable hanging kit
- On a Prelude® XL® Heavy-duty suspension system subceiling with 12 gauge hanger wire
- On a Prelude XL Heavy-duty “Rail” suspension system with QSUTC (Rigid Attachment Clip) or ARBRKT (Adjustable Hanger Bracket)

2.2 General
SoundScapes Blades panels may require two people to align and install each vertical panel safely.

SoundScapes Blades panels cannot be used to support any other material. The suspension system chosen must be fastened to the structure per code in your area. Each vertical panel has embedded attachment clips along the top of each panel.
2.3 Blades™ Panel Hanging Kit – Independent Suspension

SoundScapes® Blades™ panels can be independently suspended using aircraft cables and quick release, fork gripper adjusters. The 6655 hanging kit includes (4) 96” long cables with stops, (4) fork gripper adjusters, and (4) top end connectors.

NOTE: For layout considerations in a seismic installation, refer to section 3.0.

- Determine the location to hang the Blades™ panels
- Fasten the appropriate anchor to the structure that will interface with the top end connectors
- Remove the unneeded portion of the clip with tin snips
- Attach the fork gripper and pin through the hole in the embedded attachment clip within the Blades™ panel
- Thread the aircraft cable through the fork gripper
- Level the Blades™ panel to the finished height and trim the aircraft cable at the desired length, once finished
- To release the cable and lower the Blades™ panel, take all weight off the adjuster, push the release mechanism, and simply slide the cable out, as needed

IMPORTANT SAFETY AND QUALITY NOTE: Do not allow any portion of wire or aircraft cable to drop below the top of a panel while adjusting final height. To do so could cause injury to the installer or damage to the edge of the panel.

2.4 Group Installation on a Prelude® XL® Heavy-duty Suspension System Subceiling

SoundScapes Blades panels can be installed on Prelude XL Heavy-duty suspension system by using the embedded attachment clips on the top of the SoundScapes Blades panels to interface with route holes in the Prelude XL main beams.

- The suspension system must use Prelude XL Heavy-duty main beams (includes 360° Painted Grid) and full-height cross tees (1-11/16”). These suspension components are necessary despite the seismic category of the installation.
- For seismic category C, D, E, and F installations refer to section 3.0 Seismic Restraint and the Armstrong® Seismic Rx® guide to modify the suspension system to meet IBC requirements. For seismic category A and B installations refer to the following guidelines:
  - Main beams closest to the perimeter must be no farther than 24” from each wall
• Main beams must have a hanger wire within 24" of the walls, and then a maximum of 4' O.C.

• The field of the suspension system assembly must be a standard 24" x 24" module build (main beams 48" O.C., 48" cross tees perpendicular to the main beams at 24" O.C., and 24" cross tees spanning the midpoints of the 48" cross tees. Once the suspension system is in place refer to section 2.6 Blades™ Panel Attachment to Suspension System.

2.5 Installation on a Prelude® XL® Heavy-duty “Rail” Suspension System

SoundScapes® Blades™ panels can be installed on a grid "rail" system, using the following guidelines:

• Prelude XL Heavy-duty main beams (includes 360º Painted Grid main beams)

• Main beams must be spaced at 24" O.C.

• QSUTC clips or ARBRKT brackets to attach main beams to the deck

• 24" full-height cross tees (1-11/16") installed at 4' O.C. for alignment and squaring

2.5.1 Brackets

Brackets are used to attach the main beams to structure. Brackets are recommended within 12" of the ends and not more than 48" on center along the run of main beams. Brackets allow suspension system elevation adjustment from 1-3/4" to 5-1/2". Use heavy snips or a hacksaw to trim the bracket for different heights, or as needed, to level the suspension system. Avoid installing the bracket on the main beam at the location of cross tees.

QSUTC Rigid Attachment Clip – This clip must be accurately located before fastening to the structure for correct suspension system alignment and proper panel fit. Use a string line or laser to establish a straight row for bracket attachment. Use the appropriate fastener to anchor the clip to the structure.

ARBRKT Adjustable Hanger Bracket – This bracket is adjustable after fastening to the structure with a screw. This allows flexibility and minor variations for attachment to the structure. Use of a string line or laser is still recommended for this bracket. The suspension system can easily be aligned and squared for proper panel fit. Use the appropriate fastener to anchor the clip to the structure.

2.5.2 Main Beams

Main beams will run perpendicular to the Blades™ panel length and will act as carrying rails. Blades™ panel attachment will only be to main beams, and cross tees are added only for alignment and squaring of the system.

• 7301 Prelude XL main beams are installed at 24" on center to align with the embedded attachment clips

• The main beams must be attached to the brackets so that cross tee route holes are located for proper spacing of the Blades™ panels per the reflected ceiling plan

First Row of Main Beams:

Use clamps or vise grips to temporarily secure the first main beam to the brackets. Adjust for proper location and elevation. Use two sheet metal screws (Type #8 x 1/2 sharp point screw) to fasten the bracket to the main beam. Use the typical method to join sections of main beams for long runs.

Additional Rows of Main Beams:

Brackets should be installed accurately to accommodate 24" O.C. main beam spacing. Use clamps or vise grips to temporarily secure the main beam in the second row to the brackets. Install two 24" cross tees at 48" O.C., being sure to avoid route holes that will be needed for proper attachment of the Blades™ panels per the RCP.

Check System Squarness:

System squarness is a critical stage of suspension system installation. System squarness must be within 1/16" for the measurement of a 24" x 48" module. The system must be square or this will result in improper panel fit, poor alignment, and an unacceptable visual. Measure diagonals; use a carpenter’s square, or the 3-4-5 method to square the system. Secure the second main beam to the brackets with sheet metal screws.

For installations with multiple rows of main beams: Once the first two main beams are square, temporarily clamp the furthest main beam of the installation. Clamp a dry line to a reference route hole in the furthest main beam and then pull tight and clamp to the matching route hole in the first main beam. Adjust the furthest main beam so that the dry line intersects the route holes of the first two squared main beams. Screw attach the furthest main beam. Next, install all remaining main beams within the field of the installation so that the route holes intersect the dry line. This will ensure proper alignment throughout the installation.

Trim off any excess main beam ends to keep the main beam concealed.
2.5.3 Cross Tees

Continue to install the remaining 24" cross tees at 48" O.C. throughout the rest of the installation. Since the main beams are secured with rigid brackets, you may need to roll the top bulb away to ease insertion of the cross tee clip. All single tee connections at the perimeters will need to be reinforced with an STAC clip for both seismic and non-seismic installations.

![Cross Tee Diagram]

NOTE: In order to install Blades™ panels in a location where a route hole is not present to accept the clip tab, use aviation snips to cut off the tab on the embedded hardware so that the remaining hardware can press firmly against the web of the suspension system. Once aligned, simply drive a short framing screw through each clip convenience hole at the location desired along the suspension system component.

2.6 Blades™ Panel Attachment to Suspension System

The Blades™ panels can be installed by aligning the embedded attachment clip into the route holes in the Prelude® XL® main beams. The 6" O.C. route holes in the suspension system act as alignment and spacing indicators. Additional measuring and modifying of the suspension or embedded attachment clip is necessary when installing Blades™ panels off the 6" O.C. route holes. In cases where the clip does not align with a route hole, the clip can be modified and screw attached as detailed in the following NOTE.

Always consider load and swinging of vertical panels for any installation type. A 6" O.C. minimum spacing is recommended for all standard SoundScapes® Blades™ panels installed on a Prelude XL suspension system.

1. Align the clip tabs on the embedded hardware in the appropriate route holes of the suspension system
2. Once the tabs are engaged, Blades™ panels will be level and ready to secure to the suspension system
3. Attach to the suspension system with a short framing screw through the clip convenience hole and the web of the grid. One screw per Blades™ panel if the installation is Seismic Category A or B. One screw at each hardware-to-suspension connection if the installation is Seismic Category C, D, E, or F.

NOTE: In order to install Blades™ panels in a location where a route hole is not present to accept the clip tab, use aviation snips to cut off the tab on the embedded hardware so that the remaining hardware can press firmly against the web of the suspension system. Once aligned, simply drive a short framing screw through each clip convenience hole at the location desired along the suspension system component.

3.0 SEISMIC RESTRAINT

The following are modifications to installations that are Seismic Category C, D, E or F.

Suspended individually from the deck with aircraft cable:

The International Building Code states the ceiling system connection to structure must allow the ceiling to move 360º in horizontal plane. Blades panels suspended individually with aircraft cable must be spaced a minimum of 12" apart or from surrounding surfaces to avoid contact during a seismic event.

Blades™ panels directly attached to suspension systems have been engineered for application in all seismic areas.

On a Prelude XL Heavy-Duty suspension system subceiling the following additions and modifications must be made:

- BERC2 Clips
- Two attached, and two floating walls
- Perimeter wires within 8'
- One screw at each hardware-to-suspension connection

On a Prelude® XL® Heavy-duty “Rail” suspension system:

- One screw at each hardware-to-suspension connection

Seismic reaction information is based on full-scale testing and computer modeling conducted at the Structural Engineering Earthquake Simulation Lab located at the State University of New York at Buffalo.
4.0 BLADES™ PANEL PENETRATIONS

SoundScapes® Blades™ panels cannot be field cut for penetrations, such as lighting or sprinklers.

5.0 TOUCH-UP PAINT

For minor surface and edge scratches on white Blades™ panels, use Armstrong SuperCoat™ Touch-up Paint item #5761. This paint provides an excellent one-coat edge treatment that will match the original vertical panel.

For minor surface and edge scuffing, or scratches on colored Blades™ panels, use matching Sherwin-Williams® paint that can be ordered through the Armstrong Sample Center, or purchased from your local Sherwin-Williams store.

6.0 CLEANING

Use a clean, dry, soft white cloth to wipe off any dirt or fingerprints. Regular light dusting of the top side of the vertical panel is recommended.

This document is also available in Spanish and French on our website.

Este documento está disponible en español y en francés en nuestro website.

Ce document est également disponible en espagnol et en français sur notre site web.