ACOUSTIBuilt™ Seamless Acoustical Ceiling System Overview
Assembly and Installation Instructions

ARMSTRONG® DRYWALL GRID SYSTEM
– Main Beams 48” or 72” O.C.
– Cross Tees 16” O.C.

AXIOM® PERIMETER TRIM

ACOUSTIBuilt™ PANEL
– 4’ x 6’

FASTENERS
– Grip-Plate® Washer for ACOUSTIBuilt panels
– Drywall Screws

TAPE & COMPOUND
– Mesh Tape
– Drywall Joint Compound

FINISH
– Fine Texture Finish for ACOUSTIBuilt panels
– Spray-applied with required air-assist equipment

Inspiring Great Spaces®
### SYSTEM COMPONENTS

Substituting different types of tape and finishing compounds can result in an unsatisfactory end visual.

<table>
<thead>
<tr>
<th>Item #</th>
<th>Description</th>
<th>Ordered Separately/ Included with</th>
<th>Required for Install</th>
<th>Sold by the:</th>
<th>Pcs/Ctn</th>
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</thead>
<tbody>
<tr>
<td><strong>SUSPENSION SYSTEM</strong></td>
<td></td>
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<tr>
<td>HD8906</td>
<td>12' HD Drywall Main Beam</td>
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<td>XL8945P</td>
<td>4' Drywall Cross Tee</td>
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<td>Ctn</td>
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<td>XL8965</td>
<td>6' Drywall Cross Tee</td>
<td>Ordered separately</td>
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<td>36</td>
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<tr>
<td>7891</td>
<td>12 gauge hanger wire</td>
<td>Ordered separately (or by others)</td>
<td>Yes</td>
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<td>140</td>
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<td><strong>PANELS AND FASTENERS</strong></td>
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<td></td>
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<tr>
<td>2604</td>
<td>ACOUSTIBuilt™ Panel – tapered edges, 48&quot; x 72&quot; x 7/8&quot;</td>
<td>Ordered separately</td>
<td>Yes</td>
<td>Pallet</td>
<td>10 Panel increments</td>
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<tr>
<td>Screws</td>
<td>#6 x 1-1/4&quot; fine thread or sharp point self-drilling drywall screws</td>
<td>Ordered separately (by others)</td>
<td>Yes</td>
<td>Varies</td>
<td>Varies</td>
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<tr>
<td>2119</td>
<td>Grip-Plate® Washer for ACOUSTIBuilt Panels (1-1/4&quot; diameter)</td>
<td>Ordered separately</td>
<td>Yes</td>
<td>Bag</td>
<td>250 Washer increments</td>
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<tr>
<td><strong>TAPE, COMPOUND, AND FINISH</strong></td>
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<td></td>
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<td></td>
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<tr>
<td>Tape</td>
<td>Self-adhesive mesh drywall joint tape</td>
<td>Ordered separately (by others)</td>
<td>Yes</td>
<td>Varies</td>
<td>Varies</td>
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<tr>
<td>Setting-Type Compound</td>
<td>Lightweight setting-type drywall joint compound</td>
<td>Ordered separately (by others)</td>
<td>Yes</td>
<td>Varies</td>
<td>Varies</td>
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<tr>
<td>Drying-Type Compound</td>
<td>Premixed ultra light weight drywall joint compound</td>
<td>Ordered separately (by others)</td>
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<tr>
<td>2605WH</td>
<td>Fine Texture Finish for ACOUSTIBuilt Panels – White</td>
<td>Ordered separately</td>
<td>Yes</td>
<td>Pail</td>
<td>4 gal/pail</td>
</tr>
<tr>
<td><strong>PERIMETER TRIMS &amp; ACCESSORIES</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>AX1PC – STR AX1PC – CUR</td>
<td>Axiom® One-Piece Drywall Trim Available for 4&quot; and 6&quot; heights – straight or curved</td>
<td>Ordered separately</td>
<td>Based on layout</td>
<td>Piece</td>
<td></td>
</tr>
<tr>
<td>AX – STR AX – CUR</td>
<td>Axiom Classic Available for 2&quot;-16&quot; heights – straight or curved</td>
<td>Ordered separately</td>
<td>Based on layout</td>
<td>Piece</td>
<td></td>
</tr>
<tr>
<td>AXBTASTR</td>
<td>Axiom Bottom Trim for ACOUSTIBuilt Straight</td>
<td>Ordered separately</td>
<td>Required for Axiom Classic</td>
<td>Piece</td>
<td></td>
</tr>
<tr>
<td>AXBTACUR</td>
<td>Axiom Bottom Trim for ACOUSTIBuilt Curved</td>
<td>Ordered separately</td>
<td>Required for Axiom Classic</td>
<td>Piece</td>
<td></td>
</tr>
<tr>
<td>KAM</td>
<td>Knurled angle molding for attachment to wall. 2&quot; face recommended.</td>
<td>Ordered separately</td>
<td>Based on layout</td>
<td>Ctn</td>
<td>10</td>
</tr>
</tbody>
</table>
## TOOLS AND EQUIPMENT

<table>
<thead>
<tr>
<th>Item #</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
</tbody>
</table>

### SUSPENSION SYSTEM

- Standard drywall grid installation tools

### PANEL INSTALLATION

- Impact or drill driver
  - Used to install screws with washers. A drywall screw gun with depth-sensitive nose-piece cannot be used due to interference with the washers.

- Cutting tools
  - Standard drywall and acoustic panel cutting tools. Utility knife, jab saw, and rotary cut-out tools are recommended

### FINISHING

- Mixer
  - To mix setting-type compound

- Mud Pan
  - Standard drywall mud pan

- Taping knives (4”, 5”, 6”, and 8”)
  - Standard drywall taping knives. Used to finish board joint and fasteners, and to check flatness

- Pole Sander
  - For sanding compound at board joints

- Sanding Blocks
  - Flat, rigid sanding block to sand field fastener compound. Foam sanding block to sand compound edges.

- Examination light
  - To critically examine flatness

### FINE TEXTURE FINISH FOR ACOUSTIBUILT™ PANELS

- Pressure Pot
  - Binks® (or equivalent) pressure tank with dual air regulation and rated for 80 PSI or greater output pressure. A liner is recommended.

- Air Compressor
  - The spray gun requires continuous air delivery of 14.1 SCFM at 50 PSI. Air delivery can be achieved with one compressor or two in series. Consider the electrical load and circuit limit.

- Air Assist Spray Gun
  - Binks® Model 2100 Spray Gun:
    - 68SS Fluid Nozzle #45-6801
    - 68PB Air Caps #46-6032
    - 568 Fluid Needle #47-56800

  - Binks® Model 95 Spray Gun:
    - 68SS Fluid Nozzle #45-6801
    - 68PB Air Caps #46-6032
    - 568 Fluid Needle #47-66800

  - Graco® Model AirPro Conventional Spray Gun:
    - Part #288934
    - Nozzle Size: 0.110”
    - Air Cap Kit #289069
    - Needle/Nozzle Kit #289467

- Pole Sander
  - 220 grit sand paper used to gently remove dust and debris as needed

- Bucket
  - Bucket to fill with water for soaking gun tip between coats

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**Installation Video**
1. GENERAL

ACOUSTIBuilt™ panels are 7/8" thick, available in a nominal size of 48" x 72", and have tapered edges on all four sides. As ordered, ACOUSTIBuilt panels are scrimmed and unfinished. Panels are installed to Armstrong® Drywall Grid using drywall screws and washers. Joints between panels are subsequently taped and the joints and fasteners are covered with compound. Finally, the surface is coated with a fine texture finish.

1.1 Safety
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.

1.2 Warranty
Failure to follow the Armstrong Ceilings recommended installation instructions in effect at the time of installation will void the one-year panel warranty.

1.3 Storage and Handling
Do not store the Fine Texture Finish or panels in unconditioned spaces with temperature lower than 40° F or higher than 100° F, or with humidity lower than 25% or higher than 55% RH. Panels shall be stored in a dry interior location and shall remain in packaging prior to installation to avoid damage. Panels must not be exposed to extreme temperatures, for example, close to a heating source or near a window in direct sunlight. Proper care should be taken when handling to avoid damage or soiling.

1.4 Site Conditions
Prior to installation, the area shall be free of construction dust and debris. ACOUSTIBuilt panels should be installed in areas where the building is enclosed and the HVAC is continuously functioning. This product is not recommended for exterior applications, where standing water is present, or where moisture will come into direct contact with the ceiling. A finished ACOUSTIBuilt system features HumiGuard® Plus performance.

1.5 HVAC Design & Operation, Temperature & Humidity Control
HVAC should be designed, installed, and operated in accordance with ASHRAE Standard 62.1. It is also necessary for the area to be enclosed and for the HVAC systems to be functioning and in continuous operations for the life of the product. ACOUSTIBuilt is not intended for use where natural ventilation is part of the ventilation strategy. This product is not recommended in areas where a differential plenum pressure exists. Standard ACOUSTIBuilt ceiling systems cannot be used in exterior applications.

1.6 Fire Performance
ACOUSTIBuilt panels with Fine Texture Finish are tested to ASTM E84 and CAN/ULC S102 surface burning characteristics. Flame Spread Index 25 or less. Smoke Developed Index 50 or less (UL labeled).

1.7 Cleaning
See Section 12.

2. DESIGN AND INSTALLATION CONSIDERATIONS

2.1 Panel Layout
Panels are installed with long (6') edges parallel with the cross tees to allow for attachment at roughly 14-1/2" O.C. spacing. Control joints are required following the standards used for gypsum board listed in ASTM C840, section 20.

- Ceilings with perimeter relief cannot exceed 50 LF and 2500 SF between control joints
- Ceiling without perimeter relief cannot exceed 30 LF and 900 SF between control joints

See section 7.2.3 for applicable details.

2.2 Directionality
Panels receive a uniform, non-directional finish.

2.3 Panel Offset/Fixture Integration
The finish face of the panels drops 7/8" below the face of the grid.

The installed height of the fixtures that interface with these panels, such as sprinkler heads and light fixture trims, must allow adjustment to accommodate this 7/8" offset.

Independent support of MEP devices is required per manufacturer instructions. ACOUSTIBuilt panels may not bear load from lights, diffusers, speakers, or similar devices.

Ensure detailed plans for integrations are established prior to panel installation.

2.4 Plenum
Panels are screw attached from below to the face of the grid and do not require space in the plenum for installation. Light fixtures and air handling systems may determine the minimum plenum height for the installation.

2.5 Sprinklers
For questions about sprinklers, see NFBA13 sprinkler code.

Designers and installers are advised to consult a fire protection engineer, NFPA 13, and local codes for guidance where automatic fire detection and suppression systems are present.
2.6 Approximate System Weight & Attachment to Deck
Overall system weight will combine the suspension system, panels, and finish components
• Drywall grid weighs approximately 0.4 lbs/SF
• ACOUSTIBuilt™ panels with Fine Texture Finish weigh approximately 1.1 lbs/SF
Fastener connections of the suspension system to building structure are specified by the contractor and must follow the manufacturer's instructions and referenced code.

2.7 Accessibility
Access panels can be integrated within the system following standard installation practices. Refer to the access panel manufacturer to verify compatibility with 7/8" thick panels and for installation details. Some access panels designed for 5/8" drywall may require a 1/4" shim to install flush with ACOUSTIBuilt panels.

2.8 Perimeters
ACOUSTIBuilt panels can be installed to tie into walls or integrate with Axiom® perimeter trim. See sections 5 and 7.2.3 for details.
The perimeter detail may impact the need for and spacing of control joints.

2.9 Seismic Installations
ACOUSTIBuilt has been seismically tested for installation in all Seismic Design Categories. See section 9 for requirements and additional information.

2.10 Sloped Installations
ACOUSTIBuilt Ceiling Systems can be installed on slopes up to 20 degrees.

3. ACCESSORIES

3.1 Panel Accessories

3.1.1 Washers
The Grip-Plate® washer for ACOUSTIBuilt panels (1-1/4" diameter) is required for panel attachment to the grid system.

3.1.2 Screws
Fine thread #6 x 1-1/4" drywall screws are required. Sharp point and self-drilling screws are both acceptable.

4. SUSPENSION SYSTEM
The requirements listed here represent the manufacturer's minimum acceptable installation recommendations, and may be subject to additional requirements established by the local authority having jurisdiction.
• All installations should be in compliance with ASTM C754, and C1858
• All references to grid component property testing are per ASTM E3090
• All grid components must meet the requirements of ASTM C645

4.1 System Components

4.1.1 Main Beams
ACOUSTIBuilt is installed on Heavy-Duty drywall main beams (HD8906/HD890610).

4.1.2. Cross Tees
4' drywall cross tees (XL8945P) or 6' drywall cross tees (XL8965) can be used.

4.1.3 Angle Molding
Perimeters of the installation that interface with walls must be supported with KAM.

4.1.4 ShortSpan® Framing
ACOUSTIBuilt Ceiling Systems can also be installed on 8' (S7708P), 10' (S7710P), 12' (S7712P), and 14' (S7714P) ShortSpan Tees.

4.2 Suspension/Hanger Rules
Hanger wires must be installed on the mains within 24" of the perimeter and no more than 48" O.C. along the mains.

4.3 Drywall Grid/Framing Layout
When determining the grid layout, consider the long edges of the boards must run parallel with the cross tees.
• Main beams must be installed at 48" or 72" O.C. (depending on what DGS cross tees are being used).
• Cross tees must be installed at 16" O.C.
4.4 Squaring and Leveling the Grid

This system relies on a square grid system to ensure panel edges align at centers of cross tees. If the installation does not meet these squareness requirements, the panel edges may run off of the grid system.

- The system must be square to within 1/8" over a 48" x 48" module.

To check squareness of the system, measure across the diagonals of a 48" x 48" opening. The measurements (A and B) must be equal within 1/8". See detail:

• The suspension system must be leveled to within 1/4" in 10’.

4.6 Perimeter Attachment to Wall Molding

All grid that interfaces with the perimeter must be secured to the perimeter with a framing screw.

5. FLOATING PERIMETERS / TRIM FOR DISCONTINUOUS CEILINGS

Floating perimeters must be trimmed with either Axiom® One-Piece Drywall Trim or Axiom® Classic with Bottom Trim for ACOUSTIBuilt™. Refer to the installation instructions for the Axiom product you are using for instructions specific to the trim product. The following sections address requirements in addition to the standard Axiom instructions that must be followed for integration with ACOUSTIBuilt installations.

5.1 Suspension Rules

Based on the layout, the system may require additional suspension points when compared to the Axiom trim instructions.

When Axiom trim is not directly supported, the following suspension rules must be followed:

- All splices (including corners) must be supported by a connecting grid member within 24" on either side of the splice. Situations where there is no grid member that interfaces the Axiom Trim within 24" of the splice will require supplemental support directly from the Axiom Trim to structure.
- Axiom must be supported by grid members no more than 72" O.C. or be directly supported from the structure.
- All grid supporting Axiom trim must have a wire at a distance no greater than half the length of the grid member, up to a max of 12" (up to 8" in seismic installations), from the Axiom Trim.
- Refer to Axiom Classic instructions for additional installation requirements for Axiom 10" tall or greater.
- Lateral bracing may be required to square the grid and stabilize the ceiling for finishing steps.

5.2 Grid Attachment

5.2.1 Axiom One-Piece Drywall Trim

- The 1/4" tabs on all Axiom T-Bar Connection Clips (AXTBC) or Axiom T-Bar Connector Twist Clips (ACCLT) must be trimmed off, typically using tin snips.

5.2.2 Axiom Classic with Bottom Trim

Axiom Bottom Trim for ACOUSTIBuilt™ (AXBTA) is designed specifically for the 7/8" thickness of ACOUSTIBuilt™ panels.

- All mains and cross tees are attached to the AXTBC clips by two metal framing screws.

5.2.3 After the panels are installed, the bottom trim is aligned in the groove of the Axiom Classic Trim and fastened with drywall screws through the taping flange of the trim into the
bottom flange of the Axiom Classic trim. The bottom trim has two rows of predrilled holes. Use only the holes closest to the face to attach the bottom trim to the Axiom Classic.

- Before installing the screws, create a bevel in the AXBTA hole using a countersink tool or step bit.

See Section 7.2.3.2 for additional details.

6. TRANSITIONS

The ACOUSTIBuilt™ Ceiling System can be transitioned on the same plane or to different elevations.

6.1 Axiom® Transitions

6.1.1 Elevation Change Transitions 2" - 10"

Axiom® Transitions Trim (items AXTR2 – AXTR10) can be used for elevation change transitions, utilizing the Axiom Bottom Trim for ACOUSTIBuilt and following the steps in section 5.2.2.

Each suspension system attaching to the Axiom Transitions should be supported to structure within 8" of the transition.

6.2 Transition Molding

Transition Molding can be used for transitions on the same plane between ACOUSTIBuilt panels and other acoustical ceiling products.

7. PANELS

ACOUSTIBuilt panels are 4' x 6' and feature a tapered perimeter around all four edges. This feature eliminates the need for butt joints. Panels can be field-cut to fit layout conditions like other acoustical panels and drywall. Field cut edges should only be placed at walls, other perimeters, or MEP. Wherever two panels are adjacent to each other, use only the factory tapered edges. Lift and handle panels carefully to avoid breaking or indenting the material that is soft compared to drywall.

7.1 Layout Rules and Overview

ACOUSTIBuilt panels require specific fastener spacing.

The panels must be oriented so the 6' edges run parallel with the cross tees, which are spaced at 16" O.C.

Screws with washers are installed approximately 14-1/2" O.C. along each row of cross tees. This will provide four rows of six fasteners supporting each panel. Eight of these fasteners will be within the field of the panel (field fasteners), and 16 will be located at the edge of the panel (edge fasteners) and shared between adjacent panels.

6.1.2 No Elevation Change

Axiom Transitions that have an integrated taping flange for drywall can be used with ACOUSTIBuilt™ panels by modifying the AXTBC in the same method as in section 5.2.1.

Each suspension system attaching to the Axiom transition...
It is recommended to lightly pre-mark the screw locations on each using a carpenter pencil. Marks may not extend outside of the small fastener area where compound will be applied, as the finish coating may not hide the marks. Panels are suspended first by the eight field fasteners. Panel edges are aligned carefully with the center lines of cross tees.

The panels should be staggered so that the short edges are offset by approximately 29" between adjacent rows. This will ensure proper spacing of edge fasteners along the perimeter of each panel.

Edge fasteners, which are shared between panels, are installed only after the adjacent board(s) are suspended.

7.2 Panel Installation

7.2.1 Fastener Attachment Guidelines

All panels are attached to cross tees with the screws and washers listed in section 3.

The screws and washers are installed using a standard impact driver or drill/driver. Drywall screw guns with nose cones cannot be used due to interference with the washers.

Fasteners are set to a depth of no more than 1/32" past the board surface. Depth is checked with a straight-edge to ensure each fastener is minimally recessed. Over-tightened fasteners will require additional steps to finish and compromise the final appearance.
It is recommended to practice installing fasteners on scrap board to ensure proper depth is achieved.

Edge fasteners are installed to the tapered perimeter, and are not installed as deeply because the taper provides a natural recess.

To attach taping flanges (such as L-trims, expansion beads, and fixture mud rings), screws that penetrate the flanges are installed without washers.

7.2.2 Panel Attachment
Panels should be handled by two people to avoid damaging or breaking the board edges. Board lifts may be used in a careful manner that avoids surface indentation or edge damage.

ACOUSTIBuilt™ panels are carefully lifted to the grid with the long edges aligned with the centerlines of the cross tees. The weight of the panels must be supported until all eight field fasteners are installed.

Edge fasteners are installed in the center of panel joints after adjacent panels are suspended by their eight field screws.

7.2.3 Panel Attachment at Perimeter
7.2.3.1 Panel Attachment at Wall Perimeter
When panels are cut to size to fit along a perimeter, they should be fastened to the KAM at no more than 16" O.C. along the entire cut edge.
7.2.3.2 Panel Attachment at Floating Trim Perimeter
When panels are cut to size to fit within Axiom® with a taping flange (Axiom One-Piece Trim and Bottom Trim for ACOUSTIBuilt™ ceiling system), screws without washers should be inserted through the taping flange, securing the panels to cross tees at no more than 16" O.C. Additional cross tees may be required along the perimeter to meet this requirement.

7.2.3.3 Panel Attachment at Perimeter of Cutouts
When panels are cut to accommodate fixtures, fasteners should be added to ensure the panels are fully supported. If the largest dimension of the required cutout is more than about 12", then additional cross tees should be added around the perimeter of the opening, and fasteners should be added around this perimeter at no more than 16" O.C.

8. MEP
The installed height of the fixtures that interface with these panels, such as sprinkler heads and light fixture trims, must be able to be adjusted to accommodate the 7/8" panel thickness.
ACOUSTIBuilt panels are not intended to support any load from lights, diffusers, speakers, or similar devices. All fixtures must be supported by framing members or independently supported per the manufacturer's instructions.

9. SEISMIC
ACOUSTIBuilt ceiling system has been engineered and tested for application in all Seismic Design Categories when installed following these instructions for a wall-to-wall ceiling.
Layouts that vary from wall to wall (floating trim, clouds, elevation changes) may require rigid bracing at the discretion of the code official or project engineer.

10. FINISHING
Panel joints and fasteners are finished with tape and compound to create a flat surface. While the materials used to finish ACOUSTIBuilt panels are also used to finish drywall, the procedure has unique requirements. This section contains the required and methods to finish ACOUSTIBuilt.

10.1 Finishing Rules and Materials
Joint compound coverage shall be limited to preserve the acoustical performance of the panels. Compound at panel joints shall not exceed 8 inch widths. Compound applied to field fasteners shall not exceed 4 inch by 4 inch areas. All compound shall be smooth and free of tool marks and ridges. Panels are to be finished with taping knives. Production tools, including boxes, are not permitted.

The required materials are (1) fiberglass mesh tape, (2) lightweight setting-type joint compound, and (3) ultra lightweight drying-type joint compound. Suitable materials may be sourced from various manufacturers, provided they meet these descriptions.
### TAPE AND COMPOUND PROCEDURE

<table>
<thead>
<tr>
<th>Steps</th>
<th>Field Fasteners</th>
<th>Steps</th>
<th>Joints and Edge Fasteners</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td>The following steps apply to field fasteners (i.e. fasteners that are not located at panel joints).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Prefill fastener dimples</td>
<td>Spot-fill fastener areas with lightweight setting-type compound</td>
<td>1. Prefill fastener dimples</td>
<td>Spot-fill fasteners with lightweight setting-type compound.</td>
</tr>
<tr>
<td>2. Fill fastener dimples</td>
<td>Fill fastener areas again, this time with ultra lightweight drying-type compound.</td>
<td>2. Tape joints</td>
<td>Apply fiberglass mesh tape to all panel joints.</td>
</tr>
<tr>
<td>3. Overfill fastener dimples</td>
<td>Overfill fastener areas with ultra lightweight compound to create slight mounds over the dimpled areas. Feather the compound edges into the panel facing.</td>
<td>3. Coat joints</td>
<td>Apply a coat of lightweight setting-type compound to all panel joints.</td>
</tr>
<tr>
<td>4. Fill dimples</td>
<td>Spot-fill shallow areas at fastener locations with lightweight setting-type compound. Use critical light to locate and fill each shallow spot.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Coat joints</td>
<td>Coat joints again, this time with ultra lightweight drying-type compound.</td>
<td>6. Coat joints</td>
<td>Coat joints again with ultra lightweight drying-type compound. Feather the compound edges into the panel facing to eliminate ridges and minimize required sanding. Float the joints to no more than 8 inches wide. Inspect the joints and fill any shallow spots with additional compound as-needed.</td>
</tr>
</tbody>
</table>
SANDING AND INSPECTION PROCEDURE

Throughout the sanding process, inspect the surface frequently for flatness. Direct a light across the ceiling to highlight unevenness that requires attention.

<table>
<thead>
<tr>
<th>Sand the Joints</th>
<th>Inspect the Joints</th>
<th>Sand the Fasteners</th>
<th>Inspect the Fasteners</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sand the Joints with a pole sander with 180 grit or finer sand paper. Gently sand the compound edges with a rigid or foam sanding block to eliminate ridges. Use care not to damage the panel facing by over-sanding.</td>
<td>Inspect the joints with critical light and a straight edge tool held against the surface. Identify any unevenness indicated by light shining under the tool. Fill and sand as required.</td>
<td>Sand the overfilled compound flat. Use a rigid, flat sanding block. Do not use a soft sanding sponge. Examine frequently with critical light to ensure flatness and to avoid over-sanding. Gently sand compound edges. Use care to not damage the panel facing.</td>
<td>Inspect all fasteners with critical light and a straight edge tool held against the surface. Identify any unevenness indicated by light shining under the tool. Fill and sand as required.</td>
</tr>
</tbody>
</table>
11. FINE TEXTURE FINISH

11.1 Surface Preparation
Inspect the surface with critical light to ensure the surface is flat and smooth prior to applying the finish. Use a cloth to wipe off dust as needed.

11.2 Space Preparation
Ensure all service integrations are accounted for prior to applying the finish. Protect areas as required with masking film. Use drop cloth to protect the floor from dry fall.

11.3 Safety Considerations
Avoid exposure to airborne dusts/fumes/gas/mist/vapors/sprays; use only with adequate ventilation. If high dust levels are expected, use an appropriate NIOSH certified dust mask. Avoid contact with eyes and skin. Wash thoroughly after handling. See Fine Texture Finish for ACOUSTIBuilt™ label for safety information.

11.4 Spray Equipment
Fine Texture Finish ACOUSTIBuilt requires the air-assist spray equipment specified below.

Spray Gun
Binks® Model 2100 or Model 95 spray gun with required parts:
- Binks Model 2100 Spray Gun
  - 68SS Fluid Nozzle #45-6801
  - 68PB Air Caps #46-6032
  - 568 Fluid Needle #47-56800

- Binks Model 95 Spray Gun
  - 68SS Fluid Nozzle #45-6801
  - 68PB Air Caps #46-6032
  - 668 Fluid Needle #47-66800

Graco® AirPro Conventional Spray Gun:
- Part #288934
- Nozzle Size 0.110”
  - Air Cap Kit #289069
  - Needle/Nozzle Kit #289467

Pressure Tank
Binks (or equivalent) pressure tank with dual air regulation and rated for 80 PSI or greater output pressure. A liner is recommended.

Air Compressor(s)
Spray gun requires continuous air delivery of 14.1 SCFM at 50 PSI. Air delivery can be achieved with one compressor or two in series. Consider the electrical load and circuit limit.

11.5 Finish Preparation
Mix Fine Texture Finish thoroughly with a mixing paddle until a uniform consistency is achieved. Do not thin. Filter and pour the finish into the pressure tank.

11.6 Equipment Preparation
Refer to the equipment manufacturers for operational and safety information. Typical settings are shown below but may vary by equipment and conditions.

11.7 Finishing Procedure
Fine Texture Finish for ACOUSTIBuilt is applied in multiple coats, layered to achieve a uniform appearance and acoustical performance. It is strongly encouraged to practice spraying to ensure proper calibration and technique are achieved. Refer to the installation video.

11.7.1 Spray Calibration
Beginning with the pressure settings in Section 11.6, spray a dark surface such as cardboard with a single stroke. Adjust your speed and pressure settings until the spray pattern matches Image A.

- IMAGE A – Spray Pattern on Cardboard

11.7.2 Spray Procedure
Apply the spray pattern of Image A to the ceiling in 4 coats with 50% overlap. Each coat is approximately 3 wet mils, or 2 dry mils. Allow at least 40 minutes for drying between coats. Allow additional dry time for humid conditions. Alternate the spray direction of each coat. For example, if the first and third coats run North/South, the second and fourth coats run East/West.
Assess the appearance after each coat with direct and side lighting. Apply each coat with proper application weight, per Images A and B. Joint compound should remain slightly visible after the third coat, but disappear after the fourth.

**IMAGE B – Coats on ACOUSTIBuilt™ Panel Joint**

If joint compound remains visible after the fourth coat, apply a fifth coat to the transparent areas, feathering into the surrounding ceiling. Repeat as necessary, but only until the joint compound is concealed and the appearance is uniform. Applying excessive coating may degrade the acoustical performance of the system.

As necessary, use 220 grit sandpaper to gently remove dust or debris from the finish prior to the final coat.

**11.7.3 Spray Technique**
For general guidance, refer to the equipment manufacturer’s instructions. Overlap each spray pass by 50 percent to ensure an even application. The recommended gun distance from the ceiling is 12 inches.

**50 percent overlap**

Always move the gun before pulling the trigger and continue the stroke after releasing the trigger to ensure an even application.

Refill the pressure tank between coats to avoid interrupting the spraying process. If spraying must be interrupted, stop and start spraying over joint compound at board joints.

To avoid creating glossy areas, do not spray finish on a wet surface. Ensure the previous coat has dried before spraying additional finish.

To avoid clogs, submerge the air cap and fluid nozzle in water between coats.

**11.7.4 Consumption**
The net consumption is 0.012 gal/ft², applied as four coats of 0.003 gal/ft². A pail contains 4 gallons of finish.

For example, a 2,500 ft² flat ceiling consumes net 30 gallons. Each coat consumes 7.5 gallons, or nearly two pails.

<table>
<thead>
<tr>
<th>Ceiling Area</th>
<th>Net Consumption</th>
<th>Per Coat Consumption</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Area x 0.012</td>
<td>Area x 0.003</td>
</tr>
<tr>
<td>200 ft²</td>
<td>2.4 gal.</td>
<td>0.6 gal.</td>
</tr>
<tr>
<td>2,500 ft²</td>
<td>30.0 gal.</td>
<td>7.5 gal.</td>
</tr>
<tr>
<td>5,000 ft²</td>
<td>60.0 gal.</td>
<td>15.0 gal.</td>
</tr>
</tbody>
</table>

Divide large ceiling areas into smaller sections to monitor consumption rate and verify appearance (per Sections 11.7.1 and 11.7.2).
12. ACOUSTIBUILT™ MAINTENANCE AND REPAIR GUIDE

Disclaimer: Repairs that add joint compound or finish to ACOUSTIBUILT™ Ceiling System may degrade its acoustical performance.

<table>
<thead>
<tr>
<th>Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clean</strong></td>
</tr>
<tr>
<td>Remove dirt with a medium bristled paint brush, compressed air on low pressure, or vacuum cleaner with soft brush. Remove soot with a dry soot cleaning sponge.</td>
</tr>
<tr>
<td><strong>Finish Touch-Up</strong></td>
</tr>
<tr>
<td>Spray-apply Fine Texture Finish for ACOUSTIBUILT per Section 11 with the standard equipment or a portable electric HVLP sprayer.</td>
</tr>
<tr>
<td><strong>Dents or Finish Defects</strong></td>
</tr>
<tr>
<td>Fill indentations with joint compound and sand the area smooth. Follow the finish touch-up procedure.</td>
</tr>
<tr>
<td><strong>Patch</strong></td>
</tr>
<tr>
<td>Cut out damaged area and patch the hole with drywall or ACOUSTIBUILT panel. Apply tape and joint compound. Follow the finish touch-up procedure.</td>
</tr>
</tbody>
</table>

12.1 Cleaning
To remove dry dirt or debris, brush away the dirt with a medium bristled dry paint brush, or blow away the dirt with compressed air or a vacuum on low setting with a soft brush. To remove soot stains, blot or brush away the dirt with a dry soot cleaning sponge. Dry finish texture standing out from the surface can be knocked down with a squeegee trowel or 220 grit sand paper.

12.2 Finish Touch-Up
The finish must be spray applied as specified. Do not brush or blot.
ACOUSTIBUILT ceilings can be refreshed or touched up with fresh coats of Fine Texture Finish. The finish can be applied with the standard pressure-feed equipment in Section 11, or with a portable electric HVLP sprayer.

12.2.1 Standard Pressure-Feed Equipment
Follow Section 11 to calibrate the spray pattern. Apply the finish to the ceiling in multiple, light coats until the appearance and texture match the surrounding ceiling. Allow the finish to dry between coats. Feather the final coat into the adjacent ceiling area.

12.2.2 Portable Electric Sprayer
• Use an electric HVLP paint sprayer with at least 0.10 inch (2.6mm) nozzle from a local hardware store or online. Contact your local installation representative for guidance.
• Review the safety and operational information from the spray gun manufacturer.
• Thoroughly mix and strain the Fine Texture Finish for ACOUSTIBUILT with a 30 mesh / 600 micron paint strainer. Pour the finish into the spray gun container.
• Calibrate the spray pattern against a dark surface, per Section 11. Adjust the spray gun controls as necessary to achieve the fine texture pattern.

12.3 Dents or Finish Defects
To correct glossy finish, indentations, or cracks, sand the local area and apply fresh coats of finish.
• (If applicable) Fill indentations with joint compound prior to sanding. Use ultra light weight joint compound as the top layer.
• Sand the joint compound or glossy area with 100 grit paper until the surface is smooth. Sand the finish texture 6 inches beyond the damaged area.
• Verify the area is flat with a long straight edge and critical light.
• Spray light coats of Fine Texture Finish for ACOUSTIBUILT per section 12.2.2.

12.4 Patch
To correct structural damage, patch the ceiling with a piece of ACOUSTIBUILT Panel or drywall.
• Cut out the damaged area and cut a new patch of the same size from ACOUSTIBUILT panel or drywall.
• Install framing as needed and secure the new patch with drywall screws (and Grip-Plate® washers if the new patch is cut from ACOUSTIBUILT panel). Shim the patch as needed to make it 1/8” recessed from the surrounding ceiling.
• Sand the finish texture where joint compound will be applied with 100 grit paper.
• Apply fiberglass mesh tape with setting compound around perimeter of the patch. Apply ultra light weight joint compound as the top coat and float the joints to create a flat surface.
• Sand the joint compound and finish texture 6 inches beyond the perimeter of the patch.
• Verify the area is flat with a straight edge and critical light.
• Spray light coats of Fine Texture Finish for ACOUSTIBUILT per section 12.2.2.
For more information, or for an Armstrong Ceilings representative, call 1 877 276 7876.

For complete technical information, detail drawings, CAD design assistance, installation information, and many other technical services, call TechLine customer support at 1 877 276 7876 or FAX 1 800 572 TECH.

For the latest product selection and specification data, visit armstrongceilings.com/commercial

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