

WOODWORKS® Grille

Assembly and Installation Instructions

1.0 GENERAL

1.1 Product Description

WoodWorks® Grille is a solid wood ceiling system available standard in two blade heights and four warm wood finishes – Grille Maple, Light Cherry, Dark Cherry and Walnut. Both the 1' x 8' panels and installation system are provided by Armstrong. Panels can be installed on standard Prelude® 15/16" grid with a Dowel or Backer. Custom finishes, and blade heights, as well as a flexible backer for curved applications, are offered through the Architectural Specialties department.

1.2 Material and Surface Finish

Blades and Backers are constructed from solid ash and Dowels are constructed from solid birch. Blades have a clear or semi-gloss coating. Backers and Dowels have a black factory finish.

1.3 Storage and Handling

All ceiling components should be stored in a dry interior location and shall remain in the original packaging prior to installation to avoid damage. The materials shall be stored off the floor in a flat, level condition. Do not store in unconditioned spaces with humidity greater than 55% or lower than 25% or with temperatures above 86°F or lower than 50°F. Use proper care when handling to avoid damage or soiling.

CAUTION: Use proper care and caution when handling suspension systems due to the sharp edges on all exposed clips.

1.4 Site Conditions

Building areas that will receive a ceiling shall be free of construction dust and debris. Installation of the products shall be carried out where the temperature is between 50°F and 86°F and relative humidity levels maintained between 25% RH and 55% RH. These temperature and humidity conditions must be met throughout the lifetime of the ceiling.

Real wood and wood composite products are natural building materials and they will react to changes in humidity. (Wood tends to contract with lower humidity and expand with higher humidity.)

Wood could also have a tendency to warp, twist or bow, due to the natural stresses in the components and these humidity changes. Be aware of these natural tendencies when evaluating the products.

It is also necessary for the area to be enclosed and for the HVAC systems to be functioning and in continuous operation. All wet work (plastering, concrete, etc.) must be complete and dry. These products cannot be used in exterior applications.

To ensure that the ceiling panels have stabilized to the current building conditions, prior to their installation, the planks must be placed in an environmentally stable building location for a minimum of 72 hours.

1.5 Color

WoodWorks Grille panels are made of solid wood and are available in 4 standard finishes; custom options available. Natural variations in color and grain are characteristic of wood products. To maximize visual consistency, panels should be unpacked and examined collectively to determine the most desirable arrangement for installation.

1.6 Ordering Considerations

Be sure to account for extra material that is normally needed for wood installations. When installing WoodWorks Grille panels, you should consider ordering at least 5% extra material.

Up to 10% more may be needed for odd size or diagonal installations. It is the customer's responsibility to plan each layout and order the correct amount of installation material needed, taking into account their design.

1.7 FIRE PERFORMANCE

As with other architectural features located at the ceiling, WoodWorks Grille may obstruct or skew the planned fire sprinkler water distribution pattern, or possibly delay or accelerate the activation of the sprinkler or fire detection systems by channeling heat from a fire either toward or away from the device. Designers and installers are advised to consult a fire protection engineer, NFPA 13, and their local codes for guidance where automatic fire detection and suppression systems are present.

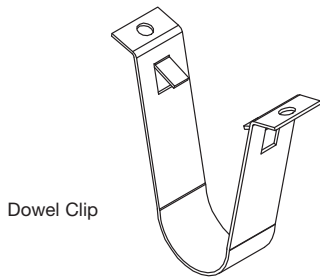
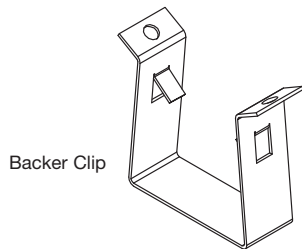
2.0 WoodWorks Grille Panels and Accessories

2.0.1 Wood Grilles

Two standard blade heights: 1-3/8" and 2-1/4" (width is 5/8").

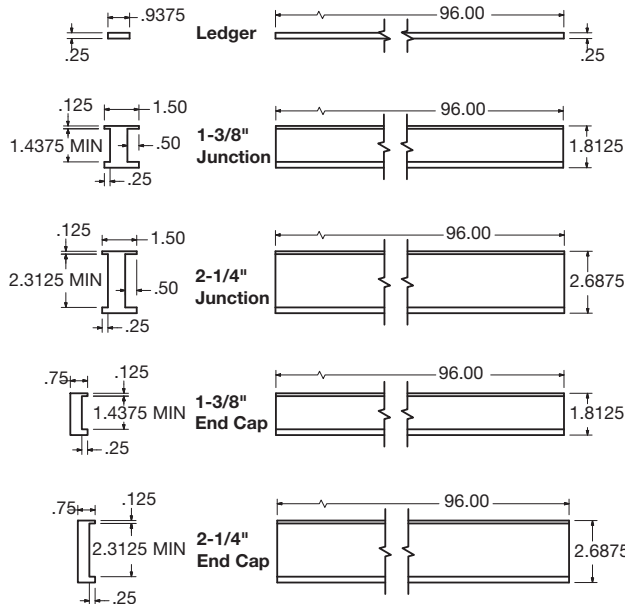
2.0.2 Backer Clips and Dowel Clips

Metal spring clips to attach panels to 15/16" T-bar suspension grid.



2.0.3 Trim Accessories

Wood trim available in matching finishes. Ledgers for wall molding trim. Junctions for panel joints. End Caps for exposed panel trim.



2.0.4 Fiberglass Infill Panel

2' x 2' x 1" black infill panel to improve acoustical performance.

2.1 Suspension System

Use standard 15/16" T-bar grid system, main beams, cross tees and wall molding to support the WoodWorks Grille panels. Use black 360° Painted grid for the best overall visual in installations where the suspension grid may be visible or in line of sight.

3.0 INSTALLATION

3.1 General

The suspension system shall be standard 15/16" exposed tee grid. The installation shall, in all cases, conform to ASTM C-636 requirements and the International Building Code.

If WoodWorks Grille panels weigh in excess of 2.5 lb/sf, the ceilings shall be installed per CISC Seismic Zones 3-4, as modified by the IBC.

WoodWorks Grille panels install perpendicular to the main beams. The main beams shall be spaced 48" o.c. The 48" cross tees shall intersect the main beams at 90° every 48" creating a 4' x 4' module. Then 48" cross tees shall be installed parallel to the main beam as required for panel attachment. (Extra rout holes in 48" 360° cross tees may need to be ordered.)

The suspension system must be leveled to within 1/4" in 10' and must be square to within 1/16" in 2'. Installation on grid systems that do not meet this tolerance will produce unacceptable panel alignment.

WoodWorks Grille panels require two people to handle each panel safely, minimize damage and provide panel support during installation.

See last page of this document for ceiling layout example.

3.2 Suspension Grid

3.2.1 Refer to the reflected ceiling plan to determine the grid layout. Main beams must run perpendicular to the panel length.

3.2.2 Refer to the reflected ceiling plan for the finished height of the ceiling. Add the overall height of the WoodWorks Grille panel to determine the elevation of the suspension grid. Grille panel height and weight is listed on data sheet.

3.2.3 Install wall molding along the perimeter at the established grid elevation.

3.2.4 Refer to the reflected ceiling plan to determine the panel orientation and size. Main beams must be installed directly under a backer/dowel location. The first main beam should be no more than 36" off the wall and then 48" on center across the installation. Use 12 ga. hanger wire 48" on center to support the main beams. Follow ASTM C636 requirements.

3.2.5 Install 4' cross tees at 48" on center between the main beams. This will create a 4' x 4' grid module.

3.2.6 Next insert 4' cross tees at the mid points of the cross tees in section 3.2.5. You should now have a 2' x 4' grid module that is called bridged or "H". This is required to keep the WoodWorks Grille panels perpendicular to the main beams and backers/dowels aligned along the grid for clip attachment.

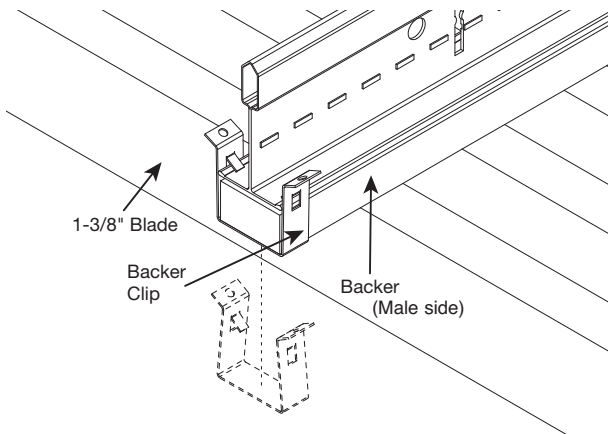
3.2.7 The end backers/dowels of the panel must be secured to the grid. These are 7 feet apart. You will need to install an additional 4' cross tee at the 7' location for each row of grilles.

3.2.8 Additional cross tees can be installed in the system as needed to support mechanical fixtures such as lights and speakers.

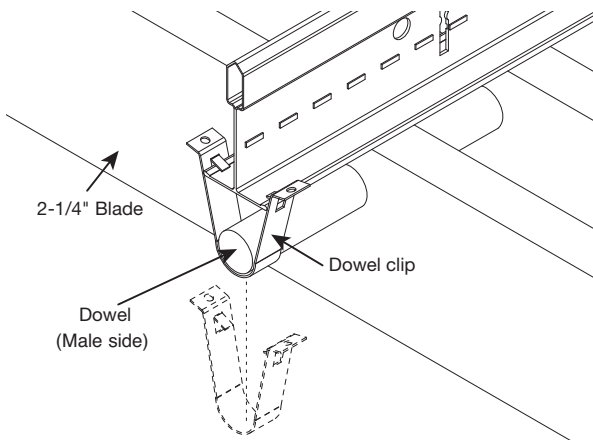
3.3 WoodWorks Grille Panels

3.3.1 WoodWorks Grille panels are installed in sequence across the room. The first row of panels will have the male side towards the wall. Backer/dowel may need to be trimmed for proper panel alignment.

Backer Assembly

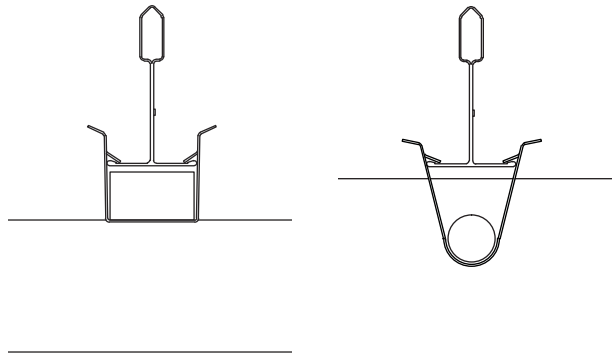


Dowel Assembly



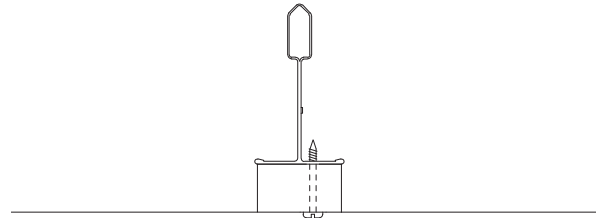
3.3.2 Begin at one wall, raise the panel up against the grid and align the backers/dowels with the grid.

3.3.3 The WoodWorks Grille panel is attached to the grid with a clip. Insert a clip around the appropriate backer or dowel, and push upwards to engage the clip tabs onto the grid flange. Make sure both clip tabs engage the grid flange.



3.3.4 Insert two backer/dowel clips at the four corners of the panel, then insert two clips on each backer/dowel that align with grid.

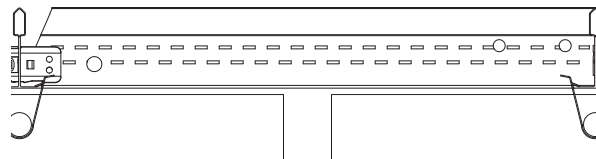
3.3.5 WoodWorks Grille panels with backers can be direct screw attached to the grid using #6 x 1-1/4" fine thread drywall screws.



3.3.6 Continue installing WoodWorks Grille panels – male to female – across the room.

3.4 WoodWorks Grille Reveal

3.4.1 WoodWorks Grille panels will have a 1" reveal between panel ends. This uniform spacing and alignment is maintained by the 15/16" grid assembly.

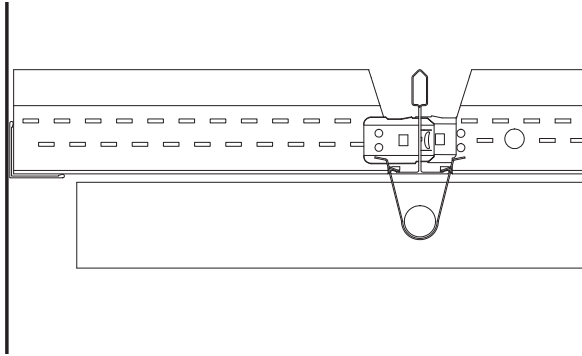


3.4.2 See accessory section 3.6.2 for optional Junction trim.

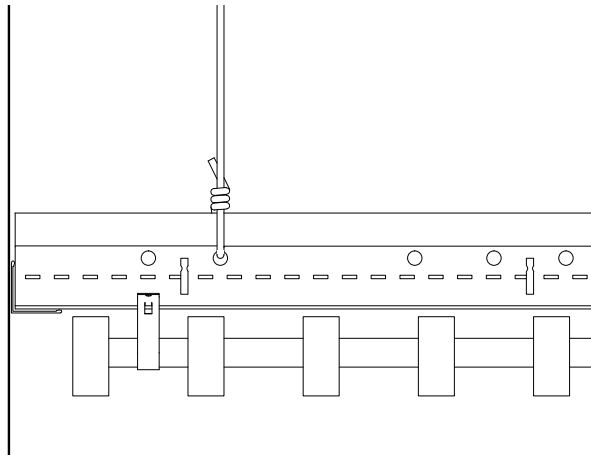
3.5 WoodWorks Grille Borders

3.5.1 Refer to the ceiling plan for border panel size and spacing.

3.5.2 The border at panel ends, perpendicular to the grid, will be controlled by the grid location. The border size was used in section 3.2.4 when determining the grid lay-out.

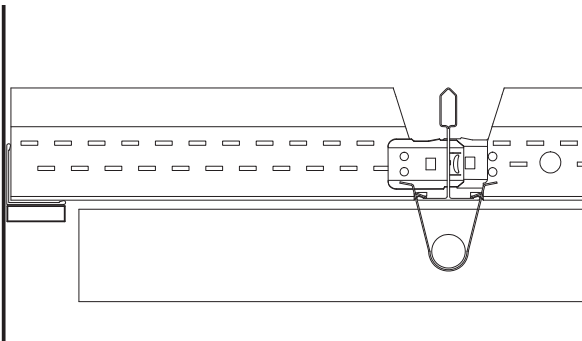


3.5.3 The border at panel sides, parallel to the grid, must be maintained at the specified dimension by using a mechanical fastener to secure the clip or panel to the grid. This can be a direct screw attachment or a wire tie attachment to the clip.

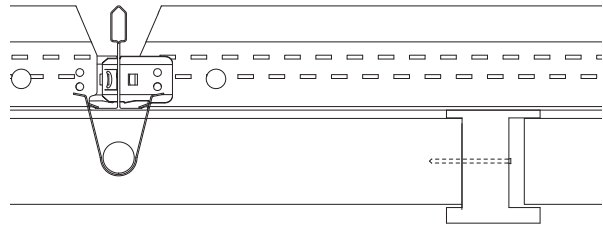


3.6 WoodWorks Grille Accessories

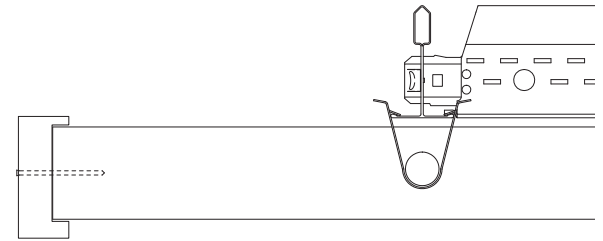
3.6.1 Ledger trim can be used to cover the wall molding with the same finish as the WoodWorks Grille panel when required. The ledger can be fastened to the molding with adhesive or screwed from above with 1/4" long screws.



3.6.2 Junction trim can be used between WoodWorks Grille panels to fill the 1" reveal. This option will be specified on the ceiling plan. The junction trim must be installed progressively as the panels are installed. Install the first row of WoodWorks Grille panels. Slip the shallow side of the junction trim over the panel blades. Use 1-1/2" 4d finish nails, every 16" to fasten the junction trim to the panel end. Install the next row of panels. The panel end will fit part way into the deep side of the junction. This panel end will float free in the junction trim to allow for expansion and contraction of the WoodWorks Grille panels.



3.6.3 End Caps can be used as trim for the panel end when the installation is not wall to wall, a floating cloud or trim around a fixture. Cut the end cap trim to fit as required and use 1-1/4" 3d finish nails, every 16" to fasten the end cap to the panel end.



3.7 Mechanical Fixtures

3.7.1 Mechanical fixtures such as lights, speakers and sprinklers should be installed into the acoustical grid before installing the WoodWorks Grille panels. Fixtures can be installed at the grid height or flush with the bottom of the panel. Fixture weight or housing must be supported by the acoustical grid. Install addition cross tees for support as needed. Refer to the ceiling plans for specific details. WoodWorks Grille panels can be cut to fit around fixture openings. Use the WoodWorks Grille end cap to trim the cut blades or sand and stain exposed field cut edges to match the panel finish.

3.8 Acoustical Blankets

3.8.1 Acoustical blankets will add acoustical performance to the WoodWorks Grille panels. See the technical brochure for specific data. The acoustical blanket is placed on top of the panel and must be installed progressively with the panel installation.

4.0 Curved Installations

For information on curved installations made possible with a flexible backer, contact the Architectural Specialties department at 1 877 ARMSTRONG and select options 1-1-4.

5.0 CUTTING

When you cut a panel to length, you can use normal woodworking tools, (e.g., circular saws, saber saws, coping saws, etc.).

Penetrations for sprinklers (or other fixtures) can be accomplished by simple interruption of the wood planks at those locations or by using normal woodworking tools to cut access in the planks.

▲ CAUTION: WOOD DUST. Sawing, sanding and machining wood products can produce dust. Airborne wood dust can cause respiratory, eye and skin irritation. The International Agency for Research on Cancer (IARC) has classified wood dust as a nasal carcinogen in humans.

Precautionary measures: If power tools are used, they should be equipped with a dust collector. If high dust levels are encountered, use an appropriate NIOSH-designed dust mask. Avoid dust contact with eyes and skin.

First Aid measure in case of irritation: In case of irritation, flush eyes or skin with water for at least 15 minutes.

6.0 SEISMIC RESTRAINT

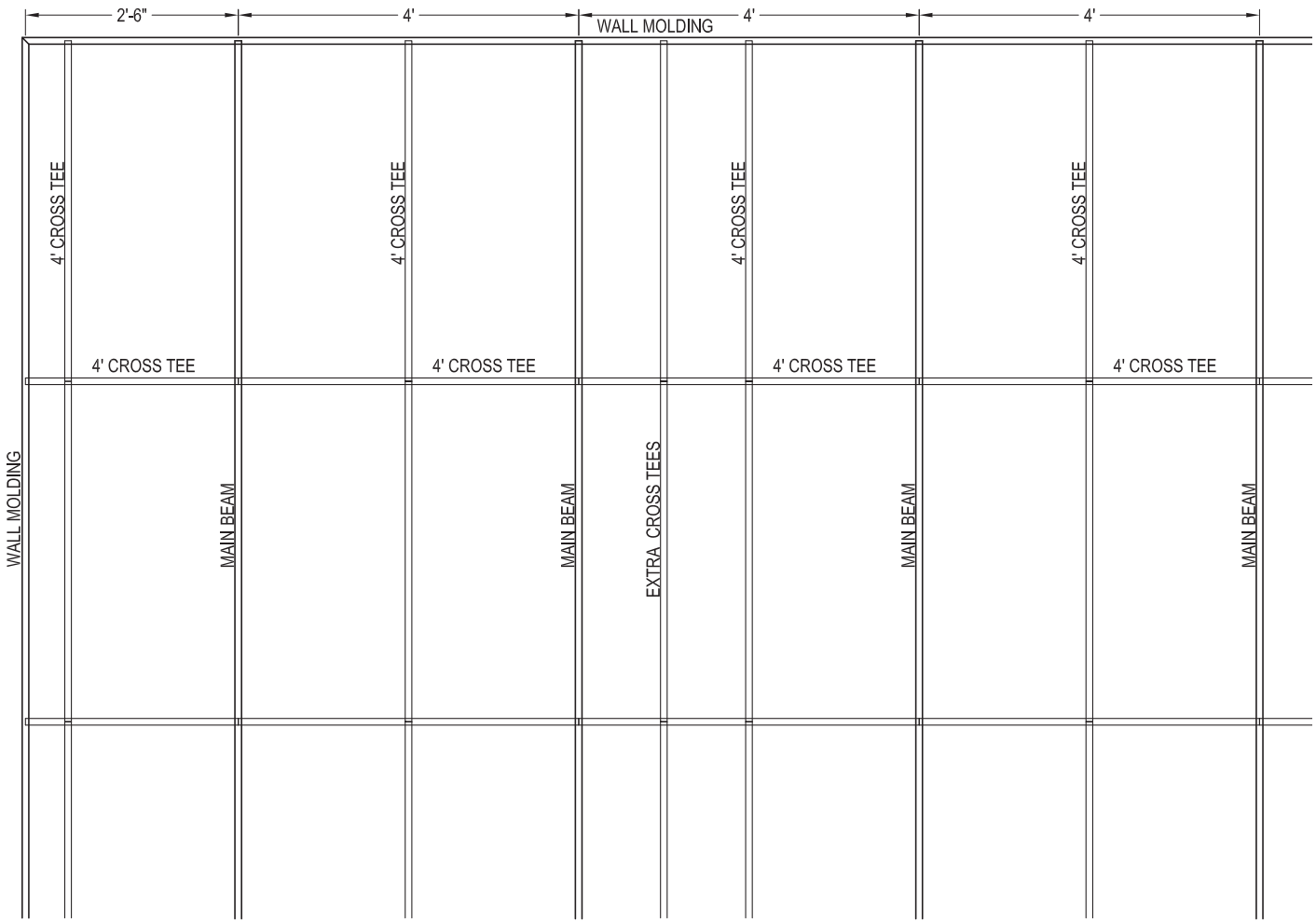
WoodWorks Grille has been engineered for application in seismic areas. This system has been successfully tested in applications simulating seismic design categories D, E & F. For applications in seismic zones, review the following guidelines.

Check local code for the need for lateral bracing and/or compression posts/splay wires, perimeter wires and for additional installation requirements.

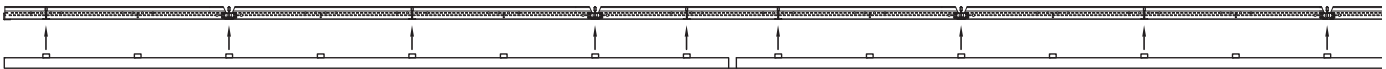
7.0 CLEANING RECOMMENDATIONS

WoodWorks Grille panels can be cleaned with a soft, dry cloth.

CEILING LAYOUT



SECTION DETAIL



MORE INFORMATION

For more information, or for an Armstrong representative, call 1 877 ARMSTRONG.
 For complete technical information, installation information and many other technical services,
 call Architectural Specialties at 1 877 ARMSTRONG, and select options 1-1-4.
 For the latest product selection and specification data, visit armstrong.com/woodworks.

