

# WOODWORKS® Grille Tegular

## Assembly and Installation Instructions

### 1.0 GENERAL

#### 1.1 Product Description

WoodWorks® Grille Tegular ceilings consist of 2' x 2' and 2' x 4' wood panels with horizontal and vertical wood blades. The vertical blade 2' x 2' and 2' x 4' panels should not be mixed during installation due to the different reveals. Vertical blade 2' x 2' panels are for checkerboard patterns and the vertical blade 2' x 4' panels are for linear applications only. There are 2' x 2' and 2' x 4' horizontal blade panels for 15/16" and 9/16" suspension systems. Vertical blades are deeper than they are wide. Horizontal blades are wider than they are deep.

#### 1.2 Material and Surface Finish

Blades and Backers are constructed from solid poplar. Blades are stained and then have a clear or semi-gloss coating. Backers are painted to 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

WoodWorks Grille Tegular ceiling materials should be permitted to reach room temperature and have a stabilized moisture content for a minimum of 72 hours before installation. They should not, however, be installed in spaces where the temperature or humidity conditions vary greatly from the temperatures and conditions that will be normal in the occupied space. These products cannot be used in exterior applications.

#### 1.5 HVAC Design & Operation Site Conditions

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 Temperature & Humidity During Installation

WoodWorks Grille Tegular panels are interior finish products designed for installation in temperature conditions between 50°F and 86°F, in spaces where the building is enclosed and HVAC systems are functioning and will be in continuous operation. Relative humidity shall not fall below 25% or exceed 55%. There shall be proper ventilation of the plenum in high-moisture areas. All plastering, concrete, terrazzo, or any other wet work should be completely dry. All windows and doors should be in place. The heating, ventilating and air-conditioning system should be installed and operable where necessary to maintain proper temperature and humidity conditions before, during, and after installation of the WoodWorks panels.

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.

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

#### 1.7 Color

WoodWorks Grille Tegular panels are made of solid wood and are available in four 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.

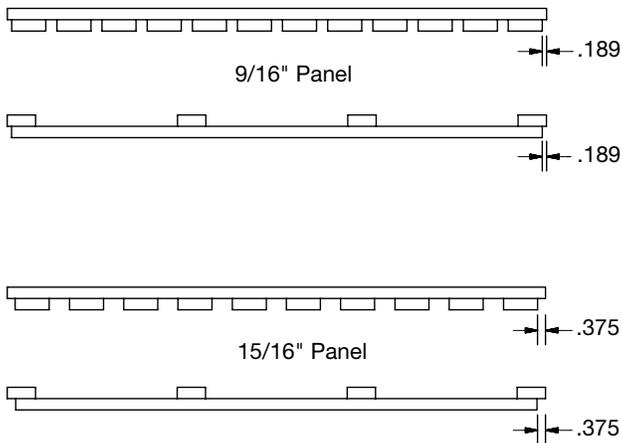
#### 1.8 Fire Performance

As with other architectural features located at the ceiling, WoodWorks Grille Tegular panels 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 TEGULAR PANELS AND ACCESSORIES

### 2.1 Panel Edges

The edges of the Tegular panels are created by the backer extending out past the blades of the panel, which support the panel on the grid flanges.



### 2.2 BioAcoustic™ Infill Panel

Use 2' x 2' x 5/8" black infill panel (item 5823) to improve acoustical performance.

## 3.0 INSTALLATION

### 3.1 General

The suspension system shall be standard 9/16" or 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 C-636 and ASTM E-580 (CISCA seismic recommendations).

### 3.2 Load Capacity

WoodWorks Grille Tegular ceiling panels weigh approximately 0.875/lb/sf. Main beams must be capable of supporting the weight of the panels plus any additional ceiling components that are not independently supported from the building structure. The minimum acceptable load capacity for the main beam when supporting only ceiling panels is 11 lbs/lf, and the 4' cross tees must be capable of carrying a minimum of 5.5 lbs/lf. These weights are just within the lower limit for an intermediate duty grid system. Job conditions may indicate the need to use a heavy-duty system or reduce the hanger wire spacing to increase the load carrying capacity of the grid.

### 3.3 Suspension Grid

Tegular panels install in a 2' x 2' or 2' x 4' module. The main beams shall be spaced 48" o.c. The 48" cross tees shall intersect the main beams at 90° every 24". The 24" cross tees shall be installed at the midpoints of the 48" tees.

## 4.0 INSTALLATION

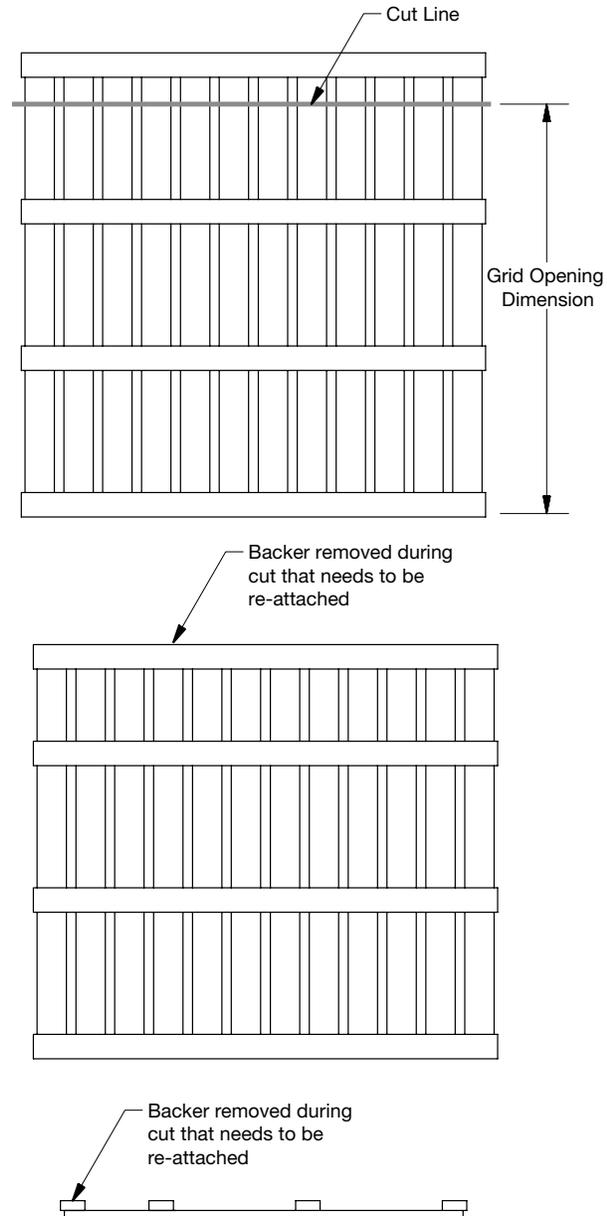
### 4.1 Cutting the Panel

Cut the panel using standard woodworking tools and techniques. A table saw is recommended for straight cuts and a band saw for curved cuts. Fine-toothed blades recommended for finish cuts will yield the best results.

A router can be used to cut a tegular edge on border panels, or a straight cut off is possible. Refer to the ceiling plan for border panel size and spacing. Before cutting a border panel, remove the backer nearest to the edge and cut blades and backer to fit the joint.

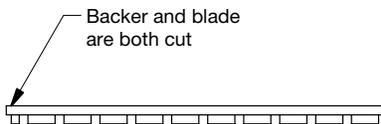
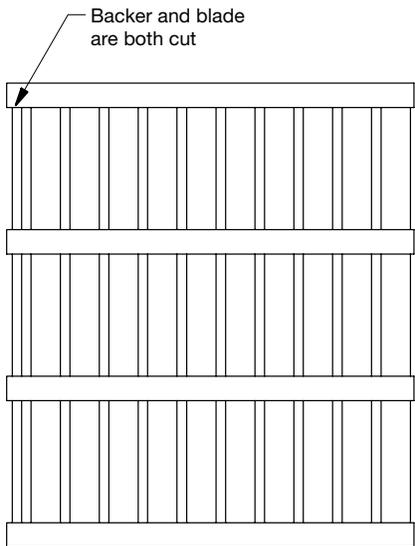
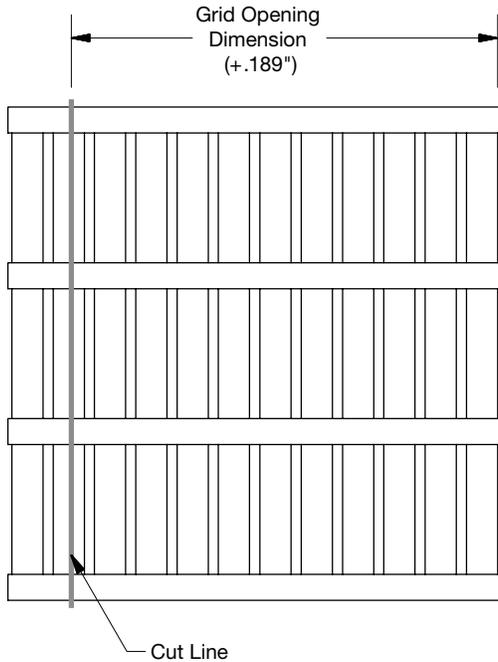
### 4.2 Cuts Perpendicular to the Blades:

Cuts perpendicular to the blades should be made by measuring the grid opening and cutting the blades to that dimension. Then the backer that was removed from the panel as a result of the cut needs to be re-attached to the back of the blades, such that it overhangs the ends of the blades to create a tegular edge. The overhang for a 9/16" panel is 0.189" and the overhang for a 15/16" panel is 0.375".



### 4.3 Cuts Parallel to the Blades:

Cuts parallel to the blades should be made by measuring the grid opening and then adding either .189" (9/16" panel) or .375" (15/16" panel) to that dimension. The cut should be made through all of the backers and the added dimension will give you enough material to rest the backer on the grid flange. If this cut line falls on a blade then the blade needs to be cut as well as the backer. The backer still needs to extend either .189" (9/16" panel) or .375" (15/16" panel) past the edge of the blade to create the tegular edge.



**▲ 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.

### 4.4 Treating Exposed Edges

Cut panel edges that are exposed to view will have to be treated to look like factory edges. Matching stain should be used to touch up exposed cut edge.

### 5.0 SEISMIC INSTALLATION

WoodWorks® Grille Tegular systems have been engineered and tested for application in all seismic areas based on these installation procedures.

### 6.0 CLEANING RECOMMENDATIONS

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

## **MORE INFORMATION**

For more information, or for an Armstrong representative, call 1 877 276 7876.

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

For the latest product selection and specification data, visit [armstrongceilings.com/grille](http://armstrongceilings.com/grille).

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BPLA-297840-915

