



CEILING & WALL SYSTEMS

Between us, ideas become reality™

WOODWORKS® Grille
Backer and Dowel, and Tegular

- Variety of blade configurations for design flexibility
- Fast, easy installation: Traditional dowels and backers or Tegular panels
- Excellent sound absorption with acoustical infill panels
- Shorter lead times and lower cost than custom millwork
- Custom finishes available
- Suspension system and panels – all from Armstrong
- FSC® chain of custody (CoC) certified WoodWorks products available upon request; consult Architectural Specialties at 1 877 ARMSTRONG, select prompts 1-1-4

 **Armstrong®**

WOODWORKS® Grille

Backer and Dowel



Key Selection Attributes

- Two standard blade sizes available
- Install in the ceiling, on the wall, or create 90° angled or faceted ceiling-to-wall transitions
- Easy installation with dowel or backer
- Custom curved application available with flexible backer
- Custom blade sizes available



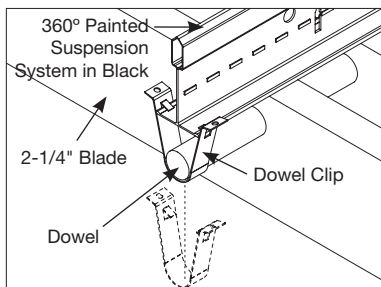
WoodWorks Grille Faceted Ceiling-to-Wall Transition 2-1/4" panels in Grille Light Cherry with Backer

WoodWorks Grille Ceiling 2-1/4" panels in Grille Walnut with Backer; Samsung, Ridgefield Park, NJ

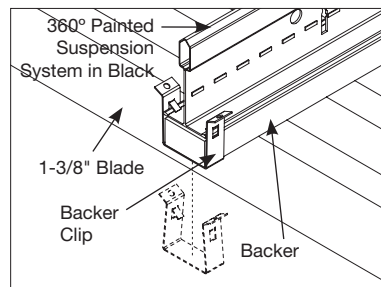
Finish Selection Due to printing limitations, shade may vary from actual product.



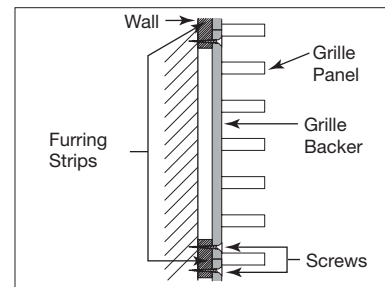
System Installation Details



Ceiling Dowel Assembly



Ceiling Backer Assembly



Wall Backer Assembly

Pictured on cover: WoodWorks Grille Ceilings Custom 3-1/4" Blades in Grille Light Cherry on Prelude® Heavy-duty suspension system in Black; Southern California Telemedicine Learning Center, University of California San Diego School of Medicine, La Jolla, CA

In addition to these standard options, there are more finish, size, and curved design choices available as custom options. Contact the Armstrong Architectural Specialties project management team for details at 1 877 ARMSTRONG and select prompts 1-1-4.

Fire Performance – Solid Wood

Reported Flame Spread Indices Code Classification Ranges

Class	Flame Spread Range	Example Locations
I or A	0-25	Enclosed vertical exits
II or B	26-75	Exit access corridors
III or C	76-200	Other rooms and areas

Solid wood is widely used in interior wall, ceiling, and floor surfaces in all types of buildings.

Appearance, acoustical qualities, and interior design versatility have made wood surfaces highly desired by architects, designers, and building occupants.

This chart briefly shows building code flame spread regulations on products used as interior finishes and presents performance data on a range of wood products.

Reference sources are noted. Always reconfirm ASTM compliance on a project-by-project basis.

Material ¹	ASTM E84 Flame Spread ²	Source ³
Lumber		
Ash	80	HPVA
Birch, Yellow	105-110	UL
Cedar, Alaska Yellow	50	HPVA2
Cedar, Pacific Coast Yellow	78	CWC
Cedar, Port Orford	60	HPVA2
Cedar, Western Red	70	HPVA
Cedar, Western Red	73	CWC
Cherry 3/4"	76	HPVA
Cottonwood	115	UL
Cypress	145-150	UL
Elm 3/4"	76	HPVA
Fir, Douglas	70-100	UL
Fir, Douglas 3/4" flooring	83-98	WEY
Fir, Amabilis (Pacific Silver)	69	CWC
Fir, White	65	HPVA2
Gum, Red	140-155	UL
Hemlock, West Coast	60-75	WEY, UL
Larch, Western	45	HPVA2
Maple (flooring)	104	CWC
Oak, Red, or White	100	UL
Oak, Red 3/4"	84	HPVA

Material ¹	ASTM E84 Flame Spread ²	Source ³
Lumber		
Oak, White 3/4"	77	HPVA
Pecan 3/4"	84	HPVA
Pine, Eastern White	85	CWC
Pine, Idaho White	72	HPVA
Pine, Idaho White	82	WEY
Lauan 1/4"	150	HPVA
Pine, Northern White	120-215	UL
Pine, Ponderosa	115	HPVA2
Pine, Red	142	CWC
Pine, Southern Yellow	130-195	UL
Pine, Sugar	95	HPVA2
Pine, Western White	75	UL
Poplar, Yellow	170-185	UL
Redwood	70	UL
Redwood 3/8"	102	UL
Spruce, Engelmann	55	HPVA2
Spruce, Northern	65	UL
Spruce, Sitka	74	CWC
Spruce, Western	100	UL
Walnut	130-140	UL
Walnut 3/4"	101	HPVA

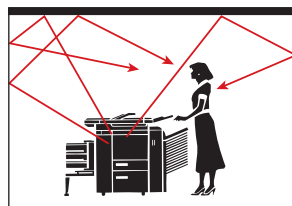
- 1 Thickness of material tested is one-inch nominal except where indicated.
- 2 The ASTM E84 test method has been revised a number of times during the years referenced by the source reports. However, the E84 test apparatus has changed little over this period. Slightly different flame spread indices, usually lower, result when recent E84 flame spread calculation techniques are applied to older wood product data. These changes in flame spread indices are not sufficient to change the flame spread class for the wood products described in this report.
- 3 Sources:
 APA – APA-The Engineered Wood Association, Research Reports 128, Revised, August 1979.
 APA2 – APA-The Engineered Wood Association Test Results.
 CWC – Fire Safety Design in Buildings, Canadian Wood Council, 1996.
 HPVA – Hardwood Plywood and Veneer Association, Test Reports, 202, 203, 335, 336, 337, 592, and 596; Special flame spread performance tests, August 1974; T9234, T9237, T9317, T9344, T9354, May 1995; T9422, T9430, T9431, T9453, T9665, February/July 1997.
 HPVA2 – Hardwood Plywood and Veneer Association, March/April 1995; October/December 2000; June 2008.
 NIST – National Institute of Standards and Technology (formerly National Bureau of Standards), Technical Notes 879 and 945.
 UL – Underwriter's Laboratory, UL 527, May 1971; Subject 723, Assignment 71SC509, March 15 & 16, 1971; Assignment 84NK1898, File R10917, March 9, 1984.
 WEY – Weyerhaeuser Fire Laboratory, 1973, 1987, January & February 1988.

NOTE: While effort has been made to ensure the accuracy of the information in this publication, the American Forest & Paper Association, Armstrong World Industries, and the Companies and Associations identified do not assume responsibility for the accuracy of the indices reported, the applicability or extension of the reported flame spread values to specific products, or their acceptance for use in particular applications. Includes updates through June 2008.

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Acoustical Performance

Noise Reduction Coefficient, or NRC, is a measure for rating the overall sound absorption of a material when used in an enclosed architectural space such as an office, where sound is reflected at many angles of incidence. WoodWorks® Grille has an NRC value of 0.75 when installed with a BioAcoustic™ infill panel.



NRC is important in any closed space where reverberation time and noise levels are an issue:

- Closed offices, conference rooms
- Mixed plan office
- Lobby, reception, and work areas
- Classrooms/core learning areas, gymnasiums, cafeterias
- Retail spaces; checkout and other customer contact areas

Factors that may affect the installed acoustical performance relative to the published results are:

- Size of area
- Number of panels
- Layout of panels
- Suspension distance below exposed deck or finished ceiling

CEILING	EXPOSED STRUCTURE (No Ceiling)	ULTIMA (100% Ceiling)	WOODWORKS GRILLE (100% Ceiling)
Reverberation Time (RT)	3.4 seconds	0.5 seconds	0.5 seconds
RT Improvement	N/A	85%	85%
Background Noise Reduction in Decibels (dB)	N/A	4.7dB	5.8dB

* You can calculate the acoustical difference that WoodWorks Grille panels can make in your space by using our online Reverb Calculator Tool at armstrong.com/reverbtool

WOODWORKS® Grille

Backer and Dowel

LEED® Credits

Energy	Waste Mgmt	Recycled Content	Local Materials	Renewable Materials	Daylight & Views
			✓		
Location Dependent					



LEED for Schools

Acoustics	Low Emitting or CHPS
✓	

Finishes

Grille Maple (GMP)	Grille Dark Cherry (GDC)
Grille Light Cherry (GLC)	Grille Walnut (GWN)

Visual Selection

Edge Profile	Item Number **	Description	Dimensions Nominal W x L x H	Acoustics NRC*
WOODWORKS Grille – Backer and Dowel				
	5663_ _ _ _ *	1-3/8" 6 blades	1' x 8' x 1-7/8" with Backer 1' x 8' x 1-3/8" with Dowel	0.75
	5664_ _ _ _ *	1-3/8" 8 blades	1' x 8' x 1-7/8" with Backer 1' x 8' x 1-3/8" with Dowel	0.75
	5665_ _ _ _ *	2-1/4" 6 blades	1' x 8' x 2-3/4" with Backer 1' x 8' x 2-1/4" with Dowel	0.75
	5666_ _ _ _ *	2-1/4" 8 blades	1' x 8' x 2-3/4" with Backer 1' x 8' x 2-1/4" with Dowel	0.75

* When specifying or ordering Backer or Dowel panels, please include the installation type and color suffixes (e.g., 5663 B Q G L C – 6 blades 1-3/8" Backer in Grille Light Cherry).
Installation suffixes: BO = Backer, DO = Dowel

* NRC 0.75 with acoustical infill Item 5823.








NOTE: For additional color and size options, as well as curved applications requiring flexible Backers available as special order, call Architectural Specialties at 1 877 ARMSTRONG and select options 1-1-4.

Suspension Systems

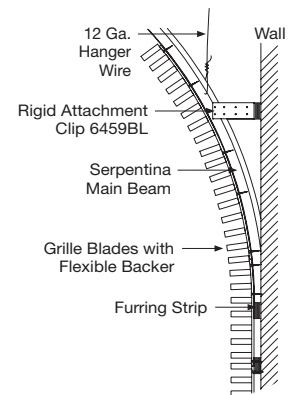
15/16"	Prelude® XL® (Black recommended), 360° Painted with 4' cross tee route holes at 12"
15/16"	Serpentina® Main Beam (for use with Flexible Backers) in Black

Note: For ceilings with a radius of 12-1/2' or greater, use standard panels and 15/16" main beams faceted 12" on center with RC2BL clips.

Accessories

Item Number	Description	Dimensions Nominal W x L x H	Color	Pieces/Carton
 5687	Backer Clip	3/8" x 11/16" x 7/8"	N/A	250 pcs/pail
 5688	Dowel Clip	3/8" x 7/8" x 7/8"	N/A	250 pcs/pail
 5671_ _ _ **	Ledger	1" x 96" x 1/4"	See Finishes Above	Bulk
 5672_ _ _ **	Junction – 1-3/8"	1-1/2" x 96" x 2"	See Finishes Above	Bulk
 5673_ _ _ **	Junction – 2-1/4"	1-1/2" x 96" x 2-3/4"	See Finishes Above	Bulk
 5674_ _ _ **	End Cap – 1-3/8"	3/4" x 96" x 2"	See Finishes Above	Bulk
 5675_ _ _ **	End Cap – 2-1/4"	3/4" x 96" x 2-3/4"	See Finishes Above	Bulk
7891	12 Gauge Soft Hanger Wire	12' Length	N/A	140
92715A620	Self-tapping Screws	#2 x 3/4" Length	Black	25
6459BL	Uptight Clip	5-1/2" x 1-3/4"	Black	25
RC2BL	RC2 Radius Clip	N/A	Black	205
5823	BioAcoustic™ Infill Panel	2' x 2' x 5/8"	Black (Matte)	10

** When specifying or ordering, include the three-letter color suffix that coordinates with your WoodWorks ceiling: (e.g., 5671 G M P)



WoodWorks Grille
Ceiling-to-Wall Transition
Installation Detail

Physical Data

Material

Blades, Backers, and Dowels – Solid Poplar (yellow or hybrid) (SW-COC-003601)

Surface Finish

Clear or tinted semigloss coating

Fire Performance

Solid Poplar Hardwood Blades and Backers – ASTM E84 surface burning characteristics. Flame Spread Index 200 or less. Smoke Developed Index 450 or less.

Solid Birch Hardwood Dowels – ASTM E84 surface burning characteristics. Flame Spread Index 200 or less. Smoke Developed Index 450 or less.

Class A intumescent treatment is available.

Fire performance will vary between wood species.

Composite Grille product testing has not been completed, since results will vary on a project-by-project basis. Contact TechLine at 1 877 ARMSTRONG for details.

WoodWorks Grille, as with other architectural features located at the ceiling, 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 local codes for guidance where automatic fire detection and suppression systems are present.

Seismic Restraint

WoodWorks Grille has been engineered, tested, and approved in all seismic areas.

Application Considerations

Variation among panels may occur due to the natural characteristics of the wood and grain.

Design Considerations

For blade heights over 5", both Dowels and Backers are required for stability. Blade sizes over 2-1/4" are not recommended for wall applications. Contact the

Architectural Specialties project management team for details at 1 877 ARMSTRONG and select options 1-1-4.

It is very important that WoodWorks panels are climatized prior to installation. Relative humidity between 25% and 55% and temperatures between 50°F and 86°F must be maintained.

Installation Consideration

When junction accessory is not used, leave 1" gap between blade lengths. Panels are 95" long to accommodate junction or gap.

Warranty

One (1) year limited warranty. Details: armstrong.com/warranty

Weight; Square Feet/Carton

5663 – 2.0 lbs/SF
5664 – 2.6 lbs/SF
5665 – 2.8 lbs/SF
5666 – 3.6 lbs/SF

Key Selection Attributes

- Panels feature solid wood blades that can be installed in a linear fashion or patterned for endless variety
- Vertical blades are deeper than they are wide creating a more open feel
- Horizontal blades are wider than they are deep creating a warm, more solid look
- 2' x 2' and 2' x 4' sizes available in vertical and horizontal blade designs
- Panels are designed so the suspension system virtually disappears
- Tegular panels with backers easily install on standard suspension systems
- Create continuous looks and clouds with Axiom® Vector® trim



WoodWorks Grille Tegular item 662912, 2' x 2' with 12 Vertical Blades in Grille Maple on Suprafine® 9/16" Suspension System in Black



WoodWorks Grille Tegular item 662808 2' x 2' with 12 Horizontal Blades in Grille Dark Cherry on Suprafine 9/16" Suspension System in Black

Veneer Selection

Due to printing limitations, shade may vary from actual product.



Grille Maple (GMP)



Grille Light Cherry (GLC)



Grille Dark Cherry (GDC)

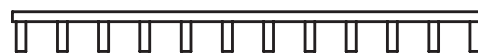


Grille Walnut (GWN)

Panel Details



WoodWorks Grille Tegular panel with **Horizontal Blades**

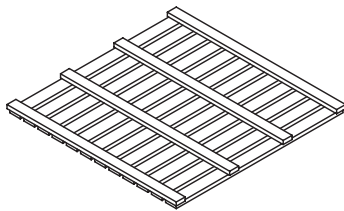
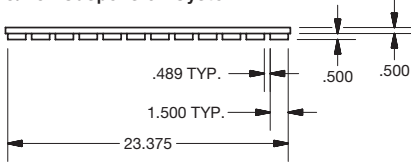


WoodWorks Grille Tegular Panel with **Vertical Blades**

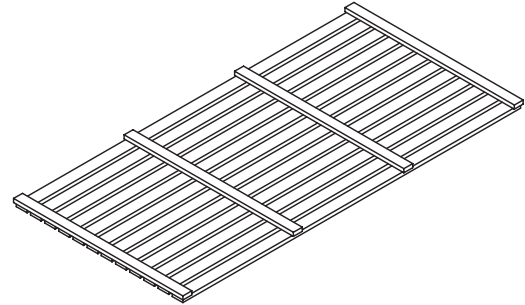
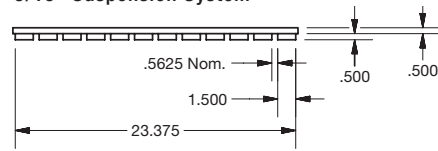
In addition to these standard options, there are other sizes and veneers available with WoodWorks Custom systems. Contact the Armstrong Architectural Specialties project management team for details at 1 877 ARMSTRONG and select options 1-1-4.

Tegular Panel Details

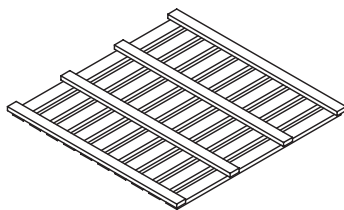
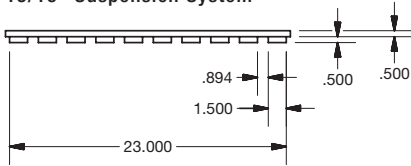
Item 662808 - 2' x 2' with 12 Horizontal Blades for 9/16" Suspension System



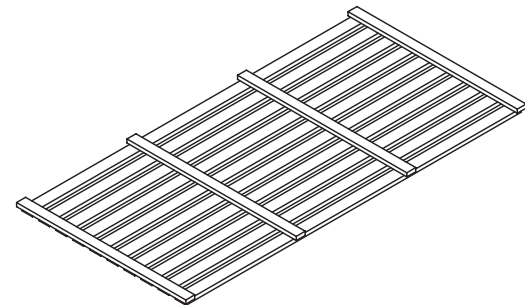
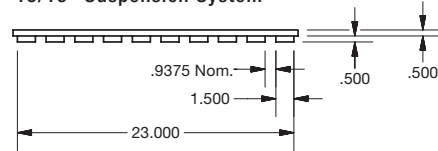
Item 663008 - 2' x 4' with 12 Horizontal Blades for 9/16" Suspension System



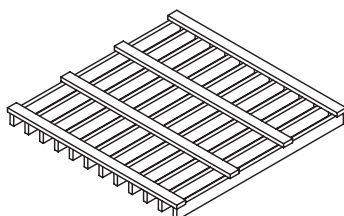
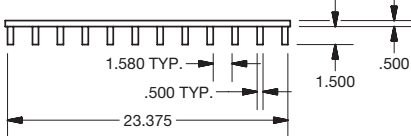
Item 662812 - 2' x 2' with 10 Horizontal Blades for 15/16" Suspension System



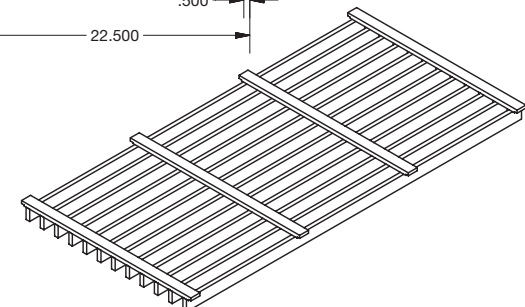
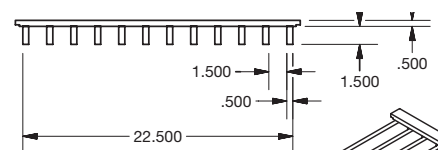
Item 663012 - 2' x 4' with 10 Horizontal Blades for 15/16" Suspension System



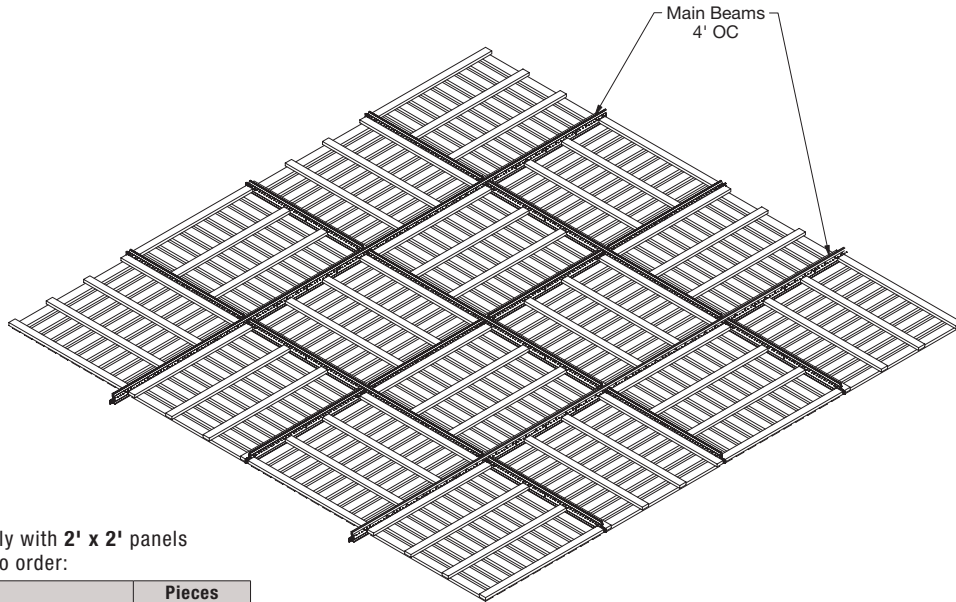
Item 662912 - 2' x 2' with 12 Vertical Blades for 9/16" Suspension System (for checkerboard applications)



Item 663112 - 2' x 4' with 12 Vertical Blades for 15/16" Suspension System (for linear applications)



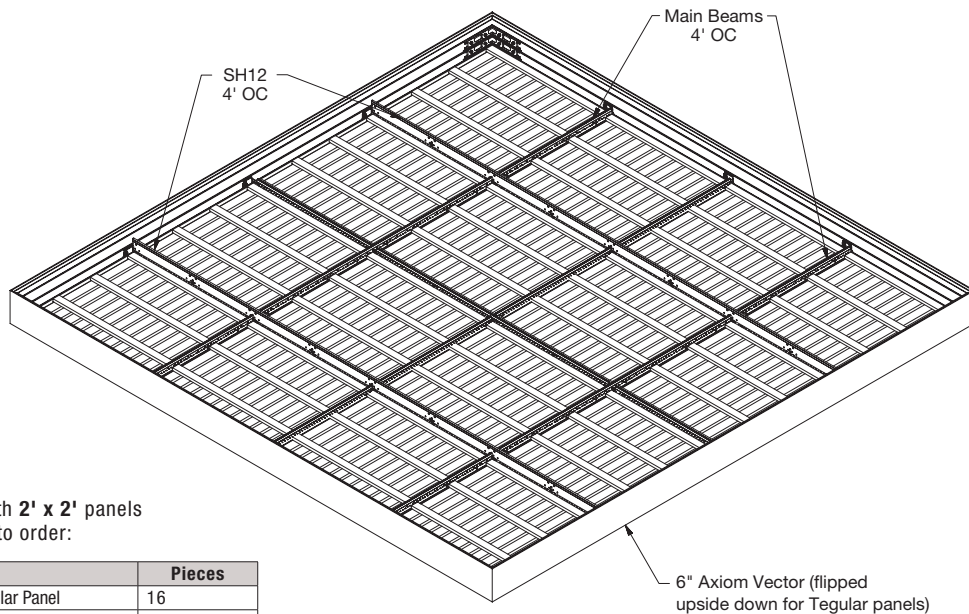
Installation Details - Continuous System (Tegular Panels)



For a basic continuous assembly with 2' x 2' panels (pictured right), you will need to order:

Item	Pieces
662812 2' x 2' WoodWorks® Grille Tegular Panel	16
7301BL Main Beam cut to length	2
XL7328BL 2' Cross Tee	4
XL8340BL 4' Cross Tee	9

Installation Details – Floating System (Tegular Panels)

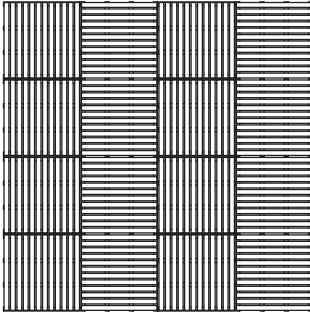


For a basic cloud assembly with 2' x 2' panels (pictured right), you will need to order:

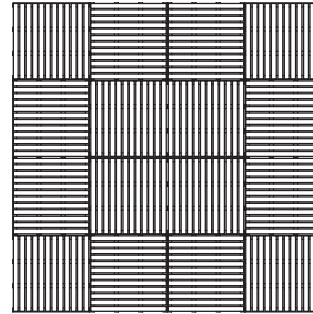
Item	Pieces
662812 2' x 2' WoodWorks Grille Tegular Panel	16
7301BL Main Beam cut to length	2
SH12 cut to length	2
XL7328BL 2' Cross Tee	2
XL8340BL 4' Cross Tee	3
XL8340BL 4' Cross Tee cut to length (perimeter)	8
6" Axiom® Vector® cut to length	4
AXTBC	12

Tegular Panel Installation Ideas

Design Ideas - 2' x 2' Panels for 9/16" Suspension System

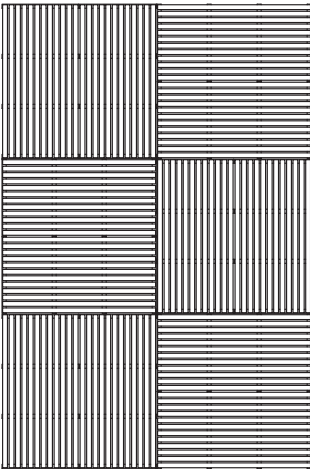


16 - item 662808
2' x 2' WoodWorks® Grille Tegular with Horizontal Blades

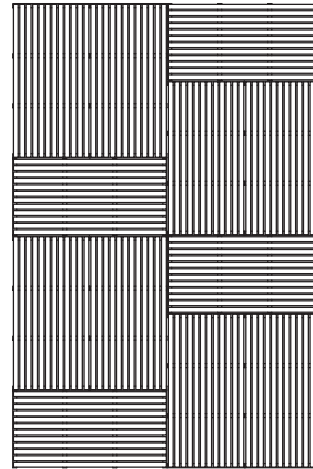


16 - item 662808
2' x 2' WoodWorks Grille Tegular with Horizontal Blades

Design Ideas - 2' x 4' Panels for 9/16" Suspension System

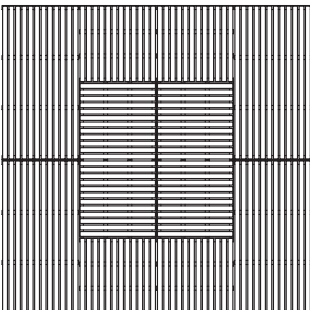


12 - item 663008
2' x 4' WoodWorks Grille Tegular with Horizontal Blades

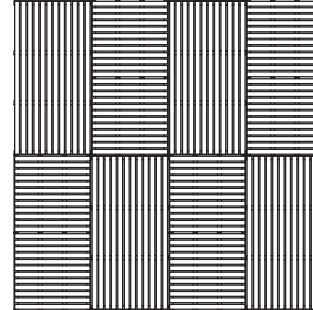


12 - item 663008
2' x 4' WoodWorks Grille Tegular with Horizontal Blades

Design Ideas - 2' x 2' and 2' x 4' Panels for 9/16" Suspension System



8 - item 662808
2' x 2' WoodWorks Grille Tegular with Horizontal Blades
4 - item 663008
2' x 4' WoodWorks Grille Tegular with Horizontal Blades



8 - item 662808
2' x 2' WoodWorks Grille Tegular with Horizontal Blades
4 - item 663008
2' x 4' WoodWorks Grille Tegular with Horizontal Blades

WOODWORKS® Grille

Tegular

LEED® Credits

Energy	Waste Mgmt	Recycled Content	Local Materials	Renewable Materials	Daylight & Views
			✓		

Location Dependent

LEED for Schools

Acoustics	Low Emitting or CHPS
✓	






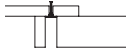




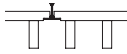
Finishes

Grille Maple (GMP)	Grille Dark Cherry (GDC)
Grille Light Cherry (GLC)	Grille Walnut (GWN)

Visual Selection

Acoustical Performance

Dots represent highest level of performance.

Edge Profile	Item Number ♦	Description	Dimensions Nominal W x L x H		Acoustics NRC* 
WOODWORKS Grille Tegular for 9/16" Suspension System					
9/16" Tegular with Horizontal Blades	662808_ _ _ ♦	1/2" x 1-1/2" 12 horizontal blades	2' x 2' x 1"		0.75 •
	663008_ _ _ ♦	1/2" x 1-1/2" 12 horizontal blades	2' x 4' x 1"		0.75 •
9/16" Tegular with Vertical Blades	662912_ _ _ ♦	1/2" x 1-1/2" 12 vertical blades	2' x 2' x 2"		0.85 •
					
WOODWORKS Grille Tegular for 15/16" Suspension System					
15/16" Tegular with Horizontal Blades	662812_ _ _ ♦	1/2" x 1-1/2" 10 horizontal blades	2' x 2' x 1"		0.75 •
	663012_ _ _ ♦	1/2" x 1-1/2" 10 horizontal blades	2' x 4' x 1"		0.75 •
15/16" Tegular with Vertical Blades	663112_ _ _ ♦	1/2" x 1-1/2" 12 vertical blades	2' x 4' x 2"		0.85 •
					

♦ When specifying or ordering, please include the appropriate color suffix (e.g., 663008 G L C).

* NRC 0.75 or 0.85 with acoustical infill item 5823.

NOTE: For additional color and size options, as well as curved applications requiring flexible Backers available as special order, call Architectural Specialties at 1 877 ARMSTRONG and select options 1-1-4.

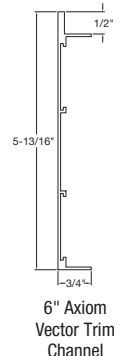
Suspension System

15/16"	Prelude® XL® (Black recommended), 360° Painted with 4' cross tee route holes at 12"
9/16"	Suprafine® XL® 9/16" Exposed Tee (Black recommended)

Accessories

Item Number	Description	Dimensions Nominal	Color	Pieces/Carton
AX4VESTRBL	4" Axiom® Vector®	120" x 3/4" x 4"	Black (BL)	—
AX6VESTRBL	6" Axiom Vector♦♦	120" x 3/4" x 6"	Black (BL)	—
AX4VEQISBL	4" Inside Corner Post	3/4" x 3/4" x 4"	Black (BL)	—
AX6VEQISBL	6" Inside Corner Post	3/4" x 3/4" x 6"	Black (BL)	—
AX4VEOSCPBL	4" Outside Corner Post	3/4" x 3/4" x 4"	Black (BL)	—
AX6VEOSCPBL	6" Outside Corner Post	3/4" x 3/4" x 6"	Black (BL)	—
AXTBC	T-Bar Connector Clip	N/A	N/A	10
AXSPLICE	Splice Plate with Setscrews	N/A	N/A	10
SH12	Support Hanger	12" x 2"	N/A	12
5823	BioAcoustic™ Infill Panel	2' x 2' x 5/8"	Black (Matte)	12

♦♦ Trim cartons include AXTBC Clips and AXSPLICE Plates.



Physical Data

Material

Solid Poplar (yellow or hybrid) (SW-COC-003601)

Surface Finish

Clear or tinted semigloss coating

Fire Performance

Solid Poplar Hardwood Blades and Backers – ASTM E84 surface burning characteristics. Flame Spread Index 200 or less. Smoke Developed Index 450 or less.

Class A intumescent treatment is available.

Composite Grille product testing has not been completed, since results will vary on a project-by-project basis. Contact TechLine at 1 877 ARMSTRONG for details.

WoodWorks Grille, as with other architectural features located at the ceiling, 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 local codes for guidance where automatic fire detection and suppression systems are present. For more fire performance information, visit armstrong.com/grille

Seismic Restraint

WoodWorks Grille has been engineered, tested, and approved in all seismic areas.

Application Considerations

Variation among panels may occur due to the natural characteristics of the wood and grain.

Design Considerations

If no infill panel is used, unfinished parts of the suspension system and Axiom will be visible from below.

2' x 2' vertical blade panels are designed for checkerboard only. On uneven reveal between blades will be visible if installed in a linear fashion.

Warranty

One (1) year limited warranty. Details: armstrong.com/warranty**Weight: Square Feet/Carton - Bulk Packaged**
662808, 662912, 663008, 663112 - 0.875 lbs/SF
662812, 663012 - 0.775 lbs/SFTechLine™ / 1 877 ARMSTRONG
armstrong.com/grille
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