



MetalWorks™
Perforations
Capabilites



Armstrong®
World Industries

Add Some Personality

What inspires you to add character to your ceiling designs using negative space? Could it be the intricacy of an antique Persian lantern? Or the simple visual found on a pegboard? No matter what sparks your imagination, there are a variety of perforation options from standard to custom that allow you to tell your design story.

Create a unique ceiling visual using your own images or artwork using MetalWorks™ Create!™ ceiling and wall panels.

Custom MetalWorks™
Torsion Spring Ceilings
and Custom MetalWorks™
WH1000 Walls;
Collectis Biologics,
Raleigh, NC; CRB Group

Build character in your space





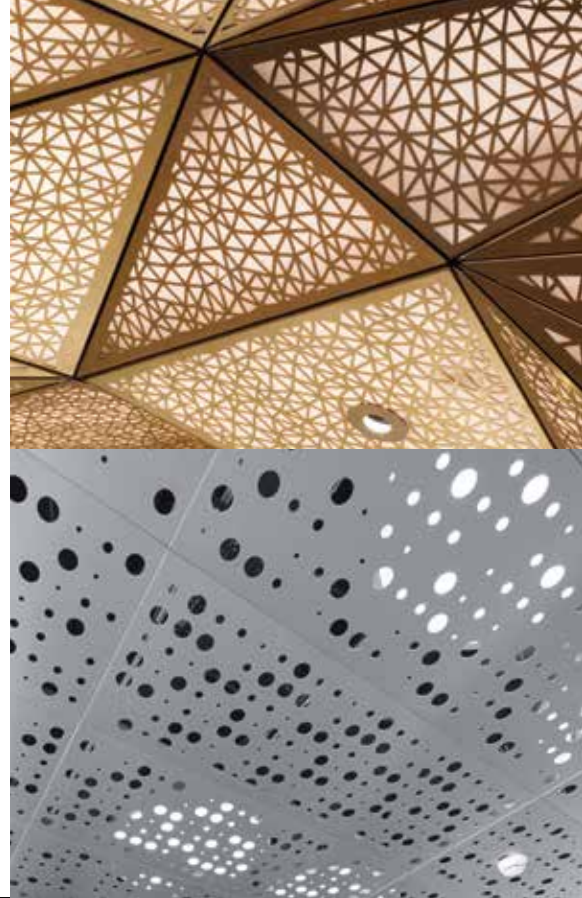
Custom Capabilities

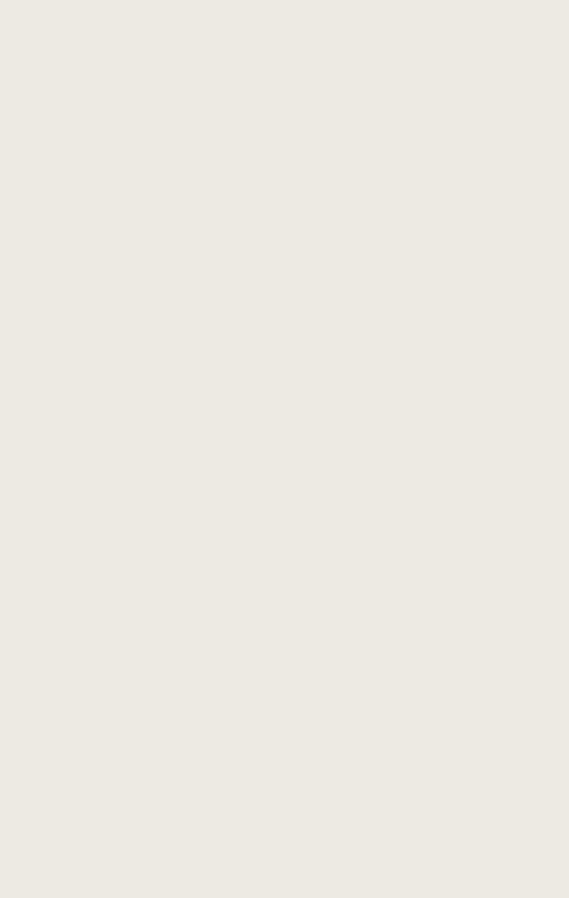
Something to Talk About

Count on our Projectworks® Design Services support to bring your one-of-a-kind ideas to life – from initial design to product selection.

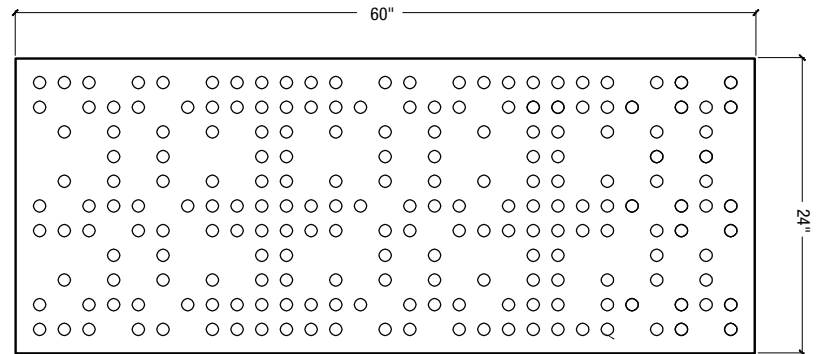
ProjectWorks offers complementary collaborative design services to ensure your projects are completed with unmatched precision and efficiency. We provide architects and contractors with the best possible options for perforated ceilings and walls.

Custom MetalWorks™ Torsion Spring; University of Alabama Football Locker Room; Davis Architects



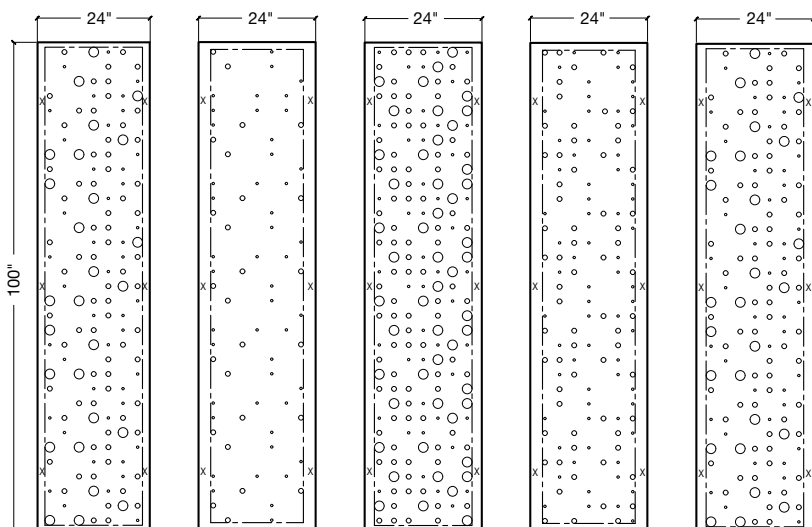


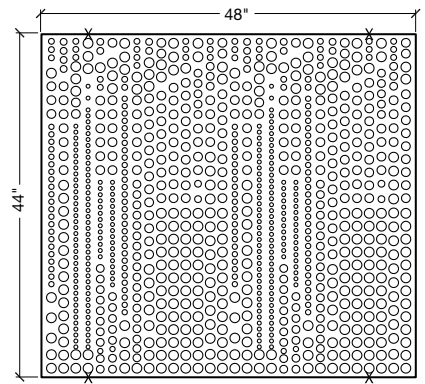
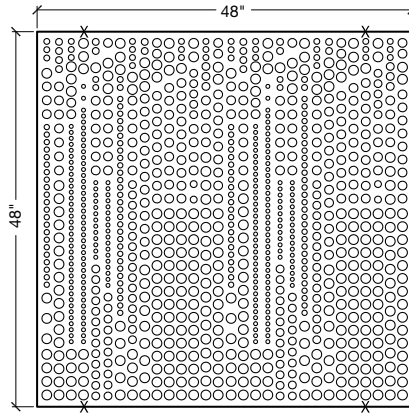
MetalWorks™ RH 200; Polycom, Andover, MA; Perkins + Will, Boston, MA





MetalWorks™ RH200; Logan International Airport;
Boston, MA; Arrowstreet, Inc., Boston, MA



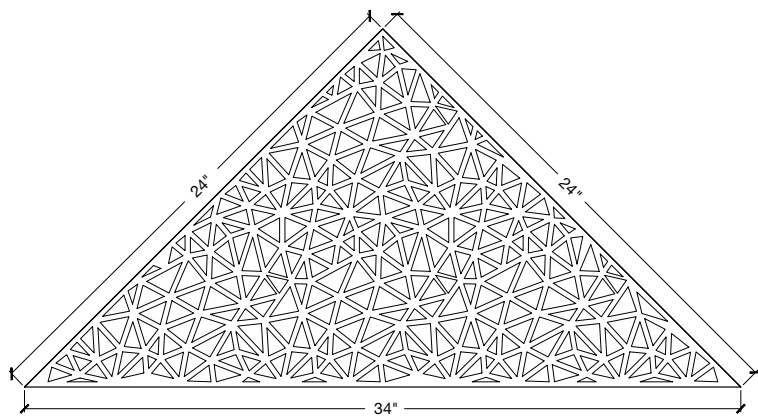


MetalWorks™ Torsion Spring; Kettle Moraine School District,
Delafield, WI; Eppstein Uhen Architects, Milwaukee, WI





MetalWorks™ Torsion Spring; Etihad Airways, Jamaica Queens, NY; Gensler





Top left: MetalWorks™ Torsion Spring
and Custom MetalWorks™ WH1000 Walls
Middle left: MetalWorks™ Linear – Classics
Bottom left: Custom MetalWorks™ Walls

Top middle: MetalWorks™ Tegular
Middle: MetalWorks™ RH200
Bottom middle: MetalWorks™ Clip-on

Top right: MetalWorks™ Torsion Spring Shapes
Middle right: MetalWorks™ Airtite® Radiant
Ceiling Systems – AR-B Panels
Bottom right: MetalWorks™ Torsion Spring



MetalWorks™ Create!™ Torsion Spring panels





MetalWorks™ Create!™ Torsion Spring panels



MetalWorks™ Create!™ Perforated Ceiling and Wall Panels

- Transform your images onto custom perforated metal panels
- Available in custom panel sizes and colors
- Available for Torsion Spring, Clip-on, RH200/RH215, and WH1000/WH1100 metal ceilings

A unique visual with
acoustical performance

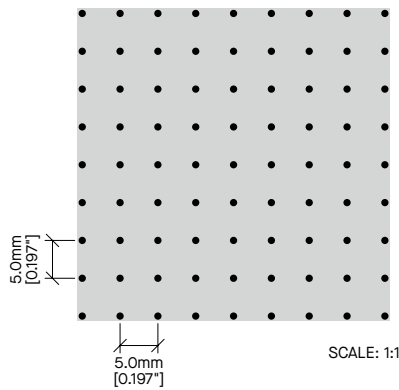
MetalWorks™

Perforation Options for Ceiling and Wall Panels



Perforations

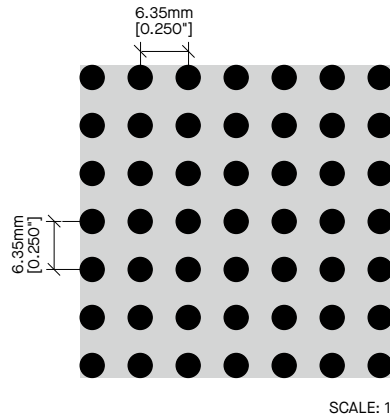
MetalWorks™ Vector®; MetalWorks™ RH200 System;
Love Field Airport, Dallas, TX; Corgan Architects, Dallas, TX



M3 Extra Microperforated (Rg 0701)

Pattern Type:
Round-Straight
Hole Size:
0.7mm [.028"]
% Open Area:
1.5%

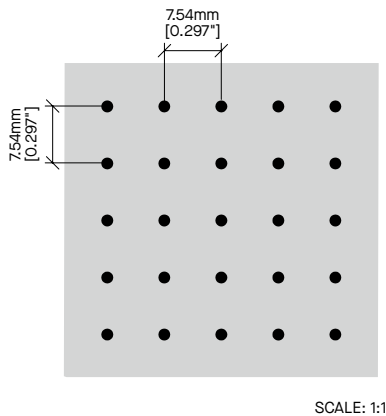
Standard on: MetalWorks™ Tegular,
MetalWorks™ Vector®, MetalWorks™ Canopies



M19 (Rg 3220)

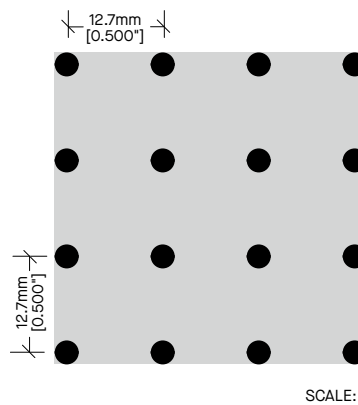
Pattern Type:
Round-Straight
Hole Size:
3.2mm [.125"]
% Open Area:
20.0%

Standard on: MetalWorks™ Torsion Spring,
MetalWorks™ Clip-on



M16S (Rg 1604)

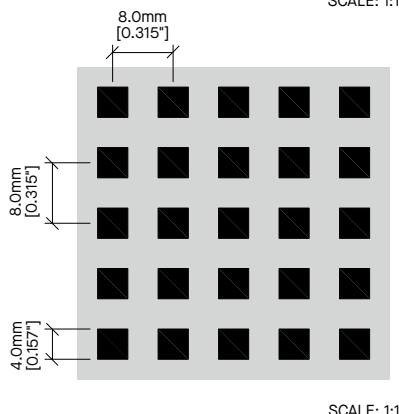
Pattern Type:
Round-Straight
Hole Size:
1.6mm [.062"]
% Open Area:
2.0%



M14 (Rg 3205)

Pattern Type:
Round-Straight
Hole Size:
3.18mm [.125"]
% Open Area:
5.0%

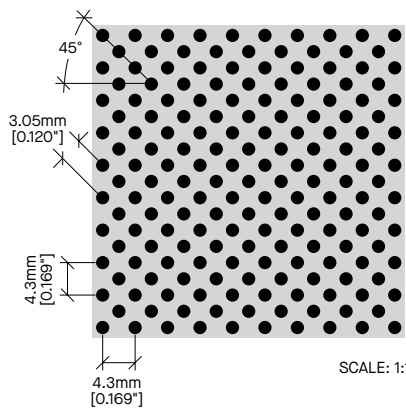
Standard on: MetalWorks™ Torsion Spring,
MetalWorks™ Clip-on



M6 (Qg 4025)

Pattern Type:
Square-Straight
Hole Size:
4.0mm × 4.0mm
[.157" × .157"]
% Open Area:
25.0%

Perforations



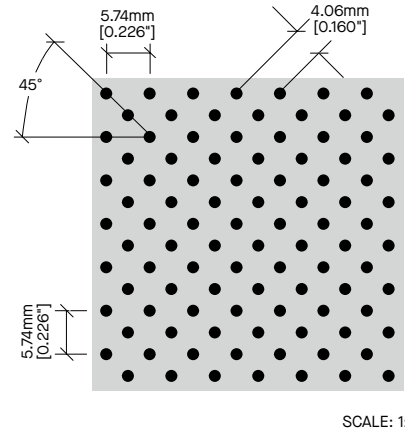
M2
Microperforated
(Rd 1518)

Pattern Type:
Round-Diagonal

Hole Size:
1.5mm [.059\"]

% Open Area:
18.0%

Standard on: MetalWorks™ Tegular, MetalWorks™ Vector®, MetalWorks™ Linear – Classics, MetalWorks™ Linear – Synchro®, MetalWorks™ Linear – Diverge®, MetalWorks™ Plank, MetalWorks™ Canopies, MetalWorks™ infills for CastWorks™ Metaphors® Coffers



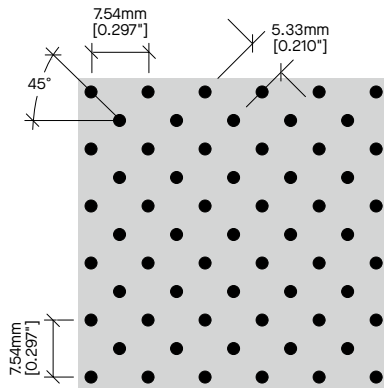
M15
(Rd 1612)

Pattern Type:
Round-Diagonal

Hole Size:
1.6mm [.062\"]

% Open Area:
12.0%

Standard on: MetalWorks™ Torsion Spring, MetalWorks™ Tegular for TechZone®, MetalWorks™ Blades, MetalWorks™ 3D, MetalWorks™ Clip-on



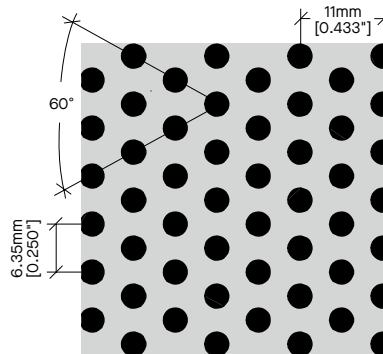
M16
(Rd 1607)

Pattern Type:
Round-Diagonal

Hole Size:
1.6mm [.062\"]

% Open Area:
7.0%

Standard on: MetalWorks™ Torsion Spring, MetalWorks™ Clip-on



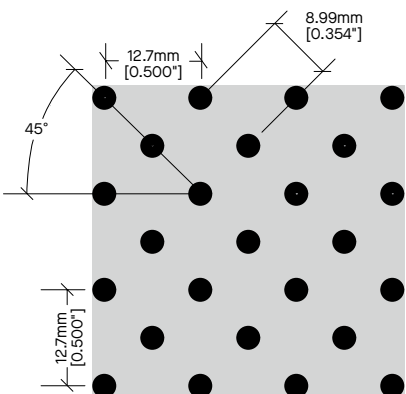
M17
(Rv 3223)

Pattern Type:
Round-Staggered

Hole Size:
3.2mm [.125\"]

% Open Area:
23.0%

Standard on: MetalWorks™ Torsion Spring, MetalWorks™ Clip-on



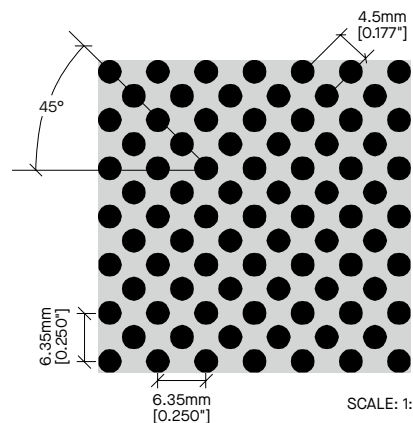
M18
(Rd 3210)

Pattern Type:
Round-Diagonal

Hole Size:
3.2mm [.125\"]

% Open Area:
10.0%

Standard on: MetalWorks™ Torsion Spring, MetalWorks™ Clip-on



M24
(Rd 3239)

Pattern Type:
Round-Diagonal

Hole Size:
3.18mm [.125\"]

% Open Area:
39.0%

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

Bg = oblong/straight Qg = square/straight
Bv = oblong/staggered Rd = round/diagonal
Lg = rectangle/straight Rg = round/straight
Lv = rectangle/staggered Rv = round/staggered
OB = oblong slot width Qd = square/diagonal

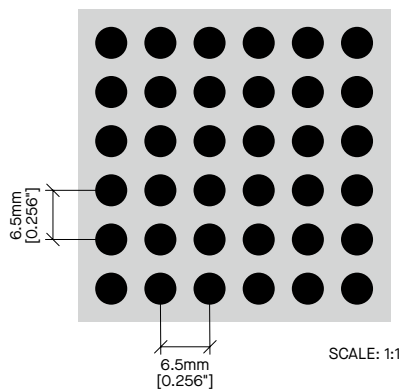
For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks

MetalWorks™

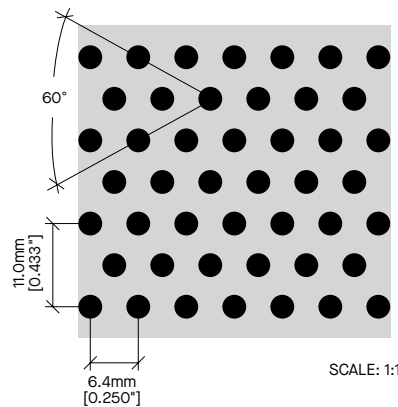
Perforation Options for Ceiling and Wall Panels



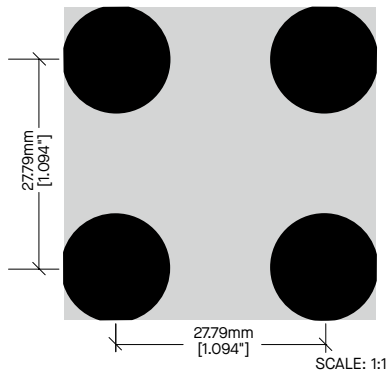
Premium Perforations



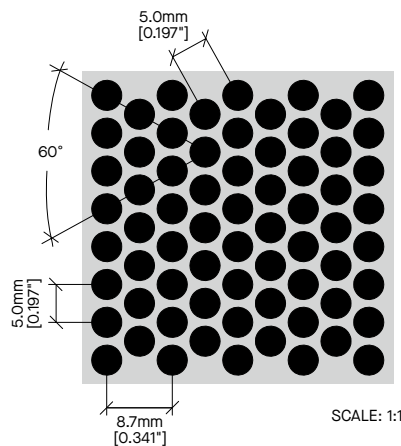
M11
(Rg 4029)
Pattern Type:
Round-Straight
Hole Size:
4.1mm [.157"]
% Open Area:
26.9%



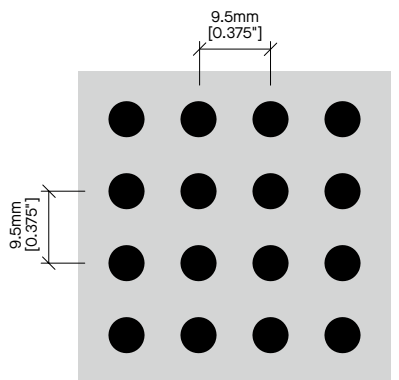
M9S
(Rv 3020)
Pattern Type:
Round-Staggered
Hole Size:
2.9mm [.114"]
% Open Area:
24.4%



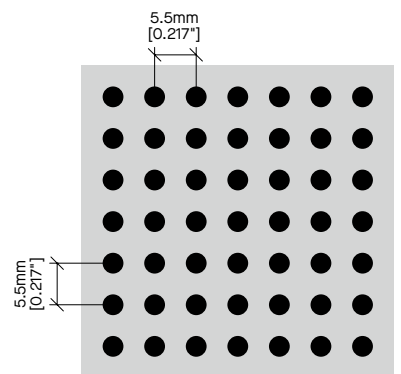
M26
(Rg 1421)
Pattern Type:
Round-Straight
Hole Size:
14.2mm [.560"]
% Open Area:
21.0%



M4*
(Rv 4058)
Pattern Type:
Round-Staggered
Hole Size:
4.0mm [.157"]
% Open Area:
58.0%

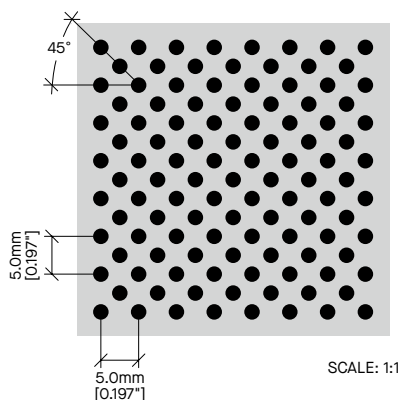


M11S
(Rg 4820)
Pattern Type:
Round-Straight
Hole Size:
4.7mm [.188"]
% Open Area:
20.0%

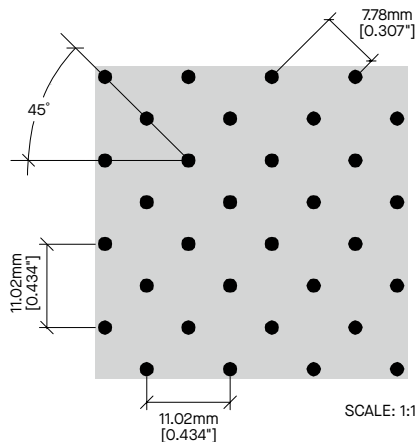


M10
Rg 2516
Pattern Type:
Round-Straight
Hole Size:
2.5mm [.098"]
% Open Area:
13.6%

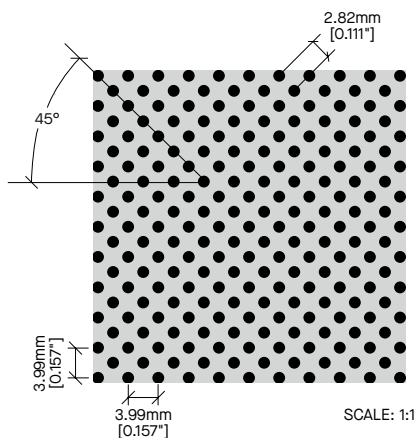
Premium Perforations



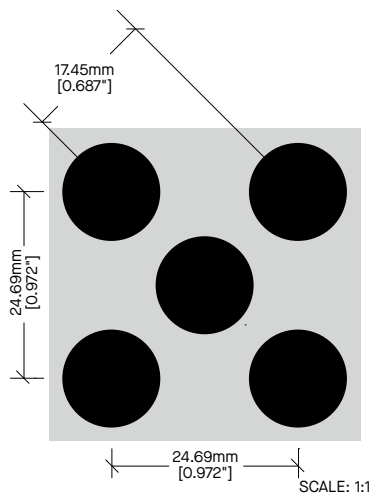
M12
(Rd 1820)
Pattern Type:
Round-Diagonal
Hole Size:
1.8mm [.071"]
% Open Area:
20.8%



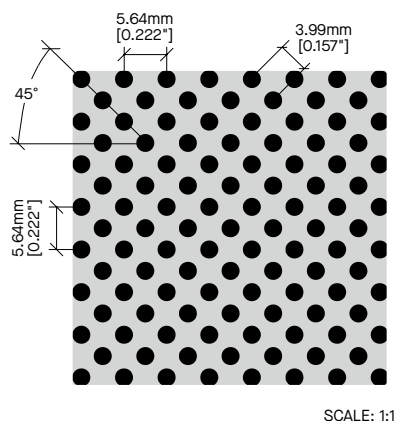
M21
(Rd 1905)
Pattern Type:
Round-Diagonal
Hole Size:
1.91mm [.075"]
% Open Area:
5.0%



M28
(Rd 1625)
Pattern Type:
Round-Diagonal
Hole Size:
1.6mm [.063"]
% Open Area:
25.0%



M29
(Rd 1242)
Pattern Type:
Round-Diagonal
Hole Size:
12.7mm [.500"]
% Open Area:
42.0%



M28S
(Rd 2428)
Pattern Type:
Round-Diagonal
Hole Size:
2.39mm [.094"]
% Open Area:
28.0%

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

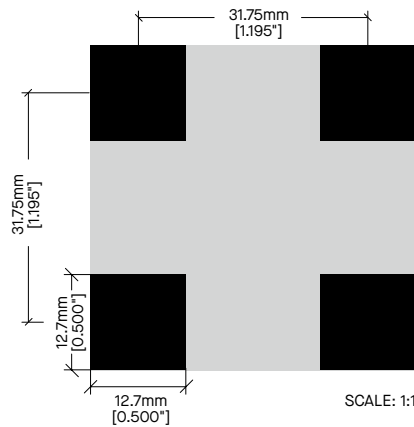
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

Bg = oblong/straight **Qg** = square/straight
Bv = oblong/staggered **Rd** = round/diagonal
Lg = rectangle/straight **Rg** = round/straight
Lv = rectangle/staggered **Rv** = round/staggered
OB = oblong slot width **Qd** = square/diagonal

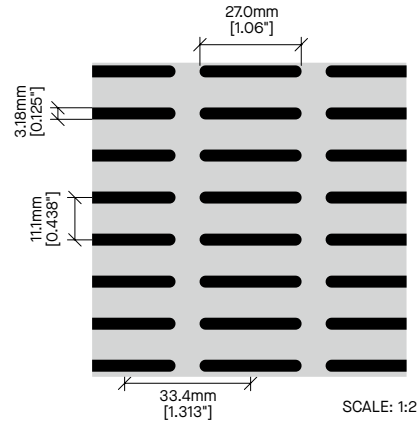
For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks

Premium Perforations



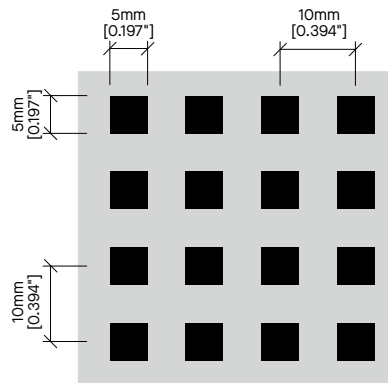
M27
(Qg 1218)
Pattern Type:
Square-Straight
Hole Size:
12.7mm × 12.7mm
[.500" × .500"]
% Open Area:
18.0%

SCALE: 1:1



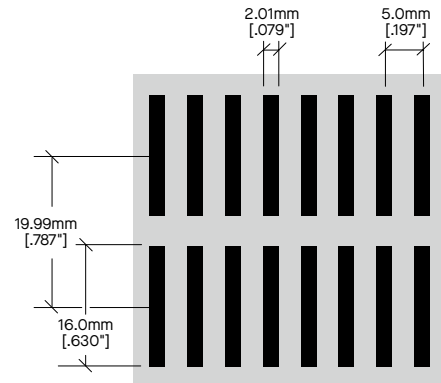
Bg 27023
Pattern Type:
Oblong-Straight
Hole Size:
3.18mm [.125"] ×
27.0mm [1.06"]
% Open Area:
23.0%

SCALE: 1:2



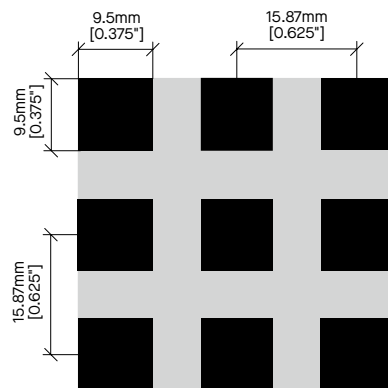
M6S
(Qg 5025)
Pattern Type:
Square-Straight
Hole Size:
5mm [.197"] ×
5mm [.197"]
% Open Area:
25.0%

SCALE: 1:1



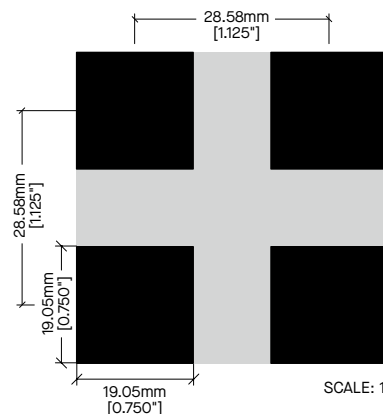
M5
(Lg 16032)
Pattern Type:
Rectangle-Straight
Hole Size:
2.01mm × 16.0mm
[.079" × .630"]
% Open Area:
32.0%

SCALE: 1:1



M13S
(Qg 9636)
Pattern Type:
Square-Straight
Hole Size:
9.5mm [.375"] ×
9.5mm [.375"]
% Open Area:
36.0%

SCALE: 1:1



M25
(Qg 1945)
Pattern Type:
Square-Straight
Hole Size:
19.05mm ×
19.05mm
[.750" × .750"]
% Open Area:
44.0%

SCALE: 1:1

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

Perforations with an open area greater than 20% may have reduced panel size capabilities.

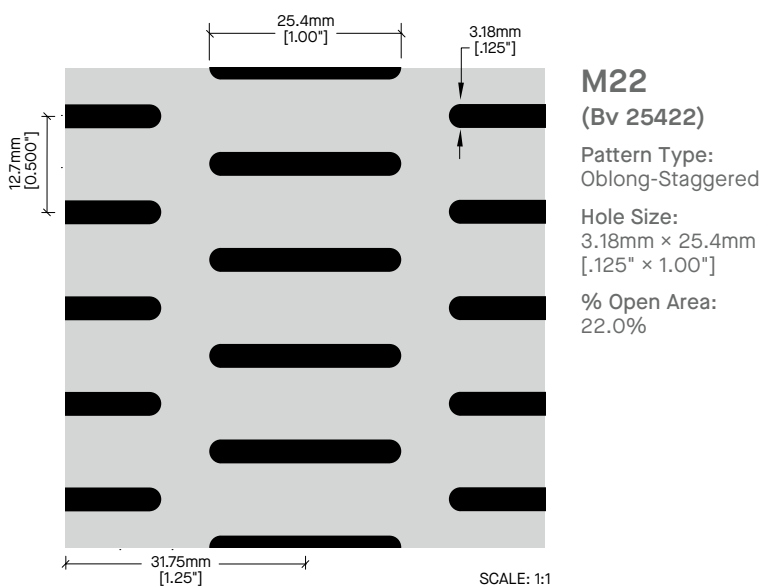
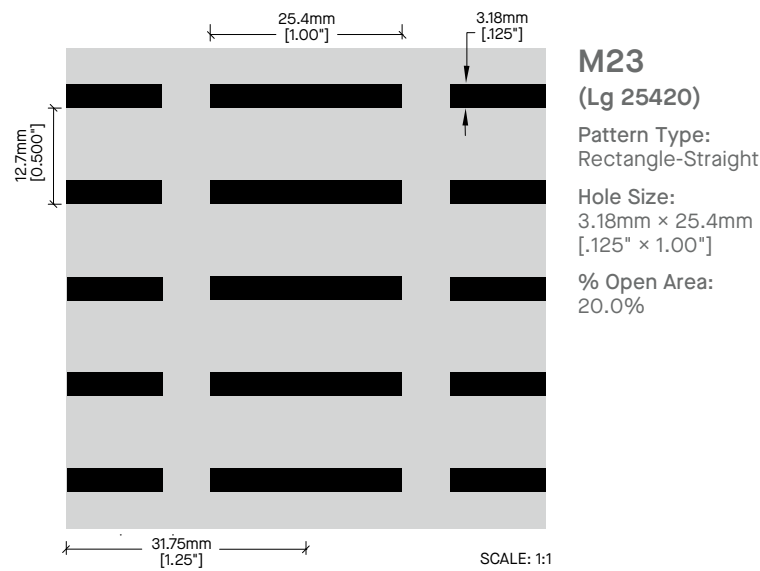
Key for Perforation Types

Bg = oblong/straight **Qg** = square/straight
Bv = oblong/staggered **Rd** = round/diagonal
Lg = rectangle/straight **Rg** = round/straight
Lv = rectangle/staggered **Rv** = round/staggered
OB = oblong slot width **Qd** = square/diagonal

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Premium Perforations



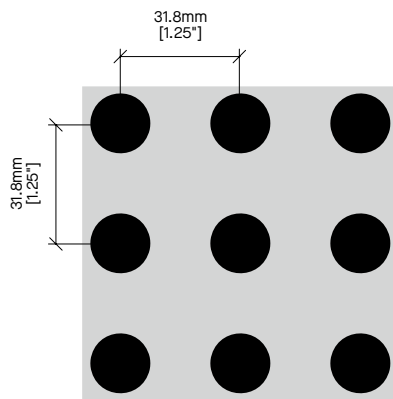
Minimum unperforated border will vary according to panel size.

MetalWorks™

Perforation Options for Ceiling and Wall Panels



Custom Perforations

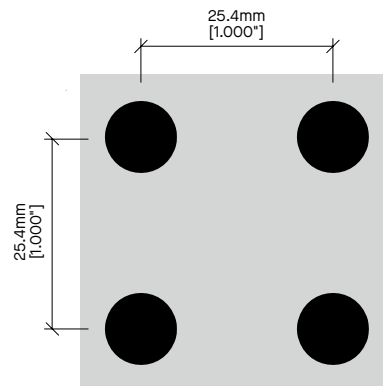


Rg 1520
Pattern Type:
Round-Straight

Hole Size:
15.9mm [.625"]

% Open Area:
20.0%

SCALE: 1:2

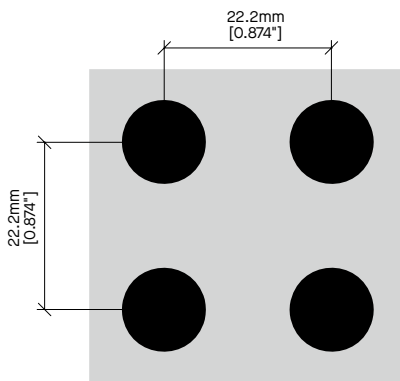


Rg 9611
Pattern Type:
Round-Straight

Hole Size:
9.5mm [.375"]

% Open Area:
11.0%

SCALE: 1:1

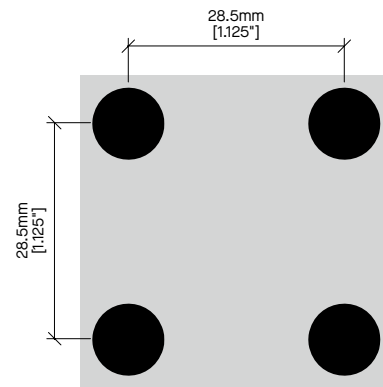


Rg 1120
Pattern Type:
Round-Straight

Hole Size:
11.1mm [.438"]

% Open Area:
20.0%

SCALE: 1:1

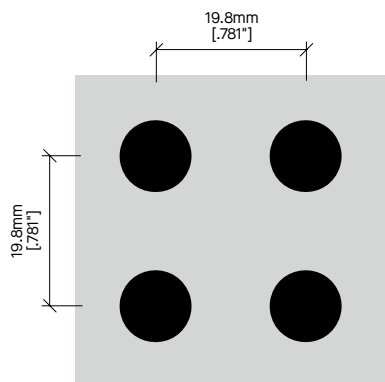


Rg 9609
Pattern Type:
Round-Straight

Hole Size:
9.5mm [.375"]

% Open Area:
9.0%

SCALE: 1:1

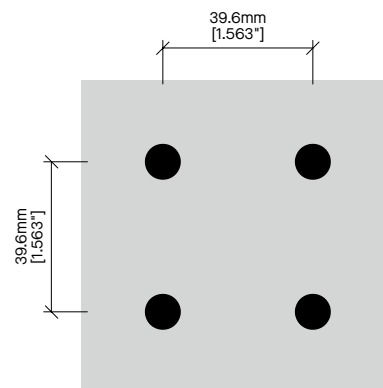


Rg 9618
Pattern Type:
Round-Straight

Hole Size:
9.5mm [.375"]

% Open Area:
18.0%

SCALE: 1:1



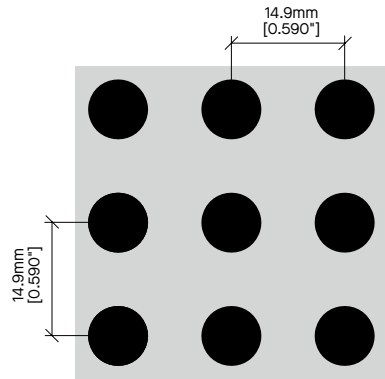
Rg 9605
Pattern Type:
Round-Straight

Hole Size:
9.5mm [.375"]

% Open Area:
5.0%

SCALE: 2:1

Custom Perforations

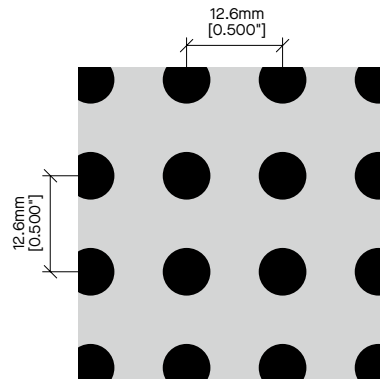


SCALE: 1:1

Rg 7922
Pattern Type:
Round-Straight

Hole Size:
7.9mm [.312"]

% Open Area:
22.0%

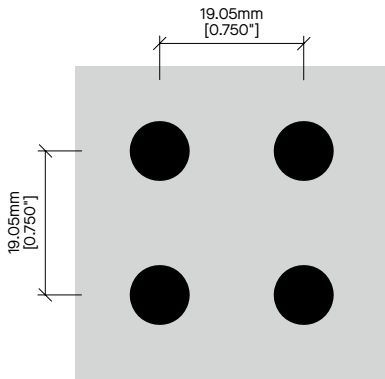


SCALE: 1:1

Rg 6320
Pattern Type:
Round-Straight

Hole Size:
6.3mm [.250"]

% Open Area:
20.0%

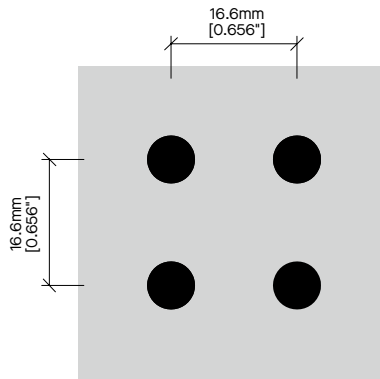


SCALE: 1:1

Rg 7914
Pattern Type:
Round-Straight

Hole Size:
7.9mm [.312"]

% Open Area:
14.0%

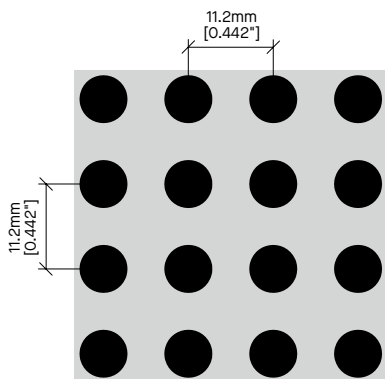


SCALE: 1:1

Rg 6311
Pattern Type:
Round-Straight

Hole Size:
6.3mm [.250"]

% Open Area:
11.0%

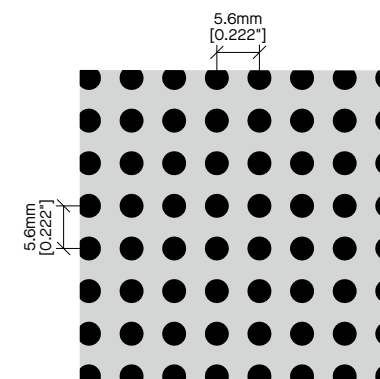


SCALE: 1:1

Rg 6325
Pattern Type:
Round-Straight

Hole Size:
6.35mm [.250"]

% Open Area:
25.0%



SCALE: 1:1

Rg 3225
Pattern Type:
Round-Straight

Hole Size:
5.6mm [.222"]

% Open Area:
25.0%

Key for Perforation Names (Example: Rg 0701)

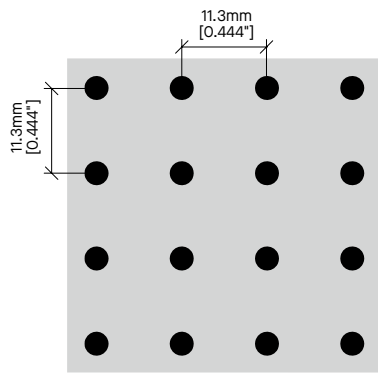
Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

Bg = oblong/straight **Qg** = square/straight
Bv = oblong/staggered **Rd** = round/diagonal
Lg = rectangle/straight **Rg** = round/straight
Lv = rectangle/staggered **Rv** = round/staggered
OB = oblong slot width **Qd** = square/diagonal

For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks

Custom Perforations

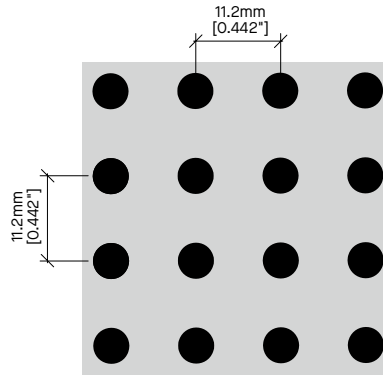


SCALE: 1:1

Rg 3206
Pattern Type:
Round-Straight

Hole Size:
3.18mm [.125"]

% Open Area:
6.0%

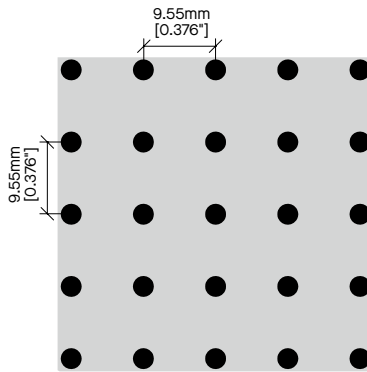


SCALE: 1:1

Rg 4814
Pattern Type:
Round-Straight

Hole Size:
4.7mm [.188"]

% Open Area:
14.0%

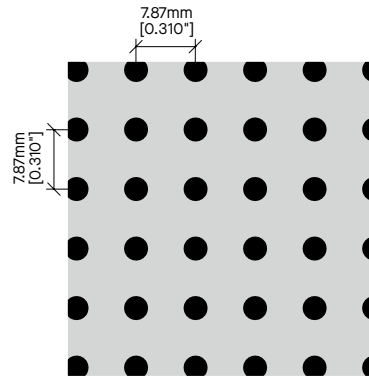


SCALE: 1:1

Rg 2807
Pattern Type:
Round-Straight

Hole Size:
2.77mm [.109"]

% Open Area:
7.0%

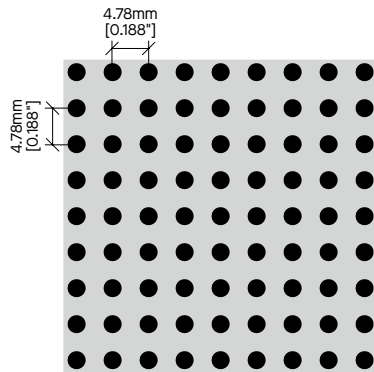


SCALE: 1:1

Rg 3213
Pattern Type:
Round-Straight

Hole Size:
3.18mm [.125"]

% Open Area:
13.0%

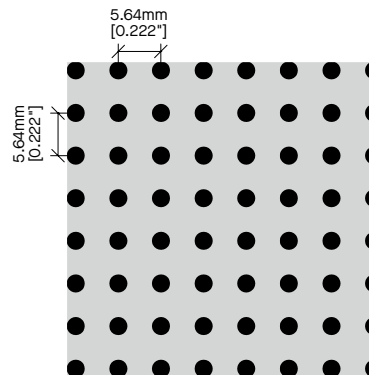


SCALE: 1:1

Rg 2420
Pattern Type:
Round-Straight

Hole Size:
2.39mm [.094"]

% Open Area:
20.0%



SCALE: 1:1

Rg 2414
Pattern Type:
Round-Straight

Hole Size:
2.39mm [.094"]

% Open Area:
14.0%

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

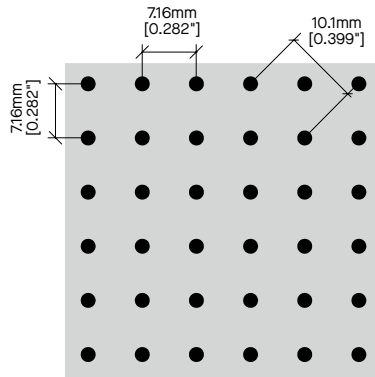
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

Bg = oblong/straight	Qg = square/straight
Bv = oblong/staggered	Rd = round/diagonal
Lg = rectangle/straight	Rg = round/straight
Lv = rectangle/staggered	Rv = round/staggered
OB = oblong slot width	Qd = square/diagonal

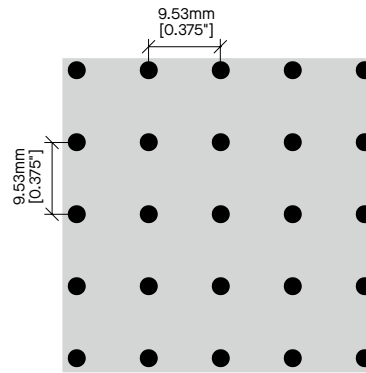
For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks

Custom Perforations



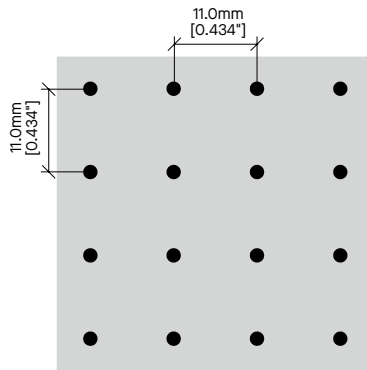
Rg 1906
Pattern Type:
Round-Straight
Hole Size:
1.98mm [.078"]
% Open Area:
6.0%

SCALE: 1:1



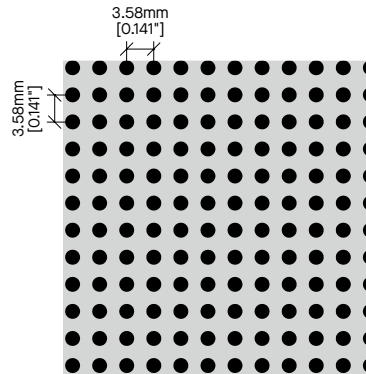
Rg 2405
Pattern Type:
Round-Straight
Hole Size:
2.39mm [.094"]
% Open Area:
24.0%

SCALE: 1:1



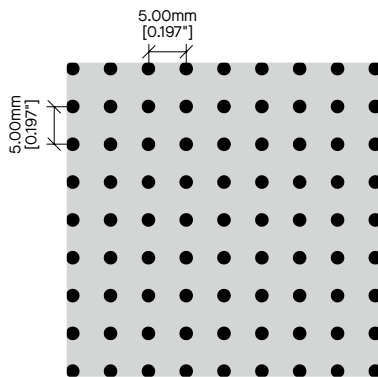
Rg 1902
Pattern Type:
Round-Straight
Hole Size:
1.91mm [.075"]
% Open Area:
2.0%

SCALE: 1:1



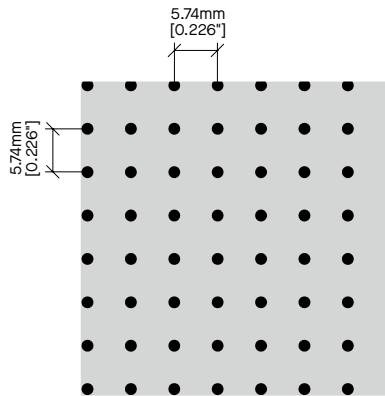
Rg 1924
Pattern Type:
Round-Straight
Hole Size:
1.98mm [.078"]
% Open Area:
24.0%

SCALE: 1:1



Rg 1810
Pattern Type:
Round-Straight
Hole Size:
1.80mm [.071"]
% Open Area:
10.0%

SCALE: 1:1



Rg 1606
Pattern Type:
Round-Straight
Hole Size:
1.57mm [.062"]
% Open Area:
6.0%

SCALE: 1:1

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

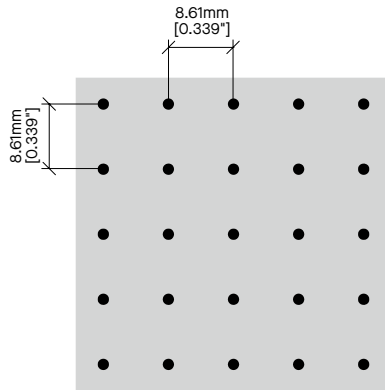
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

Bg = oblong/straight Qg = square/straight
Bv = oblong/staggered Rd = round/diagonal
Lg = rectangle/straight Rg = round/straight
Lv = rectangle/staggered Rv = round/staggered
OB = oblong slot width Qd = square/diagonal

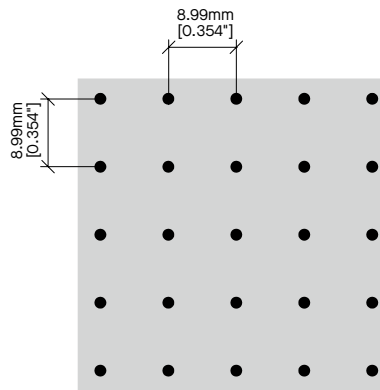
For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks

Custom Perforations



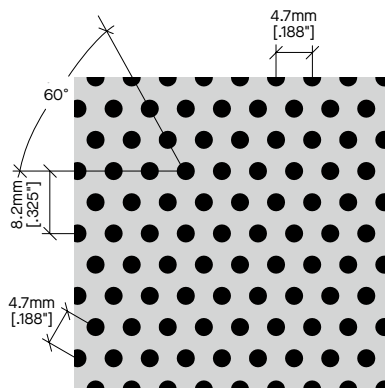
SCALE: 1:1

Rg 1502
 Pattern Type:
 Round-Straight
 Hole Size:
 11.1mm [.059"]
 % Open Area:
 2.0%



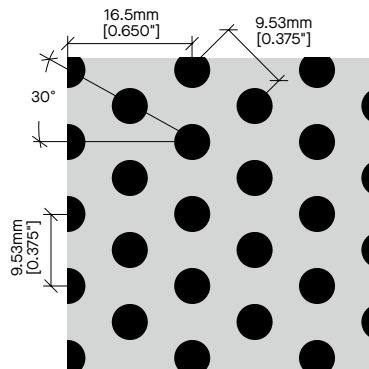
SCALE: 1:1

Rg 1602
 Pattern Type:
 Round-Straight
 Hole Size:
 1.57mm [.062"]
 % Open Area:
 2.0%



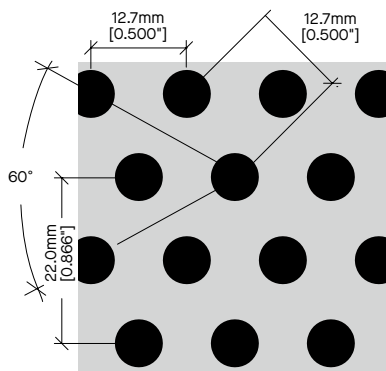
SCALE: 1:1

Rv 2423
 Pattern Type:
 Round-Staggered
 Hole Size:
 2.3mm [.094"]
 % Open Area:
 23.0%



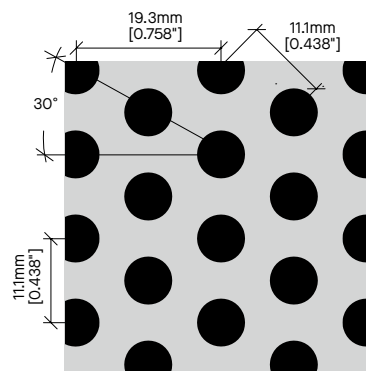
SCALE: 1:1

Rv 4823
 Pattern Type:
 Round-Staggered
 Hole Size:
 4.78mm [.188"]
 % Open Area:
 23.0%



SCALE: 1:1

Rv 6323
 Pattern Type:
 Round-Staggered
 Hole Size:
 6.35mm [.250"]
 % Open Area:
 23.0%



SCALE: 1:1

Rv 6330
 Pattern Type:
 Round-Staggered
 Hole Size:
 6.35mm [.250"]
 % Open Area:
 30.0%

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

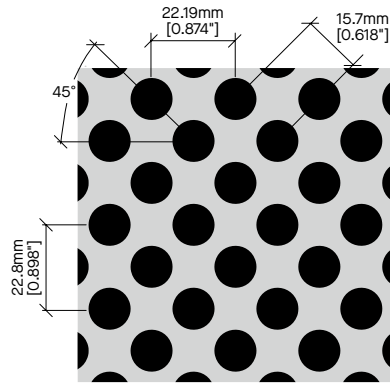
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

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 Bv = oblong/staggered Rd = round/diagonal
 Lg = rectangle/straight Rg = round/straight
 Lv = rectangle/staggered Rv = round/staggered
 OB = oblong slot width Qd = square/diagonal

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Custom Perforations



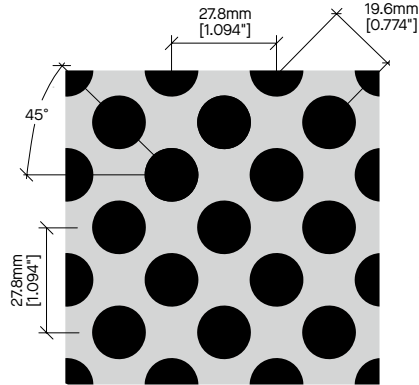
Rd 1139

Pattern Type:
Round-Diagonal

Hole Size:
11.1mm [.438"]

% Open Area:
36.0%

SCALE: 1:2



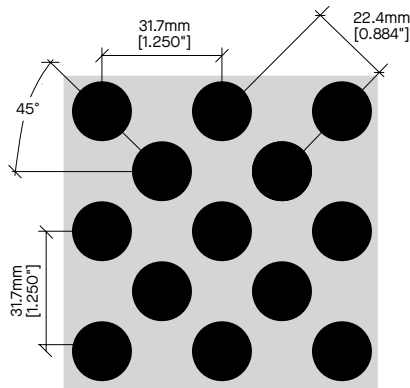
Rd 1441

Pattern Type:
Round-Diagonal

Hole Size:
14.2mm [.560"]

% Open Area:
41.0%

SCALE: 1:2



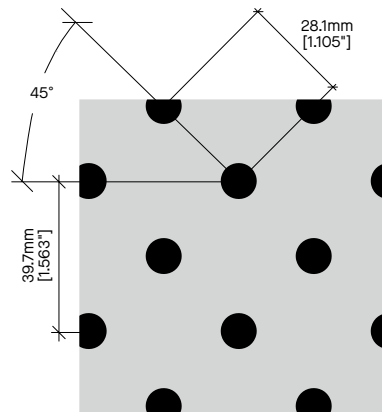
Rd 1539

Pattern Type:
Round-Diagonal

Hole Size:
15.8mm [.625"]

% Open Area:
39.0%

SCALE: 1:2



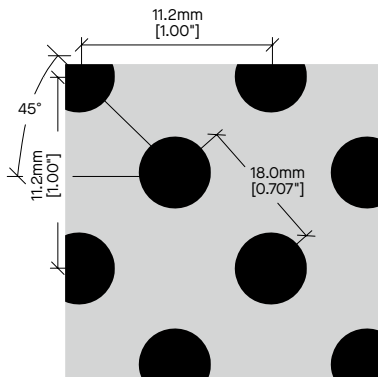
Rd 9609

Pattern Type:
Round-Diagonal

Hole Size:
9.5mm [.375"]

% Open Area:
9.0%

SCALE: 1:2



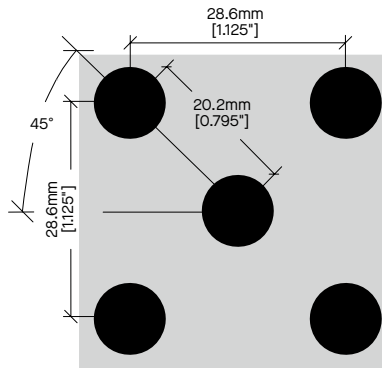
Rd 9622

Pattern Type:
Round-Diagonal

Hole Size:
9.5mm [.375"]

% Open Area:
22.0%

SCALE: 1:1



Rd 9617

Pattern Type:
Round-Diagonal

Hole Size:
9.5mm [.375"]

% Open Area:
17.0%

SCALE: 1:1

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

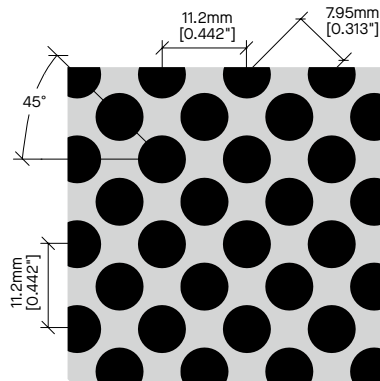
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Bv = oblong/staggered	Rd = round/diagonal
Lg = rectangle/straight	Rg = round/straight
Lv = rectangle/staggered	Rv = round/staggered
OB = oblong slot width	Qd = square/diagonal

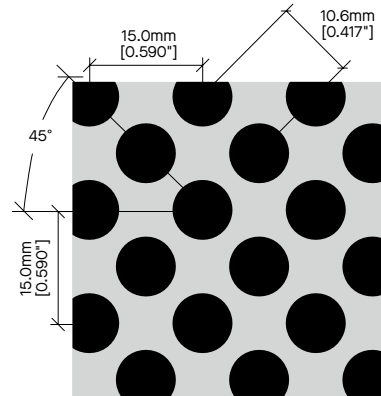
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Custom Perforations



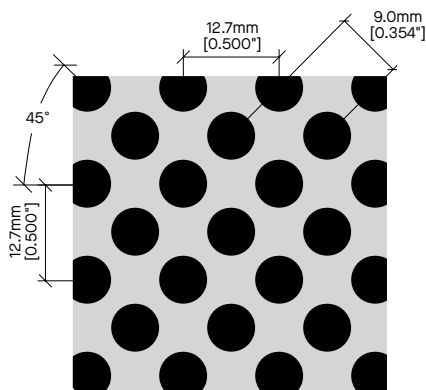
SCALE: 1:1

Rd 6350
 Pattern Type:
 Round-Diagonal
 Hole Size:
 6.35mm [.250"]
 % Open Area:
 50.0%



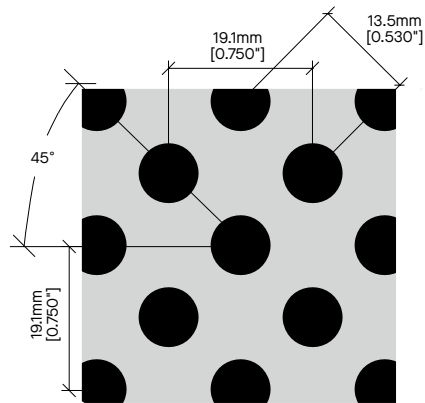
SCALE: 1:1

Rd 7944
 Pattern Type:
 Round-Diagonal
 Hole Size:
 7.92mm [.312"]
 % Open Area:
 44.0%



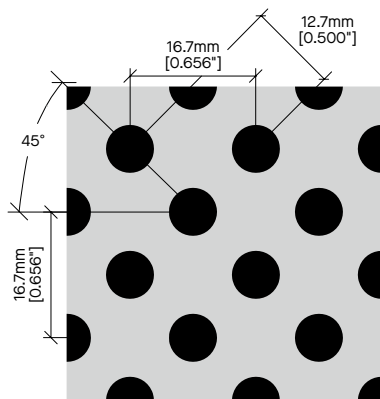
SCALE: 1:1

Rd 6339
 Pattern Type:
 Round-Diagonal
 Hole Size:
 6.35mm [.250"]
 % Open Area:
 39.0%



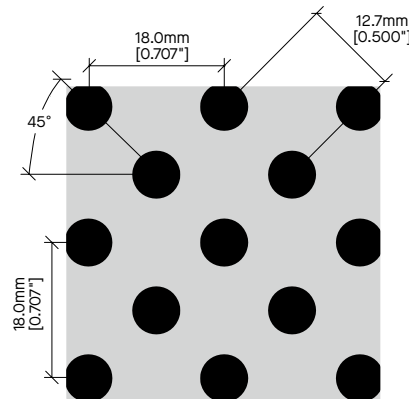
SCALE: 1:1

Rd 7927
 Pattern Type:
 Round-Diagonal
 Hole Size:
 7.92mm [.312"]
 % Open Area:
 27.0%



SCALE: 1:1

Rd 6323
 Pattern Type:
 Round-Diagonal
 Hole Size:
 6.35mm [.250"]
 % Open Area:
 23.0%



SCALE: 1:1

Rd 6320
 Pattern Type:
 Round-Diagonal
 Hole Size:
 6.35mm [.250"]
 % Open Area:
 20.0%

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

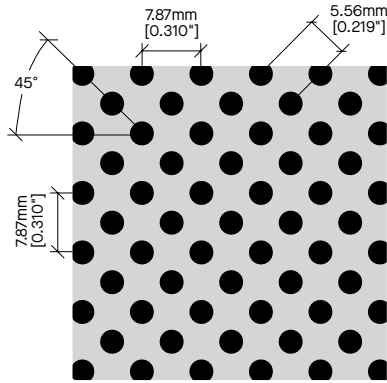
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

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Bv = oblong/staggered **Rd** = round/diagonal
Lg = rectangle/straight **Rg** = round/straight
Lv = rectangle/staggered **Rv** = round/staggered
OB = oblong slot width **Qd** = square/diagonal

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Custom Perforations



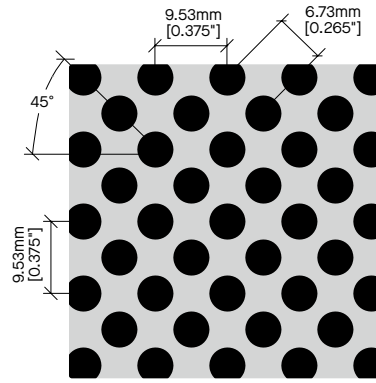
Rd 3226

Pattern Type:
Round-Diagonal

Hole Size:
3.18mm [.125"]

% Open Area:
26.0%

SCALE: 1:1



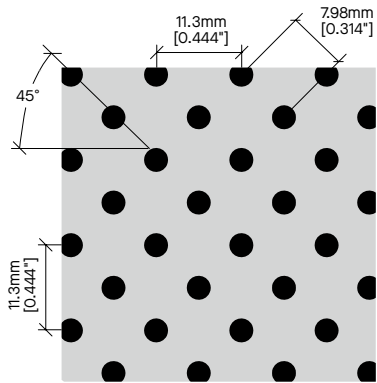
Rd 4840

Pattern Type:
Round-Diagonal

Hole Size:
4.78mm [.188"]

% Open Area:
40.0%

SCALE: 1:1



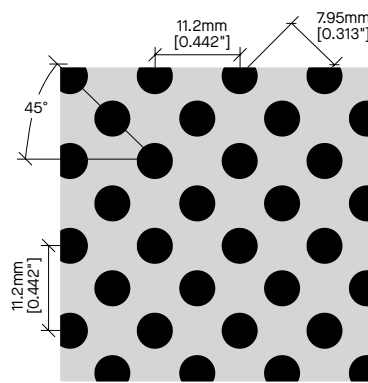
Rd 3213

Pattern Type:
Round-Diagonal

Hole Size:
3.18mm [.125"]

% Open Area:
13.0%

SCALE: 1:1



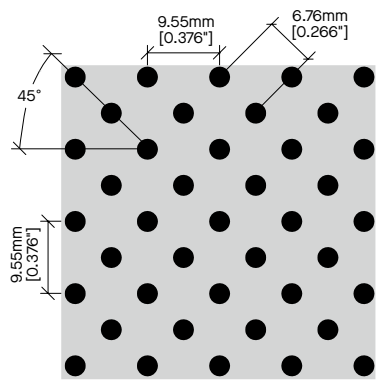
Rd 4829

Pattern Type:
Round-Diagonal

Hole Size:
4.78mm [.188"]

% Open Area:
29.0%

SCALE: 1:1



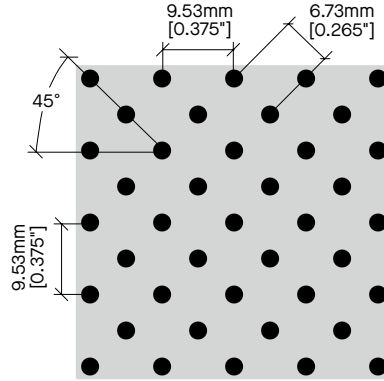
Rd 2813

Pattern Type:
Round-Diagonal

Hole Size:
2.77mm [.109"]

% Open Area:
13.0%

SCALE: 1:1



Rd 2410

Pattern Type:
Round-Diagonal

Hole Size:
2.39mm [.094"]

% Open Area:
10.0%

SCALE: 1:1

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

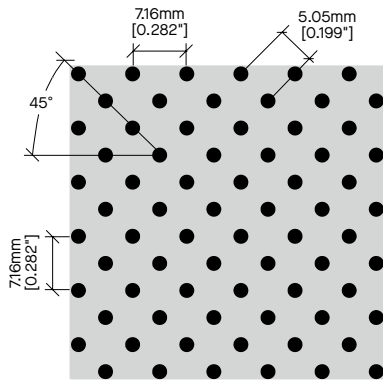
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Key for Perforation Types

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Bv = oblong/staggered **Rd** = round/diagonal
Lg = rectangle/straight **Rg** = round/straight
Lv = rectangle/staggered **Rv** = round/staggered
OB = oblong slot width **Qd** = square/diagonal

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Custom Perforations



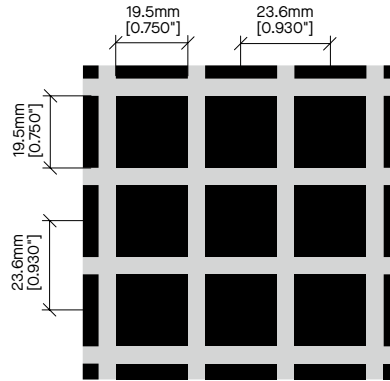
SCALE: 1:1

Rd 1912

Pattern Type:
Round-Diagonal

Hole Size:
1.98mm [0.078"]

% Open Area:
12.0%



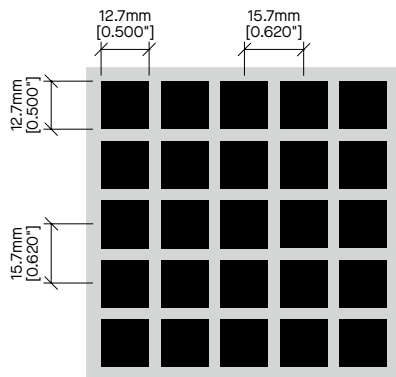
SCALE: 1:2

Qg 1965

Pattern Type:
Square-Straight

Hole Size:
19.5mm [0.750"] ×
19.5mm [0.750"]

% Open Area:
65.0%



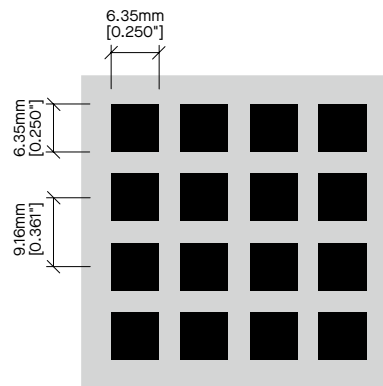
SCALE: 1:1

Qg 1265

Pattern Type:
Square-Straight

Hole Size:
12.7mm [0.500"] ×
12.7mm [0.500"]

% Open Area:
65.0%



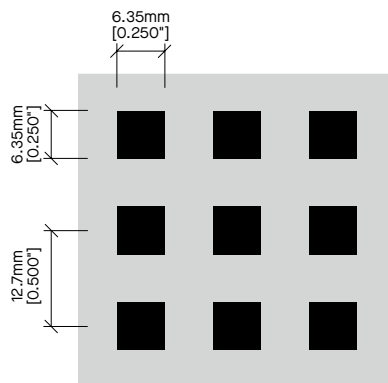
SCALE: 1:1

Qg 6348

Pattern Type:
Square-Straight

Hole Size:
6.35mm [0.250"] ×
6.35mm [0.250"]

% Open Area:
48.0%



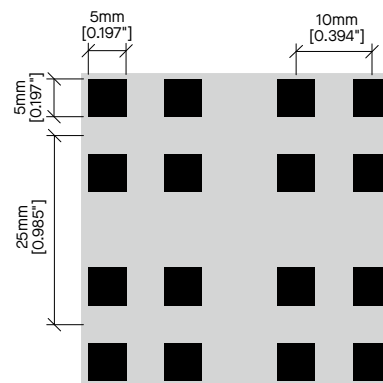
SCALE: 1:1

Qg 6325

Pattern Type:
Square-Straight

Hole Size:
6.35mm [0.250"] ×
6.35mm [0.250"]

% Open Area:
25.0%



SCALE: 1:1

Qg 5016

Pattern Type:
Square-Straight

Hole Size:
5mm [0.197"] ×
5mm [0.197"]

% Open Area:
16.0%

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

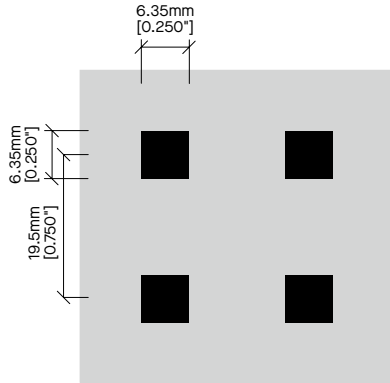
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

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Bv = oblong/staggered **Rd** = round/diagonal
Lg = rectangle/straight **Rg** = round/straight
Lv = rectangle/staggered **Rv** = round/staggered
OB = oblong slot width **Qd** = square/diagonal

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Custom Perforations



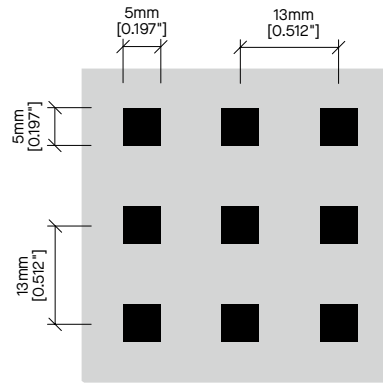
SCALE: 1:1

Qg 6311

Pattern Type:
Square-Straight

Hole Size:
6.35mm [.250"] ×
6.35mm [.250"]

% Open Area:
11.0%



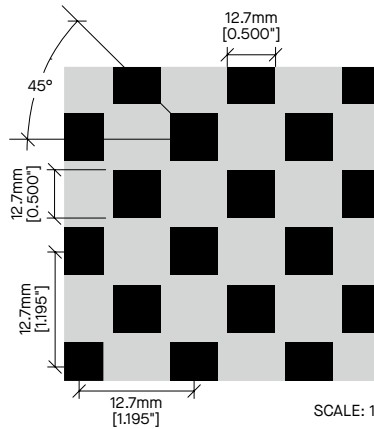
SCALE: 1:1

Qg 5015

Pattern Type:
Square-Straight

Hole Size:
5mm [.197"] ×
5mm [.197"]

% Open Area:
15.0%



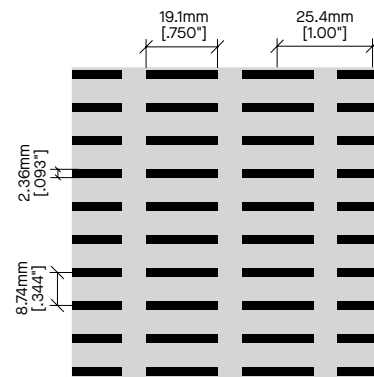
SCALE: 1:2

Qd 1235

Pattern Type:
Square-Diagonal

Hole Size:
12.7mm [.500"] ×
12.7mm [.500"]

% Open Area:
35.0%



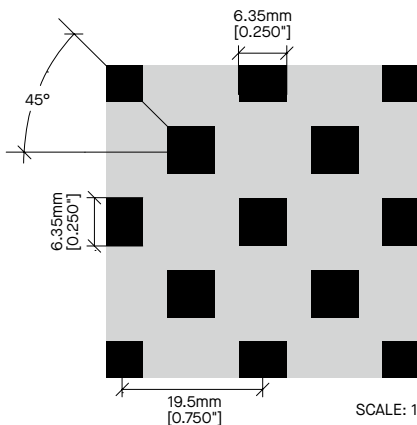
SCALE: 1:2

Lg 19120

Pattern Type:
Rectangle-Straight

Hole Size:
2.36mm [.093"] ×
19.1mm [.750"]

% Open Area:
20.0%



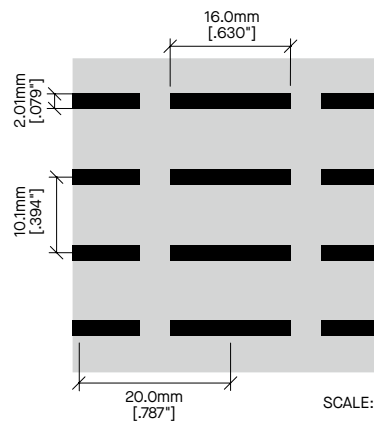
SCALE: 1:1

Qd 6322

Pattern Type:
Square-Diagonal

Hole Size:
6.35mm [.250"] ×
6.35mm [.250"]

% Open Area:
22.0%



SCALE: 1:1

Lg 16016

Pattern Type:
Rectangle-Straight

Hole Size:
2.01mm [.079"] ×
16.0mm [.630"]

% Open Area:
16.0%

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

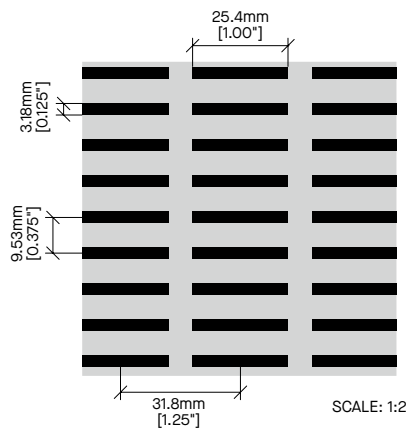
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

Bg = oblong/straight **Qg** = square/straight
Bv = oblong/staggered **Rd** = round/diagonal
Lg = rectangle/straight **Rg** = round/straight
Lv = rectangle/staggered **Rv** = round/staggered
OB = oblong slot width **Qd** = square/diagonal

For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks

Custom Perforations

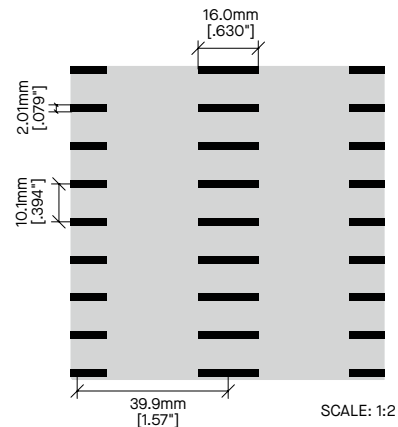


Lg 25427

Pattern Type:
Rectangle-Straight

Hole Size:
3.18mm [.125"] ×
25.4mm [1.00"]

% Open Area:
27.0%

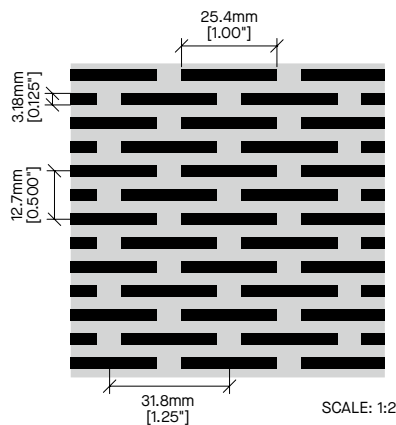


Lg 16008

Pattern Type:
Rectangle-Straight

Hole Size:
2.01mm [.079"] ×
16.0mm [.630"]

% Open Area:
8.0%

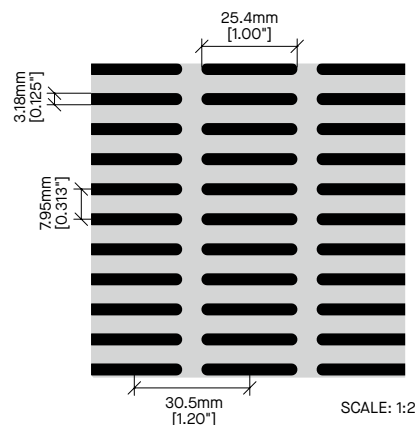


Lv 25439

Pattern Type:
Rectangle-
Staggered

Hole Size:
3.18mm [.125"] ×
25.4mm [1.00"]

% Open Area:
39.0%

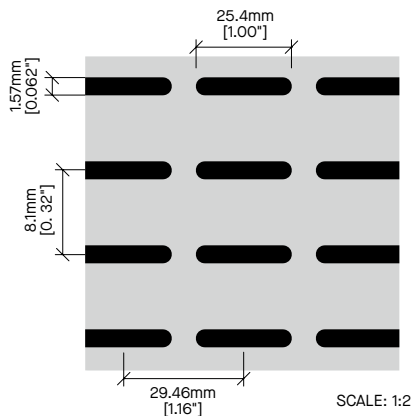


Bg 25432

Pattern Type:
Oblong-Straight

Hole Size:
3.18mm [.125"] ×
25.4mm [1.00"]

% Open Area:
32.0%

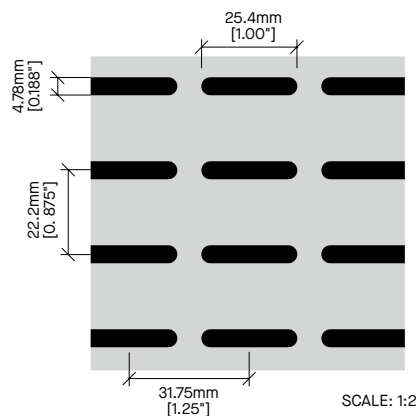


Bg 25416 (OB 0.062)

Pattern Type:
Oblong-Straight

Hole Size:
1.57mm [0.062"] ×
31.75mm [1.25"]

% Open Area:
16.0%



Bg 25416 (OB .188)

Pattern Type:
Oblong-Straight

Hole Size:
4.78mm [.118"] ×
25.4mm [1.00"]

% Open Area:
16.0%

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

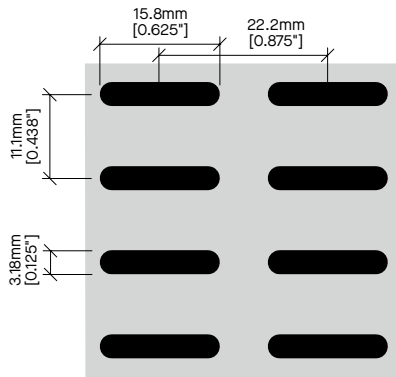
Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

Bg = oblong/straight **Qg** = square/straight
Bv = oblong/staggered **Rd** = round/diagonal
Lg = rectangle/straight **Rg** = round/straight
Lv = rectangle/staggered **Rv** = round/staggered
OB = oblong slot width **Qd** = square/diagonal

For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks

Custom Perforations



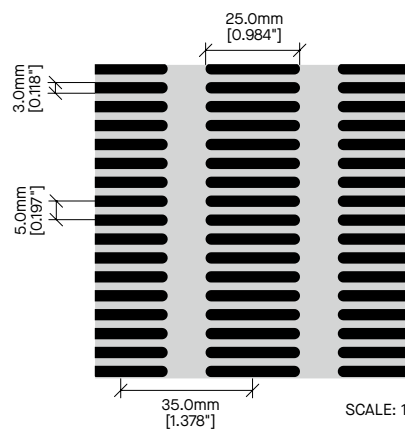
Bg 15820

Pattern Type:
Oblong-Straight

Hole Size:
3.18mm [.125"] ×
15.8mm [.625"]

% Open Area:
20.0%

SCALE: 1:1



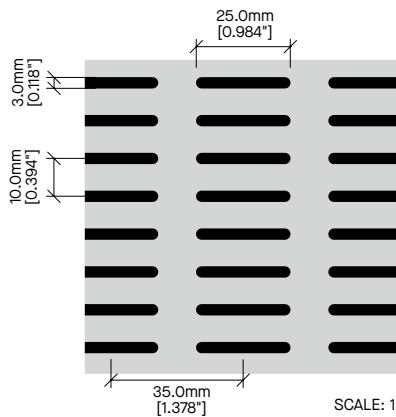
Bg 25042

Pattern Type:
Oblong-Straight

Hole Size:
3.0mm [.118"] ×
25.0mm [.984"]

% Open Area:
42.0%

SCALE: 1:2



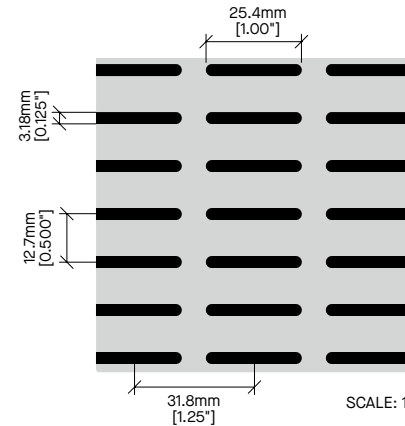
Bg 25021

Pattern Type:
Oblong-Straight

Hole Size:
3.0mm [.118"] ×
25.0mm [.984"]

% Open Area:
21.0%

SCALE: 1:2



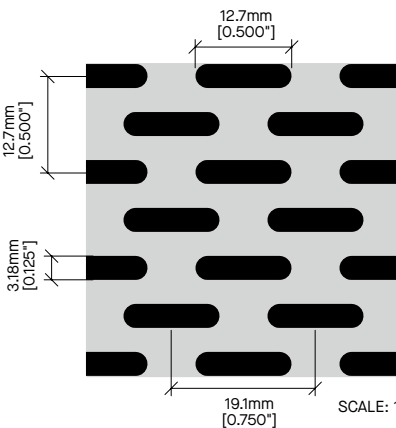
Bg 25419

Pattern Type:
Oblong-Straight

Hole Size:
3.18mm [.125"] ×
25.4mm [1.00"]

% Open Area:
19.0%

SCALE: 1:2



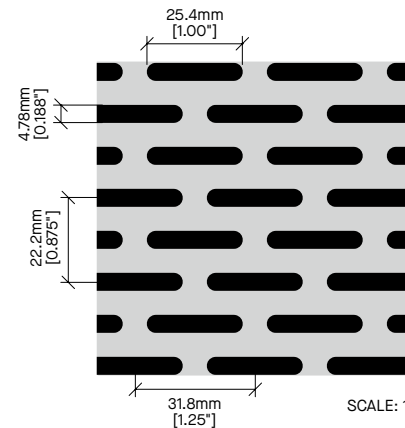
Bv 12732

Pattern Type:
Oblong-Staggered

Hole Size:
3.18mm [.125"] ×
12.7mm [.500"]

% Open Area:
32.0%

SCALE: 1:1



Bv 25433

Pattern Type:
Oblong-Staggered

Hole Size:
4.78mm [.188"] ×
25.4mm [1.00"]

% Open Area:
33.0%

SCALE: 1:2

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)

07 Diameter of hole size in mm (Example: 0.7 mm)

01 % open area

Perforations with an open area greater than 20% may have reduced panel size capabilities.

Key for Perforation Types

Bg = oblong/straight Qg = square/straight

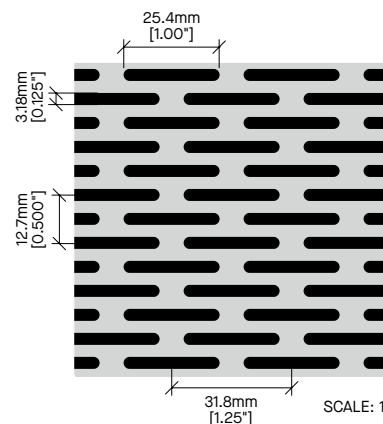
Bv = oblong/staggered Rd = round/diagonal

Lg = rectangle/straight Rg = round/straight

Lv = rectangle/staggered Rv = round/staggered

OB = oblong slot width Qd = square/diagonal

For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks



Bv 25439

Pattern Type:
Oblong-Staggered

Hole Size:
3.18mm [.125"] ×
25.4mm [1.00"]

% Open Area:
39.0%

SCALE: 1:2

Perforation Pattern	Maximum Steel Thickness (Gauge / Inches)	Maximum Aluminum Thickness (Gauge / Inches)	Open Area %
Bg 12716	18ga ≈ 0.050	0.05ga	16
Bg 15819	16ga ≈ 0.063	0.063ga	19
Bg 15820	18ga ≈ 0.050	0.05ga	20
Bg 25021	16ga ≈ 0.063	0.063ga	21
Bg 25042	16ga ≈ 0.063	0.032ga	42
Bg 25416 (OB 0.062)	22ga ≈ 0.032	0.032ga	16
Bg 25416 (OB 0.188)	16ga ≈ 0.063	0.063ga	16
Bg 25419	18ga ≈ 0.050	0.05ga	19
Bg 25432	20ga ≈ 0.038	0.04ga	32
Bg 27023	16ga ≈ 0.063	0.063ga	23
Bv 12732	22ga ≈ 0.032	0.032ga	32
Bv 25422 (M22)	22ga ≈ 0.032	0.063ga	22
Bv 25433	16ga ≈ 0.063	0.063ga	33
Bv 25439	22ga ≈ 0.032	0.032ga	39
Lg 16008	–	0.063ga	8
Lg 16016	–	0.063ga	16
Lg 16032 (M5)	–	0.063ga	32
Lg 19120	18ga ≈ 0.050	0.05ga	20
Lg 25420 (M23)	18ga ≈ 0.050	0.05ga	20
Lg 25427	18ga ≈ 0.050	0.05ga	27
Lv 25439	22ga ≈ 0.032	0.032ga	39
Qd 1235	22ga ≈ 0.032	0.032ga	35
Qd 6322	20ga ≈ 0.038	0.04ga	22
Qg 1218 (M27)	18ga ≈ 0.050	0.125ga	18
Qg 1265	22ga ≈ 0.032	0.032ga	65
Qg 1945 (M25)	14ga ≈ 0.080	0.08ga	45
Qg 1965	20ga ≈ 0.038	0.04ga	65
M6(Qg4025)	22ga	0.063ga	25
M6s(Qg5025)	20ga	0.04ga	25
Qg 5015	16ga ≈ 0.063	0.064ga	15
Qg 5025	20ga ≈ 0.038	0.04ga	25
Qg 6311	14ga ≈ 0.080	0.08ga	11
Qg 6325	18ga ≈ 0.050	0.05ga	25
Qg 6348	22ga ≈ 0.032	0.032ga	48
Qg 9636 (M13S)	18ga ≈ 0.050	0.05ga	36
Rd 1139	14ga ≈ 0.080	0.08ga	39
Rd 1242 (M29)	14ga ≈ 0.080	0.125ga	42
Rd 1441	14ga ≈ 0.080	0.125ga	41
Rd 1518 (M2)	22ga ≈ 0.032	0.04ga	18
Rd 1539	14ga ≈ 0.080	0.125ga	39
Rd 1607 (M16)	20ga ≈ 0.038	0.04ga	7
Rd 1612 (M15)	20ga ≈ 0.038	0.04ga	12
Rd 1820 (M12)	22ga ≈ 0.032	0.04ga	20
Rd 1905 (M21)	20ga ≈ 0.038	0.04ga	5
Rd 1912	18ga ≈ 0.050	0.05ga	12
Rd 2410	16ga ≈ 0.063	0.063ga	10
Rd 2428 (M28S)	22ga ≈ 0.032	0.04ga	28
Rd 2813	16ga ≈ 0.063	0.063ga	13
Rd 3210 (M18)	14ga ≈ 0.080	0.08ga	10
Rd 3213	14ga ≈ 0.080	0.08ga	13
Rd 3226	16ga ≈ 0.063	0.04ga	26
Rd 3239 (M24)	22ga ≈ 0.032	0.032ga	39

Perforation Pattern	Maximum Steel Thickness (Gauge / Inches)	Maximum Aluminum Thickness (Gauge / Inches)	Open Area %
Rd 4829	18ga ≈ 0.050	0.05ga	29
Rd 4840	22ga ≈ 0.032	0.032ga	40
Rd 6320	14ga ≈ 0.080	0.08ga	20
Rd 6323	14ga ≈ 0.080	0.08ga	23
Rd 6339	18ga ≈ 0.050	0.05ga	39
Rd 6350	22ga ≈ 0.032	0.04ga	50
Rd 7927	14ga ≈ 0.080	0.08ga	27
Rd 7944	20ga ≈ 0.038	0.04ga	44
Rd 9609	14ga ≈ 0.080	0.125ga	9
Rd 9617	14ga ≈ 0.080	0.125ga	17
Rd 9622	14ga ≈ 0.080	0.125ga	22
Rg 0701 (M3)	24ga = 0.027	–	1
Rg 1120	14ga ≈ 0.080	0.08ga	20
Rg 1421 (M26)	14ga ≈ 0.080	0.125ga	21
Rg 1502	–	0.04ga	2
Rg 1520	14ga ≈ 0.080	0.125ga	20
Rg 1602	20ga ≈ 0.038	0.04ga	2
Rg 1604 (M16S)	20ga ≈ 0.038	0.04ga	4
Rg 1606	20ga ≈ 0.038	0.04ga	6
Rg 1810	20ga ≈ 0.038	0.04ga	10
Rg 1902	20ga ≈ 0.038	0.04ga	2
Rg 1906	18ga ≈ 0.050	0.05ga	6
Rg 1924	18ga ≈ 0.050	0.05ga	24
Rg 2405	16ga ≈ 0.063	0.063ga	5
Rg 2414	16ga ≈ 0.063	0.063ga	14
Rg 2420	–	0.063ga	20
Rg 2516 (M10)	18ga ≈ 0.050	0.063ga	16
Rg 2807	16ga ≈ 0.063	0.063ga	7
Rg 3205 (M14)	14ga ≈ 0.080	0.08ga	5
Rg 3206	14ga ≈ 0.080	0.08ga	6
Rg 3213	16ga ≈ 0.063	0.08ga	13
Rg 3220 (M19)	18ga ≈ 0.050	0.05ga	20
Rg 3225	20ga ≈ 0.038	0.04ga	25
Rg 4814	14ga ≈ 0.080	0.125ga	14
Rg 4820 (M11S)	16ga ≈ 0.063	0.08ga	20
Rg 6311	14ga ≈ 0.080	0.125ga	11
Rg 6320	14ga ≈ 0.080	0.08ga	20
Rg 6325	14ga ≈ 0.080	0.08ga	25
Rg 7914	14ga ≈ 0.080	0.125ga	14
Rg 7922	14ga ≈ 0.080	0.125ga	22
Rg 9605	14ga ≈ 0.080	0.125ga	5
Rg 9609	14ga ≈ 0.080	0.125ga	9
Rg 9611	14ga ≈ 0.080	0.125ga	11
Rg 9618	14ga ≈ 0.080	0.125ga	18
Rv 2423	20ga ≈ 0.038	0.04ga	23
Rv 3020 (M95)	16ga ≈ 0.063	0.063ga	20
Rv 3223 (M17)	18ga ≈ 0.050	0.05ga	23
Rv 4058 (M4)	24ga ≈ 0.027	0.063ga	58
Rv 4823	14ga ≈ 0.080	0.08ga	23
Rv 6323	14ga ≈ 0.080	0.08ga	23
Rv 6330	14ga ≈ 0.080	0.08ga	30
Rv12763	14ga ≈ 0.080	0.125ga	63

Key for Perforation Names (Example: Rg 0701)

Rg Hole shape (round/straight)
07 Diameter of hole size in mm (Example: 0.7 mm)
01 % open area

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OB = oblong slot width **Qd** = square/diagonal

For custom design options and perforations, contact ProjectWorks® Design Services or visit armstrongceilings.com/projectworks

Perforation Acoustics Recommendations

These are the three basic categories of perforation levels, with sample applications for each:

- **Highly Perforated:** Open area of 25% or greater – used in spaces where noise reduction and speech intelligibility are critical, including boutique environments, restaurants and other hospitality spaces, and gymnasiums
- **Moderately Perforated:** Open area between 2–25%; commonly used in office, education, and healthcare settings
- **Minimally Perforated:** Open area less than 2%; used where reflection and diffusion are desired to enliven a space (e.g. an auditorium)

While perforations play the largest role in making metal ceiling and wall panels acoustically transparent, other factors determine how much sound gets through to the liner. These include the thickness of the metal and the number, size, shape, and spacing of the perforations.

For more acoustics recommendations, request a Custom Acoustics Report at armstrongceilings.com/ReverbRequest

Infill Panels

Enhance design and increase sound absorption with a variety of acoustical infill options for MetalWorks™ panels.



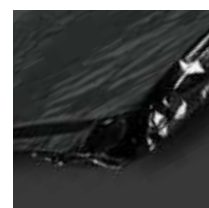
BioAcoustic™
Infill Panel – Beige



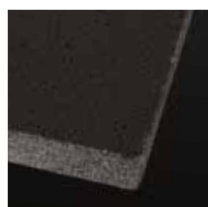
BioAcoustic
Infill Panel – Black



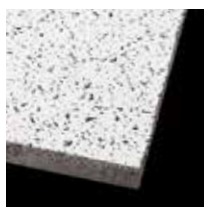
Backstage Noir® Square
Lay-in Panel – Black



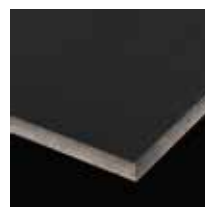
1" Fiberglass Infill Panel
(in poly bag)



Fine Fissured™ Square
Lay-in Panel – Black

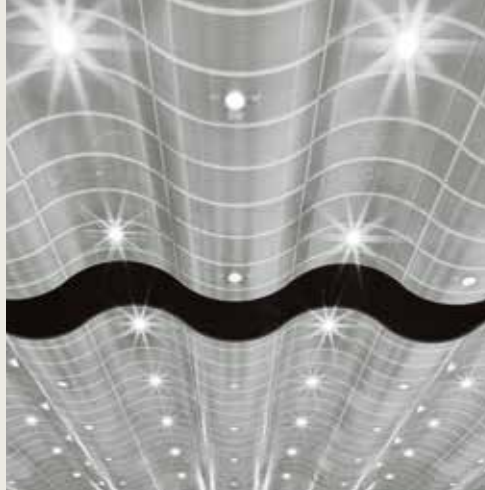


Cortega® Square
Lay-in Panel



Calla® Square
Lay-in Panel – Black

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