



Hendrick Manufacturing
Cutting Edge Metal Solutions



Perforated & Fabricated Metal
General Handbook



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Hendrick Manufacturing

Cutting Edge Metal Solutions

Hendrick Manufacturing, established in 1876, is a founding member of the Industrial Perforators Association, an organization dedicated to the promotion and use of perforated metal across multiple industries.

Hendrick Manufacturing is not just a manufacturer and supplier of perforated metal, but a partner and resource for thousands of customers across North America. We participate in the design of new products and assist in the redesign with an eye toward improved quality and cost-savings.

If you are a designer or buyer, you should take advantage of our vast experience and capabilities because holes provide solutions to many design applications. Round holes, square holes, rectangles, triangles, slots decorative patterns - shapes only limited by your imagination. Hole sizes can range from a few thousandths of an inch to more than six inches. We can perforate thicknesses from foil to 3/4". Materials can vary from carbon steel, stainless, aluminum, galvanized, copper, brass, etc. We even perforate paper, plastics and exotics.

Our multiple perforating presses can accommodate sheets or coils of material. We can perforate up to 60" in width (greater widths may be accommodated - please consult with Hendrick Manufacturing). Coils up to 20,000 pounds are easily handled. If your product is pre-coated or needs special care, we will apply the appropriate handling required.

The process to make holes with greater accuracy and efficiency is a very special process. Perforating is unlike stamping or other metal-working operations. It requires a large investment in personnel, machinery and tooling.

Hendrick is unique as we manufacture our own tooling utilizing the latest technology. The experience of our workforce is an incredible asset and is the basis for our ability to deliver high-quality products quickly. Our manufacturing operation is 24-7, thereby reducing our delivery times.

We have thousands of hole-patterns to choose from. Our tooling list is extensive and ever-changing. We will help you choose the right hole-pattern to accomplish your vision. We can also design new tooling as required.

Lastly, Hendrick offers many follow-up operations to perforating. We can shear, roll, slit, weld, form, paint, etc. In fact, many customers find that it is more economical to have Hendrick provide a sub-assembly or finished part.

We look forward to working with you as a partner.



Hendrick Manufacturing
1 Seventh Avenue
Carbondale, PA 18407

Parking Garage Enclosures, Column Covers, Custom Signage, Cladding



Perforated Sign for Armstrong Visitor Center
Lancaster, PA
Audrey Matlock Architect



Penn Highlands Community College
Robert J. Kimball Architects



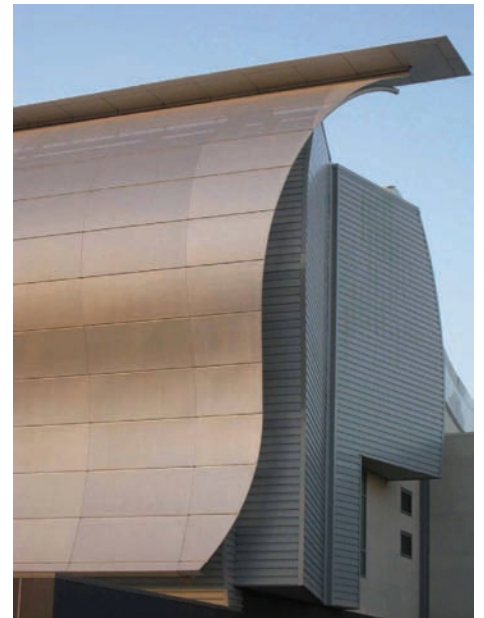
Custom Column Covers
Johnson Controls, Glendale, WI
Architect: Gensler



Perforated Brise-Soleil Panels
Cooper Union NYC
Architect: Morphosis



Parking Garage Infill Panels
Santa Monica Medical Center
Architect: Leland Saylor

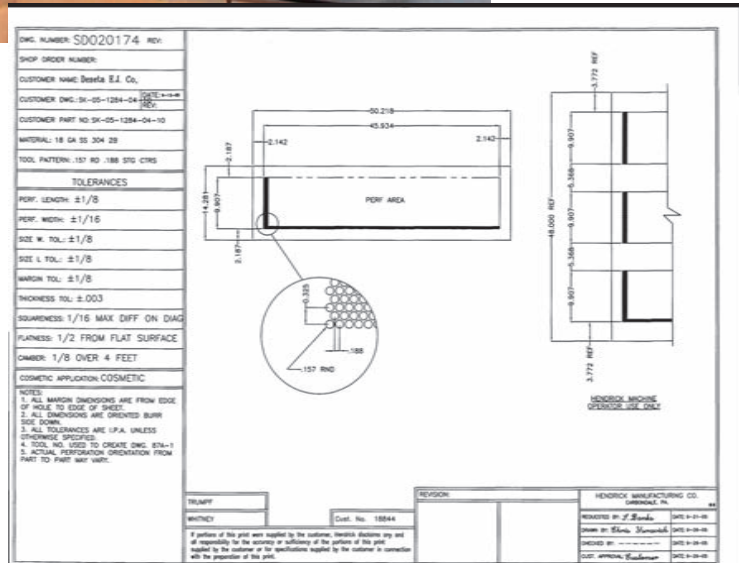


Cladding
San Jose Airport
Architect: Gensler



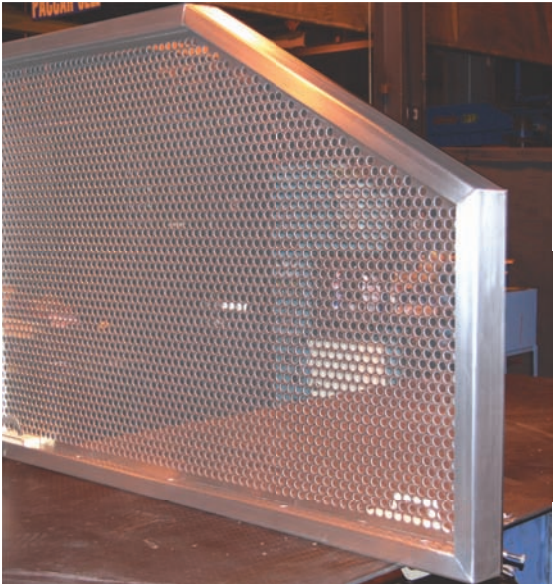
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Railing Infill Panels & Sample Shop Drawing



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Railing Infill Panels & Screens



Custom Infill Panels



Tokyo Joes's Restaurants
Architect: TSOI/KOBUS Associates



USS Intrepid Gangway Infills
New York
Dattner Architects



Proton Beam Cancer Facility
Sunscreen Panels
Architect: TSOI/KOBUS Associates



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TIME is money ... Delivered on time, every time

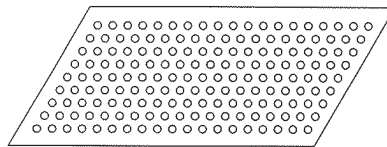
What is the value of having a product delivered when you need it? What is the value of getting the right product the first time? Late deliveries and mistakes cost you dearly regardless of the price you were quoted. With Hendrick Manufacturing, you can relax because it will be right and it will be on time. We are a 24/7 operation with 98% on time delivery. You will always get the best service in the industry.

TIME is simplicity ... Buy factory direct, no middleman

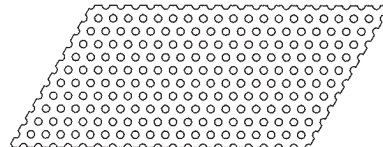
Calling your local distributor who handles all types of metals including expanded, grating, sheet stock, and perforated might be convenient, but remember the old adage: "A jack of all trades, master of none". Calling Hendrick gets you in direct touch with the real experts on perforated metal. Best of all, you do not pay the middleman mark-up.

TIME is precision ... Get exactly what you need, not "what's in stock"

Your project calls for a formed sheet of perforated stainless 35" x 49". At today's metal prices, why buy a 36" x 96" sheet off the shelf and scrap the rest when you don't have to? At Hendrick, we perforate widths up to 60" and just about any length you want. You can have those 35" x 49" sheets with margins, blank areas and mounting holes. We know perforated metal. Let us form and fabricate for you and deliver a completed part that is ready for installation. This saves you frustration, time and money. Get what you want, when you want it and don't settle for what's "on the shelf".



Hendrick



Brand X



Hendrick Manufacturing

Cutting Edge Metal Solutions

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www.hendrickarchproducts.com

This MANU-SPEC® utilizes the Construction Specifications Institute (CSI) *Manual of Practice*, including *MasterFormat™*, *SectionFormat™* and *PageFormat™*. A MANU-SPEC is a manufacturer-specific proprietary product specification using the proprietary method of specifying applicable to project specifications and master guide specifications. Optional text is indicated by brackets []; delete optional text in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

This MANU-SPEC specifies perforated architectural metals manufactured by Hendrick Manufacturing Co. Revise MANU-SPEC section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

SECTION 05580 FORMED METAL FABRICATIONS

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:

1. Perforated and fabricated architectural metals.

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

B. Related Sections:

1. Division 1 Section: Submittal Procedures.
2. Division 1 Section: Quality Control.
3. Division 1 Section: Closeout Submittals.
4. Division 3 Section: Cast-in-Place Concrete: Installation of Anchors.
5. Division 4 Section: Masonry Anchorage and Reinforcement: Installation of Anchors.
6. Division 5 Section: Metal Fabrications.
7. Division 5 Section: Metal Stairs and Ladders.

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

1.02 REFERENCES

A. ASTM International:

1. ASTM A167 Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.
2. ASTM A283M Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates.
3. ASTM A653M Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
ASTM A947M Standard Specification for Textured Stainless Steel Sheet.
4. ASTM B122M Standard Specification for Copper-Nickel-Tin Alloy, Copper-Nickel-Zinc Alloy (Nickel Silver), and Copper-Nickel Alloy Plate, Sheet, Strip, and Rolled Bar.
5. ASTM B152M Standard Specification for Copper Sheet, Strip, Plate, and Rolled Bar.
6. ASTM B248 Standard Specification for General Requirements for Wrought Copper and Copper-Alloy Plate, Sheet, Strip, and Rolled Bar.
7. ASTM B265 Standard Specification for Titanium and Titanium Alloy Strip, Sheet, and Plate.
8. ASTM B370 Standard Specification for Copper Sheet and Strip for Building Construction.

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

1.03 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures.
- B. Product Data: Submit manufacturer's product data and installation instructions for custom perforated metal architectural designs, including manufacturer's SPEC-DATA® product sheet. Include material, finish, available thicknesses and opening sizes.
- C. Drawings:
 - 1. Submit shop drawings detailing installation procedures, including layout, dimensions, anchorage, reinforcement, connections, supports and support placement.
- D. Samples:
 - 1. Submit selection and verification samples for finishes, colors and textures in accordance with Division 1 Submittal Procedures.
- E. Quality Assurance:
 - 1. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
 - 2. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article. Retain or delete as applicable.

- F. Manufacturer's Field Reports: Indicate and interpret test results for compliance with performance requirements.
- G. Closeout Submittals: Submit the following:
 - 1. Warranty: Warranty documents specified herein.
 - 2. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance.

1.04 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Fabricator Qualifications: Fabrication performed in quality controlled manufacturing environment by experienced fabricators with references indicating multiple satisfactory experiences fabricating perforated metals as required for this project.

1.05 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Delivery, Storage and Protection:
 - 1. Deliver materials in original sealed manufacturer's packaging.
 - 2. Store materials in dry, secure location.
 - 3. Store in accordance with manufacturer's written instructions.

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty).

1.06 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

1.07 WASTE MANAGEMENT & DISPOSAL

Specifier Note: State information that will assist the contractor in dealing with disposal of construction waste materials in ways other than using landfill resources.

- A. Deposit packaging materials in appropriate container onsite for recycling or reuse.
- B. Avoid using landfill waste disposal procedures when recycling facilities are available.

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

2.01 PERFORATED ARCHITECTURAL METALS

A. Manufacturer: Hendrick Manufacturing Co., 1 Seventh Ave., Carbondale, PA 18407; Telephone: (800) 225-7373, (570) 282-1010; Fax: (570) 282-1506; E-mail: sales@hendrickmfg.com; website: www.hendrickmfg.com, www.hendrickarchproducts.com.

B. Material:

1. Steel: To [ASTM A653] [ASTM A283] [Galvanized] [Cold rolled] [Hot rolled pickled and oiled] [____].
 - a. Thickness: [18 gauge (0.048 inch) (1.2 mm)] [24 gauge to 1/4 inch (6.4 mm) plate] [____].
 - b. Sheet Size: [____ × ____].
 - c. Shape: [Flat] [Curved about one axis] [Curved about two axes] [Circular] [Elliptical] [U-shaped].
 - d. Finish: [Painted] [Galvanized] [Polished] [Anodized] [Brushed] [Satin] [Matte] [Mill finish].
 - e. Color: [Powder coat] [Painted] [____].
2. Stainless Steel: To ASTM A167 [304] [316] [____].
 - a. Thickness: [18 gauge (0.048 inch) (1.2 mm)] [24 gauge to 11 gauge] [____].
 - b. Sheet Size: [____ × ____].
 - c. Shape: [Flat] [Curved about one axis] [Curved about two axes] [Circular] [Elliptical] [U-shaped].
 - d. Finish: [Painted] [Polished] [Anodized] [Brushed] [Satin] [Non-slip (sandblasted)] [Matte] [Mill finish] [Textured to ASTM A947M].
 - e. Color: [Powder coat] [Painted] [____].
3. Aluminum: To ASTM B209.
 - a. Thickness: [18 gauge (0.048 inch) (1.2 mm)] [0.025 inch - 0.25 inch (0.64 - 6.4 mm)] [____].
 - b. Sheet Size: [____ × ____].
 - c. Shape: [Flat] [Curved about one axis] [Curved about two axes] [Circular] [Elliptical] [U-shaped].
 - d. Finish: [Painted] [Polished] [Anodized] [Brushed] [Satin] [Matte] [Mill finish].
 - e. Color: [Powder coat] [Painted] [____].
4. Copper: To [ASTM B370] [ASTM B248] [ASTM B152].
 - a. Thickness: [18 gauge (0.048 inch) (1.2 mm)] [____].
 - b. Sheet Size: [____ × ____].
 - c. Shape: [Flat] [Curved about one axis] [Curved about two axes] [Circular] [Elliptical] [U-shaped].
 - d. Finish: [Painted] [Polished] [Anodized] [Brushed] [Satin] [Matte] [Mill finish].
 - e. Color: [Powder coat] [Painted] [____].
5. Titanium: To ASTM B265.
 - a. Thickness: [18 gauge (0.048 inch) (1.2 mm)] [____].
 - b. Sheet Size: [____ × ____].
 - c. Shape: [Flat] [Curved about one axis] [Curved about two axes] [Circular] [Elliptical] [U-shaped].
 - d. Finish: [Painted] [Polished] [Anodized] [Brushed] [Satin] [Matte] [Mill finish].
 - e. Color: [Powder coat] [Painted] [____].
6. Copper/Nickel: To ASTM B122M.
 - a. Thickness: [18 gauge (0.048 inch) (1.2 mm)] [____].
 - b. Sheet Size: [____ × ____].
 - c. Shape: [Flat] [Curved about one axis] [Curved about two axes] [Circular] [Elliptical] [U-shaped].
 - d. Finish: [Painted] [Polished] [Anodized] [Brushed] [Satin] [Matte] [Mill finish].
 - e. Color: [Powder coat] [Painted] [____].

- C. Perforations:
1. Round: 0.046 inch - 1 1/2 inch (1.17 - 38 mm) diameter holes, [_____] % open area, [_____] holes/in² (holes/mm²), [Staggered] [Straight].
 2. Square: [0.200 inch × 0.200 inch (5.1 × 5.1 mm)] [3/8 inch × 3/8 inch (9.5 × 9.5 mm)] [0.500 inch × 0.500 inch (12.7 × 12.7 mm)] holes, [_____] % open area, [_____] holes/in² (holes/mm²), [Staggered] [Straight].
 3. Slotted: 1/8 inch × 1 foot (3.2 × 304.8 mm) slots, 43% open area, [Staggered] [Straight].
 4. Custom: [Indented] [Collared] [Louvered] [Hexagonal] [Trapezoidal] [Rectangular] [Round cane] [Octagonal cane] [Grecian] as detailed on drawings and indicated on shop drawings.
- D. End Pattern: [Finished] [Unfinished].
- E. Panel Edges: [Frame enclosed] [Edge margins {_____] {in (mm)}} [Side margins {_____] {in (mm)}} [No margins].
- F. Accessories:
1. Equip Panels With: [Perimeter welded frames] [Return edges] [Boarders].
 2. Fixing Device: [Framing drilled for bolting] [Fixing Plates] [Plugs and spigots] [Lugs/spigots] [Tenons] [Axles] [Inserts] [Attachment brackets] [Clips] as detailed and indicated on shop drawings.

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

Specifier Note: Article below is an addition to the CSI *SectionFormat* and a supplement to MANU-SPEC. Revise article below to suit project requirements and specifier's practice.

- A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions and Hendrick Manufacturing Co.'s SPEC-DATA sheet.

3.02 EXAMINATION

- A. Site Verification of Conditions:
1. Verify substrate conditions are acceptable for product installation in accordance with manufacturer's instructions.
 2. Examine area to receive architectural metalwork for compliance with installation clearances.

3.03 INSTALLATION

- A. Install in compliance with manufacturer's product data, including product technical bulletins, application and installation instructions.
- B. Erect metalwork square, plumb, straight and true.
- C. Provide suitable means of anchorage as recommended by Hendrick Manufacturing Co.
- D. Match exposed fastening devices to attached metalwork.
- E. Provide components and setting templates to appropriate trades for placement in concrete or masonry.

3.04 FIELD QUALITY CONTROL

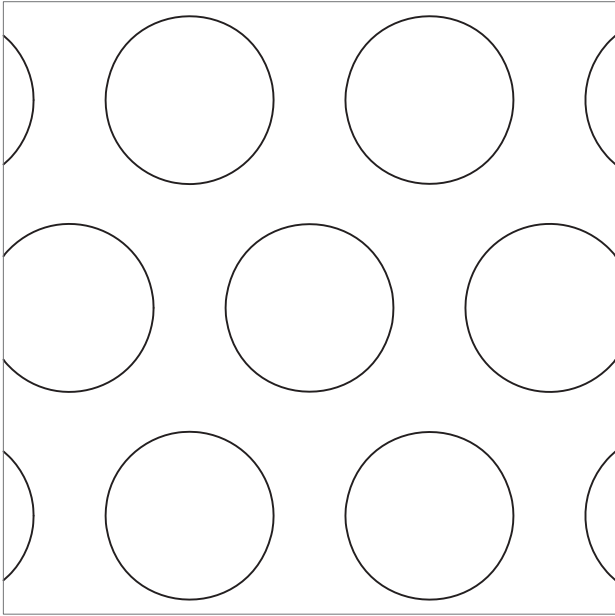
Specifier Note: Use the following Articles only when manufacturer's field services are desired to verify the quality of the installed components. Establish the number and duration of periodic site visits required by Manufacturer and specify below. Consult Manufacturer for services required. Delete if field services are not required.

- A. Have manufacturer of products supplied under this Section review Work involved in handling, installation/application and protection of its product[s], and submit written reports in acceptable format to verify compliance of Work with Contract.
- B. Protect installed product's finish surfaces from damage during construction.

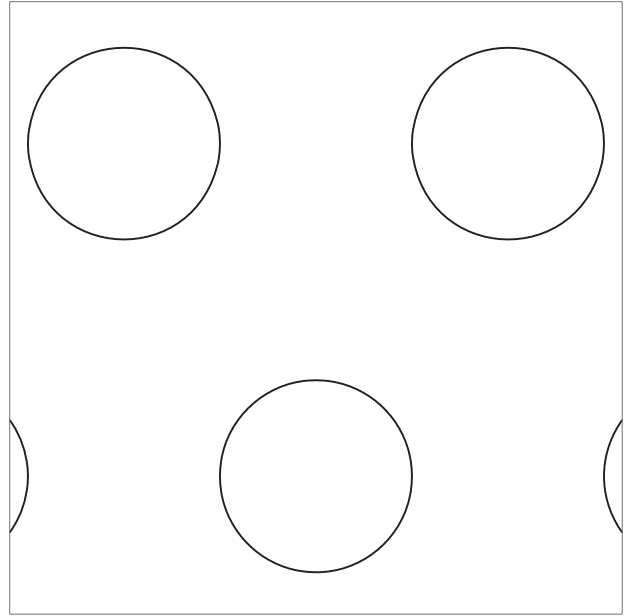
3.05 COMPLETION & CLEANUP

- A. After installation and prior to final acceptance, inspect metalwork for any damage. Repair or replace damaged installed products.
- B. Clean installed products in accordance with Hendrick Manufacturing Co.'s instructions prior to Owner's acceptance. Remove protective coverings.
- C. On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

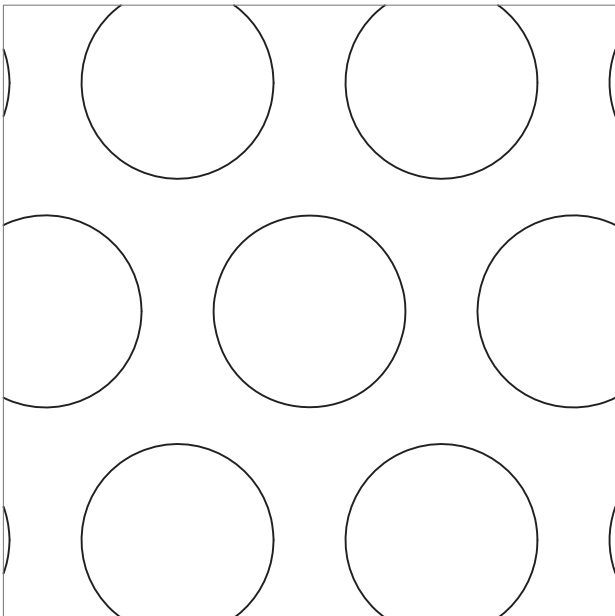
END OF SECTION



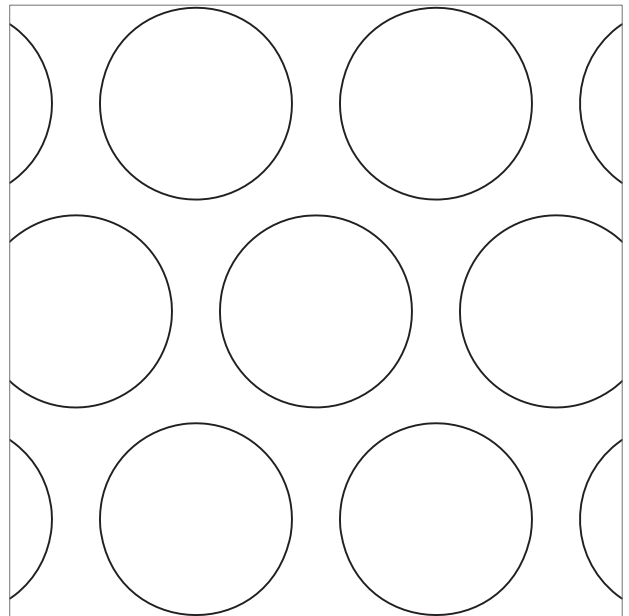
Hole Size: 7/8" Dia. x 1 1/4" Ctrs.
Open Percentage: 44%



Hole Size: 1" Dia. x 2" Ctrs.
Open Percentage: 23%



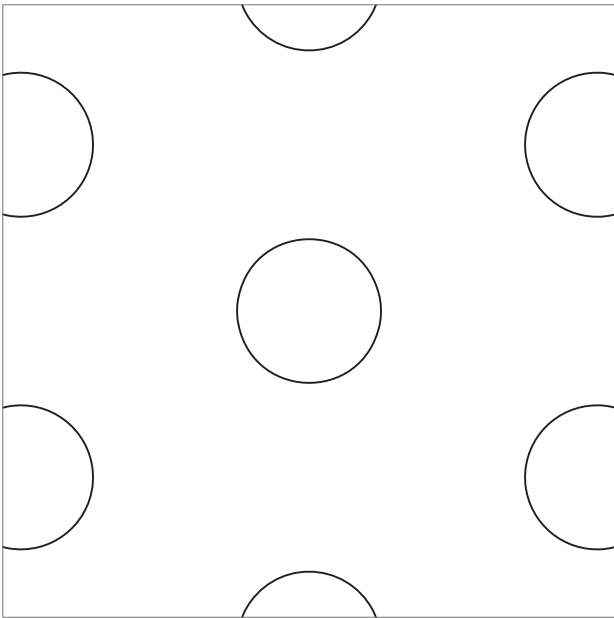
Hole Size: 1" Dia. x 1 3/8" Ctrs.
Open Percentage: 48%



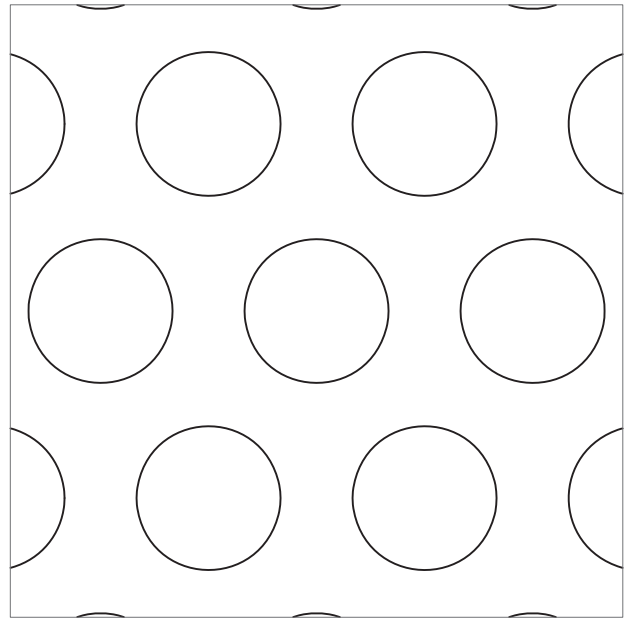
Hole Size: 1" Dia. x 1 1/4" Ctrs.
Open Percentage: 58%

Note: These Drawings are just a sampling of what is possible to manufacture!

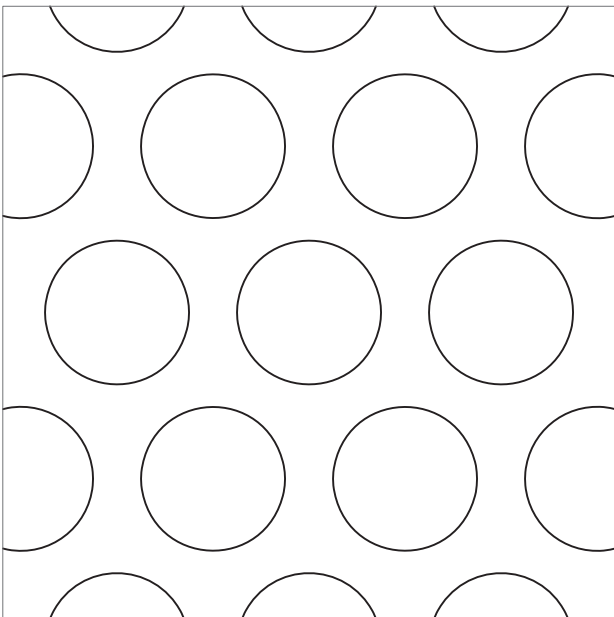
If you call us at 800-225-7373 and discuss your project with our experts,
we will make a flat sample of your part at no charge.
www.hendrickmfg.com fax: 570-282-1506



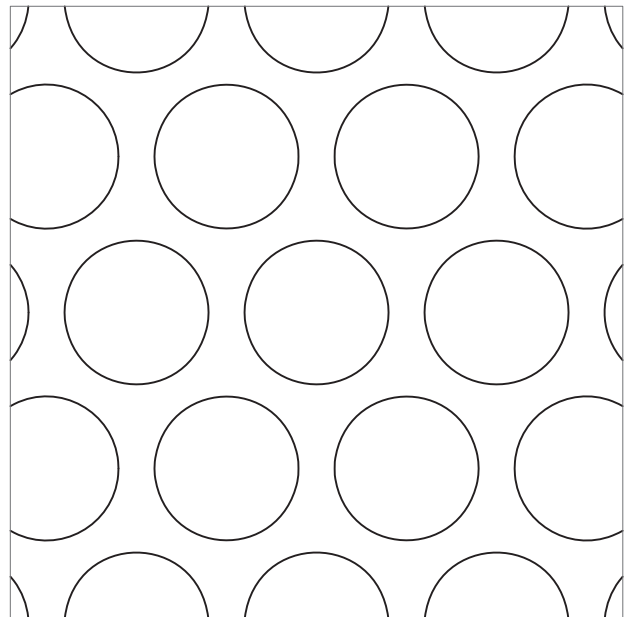
Hole Size: 3/4" Dia. x 1.732" Ctrs.
Open Percentage: 17%



Hole Size: 3/4" Dia. x 1 1/8" Ctrs.
Open Percentage: 40%



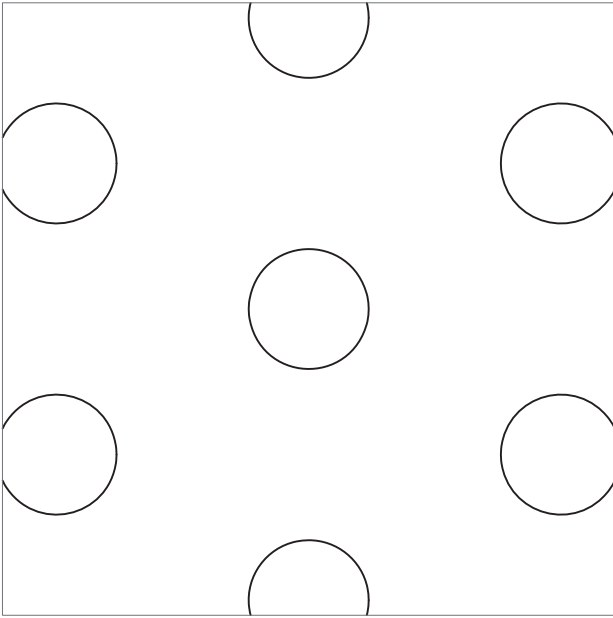
Hole Size: 3/4" Dia. x 1" Ctrs.
Open Percentage: 51%



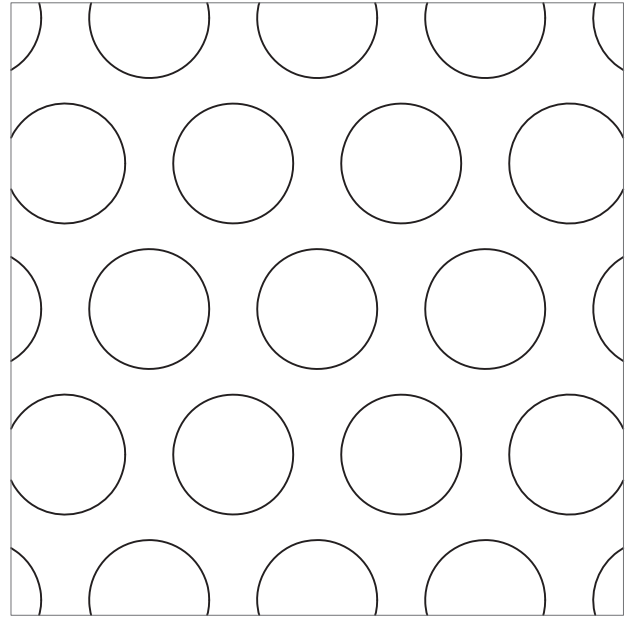
Hole Size: 3/4" Dia. x 15/16" Ctrs.
Open Percentage: 58%

Note: These Drawings are just a sampling of what is possible to manufacture!

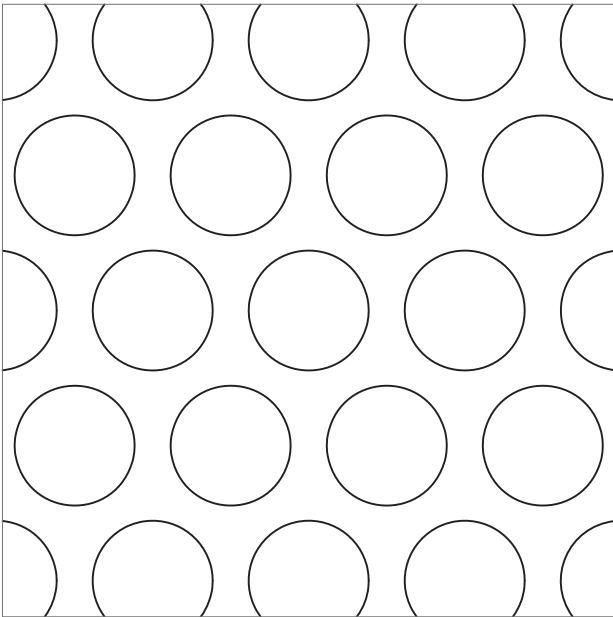
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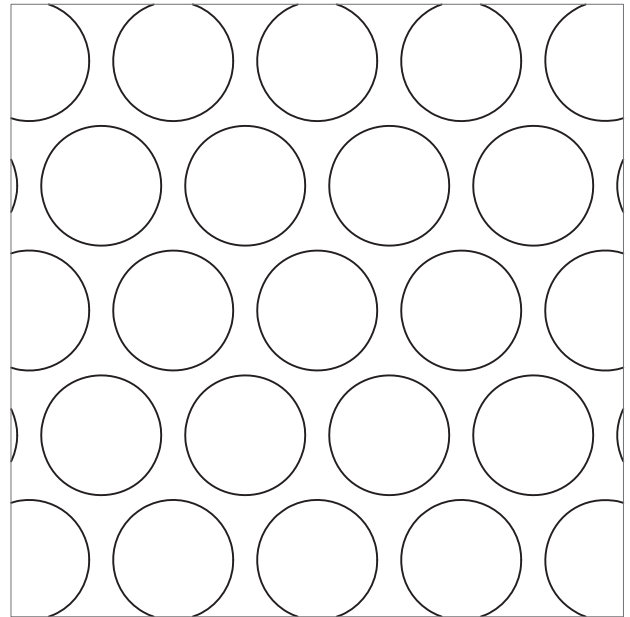
Hole Size: 5/8" Dia. x 1.516" Ctrs.
Open Percentage: 15%



Hole Size: 5/8" Dia. x 7/8" Ctrs.
Open Percentage: 46%



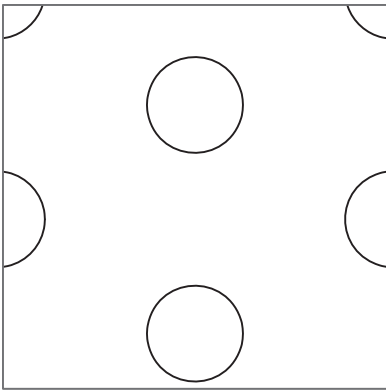
Hole Size: 5/8" Dia. x 13/16" Ctrs.
Open Percentage: 54%



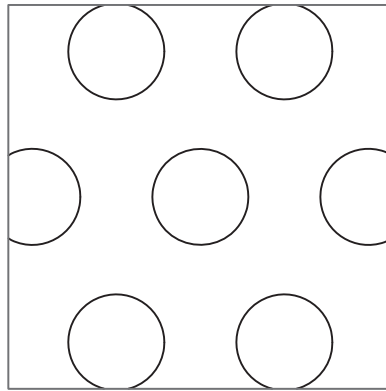
Hole Size: 5/8" Dia. x 3/4" Ctrs.
Open Percentage: 63%

Note: These Drawings are just a sampling of what is possible to manufacture!

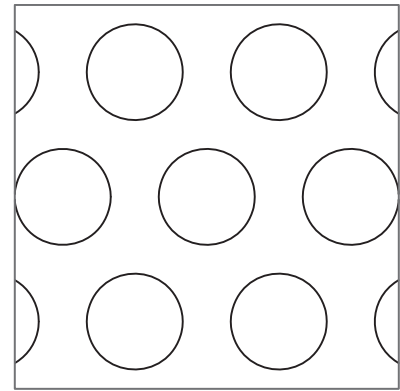
If you call us at 800-225-7373 and discuss your project with our experts,
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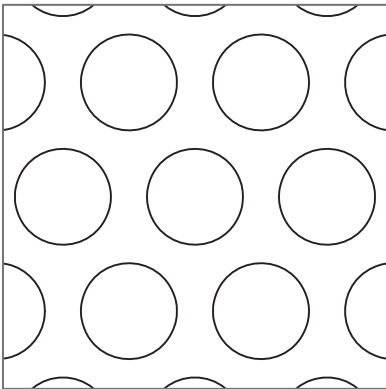
Hole Size: 1/2" Dia. x 1.191" Ctrs.
Open Percentage: 16%



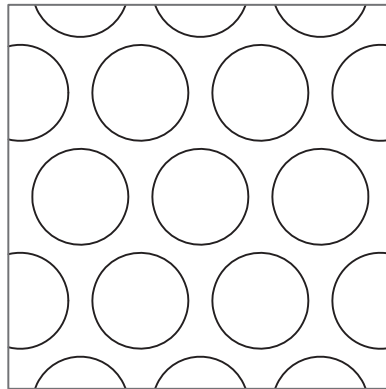
Hole Size: 1/2" Dia. x 7/8" Ctrs.
Open Percentage: 30%



Hole Size: 1/2" Dia. x 3/4" Ctrs.
Open Percentage: 40%



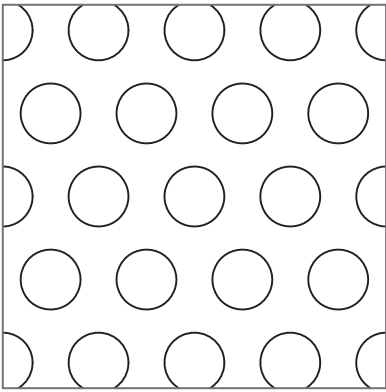
Hole Size: 1/2" Dia. x 11/16" Ctrs.
Open Percentage: 48%



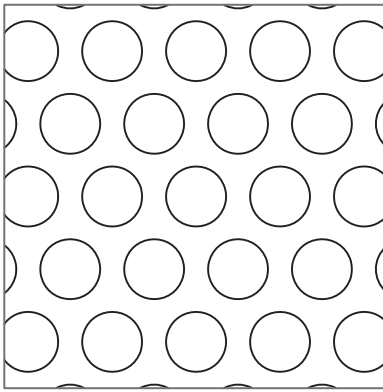
Hole Size: 1/2" Dia. x 5/8" Ctrs.
Open Percentage: 58%

Note: These Drawings are just a sampling of what is possible to manufacture!

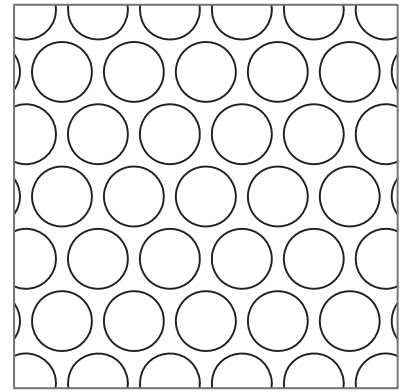
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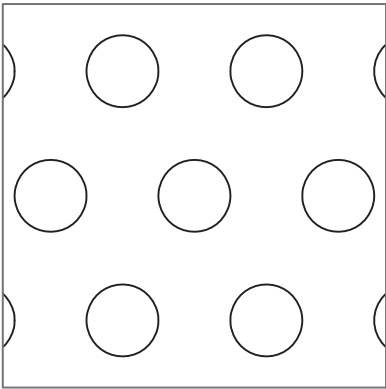
Hole Size: 5/16" Dia. x 1/2" Ctrs.
Open Percentage: 35%



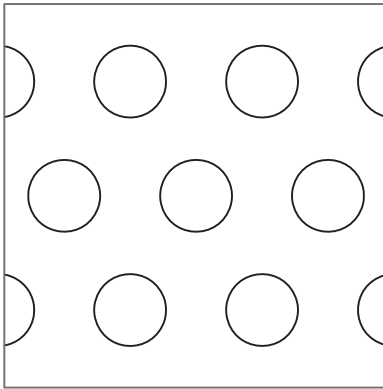
Hole Size: 5/16" Dia. x 7/16" Ctrs.
Open Percentage: 46%



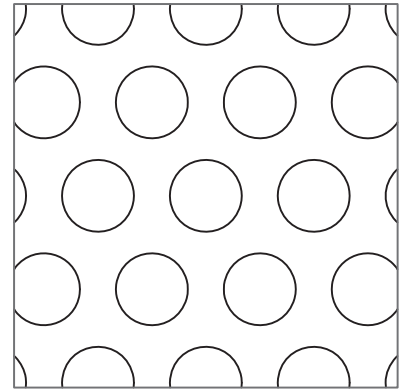
Hole Size: 5/16" Dia. x 3/8" Ctrs.
Open Percentage: 63%



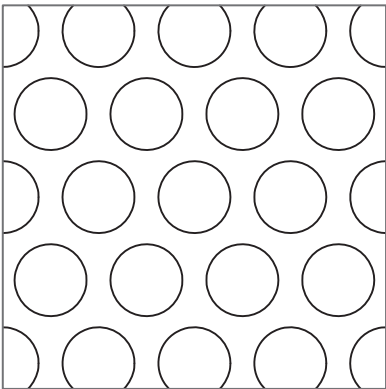
Hole Size: 3/8" Dia. x 3/4" Ctrs.
Open Percentage: 23%



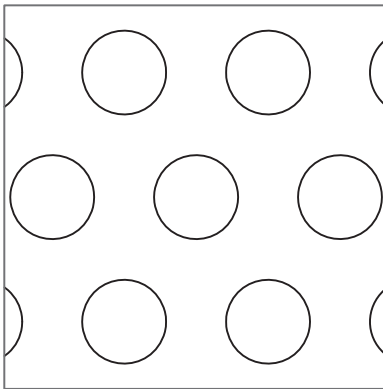
Hole Size: 3/8" Dia. x 11/16" Ctrs.
Open Percentage: 27%



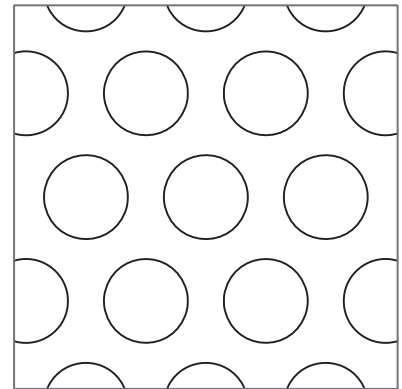
Hole Size: 3/8" Dia. x 9/16" Ctrs.
Open Percentage: 40%



Hole Size: 3/8" Dia. x 1/2" Ctrs.
Open Percentage: 51%



Hole Size: 7/16" Dia. x 3/4" Ctrs.
Open Percentage: 31%

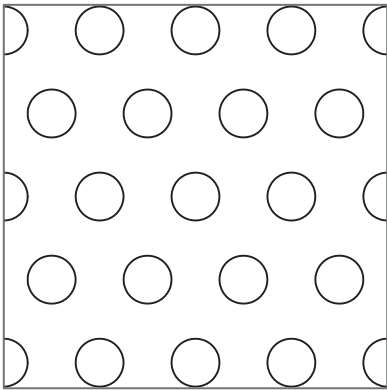


Hole Size: 7/16" Dia. x 5/8" Ctrs.
Open Percentage: 44%

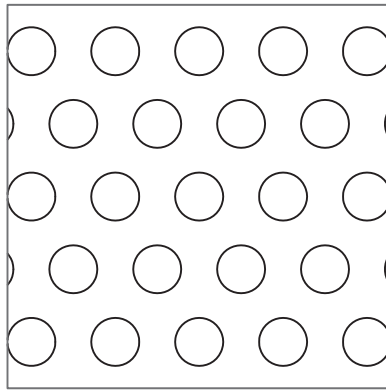
Note: These Drawings are just a sampling of what is possible to manufacture!

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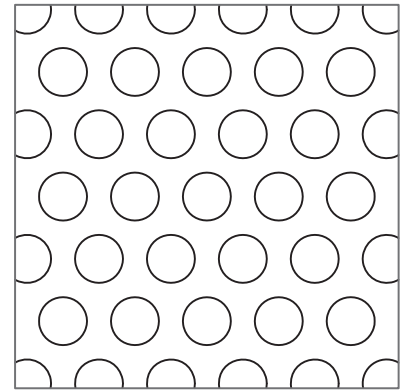
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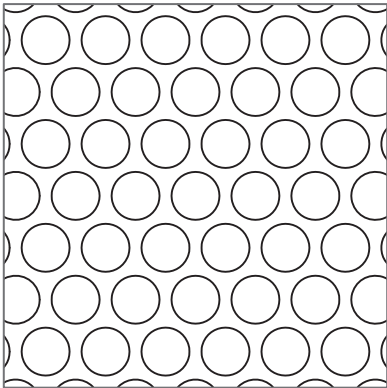
Hole Size: 1/4" Dia. x 1/2" Ctrs.
Open Percentage: 23%



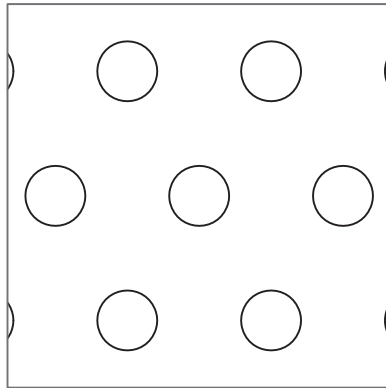
Hole Size: 1/4" Dia. x 7/16" Ctrs.
Open Percentage: 30%



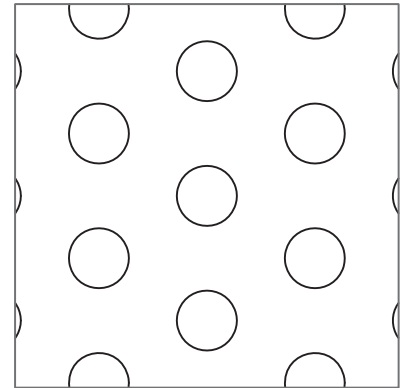
Hole Size: 1/4" Dia. x 3/8" Ctrs.
Open Percentage: 40%



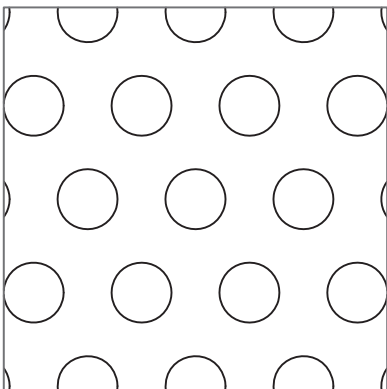
Hole Size: 1/4" Dia. x 5/16" Ctrs.
Open Percentage: 58%



Hole Size: 5/16" Dia. x 3/4" Ctrs.
Open Percentage: 16%



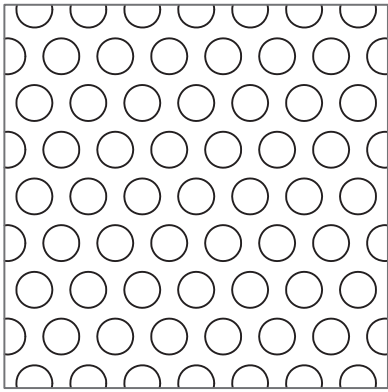
Hole Size: 5/16" Dia. x .650" Ctrs.
Open Percentage: 21%



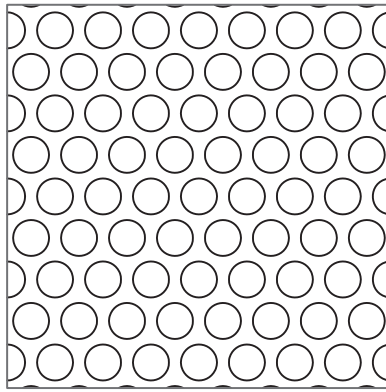
Hole Size: 5/16" Dia. x 9/16" Ctrs.
Open Percentage: 28%

Note: These Drawings are just a sampling of what is possible to manufacture!

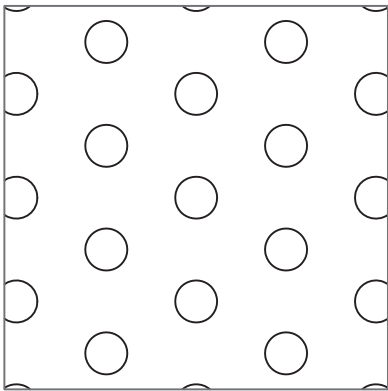
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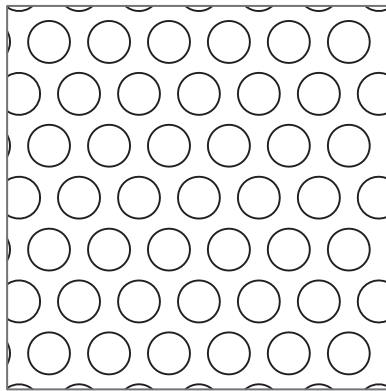
Hole Size: 3/16" Dia. x 9/32" Ctrs.
Open Percentage: 40%



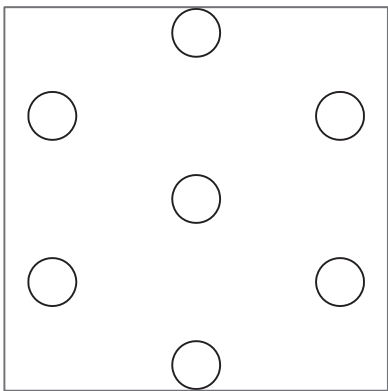
Hole Size: 3/16" Dia. x 1/4" Ctrs.
Open Percentage: 51%



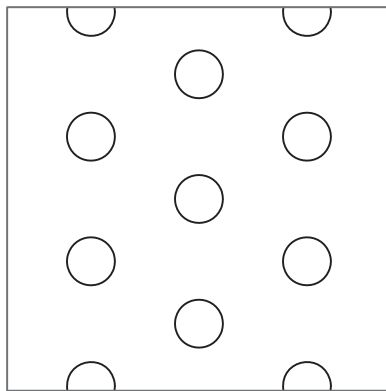
Hole Size: 7/32" Dia. x .541" Ctrs.
Open Percentage: 15%



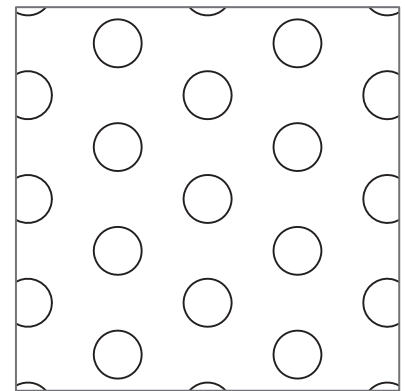
Hole Size: 7/32" Dia. x 5/16" Ctrs.
Open Percentage: 44%



Hole Size: 1/4" Dia. x .866" Ctrs.
Open Percentage: 8%



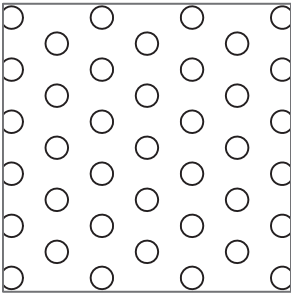
Hole Size: 1/4" Dia. x .650" Ctrs.
Open Percentage: 13%



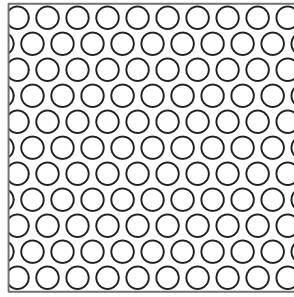
Hole Size: 1/4" Dia. x .541" Ctrs.
Open Percentage: 19%

Note: These Drawings are just a sampling of what is possible to manufacture!

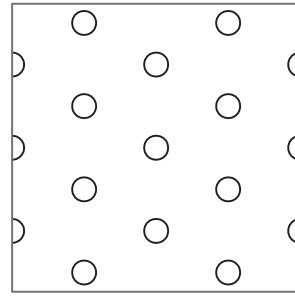
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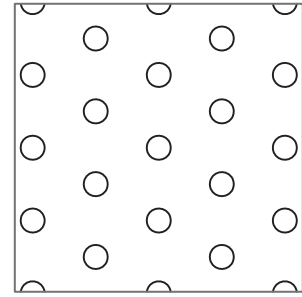
Hole Size: .117" Dia. x .271" Ctrs.
Open Percentage: 17%



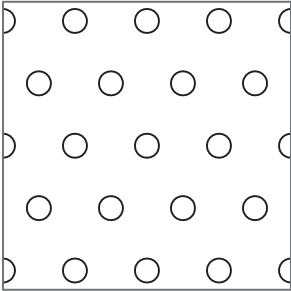
Hole Size: .117" Dia. x 5/32" Ctrs.
Open Percentage: 51%



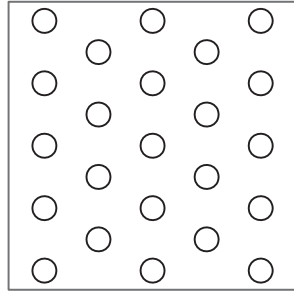
Hole Size: 1/8" Dia. x .433" Ctrs.
Open Percentage: 8%



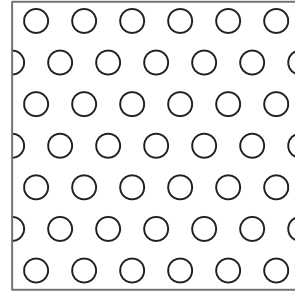
Hole Size: 1/8" Dia. x .379" Ctrs.
Open Percentage: 10%



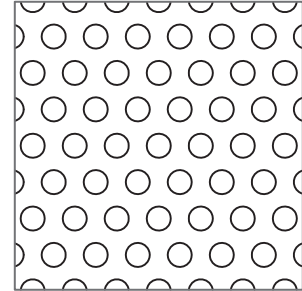
Hole Size: 1/8" Dia. x 3/8" Ctrs.
Open Percentage: 10%



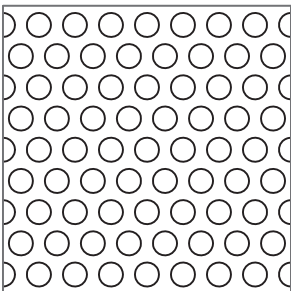
Hole Size: 1/8" Dia. x .325" Ctrs.
Open Percentage: 13%



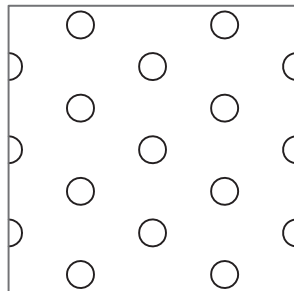
Hole Size: 1/8" Dia. x 1/4" Ctrs.
Open Percentage: 23%



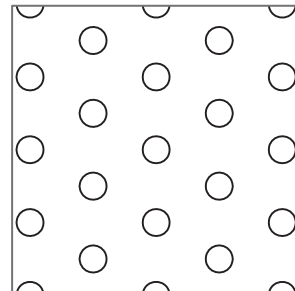
Hole Size: 1/8" Dia. x 7/32" Ctrs.
Open Percentage: 30%



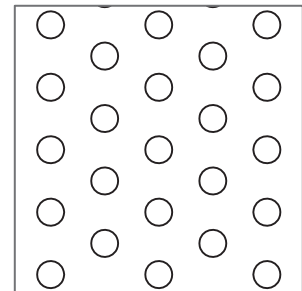
Hole Size: 1/8" Dia. x 3/16" Ctrs.
Open Percentage: 41%



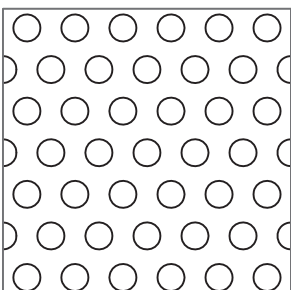
Hole Size: 9/64" Dia. x .433" Ctrs.
Open Percentage: 10%



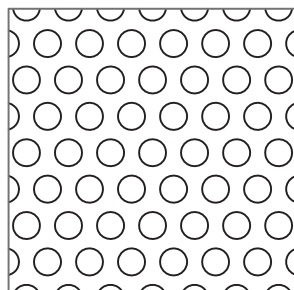
Hole Size: 9/64" Dia. x .379" Ctrs.
Open Percentage: 12%



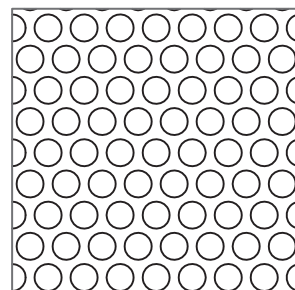
Hole Size: 9/64" Dia. x .325" Ctrs.
Open Percentage: 17%



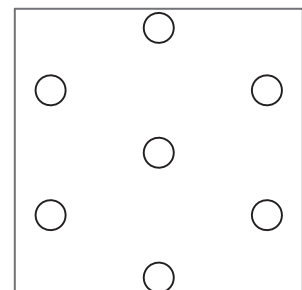
Hole Size: 9/64" Dia. x 1/4" Ctrs.
Open Percentage: 28%



Hole Size: 9/64" Dia. x 7/32" Ctrs.
Open Percentage: 38%



Hole Size: 9/64" Dia. x 3/16" Ctrs.
Open Percentage: 51%

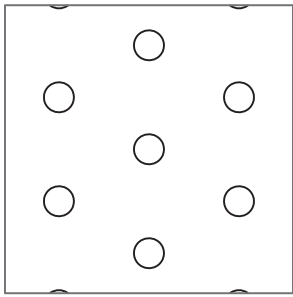


Hole Size: 5/32" Dia. x .650" Ctrs.
Open Percentage: 5%

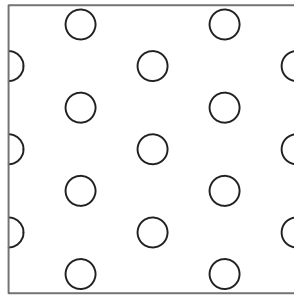
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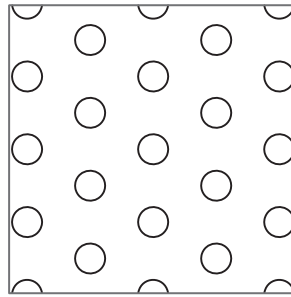
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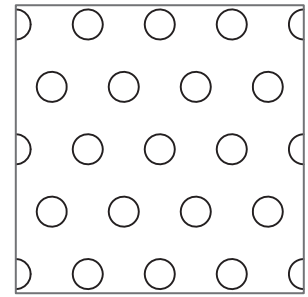
Hole Size: 5/32" Dia. x .541" Ctrs.
Open Percentage: 8%



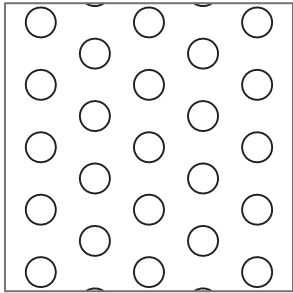
Hole Size: 5/32" Dia. x .443" Ctrs.
Open Percentage: 12%



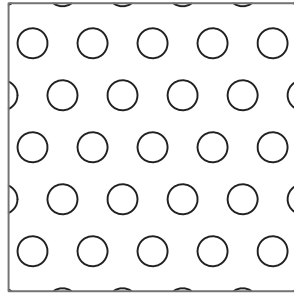
Hole Size: 5/32" Dia. x .379" Ctrs.
Open Percentage: 15%



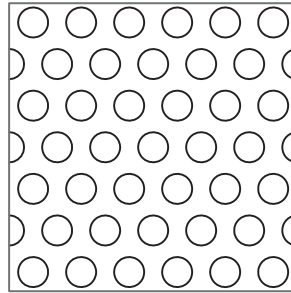
Hole Size: 5/32" Dia. x 3/8" Ctrs.
Open Percentage: 16%



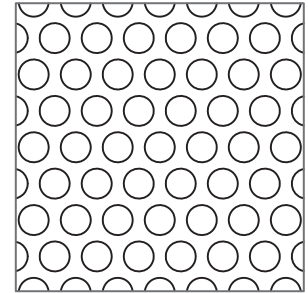
Hole Size: 5/32" Dia. x .325" Ctrs.
Open Percentage: 21%



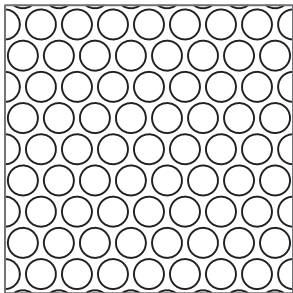
Hole Size: 5/32" Dia. x 5/16" Ctrs.
Open Percentage: 23%



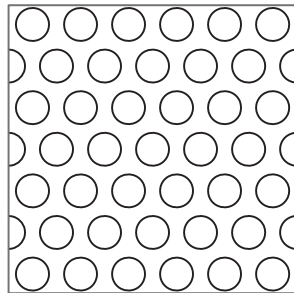
Hole Size: 5/32" Dia. x 1/4" Ctrs.
Open Percentage: 35%



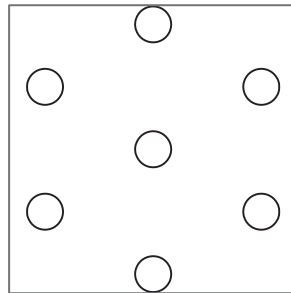
Hole Size: 5/32" Dia. x 7/32" Ctrs.
Open Percentage: 46%



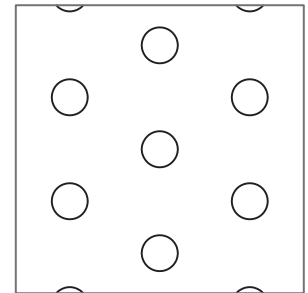
Hole Size: 5/32" Dia. x 3/16" Ctrs.
Open Percentage: 63%



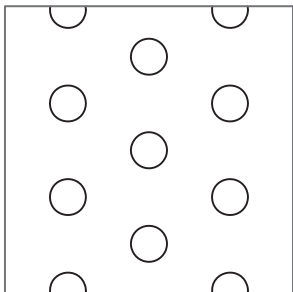
Hole Size: 11/64" Dia. x 1/4" Ctrs.
Open Percentage: 43%



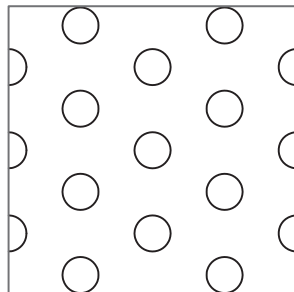
Hole Size: 3/16" Dia. x .650" Ctrs.
Open Percentage: 8%



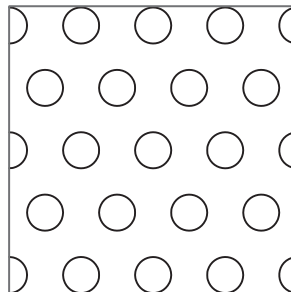
Hole Size: 3/16" Dia. x .541" Ctrs.
Open Percentage: 11%



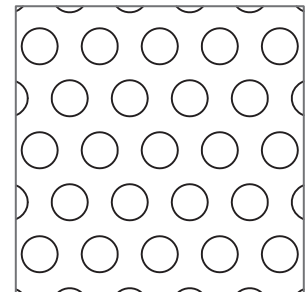
Hole Size: 3/16" Dia. x .487" Ctrs.
Open Percentage: 13%



Hole Size: 3/16" Dia. x .433" Ctrs.
Open Percentage: 17%



Hole Size: 3/16" Dia. x 3/8" Ctrs.
Open Percentage: 23%

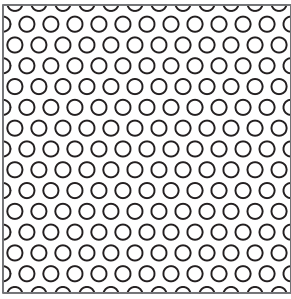


Hole Size: 3/16" Dia. x 5/16" Ctrs.
Open Percentage: 33%

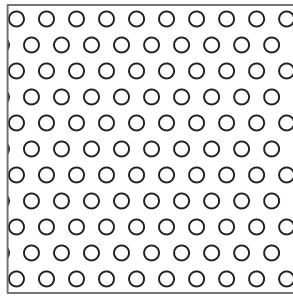
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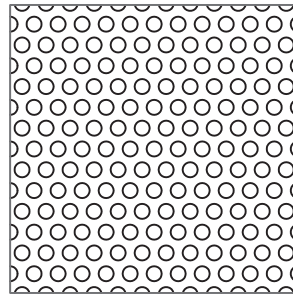
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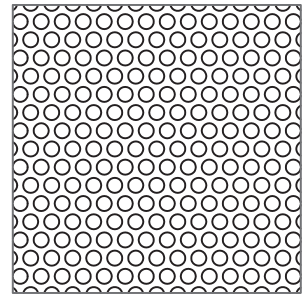
Hole Size: .079" Dia. x 1/8" Ctrs.
Open Percentage: 38%



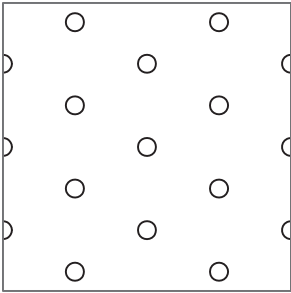
Hole Size: 5/64" Dia. x 5/32" Ctrs.
Open Percentage: 23%



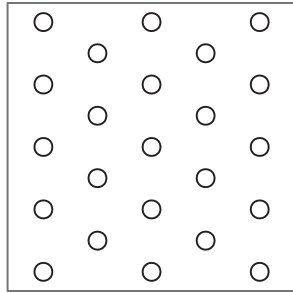
Hole Size: 5/64" Dia. x 1/8" Ctrs.
Open Percentage: 35%



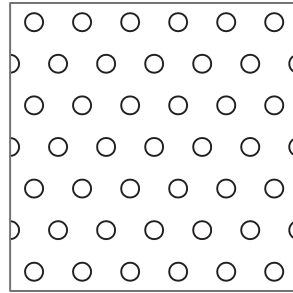
Hole Size: 5/64" Dia. x 7/64" Ctrs.
Open Percentage: 46%



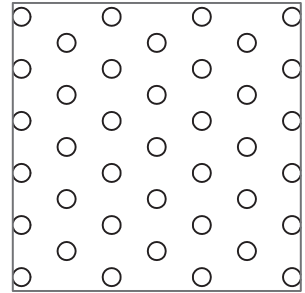
Hole Size: 3/32" Dia. x .433" Ctrs.
Open Percentage: 4%



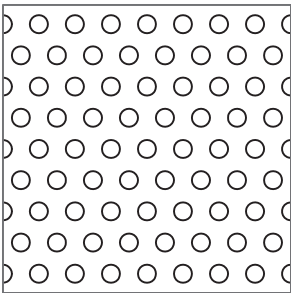
Hole Size: 3/32" Dia. x .325" Ctrs.
Open Percentage: 8%



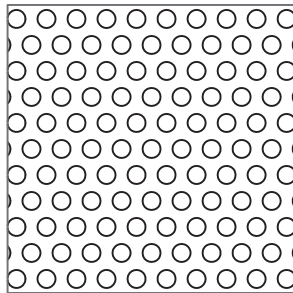
Hole Size: 3/32" Dia. x 1/4" Ctrs.
Open Percentage: 13%



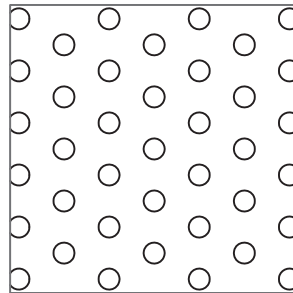
Hole Size: 3/32" Dia. x .271" Ctrs.
Open Percentage: 11%



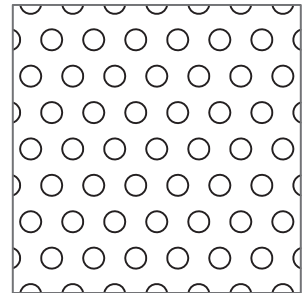
Hole Size: 3/32" Dia. x 3/16" Ctrs.
Open Percentage: 22%



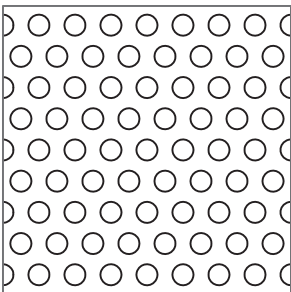
Hole Size: 3/32" Dia. x 5/32" Ctrs.
Open Percentage: 32%



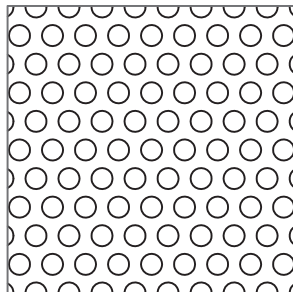
Hole Size: 7/64" Dia. x .271" Ctrs.
Open Percentage: 15%



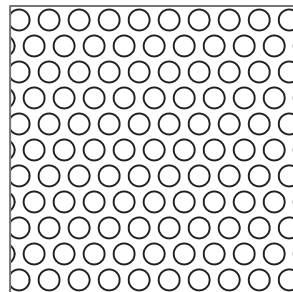
Hole Size: 7/64" Dia. x 7/32" Ctrs.
Open Percentage: 23%



Hole Size: 7/64" Dia. x 3/16" Ctrs.
Open Percentage: 31%



Hole Size: 7/64" Dia. x 11/64" Ctrs.
Open Percentage: 37%

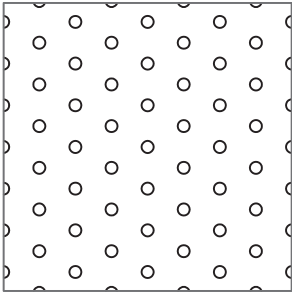


Hole Size: 7/64" Dia. x 5/32" Ctrs.
Open Percentage: 44%

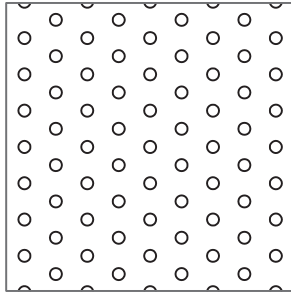
Note: These Drawings are just a sampling of what is possible to manufacture!

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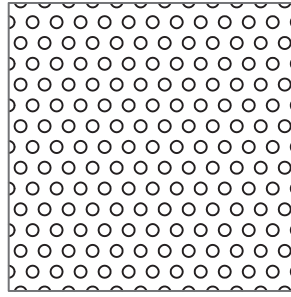
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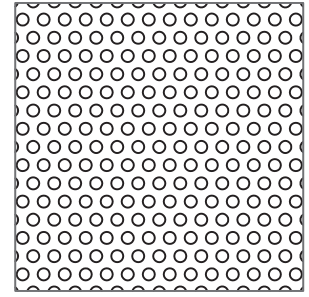
Hole Size; 1/16" Dia. x .217" Ctrs.
Open Percentage: 8%



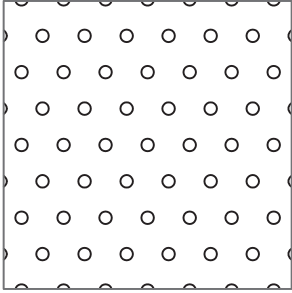
Hole Size; 1/16" Dia. x .189" Ctrs.
Open Percentage: 10%



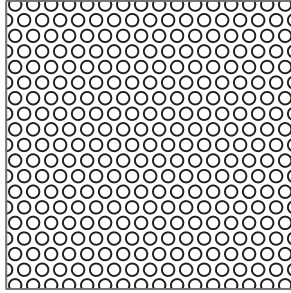
Hole Size; 1/16" Dia. x 1/8" Ctrs.
Open Percentage: 22%



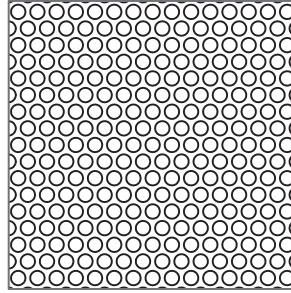
Hole Size; 1/16" Dia. x 7/64" Ctrs.
Open Percentage: 29%



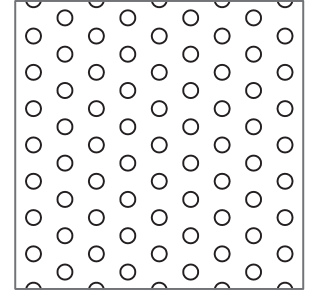
Hole Size; .065" Dia. x 7/32" Ctrs.
Open Percentage: 8%



Hole Size; .065" Dia. x 3/32" Ctrs.
Open Percentage: 44%



Hole Size; .075" Dia. x .100" Ctrs.
Open Percentage: 51%

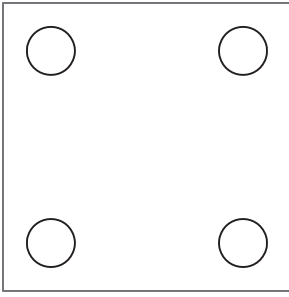


Hole Size; 5/64" Dia. x .189" Ctrs.
Open Percentage: 16%

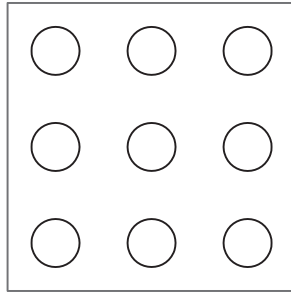
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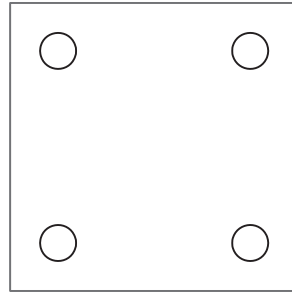
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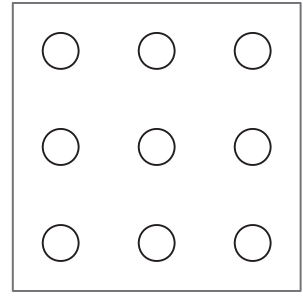
Hole Size: 1/4" Dia. x 1" Ctrs.
Open Percentage: 5%



Hole Size: 1/4" Dia. x 1/2" Ctrs.
Open Percentage: 20%



Hole Size: 3/16" Dia. x 1" Ctrs.
Open Percentage: 3%

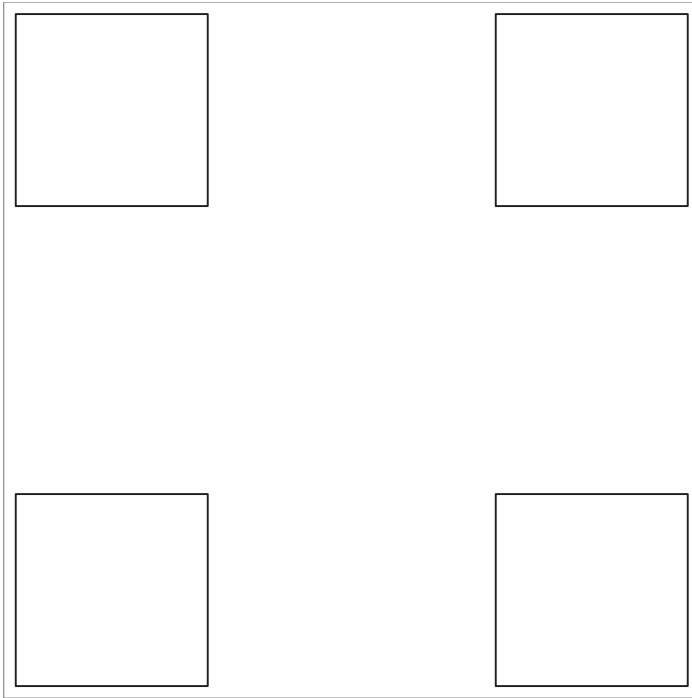


Hole Size: 3/16" Dia. x 1/2" Ctrs.
Open Percentage: 11%

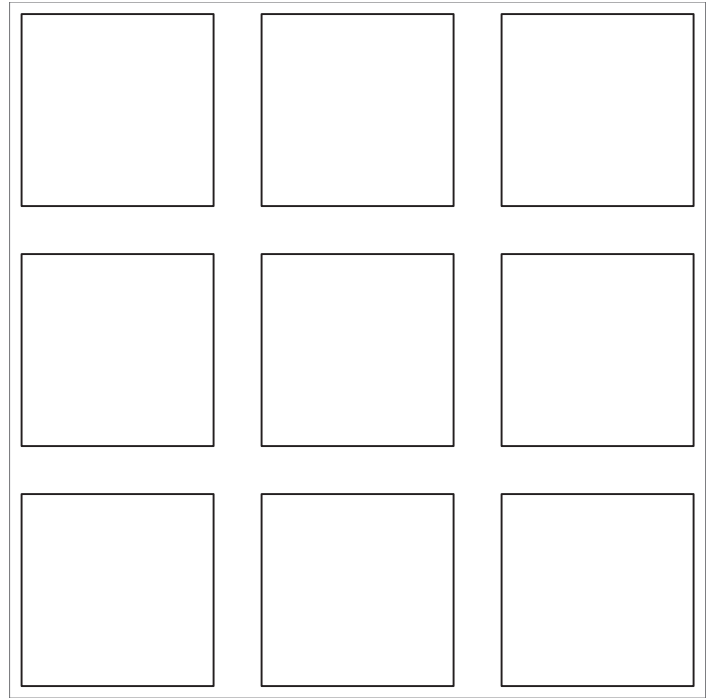
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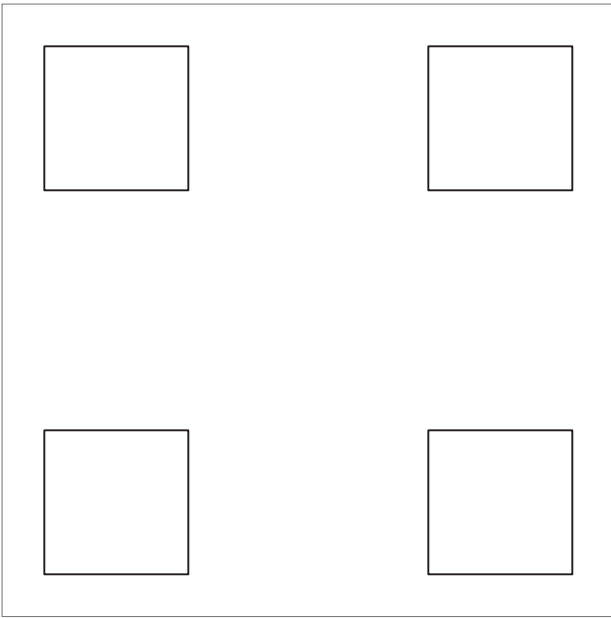
Hole Size: 1" Sq. x 2 1/2" Ctrs.
Open Percentage: 16%



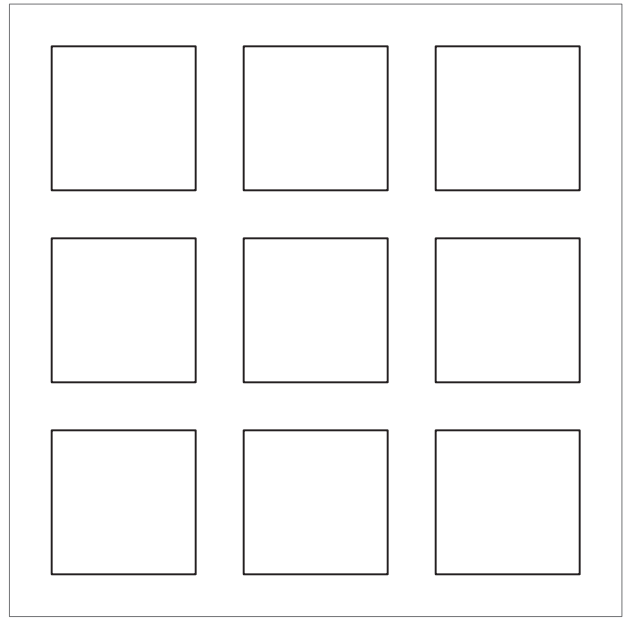
Hole Size: 1" Sq. x 1 1/4" Ctrs.
Open Percentage: 64%

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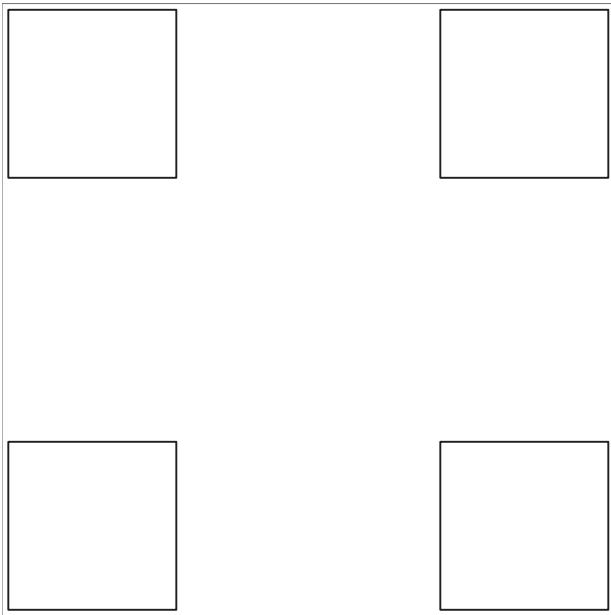
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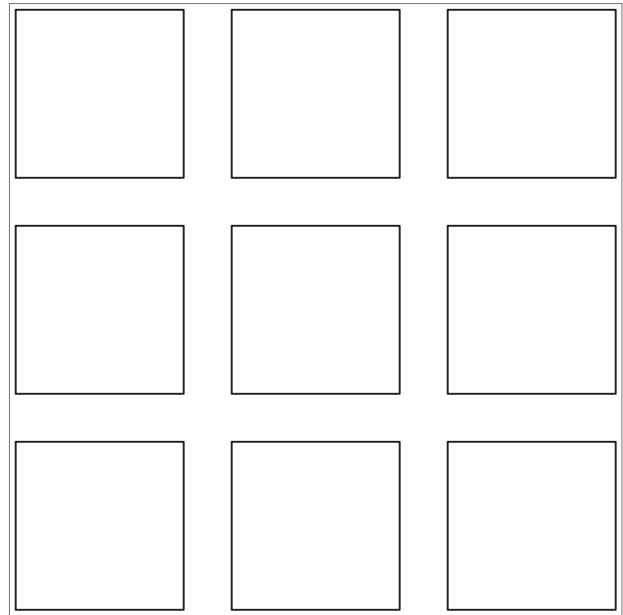
Hole Size: 3/4" Sq. x 2" Ctrs.
Open Percentage: 14%



Hole Size: 3/4" Sq. x 1" Ctrs.
Open Percentage: 56%



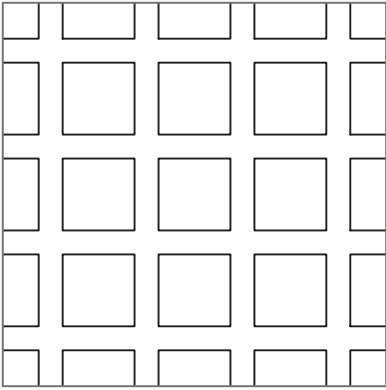
Hole Size: 7/8" Sq. x 2 1/4" Ctrs.
Open Percentage: 15%



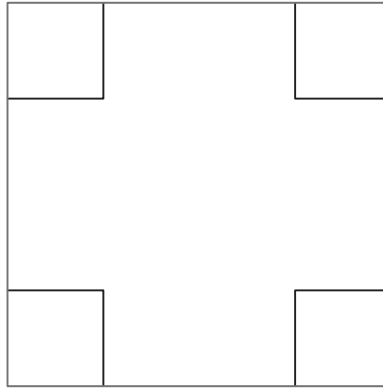
Hole Size: 7/8" Sq. x 1 1/8" Ctrs.
Open Percentage: 60%

Note: These Drawings are just a sampling of what is possible to manufacture!

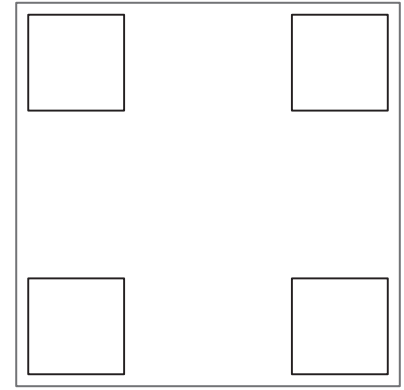
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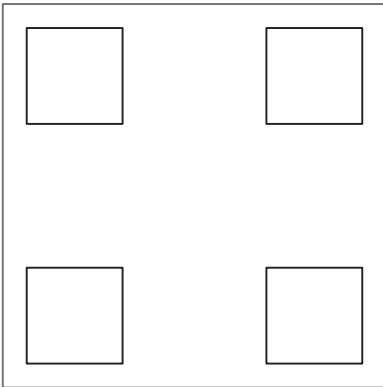
Hole Size: 3/8" Sq. x 1/2" Ctrs.
Open Percentage: 56%



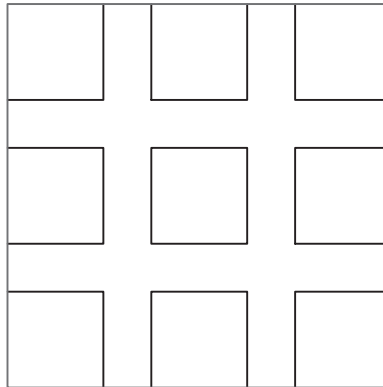
Hole Size: 1/2" Sq. x 1 1/2" Ctrs.
Open Percentage: 11%



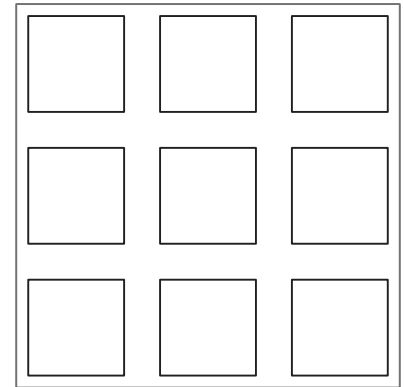
Hole Size: 1/2" Sq. x 1 3/8" Ctrs.
Open Percentage: 13%



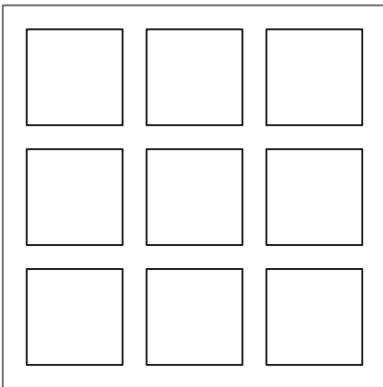
Hole Size: 1/2" Sq. x 1 1/4" Ctrs.
Open Percentage: 16%



Hole Size: 1/2" Sq. x 3/4" Ctrs.
Open Percentage: 44%



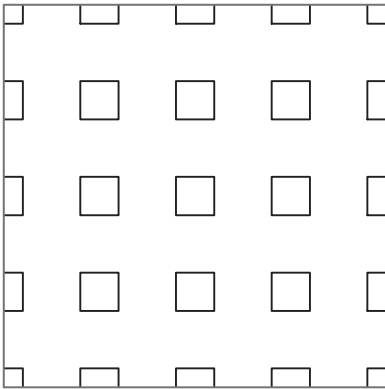
Hole Size: 1/2" Sq. x 11/16" Ctrs.
Open Percentage: 53%



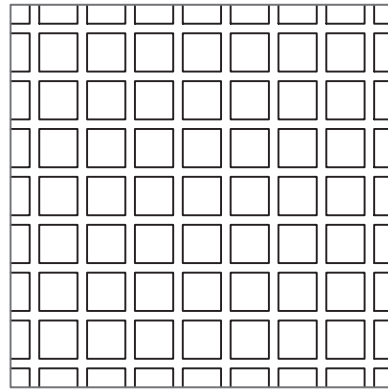
Hole Size: 1/2" Sq. x 5/8" Ctrs.
Open Percentage: 64%

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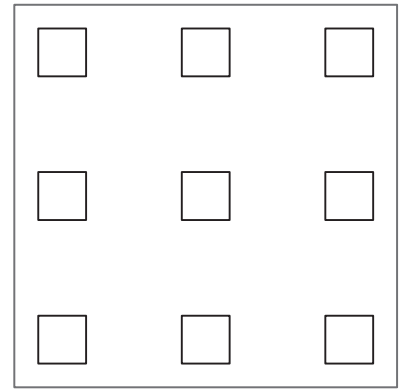
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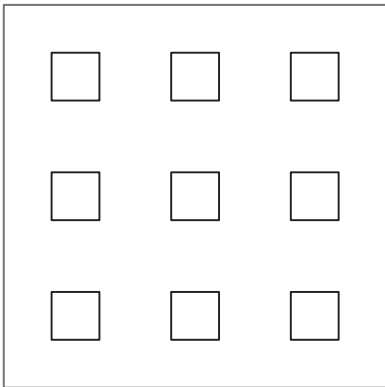
Hole Size: .200" Sq. x 1/2" Ctrs.
Open Percentage: 16%



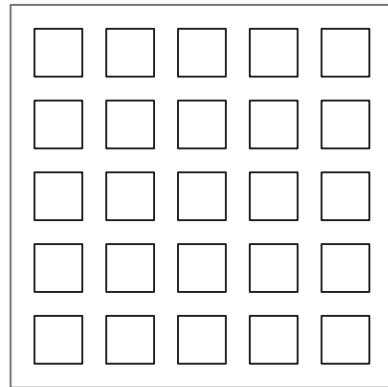
Hole Size: .200" Sq. x 1/4" Ctrs.
Open Percentage: 64%



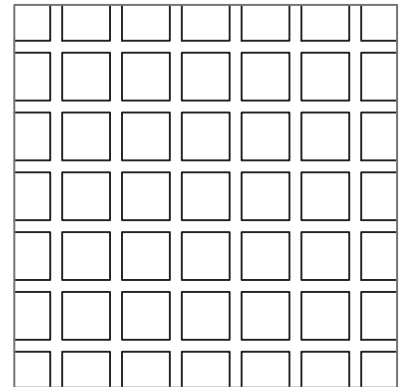
Hole Size: 1/4" Sq. x 3/4" Ctrs.
Open Percentage: 11%



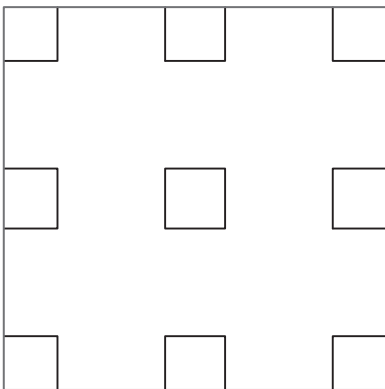
Hole Size: 1/4" Sq. x 5/8" Ctrs.
Open Percentage: 16%



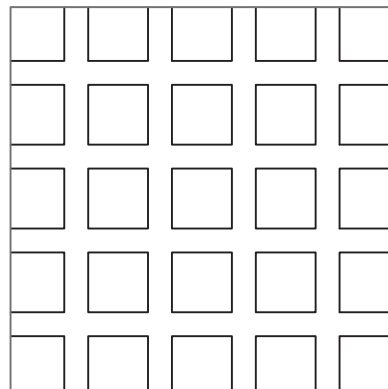
Hole Size: 1/4" Sq. x 3/8" Ctrs.
Open Percentage: 45%



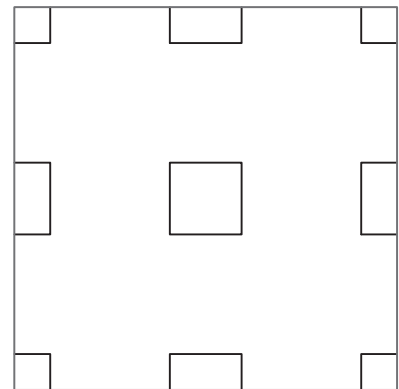
Hole Size: 1/4" Sq. x 5/16" Ctrs.
Open Percentage: 64%



Hole Size: 5/16" Sq. x 7/8" Ctrs.
Open Percentage: 13%



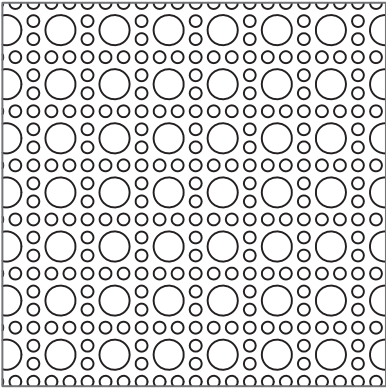
Hole Size: 5/16" Sq. x 7/16" Ctrs.
Open Percentage: 51%



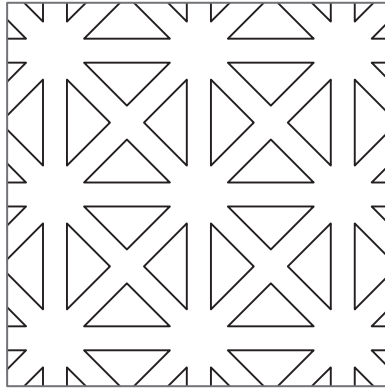
Hole Size: 3/8" Sq. x 1" Ctrs.
Open Percentage: 14%

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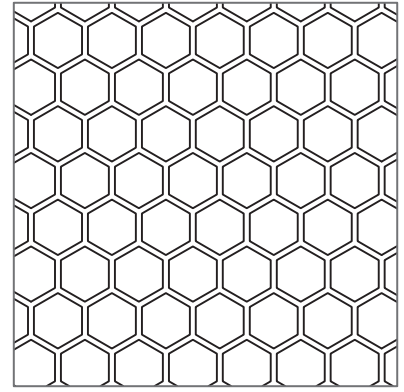
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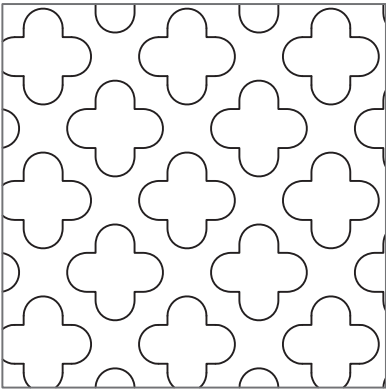
Mini Cane
Open Percentage: 45%



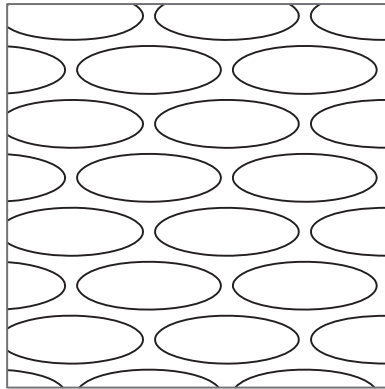
Malcane
Open Percentage: 36%



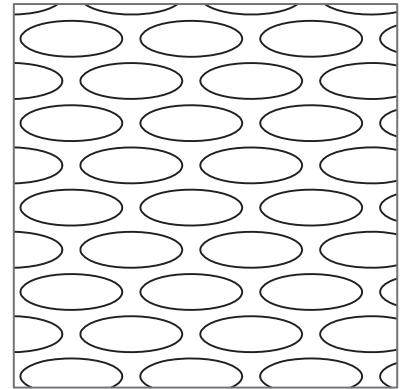
Hole Size: 1/4" Hex x 9/32" Ctrs.
Open Percentage: 79%



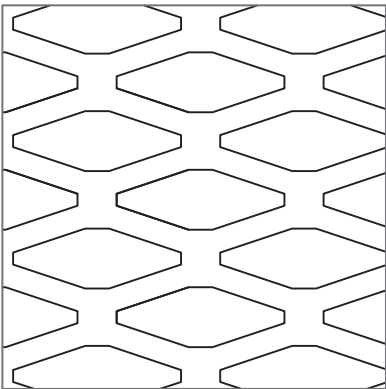
Cloverleaf
Open Percentage: 50%



Hole Size: 1/4" x 3/4" Ellipse
Open Percentage: 54%



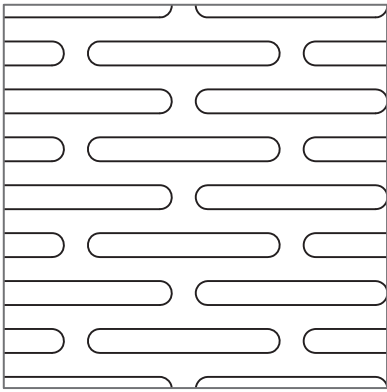
Hole Size: 3/16" x 17/32" Ellipse
Open Percentage: 55%



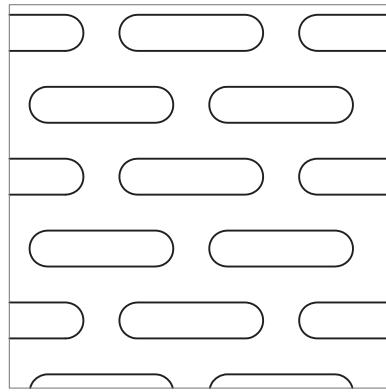
5/16" x 7/8" Diamond x 1/4" Ctrs.
Open Percentage: 55%

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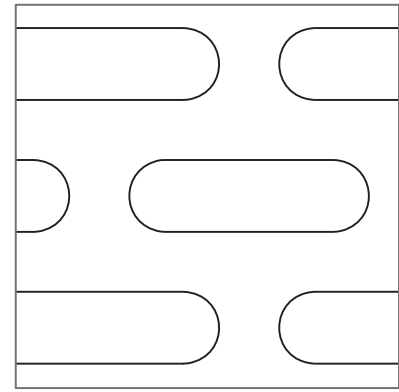
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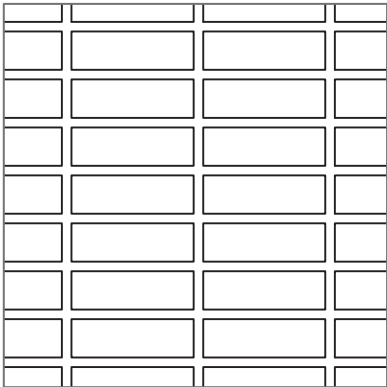
Hole Size: 1/8" x 1" Slot x 1/4" Ctrs.
Open Percentage: 41%



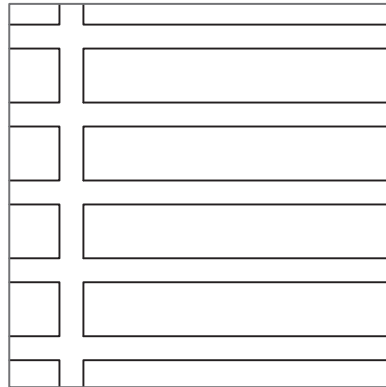
Hole Size: 3/16" x 3/4" Slot x 3/8" Ctrs.
Open Percentage: 38%



Hole Size: 3/8" x 1 1/4" Slot x 11/16" Ctrs.
Open Percentage: 43%



Hole Size: .200" x .637" Slot x 1/4" Ctrs.
Open Percentage: 74%

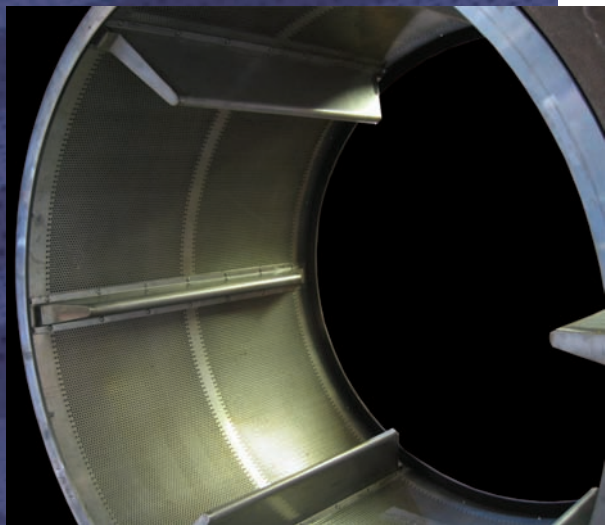


Hole Size: 9/32" x 1 27/32" Slot
Open Percentage: 65%

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Hendrick Industrial Applications



Laundry

Applications:

- Architectural / Decorative Lighting
- Industrial Machine & Equipment
- Sheet Metal Fabrication
- Hammer / Powder Mill
- Mining & Aggregate
- Non-Air Flow Filtration
- Automotive
- Distribution
- Air Flow Filtration



Computer Cabinets



Transportation

Capabilities

Perforated metal is not only used on the exterior, but when used internally, can save weight while retaining the required strength for various components. As a bonus, since perforated metal acts as a sound attenuator (think speaker grill), it helps reduce unwanted noise.

By working with Hendrick, we can assist in the design of aesthetically pleasing products that achieve your desired performance.



Mining Screens



Dryer Flights

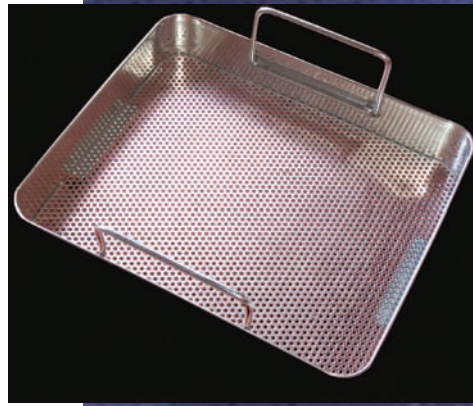


Hendrick Manufacturing
Cutting Edge Metal Solutions

Some of our Fabrication Capabilities:

- Forming
- Finishing
- Degreasing
- Coating
- Welding

Hendrick is a unique fabricator that offers you options of a semi or fully completed formed part. And our ability to deburr and polish helps us deliver superior quality and consistency to every job. Our full line of fabrication equipment is regularly enhanced to bring our customers exceptional value with new capabilities. This continuous improvement allows us to generate a true partnership with every customer. Please do not hesitate to make special requests. Send your drawings, sketches, and/or DXF files to sales@hendrickmfg.com. Our experts want to make your project a complete success!



Medical Trays



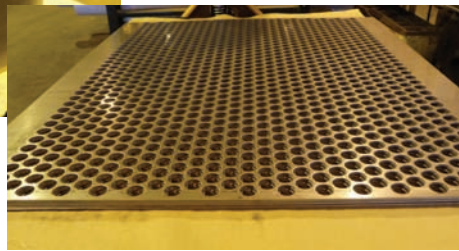
Ventilation
Air Diffuser



Filters



Coils



Sheets



Hendrick Manufacturing
Cutting Edge Metal Solutions

Hendrick Equipment



Uncoiler



60" All Across Perforating Press



CNC Punch Press



Deburring/Polishing Machines
& Degreasing



CNC Press Brake



Hendrick Manufacturing
Cutting Edge Metal Solutions



Hendrick Manufacturing

Cutting Edge Metal Solutions

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