



NILES EXPANDED METALS & PLASTICS

310 North Pleasant Avenue • Niles, Ohio 44446

Phone: 330-652-2501 • Toll Free: 1-800-321-2727 • Fax: 330-652-6497 • www.NilesExpandedMetals.com

NILES IS THE MOST RESPECTED NAME IN EXPANDED METAL

Established in 1959, our growth is the result of our commitment to sound business principles, innovation and the belief that expanded materials have infinite possibilities.

Our mission is to develop, manufacture and distribute high quality, cost effective products that meet the challenge of an ever changing world.

WHY CHOOSE NILES EXPANDED METALS

State Of The Art Systems:

From CAD engineering systems to advanced quote and order handling to industry leading manufacturing technology, we produce expanded materials with world-class efficiency.

Inventory:

Your stock orders ship from a large and diverse selection of standard and flattened expanded metals and gratings. Available in carbon steel, hot dip galvanized, stainless 304 & 316 and aluminum.

Customize Your Order:

If stock sizes won't suit your needs we will make the part to your specifications. Value added services such as shearing, custom fabrication and special finishing are distinguishing characteristics that set us apart from the competition. Our team is trained to provide cost effective solutions to your specific request.

People:

Our strongest feature is the depth of experience and dedication of all our professionals. All are committed to our mission and want to do whatever it takes to meet your needs.

Certified ISO 9002:

Niles is committed to an ongoing system of programs and procedures for all segments of the organization. All programs and procedures are certified to meet the quality requirement of ISO-9002 and enhance our status as the complete source for expanded materials.

Specialty And Architectural Patterns:

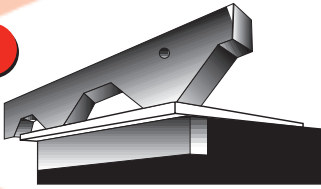
Creative and application specific expanded materials to enhance appearance, control sound, light, air and liquid, battery and electronic shielding are available from our extensive selection of tooling. We can also design patterns to your individual needs.

Ferrous And Non-Ferrous Materials:

Niles can expand your request from a wide range of ductile material. Choose from carbon steel, stainless, aluminum, nickel alloys, red metals, titanium, plastic, zinc and precious metals.

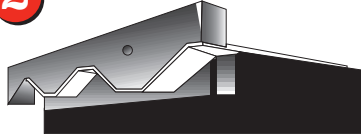
METHOD OF PRODUCTION

1



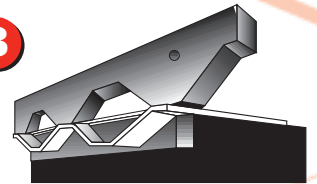
Metal advances one strand width.

2



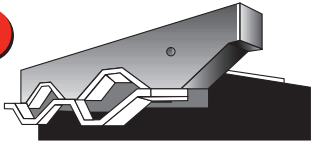
Die forms one-half of design.

3



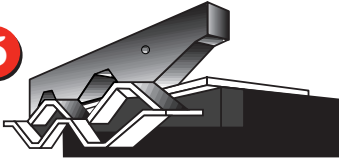
Press opens, indexes

4



Die descends, completing

5



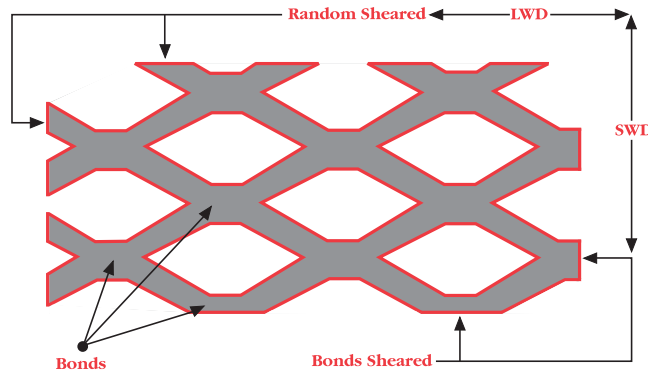
Press opens, and above steps are repeated continuously.

6



A solid sheet of material becomes expanded metal without waste. The product is lighter and stronger than the original sheet or plate from which it came from.

TYPES OF SHEARING



BOND

Where two strands intersect. A bond shear leaves closed diamonds.

RANDOM

This type of shearing leaves open diamonds.

TERMINOLOGY

STYLE DIMENSION:

Nominal dimension Short Way of Design (SWD)

DESIGN SIZE:

Actual dimension SWD and LWD. Measured from a point to a corresponding point on the following design

SWD:

Short Way of Diamond

LWD:

Long Way of Diamond

STRANDS:

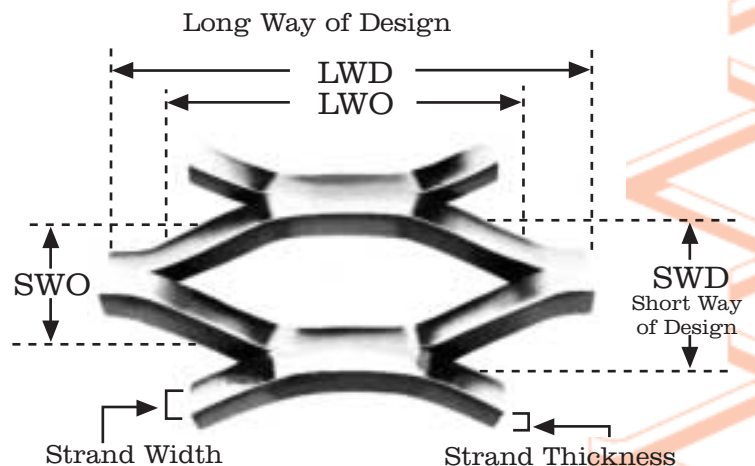
The sides of design

STRAND THICKNESS:

Gauge thickness of metal expanded

STRAND WIDTH:

Amount of metal fed under dies to produce one strand



ADVANTAGES AND USES OF EXPANDED PRODUCTS

ADVANTAGES OF EXPANDED METAL



- ❖ Cost effective alternative to perforated metals, no metal is lost in the expanding process
- ❖ Unlike woven wire products, expanded metal won't ravel; if cut at one end, the remaining strands continue to hold
- ❖ Versatile, with a great variety of sizes, styles, and thicknesses offering many choices to suit your needs
- ❖ Presents a virtually impenetrable barrier when used in walls and ceilings



USES OF EXPANDED METAL

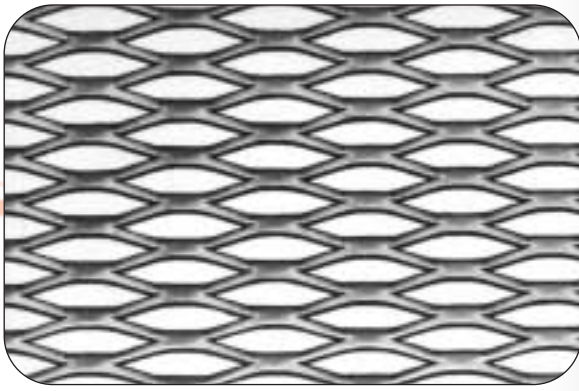
- ❖ Architectural & security fencing, storefront guards, air intake screens, windows, door & skylight guards, interior partitions, & barriers, vault reinforcement, meter box guards, drive & sidewalk gates, cab/truck dividers, overhead light guards, machine guards, patio furniture, greenhouse benches, drying racks, food service equipment, landscape & utility carts, utility trailers, stairs and walkways...

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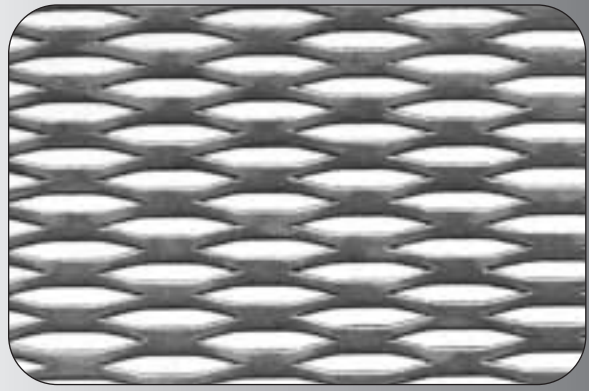
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BASIC PATTERNS OF EXPANDED METALS

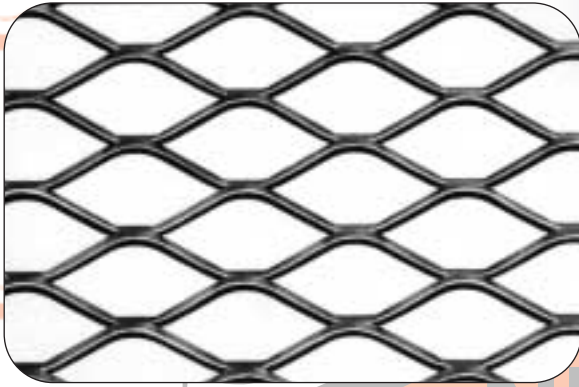
STANDARD $\frac{1}{4}$ " — #18



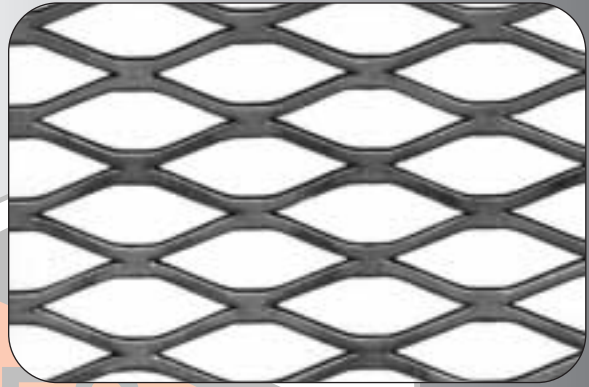
FLATTENED $\frac{1}{4}$ " — #18



STANDARD $\frac{1}{2}$ " — #16



FLATTENED $\frac{1}{2}$ " — #16



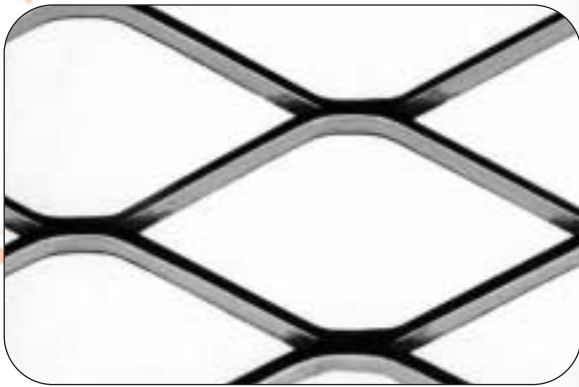
STANDARD $\frac{3}{4}$ " — #13



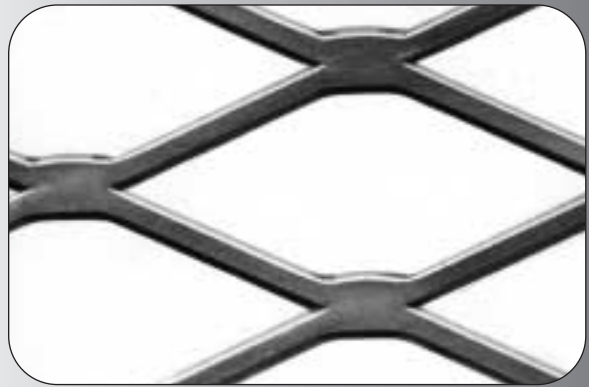
FLATTENED $\frac{3}{4}$ " — #13



STANDARD $1\frac{1}{2}$ " — #9



FLATTENED $1\frac{1}{2}$ " — #9



STANDARD

FLATTENED

(SHOWN IN ACTUAL SIZE)



3.14# GRATING

Same configuration
for 3.3#
STAINLESS GRATING



4.27# GRATING

Same configuration
for 4.5#
STAINLESS GRATING

**SHOWN IN
ACTUAL SIZE**



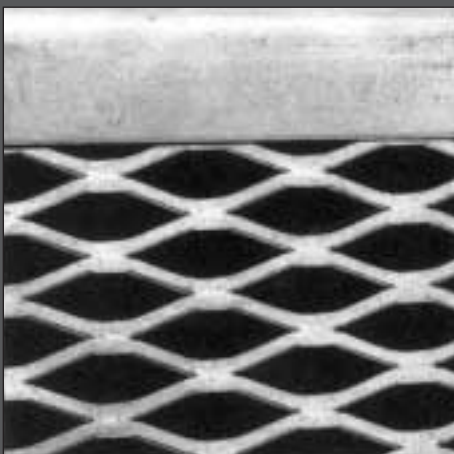
7# GRATING

Same configuration
for 3.0#, 4.0#, 5.0#, 6.25# CARBON
and 2.0# ALUMINUM GRATINGS



PROJECTION MESH

Available in:
2.0#, 3.0#, 4.0# CARBON and
1.0# and 2.0# ALUMINUM



U-EDGING

- Available From Stock In 10 & 12 Foot Lengths •
- Available In Any Custom Lengths •
- Carbon, Aluminum, Stainless, Copper And More... •



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