

# **Unified Screening & Crushing**

## **Productivity Tools**



## Sales & Manufacturing Facilities



**Unified Screening & Crushing  
Arizona**  
230 North Sunway Drive  
Gilbert, AZ 85233  
800-332-6463  
sales.dbc@unifiedscreening.com



**Unified Screening & Crushing  
Arkansas**  
#6 Industrial Park  
Benton, AR 72015  
800-458-2770  
sales.rss@unifiedscreening.com



**Unified Screening & Crushing  
California**  
8300 West Elowin Court  
Visalia, CA 93291  
800-535-2221  
sales.cwc@unifiedscreening.com



**Unified Screening & Crushing  
Colorado Wire Cloth**  
409 Goodrich Avenue, PO Box 160  
Platteville, CO 80651  
800-332-6280  
sales.colw@unifiedscreening.com



**Unified Screening & Crushing  
Florida**  
759 S. E. Federal Hwy., Ste. 310  
Stuart, FL 34997  
772-210-2618  
sales.fl@unifiedscreening.com



**Unified Screening & Crushing  
Michigan**  
305 East Walker Road  
St. Johns, MI 48879  
888-464-9473  
sales.mwc@unifiedscreening.com



**Unified Screening & Crushing  
Minnesota**  
3350 Highway 149 South  
POB 21068, Eagan, MN 55121  
800-328-0225  
sales.tcw@unifiedscreening.com



**Unified Screening & Crushing  
Nevada**  
4330 W. Desert Inn Road, Ste.-K  
Las Vegas, NV 89102  
702-222-9799  
sales.cwclv@unifiedscreening.com



**Unified Screening & Crushing  
North Carolina**  
136 Crestwick Road  
Ramseur, NC 27316  
877-784-9791  
sales.cwac@unifiedscreening.com



**Unified Screening & Crushing  
Ohio**  
200 Cass Drive  
Clayton, OH 45315  
800-626-1897  
sales.owc@unifiedscreening.com



**Unified Screening & Crushing  
Polythane**  
5654 Virginia Byway  
Bedford, VA 24523  
800-328-0225  
sales.pva@unifiedscreening.com



**Unified Screening & Crushing  
Texas**  
9235 Margies Lane  
Selma, TX 78154  
800-470-9473  
sales.tw@unifiedscreening.com



**Unified Screening & Crushing  
Utah**  
1458 South 700 West  
Salt Lake City, UT 84104  
801-975-6482  
sales.waw@unifiedscreening.com



**Unified Screening & Crushing  
Washington**  
22020 72nd Avenue  
Kent, WA 98032  
800-562-1971  
sales.wac@unifiedscreening.com



**Unified Screening & Crushing  
Wisconsin**  
400 Wisconsin Drive  
New Richmond, WI 54017  
800-328-0225  
sales.wwc@unifiedscreening.com



# Index



## Ordering your Unified® screening media

Ordering screens, wear parts and accessories from Unified is easy. Just call your closest Unified Screening & Crushing location — see page 4 or the back cover of this catalog for contact information.

You can also call our national sales and customer service team at **866-968-3697** (866-WOVENWR).

For more product information please visit the Unified website at **[www.unifiedscreening.com](http://www.unifiedscreening.com)**

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# About Unified® Screening & Crushing



## Meet the Unified® Team

Local presence, nationwide resources. As a Unified® Screening & Crushing customer, you get the best of both worlds. You work with the nearest Unified screening, sizing and crushing media manufacturer — people who know local materials and operations and who provide local delivery and tech support. You can depend on the combined knowledge base, resources, exceptional quality and competitive process that Unified offers as a nationwide manufacturer.

Most importantly, you get Unified's outstanding dedication to customer service. Your Unified Team works with you to:

- **Minimize downtime.** Massive inventory from locations across the country — including the largest ready-to-ship manganese inventory in North America — means you get the right products delivered to your site right when you need them.
- **Optimize production.** Unified has field experts who know every screening, crushing and sizing situation, ready to help you eliminate production problems.
- **Maximize profits.** Our nationwide buying clout means you get competitive pricing with lower-cost local delivery.

All of this is geared toward making your operation more productive and cost-efficient. Essentially, this catalog is filled with productivity tools. When you use the right screen your operation becomes highly productive.



## Service From the Experts

Stuck with a screening or sizing problem? Unified's sales staff — in the field, on the phone or on the web — know the materials and working conditions in your area. They're ready to apply decades of experience to your unique situation. If the solution is an out-of-

the-ordinary specification, Unified's in-house engineering staff can develop custom weave and screen designs. They consider factors such as material,

moisture content, equipment type and intended throughput to develop the right solution. Your design specs are kept on file for easy reordering.

Whether you have a screen blinding problem or just need to check a delivery date, Unified customer service is just one phone call away: 1-866-968-3697 no matter where you're located in North America.



## Unified® Mission Statement

*Our goal is to provide error-free products and services that are second to none in our industry; be competitively priced yet provide a profitable return for our company; maintain job security for all our employees. Our focus on quality affects all company activities.*

Tom Lentsch – CEO



# Selecting Screening Media



## Selecting the right screening media

Unified Screening & Crushing is your total screening solutions company. That means no matter what material you process, from sand to metallic ores, we have the right screening material and wear parts for your operation. Unified's experienced sales and engineering staff will help you select the screening material that best fits your applications:

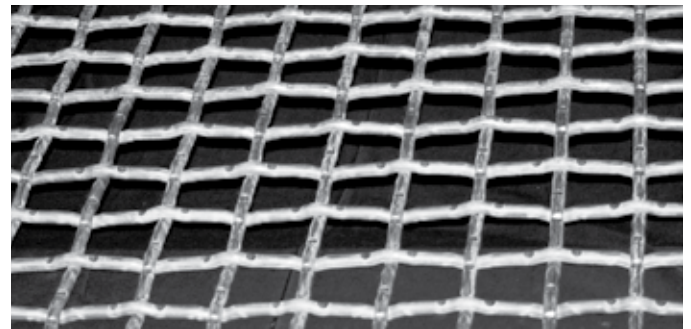


### Rubber

Scalping applications and coarse dry screening.

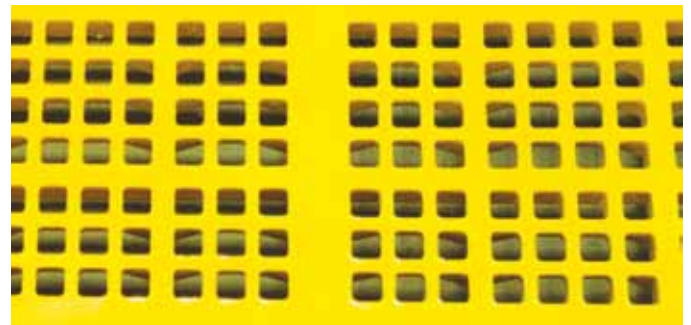
Crushed or natural, impact resistance and extended wear life in dry screening applications. Rubber Clad with full steel backing for high impact and/or heavy applications. TwinFlex fabric, or steel frame reinforced, for medium to fine dry screening. Low maintenance and high cost effectiveness in applications that are too severe for conventional wire cloth.

- Extended wear life in dry applications
- High impact resistance
- Low maintenance
- Rubber vulcanized with steel plate recommended for heavy weight and high impact applications



### Wire Cloth

- More throughput and production
- Readily available
- Less expensive than rubber or polyurethane
- More adaptable design options
- Up to 10 foot wide widths and variable length options



### Polyurethane

- Extreme wear life, especially good for wet applications
- Lower maintenance and fewer changeouts for more cost efficient production
- Square or slotted openings
- Modular or tension mats

# Corporate Profile

## 19th Century principles drive 21st Century growth

Endless companies have claimed that they put the customer first. Unified® Screening & Crushing is one of the few that actually does. For over 140 years, Unified and its forerunners have stuck to the principle of giving customers what they want and more. What began as a family owned wooden fencing business in St. Paul, Minnesota is now an industry leading group of screening, sizing and crushing media manufacturers across the United States.

Today, steel wire tops the materials list, along with urethane, rubber and manganese wear-parts. Manufacturing has evolved from anvils to computers.

However, Unified's guiding principles remain unchanged: Understand customer needs. Constantly improve and add quality. Build products that perform better on the job - because they're inspired by the job.

### Industrial roots

Unified's history dates back to 1869 and the Minnesota Fence Works Co. in St. Paul, MN.

The company then produced wood and wood turnings, eventually wire fencing and stair railings and established the practice of manufacturing products according to customer wants. Around 1893 the Toensing family purchased the business and



*The forerunner to Unified: Minnesota Fence Works circa 1869.*



*The expanded Minnesota Fence & Wire Works on University Avenue in St. Paul, MN circa 1898.*



*The staff at Minnesota Fence & Wire Works (University Ave.) St. Paul, MN circa 1915.*



*By the 1920s, delivery trucks had replaced horse-drawn wagons.*

changed the name to Minnesota Fence & Wire Works. By 1911, security mesh and machine guards had been added to the product mix, along with chain link fences, expanded steel railings and steel stairway products.

In 1923, sand and gravel screening products are added and the company is placed on-course to become Unified Screening & Crushing - 80 years later. Over the following decades, the company grew and opened the first major facility for manufacturing sand and gravel wire screening media. Minnesota Fence also made a significant hire... Eugene Lentsch joined Minnesota Fence & Iron Works, Inc. in 1949. Six years later Lentsch bought out the majority stock, then owned by the Toensing family... By the end of the 1960's, Lentsch purchased Twin City Iron & Wire, which became known as Twin City Wire, the first of the Unified® companies.

### Decades of growth

The company moved into its current location in 1973. The large manufacturing facility in Eagan, MN gave the company enough space to focus on expanding its quarry and mining business.



*The company opened a large manufacturing facility in 1973. Today, after renovation, it remains one of the 16 highly productive manufacturing facilities in the Unified network.*

During the 80's and 90's other (Unified) screening media companies opened for business across the country...from California and Colorado, to Arkansas and Texas, to several companies in the East and Midwest. Like Twin City Wire, most were family owned and quickly established enviable reputations for responsive service and high-quality products that exceeded customer expectations.

In March 2005, Unified® Screening & Crushing became the unifying force behind this long-standing group of screening, sizing and crushing media manufacturers. Today Unified has 16 production locations across the United States and six strategically located stocking distributors to assure quick service across the country.

### Our business principles

Unified's mission has always been building quality products to help customers operate more productively. Through the strength of our industry leading network, we pledge that any Unified product you buy will perform better



*Unified's leadership (left to right): Dave Lentsch, COO/Treasurer; Tom Lentsch, CEO; Bob Kleason, Dir. of Marketing & Sales*



## Corporate Profile & Associations

than or equal to, any similar product available. Customer problems always receive prompt attention.

Unified's screening, sizing, crushing and wear parts products perform so well on the job, because they are inspired by on-the-job situations. We often develop products according to one customer's needs and circumstances. Solving customer's problems then gives us proven product solutions for other customers with similar screening conditions.

### Our people

All Unified field representatives have previous industry experience. They've worked for quarries, equipment suppliers, foundries or other aggregate or mining-related companies. It's a pre-requisite for the job. Anyone can just sell products, but the Unified focus is solving customer problems - and nothing beats experience in the field. All Unified field reps know the various local materials, local processing conditions and all the other factors that affect wear life and throughput in the customers' operations

### Local presence - Nationwide resources

The Unified network gives customers the advantage of working with a local media manufacturer who understands their local operating conditions and provides local delivery and tech support. Customers also get the advantages of Unified's combined knowledge base, resources, quality control and competitive processes as a nationwide supplier and manufacturer.

### Service from the experts

Unified field representatives will review each customer's problem, then find the right screening media to solve it. The answer might be in stock screen media, an existing product that requires some tweaking, or, a whole new product. Whatever the solution, Unified has the capabilities to engineer and manufacturer

it - then add the product/solution to our ever-growing line of specialized screening and crushing solutions.

### Unified quality standards

To ensure that the Unified products you order meet the highest quality standards, each stage of manufacturing undergoes inspection and verification. The quality assurance system at our Minnesota facility is **ANSI/ISO 9001:2008** certified and the same quality program is being extended to all facilities in the Unified network.

**Conforms with  
ISO 9001:2008  
Standards**

### Best-equipped facilities

All 16 Unified Screening & Crushing locations across the U.S. are continually re-investing in new equipment, product development and training to help ensure that our products perform better than customers expect. Modern automated

production equipment such as automated crimpers and looms up to 10-foot wide fabricate wire cloth to your specifications.

### One call for immediate service

With our 16 facilities throughout the U.S., Unified customers know they can get 24-hour delivery of products on our stock list and fast delivery on custom orders.

For more information on Unified locations, just call: **866-968-3697**.

**Email: [info@unifiedscreening.com](mailto:info@unifiedscreening.com)**

**Website: [www.unifiedscreening.com](http://www.unifiedscreening.com)**



*Unified field representatives like Rod Skindrud bring years of practical field experience to every customer situation.*



*Our newest addition, Unified Screening & Crushing - Washington facility*

## Unified Endorsed Membership Associations



**NSSGA National Stone, Sand & Gravel Association**



**AWCI / American Wire Cloth Institute**



**NAAMM / National Association of Architectural Metal Manufacturers**



**MAA / Michigan Aggregates Association**



**OAIMA / Ohio Aggregates & Industrial Mineral Association**



**KCSA / Kentucky Crushed Stone Association**



**IMAA / Indiana Mineral Aggregates Association**



**IIAP / Illinois Aggregate Association**



**APW / Aggregate Producers of Wisconsin**



**ARM / Aggregate Ready Mix of Minnesota**



**IMA / Iron Mining Association of Minnesota**



**MAPA / Minnesota Asphalt Pavement Association**



**MLA / Missouri Limestone Association**



**ARMCA / Arkansas Ready Mix Concrete Association**



**OKAA / Oklahoma Aggregates Association**



**CAPA / Carolina Asphalt Pavement Association**



**VAA / Virginia Asphalt Association**

# Wire Cloth



## Unified Wire Cloth Product Line

Cost efficiency and throughput performance have made woven wire the preferred screening material for a majority of processors. Unified wire cloth products are used for classifying materials including crushed stone, gravel and sand, metallic ores, coal, grains and other foodstuffs. Wire cloth is even used for industrial and architectural applications.

Selecting the right wire cloth material depends on the intended use. Unified manufactures hundreds of opening sizes with a variety of materials and crimp options. Wire types include high carbon, Tufflex, oil tempered, stainless steel and many more. We also have a wide range of production

capabilities, for example, water jet cutting of AR 500 in any shape up to 8 by 12 feet and thickness up to 10 inches.

## Quality Wire Cloth Begins with Certified Materials

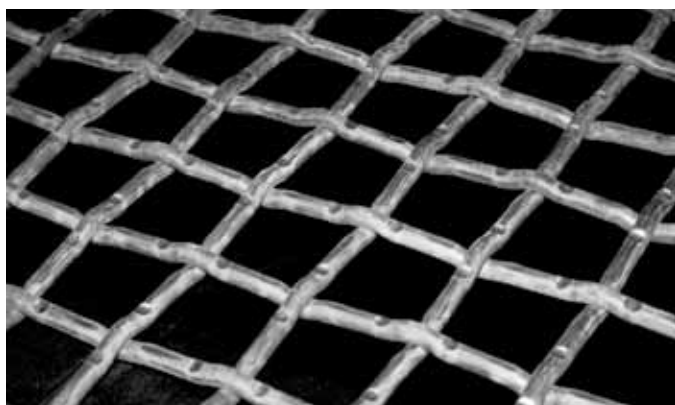
Every Unified Screening & Crushing wire cloth product begins with the highest quality wire. We buy the best wire from numerous vendors, plus specialist vendors for stainless steel, high carbon and oil tempered wire. Every vendor must provide a quality certification along with their materials consistent with the latest ISO-9001 standard so we know exactly what's going into each Unified wire cloth product.

When buying wire, we look for the best vendors. The purchasing power of Unified Screening & Crushing allows us to purchase economically and maintain large wire inventories. Large inventories also offset any shortages from vendors, so we can weave and deliver Unified wire cloth products whenever you need them.





# Wire Cloth



## High Carbon Steel Alloys

*High tensile crimping quality spring steel wire.*

### High Carbon

Abrasion-resistant, hard drawn, high carbon wire that can withstand repeated impact from heavy objects. It's recommended for use when material to be screened is heavy and bulky, but moderately abrasive. High carbon is the least expensive wire choice.

### Tufflex

Unified's Tufflex has been tested and proven to be superior to oil tempered wire. It offers greater ductility (flexibility) and tensile strength. In some applications, Tufflex wire wear life exceeded oil tempered by two times the wear life.

### Oil Tempered

Much of the oil tempered wire in the marketplace uses the old line atmospheric method of tempering. Unified's induction tempering process tempers wire consistently throughout the strand, producing a superior oil tempered wire. The higher tensile strength with increased ductility produces screen cloth with high impact resistance and longer fatigue life.

## Low Carbon Steel Alloys

*Note: These products are not generally used for aggregates or in mining.*

### Plain Steel

Unified's plain steel material is woven with a low carbon wire for lower abrasion applications.

### Galvanized Steel

Galvanized low carbon steel wire provides corrosion resistance for lower abrasion applications in corrosive environments.

### Welded Mesh

Typically manufactured from ferrous materials including stainless steel T304 and T316, plain steel and galvanized steel. The wires are resistance welded at the intersections with all of the long wires in one plane and the cross wires in another plane.

*See pages 31,32 & 33 for other wire mesh applications.*

## Other Metals and Alloys

### Inconel

Inconel wire cloth includes high nickel chromium Inconel alloy 600 for good oxidation resistance at temperatures up to 1,800°F.

### Monel

Monel alloy 400 is a nickel-copper alloy used in food processing and other applications that require high strength and excellent corrosion resistance to a wide range of materials.

### Copper

Excellent electrical and thermal conductivity plus good corrosion resistance, formability and strength.

### Aluminum

Our aluminum alloy contains magnesium, manganese and chromium.

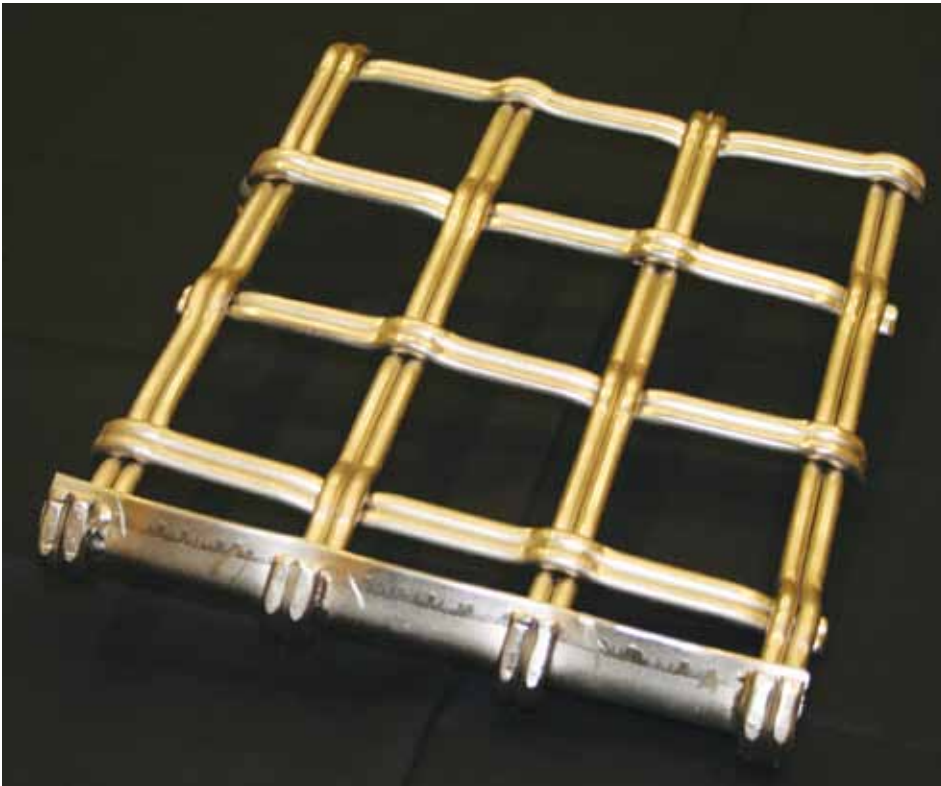
### Manganese

Unified's 14% manganese alloy handles extremely high abrasive conditions.

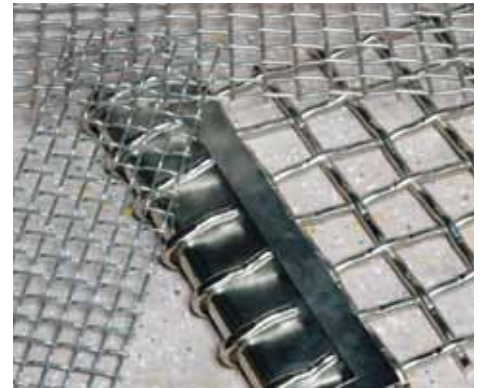


*Many other wire types & alloys available. Special Metals - Call Unified Screening & Crushing with all your requirements*

## Wire Cloth - Wire Woven Materials



The proprietary "TwinWire" screen by Unified Screening & Crushing



### Stainless Steel

*Abrasion and corrosion-resistant, high tensile, hard drawn wire.*

#### S304 Stainless

NIX chromium and 87 nickel for excellent resistance to corrosion.

#### S316 Stainless

Molybdenum is added to the basic 18% 87 alloy for better resistance to chemical corrosion.

#### S430 Stainless

Chromium alloy with no nickel for higher resistance to chemicals, atmospheric corrosion and oxidation. Handles temperatures up to 1,600 °F.



### Custom Woven Materials:

#### Unified offers:

- Stainless Steel materials, such as types: 304, 309, 310, 316, 317, 321, 330, 347, 410, 430, and more
- High nickel alloys including Inconel, Incoloy, Monel, Nichrome, Hastelloy and others
- Non-ferrous materials, including Aluminum, Brass, Bronze and Copper

Specialized products available



# Wire Cloth - Weave Styles

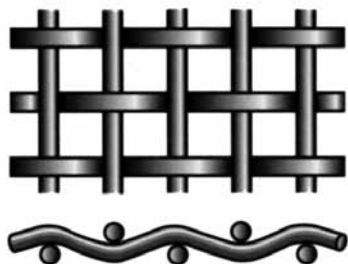
Selecting the right weave helps ensure efficient screening of materials.

## Weave Styles

Efficient screening of materials requires the right weave. Unified Screening & Crushing has one of the largest selections of weave styles available. Our wide selection of weave styles means you'll find the right design for your screening application: Aggregate production, mineral sizing, grain drying, traveling water screens, power plant applications, livestock flooring and many others. Select from the weaves shown here, or call for information on special fabricated screens.

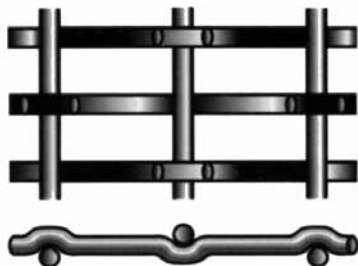
### Double-Crimp

A smaller opening weave style. All around efficient and long-wearing performance in a variety of applications.



### Slotted Openings

Single-shute oblong openings solve minor blinding problems for better flow.



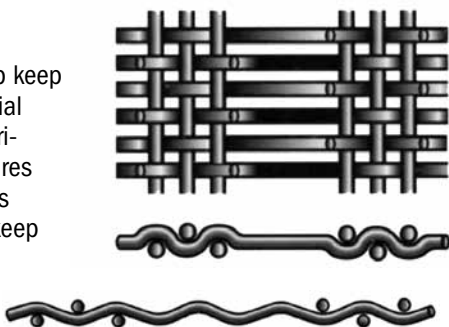
### TwinWire

Designed for high impact, top deck applications. Typically used for 1.5" openings and larger.



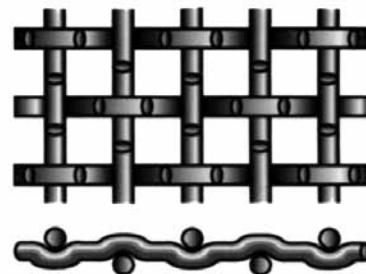
### Tri-Loc/Tri-Mesh

Long openings help keep sticky or wet material flowing freely. The Tri-Loc weave holds wires securely yet permits slight vibration to keep openings clear.



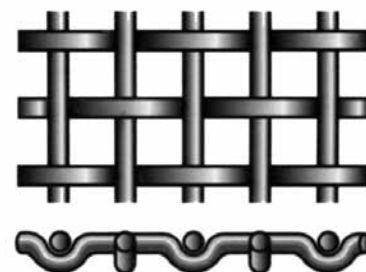
### Loc-Crimps

A larger opening weave style for scalping and heavy applications. Wire is locked in place for long wear and accurate opening sizes for the life of the screens.



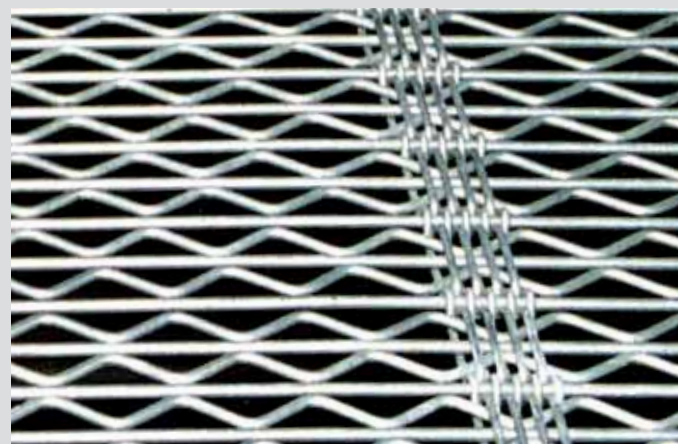
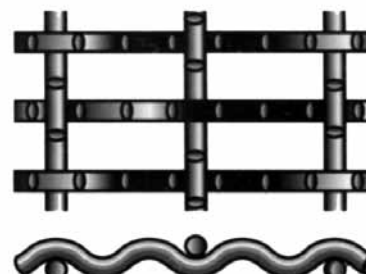
### Flat Tops

May improve material flow with flatter surface than other weaves.



### Intercrimp

Great choice for a wide range of slotted openings. Extra crimps provide locking and tightness for light wires in openings.



### Unified's W-Style Screen

SuperFlow (urethane cross supports) is also available.

See *Industrial Applications*, page 30-31, for details on mesh types.

# Wire Cloth - Clean Screens



**Unified's Clean Screens are high-quality, non-blinding screening surfaces made from crimped wire.** The wires in these screens vibrate independently of each other. They're an ideal choice when you need to greatly reduce pegging, plugging and blinding and still maintain sizing.

- Custom manufactured in four basic styles.
- All types deliver higher production rates by combining high percentages of open area (compared to square opening wire mesh) with the action of vibrating wires.
- All products available in oil tempered, Tufflex and stainless steel wire. Can be hooked with any edge style to fit all screening equipment, stationary or portable.
- Separates flakes and slivers from finished product while greatly reducing problems like plugging and blinding.

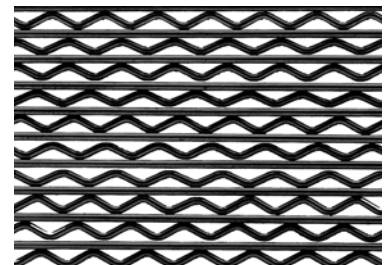
## D-Style (Diamond) Screens

- Diamond-shaped openings for accurate sizing
- Accurately sizes dry or damp material
- Also available in high carbon wire



## W-Style Screens

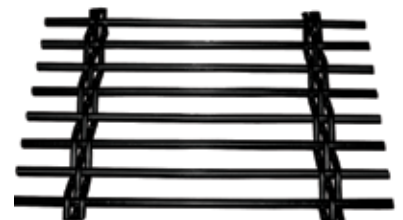
- Alternating straight and formed wires vibrate at different frequencies to clean the screening surface
- Triangular-shaped openings for accurate sizing
- Resilient to damage from oversized material
- Most accurate Clean Screen for sizing applications



## T-Style Screens

Unified's T-slot screens are an affordable alternative to high-cost piano wire screens.

- Uncrimped tension wires
- Clusters located to suit your screen deck
- Almost any wire size and opening combination available – call for details





## Wire Cloth - SuperFlow



*SuperFlow Screens – An advanced combination of wire and urethane*

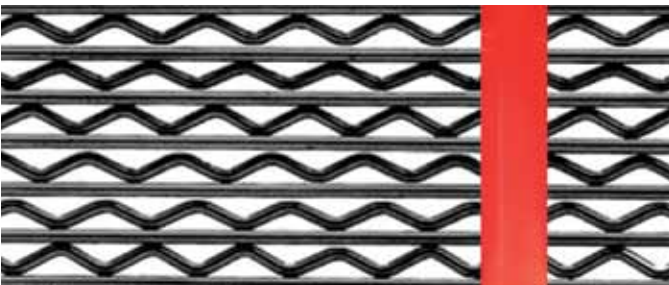
### SuperFlow

An exceptionally long-lasting, self-cleaning screen that's achieved by replacing the woven wire clusters of a Unified's Clean Screen with durable polyurethane strips.

#### SuperFlow Benefits

- Greater flexibility and longer life
- SuperFlow screens handle damp and sticky material when other screen surfaces blind
- Accurate sizing with little or no blinding

#### SuperFlow Weave



*SuperFlow - (W) Style Design*



*SuperFlow - Herringbone (H) Design*



*SuperFlow - Diamond (D) Design*



## Hooks & Edge Preparation



*Specialized shearing and forming*

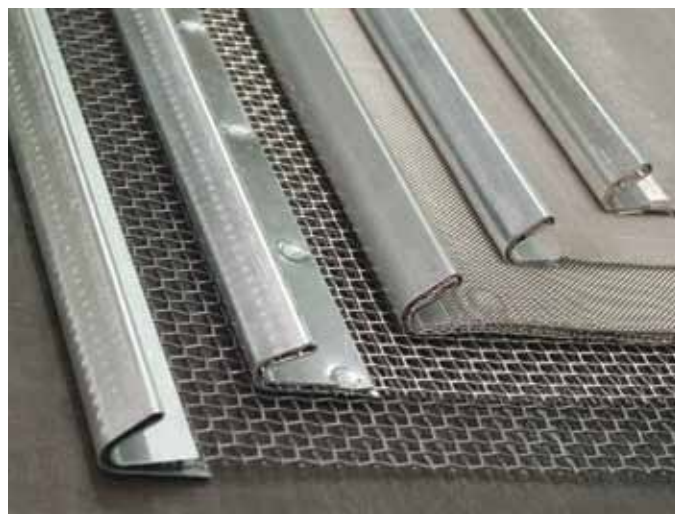
### **US-2 Shroud Banded Edges**

Available in recommended standard thickness (18 gauge galv.). Other gauges and materials by request.

Shrouding materials include stainless, galvanized and mild steel. Rubber inserts are also available for additional pull-out resistance on .080 diameter wire and smaller.

Several shroud styles are available to fit specific types of OEM equipment and are designed to meet specific customer requirements.

Proper screen size and tensioning are critical for effective screening and longer screen life. Unified Screening edge preparations fit OEM and customer designed equipment properly for optimum tensioning. Banded edges strengthen hooked edges and provide even tensioning across the screen.





# Hooks & Edge Preparation

**Below is a sampling of some of our popular hooks.**

*Get the correct edge preparation and screen size for proper fit on original equipment.*



## US-1

Plain Formed Edge for screens of 5/16" and larger diameter wire. Edges are annealed by controlled heating before forming to eliminate cracking and breakage.



## US-3

Inside Reinforced Formed Edge for screens of 1/4" diameter wire and larger can provide superior tensioning.

A 1/8" steel angle insert is welded inside the wire hooks, strengthening the screen for uniform tensioning and ease of installation on vibrating equipment.



## US-2

Reinforced Shroud Banded Edge is standard for screens of up to 1/4", and also available on diameters of 5/16" and 3/8" upon request.

Standard shrouding is 18 gauge steel with other thicknesses available.



## US-4

Welded Bent Plate Edge for 5/16" wire diameters and larger. 3/16" or 1/4" steel angle is welded on the screen edge.



## US-2 ET

End Tension Reinforced Shroud Banded Edge is compatible with all OEM replacement applications. Excellent for 1/4" wire and lighter.

Hook lengths will vary to meet OEM specifications. Any dimension and profile is available upon request.



## Non-Standard Edges

Any hook and angle will be manufactured to your specifications. Other hook dimensions are available upon request.

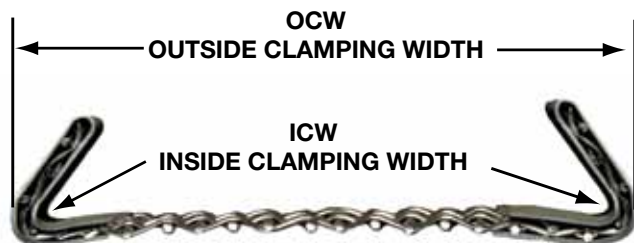
When ordering non-standard edges, give angle of formed edge and hook length.

# Technical Information - Considerations for Ordering Wire Screens

## Help us help you order the right wire cloth for your application.

Use the definitions and information on this page to determine the technical specs for your order. Of course, you can always discuss your specific application with a

Unified wire cloth expert. Just call 866-968-3697.

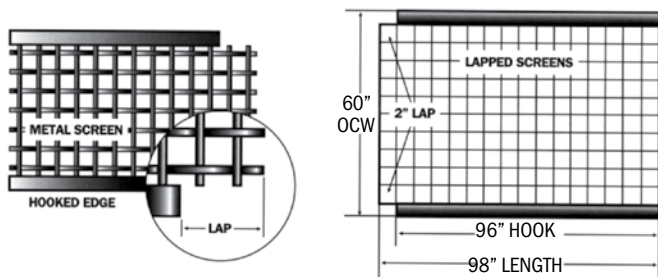


### 1. Finished Panel Size

Flat screens without hooked edges: Simply measure the length and width of the screen in inches. Example: 48" wide and 72" long.

Flat screens with hooked edges: You need to determine the screen length and its OCW (outside clamping width) or ICW (inside clamping width) in inches. You can either:

- Check the OEM equipment manual, or Measure an old screen, or
- If an old screen is not available, measure the clear width between the vibrator side plates and subtract 1-1/2" to determine the OCW.



### 2. Screen Length and Lapped Screens

When specifying screen length, always measure along the clamping edge and be sure to indicate any screen overlap, if required. Give the overall width first, then specify the length of the hook and the amount of screen overlap you need.

Example: 60" OCW x 96" long, 96" hook allowing for 2" lap (98" total length).

Lapped ends eliminate any leakage of oversized materials where screen sections meet. Normally, laps are 1" to 2" and are typically ordered with screens having an opening size of 1/4" or smaller.

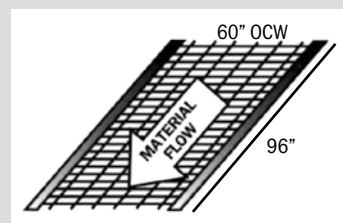
### 3. Slot Direction

When ordering screens with oblong openings, the slot direction must be specified in numerical terms. Note that Unified uses numerical terms when describing slot direction on your acknowledgments, packing slips and invoices. Also indicate the type of weave or number of shuttle wires (such as single shuttle or triple shuttle).

#### Examples of common slot direction phrases:

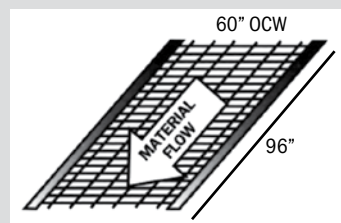
*Note that these are for side tension screens. End tension screens will change slot direction terminology.*

#### Slots parallel to 60"



Screen openings run **horizontal** to material flow

#### Slots parallel to 96"



Screen openings run **vertical** to material flow

### 4. Special Fabricated Screens

Some shaker screens require special fabrication to meet all OEM specifications. Check your existing screens for the following features, and note them on your order:

1. One hook up, one hook down
2. Four-way tensioning
3. Brazed center hold-down holes, with or without reinforcing washers
4. Center crowns
5. Rolling for rotary screens
6. Brazed laps
7. Skid bars
8. Welded or brazed edge wires



# Technical Information - Installation & Maintenance of Wire Screens



## Screen Maintenance

1. **Inspect** all clamping bars for corrosion and wear.
  - Make sure bars are not warped or worn to the point that they cannot provide even, tight tension
2. **Inspect** all nuts and bolts.
  - Replace all worn or stripped parts in the screen assembly
3. **Maintain** support deck.
  - Remove channel rubber to inspect steel bars for wear, high and low spots for bar breakage
  - Support area must be uniform to ensure an even and tight fit
4. **Change Out** channel rubber frequently.
  - Changing channel rubber is recommended every time, or at least every other time, the screen is replaced
  - Remember that channel rubber will wear from the bottom up, as well as from the top down. Check both sides
  - Mixing channel rubber sizes or styles such as flat-top and round-top on the same deck will result in improper tensioning
5. **Check** cushion and spread of material feed.
  - Cushioning of feed to the screen deck is essential to maximizing screen life. Use feed plates or stone boxes so that materials do not hit the wire cloth directly
  - For maximum screen life and production, material should be spread out to feed evenly over the entire screening surface. This also reduces uneven equipment wear as the vibrator is operating in a more balanced condition
6. **Inspect** equipment for proper operation (balance and vibration).
  - An unbalanced machine can cause premature wire cloth failure
  - Equipment with a violent, uneven vibrating motion will cause stresses in the screen, causing premature failure of the screen cloth. The cloth may actually break apart
  - Correct the unbalanced condition before continuing the screening operation

## Screen Installation

1. Channel rubber or crown bar rubber must be replaced before new screens are installed to assure longer screen life.
2. Screens should be centered on the deck before clamping rails are applied.
3. Use new tension bolts and tension all bolts equally on both sides of the vibrator. All hole positions on clamping bars must be used.
4. Make certain that butted screen panels are tight together and overlapping screens are properly installed to avoid oversized material leakage.
5. Clamping rails must be exact length of the screen panel being installed. Never overlap clamping rails.
6. After four to eight hours of operation, retighten the screen to take up any stretch that might occur.
7. Worn clamping rails should be replaced to assure proper tensioning.



## Control Costs

It pays to control your material screening costs by using proper screen installation and maintenance procedures. Unified Screening & Crushing helps by providing high-quality cloth, designed for your type of screening. By following these steps, you can dramatically increase the life of your screens, control costs and do a more efficient job of material screening.

# Openings & Wire Sizes



## Suggested Openings & Wire Sizes

CLEAR OPENING	LIGHT	MEDIUM	HEAVY
1/16" (.063)	—	#18 (.047)	—
3/32" (.094)	—	#18 (.047)	#16 (.063)
1/8" (.125)	#16 (.063)	#14 (.080)	#12 (.105)
5/32" (.156)	#16 (.063)	#14 (.080)	#12 (.105)
3/16" (.188)	#16 (.063)	#14 (.080)	#11 (.120)
7/32" (.219)	#14 (.080)	#12 (.105)	#10 (.135)
1/4" (.250)	#12 (.105)	#11 (.120)	#10 (.135)
5/16" (.313)	#12 (.105)	#10 (.135)	# 9 (.148)
3/8" (.375)	#12 (.105)	#10 (.135)	# 8 (.162)
7/16" (.438)	#10 (.135)	# 8 (.162)	# 6 (.192)
1/2" (.500)	#10 (.135)	# 8 (.162)	# 6 (.192)
9/16" (.563)	#10 (.135)	# 8 (.162)	# 6 (.192)
5/8" (.625)	# 8 (.162)	# 6 (.192)	# 4 (.225)
3/4" (.750)	# 6 (.192)	# 3 (.244)	5/16" (.313)
7/8" (.875)	# 6 (.192)	# 3 (.244)	5/16" (.313)
1" (1.00)	# 6 (.192)	# 3 (.244)	5/16" (.313)
1 - 1/8" (1.125)	# 3 (.244)	5/16" (.313)	3/8" (.375)
1 - 1/4" (1.250)	# 3 (.244)	5/16" (.313)	3/8" (.375)
1 - 3/8" (1.375)	# 3 (.244)	5/16" (.313)	3/8" (.375)
1 - 1/2" (1.500)	5/16" (.313)	3/8" (.375)	1/2" (.500)
1 - 5/8" (1.625)	5/16" (.313)	3/8" (.375)	1/2" (.500)
1 - 3/4" (1.750)	5/16" (.313)	3/8" (.375)	1/2" (.500)
2. 0"	5/16" (.313)	3/8" (.375)	1/2" (.500)
2 -1/4" (2.250)	5/16" (.313)	3/8" (.375)	1/2" (.500)
2- 1/2" (2.500)	3/8" (.375)	1/2" (.500)	5/8" (.625)
3. 0"	3/8" (.375)	1/2" (.500)	5/8" (.625)
3 -1/2" (3.500)	3/8" (.375)	1/2" (.500)	5/8" (.625)
4. 0"	1/2" (.500)	5/8" (.625)	3/4" (.750)
5. 0"	1/2" (.500)	5/8" (.625)	3/4" (.750)
6. 0"	1/2" (.500)	5/8" (.625)	3/4" (.750)

The following pages contain a small sampling of our opening sizes and recommended wire gauges (diameters) for light, medium and heavy use. Based on our experience, Unified Screening & Crushing offers standard sizes for various crushing conditions. For any size opening please call us, or check our website. Most openings are in stock for 24-hour service.

## Industry Opening Tolerances\*

OPENING INCHES	TOLERANCE INCHES + or -
1/16 to 1/8 Inclusive	0.007
Over 1/8 to 3/16 Inclusive	0.010
Over 3/16 to 1/4 Inclusive	0.012
Over 1/4 to 3/8 Inclusive	0.015
Over 3/8 to 1/2 Inclusive	0.017
Over 1/2 to 3/4 Inclusive	0.020
Over 3/4 to 1 Inclusive	0.030
Over 1 to 1-1/2 Inclusive	0.045
Over 1-1/2 to 3 Inclusive	0.075
Over 3 to 5 Inclusive	0.100
Over 5 to 7 Inclusive	0.125
Over 7	0.188

\*ASTM E2016-06

Openings may vary in size.  
Consult your Unified Rep for exact (decimal) specifications.




























# Openings & Wire Sizes



The chart below illustrates the available wire diameters used to manufacture most aggregate/mining wire cloth applications.

Certified welding - ISO 9001-2000

APPROX DIAMETER INCHES		GAUGE & ACTUAL DIAMETER	LINEAL FT./LB.
1"			0.037
3/4"			0.67
5/8"			0.96
1/2"			1.50
7/16"			1.96
3/8"			2.67
5/16"			3.83
1/4"		3 .244	6.30
7/32"/.219		4 .225	7.41
3/16"/.188		5 .207	8.95
		6 .192	10.17
		7 .177	11.97
		8 .162	14.29
5/32"/.156		9 .148	17.05
		10 .135	20.5

APPROX DIAMETER INCHES		GAUGE & ACTUAL DIAMETER	LINEAL FT./LB.
1/8"/.125		11 .120	25.82
3/32"/.094		12 .105	33.69
5/64"/.078		13 .092	44.78
1/16"/.063		14 .080	58.58
		15 .072	72.32
		16 .063	95.98
3/64"/.047		17 .054	128.57
		18 .047	166.17
		19 .041	223.04
		20 .035	309.59



Loom #7 at the Eagan, MN facility

Illustrations are approximate to actual diameter.  
Use for comparative purposes only.

# Openings & Wire Sizes

Unified stocks hundreds of different square opening screen sizes, in addition to manufacturing thousands of various design specifications.

OPENING WIDTH	WIRE DIAMETER	GAUGE	WEIGHT LB/SQ FT	% OPEN SPACE TO AREA
3/32" (.094")	.035"	#20	0.65	53.0
	.047"	#18	1.04	44.4
	.072"	#15	2.17	32.0
1/8" (.125")	.047"	#18	0.85	52.8
	.063"	#16	1.43	44.2
	.080"	#14	2.15	37.2
	.092"	#13	2.71	33.2
	.105"	#12	3.37	29.5
5/32" (.156")	.063"	#16	1.24	50.8
	.080"	#14	1.88	43.0
	.105"	#12	2.97	35.8
	.120"	#11	3.75	32.0
3/16" (.188")	.063"	#16	1.05	56.0
	.080"	#14	1.60	49.1
	.092"	#13	2.04	45.0
	.105"	#12	2.56	41.1
	.120"	#11	3.22	37.2
7/32" (.219")	.080"	#14	1.44	53.6
	.105"	#12	2.32	45.7
	.120"	#11	2.92	41.7
	.135"	#10	3.56	38.2
1/4" (.250")	.080"	#14	1.28	57.4
	.092"	#13	1.64	53.4
	.105"	#12	2.07	49.6
	.120"	#11	2.62	45.7
	.135"	#10	3.21	42.2
	.148"	#9	3.76	39.5
	.162"	#8	4.38	36.8
	.192"	#6	5.82	32.0
	.225"	#4	7.55	27.7
9/32" (.281")	.105"	#12	1.95	53.0
	.120"	#11	2.42	49.1
	.135"	#10	2.97	45.7
5/16" (.313")	.080"	#14	1.07	63.4
	.105"	#12	1.74	56.0
	.120"	#11	2.21	52.2
	.135"	#10	2.72	48.8
	.148"	#9	3.20	46.1
	.162"	#8	3.74	43.4
	.192"	#6	5.00	38.4
3/8" (.375")	.105"	#12	1.51	61.0
	.120"	#11	1.92	57.4
	.135"	#10	2.37	54.1
	.148"	#9	2.79	51.4
	.162"	#8	3.27	48.8
	.192"	#6	4.39	43.7
	.244"	#3	6.62	36.7
	.5/16"		9.99	29.8

OPENING WIDTH	WIRE DIAMETER	GAUGE	WEIGHT LB/SQ FT	% OPEN SPACE TO AREA
7/16" (.438")	.120"	#11	1.69	61.6
	.135"	#10	2.09	58.4
	.148"	#9	2.47	55.8
	.162"	#8	2.90	53.3
	.177"	#7	3.40	50.7
	.192"	#6	3.92	48.3
1/2" (.500")	.120"	#11	1.51	65.0
	.135"	#10	1.88	62.0
	.148"	#9	2.22	59.5
	.162"	#8	2.61	57.0
	.177"	#7	3.06	54.5
	.192"	#6	3.54	52.2
	.244"	#3	5.39	45.2
9/16" (.563")	.120"	#11	1.38	67.9
	.162"	#8	2.40	60.3
	.177"	#7	2.81	57.6
	.192"	#6	3.26	55.6
	.207"	#5	3.72	53.4
5/8" (.625")	.120"	#11	1.25	70.4
	.135"	#10	1.56	67.6
	.148"	#9	1.85	65.4
	.162"	#8	2.18	63.1
	.192"	#6	2.97	58.5
	.225"	#4	3.94	54.1
3/4" (.750")	.148"	#9	1.56	69.8
	.162"	#8	1.87	67.6
	.192"	#6	2.56	63.4
	.207"	#5	2.93	61.4
	.225"	#4	3.41	59.2
	.244"	#3	3.95	56.9
	5/16"		6.13	49.8
	3/8"		8.44	44.4
13/16" (.813")	.207"	#5	2.76	63.5
7/8" (.875")	.162"	#8	1.64	71.2
	.192"	#6	2.25	67.2
	.225"	#4	3.01	63.3
	.244"	#3	3.49	61.1
	5/16"		5.44	54.3
	3/8"		7.52	49.0
15/16" (.938")	.244"	#3	3.31	63.0
	.313"		5.17	56.2
1" (1.00")	.162"	#8	1.46	74.1
	.192"	#6	2.01	70.4
	.225"	#4	2.69	66.6
	.244"	#3	3.12	64.6
	5/16"		4.90	58.0
	3/8"		6.79	52.9

Red Figures = Standard Wire Sizes Please consult your Unified Locations for availability



# Openings & Wire Sizes

Unified weaves wire cloth for all kinds of screening and sizing applications and uses all types of materials; carbon steel, Tufflex, oil tempered, stainless steel, copper and nickel alloys.

OPENING WIDTH	WIRE DIAMETER	GAUGE	WEIGHT LB/SQ FT	% OPEN SPACE TO AREA
1 - 1/16" (1.063")	.244"	#3	2.98	66.1
	.313"		4.68	59.7
1 - 1/8" (1.125")	.244"	#3	2.83	67.5
	5/16"		4.45	61.2
	3/8"		6.19	56.3
1 - 1/4" (1.250")	.244"	#3	2.58	70.0
	5/16"		4.08	64.0
	3/8"		5.69	59.2
1 - 3/8" (1.375")	.244"	#3	2.38	72.1
	5/16"		3.77	66.4
	3/8"		5.26	61.7
	7/16"		6.95	57.6
	1/2"		8.83	53.8
	5/8"		13.1	47.3
1 - 1/2" (1.500")	.244"	#3	2.21	74.0
	5/16"		3.50	68.5
	3/8"		4.90	64.0
	7/16"		6.48	59.9
	1/2"		8.25	56.3
1-5/8" (1.625")	.244"	#3	2.07	75.6
	5/16"		3.29	70.3
	3/8"		4.60	66.0
	7/16"		6.10	62.1
	1/2"		7.77	58.5
1 - 3/4" (1.750")	.244"	#3	1.93	77.0
	5/16"		3.07	72.0
	3/8"		4.30	67.8
	7/16"		5.71	64.0
	1/2"		7.29	60.5
1 - 7/8" (1.875")	.375"		4.07	69.4
2" (2.000")	.244"	#3	1.71	79.4
	5/16"		2.73	74.8
	3/8"		3.84	70.9
	7/16"		5.11	67.3
	1/2"		6.53	64.0
	5/8"		9.79	58.0

OPENING WIDTH	WIRE DIAMETER	GAUGE	WEIGHT LB/SQ FT	% OPEN SPACE TO AREA
2 - 1/4" (2.250")	5/16"		2.46	77.1
	3/8"		3.46	73.5
	1/2"		5.91	66.9
	5/8"		8.90	61.2
2- 1/2" (2.500")	5/16"		2.24	79.0
	3/8"		3.16	75.6
	1/2"		5.40	69.4
	5/8"		8.16	64.0
	3/4"		11.37	59.2
3" (3.000")	.244"	#3	1.18	85.5
	5/16"		1.90	82.0
	3/8"		2.68	79.0
	1/2"		4.62	73.5
	5/8"		7.00	68.5
	3/4"		9.79	64.0
3 - 1/2" (3.500")	3/8"		2.33	81.6
	1/2"		4.03	76.6
	5/8"		6.13	72.0
4" (4.000")	3/8"		2.07	83.6
	1/2"		3.58	79.0
	5/8"		5.46	74.8
	3/4"		7.68	70.9
5" (5.000")	1/2"		2.98	82.6
	5/8"		4.61	79.0
	3/4"		6.30	75.6
6" (6.000")	1/2"		2.54	85.2
	5/8"		3.92	82.0
	3/4"		5.37	79.0



Red Figures = Standard Wire Sizes      Please consult your Unified Locations for availability

# Polyurethane



*Trommel Screens*

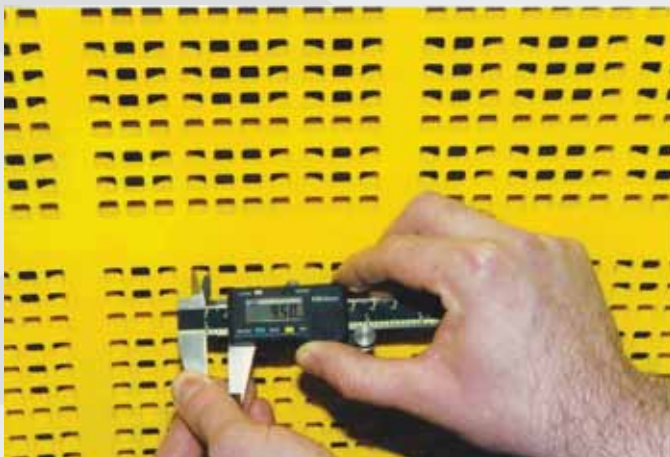
## FLOWMAX Modular Screening Systems

US Patent 5,248,043 - 5,346,053

Unified's proprietary FLOWMAX polyurethane is an extremely adaptable system. This system can be a permanent flat deck or modular (removable) solution using modular tension mats. The universal, patented fastening method provides substantial locking area.

### Benefits of FLOWMAX Polyurethane

- Longer life — can last 15 times the life of wire cloth and more — greater cost savings
- Reduced plugging and blinding; better production performance
- Variety of materials available; ethers, esters at 60A - 90A durometer
- Easy installation
- Flexible installation options



*Polyurethane screening surfaces can last more than 15 times the life of wire cloth. Unified makes a wide variety of polyurethane screens, including our FLOWMAX screens that reduce plugging and blinding. FLOWMAX screens have up to 25% more open area compared to competitive screens.*

### FLOWMAX is Easy to Install

The tensionable FLOWMAX frame is constructed out of heavy duty steel. The frame dimensions are the same as the wire cloth screen the polyurethane system replaces. Installation is exactly the same as a wire screen. Special tools or labor skills are not required.

1. Simply position the module in the frame along one edge. The modules themselves install with an ordinary rubber mallet.
2. Strike the opposite edge with a mallet. Continue down the edge until the module is completely seated.
3. Install the FLOWMAX frame, with modules, into your screen deck as you would any wire cloth screen. Install subsequent modules in a similar fashion until all are installed.

That's all there is to correctly install a FLOWMAX Polyurethane System.



# Polyurethane

## FLOWMAX offers many advantages over other Synthetic Systems

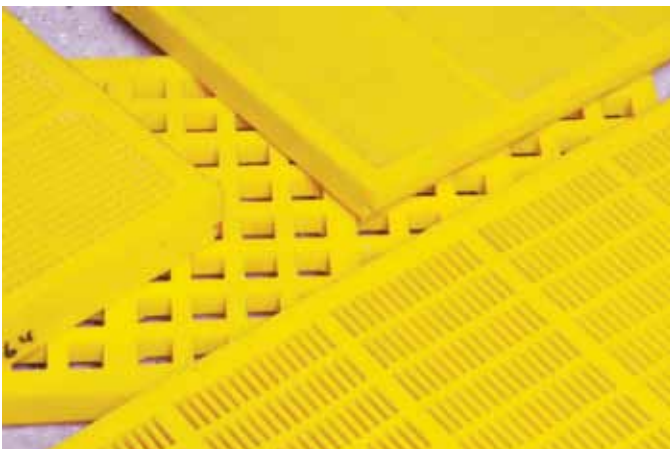
FLOWMAX is an extremely adaptable system offering either a modular tension mat or a permanent flat deck solution.

### FLOWMAX is the Modular Solution

FLOWMAX modules allow replacement of worn areas without replacing the entire screen. Modules are available in 12" x 24" or 12" x 12" panels, giving you the best use of available area plus optimum efficiency in replacement and maintenance.

No matter which installation option you choose, FLOWMAX offers a universal, patented fastening method, providing substantial locking area. There are no pins, plugs or other loose parts required.

Modules are interchangeable between a permanent and removable frame system.



### Comparable Cost

Synthetic screening surfaces can last about 15 times the life of wire cloth screens.

### Reduced Plugging and Blinding

FLOWMAX has exceptional resilience which helps eliminate plugging and blinding in most cases.

Tapered apertures allow a clean break away of material after passing through the opening.

### Greater Production

FLOWMAX systems outperform other synthetic systems due to an increase in the percentage of open area.

### We offer a Variety of Material Compounds

FLOWMAX modules are available in polyester, polyether, rubber and specialized compounds ensuring the correct surface for your demanding application.



### Polyurethane Permanent System Adaptors

Allows you to retrofit your permanent screen to woven wire cloth.

### FLOWMAX Modular Polyurethane Systems

Modules manufactured with compounds suited for any application to meet your screening requirements

- Permanent Decks
- Removable Decks
- Openings from 1/64" to 3-1/2"
- Thickness from 30mm to 70mm



### TwinThane Polyurethane Tension Mats

Polyurethane tension mats are available in either polyester or polyether, and are suited for wet and washing applications.

- Cable or steel tube reinforced
- Openings to 2.50"

# Polyurethane

## FLOWMAX Designed for Your Demanding Application

*Choose the screen design best for you.*

### Tension Mats

#### Polyurethane or Rubber

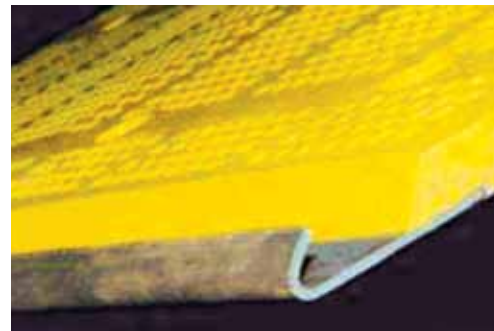
- Tension mats are available in either polyurethane or rubber with molded or punched tapered openings. No deck modifications
- Tension mats require no screen deck modifications and are as easy to install as wire cloth. Custom fit
- Each tension mat is manufactured to match your specific screen deck requirements

### Modular Tension Mats

- FLOWMAX modular tension mats combine the convenience of a tension mat with the benefits of a modular system. Replace a module in seconds, or the entire system in minutes. No commitment to permanent deck change or modifications
- A FLOWMAX change-out to wire is just another change. No hassle with special parts or tools

### Permanent Flat Decks

- Greater production
- Flat screening surface means better material distribution and higher screening efficiency
- Permanent installations have very low maintenance requirements



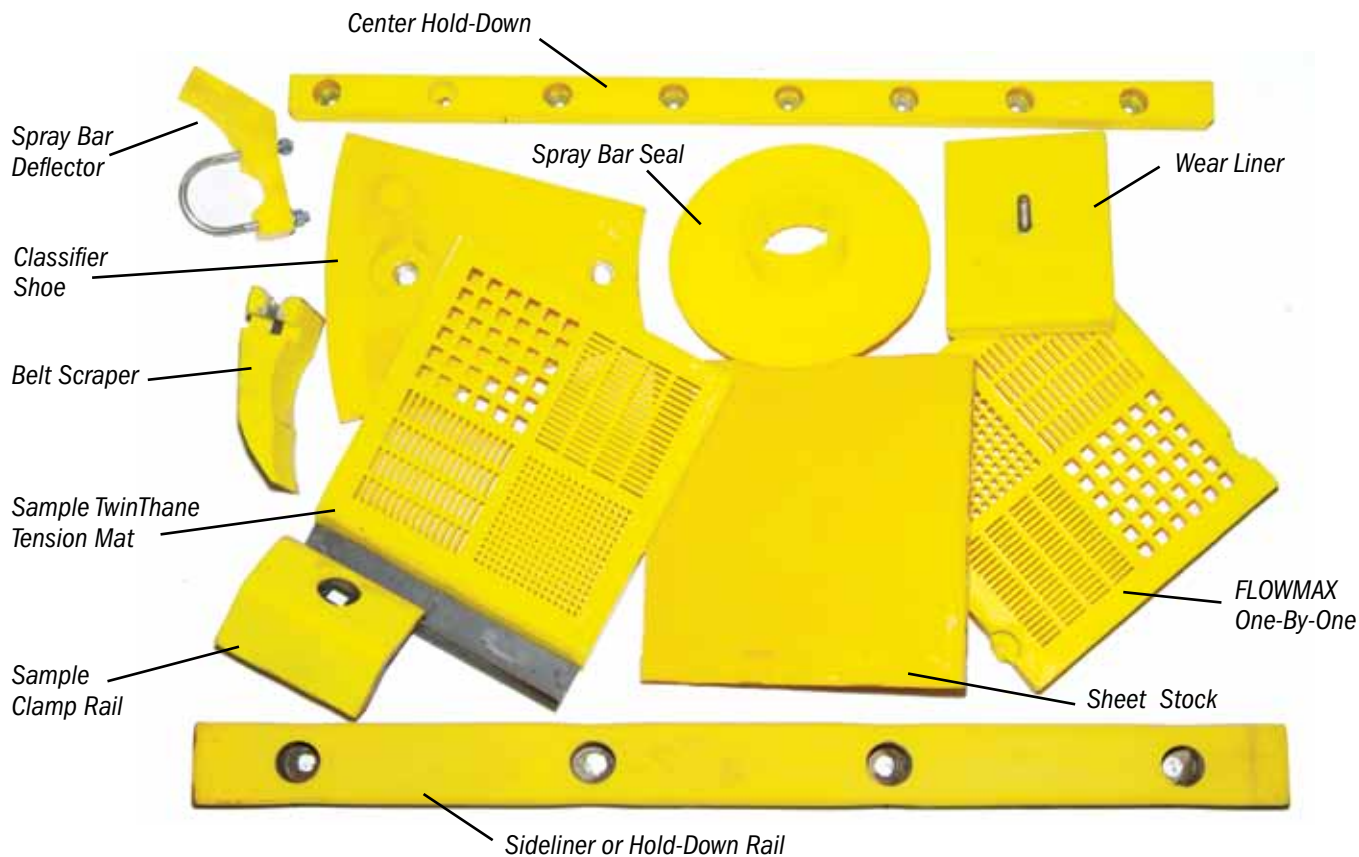
### TwinThane Tension Mats

TwinThane, Polyurethane, tension mats solve your toughest screening problems. Made from aggregate proven polyester compounds, TwinThane withstands abrasion, impact, pegging, and blinding.

### Other Accessories

Replacement parts for most systems.

See page 28 for more polyurethane accessory information.



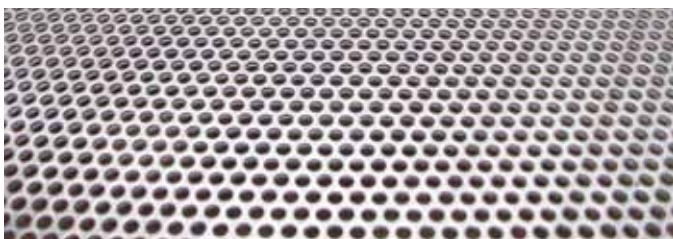


# Perforated Plate



## Steel and Rubber-Clad Perforated Plate

Perforated or “punch” plate provides a more accurate screening surface than conventional wire cloth with square openings. Punch plate is available in hexagonal or round openings that are much more efficient at screening material of a specific size. Openings can be staggered to prevent material from “riding the bar” and tapered to help prevent blinding.



## High carbon steel perforated plate

This product offers maximum open area with superior impact resistance and good wear resistance against wet or dry materials. Customers may select square, round, hexagonal or slotted perforations, which remain uniform.

We also offer AR200, AR400, AR500, 85B, H2L, T-1 and XAR-15 materials.



*Rubber-clad punch plate in 4' x 6' panels*

## Rubber-clad perforated plate

Rubber provides excellent wear resistance against wet or dry materials, very good impact resistance and moderate open area.

Ideally suited for scalping applications, a tough rubber surface is molded to a full steel backing plate to provide increased abrasion and impact

resistance to the load bearing ability of the steel plate. This product can be manufactured in rubber compounds suited for dry or wet application and for crushed or natural products. Openings range from 1” to 10” . . . round or square and rubber thickness from 1” to 5” with a steel backing thickness from 1/4” to 1/2”. Rubber thickness is determined by size and weight of material.

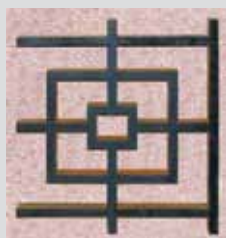
## Other Steel Screening Media

These screening products are widely used for primary/secondary/tertiary grading of material and dewatering. They're also used for operator protection and as machine guards in heavy industrial environments.

## Special Cut Plate

We can fabricate any hardware or metal type with tapered openings to fit your specific application. We'll cut any shape in sizes up to 8' x 12' and any plate thickness up to 10". Our unique jet cut plate production includes the following capabilities:

- Water jet cut plate
- Certified welders
- Spot welders
- Specific tooling and edging
- Design engineers



## Profile/Wedge Wire Screens

Material can be welded into frames.



# Rubber



Rubber and wire cloth screen deck with rubber side tension rails

## FLOWMAX rubber modular system:

For high impact screening applications, processing dry material, scalping applications, when there is a high percentage of crushed material. Rubber costs less than polyurethane and generally lasts longer than wire cloth.

### Toughness

#### TwinFlex Heavy

- Cable or steel frame reinforced
- Openings from 1" to 3"
- Thickness from 1" and up
- Molded openings

#### Rubber Scalping Screens Designed for High Impact Materials

- 60 durometer wear resistance rubber
- With or without skid bars
- Full range of openings: square, rectangular or round holes
- Bolt down or hooked
- Full steel back 1/4", 3/8" or 1/2"
- Special hole patterns available

#### TwinFlex

TwinFlex Rubber Tension Mats are manufactured with abrasion resistant rubber and are ideally suited for dry applications with a high percentage of crushed material.



Rubber Grizzly Screens for high impact at the feed end of the deck. Note: Center boulder weighs 3 tons.

## Cost Efficiency

Rubber Vibratory Floor Liner with Rubber Grizzly (bottom view). The wear life is 3-4 times more than AR Plate or 10-15 times more than wire cloth.



## Key Benefit by Product

**Toughness:** TwinFlex Standard & TwinFlex Heavy

**Durability:** TwinScalp Screens

**Flexibility:** Rubber Graphite Liners and Tension Mats are used for specific wet areas

### TwinScalp

Ideal for high impact dry scalping applications.

- Backed with 1/4", 3/8" or 1/2" thick steel plate
- Openings from 2" and up
- Thickness from 2" to 4"
- Installs with clamp rails or bolts in place
- Customized for any application



Rubber Scalping Screens / Rubber Clad Punch Plates.



# Rubber



*Belt Feeder with Canoe Liners on either side shown after 6 months of wear*

## Why Use Rubber?

Offers excellent resistance to impact and abrasion. Ideally suited for scalping applications or on the feed panel of any top deck. Will outlast conventional wire cloth or steel plate. Available in full panels, hooked or bolt-on, and in any modular system.

- Dry/High-Impact materials
- Rubber Modular Systems
- Costs less than polyurethane and generally lasts longer than wire cloth

## Durability

### Rubber Canoe Liners

Manufactured with an all steel backing plate. Used under crusher or hoppers at the feed end of the conveyor. Protects steel surfaces with rubber.



## Flexibility

### Rubber Graphite Liners

- Prevents sticky buildup
- Easy replacement and installation
- Increased wear life
- Used in feeder bins, chutes, feed and discharge lip liners
- Eliminates clean-out downtime



*Discharge end of belts showing end of Rubber Canoe Liners*

### Rubber TwinFlex Standard

- Fabric backed
- Punched openings from 1/4" to 3"
- Thickness from 1/4" to 2"

## Rubber Chute Liners

- Modular system 12" x 12" to 24" x 24" or tailor made to any chute, bin and hopper
- Very cost effective in high impact / abrasion applications
- Significantly outlasts mild steel and AR Plate
- Available with graphite mix to eliminate materials build-up



## Floating Feed Cone Liners & Hoppers

- Main Frame Liners
- Feed Plates

## Benefits

- Protects OEM product
- Lowers noise
- Easy replacement

# Crusher Wear Parts



## Need manganese? We've got it

Unified Screening & Crushing maintains one of the industry's largest inventories of ready-to-ship manganese steel cone crusher parts. We stock a diverse range of jaws, cones and gyratories, gyradiscs, vertical and impact crusher parts in various alloys and grades from 5 lbs up to 40,000 lbs. And we sell to quarry and mining operations worldwide. So no matter what manganese parts you need, or when and where you need them, all you have to do is call Unified.

### Some of our available products:

- Torch/burn rings
- Nut caps
- Nut protectors
- Shaft nuts
- Mantles (upper/lower)
- Concaves
- Concave segments
- Bowl liners
- Main shaft sleeves
- Feed/distributor plates
- FLOWBAK - Non-hazardous backing material
- Blow Bars (HSI)
- Curtain Liners
- Impact Plates
- Stationary/fixed Jaws
- Movable/swing Jaws
- Side/cheek/key/heel plates
- Wedges
- Anvils (VSI)

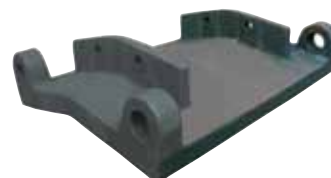


FLOWBAK - Non-hazardous backing material



## Any crusher, any part

Unified supplies replacement wear parts for almost any crusher made today or yesterday. Our experienced in-house staff can engineer or re-engineer any part your crusher needs. We can provide cavity profiles to help you choose the one that provides the most throughput and longest wear life — the right parts to maximize your operation.





# Crusher Wear Parts



Partial - East Coast Manganese Yard



Partial - West Coast Manganese Yard

## The Best Castings — Guaranteed

Unified Screening & Crushing can supply castings in several grades of manganese and alloys. Our extensive quality control program assures proper fit and wear. We guarantee that all alloys will meet or exceed industry standards for chemical composition and physical properties. Ask us for details.

Unified's main objective is to provide the best service and highest quality products with competitive pricing.

### Alloys

- Standard MN: 11.5 – 14.5%
- 18% MN: 16 – 18%
- 21% MN: 21 – 24%
- MNX50 proprietary



### Inventories

Unified stocks hundreds of premium quality cone & jaw crusher wear parts, ready for immediate shipment from multiple locations around the country. We have more than 10,000 patterns available. If we don't have a pattern for your make of crusher, we'll be happy to discuss making one for you.



Various VSI Wear Parts

## Unified's VSI Vertical Shaft Impactor Parts

Unified provides impact wear parts in a range of wear resistant alloys, including high-chrome white iron martensitic steels - with or without ceramic inserts and manganese steels.

Impact wear parts can be customized upon request.



VSI Wear Table

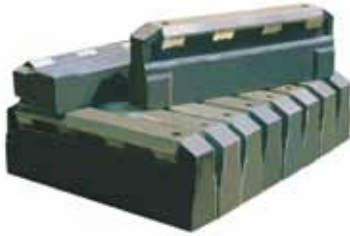
# Crusher Wear Parts

## Worldwide Market

Unified Screening & Crushing sells worldwide to quarry and mining operations. We supply wear replacement parts for all OEM crushers and any unique applications.

## Horizontal Shaft Impactor Parts / HSI - Blow Bars

Unified has a large stock of HSI wear parts throughout our locations. Call us for more information on all instock items including ceramic wear inserts.



## Cone, Jaw and Impact Crusher Replacement Parts

Unified can supply parts for the following Original Equipment Manufacturers

- |                  |                 |                   |
|------------------|-----------------|-------------------|
| • ABM            | • Extec         | • Metso           |
| • Allis Chalmers | • Farrel Bacon  | • Minyu           |
| • Armadillo      | • Gator         | • Missouri-Rogers |
| • Austin Western | • Hartl         | • Nordberg        |
| • Baxter         | • Hazemag       | • Pegson          |
| • Birdsboro      | • Hewitt-Robins | • Pettibone       |
| • Buchanan       | • Inertia       | • Pioneer         |
| • Bl-Pegson      | • I-Rock        | • Sandvik         |
| • Bohringer      | • ISC           | • Spokane         |
| • Canica         | • JCI           | • Stedman         |
| • CEC            | • Kangwon       | • Svedala         |
| • Cedarapids     | • Kleemann      | • Symons          |
| • Cemco          | • Kobelco       | • Telsmith        |
| • Clemro         | • Komatsu       | • Tesab           |
| • Diamond        | • Kue-Ken       | • Torgerson       |
| • Eagle          | • Kurtz         | • Traylor         |
| • El-Jay         | • Lima-Hamilton | • Trio            |
| • El-Russ        | • Lippmann      | • Universal       |
| • Excel          | • Lokomo        |                   |





## Other Unified™ Products



Offered in full faced rubber, steel (double faced), or, urethane (clad)

### Screen Rails Clamping Rails

Available in many styles. A-36 steel rails are standard.

#### Steel

**Money-Saver rails.** 3/8" or 1/4" thick steel hole protector patch welded onto the steel rail.

The recessed holes in the Money-Saver, heavy-duty steel, double-faced heavy-duty steel and rubber rails reduce head wear on the tension bolts.

**Double faced heavy duty rails.** 3/8" or 1/4" thick steel double faced wear strip welded on the steel rail.

**Rubber rails.** 1/2" rubber vulcanized onto a 5/16" steel rail, backing plate in between.

**Rubber full-faced rails.** Due to the flexibility of the patented vulcanized rubber tread design, large rocks hitting the rubber flex it inward instead of penetrating and breaking the rubber.

#### Polyurethane Clad Rails

### Screen Tension Accessories



### Screen Bolts and Fasteners

- Bolts, nuts and washers
- Bolts in various steel grades
- Shaker Screen Bolts
- J-Bolts
- Slotted pin and wedge tensioning assemblies
- All Bolts are available from stock in a wide range of sizes and style



Channel Rubber - Some profile options

### Channel Rubber

Available in 60-75 durometer, flat-top or round-top and 50' and 100' rolls. In stock for immediate delivery.



Channel Rubber

#### Round Top Long Leg

- Available in 1/4", 3/8" & 1/2"

#### Heavy Hex

- Available in 1/4", 3/8", 1/2" & 3/4"

#### New - extra wear life channel rubber-XMBR (3/8" available)

- Channel urethane
- Available in 1/4" & 3/8"

### Pulley/Tack-on-Wing Repair Kit

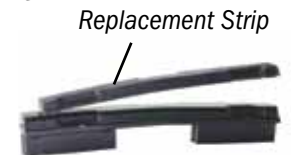
1/2" natural rubber vulcanized to a precision formed steel backing plate which is easily tack-welded to the pulley. One size pad fits all pulleys. Field cut to any pulley length. This product replaces worn out lagging at 1/4 the cost of a new pulley. You replace only the rubber lagging, not the pulley. Outlasts steel three-to-one and installs in minutes on site.



Tack Lag

### Tack-On Wing Pulley Repair Kit

1/2" thick vulcanized rubber on a precision formed steel backing plate. Bent with a 3/16" crown. Replaceable lagging, shown in photos to right.



Replacement Strip

### Other Polyurethane Products & Accessories

High quality polyether and polyester urethane compounds in durometers from 60 to 95 Shore A.

Products are engineered for the most demanding applications.

- Classifier Shoes
- Clamp Rails
- Chute Liners
- Urethane Sheets and Rolls
- Spray Bar Deflectors — Available in 1-1/2" & 3" Pipe

### Pipe Patches

#### Magnetic Urethane Pipe Patches

Available in a variety of diameters (12 different sizes). Also available - curved or flat.



Pipe patches have a 1-3/8" nominal thickness.

## Other Unified™ Products



### MINING & QUARRIES

- The Miniveyor is a modular conveyor system with connecting lengths of 10' or 15' sections. This system is durable and designed for flexibility in confined space areas.



### Miniveyor Specifications:

Unit length = 10' -or- 15'

Unit depth = 7.5"

Weight per unit = 160 lbs.

Choice of 370 or 550 W motor



### Confined space VAF fans and blowers

Where fumes, smells or dust occur, the Miniveyor Air VAF fans can move contaminated air out of a confined space or building. They effectively exhaust fumes, ventilate confined spaces, and increase the flow of fresh air.

The Miniveyor Air range are tough! The rugged VAF ventilators easily withstand blows without denting, giving less downtime and greater productivity and come with an industry leading 10 year warranty on the body.



**VAF-200** Only 7.5 kg the VAF-200 is our smallest and newest Ventilator. Don't be fooled by it's size though as the VAF-200 has an impressive 1350 m³/hr (800 CFM) airflow and is available in either 110V Or 230V. Shown with ducting.



**VAF-300** Our most popular Ventilator!, available in either 110V or 230V. Too much dust to see safely? Filter out the dust by using our 200 litre filter in combination with the VAF-300.

Also **Model # VAF 300P-FRL** is the air driven version of model 300 – comes with a filter regulator and lubricator fitted as standard...a high safety blower.



**VAF-400** Available In 110 & 230V. For maximum airflow the VAF- 400 provides amassive 7500 m³ per hour (4400 CFM) air flow. (Shown with VAF-200 & VAF-300)

### Miniveyor

#### Portable Conveyor System

- Moves 20 tons per hour
- Available in 15" and 20" widths
- Capable of ground-level functions
- Reversible belts
- Composite filled cores – add strength & save weight
- Units lock together, so they can provide up 26 feet of unsupported spans



### Conveyor Parts & Components

#### Belting

Sizes: Widths of 24", 30", 42" and custom widths available.

#### Belt Clips & Fasteners



Belt Scrapers -  
Polyurethane & Rubber

#### Belt Scrapers

#### Idler/Accessories

#### Skirt Board Rubber

All sizes available.

#### Canoe Liners

Steel backed, longer lasting (see page 26).





*Used in manufacturing and food processing, chemical processing and for all bulk solids*

If a material can be drawn into wire, Unified can usually weave it into an industrial wire cloth product – with openings from 12 inches down to 2 microns. Wire cloth or mesh is ideal for a huge range of filtering and straining applications, and can serve as a substrate, barrier or conductor.

## Industrial Fine Mesh Screens

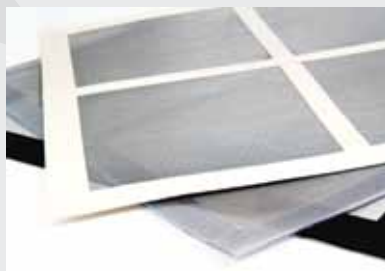
Unified manufactures fine mesh screen out of any commercially available wire mesh including bolting cloth and mill grade. Meshes range from 1 mesh to 800 mesh. These screens are used to process bulk and powdered products. Industry applications include food processing, pharmaceuticals, minerals, industrial sand, with screens to fit Tyler, Midwestern, Sprout Bauer and more.

## Fine Mesh Hooked Screens

Unified's fine mesh hooked screens are designed to fit a wide variety of OEM applications and equipment. A wide range of hook styles and edge treatments, such as plain formed edges and reinforced shroud banded edges, are available with all shroud alloys including galvanized, stainless and others. Our sales team works with you to make sure you get the correct edge preparation and screen size for proper fit on your vibrating screen decks.

## Fabric, Metal & Vinyl Edges

Unified offers mesh screens with fabric, metal and vinyl edges to fit equipment from ROTEX, Tyler, Hummer, Sweco and other OEMs. Metal edges are generally for heavier materials processing, scalping and ball supports. Fabric edges, including high temperature edging, are often used in food processing and high heat applications, while vinyl edges are used to meet high sanitary processing requirements.



*Screens to fit ROTEX, Sweco machines and more*

## Pre-tensioned Screens

Most commonly known as Sweco, or round-style screens, these screens are typically used in vibrating round separators to separate solids from liquids or to size dry material particles. Unified can supply any mesh size from 1 mesh to 800 mesh, in screen diameters up to 6' x 6'.

## Security — Including Zoo Cages & Jails

A far tougher, more secure alternative to heavy glass partitions. Wire cloth partitions provide a secure barrier while letting you see what's happening on the other side. Ideal for tool cribs, secure institutions such as jails and penitentiaries, public housing and for retail loss prevention. Also used for animal enclosures in zoos and research facilities.



*Zoo cages*

## Bulk Processing — Agriculture, Food & Chemical Processing

Similar to aggregate and mining applications, wire cloth is widely used for grain milling and processing applications such as grain cleaners, grain dryers and seed grading. Wire cloth is ideal for situations where screening and sizing of bulk materials must withstand weight, abrasion, heat and nonstop processing.

Many manufacturing applications require materials that perform in extreme temperatures and harsh chemicals. That's why wire cloth is used for applications such as furnace drip screens, catalyst screens and scale traps. It's a great material for heat treating baskets.

## Bulk Processing Screen Offerings

- Screens for Grain Milling and Processing
- Grain Cleaners
- Grain Dryers
- Seed Grading
- General Bulk & Powdered Products
- Pharmaceuticals
- Minerals & Chemicals

# Industrial



## Architectural Mesh

From stylish partitions to security cages, Unified industrial wire mesh is used in dozens of architectural applications. One of the most versatile materials available to architects and engineers, Unified wire mesh delivers strength, stability and security with a unique aesthetic quality. There's also a wide selection of materials — including exterior weathering steel, stainless steel, aluminum, brass and copper — for the right combination of appearance and durability.

Unified has full in-house capabilities to support your architectural application. Our engineering team is happy to consult with you on design and materials. Our manufacturing facilities can perform just about any type of architectural mesh fabrication such as cutting, forming, rolling and welding. We can build and ship complete mesh panels ready for installation to save you time and money on the job site.



## Architectural mesh applications

- Railing infill
- Decorative partitions
- Safety guards for industrial equipment
- Safety guards for walkways and playgrounds
- Security partitions for jails, zoos and secure storage
- Sun screens and light diffusion
- Sound abatement
- Radio frequency interference shielding
- Graffiti prevention
- Signage

## Architectural VineScreen™

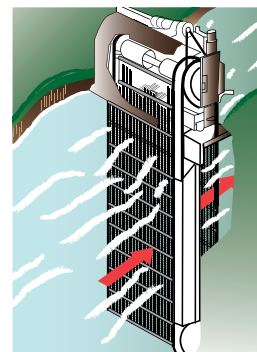
VineScreens are used for green space architectural projects. This unique modular system can fit into any area. Call us for any size project.



## Utility Screens

### Water Intake Screens: Traveling and Stationary

Screening water intake systems for effective and clean filtration. Solutions include a combination of various wire mesh types with urethane borders.



### Directed toward Oil Refinery/ Power Plants/Utilities.

Unified knows power plant applications: furnace drip shields, vibrating coal screens, traveling water basket screens and other plant components. Unified also meets NRC regulations for nuclear power applications such as stainless steel cooling tower screens.

## Specific Products Include

- Furnace Drip Screens
- Catalyst Screens
- Scale Traps
- Woodpecker Protection Screen



Drip Shields

## Heat Treating Applications: Manufactured from high tech alloys

- Baskets
- Trays
- Racks

## Mobile and Heavy Equipment Applications:

- Radiator Protection
- Ventilation
- Fan and Pulley Protection
- Operator Protection
- Vandalism Deterrence
- Detention

## Foundry Applications:

- Screens for sand recycling
- Screens for cask vents
- Sifters for fine materials





# Unified® Screening & Crushing

## Crusher Wear Parts



## Polyurethane



## Wire Cloth



## Rubber



Unified™ Screening & Crushing products  
perform better on the job because  
**They Are Inspired By The Job!**

Call: 866-968-3697 • Web: [unifiedscreening.com](http://unifiedscreening.com) • E-mail: [info@unifiedscreening.com](mailto:info@unifiedscreening.com)



# **Unified® Screening & Crushing**

## **WEST**

### **Unified Screening & Crushing Arizona**

230 North Sunway Drive  
Gilbert, AZ 85233  
800-332-6463  
sales.dbc@unifiedscreening.com

### **Unified Screening & Crushing California**

8300 West Elowin Court  
Visalia, CA 93291  
800-535-2221  
sales.cwc@unifiedscreening.com

### **Unified Screening & Crushing Colorado Wire Cloth**

409 Goodrich Avenue, PO Box 160  
Platteville, CO 80651  
800-332-6280  
sales.colw@unifiedscreening.com

### **Unified Screening & Crushing Nevada**

4330 W. Desert Inn Road, Ste.-K  
Las Vegas, NV 89102  
702-222-9799  
sales.cwclv@unifiedscreening.com

### **Unified Screening & Crushing Utah**

1458 South 700 West  
Salt Lake City, UT 84104  
801-975-6482  
sales.waw@unifiedscreening.com

### **Unified Screening & Crushing Washington**

22020 72nd Avenue  
Kent, WA 98032  
800-562-1971  
sales.wac@unifiedscreening.com

## **CENTRAL**

### **Unified Screening & Crushing Arkansas**

#6 Industrial Park  
Benton, AR 72015  
800-458-2770  
sales.rss@unifiedscreening.com

### **Unified Screening & Crushing Michigan**

305 East Walker Road  
St. Johns, MI 48879  
888-464-9473  
sales.mwc@unifiedscreening.com

### **Unified Screening & Crushing Minnesota**

3350 Highway 149 South  
PO Box 21068  
Eagan, MN 55121  
800-328-0225  
sales.tcw@unifiedscreening.com

### **Unified Screening & Crushing Ohio**

200 Cass Drive  
Clayton, OH 45315  
800-626-1897  
sales.owc@unifiedscreening.com

### **Unified Screening & Crushing Texas**

9235 Margies Lane  
Selma, TX 78154  
800-470-9473  
sales.twx@unifiedscreening.com

### **Unified Screening & Crushing Wisconsin**

400 Wisconsin Drive  
New Richmond, WI 54017  
800-328-0225  
sales.wwc@unifiedscreening.com

## **EAST**

### **Unified Screening & Crushing Florida**

759 S. E. Federal Hwy., Ste. 310  
Stuart, Florida 34997  
772-210-2618  
sales.fl@unifiedscreening.com

### **Unified Screening & Crushing North Carolina**

136 Crestwick Road  
Ramseur, NC 27316  
877-784-9791  
sales.cwac@unifiedscreening.com

### **Unified Screening & Crushing Polythane**

5654 Virginia Byway  
Bedford, VA 24523  
800-328-0225  
sales.pva@unifiedscreening.com

**Contact Us At  
Your Local  Unified®  
or Distributor Location  
866-968-3697**

