

# Productivity Tools



**Mini Catalog**



# 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:

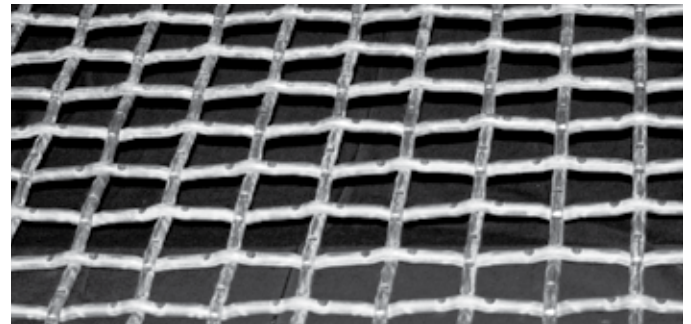


## Rubber

Scalping applications and coarse dry screening.

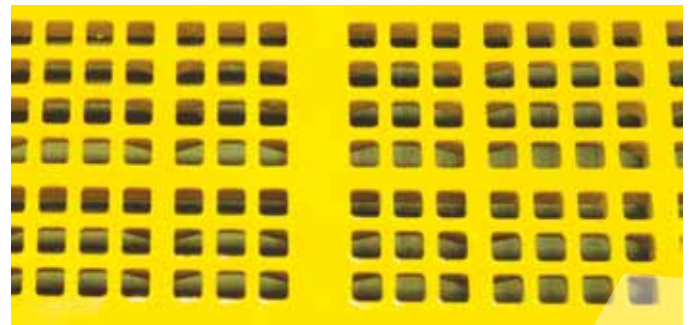
Crushed or natural, impact resistance and extended wear life in dry screening applications. Rubber Clad with full steel backing for high impact and/or heavy applications. TwinFlex fabric, or steel frame reinforced, for medium to fine dry screening. Low maintenance and high cost effectiveness in applications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

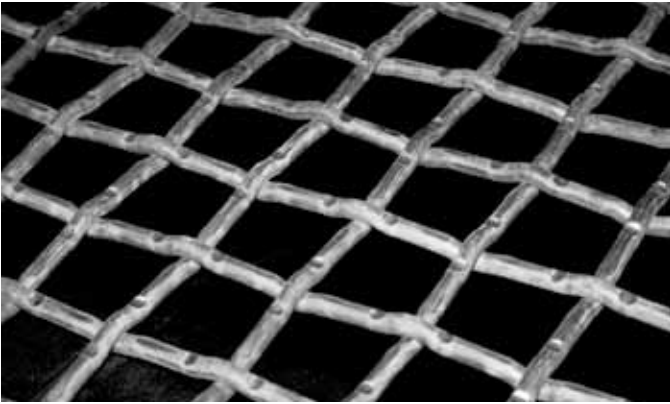
- More throughput and production
- Readily available
- Less expensive than rubber or polyurethane
- More adaptable design options
- Up to 10 foot wide widths and variable length options



## 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

# 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 is a substitute for oil tempered wire that offers greater ductility (flexibility) and tensile strength. In some applications, Tufflex wire has proven to last almost two times as long as oil tempered wire.

### 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*

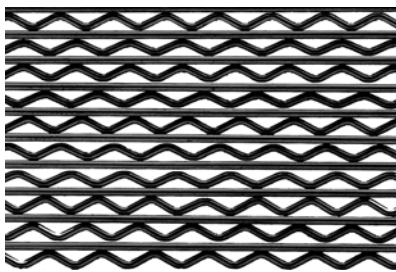


# Wire Cloth - Clean Screens



**FLOWMAX 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.



## 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 FLOWMAX Clean Screen for sizing applications

## D-Style (Diamond) Screens

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



## H-Style (Herringbone) Screens

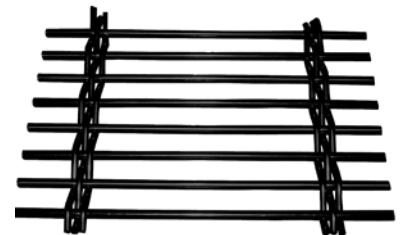
- Herringbone weave pattern
- Prevents roots, grass and other debris from clogging the screening surface
- Used where the gradation from raw to finished product is not large
- Recommended only for light applications



## T-Style Screens

FLOWMAX 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*

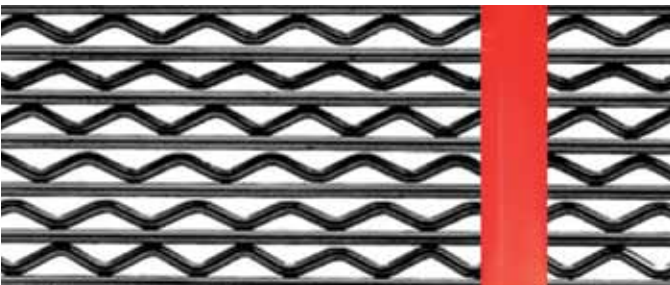
## **SuperFlow**

An exceptionally long-lasting, self-cleaning screen that's achieved by replacing the woven wire clusters of a FLOWMAX 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*



# Polyurethane



Trommel Screens

## FLOWMAX Modular Screening Systems

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

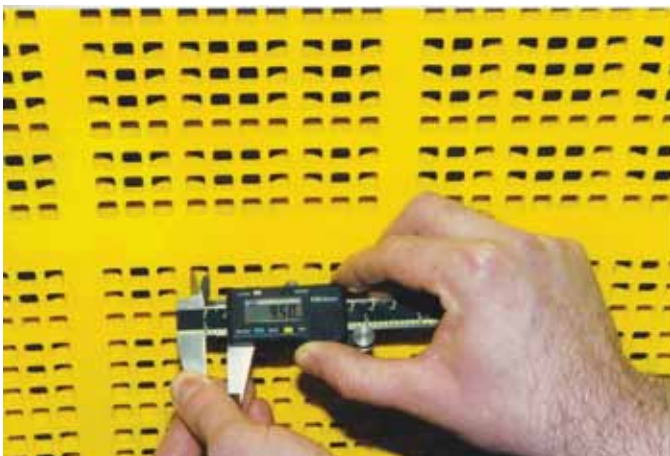
Unified's proprietary FLOWMAX polyurethane is an extremely adaptable system. This system can be a permanent flat deck or modular (removable) solution using modular tension mats. The universal, patented fastening method provides substantial locking area.

### 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

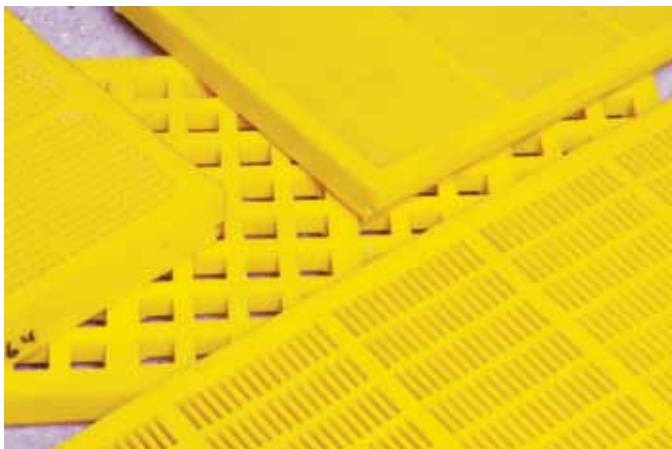
FLOWMAX is an extremely adaptable system offering either a modular tension mat or a permanent flat deck solution.

### 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.



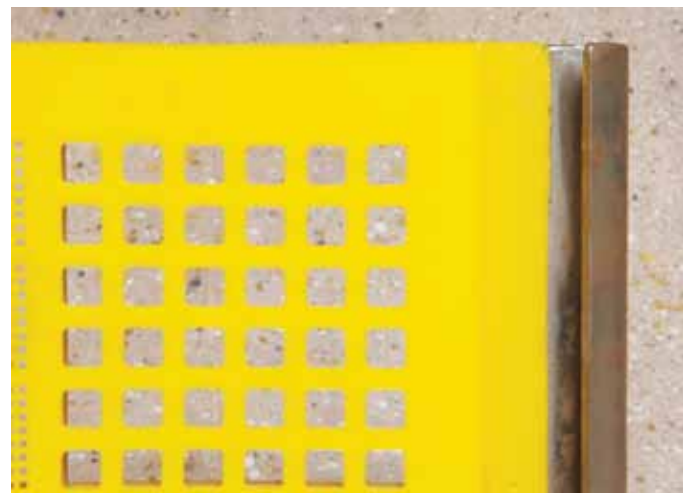
### Polyurethane Permanent System Adaptors

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"



# 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.

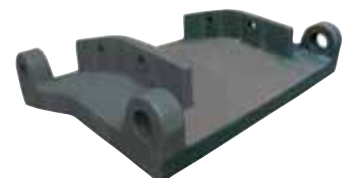
### Some of our available products:

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



## 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

## 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"

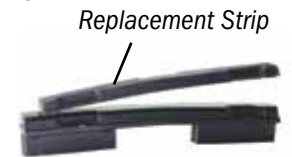
### Pulley/Tack-on-Wing Repair Kit

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-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.



### 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.



# Unified® Screening & Crushing

## Unified Screening & Crushing

### California Wire Cloth

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

## Unified Screening & Crushing

### Diamondback Castings

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

## Unified Screening & Crushing

### Razorback Screen Services

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

## Unified Screening & Crushing

### Wasatch Wire

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

## Unified Screening & Crushing

### California Wire Cloth-Las Vegas

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

## Unified Screening & Crushing

### Michigan Wire Cloth

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

## Unified Screening & Crushing

### Texas Wire

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

## Unified Screening & Crushing

### Washington

22020 72nd Avenue  
Kent, WA 98032  
801-975-6482  
sales.wac@unifiedscreening.com

## Unified Screening & Crushing

### Carolina Wire & Castings

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

## Unified Screening & Crushing

### Ohio Wire Cloth

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

## Unified Screening & Crushing

### Twin City Wire

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

## Unified Screening & Crushing

### Wisconsin Wire Cloth

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

### Polythane of Virginia

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 (866-WOVENWR)



 = Unified Locations

 = Unified Authorized Distributors

