



紅星篩網

RED STAR  
WIRE SCREENS

— SINCE 1989 —

**POLYURETHANE SCREEN  
PANELS**

## ▪ *What is polyurethane?*



- Polyurethane (PU) is a high-molecular synthetic material produced through a polymerization reaction between isocyanates and polyols. By adjusting the raw material ratios and reaction conditions, polyurethane products with vastly different forms and properties—such as elastomers, foams, coatings, and adhesives—can be manufactured.
- The polyurethane screen panels produced by Red Star belong to the category of cast polyurethane elastomers. They combine the high elasticity of rubber with the high strength and wear resistance of plastics, making them a high-performance material specifically designed for harsh operating conditions.

## ▪ Advantages of Polyurethane



### **Superior Wear Resistance**

3–5x more wear-resistant than rubber; outperforms metal in withstanding prolonged impact/abrasion.



### **Elasticity & Self-Cleaning**

High elasticity prevents clogging via secondary vibration—ideal for wet, sticky materials like coal slurry.



### **Hydrolysis & Corrosion Resistance**

Stable in water, weak acids/alkalis; no rust, swelling, or hydrolysis ensures durability in humid conditions.



### **Low Noise**

Reduces operational noise by 10–20 dB vs. metal screens.



### **Lightweight & Easy Handling**

Lower density than steel simplifies installation/transport and reduces machine load.



### **Aging Resistance**

Resists UV, temperature changes, and brittleness over time.



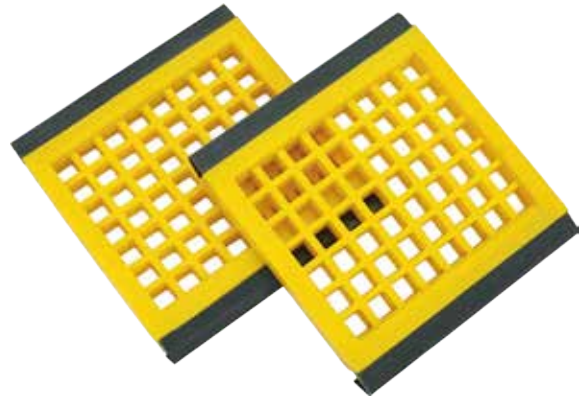
### **High Design Flexibility**

Hardness, elasticity, open-area ratio, aperture shape, and surface properties can be customized via formulation and manufacturing adjustments. This allows optimization for varying material properties and screening requirements, maximizing efficiency and service life.

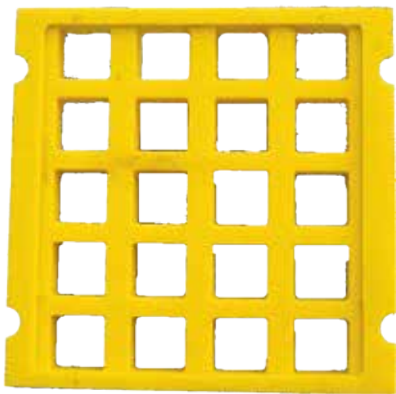
▪ ***Polyurethane Screen Panels in a Variety of Styles***



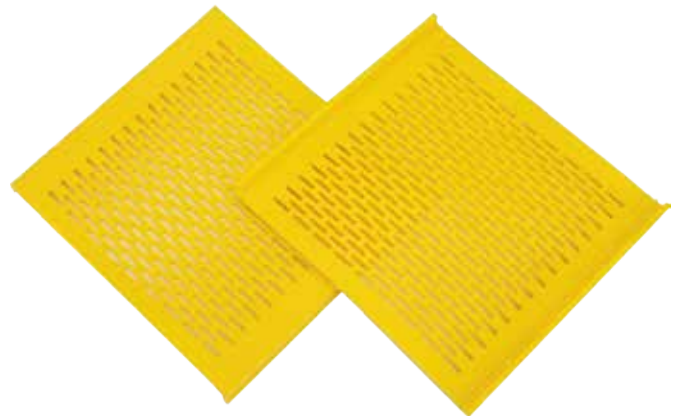
- Polyurethane Dewatering Screen



- Polyurethane Tension Screen



- Modular Polyurethane Screen Panels

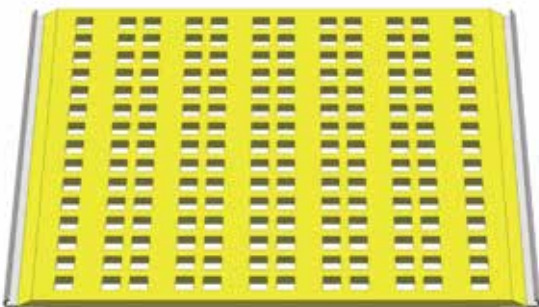


- Polyurethane Flip Flow Screen

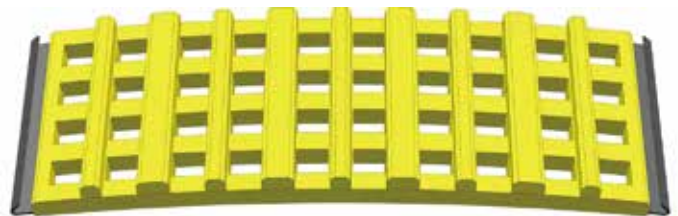
## ▪ *Polyurethane tension screens*

- Polyurethane tension screens offer excellent wear resistance and have a service life that is 3 to 10 times longer than ordinary metal screens and 5 times longer than rubber screens.
- These screens can withstand significant material impact forces and weights because they use steel wire rope as the skeleton material combined with the high elasticity inherent in polyurethane. They are ideal for screening materials with larger particle sizes, greater drop heights, and strong impact forces. Their load-bearing capacity exceeds that of rubber screens by more than 2.5 times.
- They also provide vibration damping and noise reduction. Using polyurethane screens instead of metal screens on the same screening machine can reduce noise levels by 5 to 20 decibels.
- Polyurethane screens are highly permeable to water, which prevents moist, fine-grained materials from adhering to them. Their conical openings reduce clogging and improve screening efficiency.
- Taking into account factors such as screening efficiency, maintenance costs, and service life, polyurethane screens provide superior economic benefits overall compared to conventional metal screens.
- **Screen aperture range:** 0.15–60 mm
- **Screen thickness:** 25–45 mm
- **Hardness range:** 80–90A

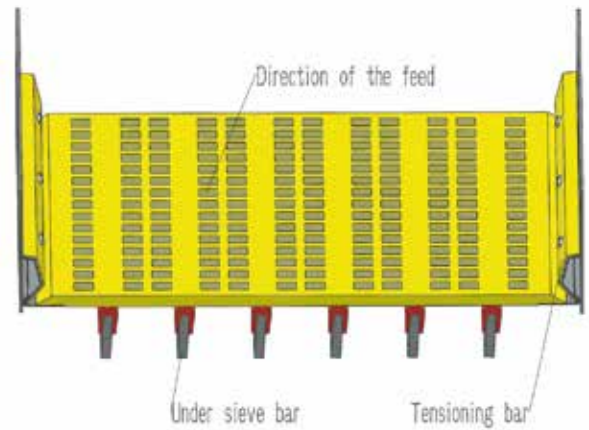
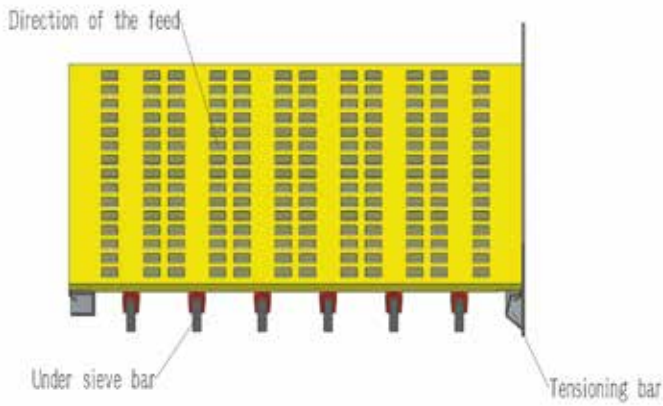
• Ordinary Polyurethane tension screens



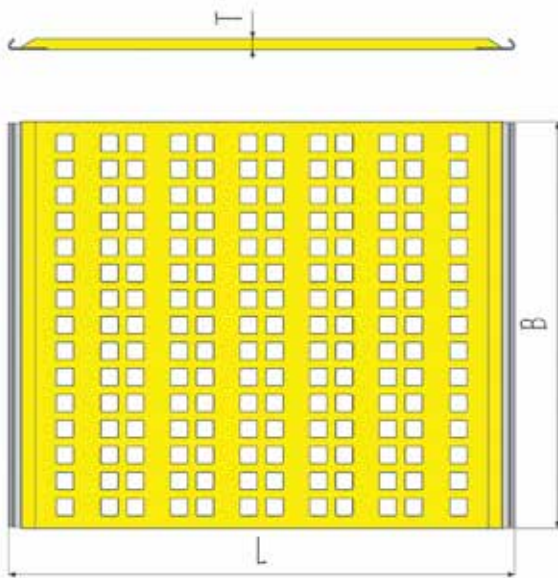
• Load-bearing capacity Polyurethane tension screens



## Various Installation Methods



### Product Specifications

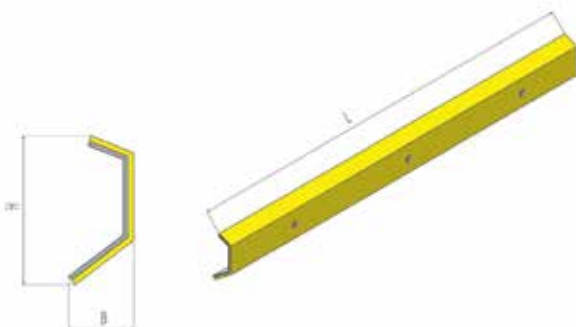


### Various Installation Hook Types

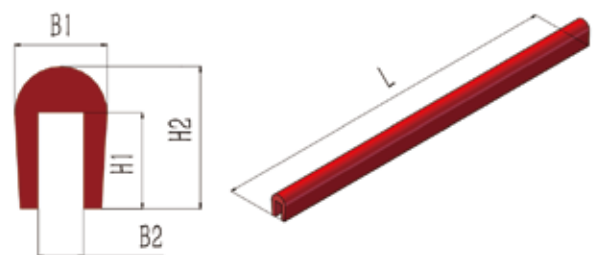


## Accessories

### Tensioned Steel Plate



### Polyurethane Support Bar

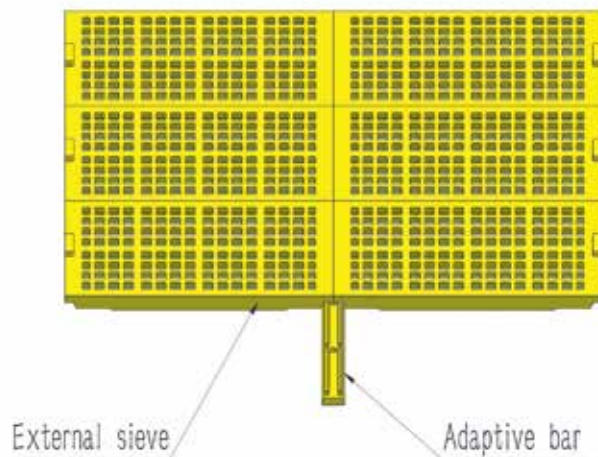
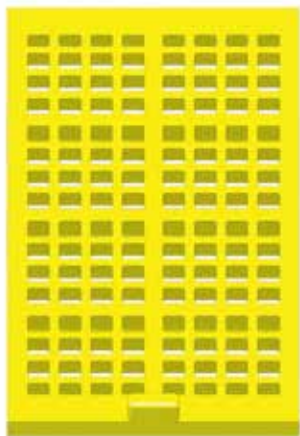


## ▪ **Modular Polyurethane Screen Panels**

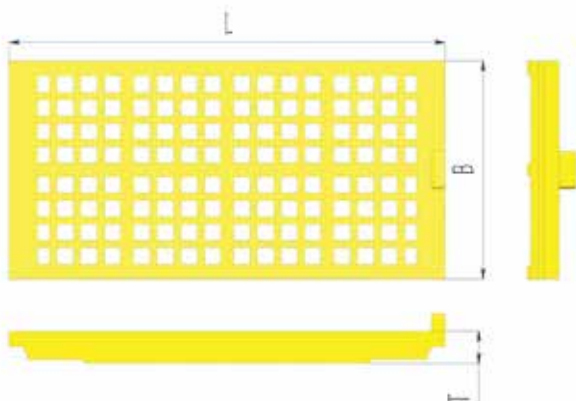
- Thanks to its modular structural design, screen plate units with localized wear can be replaced independently, eliminating the need to replace the entire screen surface and reducing downtime and replacement costs.
- Modular polyurethane screen plates have a service life that is 3-5 times longer than ordinary metal screen plates and approximately 5 times longer than rubber screen plates.
- They are suitable for various models of vibrating screens, and customization is available based on different screen machine dimensions and screening requirements.
- They are available in multiple colors and have an aesthetically pleasing design. There are multiple mounting options for easy installation and maintenance.
- Screen aperture range: 0.15–200 mm
- Screen surface thickness: 25–80 mm
- Hardness range: 65–90A

## ▪ **Installation Method 1**

### Installation Exploded View

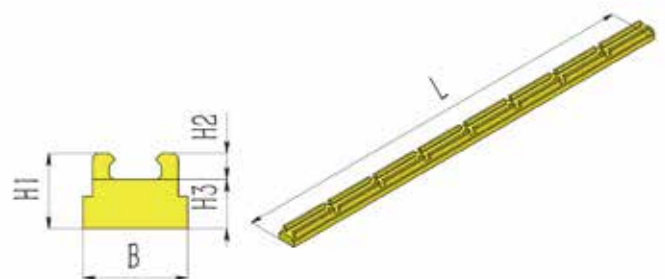


### Product Specifications



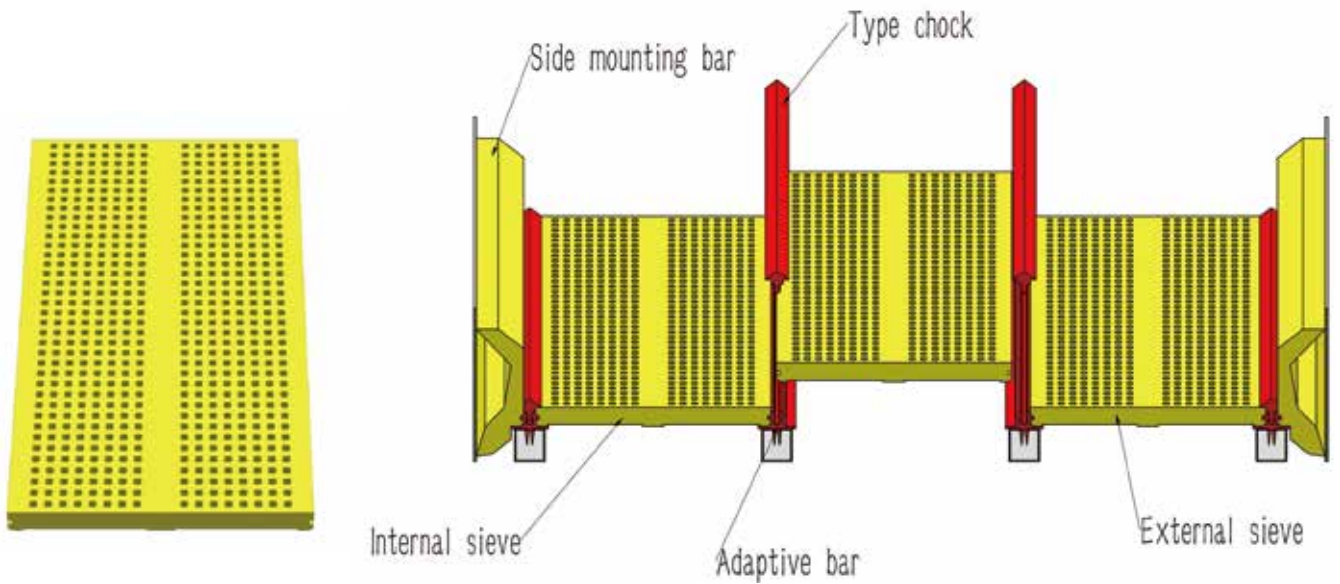
### Accessories

#### Polyurethane Rail Seat

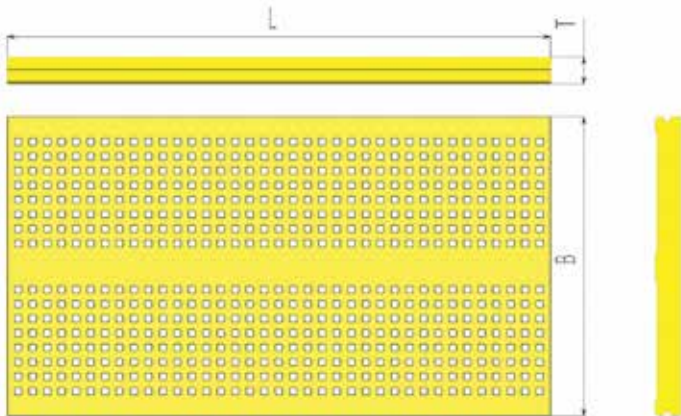


## Installation Method 2

### Installation Exploded View

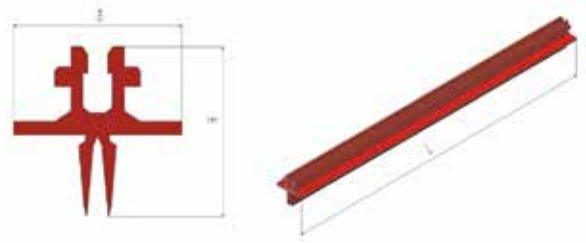


### Product Specifications

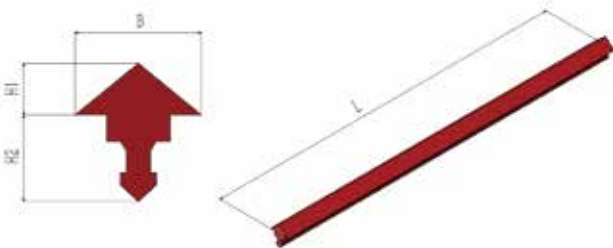


### Accessories

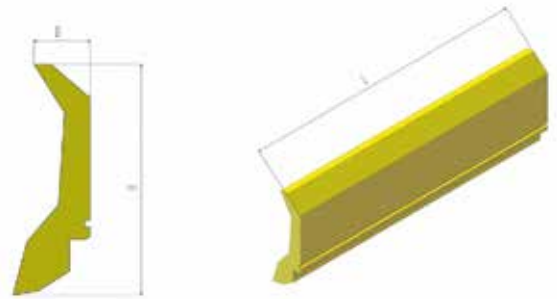
#### Polyurethane Rail Seat



#### Polyurethane Pressure Strip

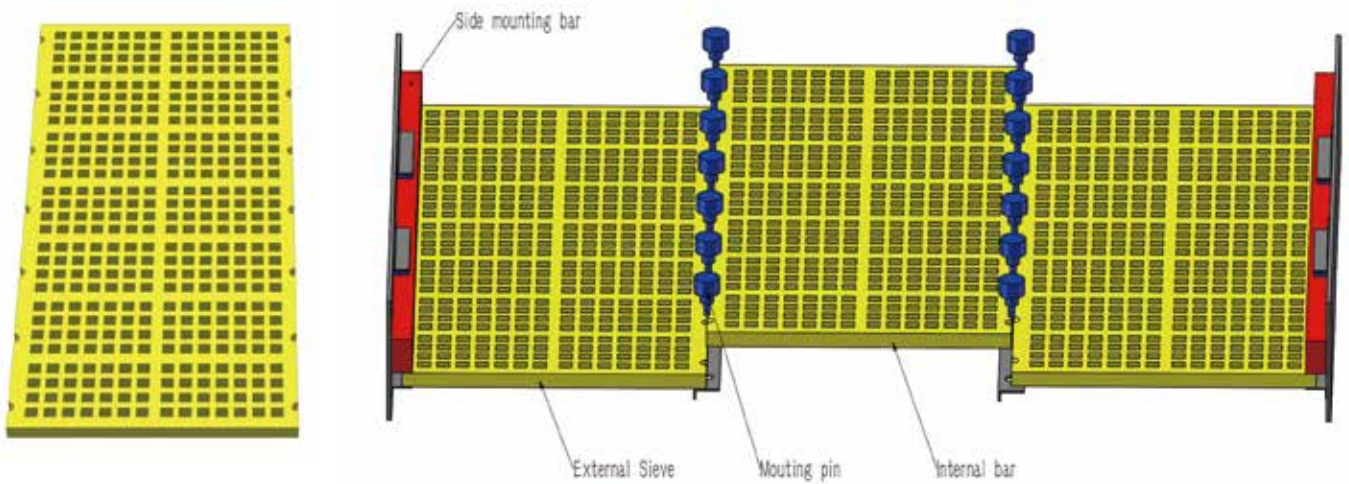


#### Polyurethane Rail Seat

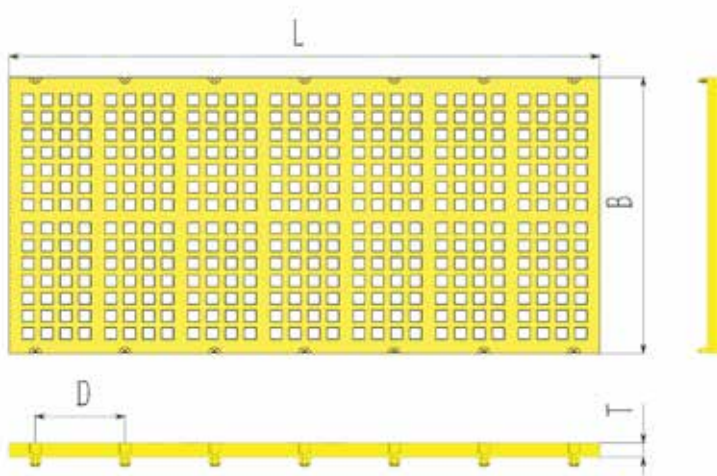


## Installation Method 3

### Installation Exploded View

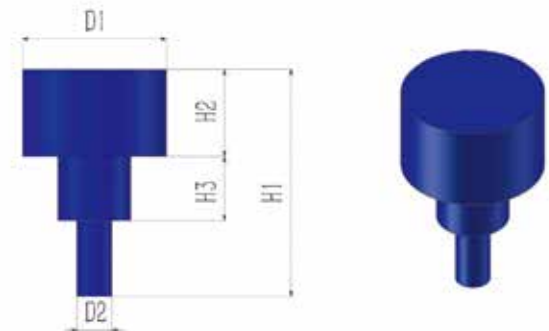


### Product Specifications

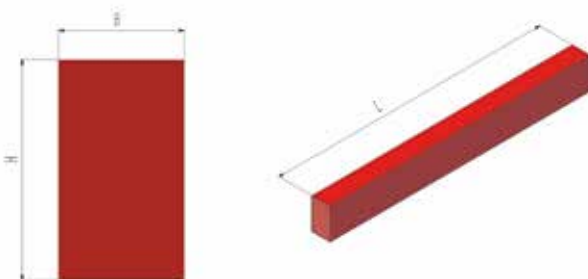


### Accessories

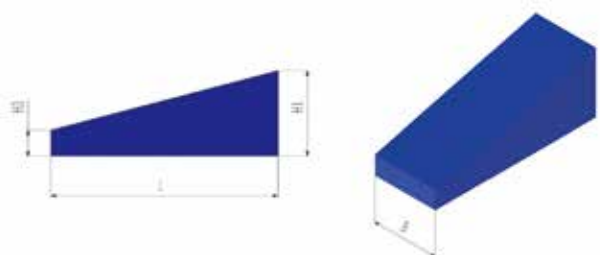
#### Pins



### Polyurethane Side Pressure Plate

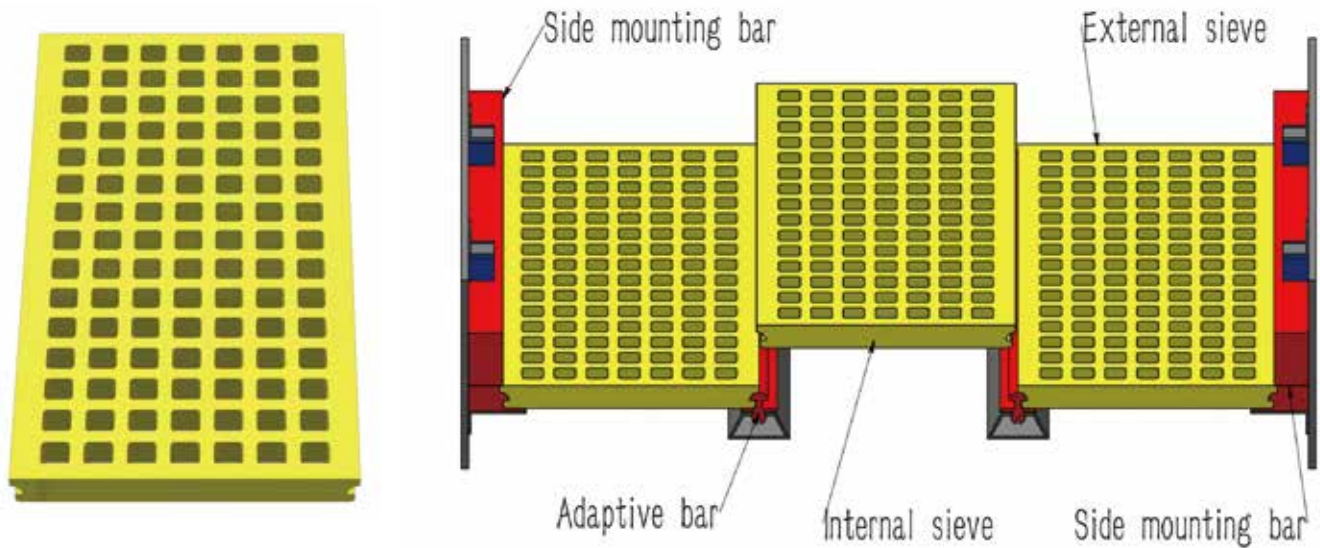


### Polyurethane Wedge Block

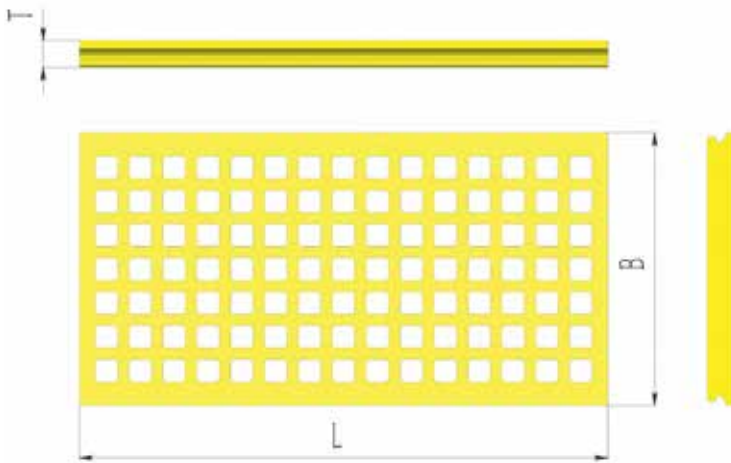


## Installation Method 4

### Installation Exploded View



### Product Specifications

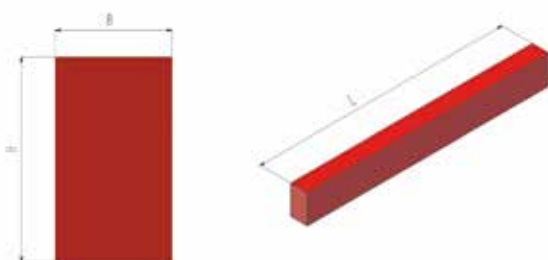


### Accessories

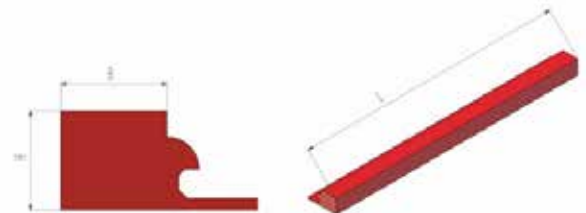
#### Polyurethane Adaptive Bar



#### Polyurethane Side Pressure Plate

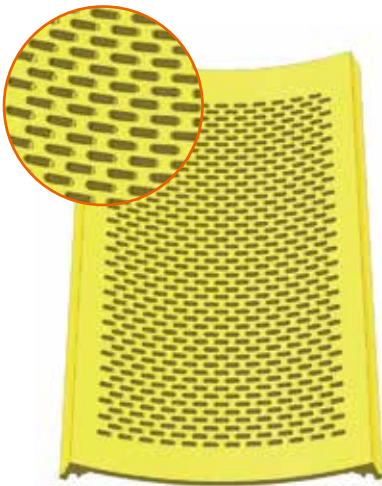


#### Polyurethane installation strip

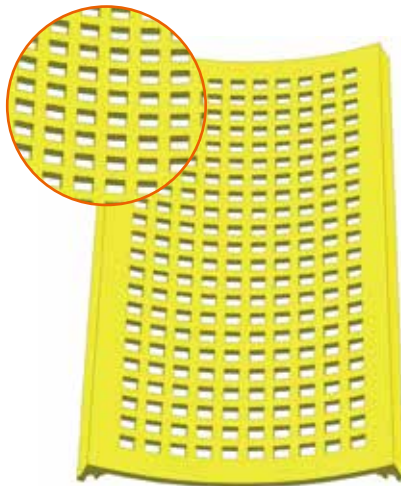


## ▪ *Polyurethane Flip Flow Screen*

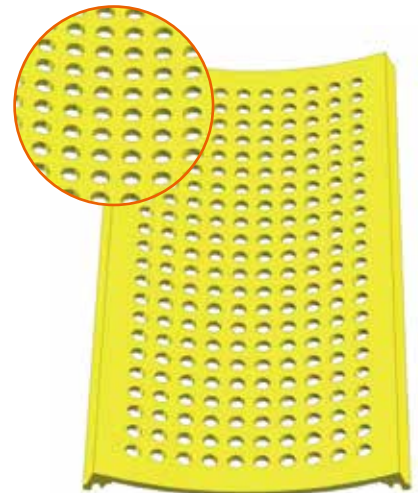
- It is especially suitable for screening fine, sticky, and moist materials.
- The polyurethane flip flow screen has a thin surface and a high open area ratio, which increases material throughput and screening efficiency.
- It is lightweight, reduces machine load, and is easy to install and disassemble. This lowers equipment energy consumption and operational costs.
- **Screen aperture range:** 0.3–60 mm
- **Screen surface thickness:** 2–10 mm
- **Hardness range:** 70–85A



- Slotted Hole

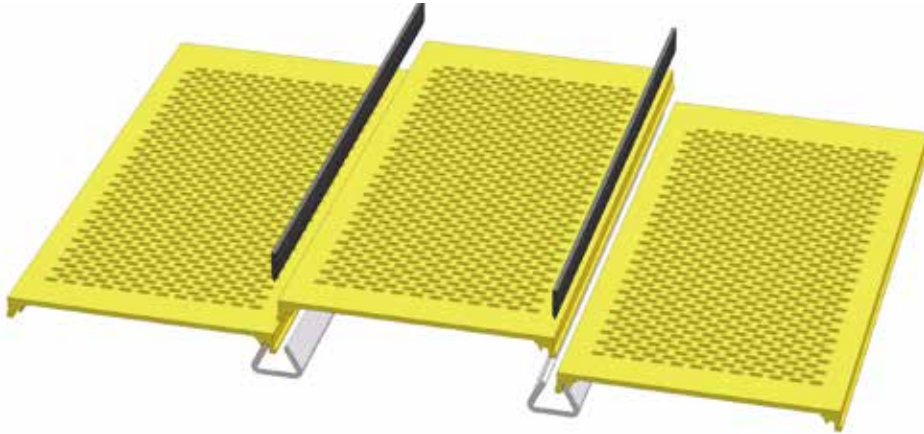


- Square Hole

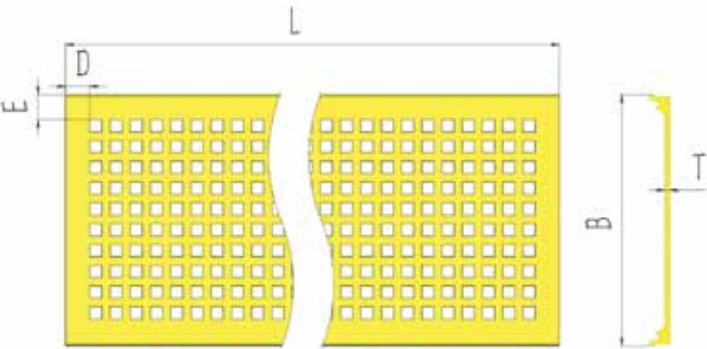


- Round Hole

Installation Exploded View



Product Specifications



Accessories

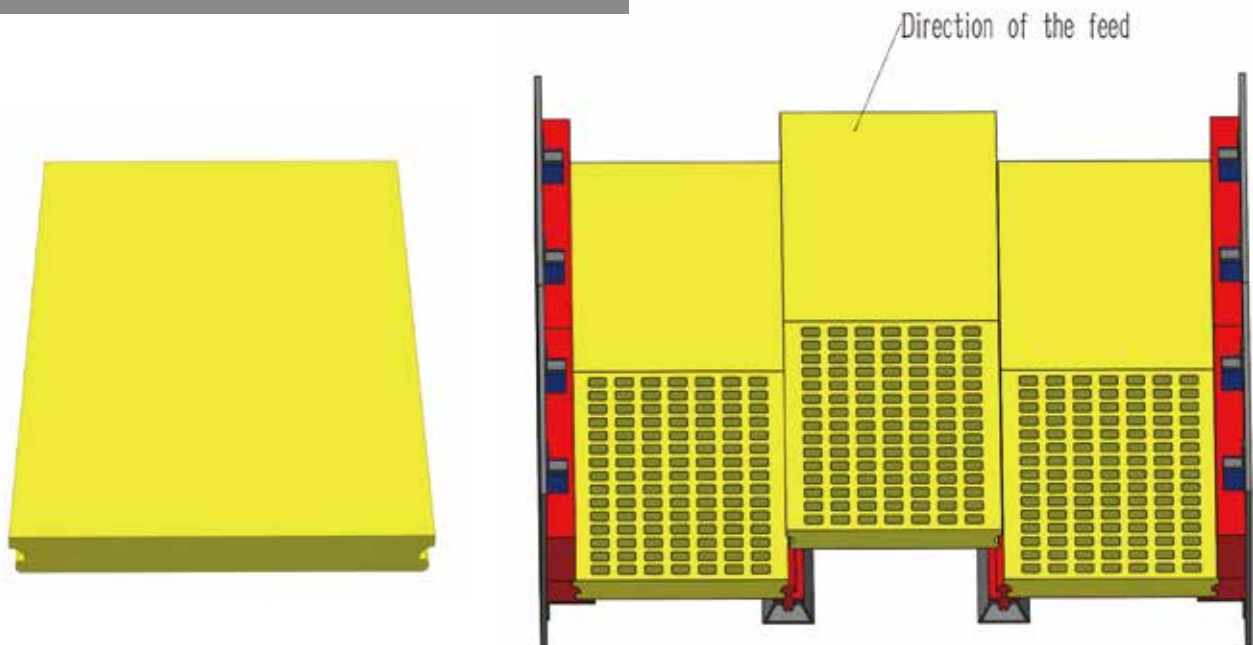
Rubber wedge strip



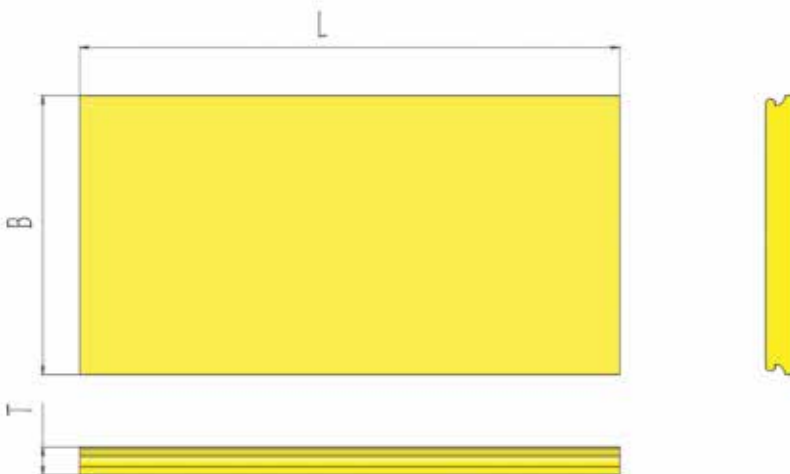
## ▪ Polyurethane Impact-Resistant Screen Panel

- Polyurethane impact-resistant screen panels are primarily used in mining operations, quarries, and coal washing plants for chute and hopper liners, buffer and deflector plates, and other wear-resistant protective parts.
- They are designed to withstand the impact of large, high-drop materials, prevent cracking and deformation of the screen plates, and protect the foundation structure of the equipment.

### Various Installation Methods



### Product Specifications

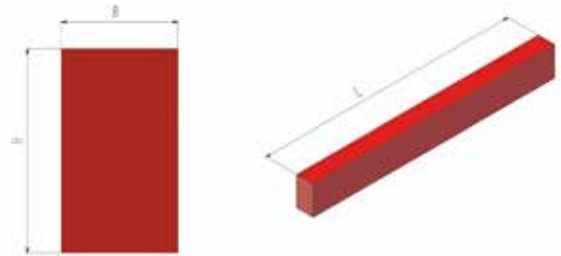


Accessories

Polyurethane Adaptive Bar



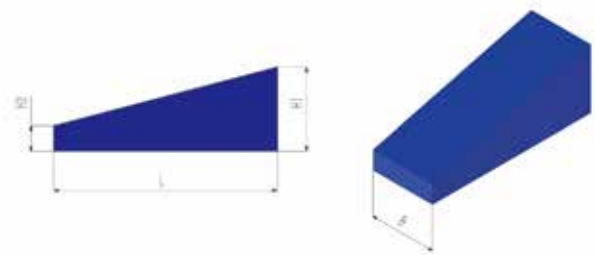
Polyurethane Side Pressure Plate



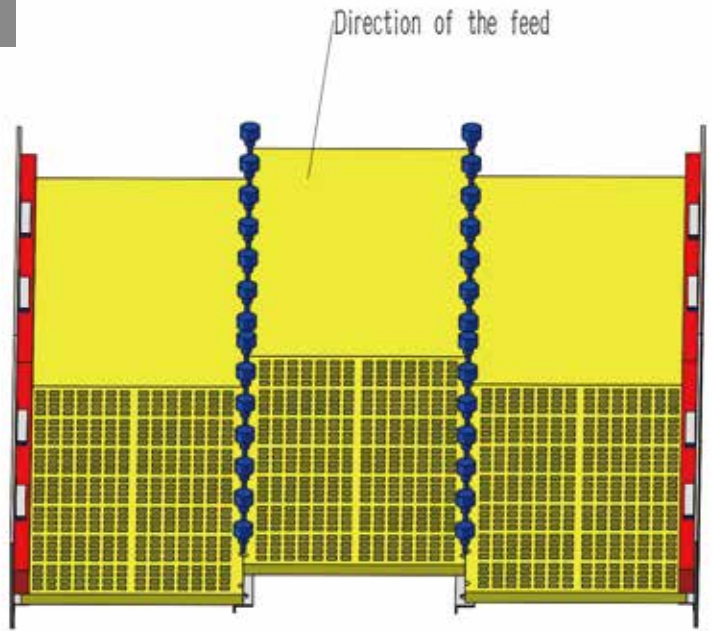
Polyurethane installation strip



Polyurethane Wedge Block



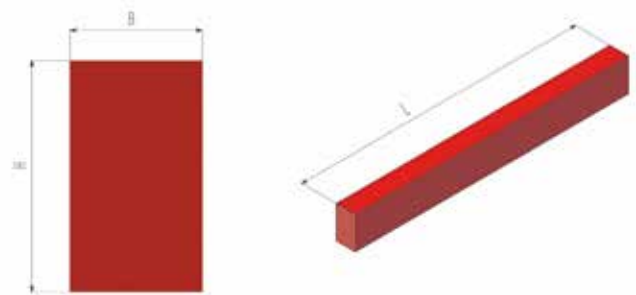
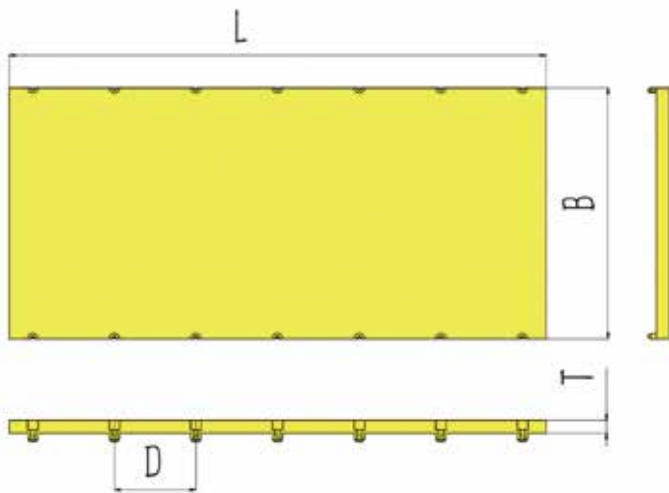
Various Installation Methods



Product Specifications

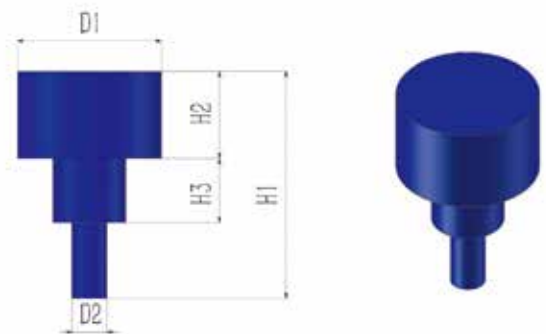
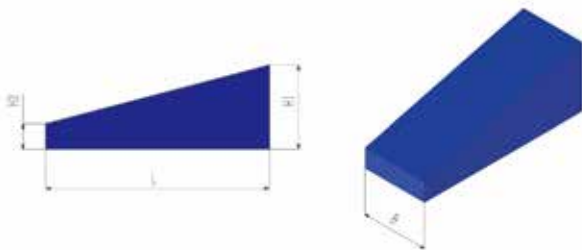
Accessories

Polyurethane Adaptive Bar

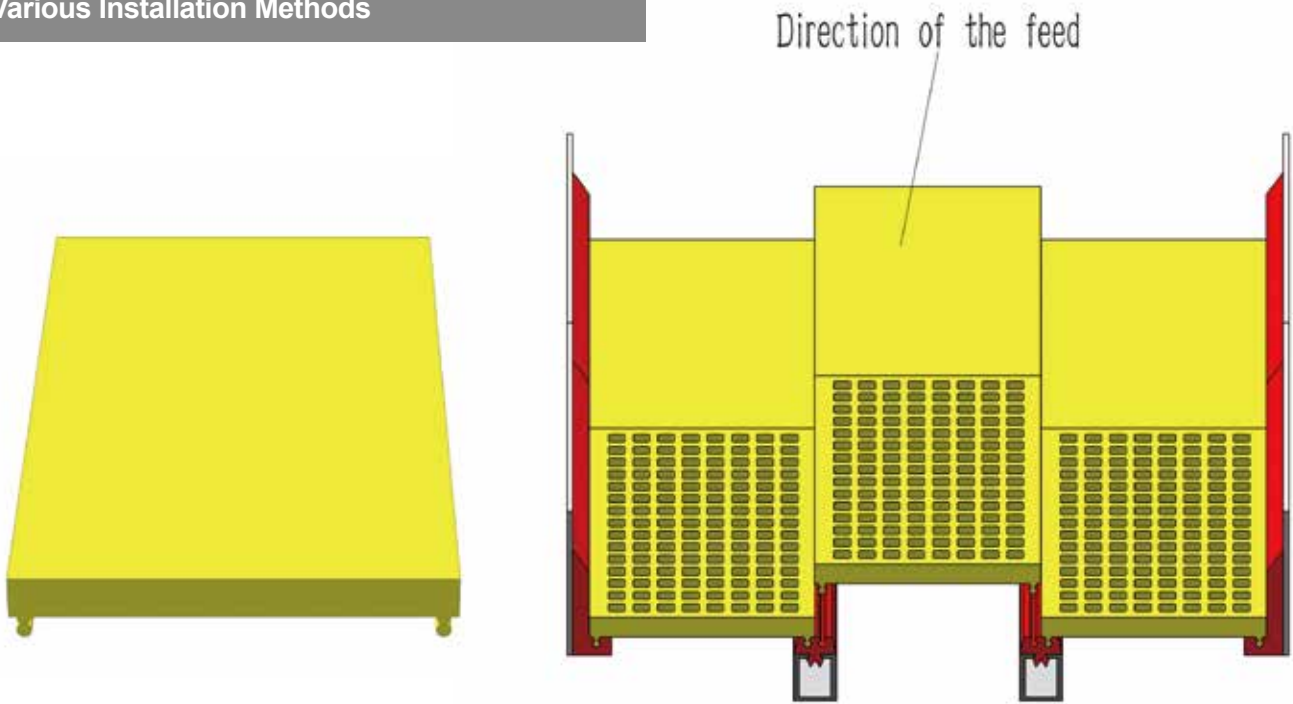


Polyurethane Wedge Block

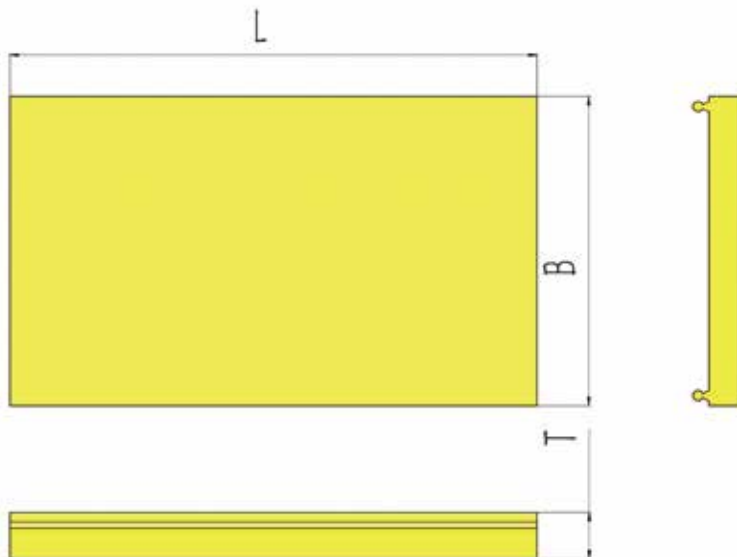
Pins



Various Installation Methods

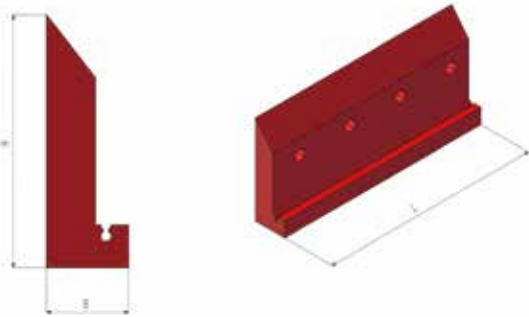


Product Specifications

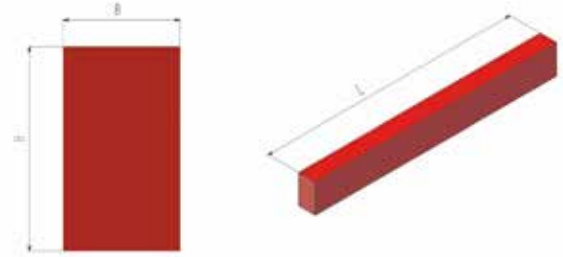


Accessories

Polyurethane Side Mounting Bar



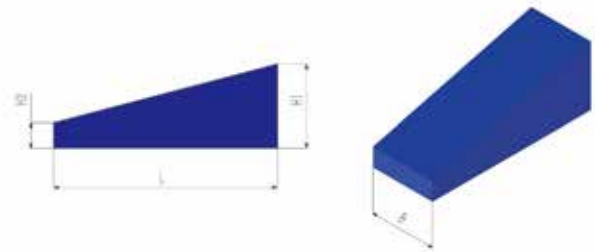
Polyurethane Side Pressure Plate



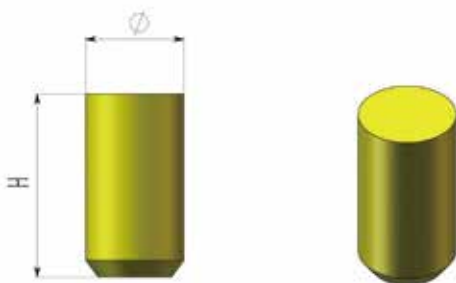
Polyurethane Adaptive Bar



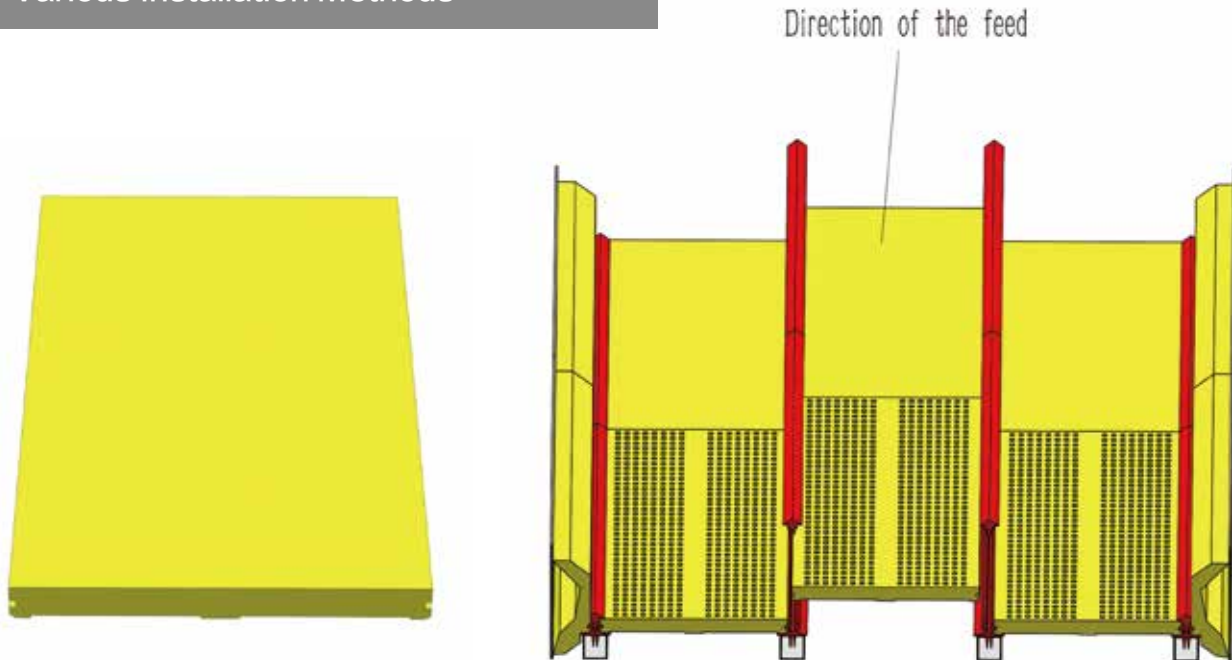
Polyurethane Wedge Block



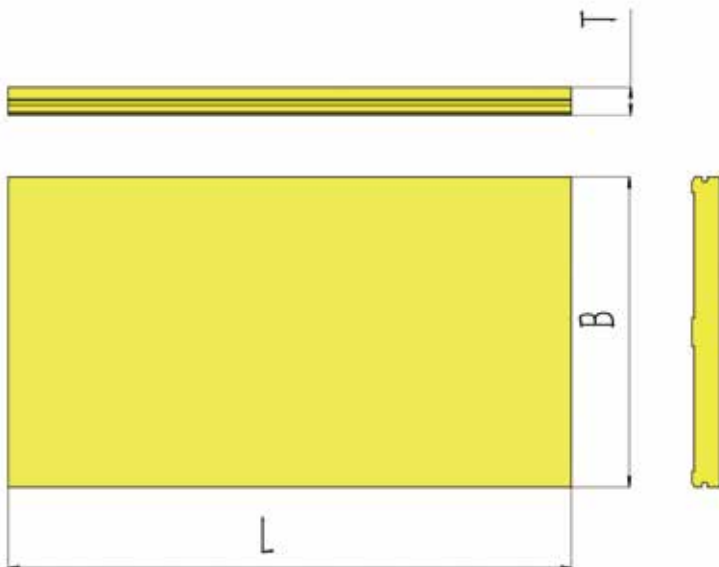
Pins



### Various Installation Methods

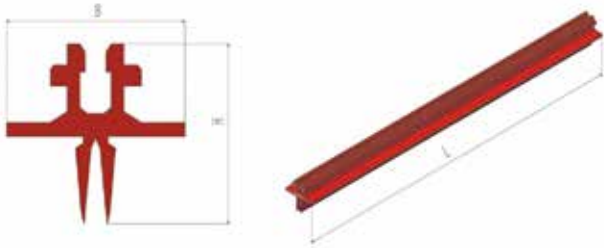


### Product Specifications

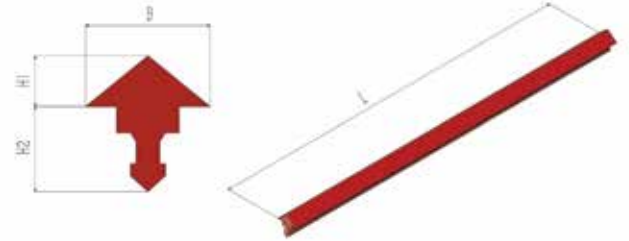


Accessories

Polyurethane Adaptive Bar



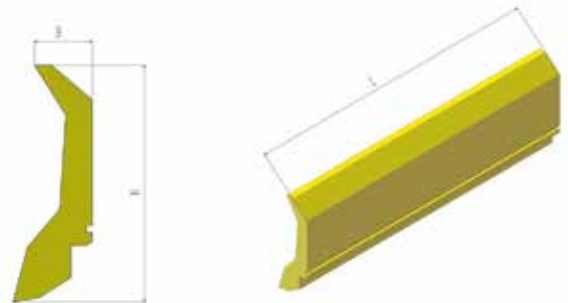
Polyurethane Chock



Polyurethane Chock



Polyurethane Side Mounting Strip



## ▪ *Vibrating Grizzly Screen Deck*



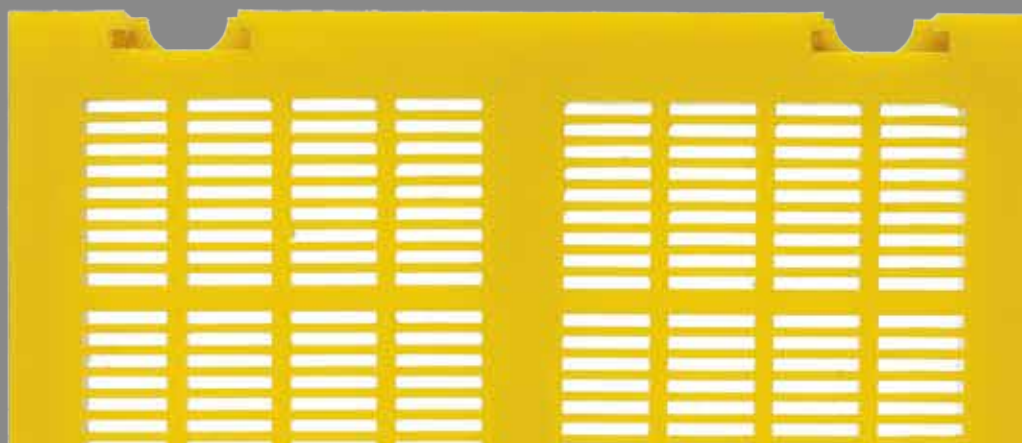
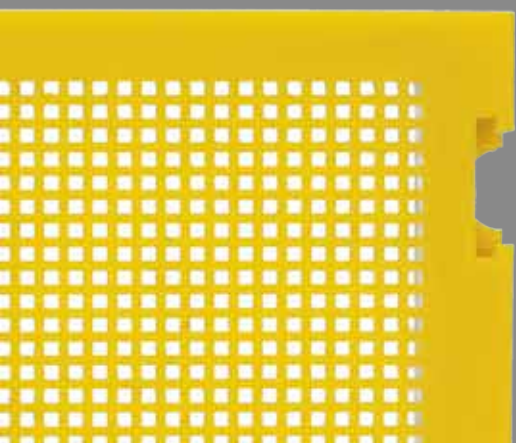
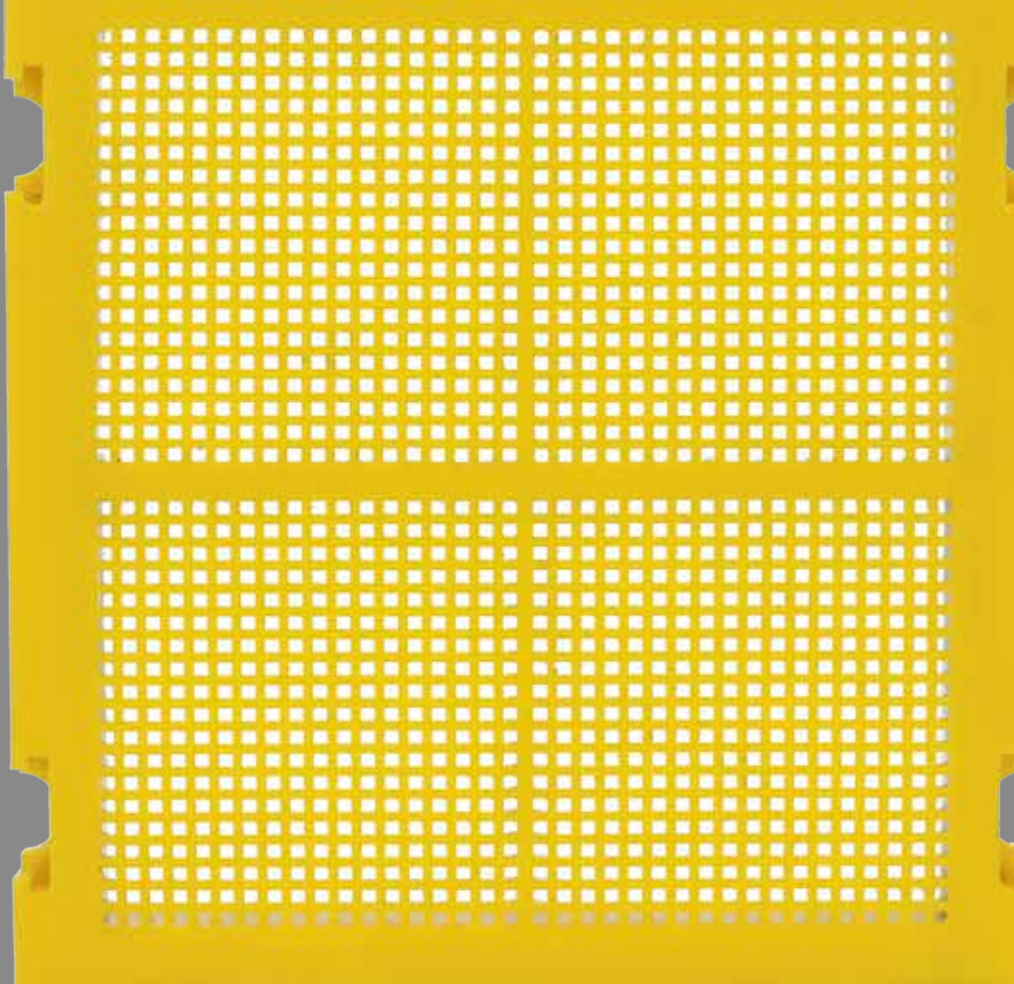
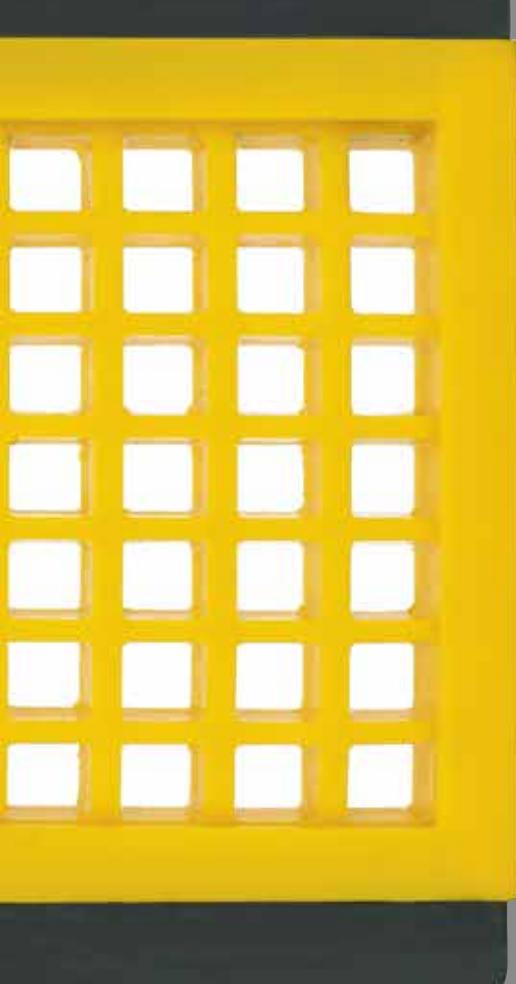
- There are different methods of pre-screening, from simple metallic profiles (Grizzly Bars) placed at a certain distance on a frame fitted on a machines' deck, to others like the Finger Screens, where independent vibrating bars mounted on a polyurethane base, offer a great self-cleaning action and manufactured in high abrasion resistant steel they withstand most of the toughest materials to be screened.

- ***Vibrating Bars Mounted on Polyurethane Base***




- ***Larger Diameters on Request***





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