



Accessories and components for belt conveyor equipment



Siberian Lining Company LLC.

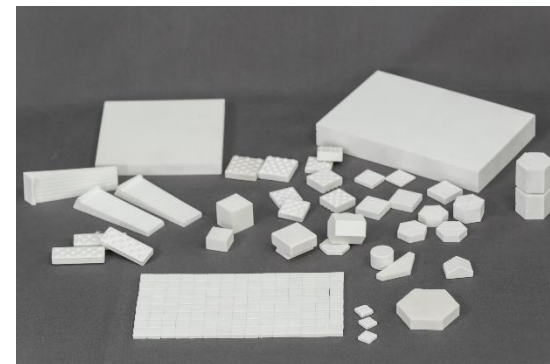
Novosibirsk, Russia



About company

Siberian lining company LLC. (Novosibirsk, Russia) is one of the leading companies in the field of complex lining solutions for protection of the working surfaces of process and transport equipment used in mining industry from abrasive and corrosive wear, and in supplies of accessories for conveyor equipment, that increase its efficiency.

- Application of advanced lining materials increases the service life of the main equipment and its lined elements without replacement and reduces the equipment downtime due to the increase in overhaul cycles.
- Installation of additional accessories on the conveyor equipment allows to increase the efficiency and productivity of the installed equipment and facilitate operation of the mining and processing equipment.





Conveyor equipment



Conveyor Accessories



Lining of belt conveyor pulleys

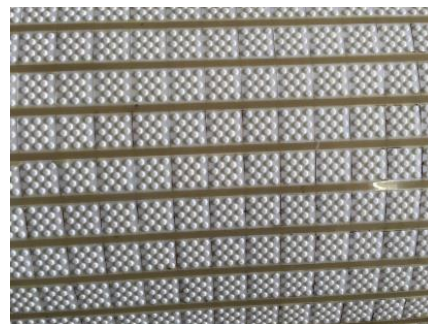
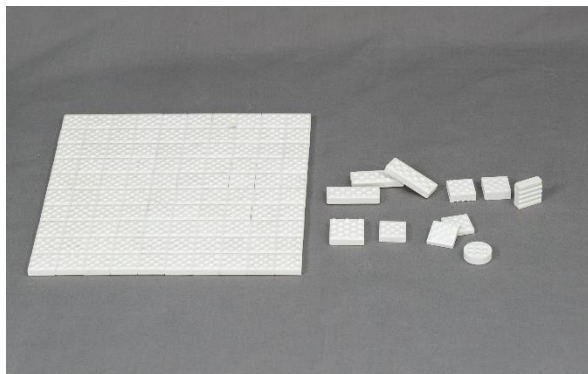
Ceramic lining of belt conveyor pulleys

Wear resistant ceramic elements from alumina 92-95% can be fit into the required geometry and be fasten with adhesive on epoxy resin base.

The special geometry of ceramic elements prevents slipping of the conveyor belt during operation.

Application temperature: up to 200 ° C, depending on the application, fixing mode and geometry.

Advantages: high wear resistance, hardness, heat resistance, inertness to aggressive media, do not corrode.





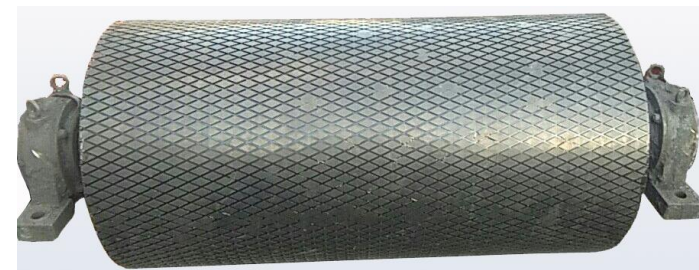
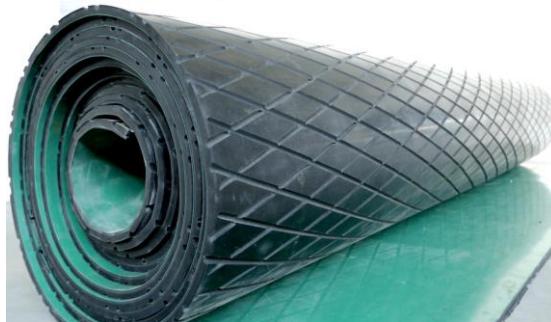
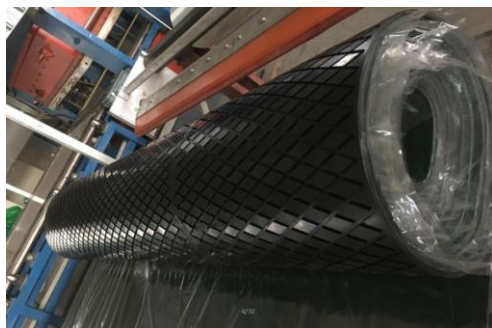
Lining of belt conveyor pulleys

Rubber lining of belt conveyor pulleys

Rubber lining is produced in on piece 10x2 m without any splice by vulcanizing press. No repeated work or waste material.

Parameters:

- CN adhesive layer peel strength : ≥ 12 kN/m
- Wear loss: ≤ 80 mm³
- Tensile strength: ≥ 24 MPa
- Elongation: 500%
- Semi vulcanized chloroprene rubber makes sure high adhesion between rubber and pulley.

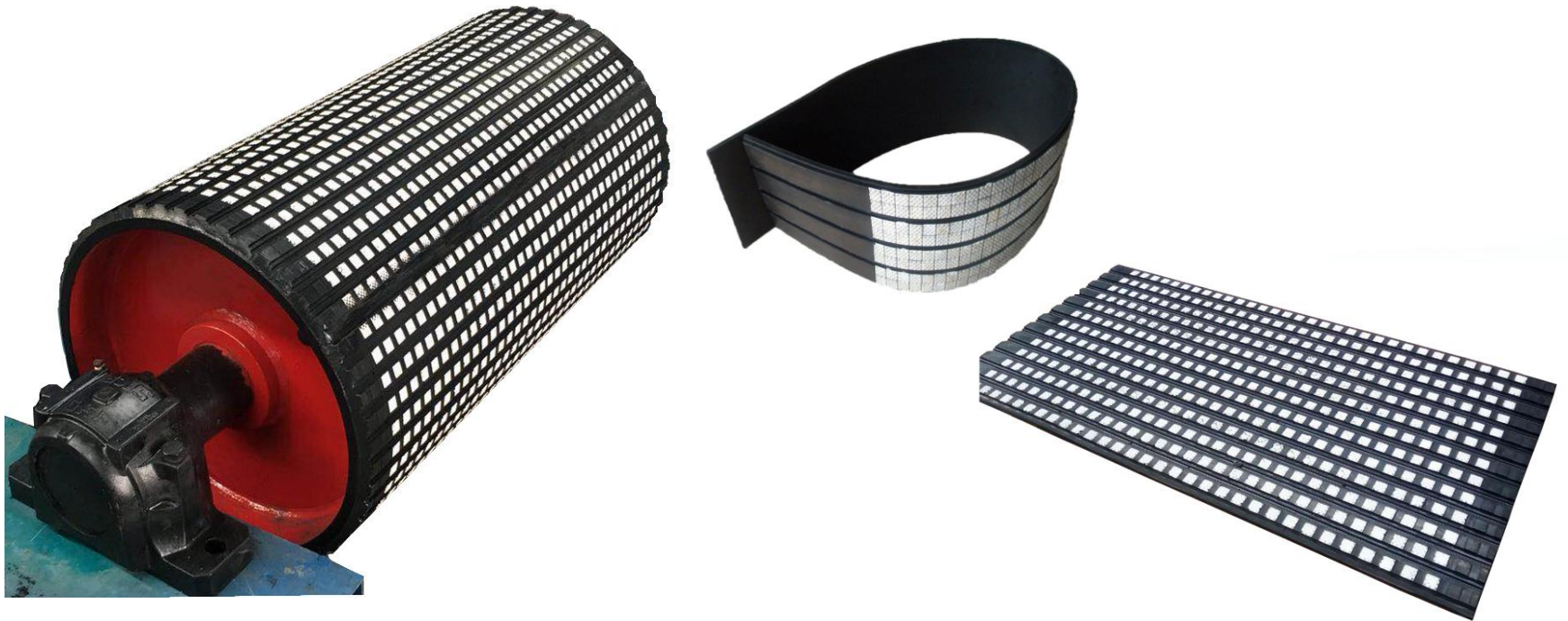




Lining of belt conveyor pulleys

Rubber-ceramic lining of belt conveyor pulleys

The rubber-ceramic lining of pulley is particularly suitable in cases where slippage and excessive wear make normal rubber lining ineffective. Alumina ceramics tiles allow to maintain the correct position of the belt, even in conditions of high humidity, heavy pollution and abrasive impact.





Rubber-ceramic lining of belt conveyor pulleys

A. Rubber:	
1. Material:	NR&BR
2. Density:	1.15 g/sm ³
3. Tensile strength:	24 MPa
4. Shore hardness:	65±5
5. Elongation:	500%
6. Wear lost:	85 mm ³
7. Ageing coefficient :	0.87 (70C°x48 hours)
B: Alumina ceramics:	
1. MAterial:	Al2O3≥92-95%
2. Density:	3.6 г/см3
3. Colour	белый
4. Wear lost:	<0.093
5. Hardness	9 (Mohs)



Replaceable Pulley Lagging

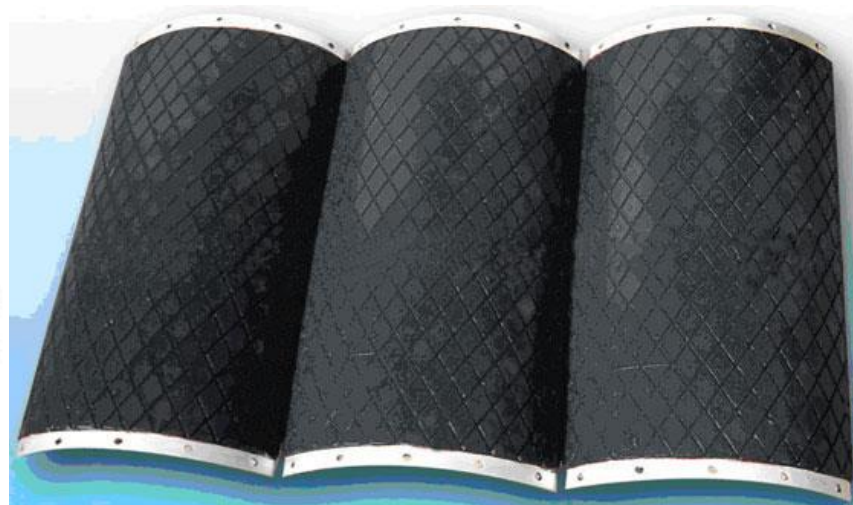
Replaceable Slide-Lag and Bolt-On lining plates for pulleys are easily and quickly removed and installed, perfect for pulleys installed in hard-to-reach places where dismantling is very difficult due to the drive mechanism, partitions or high position.

Rubber Sheet



Retainer

Slide-lag Replaceable Pulley Lagging

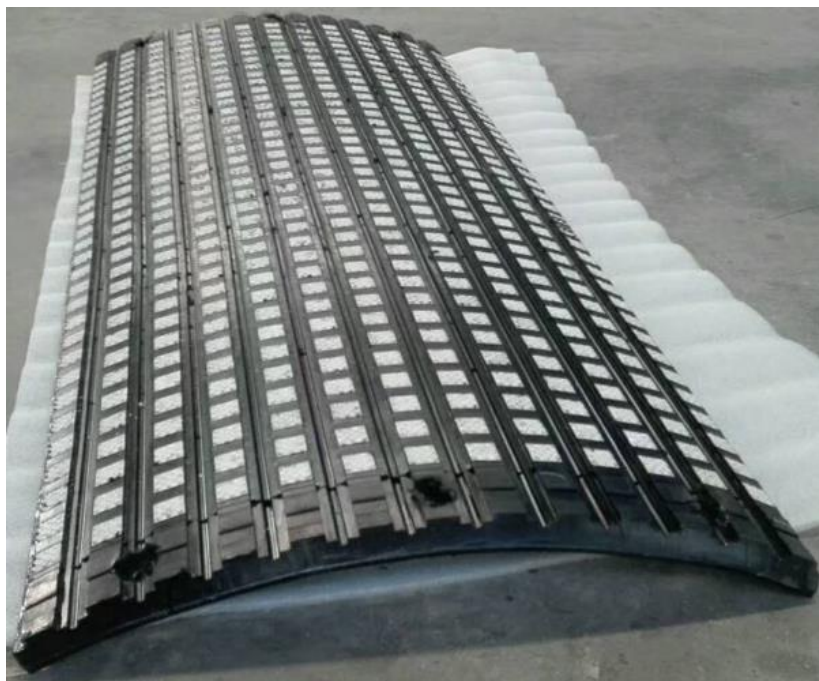


Bolt-On Replaceable Pulley Lagging

Replaceable lining plates are manufactured from special wear resistant rubber, fully vulcanized under high pressure on the steel frame, which is bent beforehand to the diameter of the pulley. It neutralizes the internal stresses in the patch and gives the maximum adhesion of the rubber to the metal. The usage of rubber with high density ensures a long service life. The locking plates are also made of steel; therefore, the installed plates are firmly fixed on the surface of the pulley.



Bolt-on replaceable pulley lagging can also be produced with ceramic surface instead of diamond pattern.





Cleaners for conveyor belt

Conveyor Belt Cleaning System:

1. Primary & Secondary belt cleaner
2. V-Plow belt cleaner
3. Polyurethane & Alloy belt cleaner
4. H-Type and P-Type belt scraper
5. Brush Belt Cleaner.





Primary belt cleaner

The primary belt cleaner is installed on the head pulley directly under the stream of the transported material to provide effective cleaning. The pressing mechanism provides the optimum pressure of the blade on the belt, which allows blade to bend around the irregularities of the conveyor belt - this makes it possible to effectively clean the conveyor belt without damaging it. Self-adjusting spring tensioners make sure consistent pressure and effective cleaning (up to 80% of the sliding material). The cleaner's blade is made of wear resistant and durable polyurethane, and special fasteners simplify the process of its replacement.

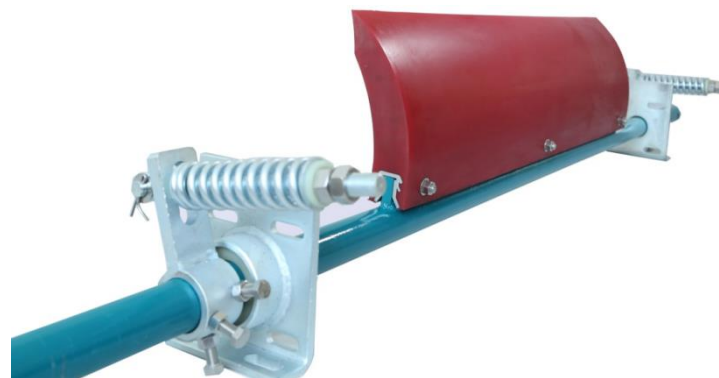
Main operation properties

Belt width: 450~2400 mm

Belt Speed: ≤ 3.5 m/s

Material humidity: $\leq 15\%$

Working Temperature: $-40/+90$ °C





Secondary Belt Cleaner

Depending on the conveyor's operation conditions and the nature of the transported material, the use of a primary belt cleaner is insufficient, in this case it is advisable to use an additional cleaner made of polyurethane. Secondary polyurethane belt cleaner can be mounted in any secondary cleaning position—usually about 100mm from where the belt leaves the head pulley. Secondary belt cleaner can be used together with primary belt cleaner, has a self-adjusting spring tension system to maintain close contact without the belt damaging, that provides effectively clean.

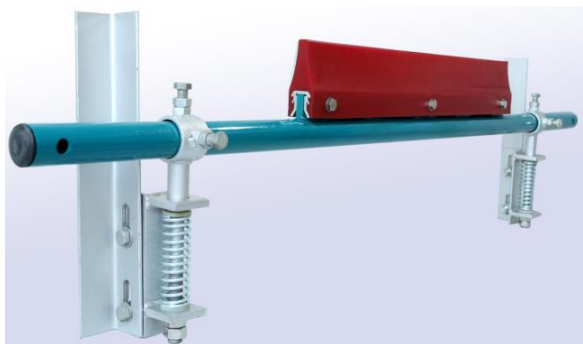
Main operation properties

Belt width: 450~2400 mm

Belt Speed : ≤ 3.5 m/s

Material humidity: $\leq 15\%$

Working Temperature: $-40/+90$ °C





V-Plough belt cleaner

V-Plough belt cleaner is used to clean the inside of the return belt. The polyurethane wear resistant cleaner has low friction coefficient, does not corrode, does not damage the belt. Three-way suspension mount allows to thoroughly and carefully clean the conveyor belt, preventing material from sticking to the rollers and conveyor pulleys, prolonging their service life.

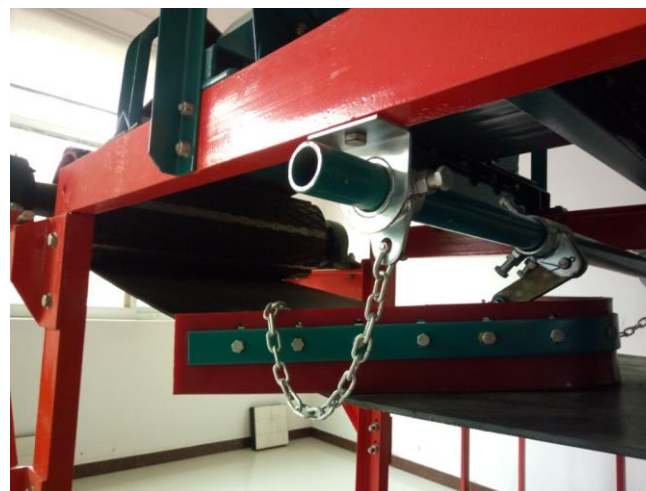
Main operation properties

Belt width: 500~2400 mm

Belt Speed: ≤ 3.5 m/s

Material humidity : $\leq 15\%$

Working Temperature : $-40/+90$ °C





Diagonal Return Belt Cleaner

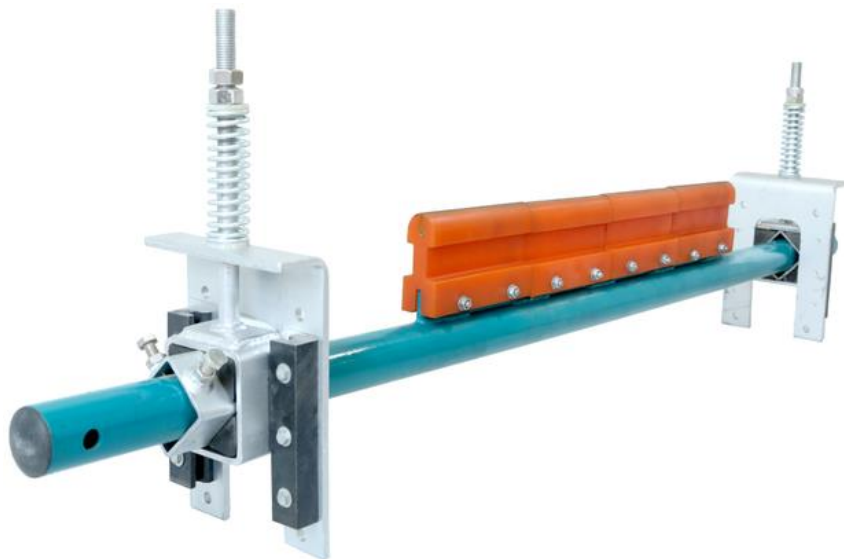
The diagonal cleaner is used for cleaning the inner surface of the idle branch of a conveyor belt and works when the belt moves backwards. Installing this type of cleaner reduces the amount of sludge on the tail pulley of the conveyor. Polyurethane wear-resistant cleaner is easy to change after usage.





Secondary Polyurethane & Alloy Belt Cleaner

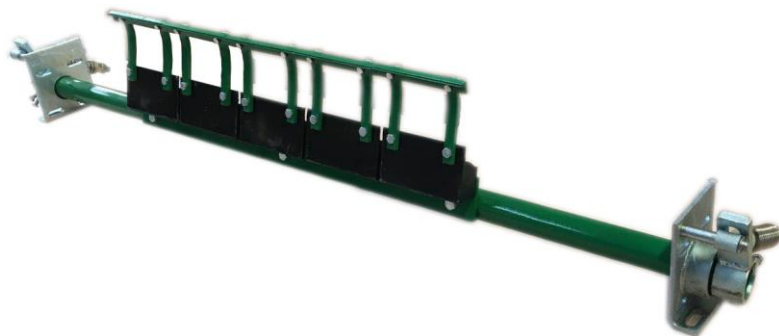
Secondary PU & Alloy belt cleaner can be mounted in any secondary cleaning position. The polyurethane blade has a tungsten carbide tip. Unique structure with multi-level buffer (1. PU Blade 2. Rubber torsion element 3. Spring tensioner), reduces the impact to mechanical fasteners and make the PU blade move away from the fasteners and pass easily without damaging the belt. This type of cleaner can be installed on the belt with width of 500-2000 mm. It is suitable for both mechanical or vulcanized joint belt, and can be used in tough operation conditions.



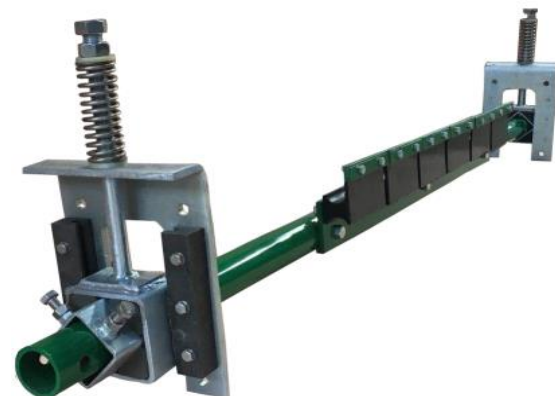


H-Type and P-Type Belt Cleaners

H-Type and P-Type belt cleaners can be used for conveyor belts only with vulcanized joint. These cleaners consist of individual blades (tungsten carbide plate on a rubber stand), which are easily replaced during operation. The self-adjusting pressing mechanism provides the optimum pressure of the blade on the belt, which allows to bend around the irregularities of the conveyor belt - this makes it possible to effectively clean the conveyor belt without damaging it.



H-Type Belt Cleaner



P-Type Belt Cleaner



Brush Belt Cleaner

Brushes are mainly used for cleaning smooth and chevron conveyor belts, as well as belts with partitions. The cleaning brush is installed directly behind the drive pulley or in the middle of the return belt of the conveyor. The tips of the cylindrical nylon brush touch the belt surface gently. The rotating brush turns in the opposite direction of the belt and brushes away the sticky materials into the funnel. The cleaning brush consists of 12 strips, which are easily replaced if damaged. The brush is equipped with a special position adjustment system, which ensures an optimal fit of the brush to the belt for maximum cleaning.



Motorized Brush Belt Cleaner



Motorless Brush Belt Cleaner



Replacement Strip



Conveyor Sealing System

The conveyor sealing system includes various types of beads and skirts for fencing the edges, which allows to hold the material on the conveyor belt, extinguish dust and avoid spilling in the loading area. The great advantage of installing seals and skirts is the extension of the service life of mechanisms by eliminating the ingress of spilled materials and dust on the components of the drive system.



Dual seal skirt



T-Type Rubber Skirt



Flat Rubber Skirt



Polyurethane Skirt



Dual seal skirt

The dual seal skirt is designed to be installed on both sides of the moving belt: the inner layer holds the material on the belt, and the outer layer prevents dust from escaping.

Details in places of contact of the skirt with the belt are made of polyurethane, which has a longer service life and does not damage the belt.

The locking system (clamps) is quite simple to install, configure and maintain.

Dimensions:

Thickness: 14 ± 1 mm

Height: 150 mm, 190 mm

Length: Could be produced according to the Customer's request





T-Type and flat rubber skirts

T-Type and flat rubber skirts have a long life service, allow to hold the material and seal the belt. The use of rubber seals reduces equipment maintenance costs.

It is possible to manufacture an edge cut at an angle of 35° for better alignment with the conveyor belt.



Standard sizes:

Height – 230 mm

Thickness – 15 и 30 mm

Length 10-15 m





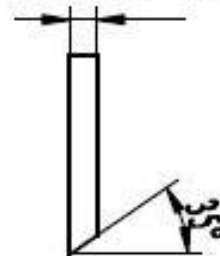
Polyurethane Skirt

Polyurethane skirt has several advantages over rubber:

- ✓ High wear resistance
- ✓ Longer service life (about in 5 times longer)
- ✓ Reduced downtime due to increased turnaround time
- ✓ Reduced maintenance costs
- ✓ The possibility of cutting the edge at an angle of 35° for better alignment with the conveyor belt
- ✓ Lower friction coefficient without damage of the belt



10,12,15mm, etc.





Comparison

Polyurethane

Wear lost: 40 mm³ (higher wear resistance)

Tensile strength: 40 MPa

Elongation: 660%



Rubber

Wear lost: 120 mm³

Tensile strength: 8-25 MPa

Elongation: 450%





Technical properties of polyurethane

Properties	Value
Colour	Orange, red, black
Shore hardness	60 or 70
Density	1.25 g/sm ³
Tensile strength	40 MPa
Elongation	660 %
Wear loss	40 mm ³
Angle Tear Strength	57 kN/m
Trouser Tear Strength	23 kN/m
Operating temperature	-30/+70 °C



Conveyor Impact Bed

Conveyor impact beds protect the conveyor belt in the material loading area and during material transportation by absorbing the impact energy of the falling material. Beds are equipped with replaceable impact bars.

The design of the impact bed can be made according to the individual operating conditions of the equipment.



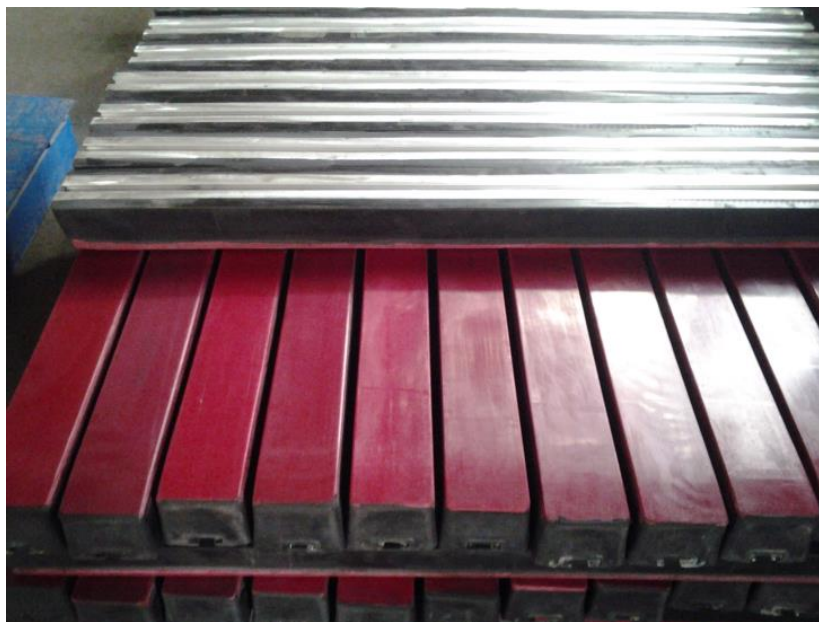


Impact bars

The impact bars consist of three main parts: a plate of UHMWPE, cushioning rubber, a frame made of especially strong alloying steel. These three parts are interconnected by the method of hot vulcanization. This design ensures the high quality of the connection of all components and their integrity during operation and under the impact force of falling material. UHMWPE ensures smooth movement of the conveyor belt, cushioning rubber absorbs the impact energy, the steel T-shaped groove makes it easy to attach the bar to the main support frame.



All installation items like bolts, nuts and washers are supplied as standard accessories (as a set)



Standard sizes of the impact bars

Size	Width x Height (mm)	Length (mm)
Standard 1	100*55	1220/1400/1500/2000
Standard 2	100*75	1220/1400/1500/2000
Standard 3	280*100	1080

It is possible to manufacture impact bars according to the Customer's sizes.





THANK YOU FOR YOUR ATTENTION!

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