GRANDRUBBER®

*Engineered for Endurance*

PRODUCT MANUAL

# CONVEYOR COMPONENTS

Sealing / Impact / Wear protection / Lagging / Splicing

**QINGDAO GRAND RUBBERS CO.,LTD**

PRODUCT SELECTION & APPLICATIONS
Conveyor products for industrial bulk material handling.
Specifications, application guidance and inquiry information.

SPECIFICATION CHECKLIST

# Define the duty.

A complete inquiry helps resolve technical and commercial gaps before a quotation is released.

## 01 Operating conditions

Material handled, particle size, bulk density, moisture, oil or chemical contact, normal and peak temperatures.

## 02 Dimensions and construction

Belt width and length, strength and plies, cover thickness, cover grade, sidewall or cleat geometry; component dimensions and drawings where applicable.

## 03 Purchase and delivery

Quantity and unit, delivery destination, packing limits, requested standards and versions, required inspection documents and target delivery date.

COMPANY OVERVIEW

# Industrial rubber. Practical selection.

GRAND RUBBER supplies industrial conveyor belts, rubber sheets, rubber linings, cow mats and related rubber products for international B2B customers.

## 01 Start with the application

Share material, temperature, load, belt speed and site conditions so that the specification can be reviewed against the operating requirements.

## 02 Define the specification

Identify dimensions, construction, cover grade, quantity, packing and required documents. Agree the final specification and commercial terms before placing the order.

APPLICATION-FOCUSED SUPPLY

This manual covers product construction, selection inputs, application examples and conveying-system accessories. Contact our team with your operating conditions, drawings and required quantity.

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# 01

# CONVEYOR COMPONENTS

Sealing systems / Dust control / Impact protection

# Skirt Rubber

## YX Skirt Rubber

**The YX skirt rubber features dual sealing design to effectively prevent material spillage and dust.**

- Dual sealing configuration
- Improve safety during operation
- Reduced material spillage
- Minimized damage to belt
- Easy for installation and adjustment



**YX Skirt Rubber**



**YX-S Skirt Rubber**

| | | |
|---|---|---|
| Specifications | Length | Customizable |
| | Width | 200mm |
| | Thickness | 20mm |
| | Polyurethane Width | 55mm |
| | Polyurethane Thickness | 5mm |
| Rubber Performance Parameters | | |
| Rubber Hardness | | 70±5 Shore A |
| Tensile Strength | | ≥6Mpa |
| Elongation at Break | | ≥300% |
| Polyurethane Performance Parameters | | |
| Tensile Strength | | ≥30Mpa |
| Elongation at Break | | ≥600% |
| Hardness | | 85±5Shore A |
| Abrasion | | ≤120mm³ |

## 01 Material

- Combined with polyurethane and rubber
- Quality polyurethane adopted for the belt contacting section
- Excellent wear resistance
- Longer service life with no damage to belt



## 02 Sealing Performance

- Dual seal configuration design
- Installed tightly against the chute side plate
- Sealing section in close contact with conveyor belt to prevent material spillage
- Outer lip turnable and adjustable



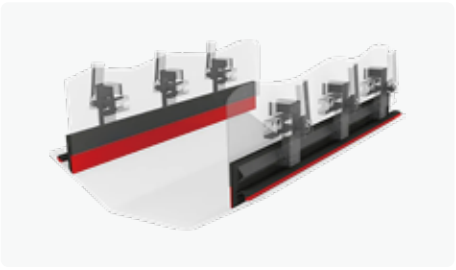
## 03 Outer Seal

- Outer seal designed with round transition surface
- Minimized abrasion to protect the conveyor belt



## 04 Inner Seal

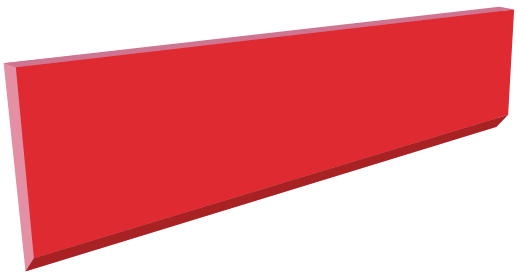
- Engineered to an integral piece on each side
- Same length as the loading chute to prevent material leakage



# Skirt Rubber

## High Abrasion-resistant Skirt Rubber

- Made of premium rubber material
- Abrasion resistance 3–5 times higher than ordinary skirt rubber
- High tensile strength and low friction coefficient
- Resistant to heat, flame and wear, suitable for various working conditions
- Ideal for large bulk materials such as ores



| | | |
|---|---|---|
| Structure | | High Abrasion-resistant Rubber (Customized Color) |
| Compression Set 100C*22H.% | | 45-100 |
| Specifications | W | 114/150/170/190/200/220/250/280/300 mm |
| | THK | 10/12/15/20 mm |
| | L m/roll | Available to be Customized |





# Dust Curtain



## Product Function

The dust curtain is an effective dust control solution designed to minimize airborne particles at transfer points, loading zones and other critical areas along conveyor systems.

## Features

- Special synthetic rubber material
- Good resilience and flexibility
- Available for corrosion, high/low temperature and fire resistance required working conditions
- Easy and quick to be replaced and installed
- Excellent wear resistance
- Long service life

## Availability

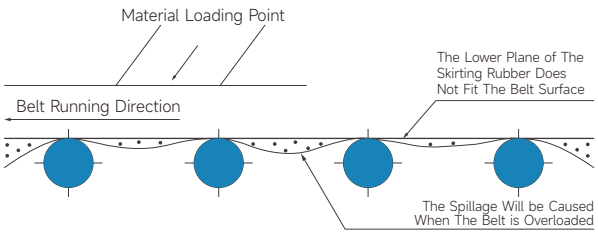
- **Type:** Slit Curtain  Solid Curtain  Strip Curtain.
- **Quality:** Abrasion-resistant, high/low temperature-resistant, flame-retardant, anti-static, etc.
- **Size:** Available to be customized.



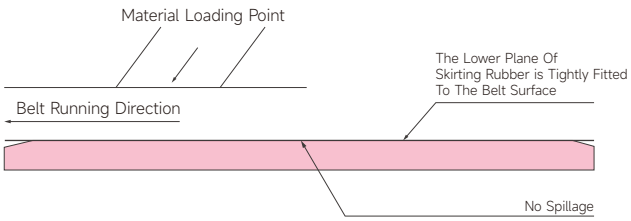



# Impact Bed

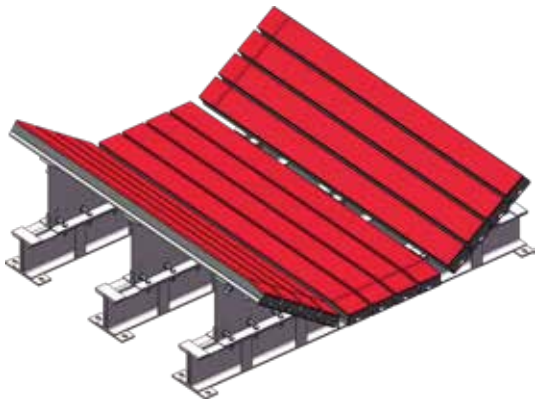
As an alternative of the impact idler, the impact bed is installed below the conveyor belt to reduce the impact on the belt caused by falling materials. It prevents the conveyor belt from tearing and scoring, and hence reducing belt maintenance. The impact bar on both sides can be adjusted to the same angle as the conveyor belt rollers to prevent material overflow and spillage.




**Impact Idlers Sets**



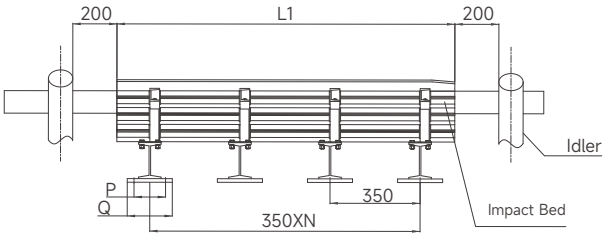

**Impact Bed**

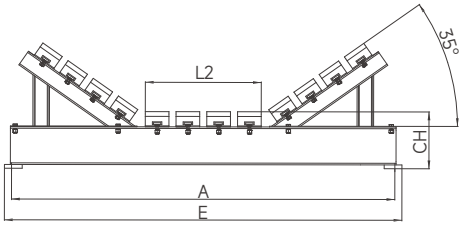


## Features

| Configuration | Features | Benefits |
|---|---|---|
| 20mm UHMW-PE layer | Low friction coefficient | To ensure the conveyor belt runs smoothly, extend the service life of impact bars and belt, and hence reduce operational costs |
| Special rubber compound | Good elasticity | Absorb impact, reduce noise and improve the working condition |
| Impact bar one end features slope design | Enable belt run smoothly | Reduce resistance and protect the belt during operation |
| Impact bars arranged in belt running direction | Enable belt run smoothly | Lower the risk of longitudinal tears |
| Engineered to effectively absorb material impact | Increased impact area | Protect the belt so as to extend the belt service life |
| Engineered to effectively absorb material impact | Tightly in contact with the skirt rubber | Prevent dust and material spillage |
| Quick-disconnect design | Quick installation, convenient replacement | Reduce downtime |

## Impact Bed Dimensions




Model: GR· IB · 140 x 140

- Impact bed length L1, cm
- Belt width, cm
- Impact bed
- GR

Model: GR·MA·IB·140x140

- Impact bed length (shown as 41), cm
- Belt width, eem
- Impact bed
- MA product, flame-retardant & anti-static material
- GR

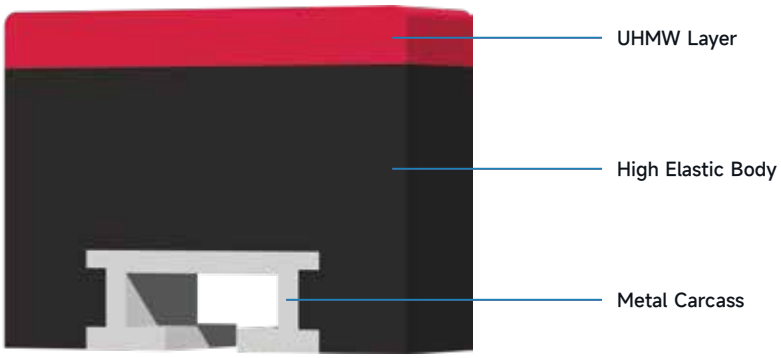
The "MA" mark in the model/name indicates the product has obtained the Coal Safety Mark, applicable to working conditions with coal safety requirements (e.g., underground coal mines) or flame-retardant/anti-static applications.

## Technical Parameters

| Model | Belt Width | $L_1$ | CH | N | E | A | $L_2$ | Q | F | Weight (kg) |
|---|---|---|---|---|---|---|---|---|---|---|
| GR-IB-65X120 | 650 | 1200 | 185 | 3 | 950 | 890 | 240 | 220 | 170 | 260 |
| GR-IB-80X120 | 800 | 1200 | 188 | 3 | 1150 | 1090 | 270 | 220 | 170 | 305 |
| GR-IB-100X120 | 1000 | 1200 | 216 | 3 | 1350 | 1290 | 380 | 220 | 170 | 390 |
| GR-1B-120X120 | 1200 | 1200 | 246 | 3 | 1600 | 1540 | 465 | 220 | 170 | 495 |
| GR-IB-140X140 | 1400 | 1400 | 251 | 3 | 1800 | 1740 | 530 | 260 | 200 | 620 |
| GR-IB-160X140 | 1600 | 1400 | 296 | 3 | 2050 | 1990 | 600 | 260 | 200 | 740 |
| GR-IB-180X160 | 1800 | 1600 | 315 | 4 | 2280 | 2210 | 670 | 260 | 200 | 1050 |
| GR-IB-200X180 | 2000 | 1800 | 342 | 4 | 2500 | 2420 | 750 | 260 | 200 | 1340 |

Notes
1. The distance between the two sides of the impact bed and the idlers can be set to 200mm.
2. All the above data can be adjusted accordingly as required by the general layout of the belt conveyor, and the troughing angle is adjustable.
3. The length of the impact bed can be manufactured according to actual design requirements, with standard lengths: 1000mm, 1200mm, 1400mm, 1500mm, 1600mm, 1800mm.
4. The CH value can be designed to match the central idler height of the troughing idler.

# Impact Bar




## Advantages

- **Surface Layer**

  UHMW polyurethane adopted to deliver low friction.
  Excellent buffering and wear resistance performance.
  High impact resistance, effectively reducing material impact on conveyor belts.
  Excellent water repellent/anti-stick/chemical resistance.



- **High Elastic Body**

  Good tear resistance, excellent tensile strength and high elongation.



- **Fabrication**

  UHMW layer, high elastic body and metal carcass are integrally vulcanized, ensuring stable product performance and extended service life.

- **Metal Carcass**

  Steel carcass or aluminum alloy carcass.
  Steel carcass available to be customized to deal with corrosion-resistant working conditions.

## Benefits

- Reduce material impact protecting belt from damage
- Effectively prevent material spillage
- Extend belt operational lifespan
- Minimize downtime to boost productivity
- Lower maintenance costs

## GR-LD-0 · General Impact Bar

- GR-LD-0 · general impact bar is intended for materials with high sulfur content such as coal.
- The steel carcass features excellent corrosion resistance in such working conditions.



## GR-LD-A · General Impact Bar

- GR-LD-A · general impact bar is available for use in various working conditions.
- The arc-shaped surface design and special shock-absorbing rubber offer maximum protection to the belt.



## Technical Parameters

| Specifications | Length.mm | Width.mm | Thickness.mm | Wear Layer Width.mm |
|---|---|---|---|---|
| GR-LD-0 | < 2000 Customizable | Top 100 Bottom 95 | 55 | 12.5 |
| GR-LD-A | < 2000 Customizable | Top 100 Bottom 95 | 75 | 12.5 |

| Polyethylene Performance Parameters | |
|---|---|
| Tensile strength | ≥20Mpa |
| Average molecular weight | ≥500million |
| Coefficient of friction | ≤0.15μ |
| Abrasion | ≤90mm$^3$ |
| Density | 0.1±0.05g/cm$^3$ |

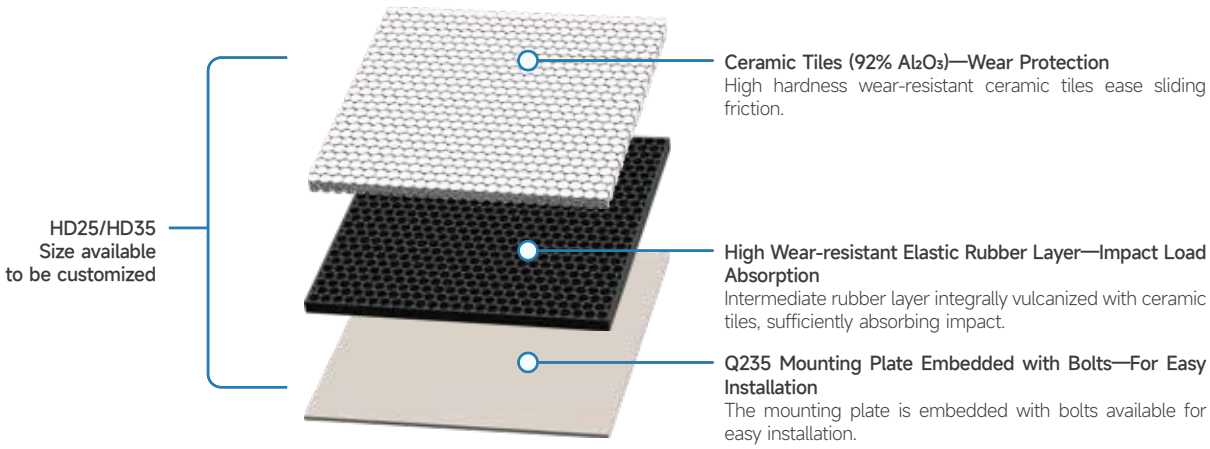
| Rubber Performance Parameters | |
|---|---|
| Tensile strength | ≥12Mpa |
| Elongation at break | ≥350% |
| Hardness | 60±5SHOA |
| Abrasion | ≤250mm$^3$ |

02

# WEAR PROTECTION PULLEY LAGGING

Ceramic lining / Polymer lining / Rubber and ceramic lagging

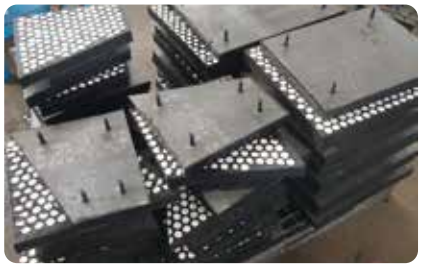
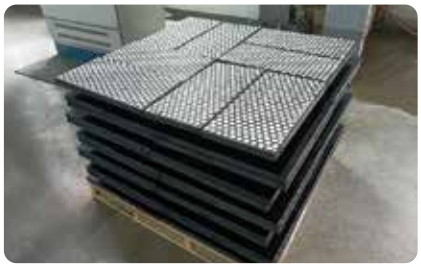
# Wear Protection




## Ceramic Wear Lining

### Benefits

- Alumina ceramic ($Al_2O_3$>90%) with hardness >HRA88 delivers wear resistance 270 times higher than manganese steel.
- Spherical surface design and quality buffering layer withstand impact caused by large sized materials.
- Ceramic tiles feature high strength, excellent corrosion resistance and water-repellent property, effectively prevent material sticking.
- Alumina ceramic has good chemical stability to resist to corrosion.
- Available to be used in environment at 0~250°C.
- Ceramic tiles, rubber and mounting plate are integrally molded to deliver high stability.
- Accommodate to different equipment with easy installation.
- Designed to be installed by bolting.
- Service life is 5 times higher than manganese steel without frequent maintenance.
- Shape, size and thickness can be customized to meet different requirement.


| | |
|---|---|
| **Size (mm)** | Standard Stock Specifications: 250*250mm/250*500mm/500*500mm<br>Common stock specifications: 150*300mm/200*300mm/300*300mm/450*300mm/530*450mm |
| **Ceramic Size** | Cylindrical (Ø10×10 mm, Ø10×19 mm), Rectangular Prism, or Hexagonal Prism (150×100×6 mm) |
| **Rubber Thickness** | 2mm~15mm |
| **Steel Plate Thickness** | 3mm~10mm |
| **Compressive Strength** | 1200~2500Mpa |
| **Lining Shape** | The size and shape can be customized according to the situation of the chute or silo on site, and the special-shaped wear-resistant block can be produced. |
| **Others** | Optional: steel plate + rubber + ceramic or rubber + ceramic |

## Applications

- Thermal power plant
- Steel
- Cement & building materials
- Smelting plant
- Machinery
- Coal
- Mining
- Chemical
- Coal chemical
- Port
- Commercial concrete

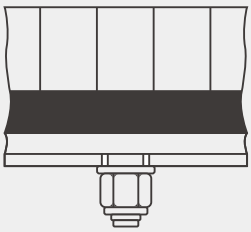


## Installation Method

The ceramic wear lining (three-in-one) adopts modular design and is installed by bolting.

Mark lines and drill holes at the installation position (original installation holes can be used without additional drilling), then install the lining and tighten the bolts. The installation is flexible and convenient, requiring no additional tools.

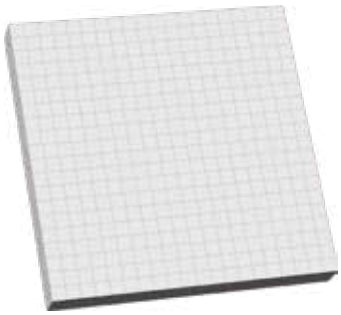
Replacement is also simple by just replacing the worn piece.



# Wear Protection

## Ceramic Wear Lining (two-in-one)

It a combination of ceramic piece and back plate with the same hardness and abrasion resistance as alumina ceramics. It is usually used with other structural parts considering its insufficient impact resistance.



- The ceramic has a hardness over HRA88 with strong impact resistance.
- It is suitable for use continuously at a temperature range of 0°C to 500°C.
- Each ceramic piece is designed with high-strength and wear-resistant bolts welded on the back plate. Strong adhesive bonding is also applied between the ceramic lining and back plate to ensure ceramic piece will not separate.
- Studs are reliably embedded onto the back plate by welding.
- The shape, size and thickness can be customized to meet your specific working conditions.

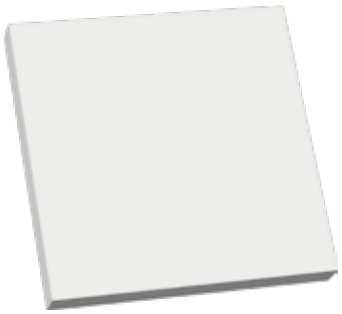
## Polymer Lining

- Its wear resistance is 4 times higher than nylon 66 and PTFE, and 6 times higher than carbon steel.
- The surface is smooth with a low friction coefficient, not easy to bond with materials, and has a relatively low heat distortion temperature under stress.
- Its self-lubricating property is comparable to that of PTFE, with a friction coefficient of only 0.07 - 0.11.
- The impact strength is 2 times that of PC and 5 times that of ABS, and it can maintain high toughness at 196°C.
- High chemical stability and corrosion resistance to acids/alkali and aging.
- The shape, size, and thickness can be customized according to your specific applications.



## Teflon Anti-stick Lining

- Free from stickness to almost all substances.
- Excellent heat resistance and low-temperature resistance
- Low friction coefficient.
- Water and oil repellent.
- Excellent wear resistance and stick free performance under load.
- Excellent corrosion resistance.
- Shape, size and thickness available to be customized.



# Pulley Lagging

## Cold Bond Pulley Lagging

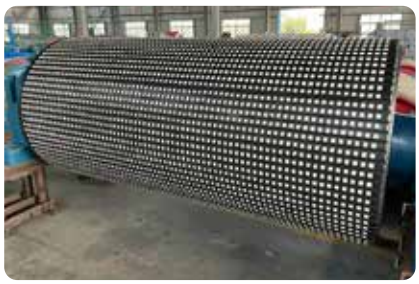
- Special CN layer requires no hot vulcanization and buffing, more environmentally friendly.

- Use with GRAND RUBBER cold bonding glue series for longer lasting and more stable quality.
- Increase service life by more than 3 times for customers.

- Lagging installed on site.
- Less downtime needed to complete lagging installation.
- Reduced works enable convenience and efficiency.



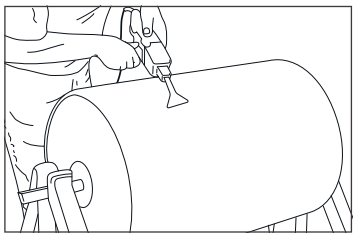
| Cold Bond Pulley Lagging | Hot Vulcanizing Pulley Lagging |
|---|---|
| Lagging available to be installed on site without removing the pulley | Lagging to be replaced and installed at the factory |
| No extra equipment investment | Special hot vulcanization equipment required |
| Adhesion effect influnced by abmbient environment (temperature, humidity) and operator skills | Stable adhesion and not likely affected by abmbient environment |
| Less downtime and low operation cost | Extended downtime and high operation cost |



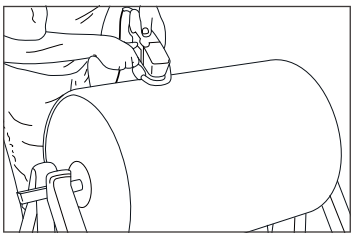




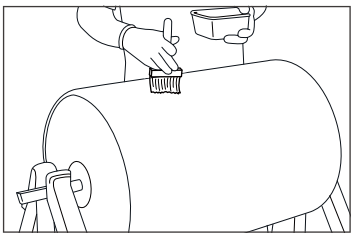

## Cold Bond Pulley Lagging Operation Process



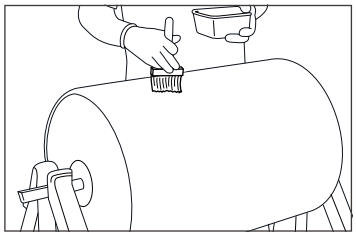
1. Remove old lagging with an electric impact drill.



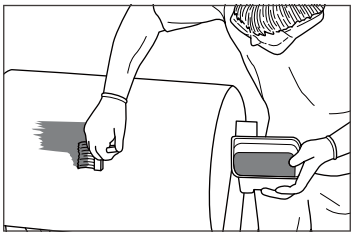
2. Use a grinder wheel to polish the metal surface to 90-140μm.



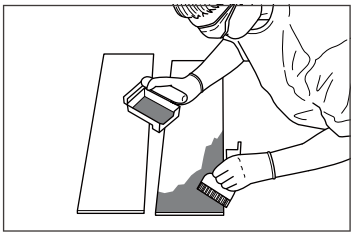
3. Use GRAND RUBBER® CLEANING SOLVENT cleaner to rinse the pulley surface.



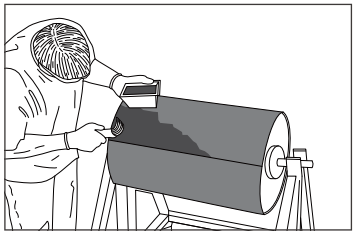
4. Coat the pulley surface with GRAND RUBBER® METAL PRIMER metal primer using a brush.



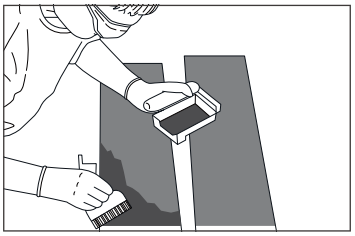
5. Coat the pulley surface with GRAND RUBBER® Cold-bonding Glue on using a brush.



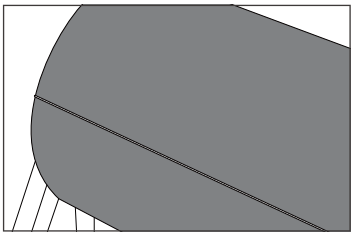
Coat the lagging strips with GRAND RUBBER® Cold-bonding Glue using a brush.



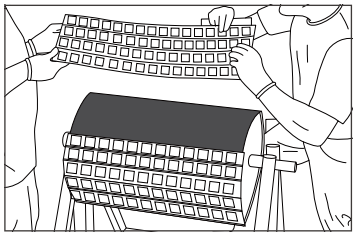
6. Apply a second coat of adhesive on the pulley.



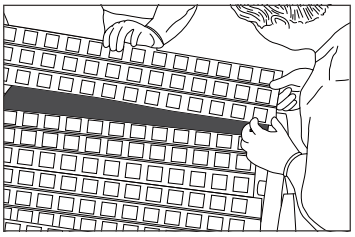
Apply a second coat of adhesive on the lagging strips.



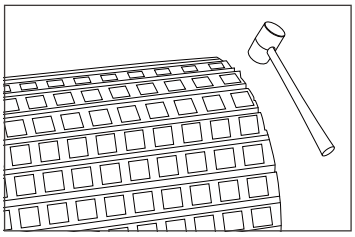
7. Mark a center line.



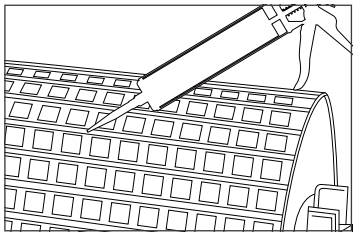
8. Install lagging strips.



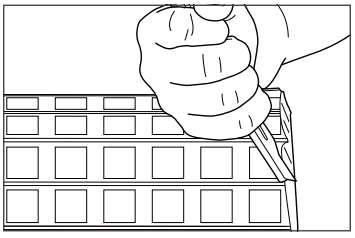
This step should be done when the glue is not completely dry and still sticky.



9. Tamping.



10. Seal any gaps with rubber sealer.

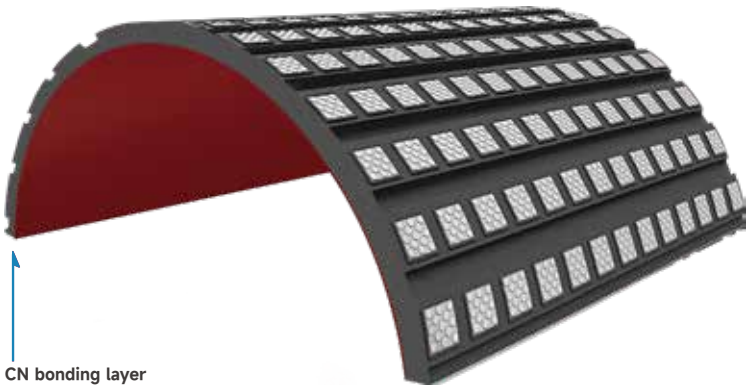


11. Trim the excess edge and seal.



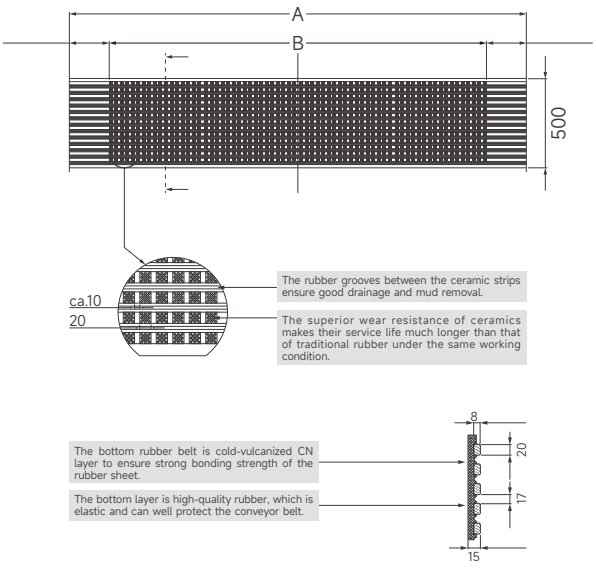
12. Pulley lagging is completed.

# Ceramic Lagging




## Features

- 92% aluminum oxide ceramic tiles embedded in rubber can prevent belt slipping.
- Rubber grooves between ceramic tiles can ensure good drainage and mud removal.
- Super wear resistance and long service life.
- The bottom layer is made of high-quality rubber to reduce the friction and wear between the conveyor belt and the driving pulley.
- Under the same load, the belt tension can be reduced and the belt life can be extended.




| Friction Coefficient | | | |
|---|---|---|---|
| Working Conditions | Steel Surface (no lagging) | GRAND RUBBER Rubber | GRAND RUBBER Ceramic |
| Dry | 0.35-0.40 | 0.40-0.45 | 0.75-0.85 |
| Wet | 0.10-0.15 | 0.33-0.38 | 0.50-0.80 |
| Mud | 0.05-0.10 | 0.22-0.30 | 0.45-0.50 |

## Application

- Pulley lagging for harsh working conditions.
- Transport of various muddy, wet and highly abrasive materials.
- High strength, high tension conveying systems.
- Ceramic tiles with particles on the surface are suitable for driving pulleys.

| Product | Model | Thickness (mm) | Width (mm) | Length (mm) | Property | Ceramic Length (mm) | Ceramic Spec (mm) | Pulley Length (mm) | Belt Width (mm) | CN Layer |
|---|---|---|---|---|---|---|---|---|---|---|
| 39% Ceramic Wear Lagging | TCY-12 TCY-15 | 12/15 | 500 | 650 | Y | 500 | 20*20*8 | 600 | 500 | √ |
| | | | | 800 | | 650 | | 750 | 650 | |
| | | | | 1000 | | 800 | | 950 | 800 | |
| | | | | 1200 | | 1000 | | 1150 | 1000 | |
| | | | | 1450 | | 1200 | | 1400 | 1200 | |
| | | | | 1650 | | 1400 | | 1600 | 1400 | |
| | | | | 1850 | | 1600 | | 1800 | 1600 | |
| | | | | 2050 | | 1800 | | 2000 | 1800 | |
| | | | | 2250 | | 2000 | | 2200 | 2000 | |
| | | | | 2550 | | 2200 | | 2500 | 2200 | |
| | TCY-20 | 20 | 500 | 650 | Y | 500 | 20*20*10 | 600 | 500 | √ |
| | | | | 800 | | 650 | | 750 | 650 | |
| | | | | 1000 | | 800 | | 950 | 800 | |
| | | | | 1200 | | 1000 | | 1150 | 1000 | |
| | | | | 1450 | | 1200 | | 1400 | 1200 | |
| | | | | 1650 | | 1400 | | 1600 | 1400 | |
| | | | | 1850 | | 1600 | | 1800 | 1600 | |
| | | | | 2050 | | 1800 | | 2000 | 1800 | |
| | | | | 2250 | | 2000 | | 2200 | 2000 | |
| | | | | 2550 | | 2200 | | 2500 | 2200 | |
| 39% Ceramic Flame-retardant Lagging | TCK-12 TCK-15 | 12/15 | 500 | 650 | K | 500 | 20*20*8 | 600 | 500 | √ |
| | | | | 800 | | 650 | | 750 | 650 | |
| | | | | 1000 | | 800 | | 950 | 800 | |
| | | | | 1200 | | 1000 | | 1150 | 1000 | |
| | | | | 1450 | | 1200 | | 1400 | 1200 | |
| | | | | 1650 | | 1400 | | 1600 | 1400 | |
| | | | | 1850 | | 1600 | | 1800 | 1600 | |
| | | | | 2050 | | 1800 | | 2000 | 1800 | |
| | | | | 2250 | | 2000 | | 2200 | 2000 | |
| | | | | 2550 | | 2200 | | 2500 | 2200 | |
| | TCK-20 | 20 | 500 | 650 | K | 500 | 20*20*10 | 600 | 500 | √ |
| | | | | 800 | | 650 | | 750 | 650 | |
| | | | | 1000 | | 800 | | 950 | 800 | |
| | | | | 1200 | | 1000 | | 1150 | 1000 | |
| | | | | 1450 | | 1200 | | 1400 | 1200 | |
| | | | | 1650 | | 1400 | | 1600 | 1400 | |
| | | | | 1850 | | 1600 | | 1800 | 1600 | |
| | | | | 2050 | | 1800 | | 2000 | 1800 | |
| | | | | 2250 | | 2000 | | 2200 | 2000 | |
| | | | | 2550 | | 2200 | | 2500 | 2200 | |

# Diamond Lagging




## Features

- The diamond-shaped groove is conducive to drainage and sewage discharge.
- Effectively avoid material accumulation on the drum surface and prevent the belt from running off track.
- Increase the friction between the drum and the belt to prevent the belt from slipping.
- Protect the drum and prevent the drum surface from wear and corrosion.

## Applications

- Specially designed patterns, suitable for high-strength fabric belts and steel cord belts conveyor system pulley lagging.

| Product | Specification | Packing Size (mm) | Weight (kg) |
|---|---|---|---|
| Diamond wear-resistant lagging | DRL10-2000/10000-X（B/O/R） | 10×2000×10000 | 230 |
| | DRL12-2000/10000-X（B/O/R） | 12×2000×10000 | 280 |
| | DRL15-2000/10000-X（B/O/R） | 15×2000×10000 | 350 |
| | DRL20-2000/10000-X（B/O/R） | 20×2000×10000 | 470 |
| Diamond flame-retardant lagging | DRL10-2000/10000-K（B/O/R） | 10×2000×10000 | 230 |
| | DRL12-2000/10000-K（B/O/R） | 12×2000×10000 | 280 |
| | DRL15-2000/10000-K（B/O/R） | 15×2000×10000 | 350 |
| | DRL20-2000/10000-K（B/O/R） | 20×2000×10000 | 470 |

# Flat Lagging




## Features

- Effectively prevent material accumulation on the pulley surface and prevent belt misalignment.
- Increase the friction between the pulley and the belt to prevent the belt from slipping.
- Protect the pulley and prevent the pulley surface from wear and corrosion.
- With the GRAND RUBBER engraving machine, it can engrave various sizes of patterns (diamond, herringbone, etc.) on flat rubber plates.

## Applications

- Pulley lagging for medium and high tension conveyor belt.
- Bend pulley lagging.

| Product | Specification | Packing Size (mm) | Weight (kg) |
|---|---|---|---|
| Flat wear-resistant lagging | PRL10-2000/10000-X（B/O/R） | 10×2000×10000 | 298 |
| | PRL12-2000/10000-X（B/O/R） | 12×2000×10000 | 333.5 |
| | PRL15-2000/10000-X（B/O/R） | 15×2000×10000 | 400 |
| | PRL20-2000/10000-X（B/O/R） | 20×2000×10000 | 521 |
| Flat flame-retardant lagging | PRL10-2000/10000-K（B/O/R） | 10×2000×10000 | 298 |
| | PRL12-2000/10000-K（B/O/R） | 12×2000×10000 | 399 |
| | PRL15-2000/10000-K（B/O/R） | 15×2000×10000 | 457 |
| | PRL20-2000/10000-K（B/O/R） | 20×2000×10000 | 595 |

# 03

# REPAIR MATERIALS
# SPLICING MATERIALS

Repair / Bonding / Splicing / Tools

# Cold Bonding System

## GRAND RUBBER® COLD-BONDING GLUE

**GRAND RUBBER® Cold-bonding Glue**

GRAND RUBBER® Cold-bonding Glue is a two-component cold **vulcanizingadhesive based on chloroprene rubber (CR). It is intended for: Rubber to rubber, rubber to fabric, fabric to fabric bonding Belt cold splicing, belt repair, etc.**

**750g**




## GRAND RUBBER® MP

**GRAND RUBBER® METAL PRIMER**

Designed for use with GRAND RUBBER® Cold-bonding Glue **to improve plastic-to-metal and rubber-to-metal adhesion.**

**700g**



# GRAND RUBBER® H02

**GRAND RUBBER® HARDENER (H02)**

Available to be used with hydroxyl polyurethane, polychlo roprene, natural rubber and synthetic rubber adhesives as a crosslinking agent. It is specially designed for the GRAND RUBBER® Cold-bonding Glue .

30g




# GRAND RUBBER® CS

**GRAND RUBBER® CLEANING SOLVENT**

Used to remove dust, grease, oil and other chemical pollut-ants from metal and rubber surfaces.

1.5L



# Cold Bonding System

## GRAND RUBBER® Cold-bonding Glue

### Features

- Deliver high bonding strength equivalent to hot vulcanization boding.
- Eliminate the need for vulcanization presses or other heavy equipment—achieves industrial-grade bonding with simple hand tools and minimal space requirements on site.
- Enable rapid repairs with immediate return-to-service capability, minimizing downtime and production losses.
- Feature intrinsic flame-retardant properties for both surface and underground applications.
- Deliver equivalent premium-grade performance at lower cost.




### Application

GRAND RUBBER® Cold-bonding Glue is a two-component cold vulcanizing adhesive based on chloroprene rubber (CR).
It is designed for use with GRAND RUBBER® Hardener (H02) for·

- Rubber to rubber, rubber to fabric, fabric to fabric, rubber to metal bonding.
- Abrasion-resistant and corrosion protection applications (rubber to metal bonding such as pulley lagging and wear lining applications).
- Belt cold splicing, belt repair, etc.

| | | |
|---|---|---|
| **Base Material** | Chloroprene rubber (neoprene) | |
| **Color** | Black | |
| **Density** | Approximately 1.45 g/cm³ | |
| **Surface Curing Time** | ~10 minutes (at 20°C) | |
| **Pot Life** | ~2 hours (at 20°C) | |
| **Shelf Life** | 48 months | |
| **Storage Conditions** | Store in sealed barrels in dry and cool conditions at room temperature 20~25°C, humidity ≤ 50% | |
| **Packaging** | 750g/can | |
| **Adhesion** | **Rubber to Rubber** | 24H ≥ 6N/mm 72H ≥ 8N/mm |
| | **Fabric to Fabric** | 24H ≥ 5N/mm 72H ≥ 7N/mm |
| | **Rubber to Metal** | 24H ≥ 8N/mm 72H ≥ 12N/mm |

# GRAND RUBBER® METAL PRIMER

## Application

GRAND RUBBER® Metal Primer is a chlorofluorocarbon (CFC)-free primer used in conjunction with GRAND RUBBER® Cold-bonding Glue to improve plastic-to-metal and rubber-to-metal adhesion.




| | |
|---|---|
| **Color** | Gray |
| **Viscosity** | 90–170 mPa·s |
| **Density** | 0.92–0.96 g/mL |
| **Surface Curing Time** | ~30 minutes |
| **Coverage** | ~50–200 g/m² per coat |
| **Storage Conditions** | Store in sealed barrels in dry and cool conditions at room temperature 20~25°C, humidity ≤ 50% |
| **Shelf Life** | >12 months |
| **Packaging** | 700g/can |

# Cold Bonding System

## GRAND RUBBER® CLEANING SOLVENT

### Application

GRAND RUBBER® CLEANING SOLVENT is a solution that does not contain water. It is often used to remove dust, grease, oil and other chemical pollutants from metal and rubber surfaces.




| | |
|---|---|
| **Density** | 1.40g/cm³ |
| **Storage Conditions** | Store in sealed barrels in dry and cool conditions at room temperature 20~25°C, humidity ≤ 50% |
| **Shelf Life** | >12 months |
| **Packaging** | 1.5L/can |

## GRAND RUBBER® HARDENER

### Application

GRAND RUBBER® Hardener (H02) is a CFC-free hardener that acts as a crosslinking agent, compatible with hydroxyl polyurethane, polychloroprene, natural rubber and synthetic rubber adhesives. It is specifically designed for use with GRAND RUBBER® Cold-bonding Glue system.




| | |
|---|---|
| **Operation** | Brushing or coating |
| **Coverage** | Approximately 250g/m³ per layer |
| **Storage Conditions** | Store in sealed barrels in dry and cool conditions at room temperature 20~25°C, humidity ≤ 50% |
| **Shelf Life** | >24 months (unopened) |
| **Packaging** | 30g/bottle |

# Quick Repair System

## GRAND RUBBER® Q2 Quick Repair System

### Features

- Simple and quick application
- No need for special tools
- Easy to operate
- Reduce downtime and improve equipment utilization
- High cost-effectiveness for repair




### Applications

- Repair of conveyor belt surface damage and longitudinal tears
- Seal maintenance
- Rubber lining joint filling
- Filling V-shaped interfaces of pulley lagging
- Repair of rubber components

### Specifications

- GRAND RUBBER Solution Q2 A/B: 1000g/can
- GRAND RUBBER Compound Q2 A/B: 20*5500mm/roll
- GRAND RUBBER Q2 Cleaning Rubber: 18*3000mm/roll

- GRAND RUBBER Q2 Solution A/B is a two-component solution, which is used in conjunction with GRAND RUBBER Q2 Compound A/B.
- GRAND RUBBER Q2 Compound A/B is a two-component rubber material. After being heated and mixed by a GRAND RUBBER Q2 glue gun, it can be used for filling and repairing without additional hot vulcanization equipment.
- GRAND RUBBER Q2 Cleaning Rubber is a non-vulcanizable rubber, mainly used for internal cleaning and preheating of the GRAND RUBBER Q2 glue gun.

# Repair Materials

## Repair Strip

### Features

- CN layer/vulcanized layer on back
- Resist to tensile force, wear and heat



### Applications

- **Standard Repair Strip:** Ideal for repairing long scratches on conveyor belts
- **Reinforced Repair Strip:** Suitable for repairing all types of conveyor belt tears and structural damages

### Specifications

| | |
|---|---|
| Standard Repair Strip | 100*10000mm/150*10000mm/ 220*10000mm/300*10000mm/400*10000mm |
| Reinforced Repair Strip | 100*10000mm+/150*10000mm +/220*10000mm+/300*10000mm+/400*10000mm+ |

## Diamond Repair Patch

### Features

It is designed with vulcanized layer and features good tensile strength and simple operation processes. Using with GRAND RUBBER vulcanizing agent can effectively improve the adhesion strength.



### Applications

- **Standard Diamond Repair Patch:** Suitable for repairing small rubber abrasions
- **Reinforced Diamond Repair Patch:** Ideal for repairing structural abrasions

### Specifications

| | |
|---|---|
| Standard/Reinforced Diamond Repair Patch | 160*130mm/260*200mm/360*270mm |

# Splicing Materials

## Cover Rubber

The cover rubber is used for both fabric and steel cord conveyor belts. It features proper tensile strength and abrasion resistance. When joining fabric conveyor belts, applying cover rubber to seal the joint enhances wear resistance at the splice and maintains the belt's overall integrity.



### Features

- Joints can withstand high temperatures.
- Suitable for both steel cord belts and fabric belts.
- Applicable to conveyor belts from different manufacturers.
- Good fluidity with rubber flow defoaming agents.
- Vulcanization is still available after a power outage if pressure is maintained.
- Shelf life: 24 months.

### Applications

- They are applicable to hot vulcanized splicing and repairs for steel cord and fabric conveyor belts.
- The joints can withstand instantaneous high temperatures of around 180°C, making them suitable for bonding high-temperature materials.

### Specifications

3*500mm / 4*500mm / 5*500mm

# Splicing Materials

## Intermediate Rubber (Tie Gum)

The intermediate rubber (tie gum) serves to enhance the bonding strength of the vulcanized part of the conveyor belt, improve the overall tensile strength of the conveyor belt and prevent steel cords from pulling out.



### Features

- Joints can withstand high temperatures.
- Suitable for both steel cord belts and fabric belts.
- Applicable to conveyor belts from different manufacturers.
- Good fluidity with rubber flow defoaming agents.
- Vulcanization is still available after a power outage if pressure is maintained.
- Shelf life: 24 months.

### Application

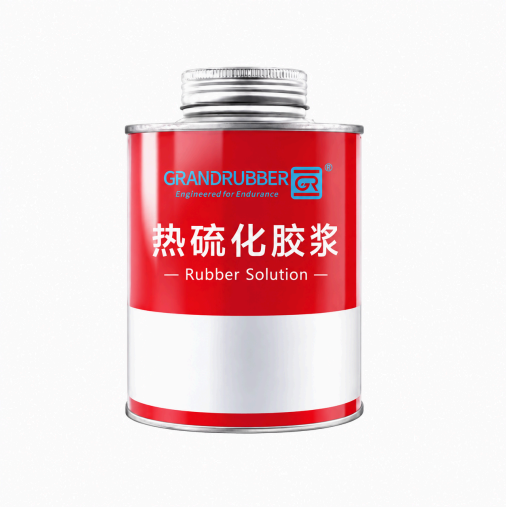
- They are applicable to hot vulcanized splicing and repairs for steel cord and fabric conveyor belts.
- The joints can withstand instantaneous high temperatures of around 180°C, making them suitable for bonding high-temperature materials.

### Specifications

0.8*500mm / 2*500mm

## Rubber Solution

The rubber solution is a flame-retardant high-performance adhesive.
It features high temperature resistance, water resistance, oil resistance, aging resistance, non-combustibility when exposed to open flame and high bonding strength.
It is widely used for hot vulcanized splicing of fabric belts, steel cord belts, solid woven conveyor belts and polyurethane conveyor belts.
When performing hot vulcanized splicing, the rubber solution needs to be used in conjunction with uncured intermediate rubber and cover rubber.




### Operation Instructions

- Make the splicing steps on the conveyor belt. After the splicing steps are prepared, use an angle grinder to grind the step surface in a zigzag manner.
- Apply the rubber solution evenly on the grinded area, as well as on the uncured intermediate rubber and cover rubber. Then lay the intermediate rubber and cover rubber flat on the steps.
- Use a vulcanizing machine to heat up and pressurize the splicing surface. When the temperature reaches 145°C, a constant temperature of 40-45 minutes is required. After it reaches the specified vulcanizing time, stop heating.
- After the vulcanizing machine cools down, remove it. Use a knife to trim the joint.

## Sealing Rubber

The sealing rubber serves to bond the joint area of the conveyor belt to prevent the joint parts from breaking.

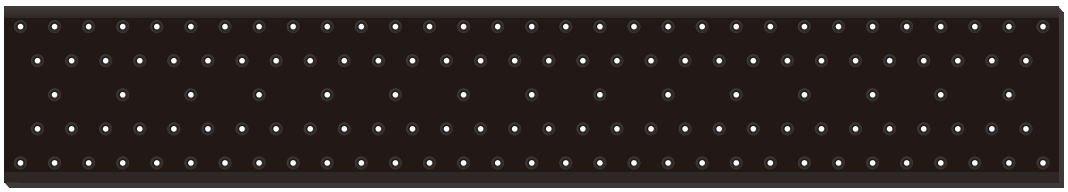


## Noodle Rubber

The noodle rubber is used to fill the gap between the steel cords at the joint of steel cord conveyor belt to enhance the bonding strength.



# Splicing Materials



## Fast Screw

The GRAND RUBBER fast screw can be used for belt repair and spicing as an alternative for hot vulcanized repair and splicing.

### Features

- Suitable for conveyor belts of various thicknesses.
- Applicable to nylon belts, polyester belts, PVC/PVG belts, Chevron belts, pipe belts, sidewall belts, and steel cord belts.
- Capable of repairing various damages to conveyor belts, including large scratches, tears, through holes and rubber loss.
- Easy and quick to operate without using vulcanizing machine.
- Simple and fast operation (within approximately 2 hours), reducing downtime and losses.
- Minimal requirements for the working environment.
- Unaffected by extreme weather conditions such as rain, snow, ice, and frost.
- Low demand for operating space, not restricted by certain special narrow working environments.
- High strength, cut resistance, and elasticity; resistant to heat, wear, acid, alkali, high temperature, and oil; special requirements can be customized.
- Integrated design, no leakage of conveyed materials, and no hinges.
- Compatible with various sizes of rollers and cleaners.






## Selection Guidance

- The thickness of the conveyor belt determines the length of the screw.
- Rubber quality shall be subject to the conveyor belt (abrasion resistant/heat resistant/ acid and alkali resistant, etc).
- Conveyor belt width=splicing length (the belt strength≤600N/mm).
  Conveyor belt width*1.06=Splicing length.
- Screw length is subject to demand.

| Model / Item | H400<br>Belt Strength ≤ 400N | H650<br>Belt Strength ≤ 650N | H1000<br>Belt Strength ≤ 1000N | H1400<br>Belt Strength ≤ 1400N | H2000<br>Belt Strength ≤ 2000N |
|---|---|---|---|---|---|
| **Carcass Thickness mm** | 2-10 | 2-10 | 4-16 | 4-16 | 4-16 |
| **Belt Strength N/mm** | 500 | 650 | 1000 | 1400 | 1800 |
| **Min. Pulley Dia. mm** | 150 | 150 | 200 | 300 | 300 |
| **Belt Availability** | EP400/ EP500 | EP500 / EP650 | EP800 / EP1000 | EP1200 / EP1400 | EP1600 / EP1800 / EP2000 |

# Splicing Tools

## Mechanical Fastener

### Applications

The mechanical fasteners are suitable for use with conveyor belts with strength ≤1400N/mm.



### Features

- Highly adaptable to conveyor belts, excellent troughability at joints, minimal damage caused to the belt.
- Easy to be used with low labour intensity.
- High belt splicing strength.
- Excellent abrasion resistance and long service life.

## Elevator Belt Splicing Fastener

A bucket elevator belt splicing fastener is used to secure the belt in bucket elevators. It is designed to provide a reliable joint for the belt, ensuring proper operation and safety in elevator systems.



- The splicing fastener is designed for easy installation and operation.
- Belt can be effectively protected from damage.
- The splicing fastener delivers high reliability to ensure safe operation of the belt.

## Hot Vulcanization Press



### Features

- Small in size and light in weight.
- Three-phase motor power system, uniform hot plate temperature and the pressure system supply (0-1.8MPa).
- Automatic electric control box, easy to operate and reliable in operation.

### Application

- It is widely used for hot splicing of the fabric and steel cord conveyor belt on the job site. Please be noted that the job site shall be free from explosive gas and corrosive gas.

### Technical Parameters

- Vulcanization Pressure: 1.0-2.0MPa
- Vulcanization Temperature: 145°C
- Surface Temperature Difference: ±3°C
- Warming-up Time: ≤50min (from room temperature to 145°C)
- Voltage: 380V@50Hz
- Control Box Output Power: 36Kw
- Temperature Adjustment Range: 0~200°C
- Timing Adjustment Range: 0~59min
- The gap between the upper and lower heating plates is no more than 0.5mm when pressurized to 0.8MPa

## Sidewall and Cleat Hot Assembling Tool

The sidewall and cleat hot assembling tools are used for hot assembling of sidewall and cleat at the splicing area as well as the hot repairing of sidewall and cleat on site.



## Sidewall Splicing Mold

It is used for sidewall splicing and repair and applicable for sidewall with base width from 50-105mm.



TECHNICAL COORDINATION

# A clear path from inquiry to supply.

## 01 Review the specification

Resolve conflicting requirements and identify the application, material, dimensions and performance criteria.

## 02 Confirm the proposal

Agree the supply scope, drawings, test requirements, packing and commercial terms before order acceptance.

## 03 Control the handover

Record approved versions and agreed documents. Installation support and site services depend on the confirmed project scope.

# LET'S REVIEW
# YOUR REQUIREMENT.

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