

# STEEP INCLINE VERTICAL CONVEYING

POWERED BY: **BI-STATE RUBBER**

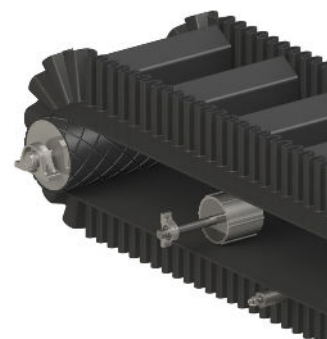


## GET TO KNOW US

Since 2003, Bi-State Rubber has been a trusted manufacturer of new and replacement pocket incline conveyor belts, catering to a diverse range of industries including power and cement plants, steel mills, scrap recycling, pulp and paper mills, mine processing, grain, and more. Our commitment to quality and durability has earned us the loyalty of customers worldwide.

Fueled by our relentless pursuit of quality, we're proud to announce our partnership with Sidewall Italy®, bringing a new standard of excellence to these industries. Our collaboration ensures the highest quality by utilizing first-class raw materials, efficiency through employing innovative processes for hot vulcanized sidewall and cleats, and delivering long-lasting products built to endure the toughest conditions.

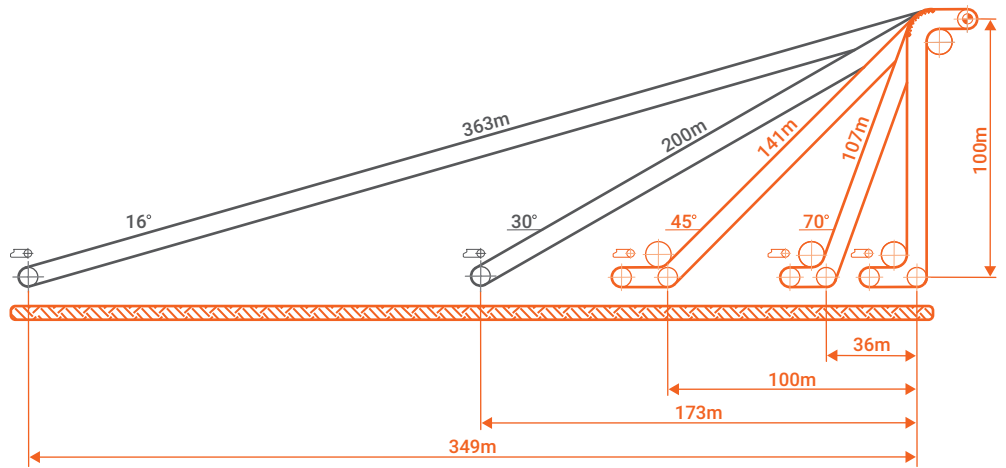
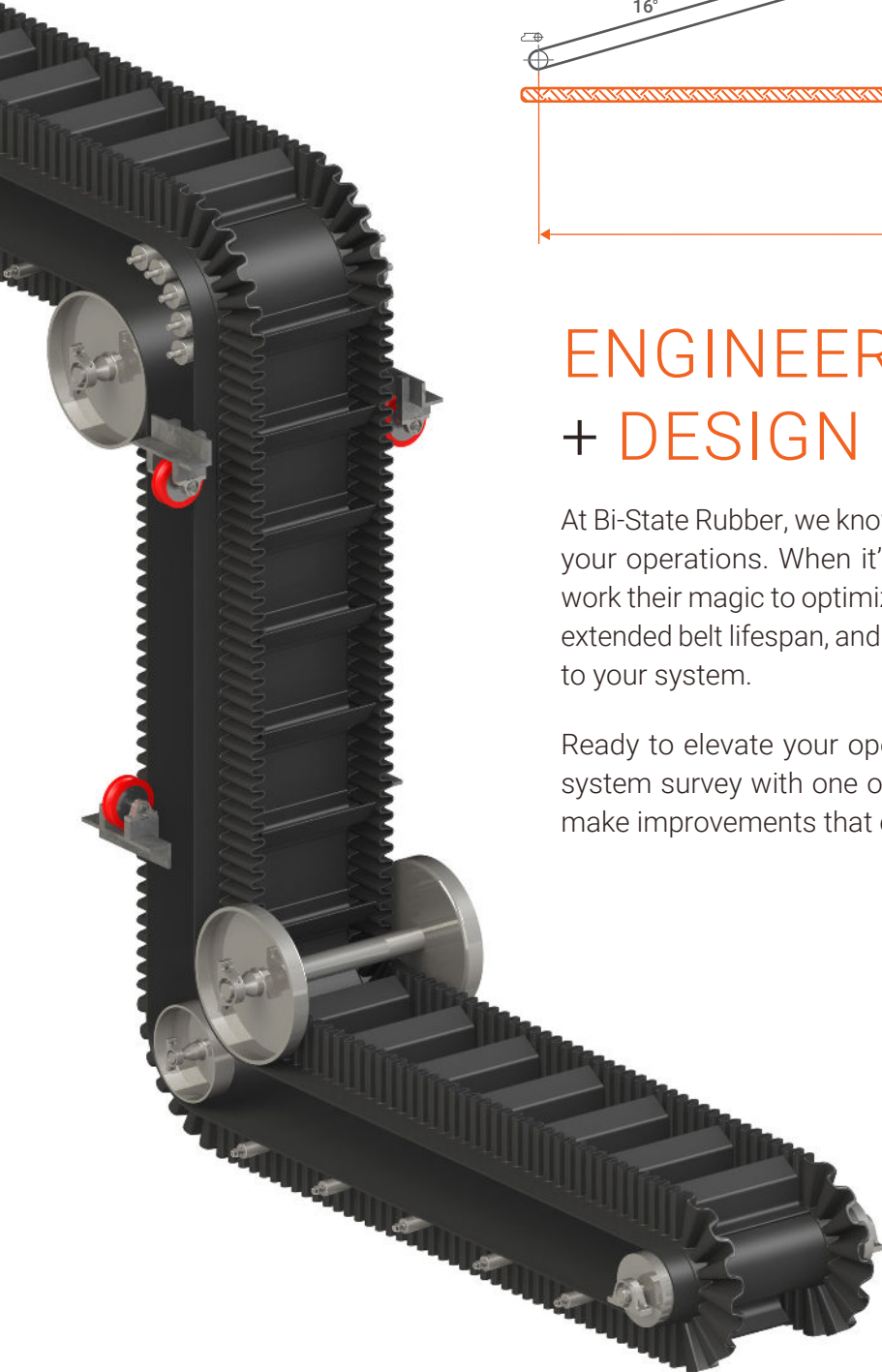
With our enhanced capabilities, we are able to offer unmatched flexibility and efficiency, ensuring prompt delivery to meet the demands of today's dynamic local and international markets. Partner with us for superior conveyor belt solutions that stand the test of time.



## OUR PROMISE

When you partner with Bi-State Rubber and Sidewall Italy®, you're not just getting top-notch products; you're getting a dedicated team of specialists committed to your success. From assembly to start-up and even belt vulcanization if required, we're with you every step of the way. Need clarification or information? Consider us your go-to resource, available at your full disposal to ensure your complete satisfaction.





## ENGINEERING + DESIGN

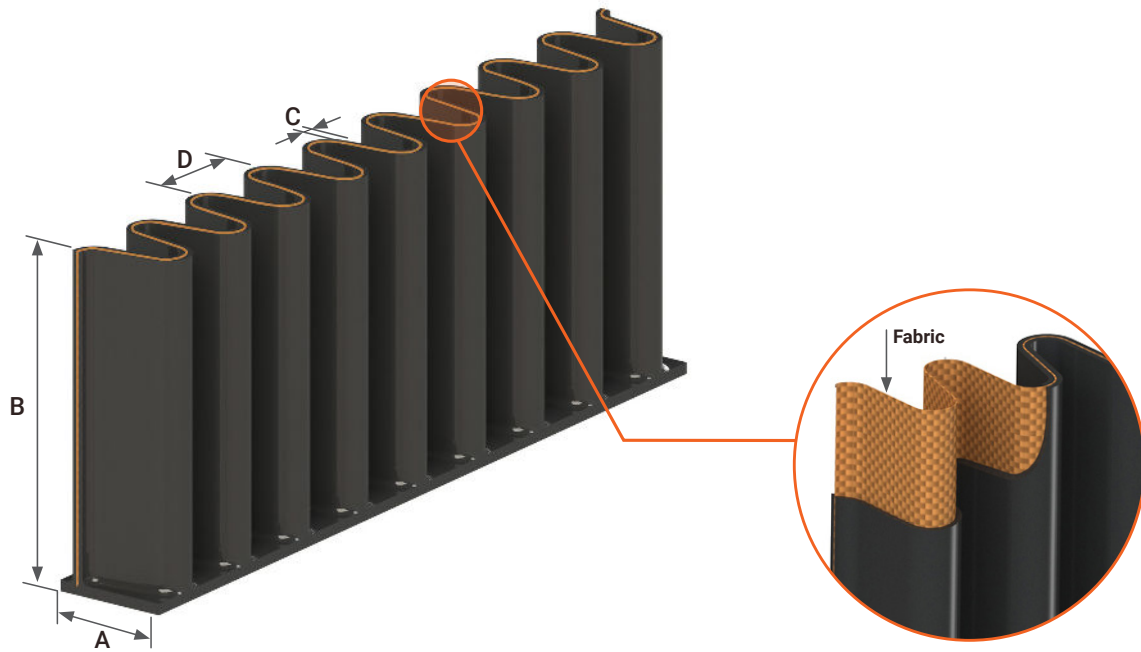
At Bi-State Rubber, we know that engineering and design can transform your operations. When it's time to replace your belt, let our experts work their magic to optimize your design. The result? Reduced spillage, extended belt lifespan, and minimized downtime without costly changes to your system.

Ready to elevate your operations? Contact us to schedule a visit or system survey with one of our in-house Pocket Belt Specialists. Let's make improvements that count!

### Talk to Us

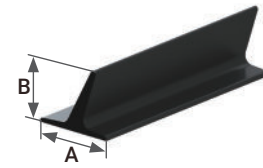
- ☎ 636.349.2388
- ☎ 636.349.2393
- ✉ [sales@bistaterubber.com](mailto:sales@bistaterubber.com)
- 🌐 Bi-Staterubber Inc

# SIDEWALLS



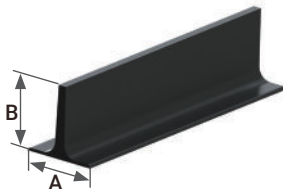
article code	HEF fabric	A mm	B mm	C mm	D mm	weight Kg/m	Ø pulley mm	Ø deflection mm
40/30	-	30	40	5	25	0,5	-	-
40/50	✓	50	40	6	50	0,8	250	280
60	✓	50	60	6	50	1,2	250	280
80	✓	50	80	6	50	1,4	280	315
100	✓	50	100	6	50	1,6	360	480
120	✓	50	120	6	50	2,2	360	480
160	✓	70	160	6	55	3,7	480	640
200	✓	80	200	8	65	5	600	800
240	✓	80	240	8	65	6	720	960
300	✓	100	300	9	90	8,2	900	1200
160/75	✓	75	160	9	60	4,6	480	640
200/75	✓	75	200	9	60	5,6	600	800
240/75	✓	75	240	9	60	6,6	720	960
250/75	✓	75	250	9	60	7	750	1000
280/75	✓	75	280	9	60	7,8	900	1200
300/75	✓	75	300	9	60	8,3	900	1200
400	✓	100	400	12	83	18,7	1200	1600
500	✓	100	500	12	83	23,7	1500	2000

# CLEATS



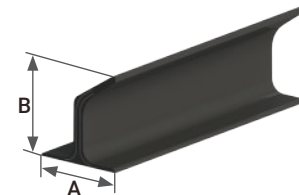
**C**

article code	HBL no fabric	HEF fabric	A mm	B mm	weight Kg/m
C55	✓	-	90	55	1,2
C75	✓	-	90	75	2,0
C110	✓	✓	110	110	2,7



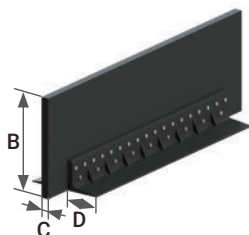
**T**

article code	HBL no fabric	HEF fabric	A mm	B mm	weight Kg/m
T20	✓	-	40	20	0,2
TB30	✓	-	80	30	1,1
TB40	✓	-	80	40	1,2
TB50	✓	-	100	50	2,3
T55	✓	-	80	55	0,9
T75	✓	✓	100	75	1,6
T90	✓	✓	110	90	2,4
T110	✓	✓	110	110	3,0
T140	✓	✓	110	140	3,6
T180		✓	150	180	4,7



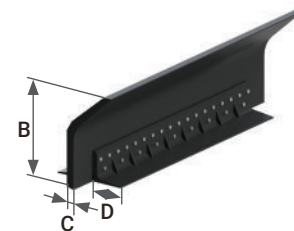
**TC**

article code	HBL no fabric	HEF fabric	A mm	B mm	weight Kg/m
HBL-TC70	✓	✓	70	70	1,24
HBL-TC90	✓	✓	110	90	2,7
HBL-TC110	✓	✓	110	110	3,0
HBL-TC140	✓	✓	140	140	4,3
HBL-TC180	✓	✓	170	180	6,3
HBL-TC220	✓	✓	175	220	7,4
HBL-TC230	-	✓	175	230	7,8
HBL-TC240	-	✓	175	240	8,2
HBL-TC250	-	✓	175	250	8,5
HBL-TC260	-	✓	175	260	8,7
HBL-TC280	-	✓	190	280	11,9



**TW**

article code	HBL no fabric	HEF fabric	B mm	C mm	D mm
TW280	-	✓	280	30	99
TW360	-	✓	360	30	99
TW380	-	✓	380	30	99
TW480	-	✓	480	30	99



**TCW**

article code	HBL no fabric	HEF fabric	A mm	B mm	C mm	D mm
TCW280	-	✓	228	280	30	99
TCW360	-	✓	228	360	30	99
TCW380	-	✓	228	380	30	99
TCW480	-	✓	228	480	30	99



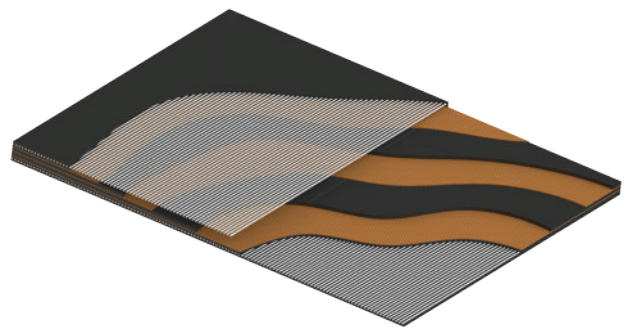
# RUBBER CONVEYOR BELTS

For high incline and vertical systems, the key lies in utilizing base conveyor belts with cross-stabilized insertions. Sidewall conveyor belts excel in navigating elevation changes from horizontal to inclined and/or vertical, relying solely on free lateral spaces in the return strand for support.

To meet the demands of these deflection and support zones, a rigid and stiff belt is crucial. Enter cross-stabilized base belts – a fundamental component of sidewall belts. Manufactured with a wide array of rubber compounds, these belts are tailored to meet any conveying requirement.

## TEXRIGID

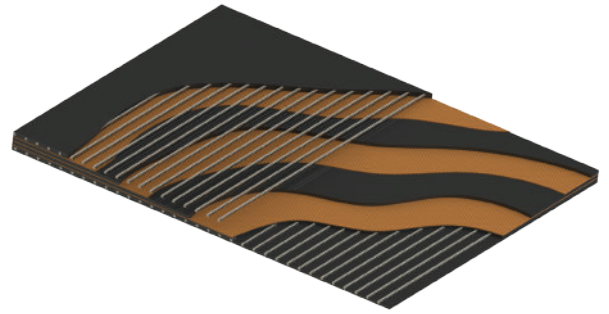
A cross-stabilized belt crafted from a textile carcass EP (Polyester – Polyamide), enhanced with two layers of rigid Polyester fabrics. Engineered for medium to heavy-duty applications, Texrigid Belts offer reliable performance and durability. Customize your belt with options for various tensile strengths and cover thicknesses, tailored to your specific requirements. Explore our standard types in the table below, or reach out to us for personalized solutions designed to meet your needs precisely.



article code	tensile strength N/mm	fabrics n.	cover mm	Ø min. pulley mm
TEXRIGID 315	315	2 + 1	3 + 1,5	250
TEXRIGID 400	400	2 + 2	5 + 3	305
TEXRIGID 500	500	3 + 2	5 + 3	400
TEXRIGID 630	630	4 + 2	5 + 3	500
TEXRIGID 800	800	5 + 2	5 + 3	630
TEXRIGID 1000	1000	5 + 2 / 6 + 2	5 + 3	800
TEXRIGID 1250	1250	5 + 2	5 + 3	800
TEXRIGID 1600	1600	5 + 2	5 + 3	1000

## CROSSRIGID

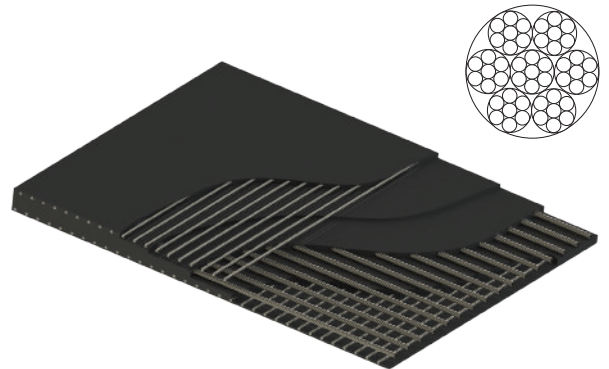
Our innovative belts built on a textile carcass EP (Polyester – Polyamide) with robust steel cord inserts. This unique design ensures exceptional stability and rigidity, even over long center distances and in high-elevation applications. Tailored to your needs, we offer various options for tensile strength and cover thickness, available upon request. Explore our standard types in the table below, or contact us for customized solutions to suit your specific requirements.



article code	tensile strength N/mm	fabrics n.	cover mm	Ø min. pulley mm
CROSSRIGID 500	500	3 + 2	5 + 3	400
CROSSRIGID 630	630	4 + 2	5 + 3	500
CROSSRIGID 800	800	5 + 2	5 + 3	630
CROSSRIGID 1000	1000	5 + 2 / 6 + 2	5 + 3	800
CROSSRIGID 1250	1250	5 + 2	5 + 3	800
CROSSRIGID 1600	1600	5 + 2	5 + 3	1000

## CROSSRIGID HR

Our advanced steel cord belts are engineered for superior transversal rigidity and minimal longitudinal elongation. Featuring a customizable rigid reinforcement, these belts are tailored to meet precise requirements, making them ideal for heavy-duty applications and elevated environments. Plus, our Crossrigid HR option includes a free zone under the sidewall base, enhancing versatility and performance. Experience the reliability of belts made on demand, crafted to your exact specifications for optimal results.



article code	tensile strength N/mm	min. cover thickness n.	Ø min. pulley mm
CROSSRIGID HR 1000	1000	6 + 4	630
CROSSRIGID HR 1250	1250	6 + 4	800
CROSSRIGID HR 1600	1600	6 + 4	800
CROSSRIGID HR 2000	2000	6 + 4	800
CROSSRIGID HR 2500	2500	6 + 4	1000
CROSSRIGID HR 3150	3150	6 + 4	1250
CROSSRIGID HR 3500	3500	6 + 4	1250

# BI-STATE RUBBER STUB IDLERS

A testament to technological progress and design innovation that revolutionizes idler functionality compared to traditional steel can idlers.

**Introducing the game-changer: UHMW surfaces.** With a significantly lower friction coefficient, they shield your system from sidewall and base belt damage. Our idlers feature solid UHMW construction, ensuring smooth belt movement even in lock-ups. Plus, a front nose with a UHMW radius curve provides extra sidewall defense, eliminating worries about heavy damage from belt tracking issues. Equipped with sealed bearings, maintenance is a breeze.

At Bi-State Rubber, customization is our specialty. Choose tailor-made idlers or select from our in-stock sizes for dependable performance and durability.

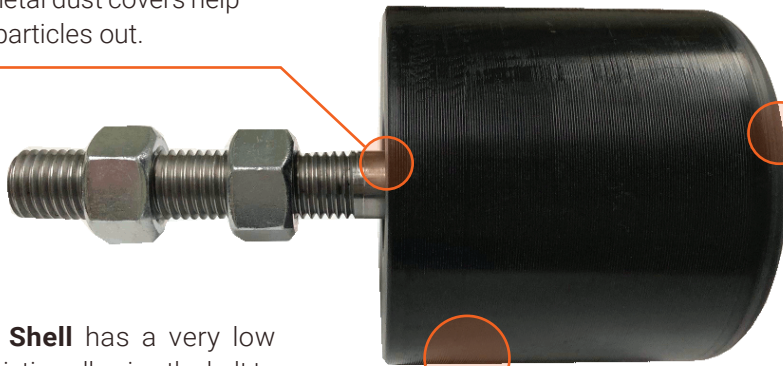
### Common Stock Sizes (Custom sizes by request)

- 6" dia x 6" face x 1-1/8" dia shaft (CEMA-D RATING)
- 5" dia x 5" face x 3/4" dia shaft (CEMA-C RATING)
- 5" dia x 5" face x 1" dia shaft (CEMA-C RATING)



### Dual internal sealed bearings

require no maintenance, and greased metal dust covers help keep fine particles out.



Solid **UHMW Shell** has a very low coefficient of friction allowing the belt to slide gently across the face, in the event of a failure. This means no damage caused to the Pocket Belt as seen on steel can idlers.

Completely smooth **Radius Nose** helps protect sidewall and base belt when tracking too heavy on one side.





# BI-STATE RUBBER GUIDE WHEELS

Protect your belt, extend its lifespan, and say goodbye to costly replacements with Guide Wheels.

Ever wonder what causes the premature demise of your pocket belt? It's often the belt veering off track, scraping against the structure, and wearing down its edges. But fear not, our BSR Guide Wheels are here to save the day.

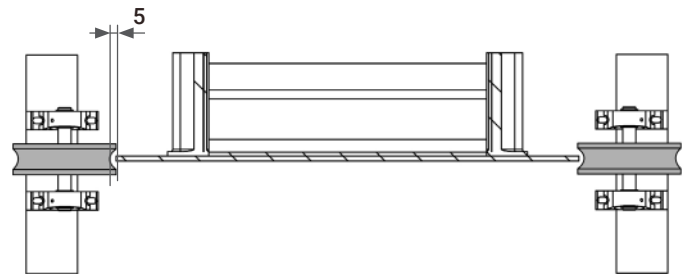
Available in two variants – 12" diameter rubber and 8" diameter urethane – these wheels are meticulously designed to glide along the belt's edge, shielding it from harm. What's more, we offer customizable mounting brackets that let you tweak the wheel's position, ensuring precise correction or steadfast belt alignment.

Unlike conventional metal wheels, our rubber-on-rubber contact is gentle on the belt's edge, minimizing abrasion and maximizing longevity. Say hello to smoother operations and farewell to frequent belt replacements.

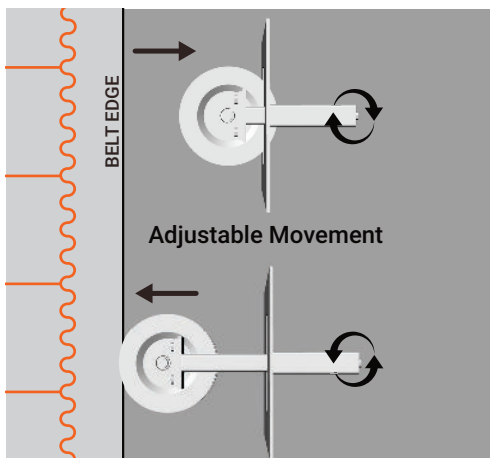
12" dia all rubber guide wheel. BSR-FRG-260



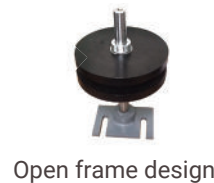
8" dia Urethane Guide Wheel



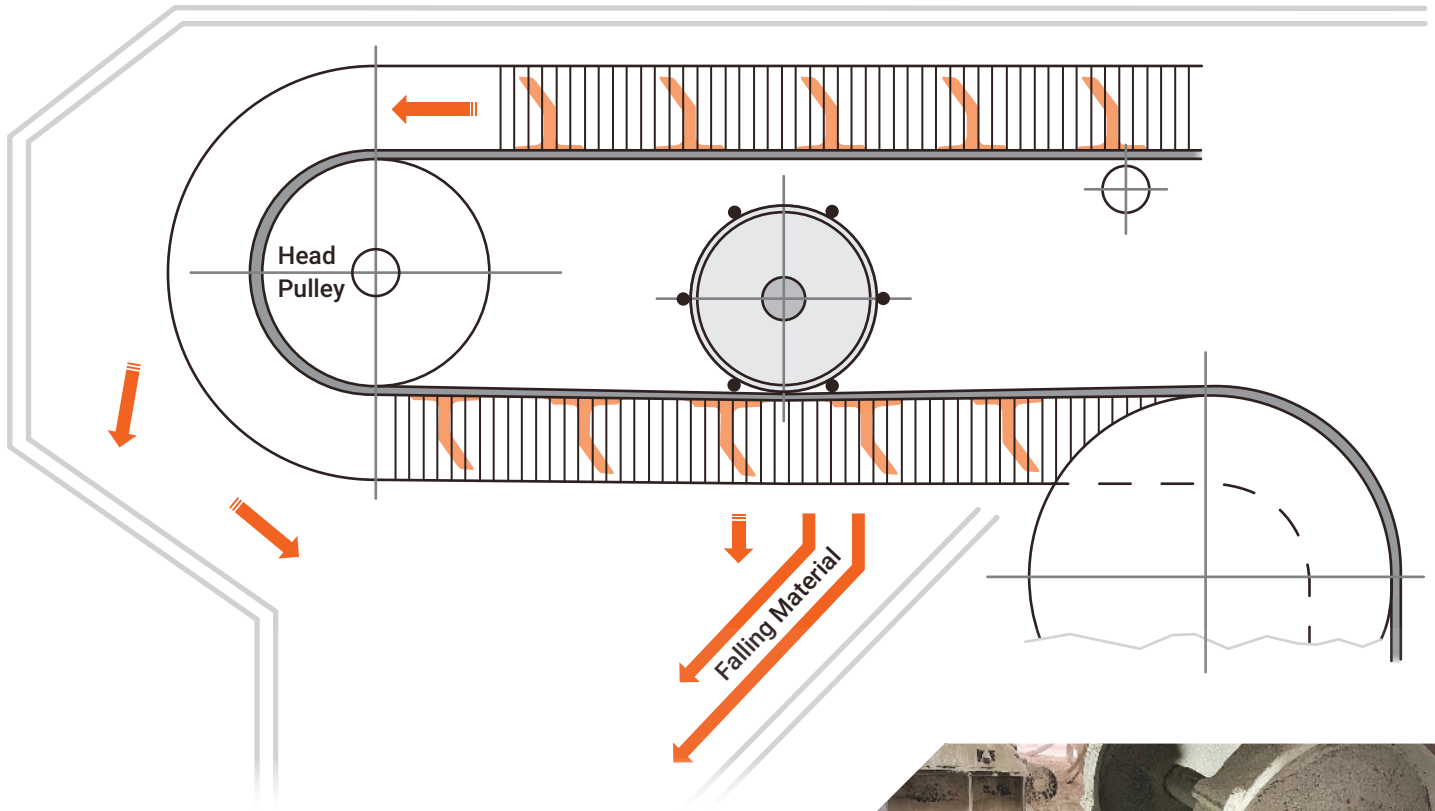
## Screw Take-Up Design



## 8" Mounting Bracket/Wheel Options



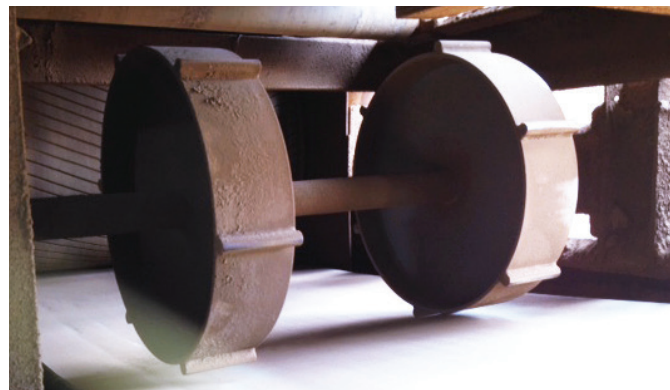
# BELT CLEANING



Powered by contact with the base belt, no motor required!

- Gentlest on your base belt: Say goodbye to deterioration caused by other cleaners.
- Simplicity at its finest: No extra moving parts to worry about, unlike cleaners with multiple bearings and rollers.
- Side-to-side rocking and thumping action: Alternating lugs stretch out sidewall convolutions, ensuring maximum material removal.
- Tailored to your system: Custom-made based on your belt design, speed, and head pulley diameter.

**Note:** While Sidewall Conveyor Belts possess self-cleaning properties, in the case of sticky materials, the assistance of a cleaning device may be necessary. Please consult our technical department for advice on hopper design, as the actual position of the discharge hopper may vary based on the length of the horizontal section, and additional support may be required.



# POCKET BELT PULLEYS + DEFLECTION WHEELS

At Bi-State Rubber, we've got you covered with our full range of Pulleys, Idlers, and Wheels, designed to keep your Pocket Belt system running seamlessly. Our pulleys are precision-engineered for each unique system and custom-made to ensure a perfect fit. Experience smoother operations with Bi-State Rubber—upgrade your pulleys today!



# SUPER SCREW FLEXIBLE FASTENER

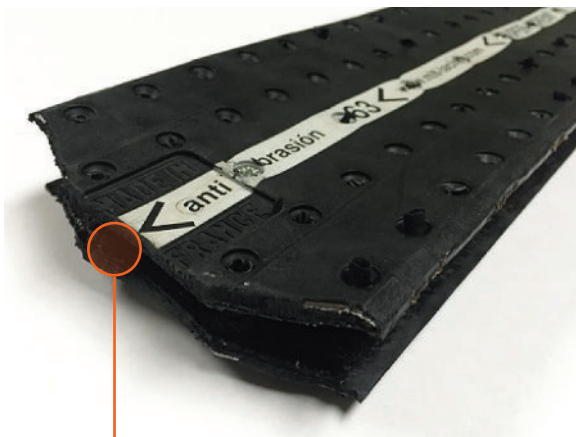
Get ready for the Super Screw Fastener, a mechanical rubber fastener that's not only reinforced with a multiple textile carcass and steel inserts, but also attaches to the belt effortlessly using self-tapping screws—no special tools required!

This leak-proof joint boasts no hinge, ensuring no material sifts through the splice. Plus, the screws reach farther back into the belt, providing superior holding strength. With splice strength comparable to a vulcanized splice, yet installable in just hours, it's the game-changer your system needs!

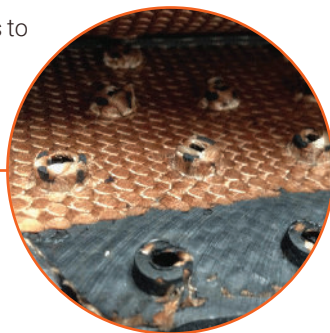


## KEY POINTS

- Made to match the tension of your belt
- Can be ordered in width needed or in rolls to keep on hand
- Angled or perpendicular splice
- Common rubber compounds available
  - ▶ Abrasion resistant – MOR – MSHA
  - ▶ HOT 400 F – Stainless steel
  - ▶ Food grade – Slider bed
- Used as main splice or repair patch
- Highly flexible and leak proof
- Longer lasting than metal fasteners
- As strong as vulcanized splice but installed mechanically using hand drill



- Tension rating matches belt rating
- Inlaid steel grommets to secure screws



# PACKAGING

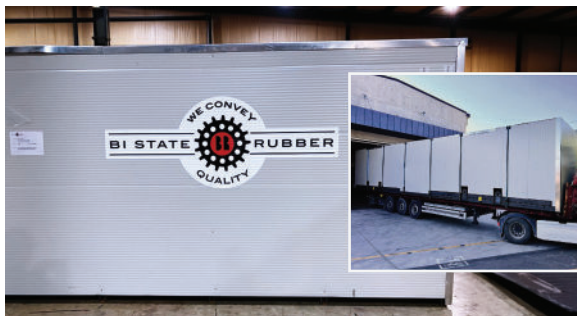


## ALL STEEL FRAME CRATE

- Custom-made to fit your exact belt, even in tight installation areas or storage spaces
- Over-engineered for easy transportation with forklifts or cranes; lifting lugs can be added on top rails

## OPTIONAL UV RESISTANT SNOW LOAD COVER

- Keep your belt in pristine condition during long-term storage
- Protection from all outside elements, including snow, rain, and sun
- Complete shrink wrap with heat-sealed plastic available
- Steel-reinforced roof prevents cave-ins, while grommets along the bottom keep it secure



## OPTIONAL METAL INSULATED ENCLOSURE

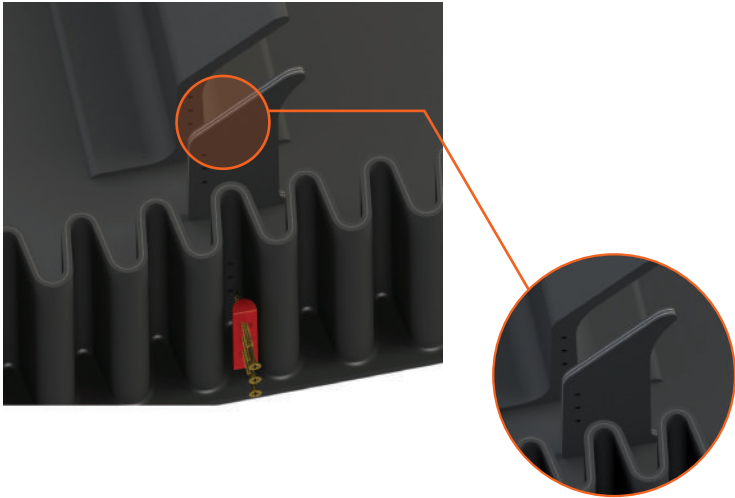
- Fully enclosed metal panels with insulation
- Helps to reduce the internal belt temperatures significantly
- Best for long term outside storage

## WEATHER-RESISTANT HD CORES

- No Styrofoam or cardboard to worry about rotting and causing sidewall damage
- Core diameter exceeds our minimum pulley diameter, preventing sidewall stretch

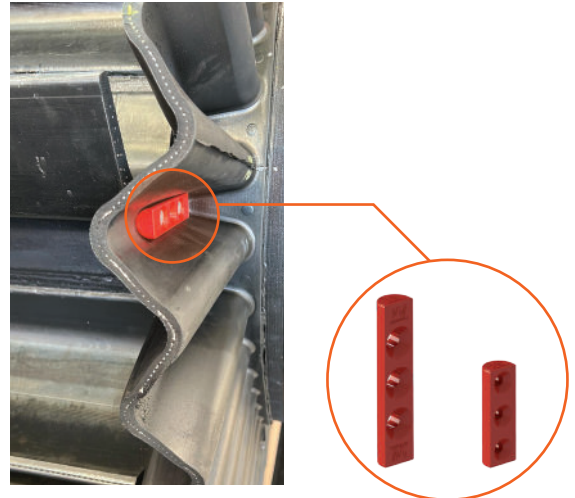


# CONVEYOR BELT ENHANCEMENTS



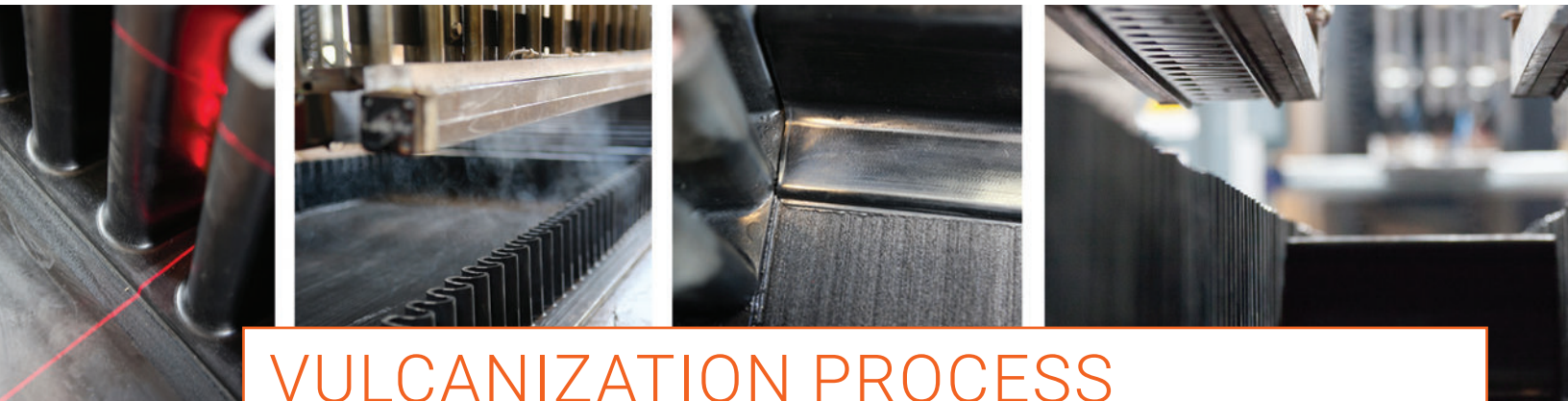
## BLINKERS

Customize your order with our innovative “Blinkers” or spill plates, which are placed between the cleats and sidewalls. These are available upon special request to suit your specific conveyor system needs, ensuring optimal performance.



## FIX

Our FIX Red Inserts offer screw reinforcement from sidewalls to cleats, providing added strength and durability to your conveyor belts.



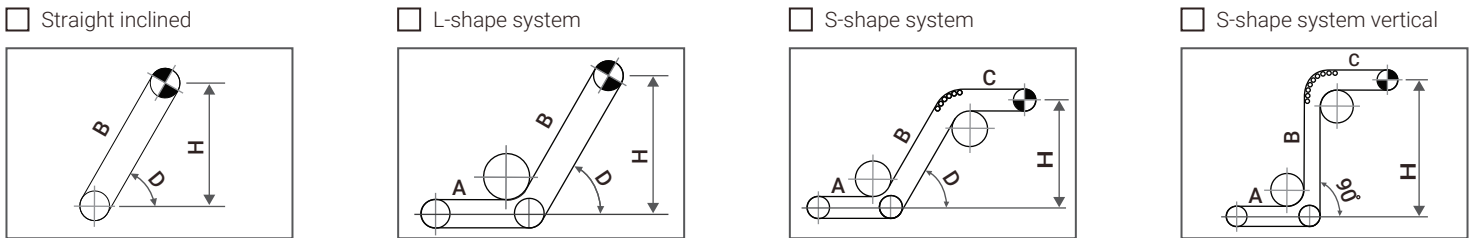
## VULCANIZATION PROCESS

Experience superior quality with our fully hot vulcanized belts. Cleats and sidewalls undergo precision vulcanization under high heat and pressure in state-of-the-art presses, ensuring reliability and longevity. Manufactured at either Bi-State Rubber in Fenton, MO, or Carpegna, Italy, our belts meet the highest standards of craftsmanship and performance.

# STEEP INCLINE AND VERTICAL CONVEYING

Company: \_\_\_\_\_ Date: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Address: \_\_\_\_\_ City/State: \_\_\_\_\_ Postal Code: \_\_\_\_\_  
 Contact: \_\_\_\_\_ Email: \_\_\_\_\_ Fax: \_\_\_\_\_

Select layout below or describe other: \_\_\_\_\_



'A' Feeding: \_\_\_\_\_ ft.    'C' Discharge: \_\_\_\_\_ ft.    'D' incline angle: \_\_\_\_\_ deg.  
 'B' Incline length: \_\_\_\_\_ ft.    'H' Lift height: \_\_\_\_\_ ft.    Vertical belt twist:  Yes  No \_\_\_\_\_ ft.

Type of material: \_\_\_\_\_  
*list all if more than one*

Capacity: \_\_\_\_\_ stph    Max Lump Size: \_\_\_\_\_ in.    Density: \_\_\_\_\_ lbs/ft    Moisture: \_\_\_\_\_ %  
 Temperature: \_\_\_\_\_ deg F.

Rubber Compound:     Black Standard    |     Mor - Oil Resistant    |     Heat Resistant    |     Flame Resistant    |     MSHA Flame Retardant  
*Check all that apply*

Splice Area: Check One

Open Ended: Extra feet needed \_\_\_\_\_    |     Vulcanized Endless    |     Mechanical: Type \_\_\_\_\_

Base belt discription: \_\_\_\_\_ # of Plys in Base Belt/Tension rating: \_\_\_\_\_

Belt Width (A): \_\_\_\_\_ Belt Length: \_\_\_\_\_ Sidwall height (E): \_\_\_\_\_

Sidwall Recess (from belt edge) in. (B) \_\_\_\_\_ Cleat width. (D): \_\_\_\_\_

Sidwall Fabric reinforced:  Yes  No Sidwall width (C): \_\_\_\_\_

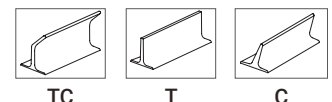
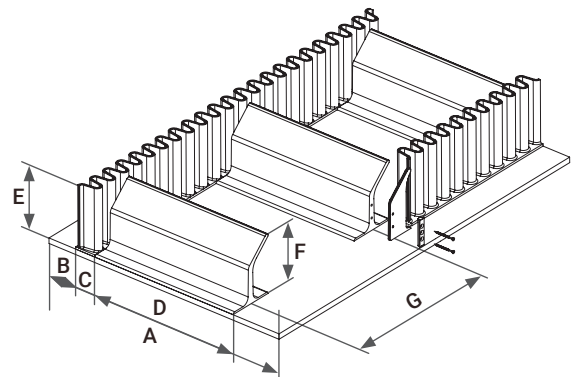
Sidwall screw reinforced (into cleats):  Yes  No

Cleat height (F): \_\_\_\_\_ Center to center cleat spacing (G): \_\_\_\_\_

Cleat profile type:  'C'     'T'     'TC'    Other: \_\_\_\_\_

Pulley Diameters: Head: \_\_\_\_\_ Tail: \_\_\_\_\_ Deflection: \_\_\_\_\_

Winged Pulleys:  Yes  No Current belt speed: \_\_\_\_\_





## OUR PARTNERSHIP WITH SIDEWALL NORTH AMERICA®





Bi-State Rubber is the exclusive sales, marketing and manufacturing partner for the Sidewall North America® company which is a registered trademark of the Sidewall Company® out of Carpegna, Italy.

Sidewall belts will be manufactured at both Bi-State Rubber in Fenton, Missouri and the main Sidewall® plant in Carpegna, Italy.

### CONTACT US



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