



**CUSTOMISED CONVEYOR SYSTEMS & CONVEYOR BELTS
CATALOGUE 2026**



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INTRODUCTION

Vulcan Conveyor Systems & Conveyor Belts

Vulcan Metal & Engineering Industries Ltd is a leading provider of customised conveyor systems and conveyor belt solutions in East Africa. We design, fabricate, supply and install complete conveyor systems tailored to your specific operational requirements - from compact production lines to large-scale industrial material handling.

Our conveyor division combines precision engineering with robust fabrication to deliver systems that maximise throughput, reduce manual handling and integrate seamlessly into your existing production environment. Whether you require a single belt replacement or a complete automated conveying solution, Vulcan delivers with UAE-standard quality and local expertise.

Our Conveyor Services Include:

- Custom Conveyor System Design & Engineering
- Conveyor System Fabrication & Assembly
- Conveyor Belt Supply (PVC, PU, Silicone, PTFE, Metal Mesh & more)
- Roller Systems & Components
- Installation & Commissioning
- Belt Welding & On-Site Maintenance
- System Upgrades & Modifications

Industries We Serve:

Food & Beverage Processing • Bakery & Confectionery • Meat, Poultry & Seafood • Dairy • Fruits, Vegetables & Nuts • Packaging • Warehousing & Logistics • Airport & Baggage Handling • Paper & Printing • Raw Materials & Industrial Processing • Agriculture & Agro-Processing

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CUSTOMISED CONVEYOR SYSTEMS

Engineering Conveyor Solutions for Every Industry

Vulcan Industries designs, fabricates and installs customised conveyor systems engineered to meet the precise demands of your production environment. Our systems are built for reliability, efficiency and seamless integration with your existing operations.

System Types We Fabricate:

- Flat Belt Conveyors - Standard horizontal transport for general material handling
- Incline & Decline Conveyors - Elevation changes with cleated or textured belts
- Modular Belt Conveyors - Interlocking plastic modules for heavy-duty applications
- Roller Conveyors - Gravity and powered roller systems for packages and pallets
- Spiral & Vertical Conveyors - Space-saving elevation systems for continuous flow
- Sortation & Diverter Systems - Automated routing and distribution solutions

Key Specifications:

- Belt widths: 200mm to 2000mm (custom widths available)
- Conveyor lengths: Up to 50 metres per section
- Load capacity: Up to 500 kg/m depending on system type
- Speed range: 0.1 m/s to 3.0 m/s (variable frequency drive)
- Frame material: Mild steel (powder coated) or stainless steel 304/316
- Drive systems: Motorised head drive, centre drive, or multi-zone
- Controls: PLC-based with HMI interface, sensor integration
- Power: 220V/380V/415V, 50/60Hz

Design Features:

- Modular construction for easy maintenance and expansion
- Food-grade options with washdown-rated components (IP65/IP67)
- Adjustable height legs and side guides
- Emergency stop systems and safety guarding
- Integration with existing production lines and ERP systems

FLAT BELT CONVEYORS

The most versatile and widely used conveyor type, flat belt conveyors provide smooth, continuous transport for a wide range of products across industries.

Technical Specifications:

- Belt width: 200mm - 2000mm
- Conveyor length: Up to 40 metres per section
- Speed: 0.1 - 2.5 m/s (VFD controlled)
- Load capacity: Up to 150 kg/m
- Frame: Mild steel powder coated / SS 304/316
- Belt type: PVC, PU, or Silicone
- Drive: Head drive motorised drum or external gearmotor
- Bed type: Slider bed or roller supported

Features:

- Adjustable speed via variable frequency drive
- Side guides and product containment options
- Quick-release belt tensioning system
- Washdown-rated options (IP65/IP67)
- Modular frame for easy maintenance

Applications:

Food processing, packaging lines, assembly operations, inspection stations, accumulation zones



FLAT BELT CONVEYORS — Applications Gallery





INCLINE & DECLINE CONVEYORS

Designed for elevation changes in production lines, incline and decline conveyors move products between different levels with controlled grip and stability.

Technical Specifications:

- Belt width: 300mm - 1500mm
- Incline angle: 0° to 45° (up to 90° with vertical lifts)
- Speed: 0.1 - 1.5 m/s
- Load capacity: Up to 100 kg/m
- Frame: Mild steel / Stainless steel 304
- Belt type: Cleated PVC, textured PU, or modular
- Cleat height: 15mm - 80mm (T-cleats, V-cleats, bucket)
- Drive: Gearmotor with torque limiter

Features:

- Anti-rollback cleats prevent product slippage
- Sidewall belts for bulk material containment
- Adjustable angle frames for flexible installation
- Hopper feed integration at base
- Discharge chutes at elevated end

Applications:

Mezzanine feeding, packaging line elevation, bulk material transfer, truck loading/unloading, multi-level production facilities

INCLINE & DECLINE CONVEYORS — Applications Gallery



MODULAR BELT CONVEYORS

Built with interlocking plastic modules, these conveyors handle heavy loads, sharp turns and harsh environments where traditional belts fall short.

Technical Specifications:

- Belt width: 100mm - 2400mm
- Module material: Polypropylene (PP) or Polyethylene (PE)
- Speed: 0.05 - 1.5 m/s
- Load capacity: Up to 300 kg/m
- Frame: Stainless steel 304/316 or painted mild steel
- Operating temperature: -40°C to +120°C
- Drive: Sprocket-driven with gearmotor
- Curve radius: As tight as 500mm

Features:

- Individual module replacement reduces maintenance cost
- Flush grid, raised rib, and flat top surface options
- Capable of tight radius curves and spiral configurations
- Chemical and corrosion resistant
- FDA/EU food-contact compliant modules available

Applications:

Meat and poultry processing, bottling lines, heavy-duty packaging, automotive parts, wet environments, freezer operations



MODULAR BELT CONVEYORS — Applications Gallery





ROLLER CONVEYORS

Roller conveyors use a series of cylindrical rollers to transport products by gravity or powered drive, ideal for heavy loads and high-throughput operations.

Technical Specifications:

- Roller diameter: 50mm - 150mm
- Roller pitch: 75mm - 300mm (based on product size)
- Conveyor width: 300mm - 1800mm
- Load capacity: Up to 500 kg/m (powered), 200 kg/m (gravity)
- Speed: 0.1 - 1.8 m/s (powered)
- Frame: Mild steel / Stainless steel 304
- Roller material: Galvanised steel, stainless, or PVC-coated
- Drive: 24V MDR (motorised drive roller) or chain-driven

Types Available:

- Gravity roller (non-powered, slope-fed)
- Powered roller (zone-controlled accumulation)
- Flexible/expandable roller (portable applications)
- Curve rollers (tapered for directional changes)

Features:

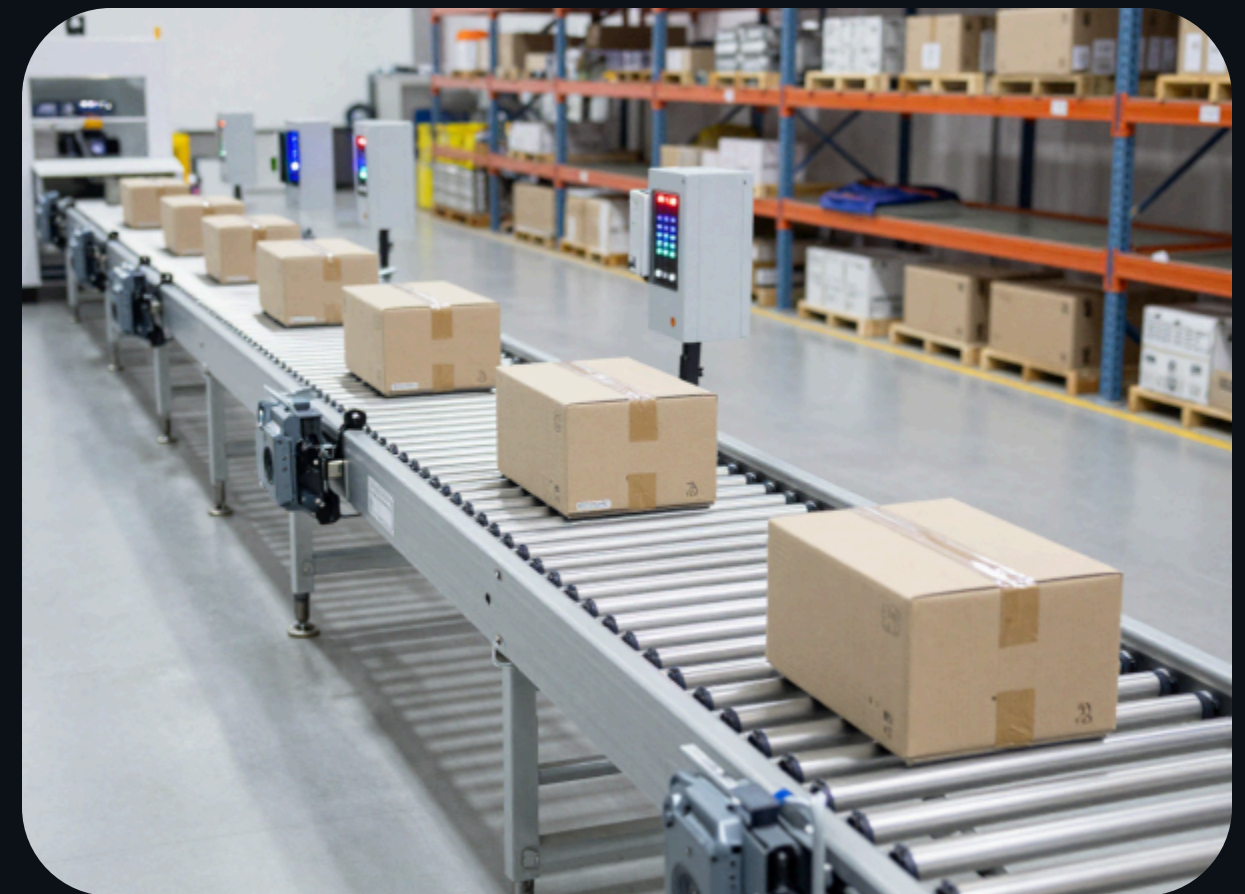
- Zero-pressure accumulation prevents product damage
- Zone control for independent section operation
- Low noise 24V DC motorised rollers
- Merge, divert and transfer modules available

Applications:

Warehousing, e-commerce fulfilment, pallet handling, airport baggage, manufacturing assembly lines

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ROLLER CONVEYORS — Applications Gallery



SPIRAL & VERTICAL CONVEYORS

Space-saving vertical transport solutions that move products between multiple levels using continuous spiral motion or vertical lift mechanisms.

Technical Specifications:

- Elevation change: Up to 20 metres
- Belt width: 200mm - 800mm
- Speed: 0.2 - 1.2 m/s
- Load capacity: Up to 75 kg per product
- Spiral diameter: 1200mm - 2400mm
- Frame: Stainless steel 304 or powder-coated mild steel
- Belt type: Modular plastic (low friction)
- Drive: Single motor at base or top

Types Available:

- Continuous spiral (mass flow, no gaps)
- Vertical reciprocating lift (single product)
- Multi-entry/exit spiral (multiple floor access)

Features:

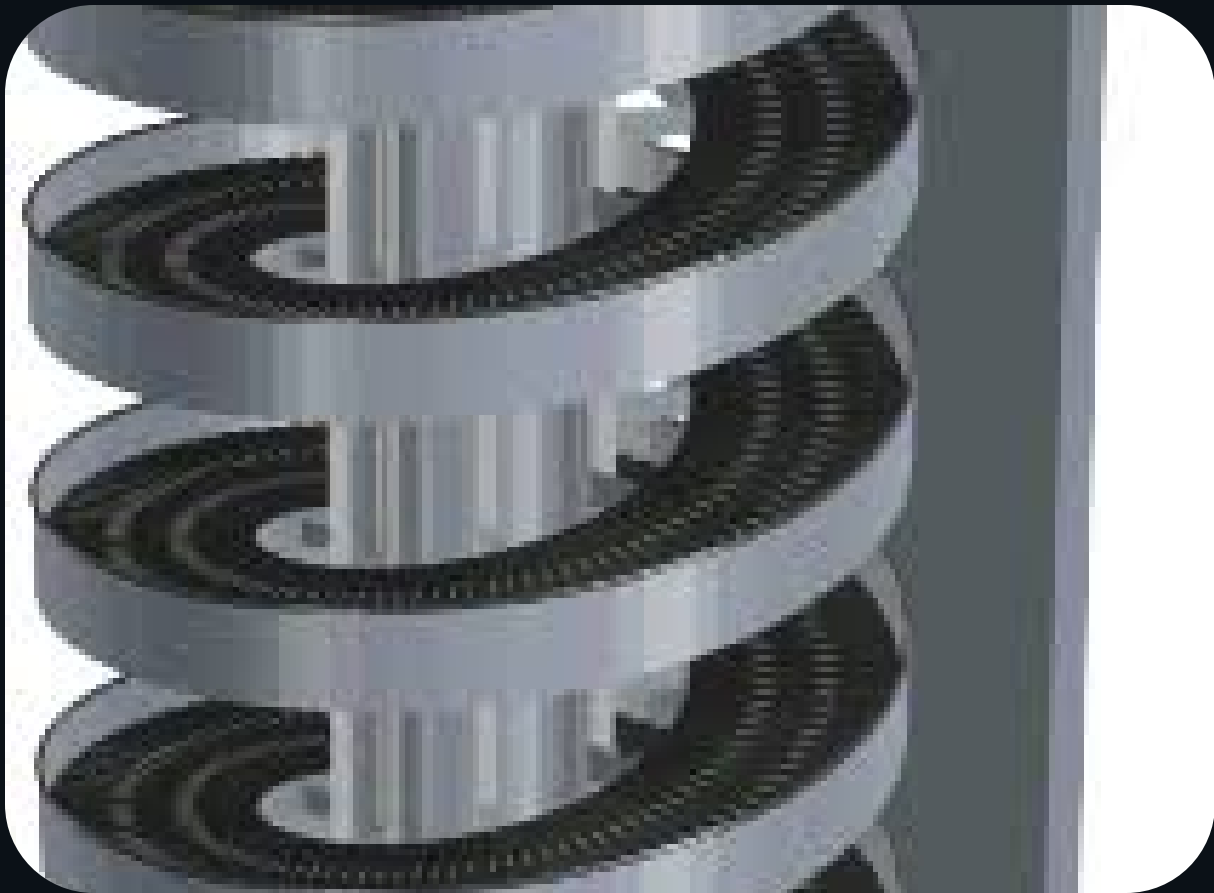
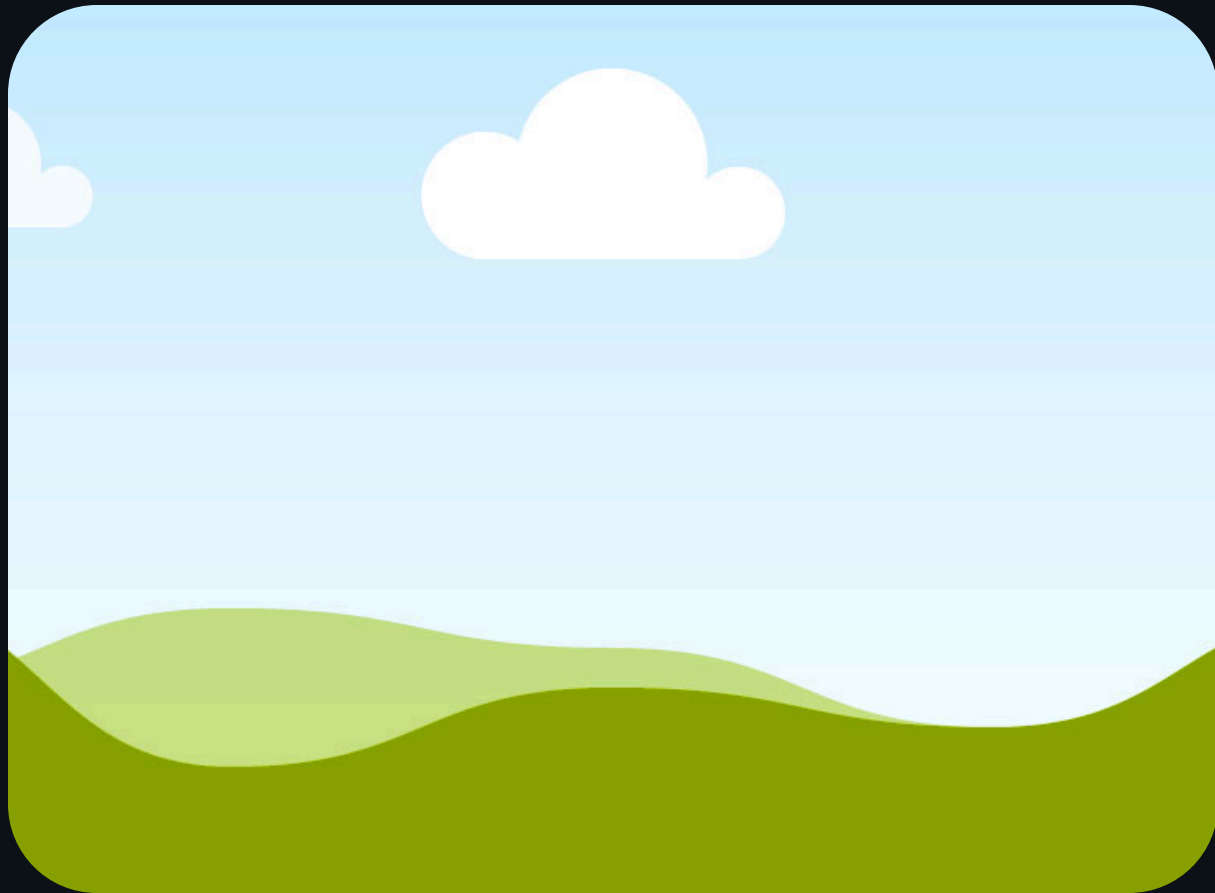
- Minimal floor space footprint
- Continuous product flow without queuing
- Low energy consumption vs. multiple incline conveyors
- Enclosed options for hygiene or temperature control
- Reversible direction capability

Applications:

Multi-storey warehouses, bakery cooling, frozen food elevation, packaging line level changes, pharmaceutical production



SPIRAL & VERTICAL CONVEYORS — Applications Gallery





SORTATION & DIVERTER SYSTEMS

Automated systems that identify, route and distribute products to designated lanes or destinations based on size, weight, barcode or destination criteria.

Technical Specifications:

- Throughput: Up to 6,000 items/hour
- Divert angles: 30°, 45°, 60°, 90°
- Conveyor width: 400mm - 1500mm
- Speed: 0.5 - 2.5 m/s
- Load capacity: Up to 50 kg per item
- Frame: Mild steel / Stainless steel
- Controls: PLC with barcode/RFID integration
- Power: 380V/415V 3-phase

Types Available:

- Pop-up wheel sorter
- Pusher diverter (pneumatic/electric)
- Sliding shoe sorter
- Cross-belt sorter
- Tilt-tray sorter

Features:

- Real-time tracking and WMS integration
- Multiple sort destinations (4 to 20+ lanes)
- Automatic recirculation for unread items
- Sensor-based product detection and gapping
- Scalable modular design

Applications:

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E-commerce fulfilment, parcel distribution, airport baggage, pharmaceutical picking,

SORTATION & DIVERTER SYSTEMS — Applications Gallery



INDUSTRY APPLICATIONS

Vulcan conveyor systems serve diverse industries with tailored solutions.

Food & Beverage Processing

SS frames, FDA belts, washdown motors. HACCP-compliant designs.

Bakery & Confectionery

Heat-resistant belts, cooling conveyors, proofing line integration.

Meat, Poultry & Seafood

Hygienic modular belts, positive-drive, full washdown capability.

Dairy

Temperature-controlled conveying, CIP-compatible designs.

Fruits, Vegetables & Nuts

Gentle handling, sorting integration, mesh belts for washing.

Packaging & Logistics

High-speed accumulation, merge/divert, barcode-triggered sortation.

Warehousing & E-Commerce

Roller conveyors, spiral lifts, automated sortation systems.

Airport & Baggage Handling

Heavy-duty flat belts, incline systems, check-in carousels.

Paper & Printing

High-friction silicone belts, precise registration, anti-static.

Raw Materials & Industrial

Heavy-duty cleated belts, bulk handling, aggregate transport.





PVC CONVEYOR BELTS

Flexible, multi-ply belts suitable for a wide range of industrial and food-related conveying applications.

Construction:

- Multi-ply polyester/cotton fabric carcass
- PVC top and bottom covers
- Thickness: 1mm - 6mm
- Ply count: 1 to 4 plies

Available Options:

- Food-grade (FDA/EU compliant, white/blue)
- Oil-resistant (mineral and vegetable oils)
- Flame-retardant (self-extinguishing)
- Anti-static (conductive covers)
- Custom colours for product detection
- Surface finishes: matt, gloss, diamond, grass pattern

Temperature Range:

- Standard: -10°C to +80°C
- Heat-resistant: up to +120°C

Belt Properties:

- Tensile strength: 200 - 500 N/mm
- Minimum pulley diameter: 40mm - 200mm
- Elongation at break: 10% - 20%
- Splice type: Finger splice or mechanical

Applications:

General manufacturing, food processing, packaging, logistics, printing, textiles, agriculture

PU CONVEYOR BELTS

Hygienic thermoplastic polyurethane belts designed for demanding food processing environments where cleanliness and chemical resistance are critical.

Construction:

- Homogeneous or fabric-reinforced TPU
- Thickness: 0.8mm - 4mm
- Positive-drive tooth profiles available
- Seamless or welded splice options

Key Properties:

- Resistant to water, oils, greases and chemicals
- Hydrolysis-resistant formulation
- Non-porous surface prevents bacterial growth
- FDA/EU food-contact compliant
- Excellent cut and abrasion resistance

Temperature Range:

- Standard: -30°C to +100°C
- Specialist grades: up to +120°C

Drive Options:

- Positive-drive (toothed) - eliminates belt slip
- Friction-drive (traditional tensioned)
- Reduced tracking issues with positive drive

Surface Options:

- Smooth, textured, waffle, nub-top
- Cleats and sidewalls weldable directly

Applications:

Meat and poultry, bakery, dairy, produce processing, confectionery, pharmaceutical, cosmetics





SILICONE BELTS

High-friction silicone belts providing consistent grip and excellent release properties for high-speed and heat-sensitive applications.

Construction:

- Silicone rubber coating on fabric substrate
- Thickness: 1mm - 4mm
- Available in solid or perforated formats

Key Properties:

- High and consistent coefficient of friction
- Excellent product release (non-stick surface)
- Superior surface uniformity
- High tear and abrasion resistance
- Food-grade silicone options (FDA compliant)

Temperature Range:

- Operating: -60°C to +230°C
- Short-term peaks: up to +250°C

Colours Available:

- Red, white, blue, translucent
- Custom colours on request

Belt Properties:

- Tensile strength: 100 - 300 N/mm
- Elongation: < 1% under working load
- Anti-static options available

Applications:

High-speed packaging, paper and printing, textile handling, shrink tunnels, labelling machines, envelope feeders

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HOMOGENEOUS BELTS

Single-layer thermoplastic polyurethane belts offering superior hygiene, easy cleaning and positive-drive capability for demanding food environments.

Construction:

- Single-layer extruded thermoplastic polyurethane
- No fabric layers - eliminates wicking and bacteria harbourage
- Thickness: 1mm - 4mm
- Reinforced core options for high-tension applications

Key Properties:

- Non-porous, fully sealed surface
- Resistant to grease, oils, fats and chemicals
- FDA/EU food-contact compliant
- Antistatic and antimicrobial options
- Small roller compatibility (min. 12mm diameter)
- Low-tension running reduces energy consumption

Temperature Range:

- Standard: -30°C to +100°C

Drive Options:

- Positive-drive toothed profile (no slip, no tracking issues)
- Friction-drive compatible

Cleaning:

- CIP (Clean-In-Place) compatible
- Pressure washable
- Chemical sanitiser resistant

Applications:

Meat and poultry, seafood, dairy, bakery, ready meals, pharmaceutical, cosmetics





POLYESTER MESH BELTS

Woven monofilament polyester belts designed for filtering, draining and drying applications where airflow and liquid passage are essential.

Construction:

- Monofilament polyester woven mesh
- Mesh opening: 0.1mm - 5mm
- Belt thickness: 1mm - 3mm
- Reinforced edges for tracking stability
- Strong heat-welded or clipper splices

Key Properties:

- Excellent dimensional stability
- Resistant to moisture and most chemicals
- Food-contact compliant (FDA/EU)
- Low elongation under tension
- Easy to clean - no material retention in weave

Temperature Range:

- Operating: -20°C to +150°C

Open Area:

- 4% to 65% depending on mesh specification
- Custom weave patterns available

Applications:

Food washing and draining, vacuum filtration, paper dewatering, sludge treatment, fruit and vegetable processing, cooling tunnels

METAL WIRE MESH BELTS

Heavy-duty metal belts for extreme temperature, heavy load and open-mesh applications where synthetic belts cannot perform.

Construction:

- Stainless steel 304/316 or phosphor bronze wire
- Weave types: Balanced, compound balanced, flat wire, chain-edge
- Wire diameter: 0.5mm - 4mm
- Belt width: Up to 3000mm

Key Properties:

- Extreme temperature resistance
- Open-mesh supports airflow and drainage
- Minimal product contact area
- High tensile strength and durability
- Chemical and corrosion resistant (SS grades)

Temperature Range:

- Stainless steel: up to +1150°C
- Phosphor bronze: up to +300°C

Customisation:

- Custom weave patterns and pitch
- Edge finishing: welded, folded, or chain-edge
- Fastening: rod-through or welded cross-rods
- Width and length to specification

Applications:

Baking ovens, drying tunnels, heat treatment, washing systems, glass annealing, metal hardening, food freezing, filtration





PTFE BELTS & TAPES

Non-stick, heat-resistant PTFE (Teflon) coated belts and tapes for extreme temperature and release-critical applications.

Construction:

- PTFE-coated fiberglass mesh or solid fabric
- Thickness: 0.08mm - 1.5mm
- Available as open mesh or solid sheet
- Reinforced edges and tracking guides

Key Properties:

- Exceptional non-stick surface
- Heat resistant and dimensionally stable
- Anti-static performance
- Chemical inertness
- UV resistant
- FDA food-contact compliant

Temperature Range:

- Continuous: -73°C to +260°C
- Short-term peaks: up to +290°C

Types Available:

- PTFE mesh belts (open weave for airflow)
- PTFE solid belts (sealed surface)
- PTFE adhesive tapes (heat sealer bars)
- Teflon stringer belts (solar panel welding)

Applications:

UV/IR/hot-air drying, textile processing, printed goods, cereal drying, shrink tunnels, solar panel manufacturing, heat sealing, packaging machines

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ENDLESS WOVEN BELTS

Seamless single-ply woven belts with exceptional tensile strength and controlled elongation for precision conveying at extreme temperatures.

Construction:

- Seamless tubular weave (no splice joint)
- Single-ply construction
- Materials: Polyester, Nomex, Kevlar blends
- Thickness: 0.5mm - 2mm
- Custom circumference and width

Key Properties:

- High tensile strength with low elongation
- No splice - eliminates weak point
- Excellent tracking stability
- Resistant to oils, chemicals and moisture
- Minimal stretch over service life

Temperature Range:

- Polyester: -80°C to +150°C
- Nomex/Kevlar: up to +350°C

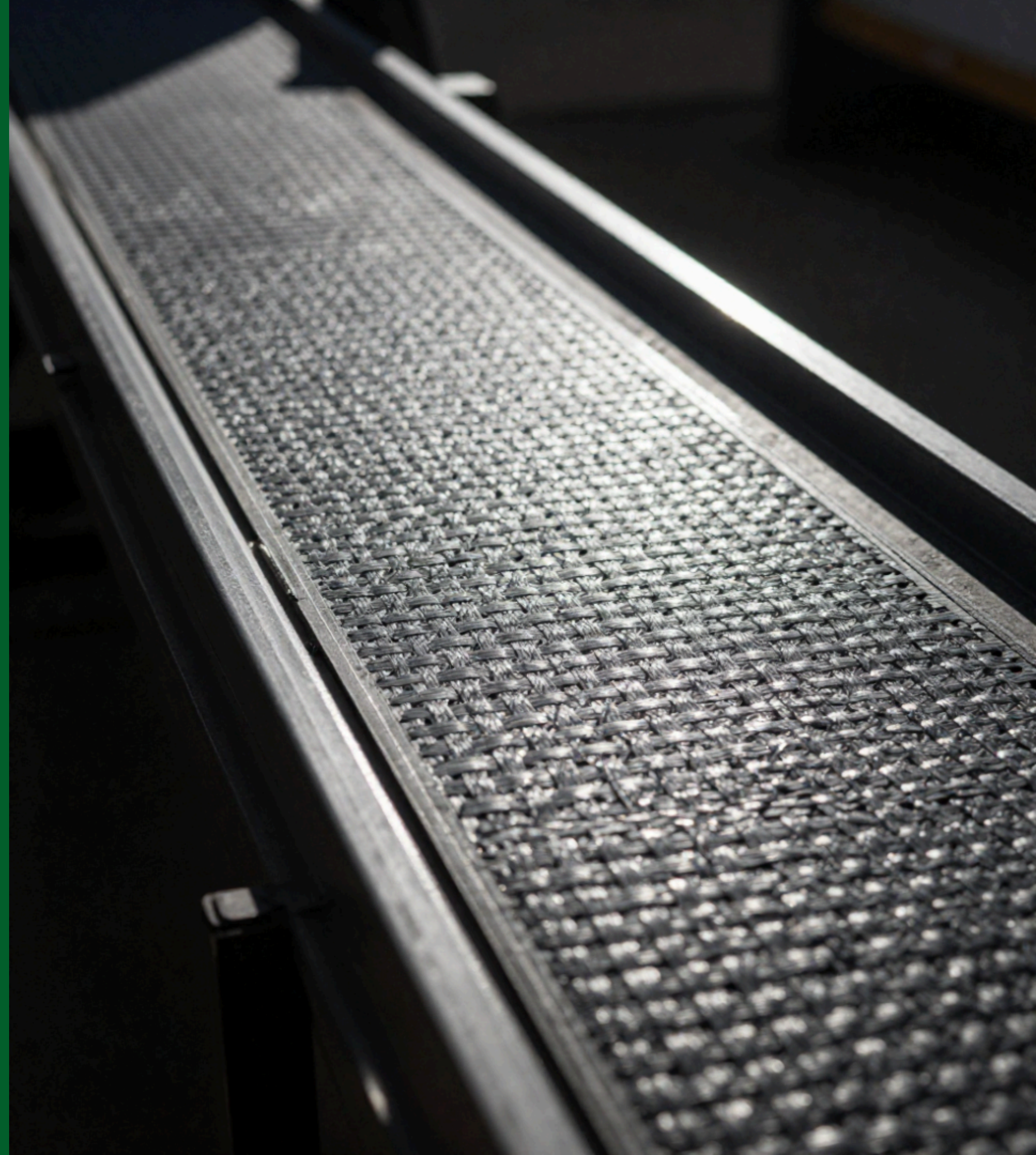
Features:

- Knife-edge transfer compatible (small nose bar)
- Suitable for high-speed applications
- Uniform tension distribution
- Long service life with minimal maintenance

Applications:

High-speed conveying, knife-edge transfers, biscuit dough handling, drying tunnels, industrial moulding, shrink wrapping, textile processing

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BELT APPLICATIONS BY INDUSTRY

Selecting the right belt for each industry ensures optimal performance, hygiene and longevity.

Food & Beverage

PU homogeneous, PVC food-grade, modular plastic. FDA/EU compliant, washdown safe.

Bakery & Confectionery

PTFE non-stick, endless woven, silicone. Heat-resistant up to 260°C.

Meat, Poultry & Seafood

Homogeneous PU, modular plastic. Antimicrobial, positive-drive, CIP compatible.

Dairy

PU positive-drive, homogeneous. Chemical resistant, low bacteria harbourage.

Fruits, Vegetables & Nuts

Polyester mesh (washing/draining), PVC with raised profiles for gentle handling.

Packaging & Logistics

PVC multi-ply, silicone high-grip, modular for accumulation and sortation.

Airport & Baggage

Heavy-duty PVC, flame-retardant, anti-static. High abrasion resistance.

Paper & Printing

Silicone high-friction, anti-static PVC. Precise registration and grip.

High Temperature

Metal wire mesh, PTFE, endless woven Nomex/Kevlar. Up to 1150°C.

Wet & Washdown

Polyester mesh, homogeneous PU, stainless wire mesh. Drainage and hygiene.

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FABRICATION, SUPPLY & INSTALLATION

Vulcan Industries provides end-to-end conveyor solutions from initial concept through to commissioning and ongoing support.

Custom Fabrication

- In-house design and engineering team
- CAD/3D modelling of complete systems
- Precision cutting, welding and assembly
- Mild steel and stainless steel fabrication
- Powder coating and surface finishing
- Quality control and load testing

Supply

- Full range of conveyor belts (PVC, PU, Silicone, PTFE, Mesh, Metal)
- Rollers, bearings and drive components
- Motors, gearboxes and VFDs
- Sensors, PLCs and control panels
- Spare parts and replacement belts

Installation & Commissioning

- Site survey and layout planning
- Professional installation by trained technicians
- System integration with existing lines
- Testing, calibration and commissioning
- Operator training and handover documentation

Ongoing Support

- On-site belt welding and splicing
- Preventive maintenance programmes
- Emergency breakdown response
- System upgrades and modifications
- Belt tracking and tensioning services

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CONTACT US

Let's Build a Line That Runs for Decades.

Whether you need a single belt replacement or a complete automated conveyor system, Vulcan Industries is ready to deliver.

Vulcan Metal & Engineering Industries Ltd

Founder & Managing Director: Huzefa Khambati

Website

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Services

- Customised Conveyor System Design & Fabrication
- Conveyor Belt Supply & Installation
- Roller Systems & Components
- On-Site Belt Welding & Maintenance
- System Upgrades & Modifications

Industries Served

Food & Beverage • Bakery • Meat & Poultry • Dairy
Fruits & Vegetables • Packaging • Logistics
Airport • Paper & Printing • Industrial Processing

Engineered for durability, precision and uninterrupted operations.

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