Conveyor Solutions

Belts
Accessories
Components
Conveyor Solutions

The best selection

The most complete and versatile product range on the market to maximize efficiency and safety of your conveyor operations.

Whatever conveyor structure you operate, we have everything you need.
Conveyor Solutions
One deal – One concept – One contact

Belts
Accessories
Components
Service
Conveyor Belts

Introduction

Metso conveyor belts are designed to meet specific end-user requirements for high performance and cost-efficiency

- Textile conveyor belts
- Classic steel cord belts (Flexocord®)
- Strongflex/Novobelt
- Aramid conveyor belt
- Inclined conveying belts
- Flexopipe® conveyor belts

More than 100 years of experience in development and applications know-how
Conveyor Belts

Parts overview
## Conveyor Belts

### Overview – belt types

<table>
<thead>
<tr>
<th>Application</th>
<th>Belt type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long conveyors, high load</td>
<td>Steelcord, Trellamid</td>
</tr>
<tr>
<td>Standard applications</td>
<td>EP-belts</td>
</tr>
<tr>
<td>Inclined conveying</td>
<td>Escort, Griplift, Nasta, Nappula, Pyramid, Grip top, Ripro, Herringbone</td>
</tr>
<tr>
<td>Vertical conveying</td>
<td>Elevator belts</td>
</tr>
<tr>
<td>Paper roll transport</td>
<td>PAP-belts</td>
</tr>
<tr>
<td>Plasterboard production</td>
<td>Plasterboard belts</td>
</tr>
<tr>
<td>Closed conveying</td>
<td>Flexopipe®</td>
</tr>
<tr>
<td>Profiled</td>
<td>Grip top, Ripro, Herringbone, Griplift</td>
</tr>
<tr>
<td>Sugar industry</td>
<td>White belts, GAK</td>
</tr>
</tbody>
</table>
## Conveyor Belts
### Overview – cover grades

<table>
<thead>
<tr>
<th>Application/property</th>
<th>Cover grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lumpy, sharp bulk material</td>
<td>Grade X</td>
</tr>
<tr>
<td>Abrasive material</td>
<td>Grades Y-30, W</td>
</tr>
<tr>
<td>Standard application</td>
<td>Grade Y</td>
</tr>
<tr>
<td>Hot material</td>
<td>Termo, High Heat, Retard</td>
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<tr>
<td>Oily, greasy material</td>
<td>Antioil, Trelloil, Pitch and Pine</td>
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<tr>
<td>Flame resistant</td>
<td>Grades (K,S)</td>
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<tr>
<td>Self extinguishing</td>
<td>Grades (VT, VLS)</td>
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<tr>
<td>Approved for food (FDA)</td>
<td>Grades A</td>
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</table>
## Conveyor Belts

National and international cover grades of conveyor belts

<table>
<thead>
<tr>
<th>Standard</th>
<th>Cover grade</th>
<th>Tensile strength N/mm²</th>
<th>Elongation at break %</th>
<th>Abrasion mm³</th>
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<tr>
<td>DIN</td>
<td>W 25</td>
<td>15</td>
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<td>X 25</td>
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<td>Y 20</td>
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<td></td>
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<td>15</td>
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<td>ISO / EN</td>
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<td>D 18</td>
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<td>M24 24</td>
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<td>S 18</td>
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<td>US(CEMA)</td>
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<td>350</td>
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<td>RMA II 14</td>
<td>20</td>
<td>20</td>
<td>400</td>
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</table>
Flat Conveyor Belts
Flat Conveyor Belts

Standard positioning: 0-18°
Flat Conveyor Belts

EP

• Polyester/Polyamid carcass
• Strength classes from 125 N/mm to 3,150 N/mm, between two and eight fabric plies
• Splicing by hot or cold vulcanization, step-splice
• Lumpy, sharp-edged or abrasive material, e.g. rock or ores
• Oil and grease, or chemical resistant cover grades
• Heat resistant cover grades up to 250°C material (peak) temperature
• Flame resistant or extinguishing acc. to ISO 340, or other standards
• Other cover grades or special constructions (sliding bottom or profiled cover) on request
Flat Conveyor Belts

Aramid

• Reinforcement of Aramid cords, as strong as steel
• Low elongation and low weight
• Resistant against fatigue, temperature, corrosion and most chemicals
• Strength classes from 500 N/mm to 2,800 N/mm
• Cord fabric or straight warp fabric (Nylon cords in transverse direction)
• Thin carcass (single ply), low belt weight
• Splicing by hot or cold (only recommendable for emergencies) vulcanization, overlap or finger splice
• Oil and grease, or temperature resistant up to 250°C material (peak)
• Flame resistant or extinguishing acc. to ISO 340, or other standards
Flat Conveyor Belts

Steel Cord Classic

• Conveyor belts reinforced with steel cords
• Belt types acc. to DIN EN 15236, DIN 22131
• Strength classes from 630 N/mm to 6,300 N/mm
• Long distance conveying, low elongation
• Good trough ability
• Open cord constructions (typically 7x7 and 7x19) provide high pull out strength of cords
• Different cover grades available
• Splicing by hot-vulcanization, one or multi step splices
• Great splice strength
• Small safety factor
Flat Conveyor Belts

Steel Cord – Strongflex/Novobelt

• Conveyor belts reinforced with steel cords
• Strength classes from 350 N/mm to 2,000 N/mm
• STX belts with transverse nylon cords
• Strongflex belts offer increased impact and slit resistance by transverse steel cords (type B)
• Crossrigid construction (type C) used as elevator belt
• Open reinforcement design provides high adhesion between carcass and covers
• Heat-resistant, flame-resistant or self-extinguishing grades available
• Other cover grades/special constructions on request
• Splicing by hot-vulcanization or clamp (only elevator belts), mechanical fasteners useable in emergencies
Flat Conveyor Belts

Flexopipe

• Closed conveying
• Protection of environment and of the conveyed materials
• Flexible conveyor line - low radii of horizontal or vertical curve
• Less transfer points
• Higher conveying inclination possible
• Steel cord, Polyamide, EP or Aramid carcass
• All cover grades, belt ratings from 250 N/mm to 2,500 N/mm
Flat Conveyor Belts

Plasterboard belts

• Process belt for the production of gypsum boards
• 1,400 mm (54") wide belt with bright grey covers
• EP 800/5 type – very low thickness tolerance
Profiled Belts for Inclined Conveying
Profiled Belts for Inclined Conveying

Profiled positioning: 18-40°
Profiled Belts for Inclined Conveying

For bulk material (generally the wood industry)

- Multi-ply EP belts, all strengths possible
- Inclinations up to approx. 30° (depends on material characteristics)
- Cleat height up to 8 mm (Ripa III)
- Oil and grease, or temperature resistant up to 200°C material (peak) available
- Flame resistant or extinguishing acc. to ISO 340, or other standards
- Return strand can be supported by normal idlers, snub pulleys can be installed
- Splicing or repairs like for multi-ply belts
Profiled Belts for Inclined Conveying
For unit loads, bags, boxes, etc.

- Antistatic multi-ply EP belts, all strengths possible
- Inclinations from 30° to approx. 40°
- Cleat height up to 8 mm (Ripro)
- Flame resistant or extinguishing acc. to ISO 340, or other standards
- Return strand can be supported by normal idlers, snub pulleys not recommended for Ripro
- Splicing or repairs like for multi-ply belts
Profiled Belts for Inclined Conveying

Escort/Chevron positioning: 40-45°
Profiled Belts for Inclined Conveying

Escort conveyor belts

- Multi-ply EP Belts, 400 to 1,400 mm wide
- Several different U- or V-cleat shapes, open or closed
- Inclinations up to 45° possible (depending on material characteristics)
- Cleat heights 10, 15, 20, 25, 30 or 35 mm
- Cleats are hot vulcanized
- Oil and grease, or temperature resistant up to 150°C
- Flame resistant or extinguishing acc. to ISO 340, or other standards
- Splicing or repairs like for Trellply belts
- Bigger pulleys required than for Trellply belts, no snub pulleys
Profiled Belts for Inclined Conveying

Elevator belts

• Conveyor belts reinforced with steel cords (Strongflex type C)
• Polyester/Polyamid carcass
• Strength classes from 350 N/mm to 2,000 N/mm
• Different cover grade
• Mechanical splicing
Conveyor Accessories

Reliability
Improved working conditions
Secure and safe applications
Conveyor Accessories

Introduction

Increase uptime, reduce need for maintenance and improve your working environment with Metso conveyor accessories.

Smart, simple design that makes our conveyor accessories efficient, rugged and maintenance friendly.
Conveyor Accessories
Options to suit your needs

Belt Cleaning Systems
Belt Guiding Systems
Sealing Systems
Loading Systems
Pulley Lagging Systems
Trellex ABC Belt Cleaning System

High performance belt cleaning
Trellex ABC Belt Cleaning System

Introduction

Pre-Cleaner
*Light/medium duty applications*
- Trellex ABC 70 / 70-HD
- Trellex ABC 90 / 90-HD
- Trellex ABC 96
- Trellex ABC Pre-HMS

Pre-Cleaner
*Heavy duty mining applications*
- Trellex ABC 90-HD-XL
- Trellex ABC 90-HD-L

Secondary Cleaner
*Light/medium duty applications*
- Trellex HMS T-Cleaner
- Trellex ABC Arm-Cleaner
- Trellex Brush Cleaner
Trellex ABC Belt Cleaning System

Trellex ABC 70 Pre-Cleaner

- Long wear life for lowest cost per ton
- High efficiency ensures minimum spillage
- Easy to install
- Unique patented design
  - Dual degrees of hardness for maximum rigidity and wear life
- High reliability during the entire life of the scraper

The best gets better
Now re-designed for even better quality and wear life
Trellex ABC Belt Cleaning System

Trellex ABC 70 Pre-Cleaner
Trellex ABC Belt Cleaning System

Trellex ABC 90 Pre-Cleaner

- Long wear life for lowest cost per ton
- High efficiency ensures minimum spillage
- High reliability during the entire life of the scraper
- Trouble free operation – minimized need for maintenance
Trellex ABC Belt Cleaning System

Trellex ABC 90 Pre-Cleaner
Trellex ABC Belt Cleaning System

Trellex ABC 95 Pre-Cleaner

- Long wear life for lowest cost per ton
- High efficiency ensures minimum spillage
- Especially designed for wood handling and pulp and paper industry
Trellex ABC Belt Cleaning System

Trellex ABC 95 Pre-Cleaner
Trellex ABC Belt Cleaning System

Trellex ABC 90-HD-XL Pre-Cleaner

• Robust design for heavy duty mining applications
• Long wear life for lowest cost per ton
• High efficiency ensures minimum spillage
Trellex ABC Belt Cleaning System

Trellex ABC 90-HD-XL Pre-Cleaner
Trellex ABC Belt Cleaning System
Trellex HMS and HMS-PU secondary cleaner

• For light to medium duty applications
• Removes the remaining fines for even higher belt cleaning efficiency
• The HMS blade tip is made of Tungsten carbide for excellent wear resistance
Trellex ABC Belt Cleaning System

Trellex HMS and HMS-PU secondary cleaner
Trellex ABC Belt Cleaning System

Trellex secondary cleaner

- **Trellex ABC Arm-Cleaner**
  - Special secondary cleaner, suitable for warm material

- **Trellex Belt Brush**
  - With motorized pulley and nylon bristles
  - Compact and space saving design
Trellex Belt Guiding System

Aligns your belts to boost profitability
Trellex Belt Guiding System

Introduction

• Increased belt life
• Less belt and roller wear
• Fewer unscheduled maintenance stops
• Higher throughput due to less spillage
Trellex Belt Guiding System

Belt conductors

- Trellex SBC Belt Conductor
  - Standard belt conductor

- Trellex RBC Belt Conductor
  - For reversible belts
Loading and Sealing Systems
For optimized performance in all applications
Loading and Sealing Systems

Loading systems

• Trellex Impact Bars
  - High quality impact bars

• Trellex Loading Cradle
  - Steel cradle with impact bars

• Trellex Glide Bar
  - For good belt support
Loading and Sealing Systems

Sealing systems

• **Trellex Snap-on**
  - Extruded rubber sealing, with a snap-on profile

• **Trellex Clamp-on**
  - Polyurethane foam blocks, with quick release handles

• **Trellex Wear Liner**
  - Helps centering the material in the loading zone
Loading and Sealing Systems

Your best loading zone solution

- Trellex loading cradle
- Trellex clamp-on sealing
- Trellex wear liner
Loading and Sealing Systems

Overview
Pulley Lagging Systems
Get a better grip
– whenever and wherever
Pulley Lagging Systems

Introduction

Trellex Traclag

Trellex Griplag (Trellgrip™)

Trellex Pulley Bar

Trellex Cerlag
Trellex Sheeting

Introduction

**Trellex T40**
High quality black NR rubber, used for sliding abrasion of small particles

**Trellex T60**
High quality black SBR rubber, used for large sized particles. Excellent for wear, tear and impacting applications

**Trellex TR60**
Wear rubber for applications where good wear resistance is required. A price worthy alternative – when softer rocks and smaller impact forces are involved
Conveyor Components

Introduction

Metso develops and manufactures a broad range of components used in the building of belt conveyors.

Conveyor Components are used wherever bulk material products are found:

- Mining
- Aggregate
- Power generation
- Transportation industries

Well respected in the industry for over 100 years for quality and proven ability to handle severe duty
Conveyor Components

- Offset
- Channel Inset
- Adjustable
- Return Trainer
- Inline
- Picking Table
- V-Returns
- Impact
- Wire Rope
- Trough Trainer
- Flat Belt
- Rubber Disc Return
Troughing Idlers
Troughing Idlers

Types

- Impact troughing idlers
- Inline troughing idlers
- Adjustable transition idlers
- Offset troughing idlers
- Self training positive action idlers
- Picking table idlers
Troughing Idlers

Inline Idler

- Used to carry or convey conveyor belts with bulk material
- Select the appropriate trough degree to carry a maximum load
- Based on material characteristics and belt speed

Models: CEMA B, C, D and E

Belt widths: 18" to 96"

- 20, 35 and 45 trough angles
- Sealed or re-greasable
- Ball and tapered roller bearing
- Equal length rollers that are interchangeable with each other
Troughing Idlers

Offset Idler

• Developed for the grain industry where thin single ply belts are often used
• Offset roll design eliminates roll gap and belt pinch and subsequent belt damage
• Also used in underground mining applications where height clearance is minimal

Models: CEMA B and C
Belt widths: 18" to 60"
- 20, 35 and 45 trough angles
- Sealed or re-greaseable
- Ball and tapered roller bearing
Troughing Idlers

Inline Impact Idler

- Used under loading points where material impact (lump size, density, height) could damage the belt of no cushion

**Models:** CEMA B, C, D and E

**Belt widths:** 18” to 96”

- 20, 35 and 45 trough angles
- Sealed or re-greasable
- Ball and tapered roller bearing
Troughing Idlers

Inline Self Training Positive Action Idler

- Used to control belt alignment on the carrying side in difficult situations
- Normal spacing is 100 to 150 feet apart
- At least one training idler should be used on conveyor lengths of 100 feet or less
- Trough trainers are available for one way or reversible belts

**Models:** CEMA B, C, D and E

**Belt widths:** 18" to 96"

- 20, 35 and 45 trough angles
- Sealed or re-greasable
- Ball and tapered roller bearing
Return Idlers
Return Idlers

Types

- Return idlers
- Rubber disc return idlers
- Flat belt idlers
- Impact flat belt idlers
- V-Return idlers
- Self training return idlers
Return Idlers

Self Training Positive Action Return Idler

- Used to correct belt misalignment on the return side
- Return trainers are available for one-way or reversible belts
- Normal spacing is 100 to 150 feet apart
- At least one return trainer should be used on conveyor lengths of 100 feet or less

**Models:** CEMA B, C, D and E

**Belt widths:** 18" to 96"

*Available in steel roll and rubber disc*

- Sealed or re-greasable
- Ball and tapered roller bearing
Return Idlers

Return Roller Guards

• A solution for a safer working environment
• Designed to meet OSHA Pinch Point Protection requirements
• Protects against upper and lower pinch point hazards
• Comes complete with warning label

Models: CEMA B, C and D
Belt widths: 18” to 72”

- Brackets for return roll guard match the drop lengths for the return idlers
Thank you