LAIYA

BAODING LAIYA

CONVEYOR BELTS AND ACCESSORIES

PRODUCT CATALOG

English Edition



Products / Specifications / Selection Guide

Mining / Cement / Ports / Metallurgy

Industrial material handling

Baoding, Hebei, China

Solutions for your operating conditions

Baoding Laiya assists with conveyor belt and accessory selection, technical specification consultation, and product supply for industrial material handling. Send your operating conditions, existing belt specifications, or site photos to discuss a suitable solution.

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The data in this catalog is a reference for product selection. Applicable specifications, performance, standards, and certifications must be confirmed in writing. Food contact, mining, and special applications require separate confirmation. Inconsistencies in the source are noted in the relevant sections.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

White conveyor belts: flat and profiled surfaces



When requesting a quotation, specify the belt color, surface profile, width, thickness, and carcass construction. Product selection depends on the conveyed material, temperature, and contact requirements.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Polyester-cotton carcass conveyor belts



Applications

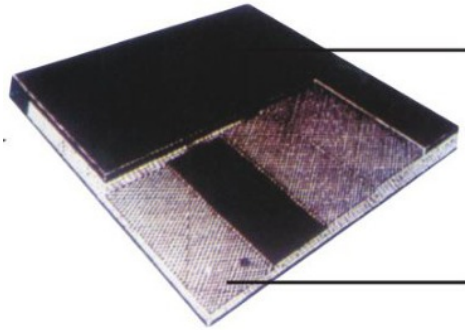
For conveying small and medium lumps, granules, and powders.

Classification

By cover type: high cut/tear resistance, high abrasion resistance, and general purpose.

Cross-sectional structure

Outer rubber covers with an inner polyester-cotton fabric carcass.





Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Polyester-cotton carcass: specifications and performance

Specifications

Width (mm)	Number of plies	Top cover thickness (mm)	Bottom cover thickness (mm)
300	3-5	4.5 / 3.0 / 1.5	3.0 / 1.5
400	3-6	4.5 / 3.0 / 1.5	3.0 / 1.5
500	3-6	4.5 / 3.0 / 1.5	3.0 / 1.5
650	3-6	4.5 / 3.0 / 1.5	3.0 / 1.5
800	3-6	6.0 / 4.5 / 3.0 / 1.5	3.0 / 1.5
1000	3-8	6.0 / 4.5 / 3.0 / 1.5	4.5 / 3.0 / 1.5
1200	4-10	6.0 / 4.5 / 3.0	4.5 / 3.0 / 1.5
1400	4-10	6.0 / 4.5 / 3.0	4.5 / 3.0 / 1.5
1600	4-10	6.0 / 4.5 / 3.0	4.5 / 3.0
1800	5-10	6.0 / 4.5	4.5 / 3.0

Longitudinal belt tensile strength grades (N/mm)

160 / 200 / 250 / 315 / 400 / 500 / 630

Physical properties of the cover

After aging at 70°C for 7 days: changes in tensile strength and elongation at break as shown in the table.

Cover rubber grade	Code	Tensile strength MPa ≥	Elongation at break % ≥	Abrasion mm³ ≤	Change after aging %
High cut/tear resistance	H	24.0	450	120	-25 to +25
High abrasion resistance	D	18.0	400	100	-25 to +25
General purpose	L	15.0	350	200	-25 to +25

Interply adhesion

Parameter (N/mm)	Between fabric plies	Cover/carcass Thickness 0.8-1.5 mm	Cover/carcass Thickness >1.5 mm
Average of all samples ≥	3.2	2.1	2.7
Minimum peak across all samples ≥	2.7	1.6	2.2

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Nylon carcass conveyor belts



Applications and classification

For conveying small and medium lumps, granules, and powders; suitable for high speeds, medium or long distances, and heavy impacts. Cover types: general purpose and abrasion resistant.

Features

1. High strength: 2 times that of vinylon and 6 times that of cotton.
2. Lightweight, easy to install, and energy efficient.
3. Elastic, impact resistant, and tear resistant.
4. Thinner construction allows smaller pulley diameters.
5. Good troughability increases conveying capacity.
6. Resistant to corrosion and the effects of bacteria and microorganisms.
7. Available in various strength grades and sizes.

Technical performance

Specifications and performance according to GB7984; appearance quality according to GB/T526. The cold-resistant type has a minimum operating temperature of -40°C. Contact us for special requirements.

General-purpose type: according to GB/T7984-2013.

Specifications

Width (mm)	Number of plies	Top cover thickness (mm)	Bottom cover thickness (mm)
400	3-4	4.5 / 3.0	3.0 / 1.5
500	3-5	4.5 / 3.0	3.0 / 1.5
600	3-5	6.0 / 4.5 / 3.0	3.0 / 1.5
650	3-5	6.0 / 4.5 / 3.0	4.5 / 3.0 / 1.5
800	3-6	6.0 / 4.5 / 3.0	4.5 / 3.0 / 1.5
1000	3-7	6.0 / 4.5 / 3.0	4.5 / 3.0 / 1.5
1200	3-7	6.0 / 4.5	4.5 / 3.0
1400	4-7	6.0 / 4.5	4.5 / 3.0
1600	4-7	6.0 / 4.5	4.5 / 3.0
1800	4-7	6.0 / 4.5	4.5 / 3.0

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Nylon carcass: technical parameters

Interply adhesion

Parameter (N/mm)	Between fabric plies	Cover/carcass Thickness 0.8-1.5 mm	Cover/carcass Thickness >1.5 mm
Average of all samples ≥	4.5	3.2	3.5
Minimum peak across all samples ≥	3.9	2.4	2.9

Note: the maximum peak across all samples must not exceed 20 N/mm.

Physical and mechanical properties of cover rubber

After aging at 70°C × 7 h: changes in tensile strength and elongation at break as shown in the table.

Cover rubber grade	Code	Tensile strength MPa ≥	Elongation at break % ≥	Abrasion mm^3 ≤	Change after aging %
High cut/tear resistance	H	24.0	450	120	-25 to +25
High abrasion resistance	D	18.0	400	100	-25 to +25
General purpose	L	15.0	350	200	-25 to +25

General flame-resistant type: GB/T10822-2003

Interply adhesion

Parameter (N/mm)	Between fabric plies	Cover/fabric Thickness ≤1.5 mm	Cover/fabric Thickness >1.5 mm
Average of all samples ≥	5.0	3.5	3.9
Minimum peak across all samples ≥	3.9	2.4	2.9

Safety performance

Performance grade	Requirement
Flame-resistant J	Flame resistance as for grade J; surface resistance for conductivity must not exceed 3×10^8 Ω.
Flame-resistant & conductive K	The average flame duration of 3 full-thickness longitudinal samples must not exceed 60 s; no reignition is permitted in any test.

Physical properties of the cover

Parameter	Minimum value
Cover tensile strength (MPa)	10
Cover elongation at break (%)	350

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Polyester conveyor belts

Applications

For conveying small and medium lumps, powders, and granules. Suitable for medium or long distances, heavy loads, and high speeds.

Classification

By cover rubber: general-purpose types include high cut/tear resistance, high abrasion resistance, and standard grades; acid-alkali-resistant and flame-resistant types are also available.

Construction

Consists of bonded polyester fabric plies, or fabric with polyester warp and nylon weft. Both sides have abrasion-resistant rubber covers with high strength and elasticity.

Carcass code

EP80 / EP100 / EP125 / EP150 / EP200 / EP250 / EP300 / EP400

Specifications

Width (mm)	Number of plies	Top cover thickness (mm)	Bottom cover thickness (mm)
400	3-4	4.5 / 3.0	3.0 / 1.5
500	3-6	4.5 / 3.0	3.0 / 1.5
600	3-5	6.0 / 4.5	3.0 / 1.5
650	3-5	6.0 / 4.5 / 3.0	3.0 / 1.5
800	3-6	6.0 / 4.5 / 3.0	4.5 / 3.0 / 1.5
1000	3-7	6.0 / 4.5 / 3.0	4.5 / 3.0 / 1.5
1200	4-7	6.0 / 4.5	4.5 / 3.0 / 1.5
1400	4-7	6.0 / 4.5	4.5 / 3.0
1600	4-7	6.0 / 4.5	4.5 / 3.0
1800	4-7	6.0 / 4.5	4.5 / 3.0
2000	5-7	6.0 / 4.5	4.5 / 3.0

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Polyester: rubber performance and adhesion

General-purpose polyester conveyor belts: according to GB/T7984-2013.

Physical and mechanical properties of cover rubber

After aging at 70°C × 168 h: changes in tensile strength and elongation at break as shown in the table.

Cover rubber grade	Code	Tensile strength MPa ≥	Elongation at break % ≥	Abrasion mm³ ≤	Change after aging %
High cut/tear resistance	H	24.0	450	120	-25 to +25
High abrasion resistance	D	18.0	400	100	-25 to +25
General purpose	L	15.0	350	200	-25 to +25

Interply adhesion

Parameter (N/mm)	Between fabric plies	Cover/carcass Thickness 0.8-1.5 mm	Cover/carcass Thickness >1.5 mm
Average of all samples ≥	4.5	3.2	3.5
Minimum peak across all samples ≥	3.9	2.4	2.9

Note: the maximum peak across all samples must not exceed 20 N/mm.

General flame-resistant type: GNB10822-89

Physical properties of the cover

Parameter	Minimum value
Cover tensile strength (MPa)	10
Cover elongation at break (%)	350

Note: general flame-resistant belts with covers less than 2.0 mm thick have no cover physical-property requirements.

Interply adhesion

Parameter (N/mm)	Between fabric plies	Cover/fabric Thickness ≤1.5 mm	Cover/fabric Thickness >1.5 mm
Average of all samples ≥	5.0	3.5	3.9
Minimum peak across all samples ≥	3.9	2.4	2.9





Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Polyester conveyor belts - technical parameters

Safety performance

Parameter	Requirement
Surface resistance	Surface resistance requirement for flame resistance and static conductivity: must not exceed 3×10^8 Ω.
Flame test	The average flame duration of 3 full-thickness longitudinal samples must not exceed 60 s; no reignition is permitted in any test.

Acid- and alkali-resistant belts: QB/YC2003-01

Cover physical and mechanical properties follow the company standard cited in the source.

Parameter	Unit	Value
Tensile strength, minimum	MPa	10
Elongation at break, minimum	%	350
Change in tensile strength after aging at 70°C × 168 h	%	±30
Change in elongation at break	%	±30
Abrasion volume loss, maximum	cm^3/1.61 km	1.0
Change in tensile strength in H_2SO_4 40%	%	-15 to +15
Change in elongation at break after 48 h at room temperature	%	-15 to +15
Change in tensile strength in NaOH 40%	%	-15 to +15

Interply adhesion strength

Parameter (minimum)	Between fabric plies	Cover/fabric; thickness ≤1.5 mm	Cover/fabric; thickness >1.5 mm
Average of longitudinal samples	3.15	2.10	2.70
Average of transverse samples	3.15	2.10	2.70
Maximum peak across all samples	20.0	20.0	20.0
Average of all samples	3.50	2.4	3.0
Minimum peak across all samples	2.70	1.6	2.2

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Scorch-resistant conveyor belts

Applications

Mainly used in metallurgy, construction, and related industries for hot materials such as sintered ore, coke, and cement clinker. Use conditions: material temperature not above 800°C and belt surface temperature not above 300°C.

Features

EPDM rubber cover with a special high-temperature-resistant fabric carcass. A special formulation addresses EPDM's high saturation, low adhesion, and weak interply bonding. The belt is lightweight, offers a long service life (approximately 2-4 times according to the source), and has good heat resistance.



Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Scorch-resistant conveyor belts - parameters

Physical and mechanical properties of the cover

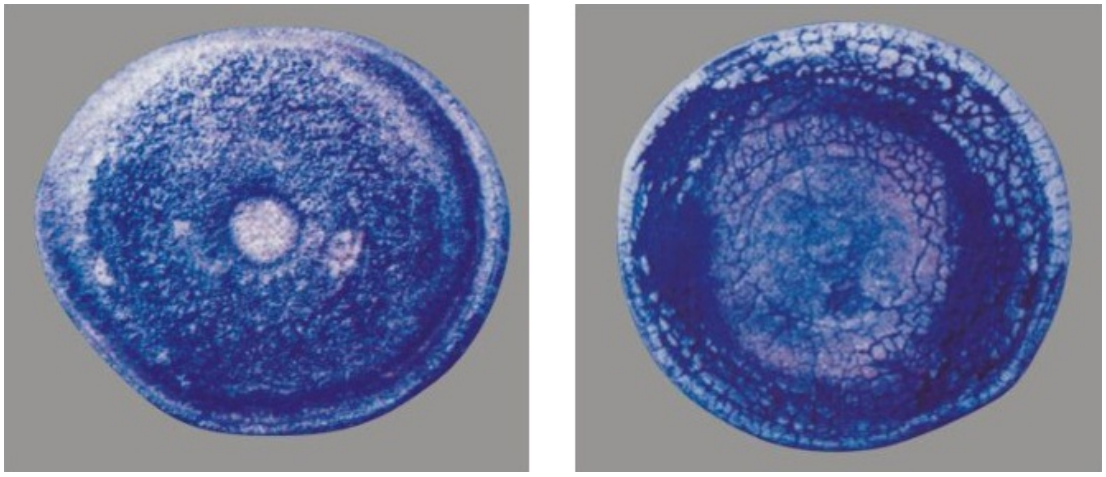
Property	Parameter	Value
Hardness	Difference before/after aging (IRHD)	23
Hardness	Maximum value after aging (IRHD)	88
Tensile strength	Performance reduction (%)	40
Tensile strength	Minimum value after aging (MPa)	5
Elongation at break	Performance change (%)	60
Elongation at break	Minimum value after aging (%)	150

Interply adhesion strength

Synthetic-filament fabric carcass.

Longitudinal parameter	Between fabric plies	Cover/fabric; thickness ≤1.5 mm	Cover/fabric; thickness >1.5 mm
Average value, minimum	8.0	7.0	12
Minimum peak value	8.0	6.5	11

Product standard in the source: QB/SY2002-5.



Left: 500°C scorch test result for a heat/scorch-resistant belt with added scorch-resistant material.
Right: 500°C scorch test result for a conventional heat-resistant belt.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Heat-resistant conveyor belts

Applications and specifications

For locations where material or ambient temperatures exceed 60°C, such as sinter plants, coke plants, cement plants, and foundries.

Specifications	Range
Carcass material	Cotton; polyester-cotton; polyester-nylon; nylon 66; steel cord
Tensile strength	200-2000 N/mm
Belt width	500-1800 mm



Physical and mechanical properties

Part	Parameter	Unit	Value
Rubber cover layer	Tensile strength at break	MPa ≥	10
Rubber cover layer	Elongation at break	% ≥	240
Rubber cover layer	Shore hardness	degrees	67-78
Rubber-coated fabric ply	Rubber-to-fabric adhesion	N/mm ≥	5.0
Rubber-coated fabric ply	Fabric-to-fabric adhesion	N/mm ≥	3.15
Rubber-coated fabric ply	Warp tensile strength at break per ply	N/mm ≥	150
Rubber-coated fabric ply	Warp elongation at break per ply	% ≥	15





Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Heat-resistant conveyor belts - classification

Dimensions are similar to general-purpose belts. Product standard in the source: GB/T20021-2005. Heat-resistant belts are divided into 4 types by test temperature:

Type	Code	Maximum test temperature
1	T1	100°C
2	T2	125°C
3	T3	150°C
4	T4	180°C

Cover mechanical properties after heat testing

Property / parameter	T1	T2	T3	T4
Hardness: difference before/after aging (IRHD)	20	20	20	20
Hardness: maximum after aging (IRHD)	85	85	85	80
Tensile strength: performance reduction (%)	25	30	30	30
Tensile strength: minimum after aging (MPa)	12	10	5	8
Elongation at break: change (%)	50	50	55	45
Elongation at break: minimum after aging (%)	200	200	180	200

Cover abrasion volume loss

Quality grade	T1	T2	T3	T4
First grade	0.8	1.0	1.0	1.0
Qualified	1.0	1.2	1.2	1.2

Interply adhesion strength

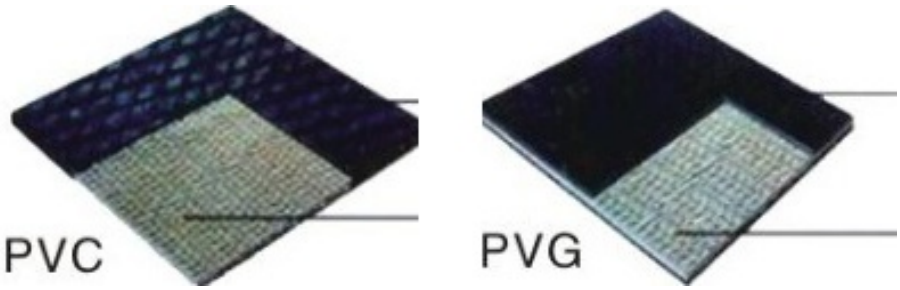
Parameter (minimum)	Between fabric plies	Cover ≤1.5 mm / fabric	Cover / fabric
Average of all samples	3.0	2.2	2.6
Minimum peak across all samples	2.0	1.6	2.0



Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Flame-resistant solid woven conveyor belts

Cross-sectional structure



Left - PVC: PVC cover and solid woven carcass. Right - PVG: rubber cover and solid woven carcass.

Applications

For conveying coal, chemicals, and similar materials in underground coal mines and locations with a fire risk.

Product type

Fully plastic-coated type (PVC) and rubber-covered type (PVG).

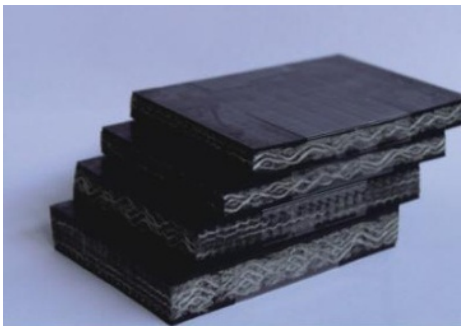
Features

• The solid woven carcass balances tension and elongation when passing over pulleys.
• No interply separation; resistant to impacts and tearing.
• PVC-impregnated carcass edges are sealed to reduce edge wear and damage.
• Can be joined with mechanical fasteners or hot-melt adhesive; easy to repair.
• Rubber covers offer greater abrasion resistance and friction; the conveying angle can be approximately 2-6° greater than with PVC.

Safety: confirm flame resistance, antistatic properties, and certification for the specific product code and application.

Mechanical performance

Good mechanical performance helps extend service life and reduce installation and operating costs.



Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Flame-resistant solid woven conveyor belts

Service life

Service life is supported by a tightly woven carcass of warp, weft, and wrapping cotton yarns; special PVC impregnation for strong carcass-to-cover adhesion; and a cover formulation for impact, tear, and abrasion resistance.

Splice characteristics

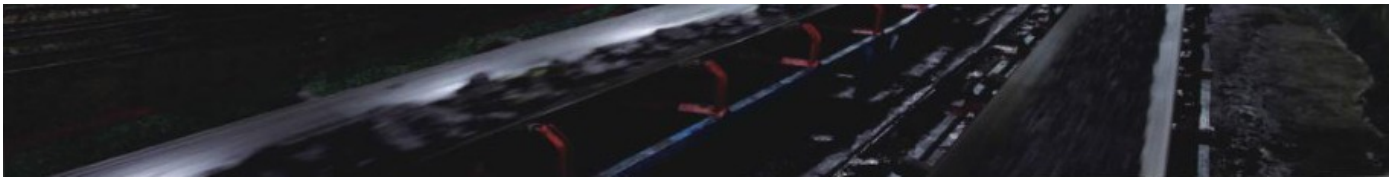
Depending on carcass strength and structure, mechanical splices can achieve 50%-90% of belt strength; vulcanized splices can achieve 60%-90%. Splice selection should suit the requirements for safe and efficient conveyor operation.

Flame-resistant characteristics

Test type	Requirement
Pulley friction	Pulley surface temperature must not exceed 325°C.
Burner flame test	After removing the burner flame, average flame duration for full-thickness samples ≤3.0 s; samples without covers ≤5.0 s.
Propane combustion test	The undamaged length must exceed 250 mm.

Surface resistance

The average value on the top and bottom surfaces must not exceed $3.0 \times 10^8\ \Omega$.



Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

PVC / PVG: tests and reference data



From left: pulley friction test; conductivity test; alcohol burner flame test; tunnel propane combustion test.

Reference cover thickness for PVC / PVG belts

Belt code	PVC (mm)	PVG (mm)
680S	1.5+1	2+1
800S	2+1	2+1
1000S	2+1	2+1.5
1250S	2+2	2.5+1.5
1400S	3+2	2.5+1.5
1600S	3+2	2.5+1.5
1800S	3+2	3+2
2000S	5+2	3+2 or 4+2

Recommended minimum drive pulley diameter

The following values are based on design experience and are for selection reference only.

Chinese standard code	Minimum pulley diameter (mm)
680/1 - Grade IV	400
800/1 - Grade V	500
1000/1 - Grade VI	630
1250/1 - Grade VII	750
1400/1 - Grade VIII	750
1600/1 - Grade IX	800
1800/1 - Grade X	800

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Corrugated sidewall conveyor belts

Corrugated sidewall belts use selected materials and special processes. The sidewalls, transverse cleats, and base belt are joined through a second vulcanization process. The structure is strong yet flexible, reduces peeling and component separation, and resists tearing and flexing. It supports steep conveying angles and flexible angle changes, with low energy use and high efficiency. Standard in the source: HG/T4062-2008.





Applications

For ports, metallurgy, mines, power plants, coal, foundries, building materials, food, and fertilizers. Continuously conveys bulk materials at angles from 0° to 90°.

Advantages: steep conveying angles, broad applications, compact installation footprint, no transfer points, lower construction investment, low maintenance, and high capacity. Can operate at angles beyond the capability of ordinary flat or profiled belts. A complete system can be designed for the operating conditions, reducing interrupted transfers and complex lifting systems.

Can convey horizontally, on an incline, vertically, or through changing angles; for coal, ore, sand, fertilizers, grain, and other bulk materials. Particle sizes below 400 mm and capacities from 1 m^3/h to 6000 m^3/h can be selected.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Sidewalls: calculations and specifications

Equivalent area calculation

Sidewall belt: A = [B × (n + (t_atas + t_bawah) / 1.5) × L] + [L × 2 × SK] + [(L / P) × B_efektif × CTK].

Profiled belt: A = B × [1 + n + (t_atas + t_bawah) / 1.5] × L.

General-purpose belt: A = B × [n + (t_atas + t_bawah) / 1.5] × L.

Symbols: B = belt width; n = number of plies; t_atas and t_bawah = top/bottom cover thickness; L = belt circumference; P = cleat spacing; B_efektif = effective width. SK and CTK are coefficients from the source formula. Units and coefficients must be confirmed before calculation.

Sidewall and cleat specifications

Sidewall type	Height H	Width BW	Pitch T	Foot width BF	Area/m SK	Cleat height H	Cleat type	Cleat foot width BF	Area/m SK
S	60	44	42	45	0.61	50	CT	55	0.55
S	80	44	42	50	0.75	75	CT	70	1.29
S	120	44	42	50	1.69	110	CT	100	1.76
S	160	65	65	80	2.68	150	CT	100	2.24
S	200	70	65	90	3.53	180	CT	160	3.39
S	240	80	65	90	4.75	220	CT	160	5.00
S	300	90	70	95	7.03	280	CT	180	7.05

Endless belts with corrugated sidewalls

Uses a polyester-cotton or polyester fabric carcass with special rubber and processing. Uniform thickness, precise dimensions, stable operation, and resistance to abrasion, high temperatures, acids, and alkalis. For metered feeding on cantilever and variable-speed electronic belt scales, according to the scale design requirements.



Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Endless sidewall belts and endless belts

Physical properties of endless belts for electronic belt scales

Parameter	Unit	Requirement
Cover tensile strength at break	MPa	≥5.5
Cover elongation at break	%	≥300
Cover abrasion	cm^3/1.61 km	≤1.40
Rubber/fabric adhesion	N/25 mm	≥80
Fabric-to-fabric adhesion	N/25 mm	≥80
Hardness	Shore	55-66
Full-thickness tensile strength at break	kN/m	≥85
Full-thickness elongation at break	%	≤10



Endless conveyor belts

Endless belts are manufactured as a continuous loop without a splice. The splice-free carcass avoids premature splice failure that can shorten service life. Flat surface, even tension, stable operation, and low elongation in service.





Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Profiled / V-chevron conveyor belts

Applications

For coal, crushed stone, sand, gravel, grain, and bagged materials, with particle sizes below 50 mm. The product description states a maximum angle of 40°. Profiles include round recesses and V-chevrons.

Features

The round recessed profile provides high friction to reduce material sliding backward. The V-chevron apex lies on the centerline to gather material toward the center of the belt.





Maximum angle by material and profile height

Material form	Examples	H=14 mm	H=16 mm	H=25 mm	H=32 mm
Powder	Wheat flour, etc.	25°	25°	28°	30°
Free-flowing granules	Corn, barley, wheat, rye, etc.	20/25°	20/25°	20/25°	25/30°
Readily rolling granules	Gravel, crushed stone, etc.	25°	25°	28°	30°
Bagged material	Sacks, paper bags, etc.	30/35°	30/35°	35/40°	35/40°
Damp and sticky	Wet sand, ash, damp soil, etc.	30°	30/35°	35/40°	40/45°

Note: the description states a maximum of 40°, but the source table lists up to 45° for certain materials. The operating angle must be confirmed for the material, profile height, and working conditions.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Oil-resistant conveyor belts

The cover uses nitrile rubber with high acrylonitrile content; the carcass is cotton, nylon, or polyester fabric. Suitable for oily materials or environments exposed to industrial oils.

Features: low volume change, high strength retention, and broad applications.



Physical and mechanical properties of cover rubber

Parameter	Value
Shore A hardness	60 ± 5
Abrasion, cm^3/1.6cm, ≤	1.20
Tensile strength, MPa, ≥	10.0
Elongation at break, %, ≥	300
Volume change after oil immersion, %, ≤ (50°C, 24 h, aviation lubricating oil No. 20)	10

Abrasion units follow the source; the test method must be confirmed when ordering.



Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Acid- and alkali-resistant conveyor belts

For acidic and alkaline environments, such as phosphate fertilizer and sea salt production. The cover is a rubber-plastic blend with inert acid-alkali-resistant fillers, offering better resistance than chloroprene rubber belts. The polyester carcass provides more reliable acid-alkali resistance than cotton. Usually made in endless form.







Physical and mechanical properties

Part	Parameter	Value
Cover	Tensile strength	≥12 MPa
Cover	Elongation at break	≥400%
Cover	Shore A hardness	55 ± 5
Cover	Acid-resistance coefficient (15-25°C, 24 h, H_2SO_4 40%)	≥0.8
Cover	Abrasion	≤1.2 cm^3/1.61Km
Full thickness	Rubber/fabric adhesion; cover >1.5 mm	≥3.2 N/mm
Full thickness	Rubber/fabric adhesion; cover ≤1.5 mm	≥2.8 N/mm
Full thickness	Fabric-to-fabric adhesion, longitudinal average	≥3.2 N/mm
Full thickness	Longitudinal elongation at break	≥10%

Abrasion units follow the source; the test method must be confirmed when ordering.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Steel cord conveyor belts

Applications

For mines, factories, ports, and docks, on long routes with high duty intensity and conveying capacity.

Classification

By cover rubber: general purpose, fire retardant, heat resistant, abrasion resistant, cold resistant, acid-alkali resistant, and oil resistant.



Features

1. High allowable working tension and high safety factor.
2. Very low elongation and short take-up travel.
3. Strong steel cord/rubber bonding and good dynamic performance.
4. Flexible belt with good troughability and straight tracking.
5. Good impact resistance.
6. Reliable splices and long service life.

Technical features

1. Parameters in the source refer to GB/T9770-2013.
2. Special cover requirements should be discussed when ordering.
3. Impact/tear-resistant type: impact resistance increases by 1-2 times and tear resistance by 0.5-1 times.
4. Minimum operating temperature of the cold-resistant type: -40°C.



Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Steel cord belts - construction and standards

Construction

General-purpose type	Impact- and tear-resistant type
Top rubber cover layer	Top rubber cover layer
Steel cord	Core rubber and steel cords
Bottom rubber cover layer	Two reinforcement layers; bottom cover rubber

Main standards and parameters

Product type	Standard or parameter
General purpose	GB/T9770-2013
Fire retardant	MT668-2008
General flame resistant	GB/T10822-2003
Heat resistant	HG2297-92
Abrasion resistant	Schopper abrasion ≤90 mm^3
Acid, alkali, and oil resistant	HG/T3782-2005
Cold resistant	HG/T3647-1999; brittleness temperature -40°C

The standard codes above are retained from the source catalog. The standards applicable to the order must be confirmed in writing.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Steel cord belts - specification tables

Basic specifications

Code	Longitudinal tensile strength (N/mm)	Max. cord Ø (mm)	Cord pitch (mm)	Top cover (mm)	Bottom (mm)
ST630	630	3.0	10 ± 1.5	5	5
ST800	800	3.5	10 ± 1.5	5	5
ST1000	1000	4.0	12 ± 1.5	6	6
ST1250	1250	4.5	12 ± 1.5	6	6
ST1600	1600	5.0	10 ± 1.5	6	6
ST2000	2000	6.0	12 ± 1.5	8	6
ST2500	2500	7.2	15 ± 1.5	8	8
ST3150	3150	8.1	15 ± 1.5	8	8
ST3500	3500	8.6	15 ± 1.5	8	8
ST4000	4000	8.9	15 ± 1.5	8	8
ST4500	4500	9.7	16 ± 1.5	8	8
ST5000	5000	10.9	17 ± 1.5	8.5	8.5
ST5400	5400	11.3	17 ± 1.5	9	9

Number of cords by belt width

Width (mm)	ST630	ST800	ST1000	ST1250	ST1600	ST2000	ST2500
800	75	75	63	63	63	63	50
1000	95	95	79	79	79	79	64
1200	113	113	94	94	94	94	76
1400	133	133	111	111	111	111	89
1600	151	151	126	126	126	101	101
1800	-	171	143	143	143	143	114
2000	-	-	159	159	159	159	128
2200	-	-	-	-	-	176	141
2400	-	-	-	-	-	193	155
2600	-	-	-	-	-	209	168
2800	-	-	-	-	-	-	-

Width (mm)	ST3150	ST3500	ST4000	ST4500	ST5000	ST5400
800	50	50	-	-	-	-
1000	64	64	64	59	55	55
1200	76	77	77	71	66	66
1400	89	90	90	84	78	78

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Continued

Steel cord belts - specification tables

Width (mm)	ST3150	ST3500	ST4000	ST4500	ST5000	ST5400
1600	101	104	104	96	90	90
1800	114	117	117	109	102	102
2000	128	130	130	120	113	113
2200	141	144	144	134	125	125
2400	155	157	157	146	137	137
2600	168	170	170	159	149	149
2800	-	194	194	171	161	161

A "-" means no data is available in the source.

Cover rubber grade

Grade	Tensile strength (MPa), ≥	Elongation at break (%), ≥	Abrasion (mm^3), ≤
D	18	400	90
H	25	450	120
L	20	400	150
P	14	350	200

D: severe abrasion; H: severe tearing; L: general use; P: oil, acid/alkali, and cold resistance, plus general flame resistance.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Pipe conveyor belts

Pipe belts use a fabric, steel cord, or equivalent carcass with elastic, abrasion-resistant, high-strength working rubber. Mainly for powders or granules that could pollute the environment. In operation, the flat belt forms a U shape and then closes into a pipe to enclose the material.

Main features

1. Enclosed conveying protects the material and the environment.
2. Can operate at steep inclines; typical angles can reach 30°.
3. The route can follow three-dimensional curves.



Selected technical specifications

Pipe Ø (mm)	Width (mm)	Tensile strength at break (N/mm)	Number of plies	Rubber cover thickness (mm)
100	430	250	1	3.0 × 1.5
150	600	160	2	3.0 × 2.0
150	600	315	2	3.0 × 2.0
200	700	315	2	3.0 × 2.0
200	700	500	2	3.0 × 2.0
200	700	315	2	5.0 × 2.0
200	700	500	2	5.0 × 2.0
250	1000	400	2	3.0 × 2.0
250	1000	500	2	3.0 × 2.0
250	1000	400	2	5.0 × 2.0
250	1000	500	2	5.0 × 2.0
300	1100	400	2	3.0 × 2.0
300	1100	500	2	3.0 × 2.0
300	1100	400	2	5.0 × 2.0
300	1100	500	2	5.0 × 2.0
350	1300	630	3	5.0 × 2.0
350	1300	800	4	5.0 × 2.0
400	1600	800	4	5.0 × 2.0
400	1600	1000	5	5.0 × 2.0

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Rubber waterstops and transmission belts

General-purpose transmission belts

Compared with chain and gear drives, general-purpose transmission belts are simpler, easy to install, and absorb vibration and impacts; they can be used individually without a matched set. Transmitted power ranges from a few kilowatts to more than one million watts. For motors, blowers, machine tools, water pumps, rice threshers, and other equipment. Made by coating and bonding nylon, polyester, or polyester-cotton fabric plies with rubber.



Transmission belts

Two edge constructions

Cut edge: fabric plies are not overlap-wrapped; the sides are flat cut surfaces.

Wrapped edge: the outer fabric ply or several plies are overlap-wrapped; the sides are curved.

Physical and mechanical properties

1. Full-thickness tensile strength of general-purpose transmission belts.

2. Elongation at break: in longitudinal tensile tests on flat belts, elongation at break must not exceed 20%.

3. Adhesion: interply adhesion of flat belts must not be less than 3.0 kN/m.

Rubber waterstops

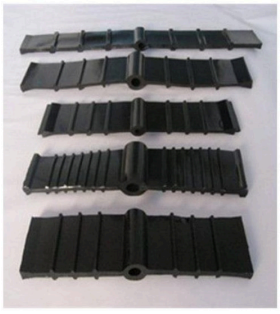
Rubber waterstops are used in large concrete structures such as dams, water tanks, and basements. They are embedded in movement joints and concrete construction joints to prevent water leakage.



Various rolled belts

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

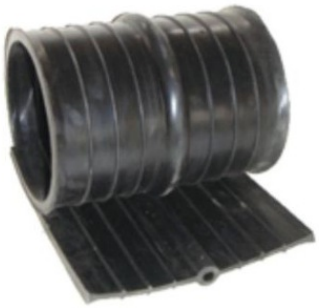
Rubber waterstops - physical and mechanical properties



Waterstop cross sections



Strip waterstop



Rolled waterstop

Physical and mechanical property requirements

Parameter	Condition / unit	Natural rubber	Synthetic rubber
Hardness	Shore A	60+5	60+5
Tensile strength	MPa, ≥	8	16
Elongation at break	%, ≥	450	400
Compression set	70°C × 24 h; %, ≤	35	35
Compression set	23°C × 168 h; %, ≤	20	20
Tear strength	N/m, ≥	-	-
Brittleness temperature	°C, ≤	35	35
Hot-air aging: hardness change	70°C × 72 h; Shore A	40	40
Hot-air aging: tensile strength reduction	70°C × 72 h; %, ≤	8	-
Hot-air aging: elongation reduction	70°C × 72 h; %, ≤	10	-
Hot-air aging: hardness change	70°C × 96 h; Shore A	20	8
Hot-air aging: tensile strength reduction	70°C × 96 h; %, ≤	-	10
Hot-air aging: elongation reduction	70°C × 96 h; %, ≤	-	20
Ozone aging	50 pphm; elongation 20%; 48 h	Grade 2	Grade 0

A - means the value is not stated in the source.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Rollers and brackets



Troughing idler



Roller sets



Self-aligning idler



Impact roller



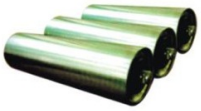
Spiral roller



Nylon roller



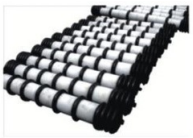
Ceramic roller



Stainless steel roller



Ultra-high-molecular-weight polyethylene (UHMWPE) roller



Rubber disc roller



Support frame



Bracket

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Conveyor systems and pulleys

Conveyor systems

Belt conveyors are widely used in the coal, metallurgy, chemical, hydropower, transport, food-processing, and other industries for large volumes of bulk materials. They can be designed and manufactured to customer requirements for quality equipment suited to the application and reliable operation.



Material-handling conveyor



Conveyor systems

Conveyor pulley types



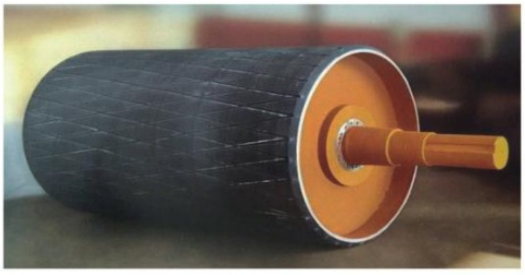
Conveyor pulley



Conveyor pulley



Drive pulley unit



Rubber-lagged pulley

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Conveyor belt storage and selection

Storage guide

1. Keep belts clean during transport and storage, and protect them from direct sunlight, rain, and snow. Avoid contact with acids, alkalis, oils, organic solvents, and similar substances. Keep at least 1 m away from heat sources.

2. Recommended warehouse temperature: -18 °C to 40 °C; relative humidity: 50%-80%.

3. Store in rolls, never folded. Rotate each roll once every three months.

Belt selection and splicing

4. Do not splice belts of different types, specifications, or ply counts. Adhesive splicing is recommended.

5. Select the type, construction, specifications, and number of plies according to operating conditions.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Conveyor belt operation and maintenance

6. Recommended belt speed must not exceed 2.5 m/s. For large lumps or highly abrasive materials, use a fixed plow discharge device and the lowest practicable speed.

7. The relationship between drive pulley diameter and ply count, compatibility of drive and bend pulleys, and idler troughing angle must be selected according to the conveyor system design.

8. Feed material in the direction of belt travel. Use a chute to reduce drop height and impacts. In the loading zone, reduce idler spacing and use impact rollers. Fit side skirts with suitable flexibility to prevent spillage; avoid overly hard skirts that can scratch or tear the belt.

9. Points to observe during use

(1) Avoid material buildup that obstructs roller rotation and spillage trapped between the pulley and belt. Lubricate moving parts, but do not allow oil to contaminate the belt.

(2) Avoid starting the conveyor with a loaded belt.

(3) Correct belt mistracking immediately.

(4) Repair local damage promptly to prevent it from spreading.

(5) Prevent the belt from catching on frames, supports, or material lumps; avoid impacts and tearing.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Common problems: belt mistracking

Symptom	Cause	Corrective action
Mistracking at the same section of belt	1. Splice is not straight. 2. Edges are worn or distorted by moisture. 3. Belt body is curved.	1. Remake the splice. 2. Repair damage promptly. 3. Use a self-aligning idler, or cut out the curved section and resplice.
Mistracking near the same idler	1. Frame is bent or distorted. 2. Idlers are misaligned. 3. Material has built up on idlers. 4. Idlers have fallen or shifted.	1. Straighten distorted sections. 2. Align the idlers. 3. Remove adhering material. 4. Install idlers correctly, and lubricate and maintain them promptly.
Mistracking when unloaded	1. Poor belt troughability. 2. Insufficient belt flexibility. 3. Initial tension is too low.	1. Increase initial tension appropriately. 2. Correct with a self-aligning idler. If ineffective, use a more flexible belt with better troughability.
Mistracking when loaded	1. Material shifts due to one-sided loading. 2. Lumps are too large for the belt width.	Adjust the chute so material lands in the belt center; reduce lump size or adjust belt width.
Mistracking at the conveyor head or tail	1. Pulley axes are misaligned. 2. Material has built up on the pulleys.	1. Align the pulley axes. 2. Remove material buildup and check belt cleaner effectiveness.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Common problems: belt wear and tearing

Symptom	Cause	Corrective action
Top cover deteriorates too quickly	1. Incorrect skirt installation. 2. Large or sharp material strikes the belt. 3. Loading is too fast or too high.	1. Check and adjust skirt installation. 2. Improve loading conditions to reduce impacts.
Bottom cover wears too quickly	1. Belt slips on the drive pulley. 2. Troughing idler angle is too large. 3. Carrying-side idlers do not rotate freely. 4. Material has built up on the pulleys.	1. Increase drive pulley friction. 2. Increase belt tension. 3. Restore free idler rotation and reduce the troughing angle. 4. Clean pulley surfaces.
Belt edges wear too quickly	1. Belt is mistracking. 2. Insufficient troughability.	1. Correct belt tracking. 2. Ensure guide rollers rotate freely.
Belt carcass deteriorates too quickly	1. Large or sharp material strikes the belt. 2. Lumps or foreign objects become trapped between the belt and pulley. 3. The belt catches on hard objects in the chute area.	1. Reduce lump size and improve the chute to reduce impacts. 2. Prevent foreign objects from entering between the belt and pulley. 3. Install a metal detector or magnetic separator.
Longitudinal belt tearing	1. Foreign objects fall, pierce the belt, and become caught. 2. Frame components are loose; angle steel, bolts, or other parts fall and become caught on the skirt or scraper. 3. Worn or damaged idlers come loose. 4. Large foreign objects fall onto the belt.	1. Inspect frame components regularly and promptly repair loose parts. 2. Install a V-plow at the tail pulley. 3. Install a suspended belt-type magnetic separator. 4. Install electrical protection or ultrasonic detection devices.

Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.

Send details to request a quotation

01 **Material and operating conditions**
Conveyed material, application, temperature, and working conditions.

02 **Dimensions and quantity**
Belt width, length per roll, and total requirement.

03 **Carcass and strength grade**
Carcass type and tensile strength, for example EP / NN / ST.

04 **Ply count and thickness**
Number of fabric plies, overall thickness, and top and bottom cover thicknesses.

05 **Special requirements**
Heat, abrasion, oil, chemical, or flame resistance.

06 **Delivery**
Delivery location and preferred trade terms.

You can also send an old belt label, engineering drawing, or site photos.

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Reference data; specifications, performance, and standards must be confirmed in writing for the specific model and order.