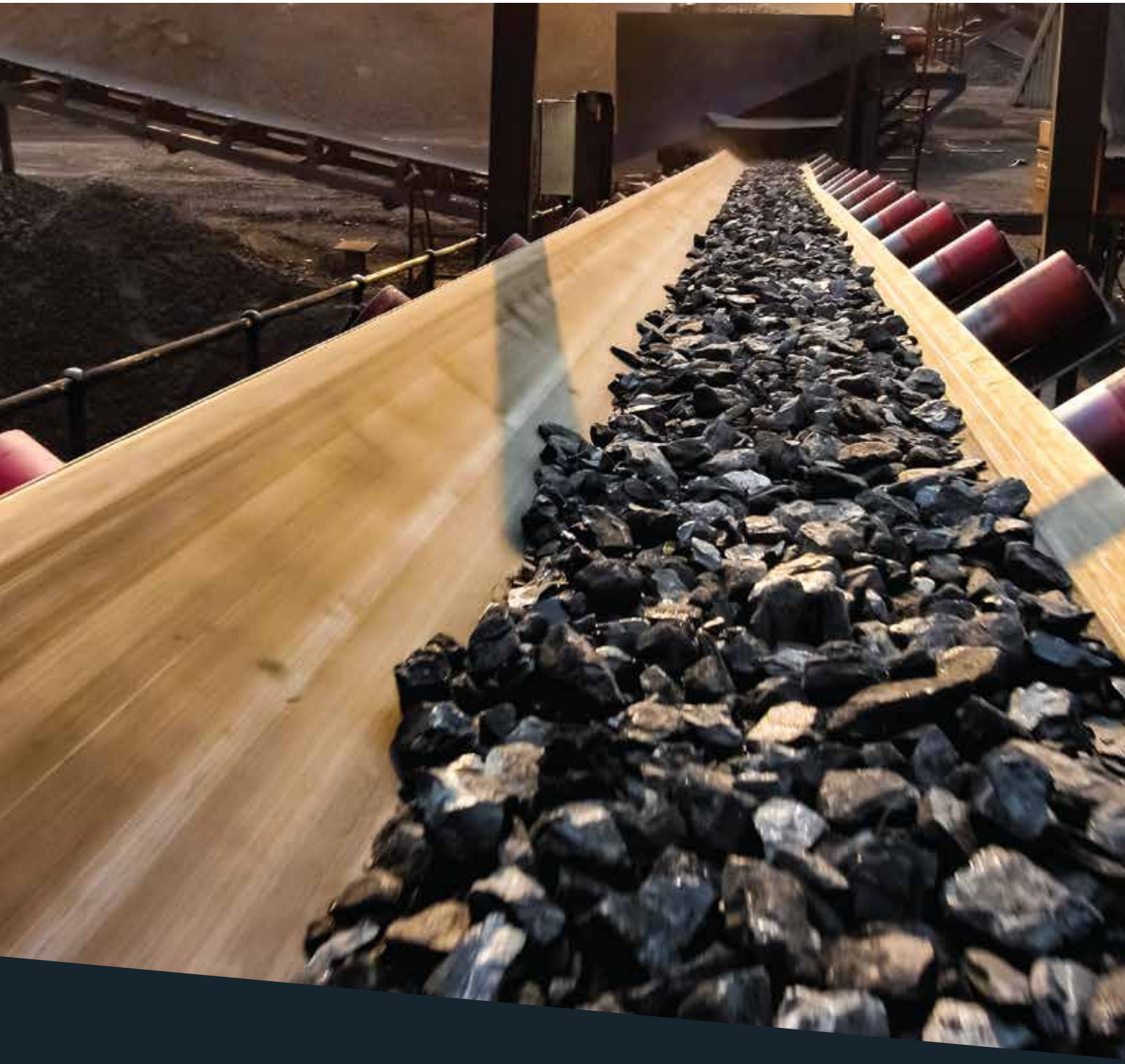
GÖKIŞIK

RUBBER BELT INDUSTRY



We convey your company to the **future**

GOKISIK
www.gokisik.com.tr

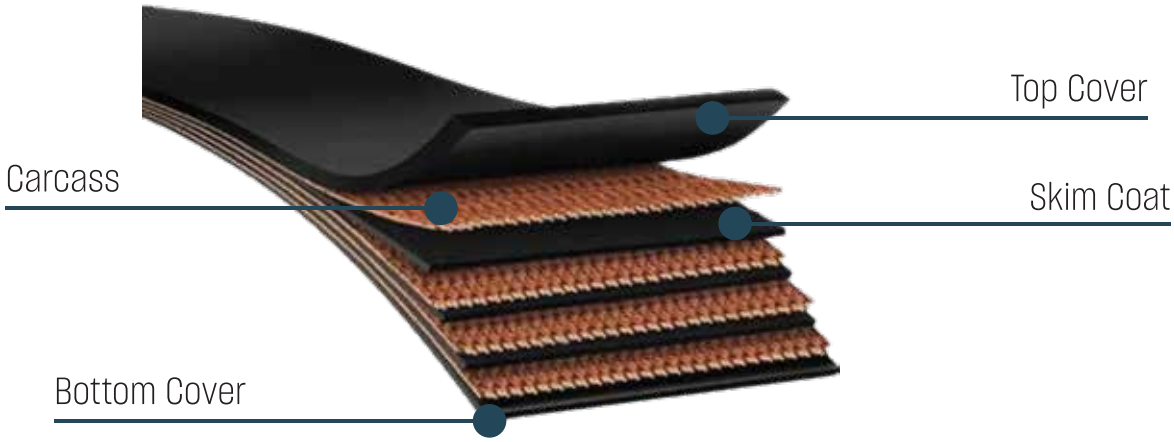
The rubber belts we offer to you by fully applying all our quality standards at every point of our production line allow you to reduce the unit cost prices of your products by increasing the efficiency of your company's product transfer lines.

Description of Conveyor Belt

Conveyor belts are the most important transportation vehicles used in the horizontal or inclined transportation of solid materials over long distances. It is used in many areas such as material transportation, loading, unloading, stocking and taking from stock, conveyor belts have common areas of use in daily life from industry to airports.

Benefits;

·Large transmission flow rate
·Very low energy requirement
·Low investment and low service costs
·Stable and trouble free transportation of products
·It is easy to use
·Less manpower and higher productivity
·Continuity



Cover Rubber - Covers of natural or synthetic rubber are used in conveyor belt construction in order to protect the base carcass from wear, impact, deterioration and other injurious influences. They are compounded to meet particular service conditions such as abrasion, oil, heat, flame, chemical resistant and antistatic, etc. Cover type, quality and thickness are matched to the service life of the belt involved. A specific cover formulation used in an individual belt construction is determined by the material to be carried and the environment in which the belt will operate.

Carcass - Carcass consists of one or more plies of textile fabric with rubber on each side to give adhesion and flexibility.The fabrics most commonly used are nylon, polyester and cotton, etc. The carcass of the belt provides the tensile strength necessary to move the loaded belt and absorb the impact of the impinging material being loaded onto the conveyor belt.

Rubber Skim Coat - An extra layer compound between plies is called skim coat. Skims are important contributors to internal belt adhesions, impact resistance, and play a significant role in determining belt load support and troughability. The proper skims increase flex life and create a more elastic link so that plies flex without separation; improper skims can adversely affect belt performance and lead to ply separation.

Grade	Standard	Abrassion mm^3 max.	Breaking Strength N / mm^2 min.	Elongation at Break % min.
W	DIN22102	90	18	400
X	DIN22102	120	25	450
Y	DIN22102	150	20	400
Z	DIN22102	250	15	350
V	DIN22102	200	14	350
H	ISO14890	120	24	450
D	ISO14890	100	18	400
L	ISO14890	200	15	350
K	ISO14890	200	15	350

Types of Conveyor Belts
Belt according to Carcass
Belt according to Cover
Belt according to Step Angle

Belt According to Carcass

The EP fabric consists of polyester fibre as warp and polyamide (Nylon66) as the weft. This belt is suitable for middle and long distance transportation of higher load and speed.

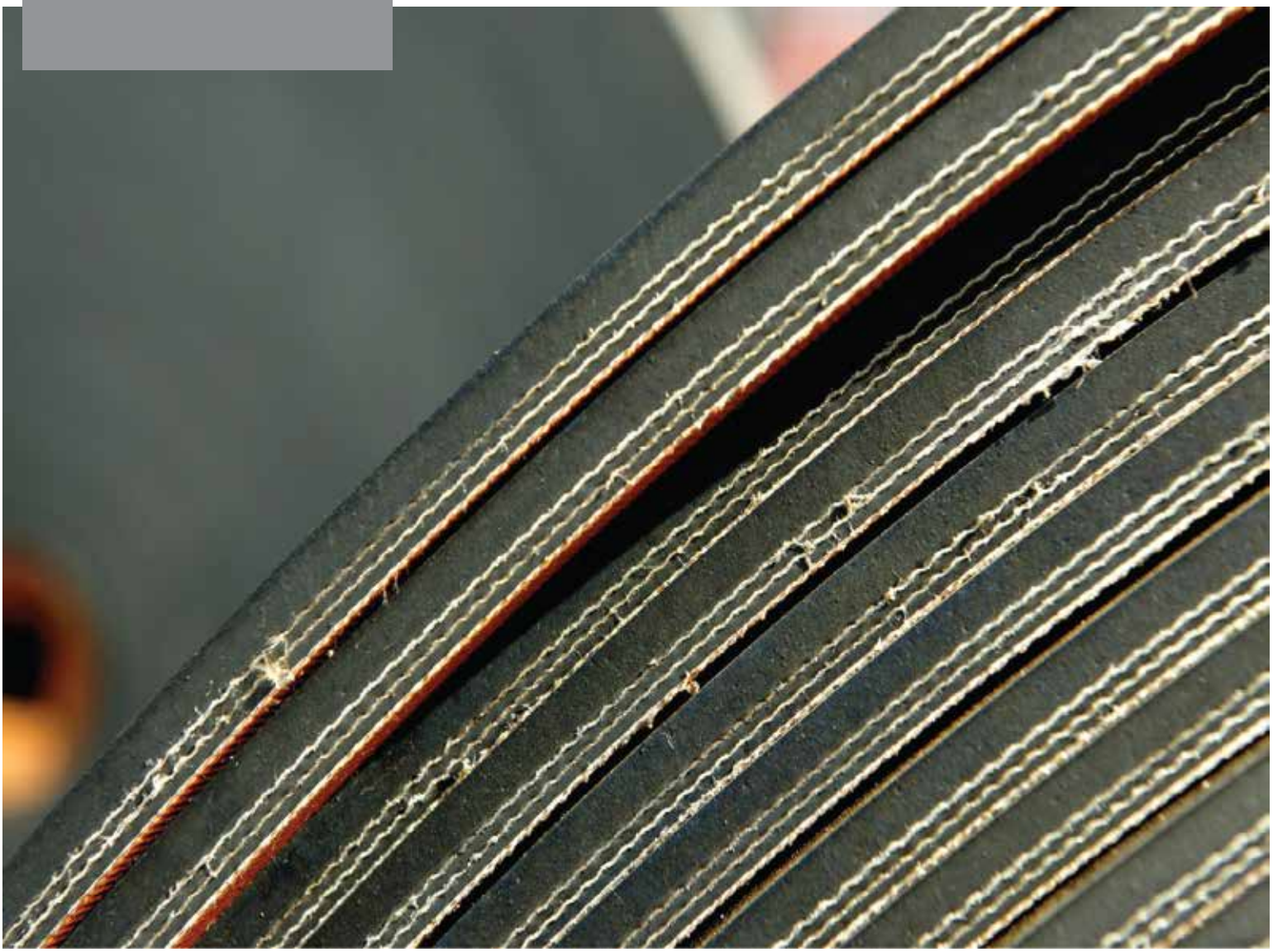
-Excellent resistance to impact
-Superior in fastener holding ability
-Unaffected by alkali and weak acids
-Strong adhesion to rubber
-Higher tensile strength compatible with high weight
-Lower elongation
-Advanced resistance to mildew, moisture and rotting

Fabric Type	EP-70	EP-100	EP-125	EP-160	EP-200	EP-250	EP-315	EP-400	EP-500	EP-630
Fabric Weight (g/m²)	260	355	430	560	690	860	1050	1300	1600	2100
Fabric Thickness	0,50	0,55	0,70	0,90	1,05	1,20	1,4	1,6	2,1	2,8
Elongation at 10% Load	2	2	2	2	2	2	2	2	3	3
Crimp (%)	2,5	3	3,5	3,5	3,5	3,5	3,5	3,5	4	5
Material	POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER	POLYESTER

Belt According to Cover

Conveyor belts made of fabric carcass and covering rubber can be used for the transportation of different materials according to the properties of the covering rubber. Gökışık has adopted the flexible production style in order for customers to transport their products with maximum efficiency, not the same type of belt to the materials to be transported in different structures and sizes, and can make special covering rubber for customers according to the requirements.

- General Purpose
- Abrasion Resistant
- Heat Resistant
- Flame Resistant
- Oil Resistant



Belt According to General Purpose

It is a band suitable for use in the transportation of medium-grade materials that do not require strong abrasion resistance.
In general, it can be produced as open or closed edge with two or more layer fabric carcass structure according to the fabric types specified in a way the customer demands.
This carcass, combined with the standard thickness and quality lower and upper covers adapted to the application area, can also provide the following features;

Applied Fabrics:
EP (Polyester-Poliamid), NN (Naylon-Naylon), EE(Polyester-Polyester)

Usage Area:
Quarry, Soil Industry, Coal, Cement, Steelworks, Warehouse, Port, Silo, Recycling Facility, Timber, Agriculture and other general transpostation applications.

Standard of Cover	DIN 22102-Z, ISO 14890-L
Minimum Elongation (%)	350
Min. Tensile Strength (N/mm^2)	15
Max. Wear Loss (mm^3)	200
Max. Material Temperature	70 C°
Ambient Temperature Max.	50 C° min - 30 C°
Max. Chassis Angle *	45°

*For 3 groups carrier roll station

Belt According to Abrasion Resistant

It is a rubber band that is suitable for the transportation of materials that require high abrasion resistance. In general, it can be produced as open or closed edge with fourt or more layer fabric carcass structure according to the type of fabric specified in accordance with the customer demands.
The thickness and qualities of the upper and lower covers are adapted to the long-lasting strength of the carcass, thus contributing to the maximum efficiency from the belt.

Applied Fabrics:
EP (Polyester-Poliamid), NN (Naylon-Naylon), EE(Polyester-Polyester)

Usage Area:
Quarry, Soil Industry, Coal, Cement, Glass Industry, Granite, Iron, Ore Mining and other abrasive materials.

Standard of Cover	DIN 22102-Y	DIN22102-X ISO 14890-H	DIN22102-W ISO 14890-D
Minimum Elongation (%)	400	450	400
Min. Tensile Strength (N/mm^2)	20	25	18
Max. Wear Loss (mm^3)	150	120	90
Max. Material Temperature	70 c^0	70 c^0	70 c^0
Ambient Temperature Max.	50 C^0 min - 30 C^0	50 C^0 min - 30 C^0	50 C^0 min - 30 C^0
Max. Chassis Angle*	45^0	45^0	45^0

*For 3 groups carrier roll station

Belt According to Heat Resistant

Heat-resistant conveyor belts provide maximum resistance to the deteriorating effects of high heat when conveying materials at high temperatures

EPDM based rubber band suitable for the transportation of materials at max. 180 ° C. Cover rubber provides high adhesion strength and excellent thermal protection.

Applied Fabric:
EP(polyester-poliamid) , NN(naylon-naylon), EE(polyester-polyester)

Usage Area:
Cement kiln clinker, power plants, chemical industry, garbage and recycling facilities, foundry, steelworks and similar applications.

Standard of Cover ISO 4195	T1	T2	T3
Minimum Elongation (%)	450	400	400
Min. Tensile Strength (N/mm^2)	18	15	12
Max. Wear Loss (mm^3)	120	150	200
Max. Material Temperature	130 c^0	150 c^0	180 c^0
Ambient Temperature Max.	150 c^0	180 c^0	200 c^0
Max. Chassis Angle*	45^0	45^0	45^0

*For 3 groups carrier roll station

Belt According to Flame Resistant

Chloropene based rubber band, has a high risk of burning and flammability and is suitable for safe transportation in underground and surface facilities.

These types of bands have a good resistance to open flames and protect the entire conveyor against open fire. This high level of protection against fire helps to stop the spread of fire over the belt. These types of belts are used in temperatures ranging from - 30 to +100 °C.

Applied Fabric:
EP(polyester-poliamid) , NN(naylon-naylon), EE(polyester-polyester)

Usage Area:
Coal mines, cement industry, power plants and similar applications.

Standard Covering	DIN 22102-V ISO 14980-K
Minimum Elongation (%)	350
Min. Tensile Strength (N/mm^2)	15
Max. Wear Loss (mm^3)	200

Belt According to Oil Resistant

Nitrile-based rubber structure, it is the most suitable band for transportation of mineral oil, grease and solvent based products.

Few applications demand a certain degree of resistance to oil. The general purpose conveyor belts are designed to withstand a higher level of oil resistance. This results in the swelling of cover when they come into contact with petroleum-based oils, greases, animal or vegetable fats, etc.

Applied Fabric:
EP(polyester-poliamid) , NN(naylon-naylon), EE(polyester-polyester)

Usage Area:
Recycling and garbage facilities, fertilizer industry, glass industry and similar applications.

	DIN 22102-G	
Standard of Cover	MOR	OR
Minimum Elongation (%)	450	400
Min. Tensile Strength (N/mm^2)	15	12
Max. Wear Loss (mm^3)	200	250
Ambient Temperature Max.	80 c° min -30 c°	100 c° min -20 c°
Max. Chassis Angle*	45°	45°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Belt with Steel Breaker

Specifically designed to provide strong resistance against objects that might rip through the belt, impact-resistant conveyor belts are used for carrying jagged materials in heavy-duty conditions, especially where large drop heights are involved. Impact-resistant belts operate effectively in this environment due to a special textile or metal weave, known as a breaker.
The material used for the breaker differs, depending on the application: high elongation steel mesh is used as a weft cord for increased lateral strength, while regular steel mesh can be used for increased lateral stiffness. Breaker material is also available as a fabric weave, featuring increased impact resistance for lighter working conditions, where steel is not needed.
The rubber covers are equipped to handle the impact, minimize rips and tears, resist aggressive wear and reduce gouging and cutting caused by hard, sharp materials.

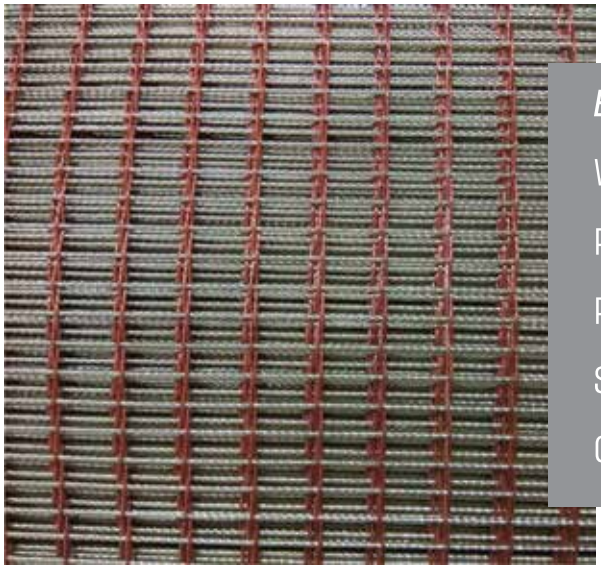
BF-HE Series Fabric

Woven with polyester cord as warp and steel cord as weft.

Provides high resistance to tearing and puncture

Provides high grooveability

Can be adapted with all cover grades.



BF-RE Series Fabric

Woven with polyester cord as warp and steel cord as weft

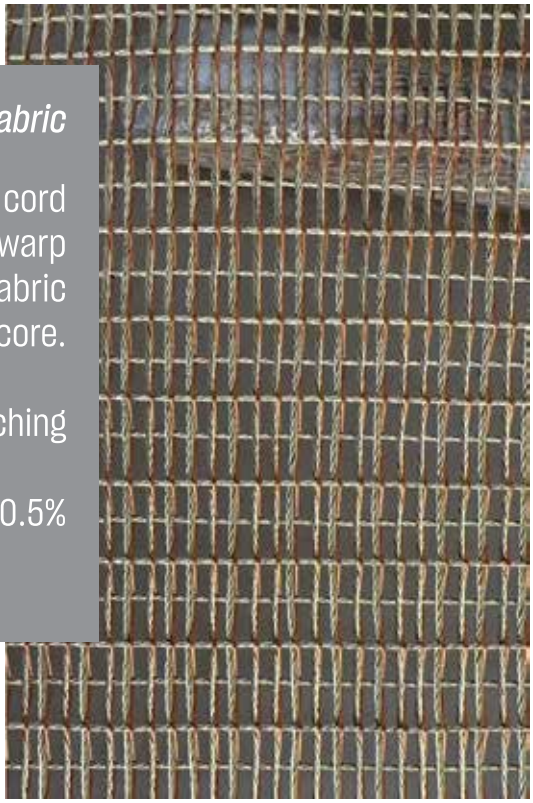
Provides high resistance to tearing and puncture

Provides extra transverse rigidity

Suitable to use at Elevators and Sidewall belts

Can be adapted with all cover grades.

SW conveyor belt is made of high-quality steel cord fabric, the longitudinal and transverse steel cords are fixed together with a layer as the carcass. Because of its high impact strength and trough capability, it can be used for many purposes.
Compared with fabric belts, SW belts are stronger, tear-resistant, and more suitable for high-temperature use. Compared with steel cord belts, SW belts are lighter, more energy-efficient, and have good trough capabilities.

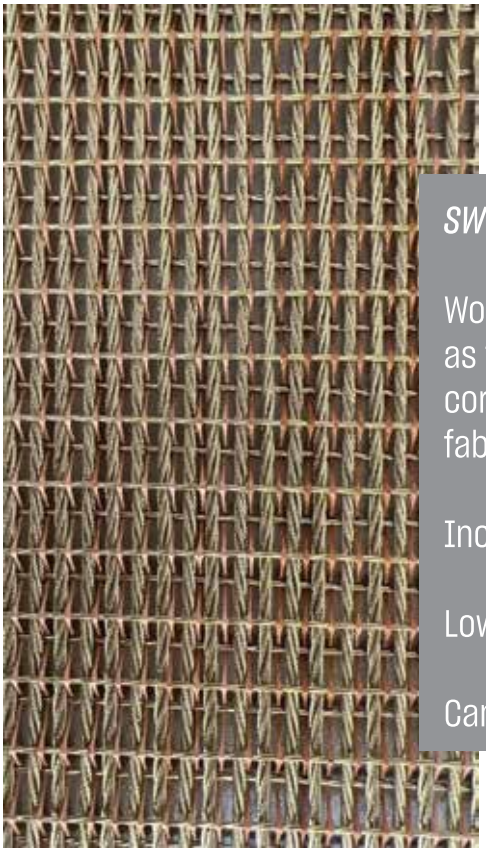


IW Series Fabric

Woven with polyester cord and steel cord as the warp, and the steel cord as the weft direction is located at the upper and lower parts of the warp cord to weave a one-layer straight warp and straight weft steel cord fabric belt core.

Optimal load bearing capacity and limited stretching

Low Elongation at Operating Load : 0.5%



SW Series Fabric

Woven with polyester cords and steel cords as the warp, and the steel cord as the weft direction is located at the upper and lower parts of the warp cord to weave a double-layer straight warp and straight weft steel cord fabric belt core.

Increase bucket bolt holding ability

Low Elongation at Operating Load: 0.5%

Can be adapted with all cover grades.

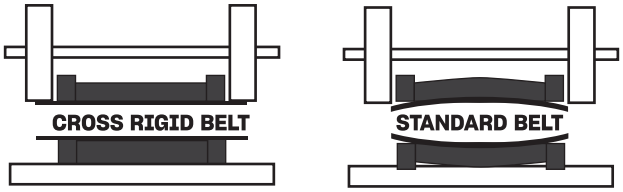
Pipe Belt

Pipe belt is mostly preffered to use where bulk materials must be conveyed along horizontal and vertical curves in confined spaces, and/or where the environment has to be protected resp where spillage must be avoided. Pipe belt works well at tight horizontal and vertical curves. This eliminates or reduces transfer points, which is a big cost saving.

- Protects the transported material from external factors including rain and wind
- Protects environment through avoiding spillage of conveyed material
- Does not require additional conveyor cover
- Low noise emission with incline up to 35°
- Allowing simultaneous conveying of different materials in vertical as well as horizontal directions

Cross Rigid Conveyor Belt

Cross Rigid conveyor belts are designed to bend efficiently in a longitudinal direction and has greater rigidity in a transverse direction by utilizing reinforced fabric with monofilament,creating a fabric carcass of high tension. This type of belt remains rigid throughout the width and not form trough like conventional conveyor belts do. It is suitable for use at sidewall and cleat belts up to the inclined angle of 75 degrees.



Monoply Belts

The Monoply belts are preferred to use in order to stand the toughest conditions and heavy duty industrial use conveying large quality of material. These belts have high corrugation and impact resistance.

- Longer belt life
- Lower belt weight and thickness against EP cords with same tensile strenght
- Suitable to use with smaller drum diameter
- Higher impact, tear and rip resistance
- Low stretch, and elongation

Strength	500		630		800	
Type	EPP500/1	EP500/4	EPP630/1	EP630/4	EPP800/1	EP800/4
Thickness of Carcass (mm)	2,90	3,20	3,40	4,50	4,10	5,30
Weight of Carcass (g/m^2)	1750	3700	2050	4600	2200	5500

Thin Profile Belts

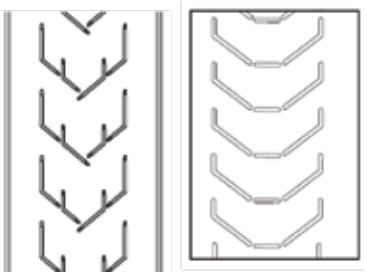
Used in transportation of light weight goods, also on inclined surfaces. The special surface absorbs vibrations and impacts and also prevents material from slipping back.

Applied Fabric:
EP(polyester-poliamid) , NN(naylon-naylon), EE(polyester-polyester)

Usage Area:
Mostly used for transporting to packed products.

Chevron Belts

It is a chevron rubber band that is suitable for use in order to prevent the back flow of the material carried on chassis with an inclination angle of more than 18 degrees. Our chevron rubber band ensure that the profiles in the patterns reach the maximum lifetime with the special rubber structure used. Depending on the type and size of the material to be transported, we have variable profile band patterns in different types and thicknesses.



Applied fabric:
EP(polyester-poliamid),NN(naylon-naylon), EE(polyester-polyester)

Usage Area:
Quarry, Soil Industry, Coal, Cement, Steelworks, Warehouse, Port, Silo, Recycling Facility, Timber, Agriculture and other general transportation applications

Sidewall & Cleat Belt

This belts can be used at a steeper angle up to 800 than was previously possible for the volume movement of powder and lumpy materials.
The sidewall and cleat design ensures maximum flexing without fatigue , the profile has excellent vertical stability for load retention and return side support . The design allows for high compression to ensure smooth inner deflection around small radii .

Applied fabric:
EP(polyester-poliamid),NN(naylon-naylon), EE(polyester-polyester)

Usage Area:
Quarry, Soil Industry, Coal, Cement, Steelworks, Warehouse, Port, Silo, Recycling Facility, Timber, Agriculture and other general transportation applications

Elevator Belt

Elevators are the most suitable and efficient conveyor systems used for transporting products to be transported at a vertical angle of 90 degrees. It is possible to carry heavy loads in belt and bucket type elevator systems.
The Carcass is more important than covered rubbers for elevator belts.For this reason, top and bottom covers are kept thinner than the conveyor belts and carcass structure is made stronger. The elevator belt that we are producing made of cord fabrics that meet the requirements for maximum tensile strength and minimum elongation.

Applied Fabric:
EP(polyester-poliamid)

Usage Area:
Quarry, Soil Industry, Coal, Cement, Steelworks, Warehouse, Port, Silo, Recycling Facility, Timber, Agriculture and other general transportation applications

Technical Details

Tips for Selecting Conveyor Belt

Please fill out and forward to us the use condition details from us for right belt selection

Do not use conveyor belts for transporting bulk or unpacked foodstuff

Observe the following instructions in to stocking conveyor belts

Points to Note in Handling and Storage Conveyor Belt

Belts are rolled on wood or steel drum and wrapped with polypropylene

The belt rolls should be fixed on the cargo bed of a truck. Pay special care not to damage them with forks of lift trucks

Ensure the belt is not damaged by inserting a shaft in the roll holes as shown in the figure when you lift them by a crane

When keeping stand-by belts or used belts, pay attention to the following points to prevent aging or damage from prolonged storage:

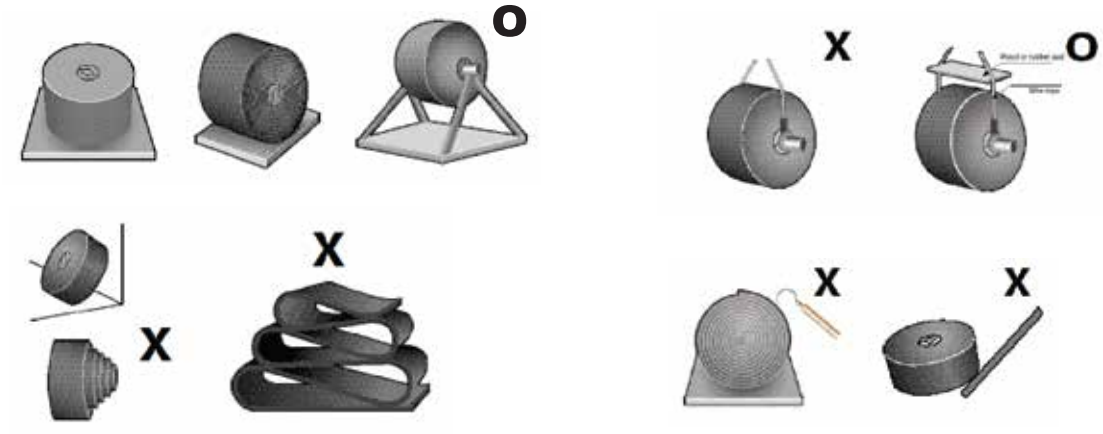
Keep the belts away from direct sunlight

Keep the belts away from wind, rain, or moisture

Keep them in a dry, even place

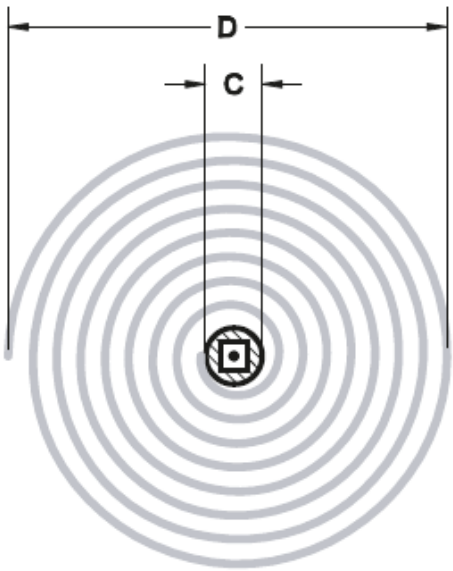
Keep them away from harmful objects like fire, oil, chemical or organic gas

Fix belt rolls to prevent them from rolling



Calculation of Conveyor Belt Roll Diameter

$$D = \sqrt{\frac{4.t.L}{\pi} + C^2}$$



D: Roller Dia (meter)
t: Belt Thickness (meter)
L: Belt Lenght (meter)
C: Core Dia (meter)

Recommended Belt Series

Belt Type	Allowed Max. Belt Tension (kg/cm)	Fabric Type (kg/cm)	No fo Ply	Covers (mm)		Thickness of Belt (mm)	Weight of Belt (kg/m²)	Belt Widht								
				Top	Bottom			500	600	650	750	800	1000	1200	1400	1600
EP250	25	EP 125 EP 70	2 3	4 3	2 2	8,5 8,0	9,77 9,20	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●
EP315	31.5	EP 160 EP 100 EP 70	2 3 4	4 3 4	2 2 2	9,0 8,0 10,0	10,35 9,20 11,50	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
EP400	40	EP 200 EP 125 EP 100	2 3 4	4 4 4	2 2 2	9,5 9,5 10,0	10,92 10,92 11,50	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
EP500	50	EP 160 EP 125 EP 100	3 4 5	5 4 5	2 2 2	11,0 10,5 12,0	12,65 12,07 13,80	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
EP630	63	EP 200 EP 160 EP 125	3 4 5	5 6 5	2 3 3	11,5 14,0 13,5	13,22 16,10 15,52	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
EP800	80	EP 250 EP 200 EP 160	3 4 5	5 6 6	2 2 3	12,0 14,0 15,0	13,80 16,10 17,25	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
EP1000	100	EP 135 EP 250 EP 200	3 4 5	6 6 6	2 3 3	13,0 15,0 16,0	14,95 17,25 18,40	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●	● ● ●
EP1250	125	EP 315 EP 250	4 5	7 6	4 3	18,0 17,0	20,70 19,55	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●	● ●
EP1600	160	EP 315	5	8	4	20,0	23,00	●	●	●	●	●	●	●	●	●

Lab & Quality Control

Raw material rubbers, fabrics and finished product rubber belts are checked in our laboratory according to DIN and ISO standards.

We convey your company to the **future**

08.01.2024 Izmir Turkey
Gökışık Ltd. Factory

GOKISIK
RUBBER BELT INDUSTRY

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