BeltCo
Conveyor Belt Company

Rubber Conveyor Belts

Summary

BeltCo
Conveyor Belt Company

The Company

In BeltCo, a German Company, we had developed, produced and commercialized rubber conveyor belts for the last 55 years. The conveyor belts we produce are used in a wide variety of sectors. This ranges from underground to opencast mines, quarries, the different industrial sectors such as the steel or cement industries, to conveyor belts for use in harbors and ports to the food industry and agriculture.

In comparison to many other companies which have a wide range of activities, BeltCo produces only conveyor belts. A conveyor belt is not just one product among many others for us, but the sole focus of our attention. Internationally our effort is directed towards one goal: to satisfy you, the conveyor belt user.

BeltCo achieves by:

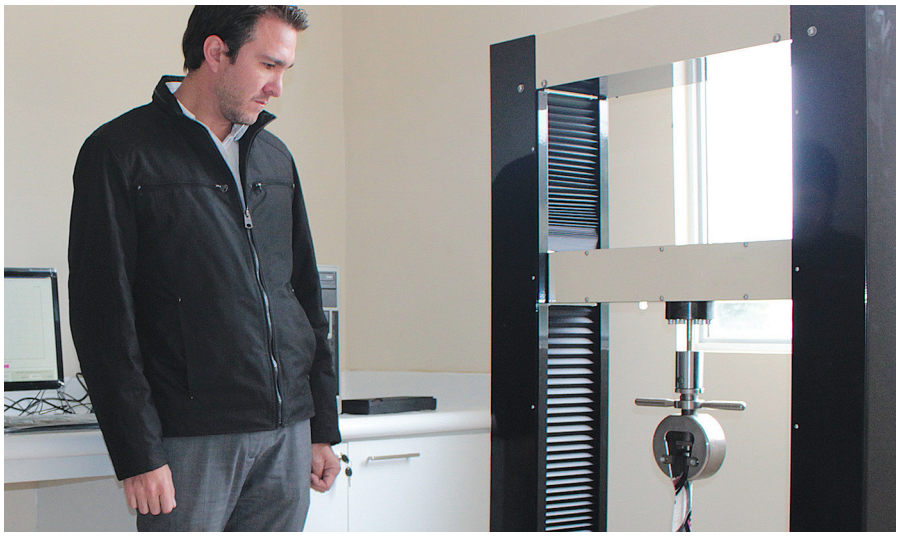
- Our team of highly qualified technical salespeople. We take an interest in your problems and constraints, and are available to help you to develop the full conveying system.

Choosing a conveyor belt made by BeltCo, is choosing a product that has been carefully selected to suit your needs. A belt that is made to last, resist, and is easy to install and maintain.

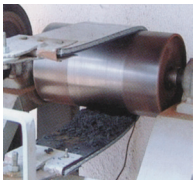
- Our wide-ranging expertise in textiles, in rubber, as well as in thermo-plastics. The textile carcass is the very core of a belt, and we are experts in this field. BeltCo is one of the few conveyor belt manufacturers to produce its own textile. BeltCo also has extensive knowledge not only of the different types of rubber, but also in thermo-plastics like PVC or polyurethane.
- And above all, because of our experienced personnel and our management system.

Laboratory

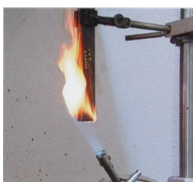
All BeltCo belts have undergone the most stringent fire and anti-static testing to obtain the necessary certification and clients approvals. Each country has adopted its own method of testing, BeltCo are familiar with all the worlds leading standards.



Standard fire test (self-extinguishing belts)
This test is designed to simulate the conditions of a fire in an underground gallery with ventilation. A sample of belt to be tested is placed on a supporting frame directly above a propane burner, the burner is ignited for a designated period of time consuming a specific quantity of propane. The fire source is then removed and the belt must self-extinguish leaving an area of the belt totally undamaged. This test is a demonstration that the belt will not support combustion when the source of the flame is removed.



Drum friction test
This test was developed to simulate a stalled belt where the drum continues to rotate against the sample belt and is to prove the propagation of fire will not result from the drum's generated frictional heat igniting it. As an example, in the U.K. test, the drum temperature must not exceed 325 ºC before the belt sample breaks on the drum, in addition there must be no flame or glow at any time during the test or when the test is completed.



Flame Test MSHA
Small samples of the finished belts are prepared, some are left intact and on others the covers are removed to simulate wear on the belts. These samples are held in a flame source for a certain period of time and once removed the samples must self extinguish. The time for the individual sample to extinguish is noted along with the collective time to conform to specification.

CONVEYOR BELTS STANDARDS

		ISO	DIN
Carcass	Adhesion fabric/fabric Warp strength Mechanical joining Weft strength Elongation	252 283 1120 283 283	22102 22102 22110 22102 22102
Cover	Tensile strength Elongation at break Thickness Wear loss	10249 10247 583 10247	22102 22102 22102 22102
Entire belt	Belt width Straightness Belt thickness Adhesion fabric/fabric Belt length Adhesion cover/fabric Troughability	251 583 252 251 252 703	22102 22102 22102 22102 22102 22102 22102
Belt properties	Antistatic Flameproof	284 340	22104 22103

QUALITY SISTEMS LABORATORY

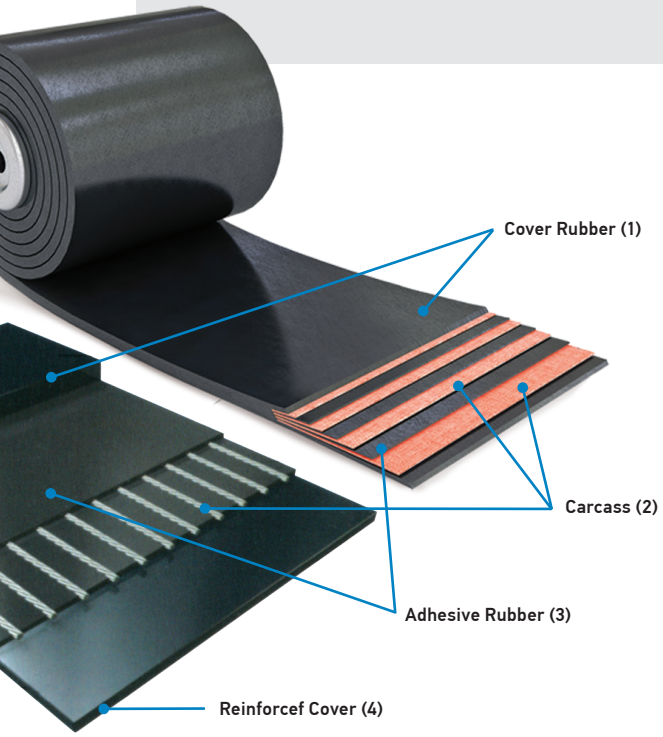
FIELD	MEASUREMENT	STANDARD
Rheology	**Mooney viscosity**	ISO 289-1
	Vulcanisation properties	ISO 6502
Mechanical Testing of Rubber and Rubber Products	**Shore A hardness**	ISO 7619-1
	Shore D hardness	ISO 7619-1
	IRHD hardness	DIN ISO 48
	Tensile test	DIN 53504
	Wear resistance according to Schopper	ISO 4649
	Wear resistance according to Taber	ISO 5470-1
	Compression set (CS)	ISO 815
	Tension set	ISO 2285
	Rubber-to-metal adhesion	DIN ISO 813
	Permeability of rubber to gases	ISO 2782
	Ozone resistance	DIN 53509-1
	Electrical conductivity	ISO 284
	UV ageing	DIN 53384
Testing of textiles	**Thermal shrinkage of textiles**	ASTM D 2646 ASTM D 4974
	Rubber-to-textile adhesion	IS 36

Conveyor Belt Structure

Conveyor belt is used to transport the materials at some distance continuously and has the most convenient and economical merits in the material transportation. Recently, conveyor belt is used in various fields from the escalator in a department store and subway to all kinds of industries such as the transportation of coal and ore, the transportation process of raw material of cement and half finished goods and the unloading work in harbor, railroad station and warehouse.

BeltCo has various products as classified by the types of carcass, cover rubber, application and structure to provide the best conveyor belt suitable to these industries and tries to satisfy the customers

Conveyor belt generally consists of cover rubber, carcass, reinforced fabric and adhesive rubber or steel cords.



1. Cover rubber

Consists of the main raw materials such natural or synthetic rubber and protects the carcass. It has the properties resistant to abrasion, heat, oil, chemical, static and fire, depends on the condition of use.

2. Carcass

Keep the tension of belt and supports the handling materials, and uses the covered fabric, nylon, polyester, steel cord and aramid as the good adhesive rubber.

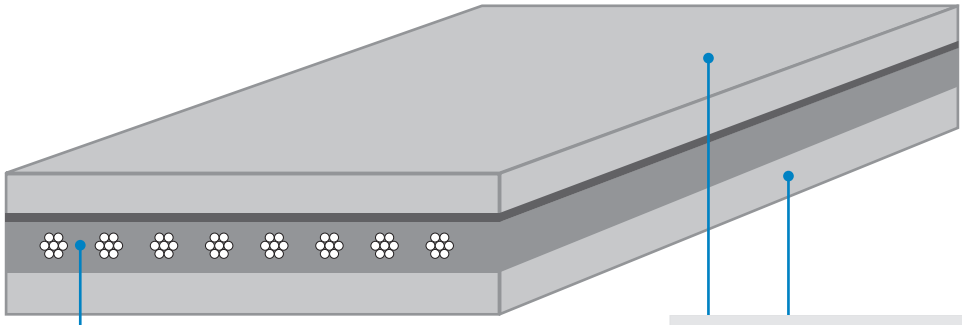
3. Adhesive Rubber

Keeps the adhesive strength between all layers of carcass and the cover rubber against the sustaining flexibility to belt and uses rubber of low fatigue to stress.

4. Reinforced Cover

It is good for protecting the carcass to insert the reinforced cover between carcass and the layers of cover rubber in cast that the materials has large tear or big and belt is greatly shocked in bad condition of falling.

Construction



Carcass

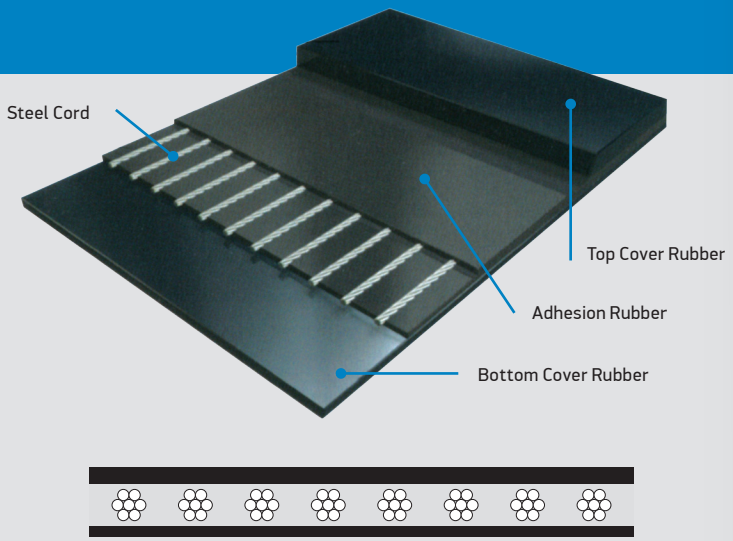
- Steel Cord
- NN (Nylon-Nylon)
- EP (Poliester-Nylon)
- SW (Straight Warp)
- Aramid

Cover

- Abrasion Resistant
- Cut Resistant
- Heat, Oil, Cold Resistant
- Flame Resistant
- Energy Saving Compound

Steel Cord
Conveyor Belts

- It is ideal for long-distance, large-capacity and high tensile strength lines.
- Low elongation allows short take-up strokes.
- Small diameter pulleys may be used.

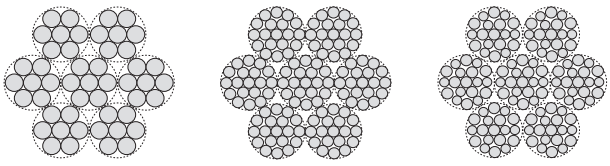


STRUCTURE

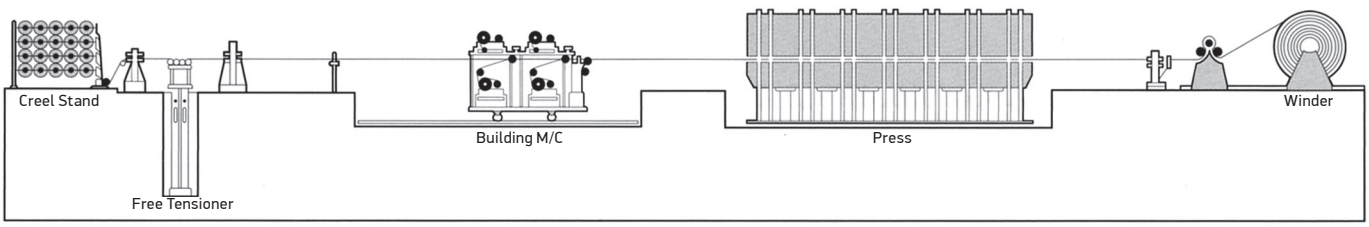
Steel cord conveyor belts are widely used in high strength, long distance and heavy load transportation of materials. Also used in high strength and short distance transportation at high speed.
These belts only need a very short take-up stroke distance.
The belt body has a layer of longitudinal arranged steel cords as its skeleton and thus is resistant to flex fatigue. Therefore, drive pulley of smaller diameter can be used to make equipment smaller.
The steel cords are coated on their surface and high adhesion to steel rubber. Therefore, the rubber is tightly adhered to the steel cords and is shock resistant, improving the belt life.
Steel cords are evenly arranged and have the same tension, making the belt balanced in running and aligned.
Since the carcass has not transverse yarns, the belts has excellent properties to copy the idlers angle and loading more material to transport with higher angles.

CORD STRUCTURE

7×7 : Applied to low tension lines
7×19 : Applied to high tension lines used.



PRODUCTION PROCESS

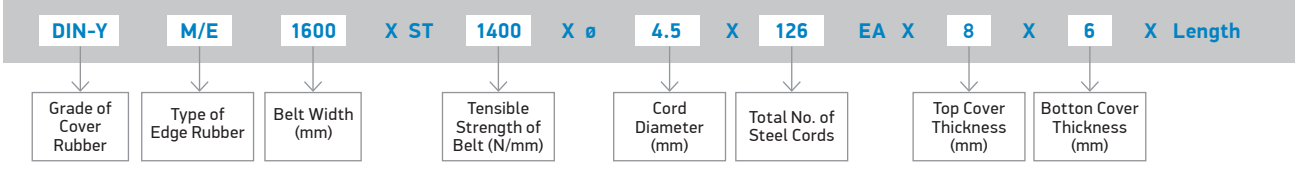


SPECIFICATIONS

BELT TIPE		ST 500	ST 630	ST 800	ST 1000	ST 1250	ST 1400	ST 1600	ST 1800	ST 2000	ST 2250	ST 2500	ST 2800	ST 3150	ST 3500	ST 4000	ST 4500	ST 5000	ST 5400
Tensible strength(N/mm)		500	630	800	1000	1250	1400	1600	1800	2000	2250	2500	2800	3150	3500	4000	4500	5000	5400
Max. Diam. of Cord (mm)		2.8	3.0	3.5	4.0	4.5	4.5	5.0	5.0	6.0	6.3	7.2	7.6	8.1	8.6	9.2	10.1	10.6	11.5
Min. Breaking Strength of Cord (KN/Cord)		5.6	7.0	8.9	13.2	16.5	18.5	21.1	23.7	26.4	29.6	41.7	46.7	52.5	58.4	66.7	80.4	89.3	103.9
Weight of Cord (g/m)		30.7	34.7	47.8	64.0	79.8	79.8	97.3	97.3	137.0	155.0	196.0	221.0	253.0	280.0	316.0	385.0	414.0	496.0
Pitch (mm)		10.0	10.0	10.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	15.0	15.0	15.0	15.0	15.0	16.0	16.0	17.0
Max. Working Strength of Belt (N/mm)		72	90	115	145	180	200	230	260	290	320	360	400	450	500	580	640	720	770
Min. Thickness of Cover (mm)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.5	5.5	6.0	6.5	7.0	7.5	8.0
Min. Pulley Diameter (mm)		600	600	650	750	850	950	1000	1200	1200	1400	1500	1550	1700	1800	1850	2000	2100	2400
		500	500	500	550	700	750	800	950	950	1200	1200	1250	1350	1400	1400	1600	1700	1900
		350	350	400	450	500	510	600	700	700	800	900	950	1000	1050	1050	1200	1250	1400
BELT WITH (mm)		Nº of steel cords																	
500	± 5.0	45	45	45	38	38	38	38	-	-	-	-	-	-	-	-	-	-	-
650	± 6.5	60	60	60	50	50	50	50	50	50	50	40	40	40	40	40	37	37	35
750	± 7.5	70	70	70	59	59	59	59	59	59	59	47	47	47	47	47	44	44	41
800	± 8.0	76	76	76	63	63	63	63	63	63	63	50	50	50	50	50	47	47	44
900	± 9.0	85	85	85	71	71	71	71	71	71	71	57	57	57	57	57	53	53	50
1000	± 10.0	95	95	95	79	79	79	79	79	79	79	64	64	64	64	64	59	59	56
1050	± 10.5	98	98	98	82	82	82	82	82	82	82	66	66	66	66	66	62	62	58
1200	± 12.0	113	113	113	94	94	94	94	94	94	94	76	76	76	76	76	71	71	67
1400	± 14.0	133	133	133	111	111	111	111	111	111	111	89	89	89	89	89	83	83	78
1500	± 15.0	141	141	141	118	118	118	118	118	118	118	94	94	94	94	94	89	89	93
1600	± 16.0	151	151	151	126	126	126	126	126	126	126	101	101	101	101	101	95	95	89
1800	± 18.0	171	171	171	143	143	143	143	143	143	143	114	114	114	114	114	107	107	101
2000	± 20.0	-	-	-	159	159	159	159	159	159	159	128	128	128	128	128	120	120	113
2200	± 22.0	-	-	-	176	176	176	176	176	176	176	141	141	141	141	141	132	132	125

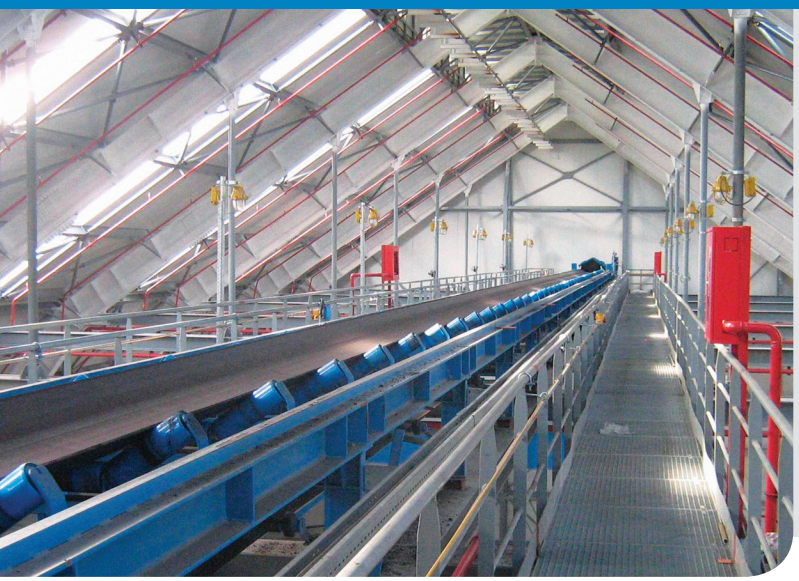
Note: Belt beyond the above specification can also be made by request.

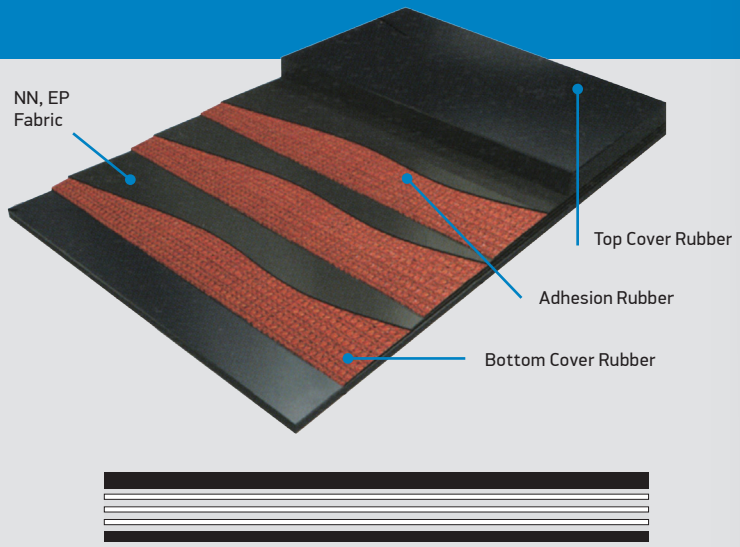
EXAMPLE OF INDENTIFICATION



Multy Ply
Conveyor Belts

• Application in all areas of material handling:
Feeding conveyors, overland belt conveyors, loading and unloading conveyors, take-off conveyors, silo conveyors.
• The carcass construction is for long life in all industrial applications.
• In the majority of cases are the best solution as far the cost efficiency is concerned.





STRUCTURE

Our renowned multy-ply EP carcass (warp polyester + weft nylon).

Special rubber layer with good fabric adhesion properties (skimmed layer).

High abrasion resistant cover quality for heavy duty application or special quality of cover on request.

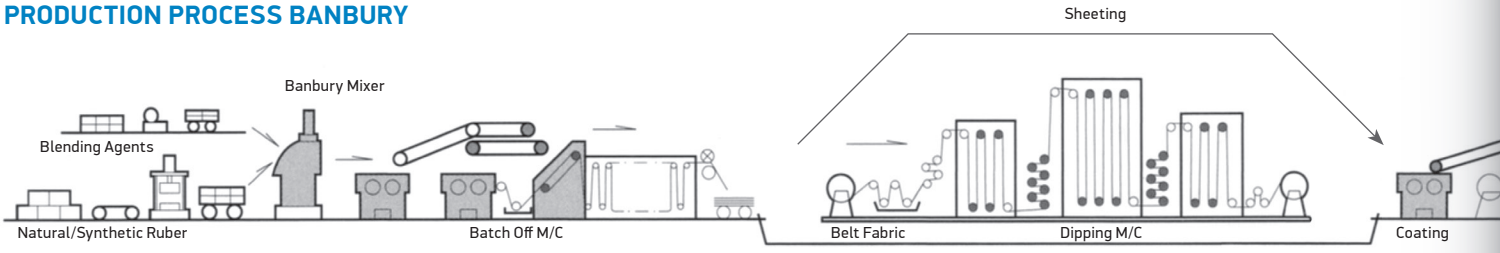
MATERIAL QUALITY

Nylon
• Highly flexible.
• Highly resistant against impact.
• Highly bendable.
Polyester
• Less elongation.
• Less deformed by heat.
• Less affected by moisture.

APLICATION GROUPS

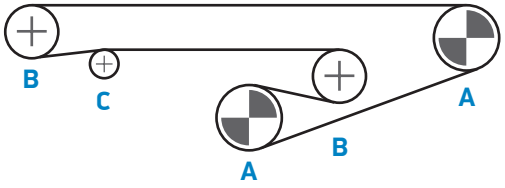
• General
• Abrasion Resistance
• Heat Resistance
• Oil Resistance
• Fire Resistance
• Chemical Resistance
• Anti-Static

PRODUCTION PROCESS BANBURY



RECOMMENDED MIN. PULLEY DIAMETERS (MM)

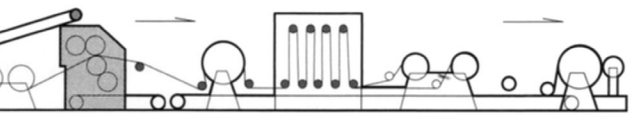
A - Pulley within a high range of max. permissible belt tensions and with arc of contact > 30°(driving pulley)
B - Pulley within a moderate range of max. permissible belt tensions and with arc of contact > 30°(tail pulley)
C - Pulley with arc of contacts < 30°(snub pulley)

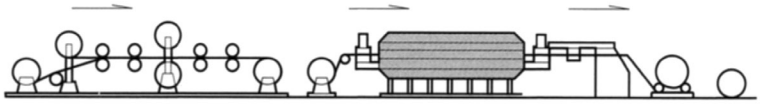


BELT TENSION (Range max. permissible)	NUMBER OF PLIES	TYPE OF FABRIC														
		EP 125			EP 160			EP 200			EP 250 - EP 315			EP 400 - EP 500		
		A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
65-100%	2	200	160	160	250	200	160	315	250	200						
	3	315	250	200	400	315	250	500	400	315	630	500	400	800	630	500
	4	400	315	250	500	400	315	630	500	400	800	630	500	1000	800	630
	5	500	400	315	630	500	400	800	630	500	1000	800	630	1250	1000	800
	6	630	500	400	800	630	500	1000	800	630	1250	1000	800	1600	1250	1000
30-60%	2	200	160	160	200	160	160	250	200	160						
	3	250	200	160	315	250	200	400	315	250	500	400	315	630	500	400
	4	315	250	200	400	315	250	500	400	315	630	500	400	800	630	500
	5	400	315	250	500	400	315	630	500	400	800	630	500	1000	800	630
	6	500	400	315	630	500	400	800	630	500	1000	800	630	1250	1000	800
Under 30%	2	160	160	160	160	160	160	200	200	160						
	3	200	160	160	250	200	160	315	250	200	400	315	250	500	400	315
	4	250	200	200	315	250	200	400	315	250	500	400	315	630	500	400
	5	315	250	250	400	315	250	500	400	315	630	500	400	800	630	500
	6	400	315	315	500	400	315	630	500	400	800	630	500	1000	800	630

BELT CONSTRUCTIONS:

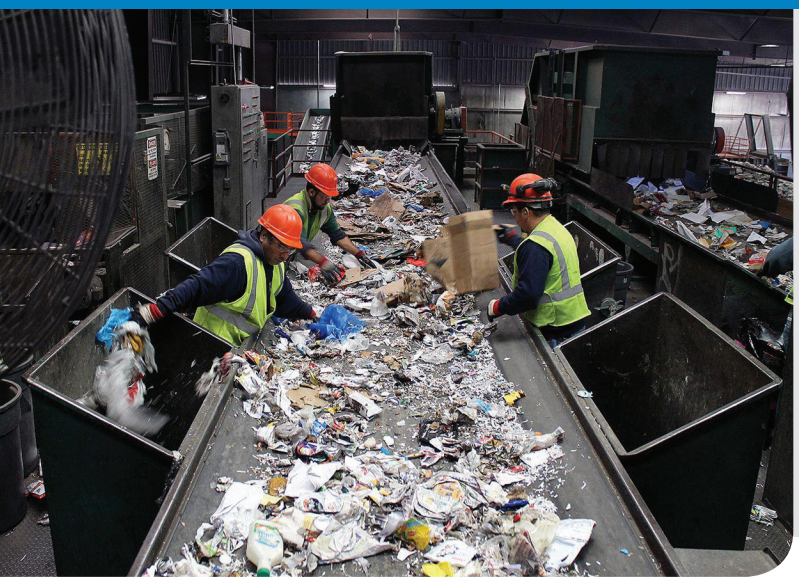
Various tensile strengths from EP 250 N/mm to EP 3150 N/mm are available.

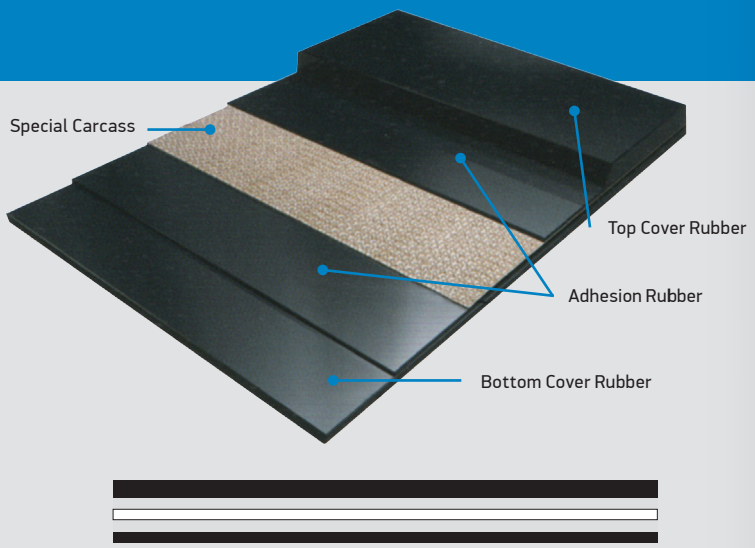

Calender Roller


Building M/C Vulcanizing Press Winder

Mono Ply
Conveyor Belts

• It is developed in order to withstand the toughest use conveying large quality of material.
• Mono Ply have excellent resistance to flexural fatigue, shocks and impacts with outstanding troughability.



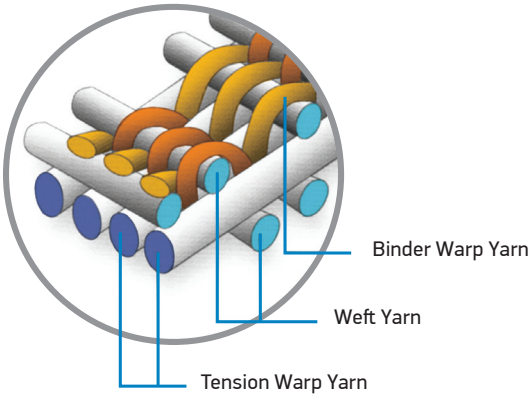


SPECIAL FEATURES

• One-ply carcass provides over 2000kN/m tension.
• Low elongation allows short take-up strokes.
• Single layer carcass structure provides optimum troughing.
• Single layer carcass structure provides high bendability, allowing small-diameter pulleys.
• High bendability, impact-resistance, and thin carcass allow thick cover rubber layers, extending belt life span.

SPECIAL CARCASS

Carcass straight warp fabric for high tensile strenght.



MONO PLY FABRIC GRADE

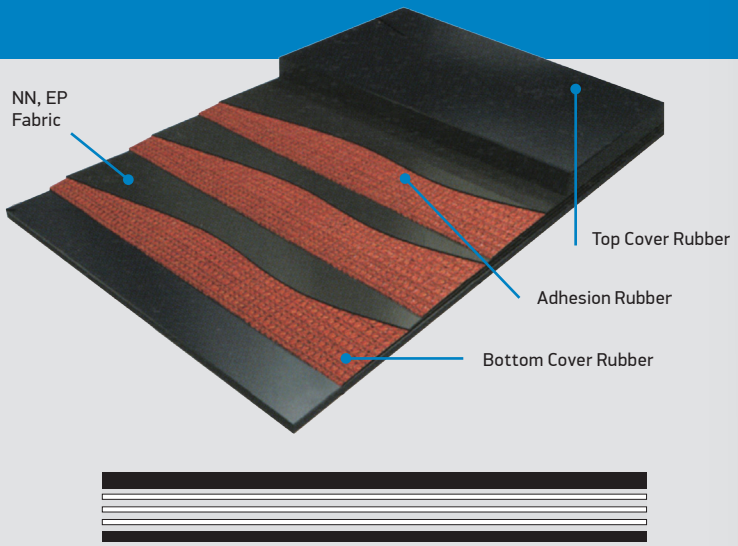
GRADE	TENSILE STRENGTH (N/mm)	WORKING TENSION RATING (N/mm)	10% STRETCH (%)	APPROX. CARCASS THICKNESS (mm)
SW 400	Min. 400	40	Max. 1.0	2.0 - 2.3
SW 500	Min. 500	50	Max. 1.0	2.3 - 2.4
SW 630	Min. 630	63	Max. 1.0	2.5 - 2.8
SW 800	Min. 800	80	Max. 1.0	2.9 - 3.0
SW 1000	Min. 1000	100	Max. 1.0	3.5 - 3.8
SW 1250	Min. 1250	125	Max. 1.0	4.0 - 4.1
SW 1400	Min. 1400	140	Max. 1.0	4.1 - 4.2
SW 1600	Min. 1600	160	Max. 1.0	5.0 - 5.1
SW 1800	Min. 1800	180	Max. 1.0	5.3 - 5.4
SW 2000	Min. 2000	200	Max. 1.0	5.7

TECHNICAL DATA

GRADE			SW 400	SW 500	SW 630	SW 800	SW 1000	SW 1250	SW 1400
Number of Plies			1	1	1	1	1	1	1
Allowable Working Tension	**Vulcanized**	**Kg/cm**	40	50	63	80	100	125	140
		lb/inch	225	280	350	445	560	700	780
	Fastened	**Kg/cm**	36	45	56	72	90	112	126
		lb/inch	200	250	310	400	500	620	700
Min. Width for Troughing Empty 35° Idlers			20”	20”	24”	24”	30”	30”	36”
Min. Pulley Diameter	**Head & Drive**		14”	16”	16”	18”	20”	22”	24”
	Tail & Take-up		12”	13”	13”	14”	16”	18”	20”
	Bend & Snubs		10”	12”	12”	14”	14”	16”	18”

Anti-Abrasion
Conveyor Belts

• The carcass construction and cover quality of these belts are noted for their reliability and long life in all industrial applications either for general purposes or handling of sharp-edged and extremely abrasive materials.



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APLICATION GROUPS

- Sand, gravel, stone industry
- Cement, concrete plants
- Heating and power stations , garbage incineration plants
- Road construction machinery
- Recycling, compost industry, mineral processing plants
- Timber industry and sawmills
- Slag conveyors
- REA-gypsum
- Broken glass
- Silica sand or materials containing silica sand
- Ascending conveyors with slipping type of material
- Clay

TYPE OF COVER

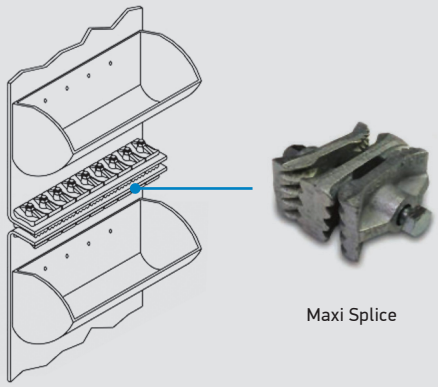
	AB	EA	EAS	EAH	EAL	EALS
APPLICATION	High abrasion resistant cover for general purpose	High abrasion resistant cover for heavy duty application	High abrasion resistant cover for extraordi-nary abrasive materials	For conveying extraordinary abrasive and extremely sharp materials	For conveying extraordinary abrasive materials or wear due to belt cleaning (REA - gypsum)	For conveying extremely abrasive materials
ABRASION	< 150 mm3	< 120 mm3	< 90 mm3	< 90 mm3	< 55 mm3	< 35 mm3
HARDNESS	60 +/- 5 Sh°A	65 +/- 5 Sh°A	62 +/- 5 Sh°A	75 +/- 5 Sh°A	62 +/- 5 Sh°A	62 +/- 5 h°A
AMBIENT TEMPERATURE	-50°C ... +60°C	-50°C ... +60°C	-50°C ... +60°C	-50°C ... +60°C	-50°C ... +60°C	-50°C ... +60°C

INTERNATIONAL COVER RUBBER STANDARD

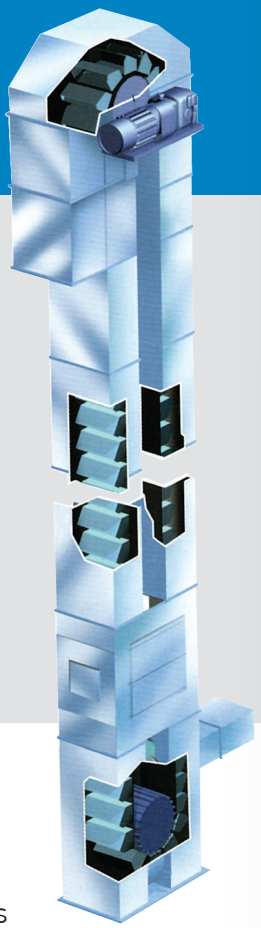
Standard	Rubber Grade	Tensile Strength (N/mm)	Breaking Elongation % min.	Abrasion mm3 max.
DIN GERMANY	W	18	400	90
	X	25	450	120
	Y	20	400	150
	Z	15	350	250
ISO INTERNATIONAL	H	24	450	120
	D	18	400	100
	L	15	350	200
AS AUSTRALIA	A	173	400	70
	E	143	300	
	F	143	300	
	M	245	450	125
	N	173	450	200
	S	143	300	250
RMA AMERICA	GRADE 1	176	400	200
	GRADE 2	141	400	250

Elevators
Conveyor Belts

• The elevators belts are designed for application in all areas. Due to their carcass construction they are known as an “endurance runner” and have proven to be reliable conveyor belts with a long service life.
• Elevator belts are the best solution from the technical and cost-efficiency point of view.



Maxi Splice



CONSTRUCTION

Bucket elevator belts have bolt holes to fix buckets along the entire belt length, making them suitable be torn easily and receiving pulled force with the buckets’ weight. They also have a withdrawal force different from that of the ordinary belts in bending in connection with pulleys. Therefore, their carcasses mainly use polyester fabric that can address such problems. Steel cord is used when a highly powerful belt is required.

APLICATION GROUPS

• Sand, gravel and stone industry /Cement, concrete plants
• Heating and power stations, garbage incinerating plants
• Asphalt mixing plants
• Recycling, compost, mineral processing plants
• Timber industry and sawmills
• Farming / Warehousing, silo feeding
• Docks, ship loading and unloading
• Sugar refineries, salt mines, potatoes and starch factories
• Foundries
• Waste treatment plants

ADVANTAGES

• High pull-out resistance of fixing screws
• Very low elongation at reference load
• Also possible with transverse reinforcement
• Rubber cover possible with cured in grooves/holes for fixing metal boards
• Belt damages arising from fabric destruction are limited
• Asymetric cover thickness possible
• High adhesion strength
• High cost -efficiency due to low maintenance and operational expenses
• Low cost endless splicing by hot curing, cold treatment, or mechanical clamping
• Favourable belt price / efficiency ratio
• Manufacture according to DIN 22102 and DIN EN 20340
• Improved weathering and rotting resistance
• Moulded or cut rubber edge
• Various types of rubber

STANDARD SPECIFICATIONS (MULTI PLY) WITH RUBBER COVER

SPECIFICATION	TIPICAL COVER RUBBER THICKNESS	MINIMUN PULLEY DIAMETER (mm)			
		4 (Ply)	5 (Ply)	6 (Ply)	7 (Ply)
EP 315		500			
EP 400		650	600		
EP 500		650	750	850	
EP 630	2.0 x 2.0	700	800	950	1000
EP 800		800	850	1000	1150
EP 1000		850	1000	1000	1200
EP 1250		900	1050	1200	1400
EP 1500		1050	1100	1300	1400

STANDARD SPECIFICATIONS (MULTI PLY) WITHOUT RUBBER COVER

	3 (Ply)	4 (Ply)	5 (Ply)	6 (Ply)
EP 100	300	400	500	600
EP 200	350	450	500	600

STEEL ELEVATOR BELTS

The structure of Beltco elevator belts is a steel carcass composed by a strong warp of steel cord with suitable elastic modulus such to reach the best compromise between low elongation and good flexibility. This characteristic makes the belt easier to be aligned than traditional steel cord elevator.

Furthermore, the cable elasticity allows the use of pulleys with lower diameters, depending on the requirements of clamps and buckets.

TEXTILE ELEVATOR BELTS

Belts designed to be used in bucket elevator plant only. The special construction of the reinforced polyester-nylon fabrics assures the use of such belts also for severe loading requirements. The result are the following:

- Polyester warp assures high resistance to heavy working conditions.
- Nylon weft guarantees transverse tearing strength and strong bolt holding.

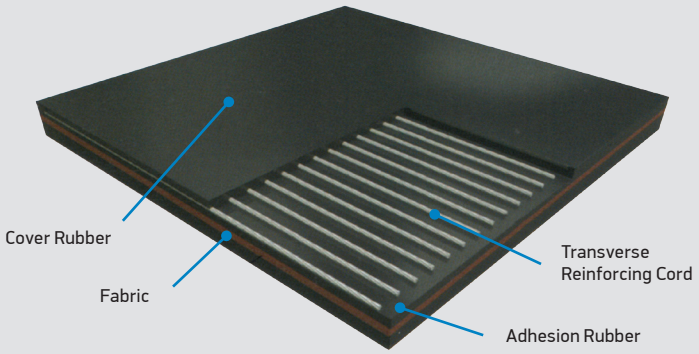
Are supplied with cut edges because sintetic fabrics used for their production do not need protection against humidity as they can't absorbe any liquid.

The 2 mm thickness both for top and bottom cover is designed to protect the carcass and at the same time assures the best bucket support without bolt loosening.

RIP Protection
Conveyor Belts

- Excellent rip protection and impact resistance.
- Minimizes damage to belt carcass from sharp objects or strong impact.
- Prevents the belt from being torn lengthwise by sharp objects inserted between the belt and other.

equipment.



THE CONSTRUCTION OF THE RIP PROTECTION

- Special, absorbent rubber interlayer (skymmed layer)
- Impact and cut resistant breaker
- High abrasion resistant cover

APLICATION GROUPS

- Sand, gravel, stone industry
- Cement, concrete plants
- Heating and thermal stations , garbage incineration plants
- Road construction machinery
- Recycling, compost industry, mineral processing plants
- Timber industry and sawmills
- Steelworks

RIPCHECK STEEL CORD	RC	RCH
Wire diameter (mm)	1,4	1,4
Distance between the wires (mm)	Approx. 12,5	Approx. 1,5
No. of wires / 10 cm	7 +/-1	35 +/-1

RIPCHECK BELTS (IN STOCK)*

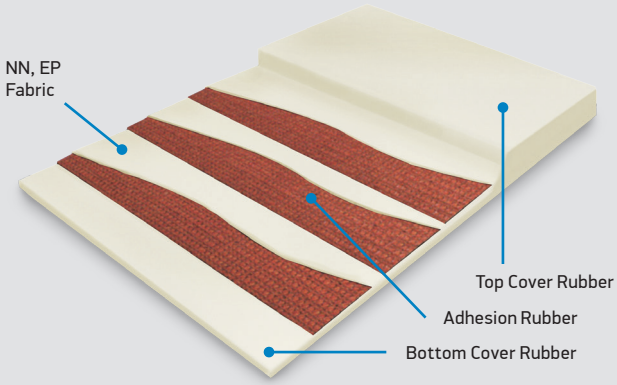
Belts type	Fabric type (N/mm)	Number of piles	Width								
			500	650	800	1000	1200	1400	1600	1800	2000
EP 500/3 + 1RC 5/2 Y	EP 160	3		●	●	●	●				
EP 500/3 + 1RC 10/2 Y	EP 160	3				●	●	●	●		

*Normally in stock for fast delivery

Food Industry
Conveyor Belts

• Belts made for the food industry. They comply with the international standards for the transport of food products.

BeltCo Conveyor Belt Company



RIP Protection /White FDA Conveyor Belt

CONSTRUCTION AND PROPERTIES

Food belt type are typically are made of 2 or 3 ply construction with cut edges. The carcass is made of synthetic EP fabrics. The cover rubber quality is tasteless and odourless and resistant to animal and vegetable oil. Easy to wash, does not absorb moisture from humidity and is not influenced by microorganisms.

APLICATION

Used for transportation of all sorts of foods, such as sugar, meat, fish, bread, poultry, etc. and has also a wide field of application within light material handling.

The belt is non-staining and therefore also suitable for transport of packaging, parcels, etc.

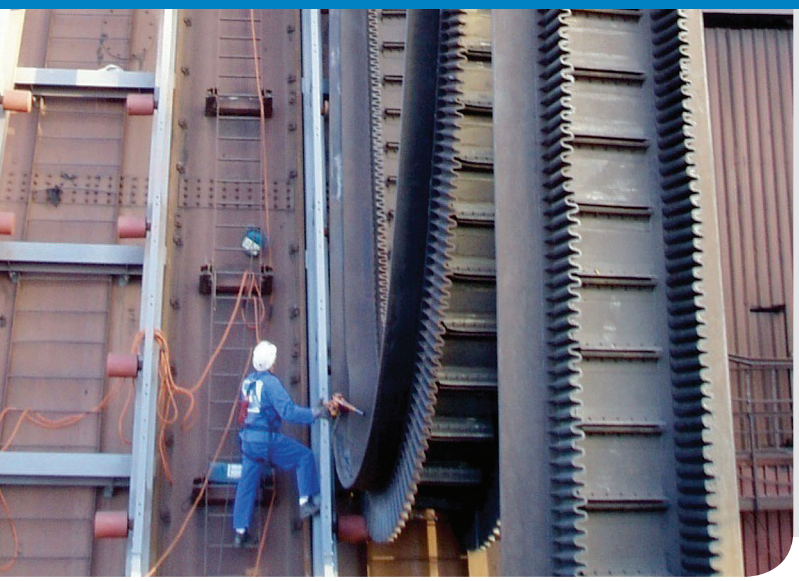
The antistatic properties prevent the outbreak of fires and explosions, and it is therefore suitable for transport of material such as sugar, grain, flour, etc. Suitable for applications, which for safety reasons requiere a flameproof conveyor belt.

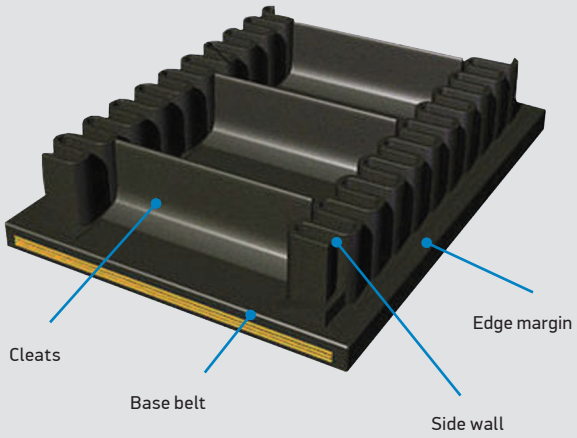
APLICATION GROUPS

- Sugar refineries
- Grain industries
- Canning factories
- Chocolate factories and bakeries
- Poultry processing plants
- Meat - Fish
- Flour mills

Side Wall
Conveyor Belts

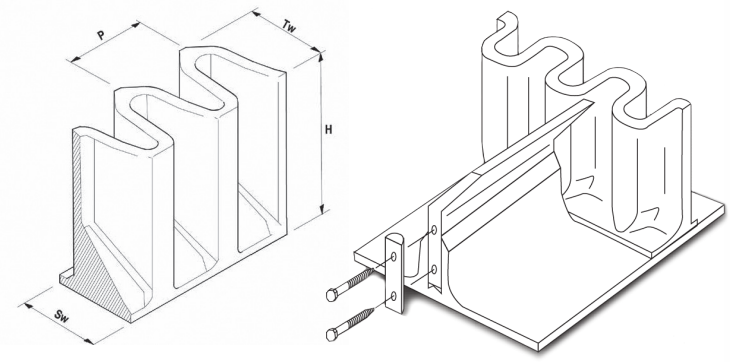
• Conveyor belts equipped with special walls and cleats.





FEATURES

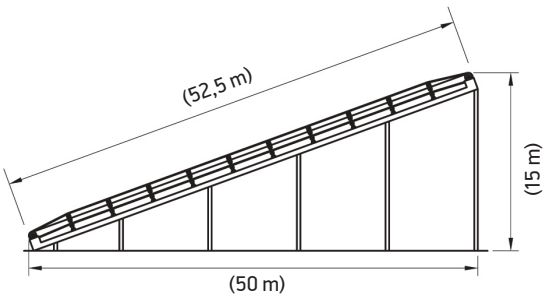
• Corrugated sidewall design allows greater transport volume with increased sectional loading area, enabling a narrower conveyor design.
• Reduces foot space as steep incline or vertical transport is possible with pin hooks attached belt widthwise.
• No skirt board is required as transport materials spillage is prevented by high wavelike raised strips.
• Incline angle can be easily adjusted with specially strong belts and press rollers.
• Flat rollers may be used to reduce the equipment cost.



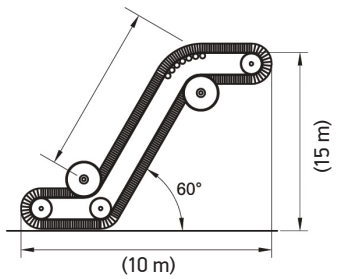
APLICATION GROUPS

• Automotive
• Mining
• Foundries
• Power plants
• Recycling industry
• Sand and gravel industry
• Stone quarries

Conventional Conveyor

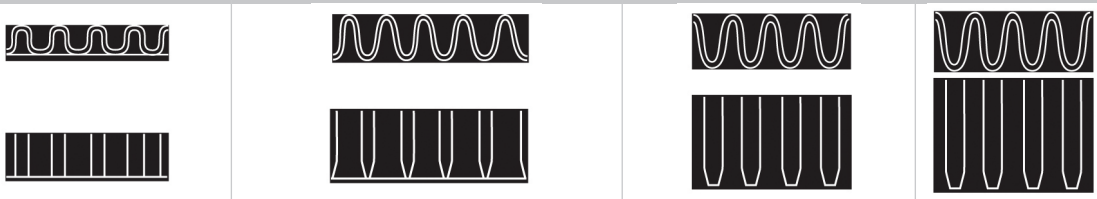


Side Wall Conveyor



COMPONENTS

WALLS



CLEATS

Height	1" 25 mm	1.5" 38 mm	2" 51 mm	2.5" 64 mm	3" 75 mm	4" 102 mm	5" 127 mm	6" 152 mm	8" 203 mm	10" 254 mm	12" 305 mm	16" 405 mm
I												
Height	**0.5" 13 mm**	**1" 25 mm**	**1.5" 38 mm**	**2" 51 mm**	**2.5" 64 mm**	**3.5" 89 mm**	**4.5" 114 mm**	**5.5" 140 mm**	**7.5" 190 mm**	**9.5" 241 mm**	**11.25" 285 mm**	**15.25" 387 mm**
C												
Height		**1" 25 mm**	**1.5" 38 mm**	**2" 51 mm**	**2.5" 64 mm**	**3.5" 89 mm**	**4.5" 114 mm**					
S												
Height							**4.5" 114 mm**	**5.5" 140 mm**	**7.5" 190 mm**	**9.5" 241 mm**	**11.25" 285 mm**	**15.25" 387 mm**

Any intermetiate size side wall or cleat is available upon request.

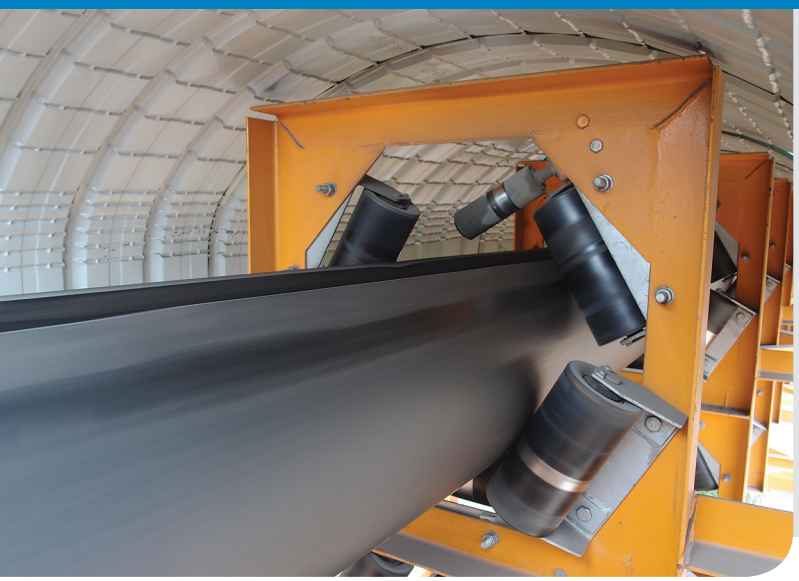
CROSS RIGID BELTING

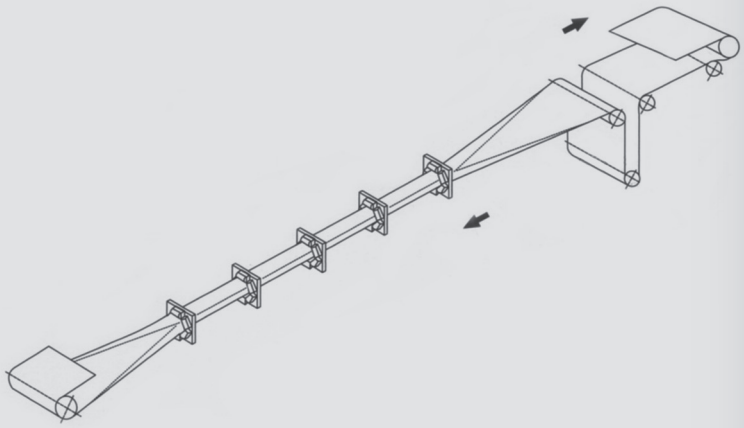
	Capas	Tension PIW	Rating N/mm	Covers**
BWX 1522	4	150	265	• White FDA 1/16" (1.6 mm) X Bare • EA 5/64" (2 mm) X 1/16" (1.6 mm)
BWX 2222	4	220	385	1/8" (3.2 mm) X 1/16" (1.6 mm)
BWX 3332	5	330	580	1/8" (3.2 mm) X 1/16" (1.6 mm)
BWX 4442	6	440	775	1/8" (3.2 mm) X 1/16" (1.6 mm)
BWX 5552	7	550	970	1/8" (3.2 mm) X 1/16" (1.6 mm)
Higher tension available upon request				

**Heat Resistant Covers - 3/16" x 1/16" / Special covers available upon request

Pipe
Conveyor Belts

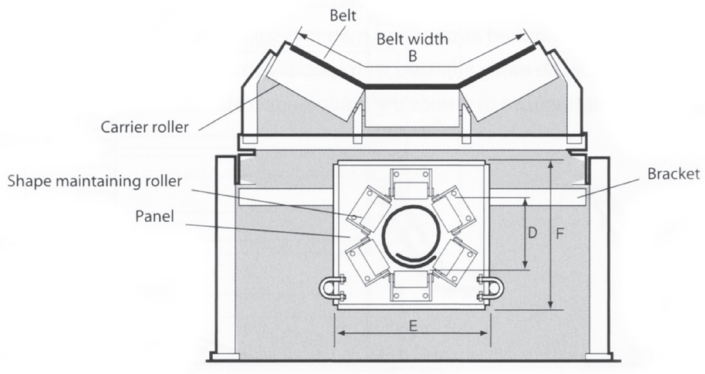
• The Pipe Conveyor Belt is suitable for use in tougher conditions and requires application of special tubular-type conveyors. Due to its special carcass construction the belt runs like a tube which opens only when loaded and unloaded. The system remains closed and dust-tight even when bulk solids are conveyed in horizontal or vertical curves.





FEATURES

• Prevents transport materials from flying, spilling or mixing with foreign substances as transported in a sealed pipe.
• Consumes less energy than ordinary conveyor lines.
• 3-dimension layouts are available with openings at top, bottom, left or right.
• Allows for maximum 30 degree incline transport, much steeper than ordinary conveyor belts.
• Occupies minimum installation space.
• Generates much less noise than ordinary conveyor lines.



APLICATION GROUPS

• Cement and concrete plants
• REA - or gypsum plants
• Lime industry
• Tunnel construction
• Conveying dusty and fine-grained material
• Material of lower density and environmentally hazardous material
• Silo conveyors
• Conveyors crossing roads (bridge conveyors)
• Heating stations, power stations, garbage incinerating plants

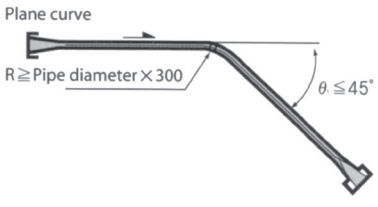
SPECIFICATIONS AND CONVEYING EFFICIENCY

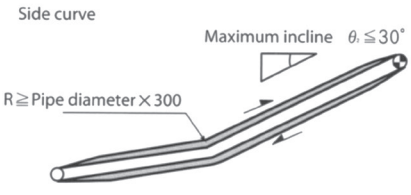
Inner pipe diameter (mm)	Loading area (m2)	Conveying speed (m/mm)	Conveying volume (m3/Hr)
150	0.013	120	95
200	0.024	130	184
250	0.037	140	309
300	0.053	150	477
350	0.072	175	758
400	0.094	200	1131
500	0.147	225	1988
600	0.212	250	2875
700	0.289	275	3931
800	0.377	300	5157

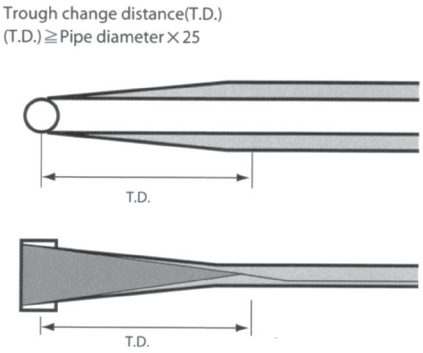
STANDARD SPECIFICATIONS

Pipe diameter (mm)	Belt width	Standard strength (kN/m)				
		200	315	500	630	800
150	600	3.0 x 2.0	3.0 x 2.0			
200	780	3.0 x 2.0 /5.0 x 2.0	3.0 x 2.0 /5.0 x 2.0	3.0 x 2.0 /5.0 x 2.0		
250	950		3.0 x 2.0 /5.0 x 2.0	3.0 x 2.0 /5.0 x 2.0	3.0 x 2.0 /5.0 x 2.0	
300	1100		3.0 x 2.0 /5.0 x 2.0	3.0 x 2.0 /5.0 x 2.0	3.0 x 2.0 /5.0 x 2.0	
350	1300			3.0 x 2.0 /5.0 x 2.0	5.0 x 2.0	5.0 x 2.0
400	1500				5.0 x 2.0	5.0 x 2.0
500	1850				5.0 x 2.0	5.0 x 2.0

LAYOUT CONDITIONS OF PIPE CONVEYOR







Heat / Oil Resistant / Fire
Conveyor Belts

HEAT RESISTANT CONVEYOR BELT

Heat resistant conveyor belts are highly resistant to hot material such as cement, steel or sand. The cover rubber of a conveyor belt consists of a special rubber compound featuring high adhesive strength, elongation at break and excellent thermal protection force. Using diverse elastomers heat resistance varies.
Heat resistant conveyor belts manufactured according to DIN 22102 are able to convey material with a constant temperature of 200°C – short runs also up to 250°C.

APLICATION GROUPS
Chemical sector / Fertilizer industry /Iron and steel industry / Foundries / Glass industry / Metalworking industry / Waste incineration / Cement plants

TECHNICAL DATA

	Heat 150°	Heat 180°	Heat 200°
Tensile Strength	≥ 14 N/mm²	≥ 14 N/mm²	≥ 13 N/mm²
Abrasion	≤ 200 mm³	≤ 200 mm³	≤ 200 mm³
Elongation at break	≥ 400%	≥ 400%	≥ 350%
Const.operating temp.	≥ 150°	≥ 180°	≥ 200°

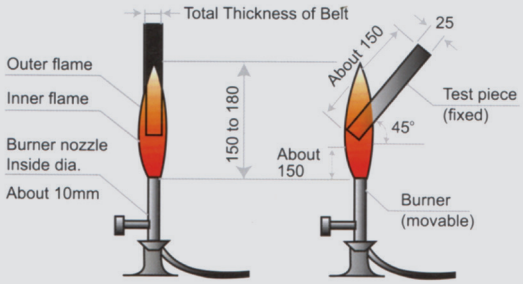
OIL RESISTANT CONVEYOR BELT

Grease, mineral oil and solvents may cause damages to normal textile conveyor belts. Even a short exposure to these substances may effect a swelling of the cover rubber. Therefore, offers oil resistant belts. The special rubber compound of the material reduces wear and increases the efficiency of the production.
Beltco product portfolio comprises the qualities MOR (medium oil resistant) and OR (oil resistant). The product specifications are also available in cross rigid XE-fabric.

APLICATION GROUPS
Chemical and Fertilizer industry / Metal processing and Iron and steel industry / Feed industry / Grain silo / Glass and Wood industry / Recycling industry

TECHNICAL DATA

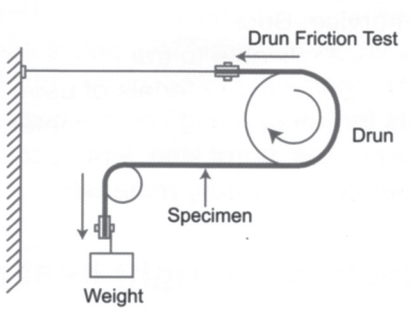
	MOR quality	OR quality
Tensile Strength	≥ 14 N/mm²	≥ 16 N/mm²
Abrasion	≤ 200 mm³	≤ 160 mm³
Elongation at break	≥ 300%	≥ 350%



FIRE RESISTANT CONVEYOR BELT

One of the major risks during a production process is fire. Flame-retardant conveyor belts may therefore be used to reduce or even avert damages to persons and property in case of fire.
Beltco provides you with the quality according to your demand:

- K quality: flame-retardant with cover plate
- S quality: flame-retardant with or without cover plate
- V quality: self-extinguishing



APLICATION GROUPS

Mining industry / Iron and steel industry /
Ports and transshipment operations / Power plants

TECHNICAL DATA

	K Quality	S Quality	V Quality
Tensile Strength	≥ 20 N/mm²	≥ 20 N/mm²	≥ 17 N/mm²
Abrasion	≤ 150 mm³	≤ 150 mm³	≤ 200 mm³
Elongation at break	≥ 450%	≥ 450%	≥ 350%

Grain Handling
Conveyor Belts

• A belt exclusively designed for use in grain elevators and conveyor systems. Excels in standard-setting user benefits, such as superior abuse resistance, reduced belt elongation, maximum resistance to oil swelling, and exceptional electrical resistance.

FEATURES

- Static conductive
- Flame resistant
- Superior oil resistance
- Improved adhesion
- Outstanding flexibility
- Unmatched strength

THE CONSTRUCTION

Carcass:
Stands up to the most abusive operating conditions in grain storage facilities. Whether it's punching holes for installing buckets or hammering rivets into a mechanical fastener. The strong, synthetic fabric carcass provides excellent bolt holding and superior fastener retention.

Fabric:
Low stretch, high strength synthetic fabric provides dimensional stability to the fabric and enhances the adhesion values between the fabric and rubber.

Covers:
The top and bottom covers belts are designed to provide the maximum degree of oil resistance to withstand the potentially damaging effects of crushed soybeans, whole soybeans, oily grains and mineral oil dust suppressant sprays. Reduces any chance for rubber swell or softening resulting in excellent adhesion and splice life.

BENEFITS

Carcass constructions are designed with a 10:1 safety factor.

All belts are static conductive, offering an exceptionally low electrical resistance below the OSHA and ISO standard of 300 megohms. Additionally, each roll of our belt is tested prior to shipment to ensure that the belt meets or betters the USMSHA test 30 CFR 18.65 requirement for flame resistance.

Belts are designed with high strength nylon fill cords which provide excellent resistance to bolt pull-out. This enables carcass to securely hold the buckets in elevator leg service.

The oil resistant skim coats, provide excellent adhesion values.

TIPICAL CONVEYOR BELT DATA

Carcass	400	630	800	1250	1600
Number of Plies	3	3	4	4	5
Fabric Type	EP	EP	EP	EP	EP
Vulcanized / Machanical Splice Rating (KN/M)	38	58	77	120	154
Elevator Rating (KN/M)	32	49	70	100	128
Maximum Bucket Projection (mm)	150	200	250	300	300
Aprox. Carcass Gauge (mm)	3.0	4.0	5.5	8.5	11.0
Aprox. Carcass Weight (Kg/sq.m)	4.4	5.6	7.7	11.9	15.3
Aprox. Cover Weight Per 1mm (Kg/sq.m)	1.3	1.3	1.3	1.3	1.3

TROUGHABILITY (MINIMUM BELT WIDTH) (mm)

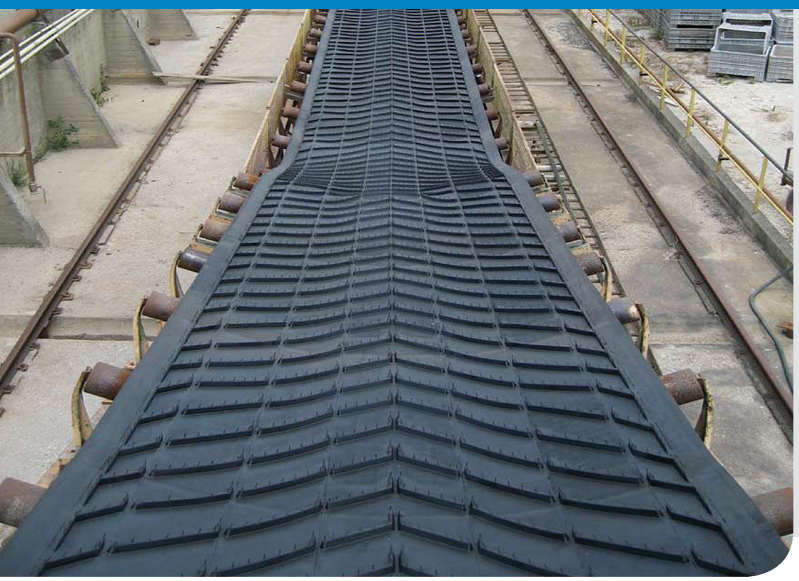
Carcass	400	630	800	1250	1600
Number of Plies	3	3	4	4	5
Idlers					
20 deg	500	500	600	600	1050
35 deg	500	600	750	750	1050
45 deg	500	750	900	900	1200

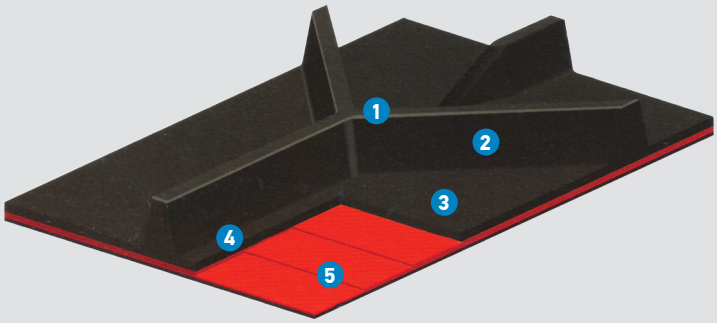
MINIMUM PULLEY DIAMETERS (mm)

Carcass	400	630	800	1250	1600
Number of Plies	3	3	4	4	5
Specifications					
Over 80% Tension	450	500	600	900	900
61% to 80% Tension	400	450	500	750	750
Up to 60% Tension	350	400	450	600	600

Chevron
Conveyor Belts

- Excellent physical property of rubber, high adhesion and fatigue resistance
- Integrated vulcanized cover and cleat rubber prevent the chevron belt cleat from coming off.
- Better cleat rubber property and abrasion extend the useful life
- Its adjustable design for various chevron conveyor belt by incline angle from range of 16º - 45º.
- Excellent drainage character.





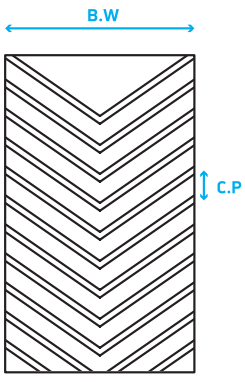
APLICATIONS

Chevron conveyor belt is designed for inclined transportation for conveying bulk material such as coal, sand, mineral, crop, package and bag depending on different loading material and inclined angle to choose suitable cleat height and chevron type to prevent loading material from dropping down.

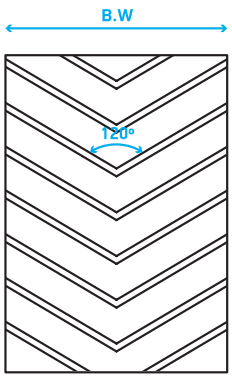
Ports and transshipment operations / Wood industry / Smelteries / Coal-fired power plants / Agriculture / Recycling industry / Sand and gravel industry / Others

STRUCTURE

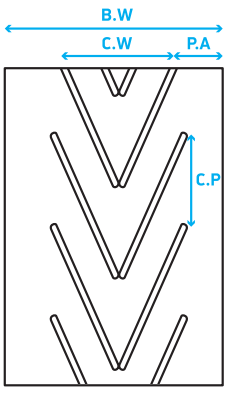
1. Excellent weather resistance and property of cleat, not easy to crack and become deformed.
2. High abrasive high tensile cleats.
3. Good flexibility and tear resistance.
4. Integrated vulcanized cleats and base belt prevent the cleats from coming off.
5. Different rubber property and carcass strength can be designed according to requirement.



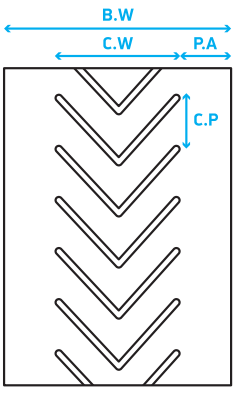
C5



C10

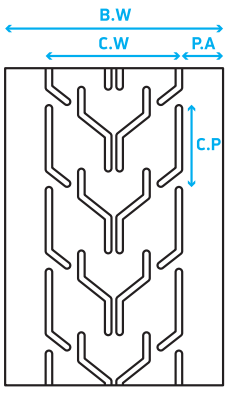


C127 P1067

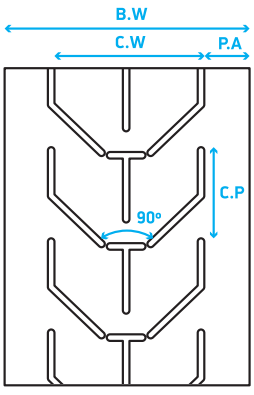


C15 P450

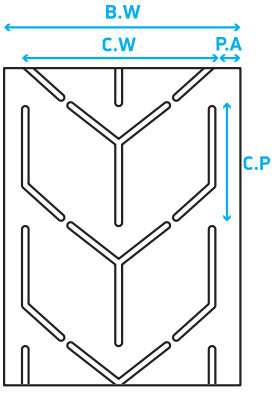
CHEVRON TYPE	PATTERN	BELT WIDTH	CLEAT WIDTH	CLEAT PITCH	CLEAT HEIGHT
C5	C5	300-1200 mm	Full width or appointed width	100 mm	5 mm
C10	10	500-1200 mm	Full width or appointed width	150 mm	10 mm
C127	C127P850	900-1500 mm	850 mm	295 mm	12,7 mm
	C127P1067	1200-1500 mm	1067 mm	381 mm	12,7 mm
C15	C15	500-1200 mm	Full width or appointed width	200 mm	15 mm
	C15V330	400-800 mm	330 mm	250 mm	15 mm
	C15V450	500-800 mm	450 mm	250 mm	15 mm
	C15V380	450-800 mm	380 mm	250 mm	15 mm
	C15V600	650-900 mm	600 mm	250 mm	15 mm
	C15V740	800-1200 mm	740 mm	250 mm	15 mm
C17	C17P300	350-800 mm	300 mm	330 mm	17 mm
	C17P440	500-800 mm	440 mm	330 mm	17 mm
	C17P550	600-800 mm	550 mm	330 mm	17 mm
	C17P630	700-850 mm	630 mm	330 mm	17 mm
	C17P750	800-1000 mm	750 mm	330 mm	17 mm
	C17P950	1000-1200 mm	950 mm	330 mm	17 mm
	C17P1050	1200-1500 mm	1050 mm	330 mm	17 mm
C25	C25P450	500-750 mm	450 mm	250 mm	25 mm
	C25P550	600-1000 mm	550 mm	250 mm	25 mm
	C25P750	900-1200 mm	750 mm	330 mm	25 mm
	C25P1000	1000-1500 mm	1000 mm	450 mm	25 mm
Y32	Y32P600	650-1000 mm	600 mm	300 mm	32 mm
	Y32P800	900-1200 mm	800 mm	333 mm	32 mm
C32	C32P460	500-800 mm	460 mm	330 mm	32 mm
	C32P580	600-800 mm	580 mm	330 mm	32 mm
	C32P630	700-1000 mm	630 mm	330 mm	32 mm
	C32P750	900-1200 mm	750 mm	330 mm	32 mm
	C32P950	1000-1500 mm	950 mm	330 mm	32 mm



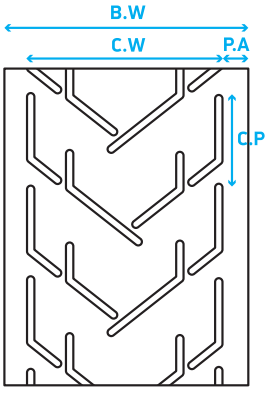
C17 P440



C25 P450



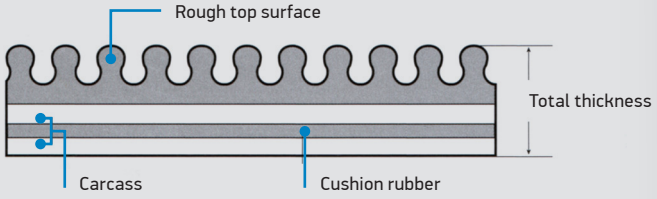
Y32 P800



C32 P750

Patterns
Conveyor Belts

• The pattern belt is used for inclined transport of packaged goods such as boxes, luggage, parcels, sacks, etc. and excelent for bulk products, specially round shape.



CONSTRUCTION PROPERTIES

Tipically 2 or 3 ply construction with cut edges and carcass of synthetic EP fabric (Polyester / Polyamide). The fibres are oriented lengthwise in the belt, which gives the belt a good stability.

The carrying side has black cover with a deep pattern providing maximum grip of the material.

The running side consist of impregnated EP fabric of high wear resistance and low friction. Therefore the belt is also suitable for conveyors with sliding plate. Rubber botton cover also available for idlers.

When choosing angles of inclination allowance must be for the shape of the conveyor such as support with carring idlers, plain support, belt spped as well as character of material and loading method.

It is recommended to place a short horizontal loading belt (booster) in front of steeply inclined conveyors.

APLICATION GROUPS

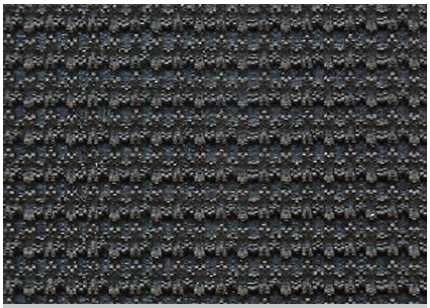
Industries with transport of packaged such as boxes, luggage, parcels, sacks.

ANGLES OF INCLINATION

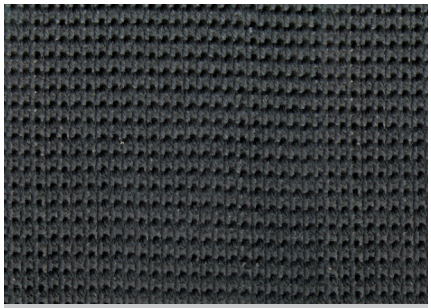
The angle depends on shape of material:
High pattern: 35º / **Low pattern :** 20º

• The belt is non-standing and therefore also suitable for transport wood cardboard industries.

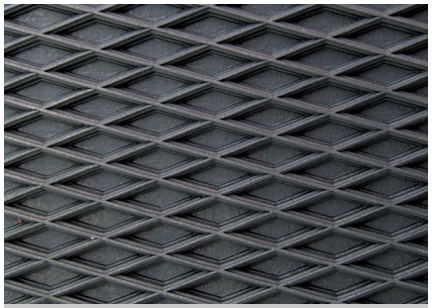
VARIETY OF PATTERNS



Rough Top



Mini Rough Top



Diamond Top

Mini Bucket

Chevron V6

Chevron Continuous

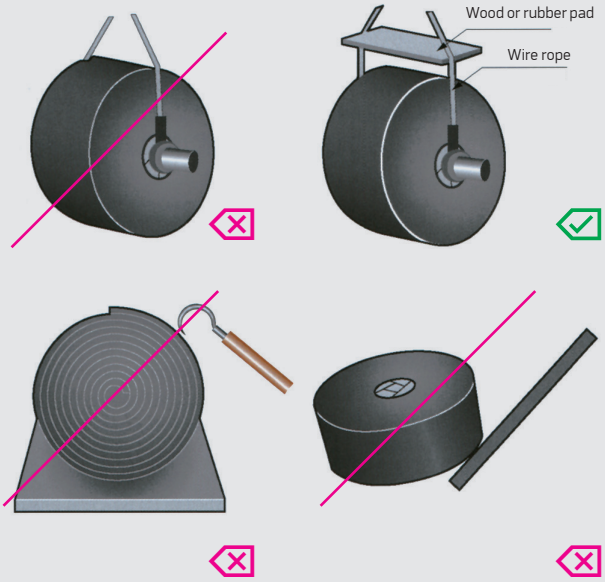
Handling
Conveyor Belts

POINTS TO NOTE IN HANDLING

Belts are rolled on wood or steel drum and wrapped with polypropylene. Beware of the following points:

⚠

- 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.
- Do not roll them. It may hurt people in the area.
- 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.
- Do not use a hook or lever.

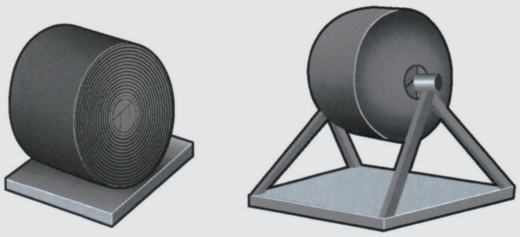


TIPS FOR STORING

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

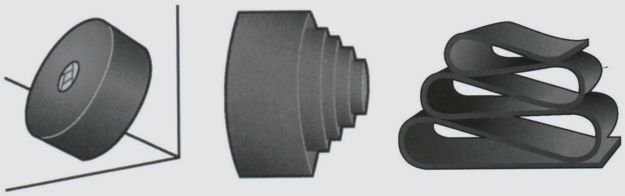
⚠

- 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.



When keep upright | When hung

ACCEPTABLE STORAGE CONDITIONS



INADEQUATE STORAGE CONDITIONS

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