

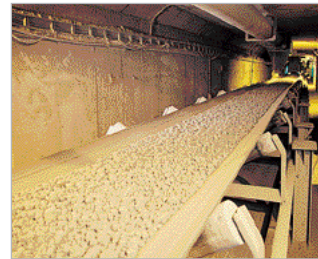
Conveyor Belt & System





Conveyor Belt

DRB has been steadily growing in automotive and industrial rubber product markets after starting out with power transmission and conveyor belt production. We provides high value-added products and services to our customers, leading their diverse industry fields in the world market, based on accumulated experiences and technological capabilities. Over 60 years, DRB has been providing outstanding products and services to Korea's leading automotive, electronic and steel manufacturers who have achieved strong footholds in the world market, and consequently, DRB has formed strong business partnerships with those companies.



- 4 Steel Cord Conveyor Belt
- 6 Multi-Ply Conveyor Belt
- 8 Mono-Ply Conveyor Belt
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- 10 General, Abrasion Resistant Conveyor Belt
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- 18 Cleanface Conveyor Belt / Energy Saving Conveyor Belt

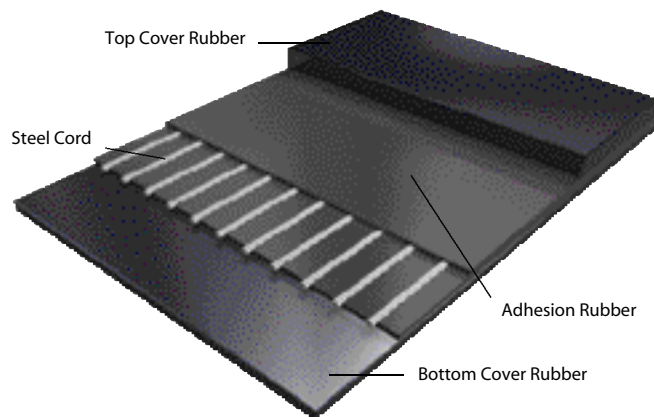
Features

- 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.

Take-up Stroke Comparison

Carcass	Take-up Stroke
Steel Cord	Over 0.35
Nylon	Over 2.1
Polyester	Over 1.4

Belt Structure



Cord Structure



7×7

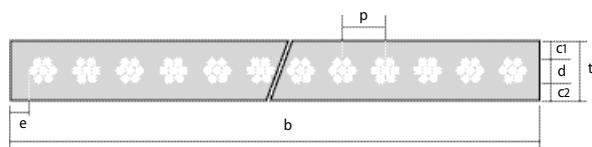


7×19

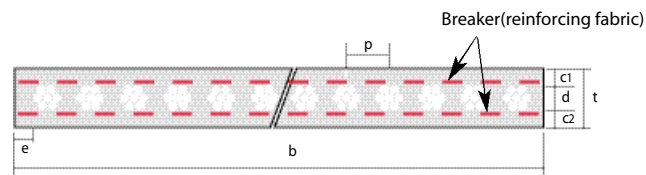
7×7 : Applied to low tension lines

7×19 : Applied to high tension lines

General Structure



b : Belt width
c1: Top cover rubber thickness
c2 : Bottom cover rubber thickness
d : Cord diameter
e : Edge rubber width
p : Cord pitch
t : Total belt thickness



b : Belt width
c1: Top cover rubber thickness
c2 : Bottom cover rubber thickness
d : Cord diameter
e : Edge rubber width
p : Cord pitch
t : Total belt thickness

Breaker(reinforcing fabric)

- prevents length-wise tearing by foreign substances or sharp objects
- prevents broken steel cord from protruding through cover rubber
- provides high withdrawal strength (in stationary tests)
- reduces risks for belt breakage by impact

Belt Marking Protocol

DIN-X ST2000 1200 × 5.7 ϕ × 94ea × 6.0 × 5.0 300m

↑ Cover rubber grade
 ↑ Tensile strength (kN/m)
 ↑ Belt width (mm)
 ↑ Cord diameter (mm)
 ↑ Number of cords (ea)
 ↑ Top cover rubber thickness (mm)
 ↑ Bottom cover rubber thickness (mm)
 ↑ Belt length (m)

Product Information

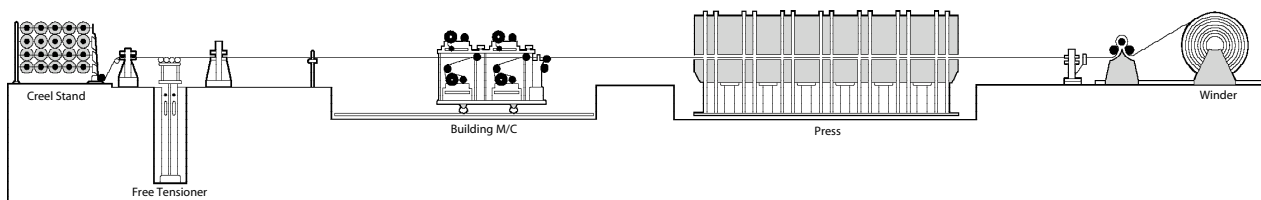
Products	Application groups
(1) Belt elongation: ST500~ST5000(kN/m)	(1) General Purpose
(2) Belt width: 600~2200mm	(2) Abrasion Resistance
(3) Minimum length: 100m	(3) Heat Resistance
	(4) Oil Resistance
	(5) Fire Resistance

Standard Specifications

Specification	Cord diameter(mm)	Cord pitch(mm)	Cord structure	Minimum pulley diameter(mm)		
				Drive/Head	Takeup/Tail	Snap/Bend
ST-500	2.4	10	7×7	600	500	350
ST-630	2.7	10	7×7	600	500	350
ST-800	3.1	10	7×7	650	500	400
ST-900	3.3	10	7×7	700	550	450
ST-1000	3.6	12	7×7	700	550	450
ST-1250	4.0	12	7×7	850	700	500
ST-1400	4.3	12	7×7	950	750	550
ST-1600	4.7	12	7×7	1000	800	600
ST-1800	5.0	12	7×7	1200	950	700
ST-2000	5.2	12	7×7	1200	950	700
ST-2500	6.8	15	7×19	1500	1200	900
ST-2800	7.2	15	7×19	1550	1250	950
ST-3150	7.6	15	7×19	1700	1350	1000
ST-4000	8.6	15	7×19	1850	1400	1050
ST-5000	9.6	15	7×19	2100	1700	1250

Note : Please contact your representative as specifications other than the above are available.

Production Process



Features



Material Quality

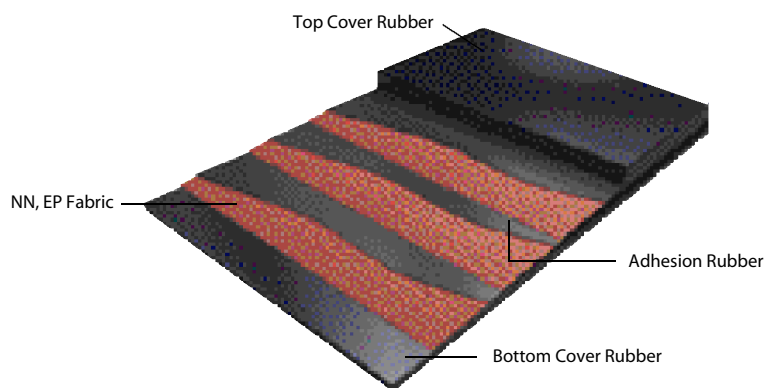
Nylon (NN)

- Highly flexible.
- Highly resistant against impact.
- Highly bendable.

Polyester (EP)

- Less elongation.
- Less deformed by heat.
- Less affected by moisture.

Belt Structure



Product Information

Products	Application groups	
(1) Belt tensile strength : 100~2000(kN/m)	(1) General Purpose	(7) Anti-Static
(2) Belt width : 300~2200mm	(2) Abrasion Resistance	(8) Color
(3) Minimum length : 50m	(3) Heat Resistance	
	(4) Oil Resistance	
	(5) Fire Resistance	
	(6) Chemical Resistance	

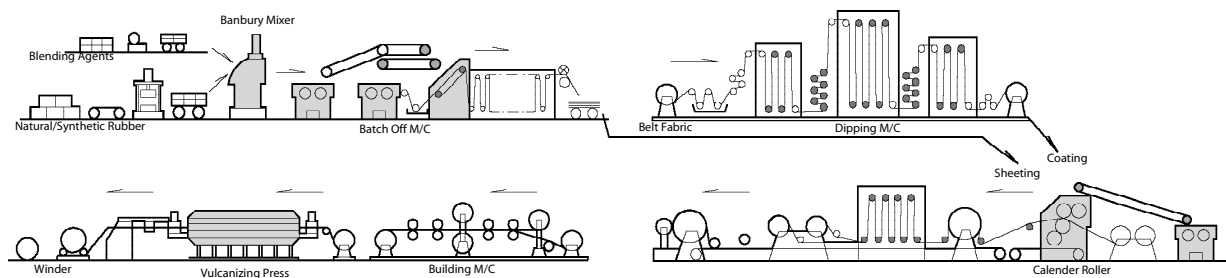
Belt Marking Protocol

JIS-S	NN630	1200	×	4P	×	6.4	×	3.2	300m
↑	↑	↑		↑		↑		↑	↑
Cover rubber grade	Tensile strength (kN/m)	Belt width (mm)		Number of plies		Top cover rubber thickness (mm)		Bottom cover rubber thickness (mm)	Belt length (m)

Standard Specifications

Belt strength (kN/m)	Belt specifications				Belt width (mm/inch)																	
	Plies	Carcass type	Cover rubber(mm)		300	400	500	600	700	800	900	1000	1050	1200	1400	1600	1800	2000	2200			
			Top rubber	Bottom rubber	12	16	20	24	28	32	36	40	42	48	56	64	72	80	88			
160	2	NN, EP	3.2	1.6																		
250	2~3	NN, EP	3.2	1.6																		
315	2~4	NN, EP	4.8	1.6																		
400	2~4	NN, EP	4.8	1.6																		
500	2~4	NN, EP	4.8	1.6																		
630	3~5	NN, EP	4.8	1.6																		
800	3~6	NN, EP	4.8	2.4																		
1000	4~6	NN, EP	4.8	2.4																		
1250	4~6	NN, EP	4.8	2.4																		
1500	5~6	NN, EP	6.4	3.2																		
2000	5~6	NN, EP	6.4	3.2																		

Production Processes

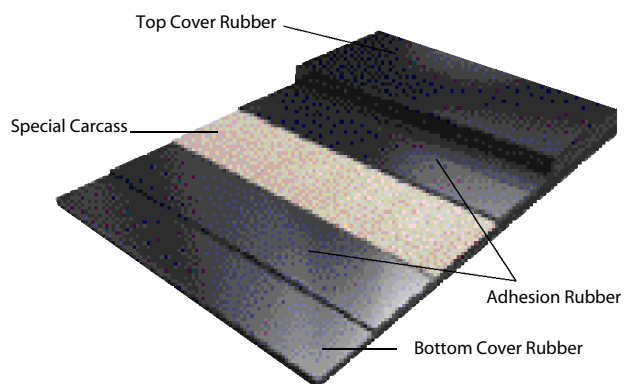


Features

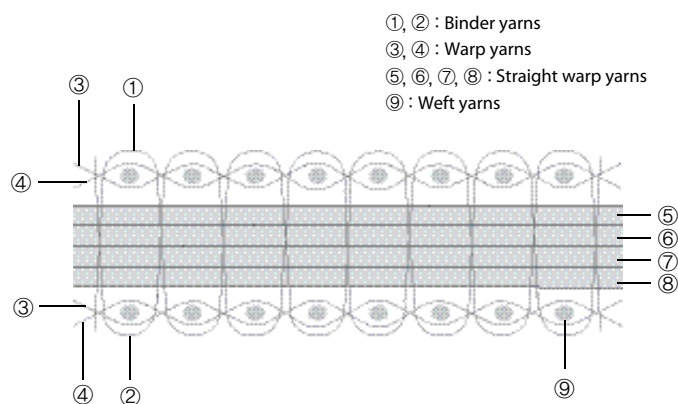


- One-ply carcass provides over 2000kN/m tension.
- Low elongation allows short take-up strokes.
- Single layer carcass structure provides optimum troughing.
- Single layer carcass structure provides high bendability, allowing small-diameter pulleys.
- High bendability, impact-resistance, and thin carcass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

Belt Structure



Carcass Structure



Belt Marking Protocol

DIN-Y SF800 1200 × 1P × 6.0 × 3.0 300m

↑ ↑ ↑ ↑ ↑ ↑ ↑

Cover rubber grade Tensile strength (kN/m) Belt width (mm) Number of plies Top cover rubber thickness (mm) Bottom cover rubber thickness (mm) Belt length (m)

Standard Specifications

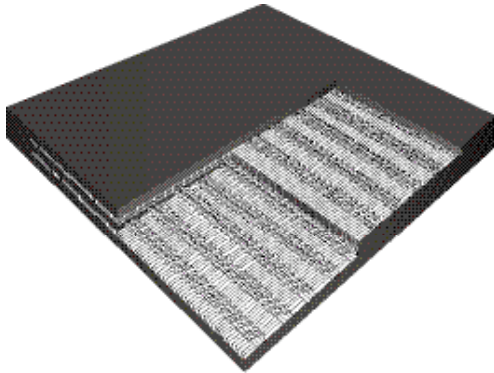
Specification	Carcass thickness	Cover rubber		Minimum pulley diameter(mm)		
		Top rubber	Bottom rubber	Drive/Head	Takeup/Tail	Snap/Bend
SF-600	2.5	5	3	400	350	300
SF-800	3.3	5	3	450	400	350
SF-1000	3.5	6	3	500	450	350
SF-1200	4.3	6	3	550	500	400
SF-1500	4.9	6	4	650	550	450
SF-1800	5.5	8	4	750	650	550
SF-2000	5.8	8	4	850	750	650

Note: Please consult us your representative for specifications other than the above.

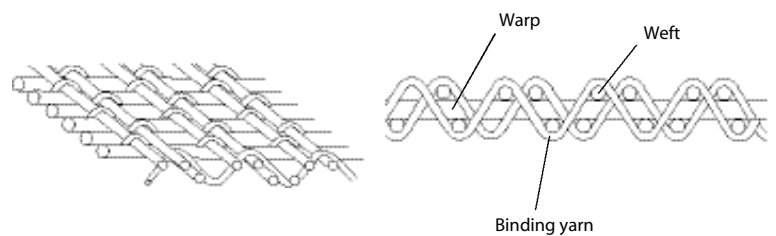
Features

- Straight warp ply carcass structure allows designs to provide higher tension than ordinary multi-ply belts.
- Provides high bendability and impact resistance.
- Belts can be easily joined.

Belt Structure



Carcass Structure



Belt Marking Protocol

DIN-W SC800 1200 × 2 × 6.0 × 3.0 300m

↑ Cover rubber grade ↑ Tensile strength (kN/m) ↑ Belt width (mm) ↑ Number of plies ↑ Top cover rubber thickness (mm) ↑ Bottom cover rubber thickness (mm) ↑ Belt length (m)

Standard Specifications

Specification	Cover rubber(mm)		Minimum pulley diameter(mm)		
	Top rubber	Bottom rubber	Drive/Head	Take-up/Tail	Snap/Bend
SC-400	5	2	350	300	250
SC-600	5	2	400	350	300
SC-800	6	3	450	400	350
SC-1000	6	3	500	450	400
SC-1200	6	3	550	500	400
SC-1600	8	4	700	600	500
SC-1800	8	4	850	750	650
SC-2000	8	4	900	800	700

Note: Please consult us your representative for specifications other than the above.

JIS

Standard			JIS-P	JIS-G	JIS-S	JIS-A	JIS-L	JIS-D	JIS-H
Tensile test	Before Aging	Tensile Strength (MPa)	>8	>14	>18	>14	>15	>18	>24
		Elongation(%)	>300	>400	>450	>400	>350	>400	>450
	After Aging	Change rate of TS(%)	± 40	± 30	± 25	± 25	± 25	± 25	± 25
		Change rate of EL(%)	± 40	± 30	± 25	± 25	± 25	± 25	± 25
Abrasion test (mm³)			<400	<250	<200	<150	<200	<100	<120
Ozone test			No Crack			No Crack			

DIN

Standard			DIN-W	DIN-X	DIN-Y	DIN-Z
Tensile test	Before Aging	Tensile Strength (MPa)	>18	>25	>20	>15
		Elongation(%)	>400	>450	>400	>350
	After Aging	Change rate of TS(%)	± 25	± 25	± 25	± 25
		Change rate of EL(%)	± 25	± 25	± 25	± 25
Abrasion test (mm²)			<90	<120	<150	<250

AS

Standard			AS-N	AS-M	AS-A
Tensile test	Before Aging	Tensile Strength (MPa)	>17	>24	>17
		Elongation(%)	>400	>450	>400
	After Aging	Change rate of TS(%)	± 20	± 20	± 20
		Change rate of EL(%)	± 20	± 20	± 20
Abrasion test (mm³)			<200	<125	<70



BS

Standard			BS-N17	BS-M24
Tensile test	Before Aging	Tensile Strength (MPa)	>17	>24
		Elongation(%)	>400	>450
	After Aging	Change rate of TS(%)	± 25	± 25
		Change rate of EL(%)	± 25	± 25

RMA

Standard			RMA-1	RMA-2
Tensile test	Before Aging	Tensile Strength (MPa)	>25	>18
		Elongation(%)	>450	>400
	After Aging	Change rate of TS(%)	± 25	± 25
		Change rate of EL(%)	± 25	± 25
Abrasion test (mm³)			<125	<200

Note : DRB produces conveyor belts that conform to various international specifications.
Please consult your representative for conveyor belts of non-standard specifications.



It is more economical to use a thermostable conveyor belt when transporting materials with 60°C or higher temperature. Damage to cover rubber varies depending on the temperature or shape of transported materials and it is critical to choose suitable belt materials depending on the use conditions. The relationship between the cargo and the belt surface temperature is especially noteworthy. This is because cooling is mainly achieved on the return trip as the temperature of the belt surface is different from that of the cargo, although it varies depending on the cargo shape, belt length, speed, operation environment and hours.

Grade	Features	Applications
HRS	Being a belt made of heat-hardening SBR materials, it has good abrasion resistance though some cracks are generated as cover rubber gets hardened by heat if used for a long time.	High abrasion resistance, Medium temperature
HRB	Being a belt made of heat-softening IIR materials, it has good resistance against cracks though its cover rubber gets softened by heat if used for a long time. It is suitable to transport cement or clinker with little abrasion.	Crack resistance, Medium high temperature
HRP	Being a belt made of EPR materials, it demonstrates outstanding performance in transporting hot materials as it has high resistance against abrasion and cracks.	High abrasion resistance, Crack resistance, High temperature
HRP (plus)	Being a new concept HRP product whose crack resistance is reinforced, you may experience a longer life span.	High abrasion resistance, Crack resistance, High temperature

Selection of Belts by Material Type and Temperature

Grain shape	Powder materials					Lump materials					
Material handled	Cement, Chemical, Fertilizer, Soda ash, Casting sand, Clinker					Sintered ore, Cokes, Limestone, Iron Ore, Clinker					
Maximum temperature of material handled	120	150	200	200	400	200	200	400	400		
	↓	↓	↓	↓	↓	↓	↓	↓	↓		
Average temperature of material handled	60	80	100	120	150	180	60	100	120	150	200
Maximum temperature of belt surface	50	80	100	120	150	180	50	80	100	130	180
HRS(SBR)											
HRB(Butyl)											
HRP (EPR)/HRP (plus)											

Relation between Material and Belt Surface Temperature

Belt surface temperature varies depending on material types, shapes, sizes, belt cycle time, and trough angle. The heat-resistant belts should be selected based on their surface temperature as their life span depends on the belt surface temperature.

Material handled	Temperature of material handled(°C)	Belt surface temperature(°C)	Used grade
Sintered ore	200~350	90~150	HRP
Cokes	60~200	40~60	HRS
Clinker	200~300	100~150	HRB
Clinker	300~400	150~180	HRP
Cement	110~140	100~110	HRB
Fertilizer	80~100	60~80	HRS
Casting cast	~100	60~80	HRS
	100~150	110~130	HRP

Fire Resistant Conveyor Belt



This belt is used to prevent line loss while reducing damage to the belt from flames by suppressing ignition. It is mainly used to transport grains, fertilizer, or coal.

Item Standard	Laboratory flame test		Drum friction test	Electric resistance	Other Items
	Flame	Glow			
JIS	Each less than 15 sec. Total of 6 samples less than 45 sec.	None	None	None	None
ISO	Each less than 15 sec. Total of 6 samples less than 45 sec.	None	None	Less than $3 \times 10^8 \Omega$	None
DIN	Each less than 15 sec. Total of 6 samples less than 45 sec.	None	None	Less than $3 \times 10^8 \Omega$	None
MSHA(USA)	Avr. less than 60 sec.	Avr. less than 180 sec.	None	Less than $3 \times 10^8 \Omega$	None
AS(Australia)	Avr. less than 10 sec. Each less than 15 sec.	Avr. less than 120 sec. Each less than 180 sec.	Less than 325°C on drum surface and no glow	Less than $3 \times 10^8 \Omega$	Oxygen index test in accordance with ISO 4589 Gallery flame test
CSA(Canada)	Avr. less than 60 sec.	Avr. less than 180 sec.	Less than 400°C on drum surface and no glow	Less than $3 \times 10^8 \Omega$	None

MSHA(U.S), CAN/CSA-M422(Canada), MDA-M5010(Australia) certified

Oil Resistant Conveyor Belt

Ordinary grade belts are damaged quickly by imbibition of oil into cover rubber, peeling of cover rubber, and reverse-troughing of the belt if oily materials are transported. Therefore, oil-resistant belts should be used to transport oily materials.

Grade	Color	Key Applications
ORN	White, Green, Black	Resistant to metal, animal or vegetable oil excluding aromatic compounds (benzene, toluene etc.) halogen hydrocarbon, ketone, and ester family. Further, the cover rubber is highly resistant to abrasion.
ORN-30	White, Black	Used for slightly oily materials. It is suitable for transporting wood chips or frozen meat.
HOR	White, Black	It is suitable for animal or vegetable oil transported at a relatively high temperature (up to 100°C)

Chemical Resistant Conveyor Belt

Used for transporting chemicals, pulp, ceramic, foodstuffs, fertilizer and materials with chemicals attached. It is necessary to select cover rubber that is resistant to acid or alkali depending on the types of transport materials or chemicals attached to the materials.



Anti-Static Conveyor Belt

Belt is made of cover rubber especially mixed to prevent static electricity. Anti-static belt is essential to transport fabrics that stick on the belt surface with static electricity or electronic products that may explode or ignite by electrification.

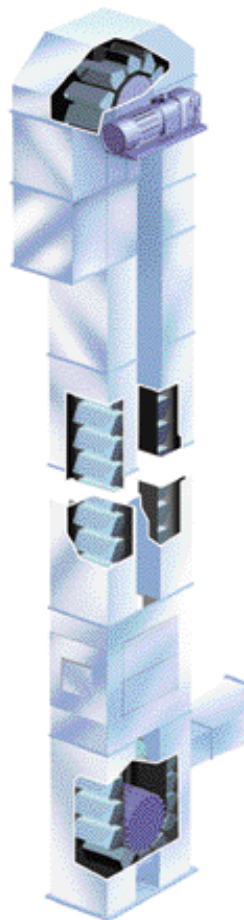
► Cover rubber electric resistance (ISO-284) : $3 \times 10^8 \Omega$ or less

Color Conveyor Belt

Belt is made of white, green or yellow cover rubber to match color in workplace, or to protect workers' eyesight or safety. It inspires easy sorting of transport materials and enhances workers' safety.

Bucket elevator conveyor belts have bolt holes to fix buckets along the entire belt length, making them apt to 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.

Specification	Cover rubber thickness	Minimum pulley diameter(mm)			
		4 (ply)	5 (ply)	6 (ply)	7 (ply)
EP 315	Over 1.5×1.5	500			
EP 400		650	600		
EP 500		650	750	850	
EP 630		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

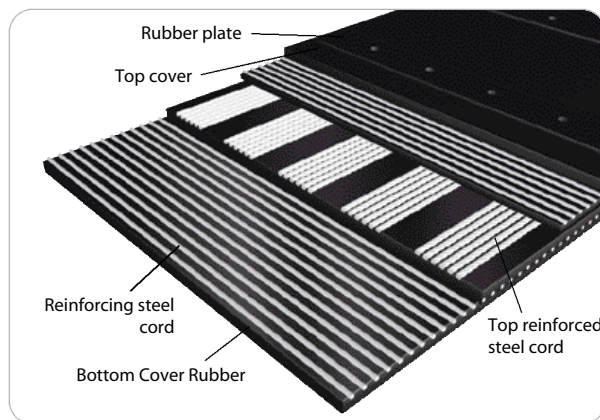


Standard Specifications (steel cord)

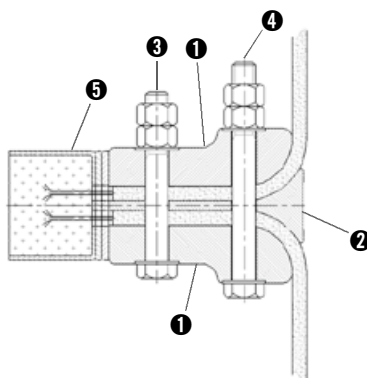
Belt Designation	Min. pulley diameter(mm)	Take-up adjustment Distance(mm)
ST- 500	600	250
ST- 630	600	250
ST- 800	650	250
ST- 900	700	250
ST- 1000	750	250
ST- 1250	850	250
ST- 1400	950	315
ST- 1600	1000	315
ST- 1800	1200	315
ST- 2000	1200	315
ST- 2500	1500	500
ST- 2800	1550	500
ST- 3150	1700	500
ST- 4000	1850	500
ST- 5000	2100	500

Bucket Width	Volume streams(m³/h)	
	100% Filling	75% Filling
160	38	28
200	55	41
250	87	65
315	127	95
400	197	148
500	287	215
630	465	349
800	665	499
1000	935	701
1250	1166	874
1400	1310	980
1600	1443	1102
1880	1613	1211
2000	1808	1352

Belt Structure



Belt Clamping



1. Clamping jaw (Duralumin)
2. Pusher (Duralumin)
3. Bolt, Nut, Washer
4. Bolt, Nut, Washer
5. U-shape



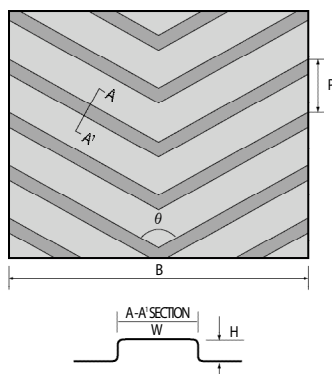
Chevron Conveyor Belt



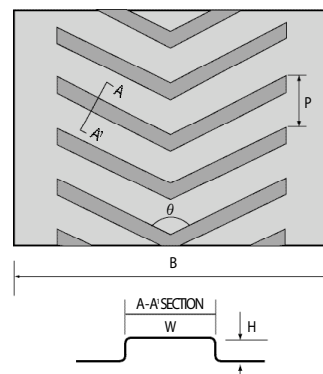
Chevron conveyor belts are highly effective for transporting sand, coal powder, grain or other powder or granular materials or materials packed in bags or boxes on incline though they can transport coal or mineral ore just like ordinary conveyor belts. They can transport powder or granular materials on 17°~28° inclines and materials packed in bags or boxes on 30°~35° inclines.

Type

Type A



Type B



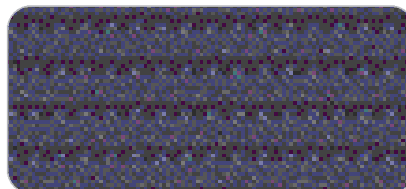
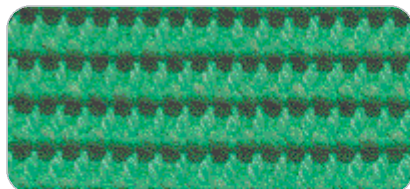
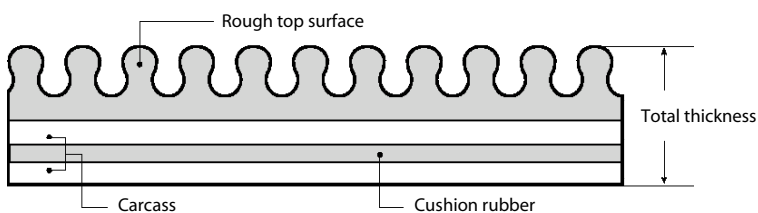
Standard Specifications

Belt width B(mm)	Cleat height H(mm)	Cleat width W(mm)	Cleat pitch P(mm)	Cleat angle θ	Type
350	3	12	80	120	A
400	3	12	80	120	A
450	3	12	80	120	A
500	3	12	80	120	A
600	3	12	80	120	A
700	4	12	60	120	A
750	4	12	60	120	A
800	4	12	60	120	A
900	4	12	60	120	A
1000	4	12	60	120	A
1050	4	12	60	120	B
1200	4	12	60	120	B

Rough Top Conveyor Belt

The conveyor belt's uneven cover rubber surface prevents slippage while preventing vibration of, or absorbing and reducing impact to transport materials by providing a cushion effect. This belt is ideal for transporting plywood or packed items.

Basic Structure

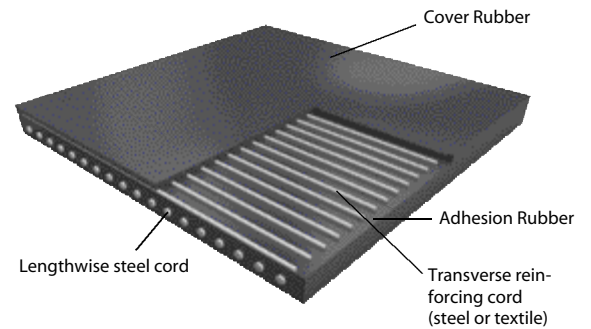


Rip Protection Steel Cord Conveyor Belt

Features

- 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.

Belt Structure

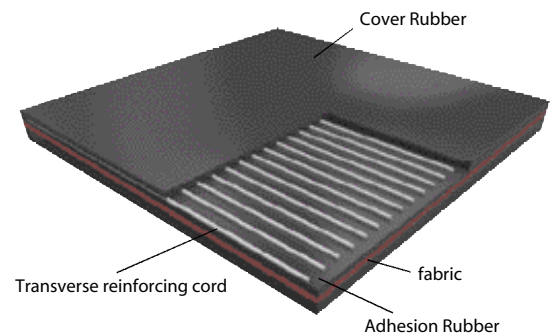


Impact / Cut Resistant Conveyor Belt

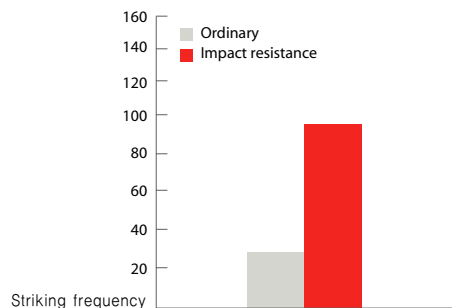
Features

- Minimizes damages to belt carcass from sharp objects or strong impact.
- Prevents belts from being cut or broken by damage.

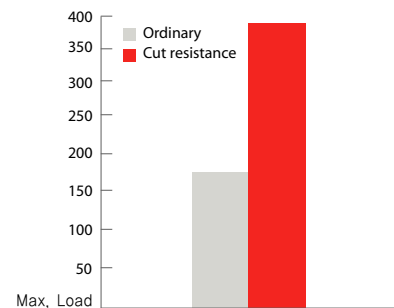
Belt Structure



Impact resistance test

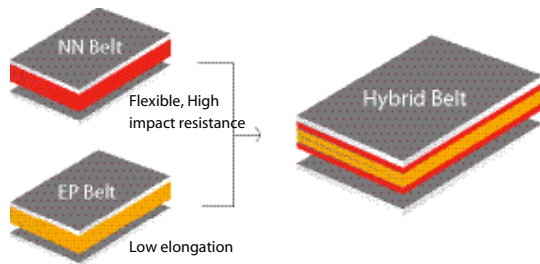


Cut resistance test



Belt type	Specification	Remark
Ordinary Conveyor belt	NN800 1200×5P×8×3	
Impact/Cut Resistant conveyor belt	NN800 1200×5P+1×8×3	Steel cord reinforced

Features

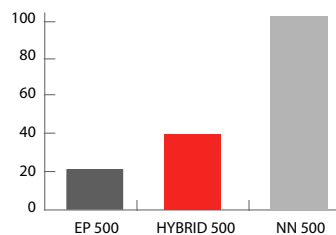


Hybrid belts combine merits of NN belt's flexibility and EP belt's low elongation. Satisfactory improvement is confirmed on lines where belts are lengthened as sufficient take-up stroke is not secured.

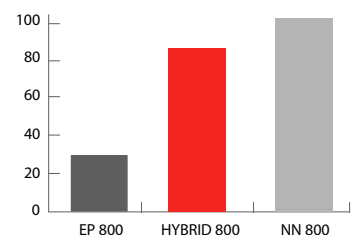
Standard Specifications

Nomal	HYBRID
NN400/4	HB400/4
NN500/3 NN500/4 NN500/5	HB500/4
NN630/3 NN630/4 NN630/5 NN630/6	HB630/4
NN800/4 NN800/5 NN800/6	HB800/4
NN1000/4 NN1000/5 NN1000/6	HB1000/4
NN1250/4 NN1250/5 NN1250/6	HB1250/4

Belt Performance



Initial elongation
approx. 40% of NN belts



Bending performance
approx. 90% of NN belts



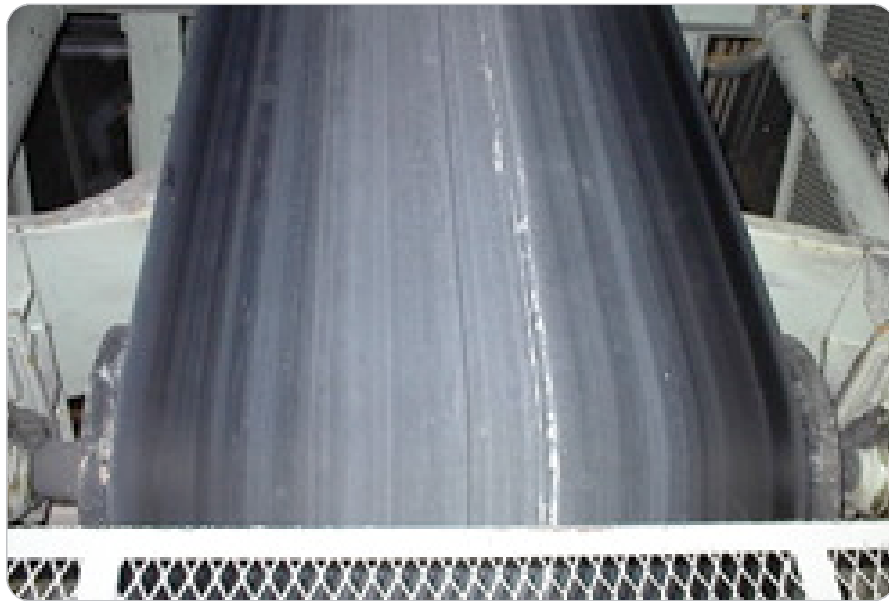
Cleanface Conveyor Belt

Features

- Overall clean environment of lines is enhanced by minimizing debris from transport materials remaining on the return trip with a maximized belt cleaner performance.
- Belt life span is extended with abrasion resistance twice that of the Abrasion Resistant grade.

Field test result

- Material : sludge
- Quantity handled : 90 ton/hr
- Standard specification : NN630 1050 × 4P × 6.4 × 3.2 86m
- Result : 57.5% reduction of the falling dust
 - ▶ The result depends on the condition of the equipment and the operation



Energy Saving Conveyor Belt

Features

Energy saving conveyor belt applies the cover rubber to minimize the transformation of rubber by idler. This conveyor belt can improve in reducing the electrical power to be required to operate the conveyor belt by decreasing the loss of energy.

Field Test Result

- Material handled : Iron Ore
- Quantity handled : 300 ton/hr
- Standard Specification : ST1300 2200 × 4.1 Φ × 176 × 9 × 5 1200m
- Result : 16.6% reduction of the operating electrical power
 - ▶ The result depends on the condition of the equipment and the operation

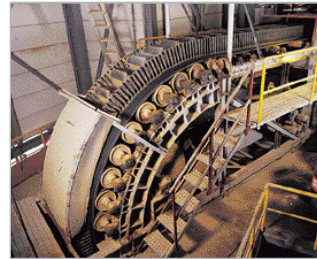


Conveyor System

DRB is equipped with unique conveyor belt design capabilities.

It designs solutions most appropriate to conveyor belt operation conditions based on its accumulated know-how is a conveyor belt specialist.

DRB designs and produces such specialty conveyor systems as pipe or corrugated sidewall conveyor belts as well as general conveyor belts.



- 20 Pipe Conveyor System
- 21 Return Pipe Conveyor System
- 22 Corrugated Sidewall Conveyor System

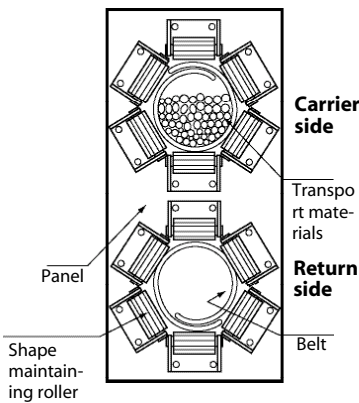
Pipe Conveyor System

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.

Structure

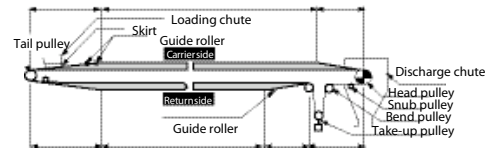


Inside diameter (mm)	Inside diameter (m²)	Belt speed (m/min)	Transport volume (m³/hr)
150	0.013	120	95
200	0.023	130	180
250	0.041	140	344
300	0.049	150	441
350	0.066	175	693
400	0.108	200	1296
500	0.155	225	2093

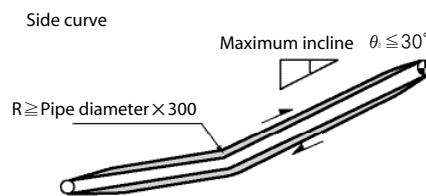
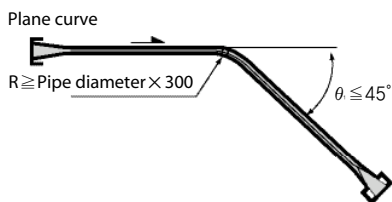
Floor plan



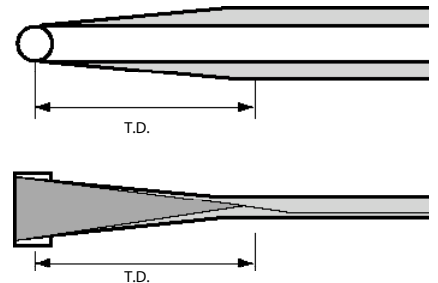
Side plan



Layout Conditions of Pipe Conveyor



Trough change distance(T.D.)
(T.D.) ≥ Pipe diameter × 25



Standard Specifications

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

Features

Minimizes contamination of line environment with debris generated at the return part, as the carrier side has a general trough structure and the return omit has a pipe structure.

Structure

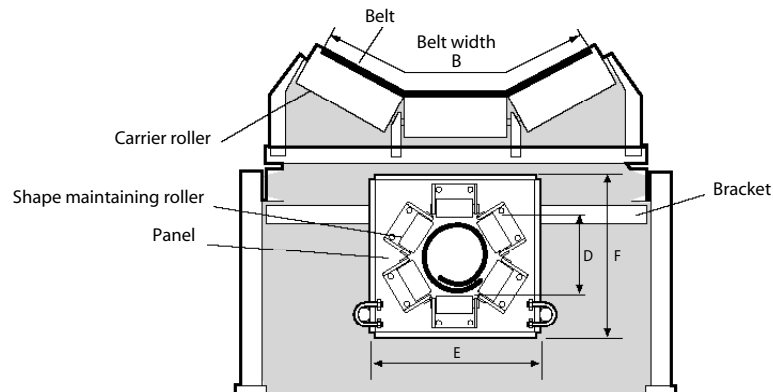
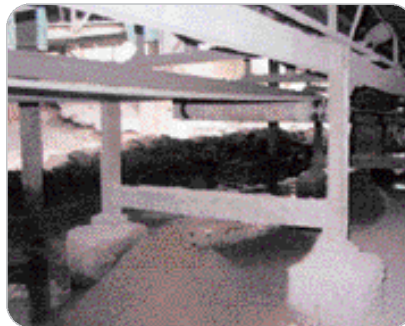


Photo of Installation



Amount of excess before return pipe conveyor applied

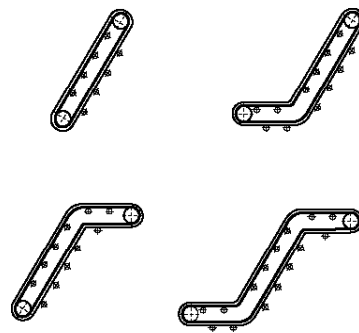


Cleanliness after return pipe conveyor applied

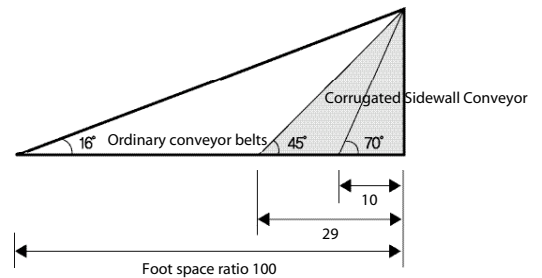
Conveyor belts equipped with special waves or cleats called corrugated sidewall on the belt provide the following features:

Features

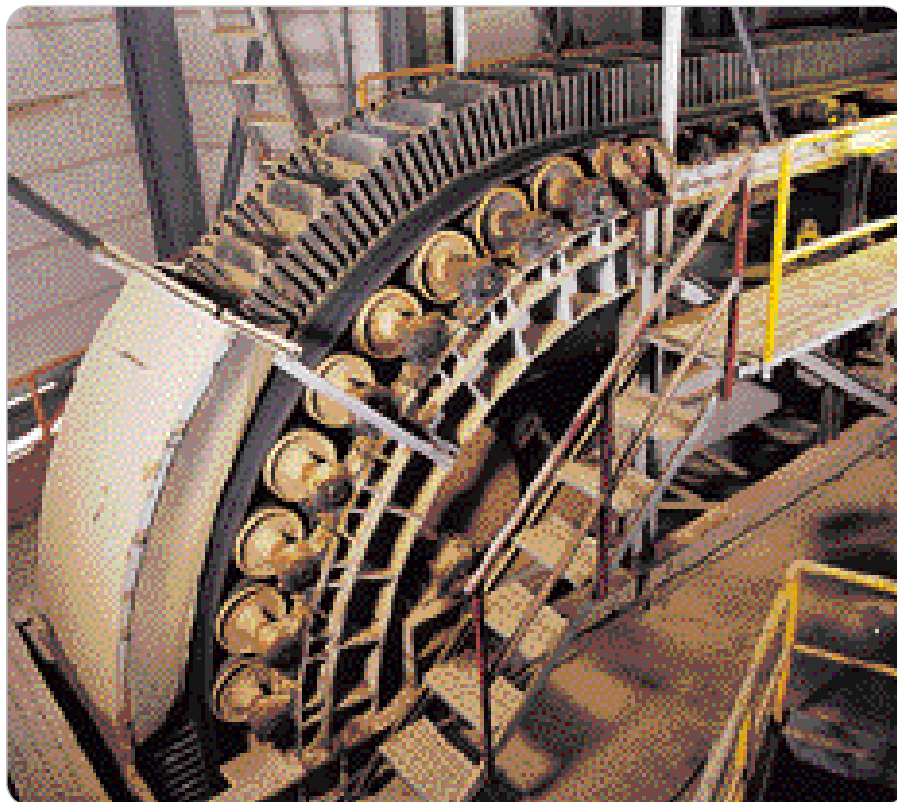
- Corrugated sidewall design allows for greater transport volume with increased sectional loading area, enabling a narrower conveyor design.
- Reduces foot space as steep incline or vertical transport is possible with cleats attached belt widthwise.
- No skirt board is required as transport materials 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.



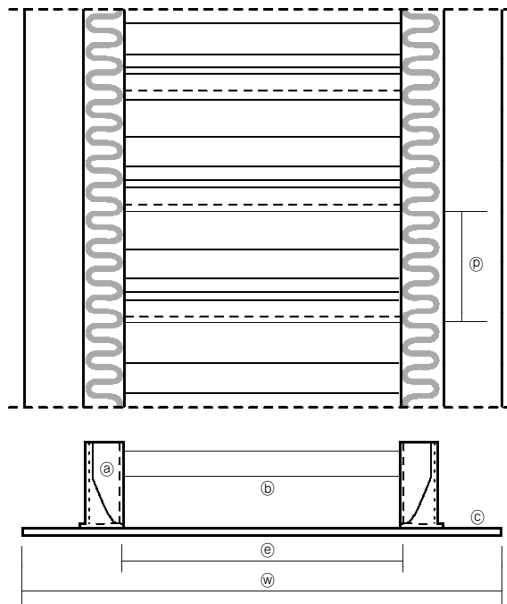
Line type



Foot space compared with that of ordinary conveyor belts

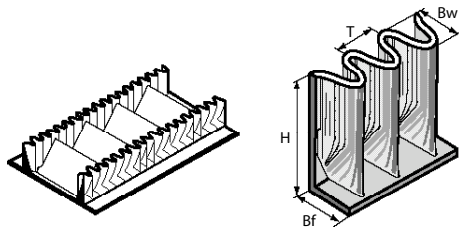


General Shape and Name of Corrugated Sidewall Conveyor Belts



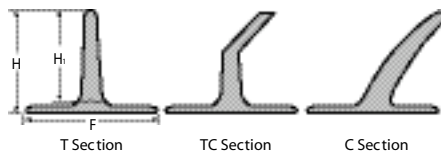
- (a) : Corrugated Sidewall
- (b) : Cleat
- (c) : Main belt
- (e) : Effective width
- (D) : Cleat pitch
- (W) : Belt width

Corrugated Sidewall Dimension and Types



H(mm)	Bw(mm)	Bf(mm)	T(mm)
60	45	50	45
80	45	50	45
100	45	50	45
120	45	50	45
160	70	80	65
200	70	80	65
240	70	80	65
300	80	90	75

Dimension and Types of Cleats



H(mm)	H1(mm)	F(mm)
80	70	100
100	90	100
120	110	100
160	140	140
200	180	190
240	220	230
TC:280	260	280

Note : Advance enquiry is urged as molds should be checked depending on your desired section shapes.



Caution

- Please fill out and forward to us the use condition details on the rear cover of the catalog for right belt selection.
- Do not use conveyor belts for transporting bulk or unpacked foodstuff.
- Advance enquiry is invited for use environment prone to cracks (on belt surface) by ozone (seashore, woods, or other places exposed to direct sunray).
- Observe the following instructions in selecting conveyor belts:

	Instructions
Ordinary Belt	Belt surface temperature should be within the range of -30°C~+50°C. This cannot be applied to such specialty belts as heat-resistant, cold-resistant, acid-resistant, alkali-resistant, foodstuff transporting, fire-retardant, human transporting, and bucket elevator conveyor belts.
Heat-Resistant Belt	Belt life span is greatly reduced if use in a sealed space as belt temperature soon becomes the ambient temperature. Do not use belt for transporting materials above allowed temperatures as indicated on the catalog. The belt is not fully fire proof.
Oil-Resistant Belt	Please indicate the intended use conditions when ordering belts as belt life span is greatly affected by adhesion of materials on belt surface, types and amount of oil contained in materials, and temperature of materials.
Fire-Resistant Belt	Flame-retardant belts may ignite into flames though they satisfy the flame retardancy standards.
Color Belt	Store belts indoors after covering. Do not leave belts idle on machines for an extended time.

Tips for Using Conveyor Belt

Routine Maintenance



Caution

Belts should be inspected as to the following checkpoints before using them. Appropriate actions should be taken for any abnormal condition. Please contact the dealer if such abnormal conditions persist.

Checkpoints	Corrective actions
(1) Damage or wear of belt body	Repair or replacement
(2) Peeling or damage on joining parts	Repair and rejoining
(3) Poor roller rotation	Repair or replacement
(4) Foreign materials attached to pulley or rollers	Removal of foreign materials
(5) Abnormal take-up action parts	Maintenance
(6) Skirt or cleaner damages	Maintenance
(7) Shute damages	Maintenance
(8) Foreign materials or substances attached	Removal

Points to note in operation



Caution

- Install a shield wall or safety cover.
Operator or others may be squeezed or drawn between the belt and equipment while under operation.
- Do not enter the area behind the shield wall.
- Do not wear a necktie and check for any loose clothing.
Human body may be squeezed or drawn into the equipment.
- During operation don't step on the belt. Don't touch the belt with your hand or body.
- Don't throw in any foreign materials like cigarette butts or anything that may catch fire.
- Check power switch, emergency stop device, and escape exit before starting operation.
- Observe maximum load limit to prevent an unusual strain. It may cause the belt to break.
- Ensure transport materials are not spilt over the belt sides.
- Install a detection device on equipment for emergency stop situation.
Ex) Device to prevent reverse rotation, serpentine action detection device, emergency stop device etc.
- Immediately stop and check the line for any joint breaks or serpentine action or any other maintenance issue.
- Do not enter the space below the belt or take-up part.
- Do not remove cake or debris while the belt is in operation.

Points to note when stopped

- Turn off the switch and display "Stopped" sign on the switch to prevent a mistaken operation.
- Never step on the belt unless necessary for repair.
- Do not stop the belt with transport materials on it. Fire may result.



Caution

- Do not turn on the switch for resuming operation until the entire line safety is thoroughly checked.
- Do not step on the belt for repair with cleated shoes. The belt may be damaged.
- Ensure that harmful objects do not fall onto or attach to the belt, including oil, chemical, welding torch flames, and heavy items.

Points to note when splicing belts

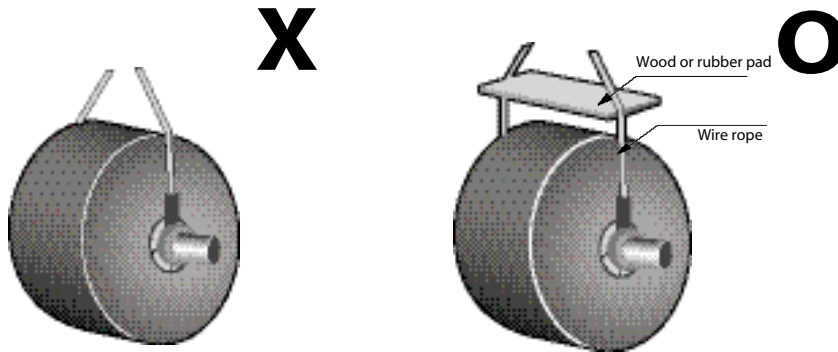
- Belts should be joined on an even surface according the strict procedures to ensure safety.
- Be careful in performing work or handling tools at a high or dangerous line.
- Beware of ignition in the workplace. Fire may result.
- Avoid direct sunlight and remove moisture or dust from the joint when joining belts. Adhesive power may be degraded.
- Ensure sufficient ventilation when rubber bond or solvent is used. They may hurt your health.
- Do not leave rubber bond or solvent or any other accelerants in the workplace. They may cause fire.
- Use only materials allowed for joining belts. Also observe the validity of the joining materials.

Points to Note in Handling Conveyor Belt

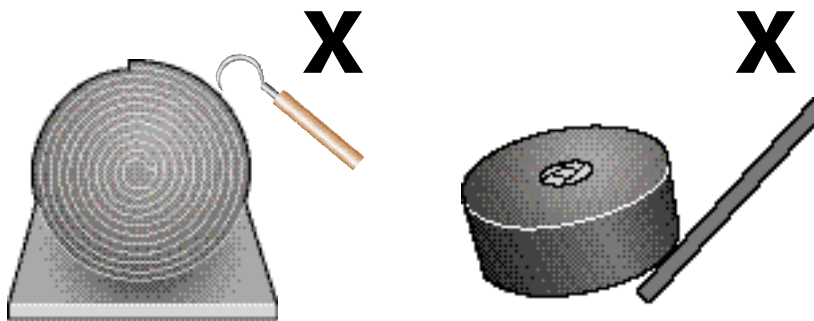
Belts are rolled on wood or steel drum and wrapped with polypropylene. Beware of the following points:

Caution

- 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.



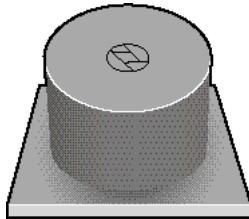
Tips for Storing Conveyor Belt

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

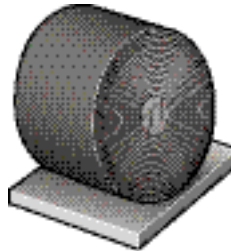
Acceptable storage conditions



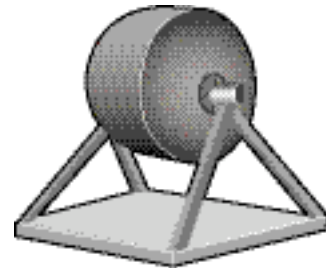
- Keep the belts away from direct sunlight.
- Keep the belts away from wind, rain, or moisture.
- Keep them in a dry, even place.
- Keep them away from harmful objects like fire, oil, chemical or organic gas.
- Fix belt rolls to prevent them from rolling.



When laid flat

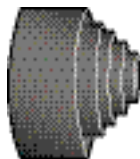


When kept upright



When hung

Inadequate storage conditions



X



X

Data Inquiry Form Of Conveyor Belt

NO. _____

Date : _____

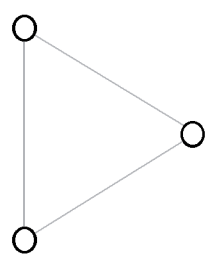
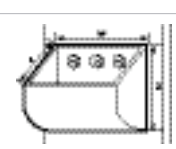
Company name			Application		
Name NO.			Use conditions		
Belt width(mm)		*	Belt length (mm)		
Transport materials	Name	*	Take-up specification	Type	
	Shape (mm)	*		Space(m)	*
	Specific gravity (t/m³)			Weight (kg)	
	Temperature (°C)	*	Location	* Head, Tail Midpoint, Around Head, Around Tail	
	Attributes		Carrier	Roller	1, 2, 3, 4, 5
	Moisture Content	* Yes No		Trough angle(deg.)	* 0°, 10°, 20°, 30°, 45°, 50°, 60°
Transport specifications	Length (m)	*	Return	Installed interval(m)	
	Incline (deg.)	*		Roller	1, 2, 3
	Horizontal length (m)	*		Trough angle(deg.)	0°, 10°, 20°, 30°
	Vertical length (m)	*	Tripper	Installed interval(m)	
	Incline length (m)			Yes, No	* Yes No
	Belt speed (m/min)	*		Type	
	Transport volume (t/h)	*		Quantity	
Drive specification	Type	Tandem, Tandem single, Single snap, Single	Pulley diameter	Drive(mm)	*
	Location	Head, Tail, Middle, Around Head, Around Tail		Head(mm)	
	Pulley surface	Rubber lagging, No lagging		Tail(mm)	
	Belt bending degree (deg.)	* 180, 200, 210, 220, 240, 360, 380, 400, 420		Take-up(mm)	
	Motor (kw)			Tripper(mm)	
			Snap(mm)		
		Loading conditions	Head (m)		
			Angle (deg.)		
			Impact roller	Yes No	
			Number of loading places		
Line sketch					
* Currently used belt	Producer name				
	Specifications				
	Damage status				
Other required information					

* Marked items are essential.

Data Inquiry Form Of Bucket Elevator Conveyor Belt

NO. _____

Date : _____

Company name				Application			
Name NO.				Use conditions			
Belt width(mm)		*		Belt length (mm)			
Transport materials	Name	*		Belt sketch 			
	Shape (mm)	*					
	Specific gravity (t/m³)						
	Temperature (°C)	*					
	Attributes						
	Moisture Content	* Yes No					
Belt speed (m/min)		*					
Transport volume (t/h)		*					
Pulley distance (m)(C to C)		*					
Incline degree (deg.)		*					
Bucket dimension	Width (W)(mm)	*		Loading method		Lift up, Flow in	
	Protrusion(L)(mm)			Pulley diameter	Top pulley (mm)	*	
	Depth (D)(mm)				Bottom pulley (mm)	*	
	Weight (kg/ea)	*	Type		Head, Tail		
	Attached interval (mm)	*	Drive	Pulley surface	Rubber lagging, No lagging		
	Number of attachments (each)	*		Belt bending degree (deg.)			
	Size of bolts used (ea)	*		Motor output			
	Number of bolts used (ea)	*					
	Capacity (kg/ea)	*					
* Currently used belt	Producer name						
	Specifications						
	Damage status						
Other required information							

* Marked items are essential.



Dongil Rubber Belt Co., Ltd.

Headquarters DRB

7 Geumsa-dong, Geumjeong-gu, Busan, Korea
Tel. +82-51-520-9104 Fax. +82-51-526-7722

Plant

DRB / Busan

7 Geumsa-dong, Geumjeong-gu, Busan, Korea
Tel. +82-51-520-9000 Fax. +82-51-526-7723

DRB / Yangsan

305, Sanmak-dong, Yangsan-si, Gyeongsangnam-do, Korea
Tel. +82-55-371-9000 Fax. +82-55-387-1289

DRB China

East Industrial-zone, Lancun, Jimo-city Qingdao Shandong Province, China
Tel. +86-532-8259-9012 Fax. +86-532-8259-6509

DRB Slovakia

Robotnicka 2198, 017 01 Povazska Bystrica, Slovakia
Tel. +421-42-445-0400 Fax. +421-42-426-2291

DRB Vietnam

F-1-CN & F-7-CN, KCN My Phuoc II Industrial Park, Ben Cat District, Binh Duong Province, Vietnam
Tel. +84-650-3556-070 Fax. +84-650-3556-078

Sales Office

DRB / Overseas Sales Team

7 Geumsa-dong, Geumjeong-gu, Busan, Korea
Tel. +82-51-520-9110 Fax. +82-51-526-7722

DRB / Conveyor Business Team

242, Yeongdeungpo-dong, 2-ga, Yeongdeungpo-gu, Seoul 150-903, Korea
Tel. +82-2-2168-9111~9121 Fax. +82-2-2672-6829

DRB China

Room 603 Building D, Gold Rainbow Bridge Plaza, WuZhong Road 686 Nong No3, Shanghai, China
Tel. +86-21-5422-5691 Fax. +86-21-5422-5697

DRB America

13040 Moore St. Cerritos, CA 90703, America
Toll Free. 888-860-4450 Tel. +1-562-802-3088 Fax. +1-562-802-3089

DRB Indonesia

Ariobimo Sentral Lt.6, Jl.HR. Rasuna Said Blok X-2, Kav.5, Jakarta 12950, Indonesia
Tel. +62-21-522-5820 Fax. +62-21-522-5822

DRB Vietnam

No.17, 172/1 Nguyen Tuan Street, Nhan Chinh Ward, Thanh Xuan District, Hanoi, Vietnam
Tel. +84-4-6285-4028 Fax. +84-4-6285-4029

DRB Japan

7F, CR Hakata Bldg., 1-8-6, Hakataeki-minami, Hakata-ku, Fukuoka-city, 812-0016, Japan
Tel. +81-92-481-7303 Fax. +81-92-481-7307



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CS-C-100526-EN