

# PHOEBUS CONVEYOR BELT



**PHOEBUS**<sup>®</sup>



SHANDONG PHOEBUS RUBBER CO., LTD.

Address: Economic Development Zone, Yishui, Shandong, China.

**PHOEBUS**<sup>®</sup>

*Your Conveyor Belt Engineer*

**01****PHOEBUS®**

CONVEYOR BELT SERIES



# PHOEBUSBELTING

## CONVEYOR BELT MANUFACTURER

Shandong Phoebus Rubber Co., Ltd., the leading conveyor belt manufacturer in China. Located in Yishui City, Shandong Province, 200km away from Qingdao port. We are established in 2010, have 13 production lines.

Our main products include: Standard type, High strength type (NN, EP and steel cord), Pipe type, Chemical resistant, High temperature resistant, Cold resistant, Anti-tear and etc. Can meet or exceed various RMA, DIN, SANS and AS1332 standard and Quality Control system had been ISO9001 certified. The first-class production equipment, testing facilities and a complete quality assurance system guarantee the high quality. Our products are deeply loved by our customers, and they are widely used in the lines of metallurgical industry, coal mines, chemical industry, building materials, electricity, light industry, cereals, mining, ports and etc.

We not only sales to domestic market, but also to Europe, America, Middle East, Southeast Asia, South Africa, Australia, etc. High quality products, perfect service and strong technical supporting bring us wide & excellent reputation. We can provide our customers total satisfaction and confidence. Quality assurance has been constantly prompting the growth of our business. Chose us, trust us, "We are your professional Conveyor Belt Engineers!"



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**02**

### DIN 22102

Standards DIN 22102	Cover Rubber			Adhesion		
	Tensile Strength Mpa	Elongation at break %	Abrasion mm <sup>3</sup>	Cover to Ply N/mm(≤1.5mm)	Cover to Ply N/mm(≤1.5mm)	Ply to Ply N/mm
DIN 22102-Z	15	350	250	3.5	4.5	5
DIN 22102-W	18	400	90	3.5	4.5	5
DIN 22102-Y	20	400	150	3.5	4.5	5
DIN 22102-X	25	450	120	3.5	4.5	5

### AS 1332

Standards AS 1332	Cover Rubber			Adhesion		
	Tensile Strength Mpa	Elongation at break %	Abrasion mm <sup>3</sup>	Cover to Ply N/mm(≤1.9mm)	Cover to Ply N/mm(≤1.9mm)	Ply to Ply N/mm
AS 1332-N17	17	400	200	4	4.8	6
AS 1332-M24	24	450	125	4	4.8	6

### RMA

Standards RMA	Cover Rubber			Adhesion		
	Tensile Strength Mpa	Elongation at break %	Abrasion mm <sup>3</sup>	Cover to Ply N/mm(≤1.6mm)	Cover to Ply N/mm(≤1.6mm)	Ply to Ply N/mm
RMA-I	17	400	200	3	4.4	4
RMA-II	14	400	250	3	4.4	4

### SANS 1173

Standards SANS 1173	Cover Rubber			Adhesion		
	Tensile Strength Mpa	Elongation at break %	Abrasion mm <sup>3</sup>	Cover to Ply N/mm	Cover to Ply N/mm	Ply to Ply N/mm
A	18	400	70	5	5	7
C	20	400	150	5	5	7
M	25	450	120	5	5	7
N	17	400	150	5	5	7

# Rubber Grade

# EP CONVEYOR BELT

## Polyester Conveyor Belt

Performance

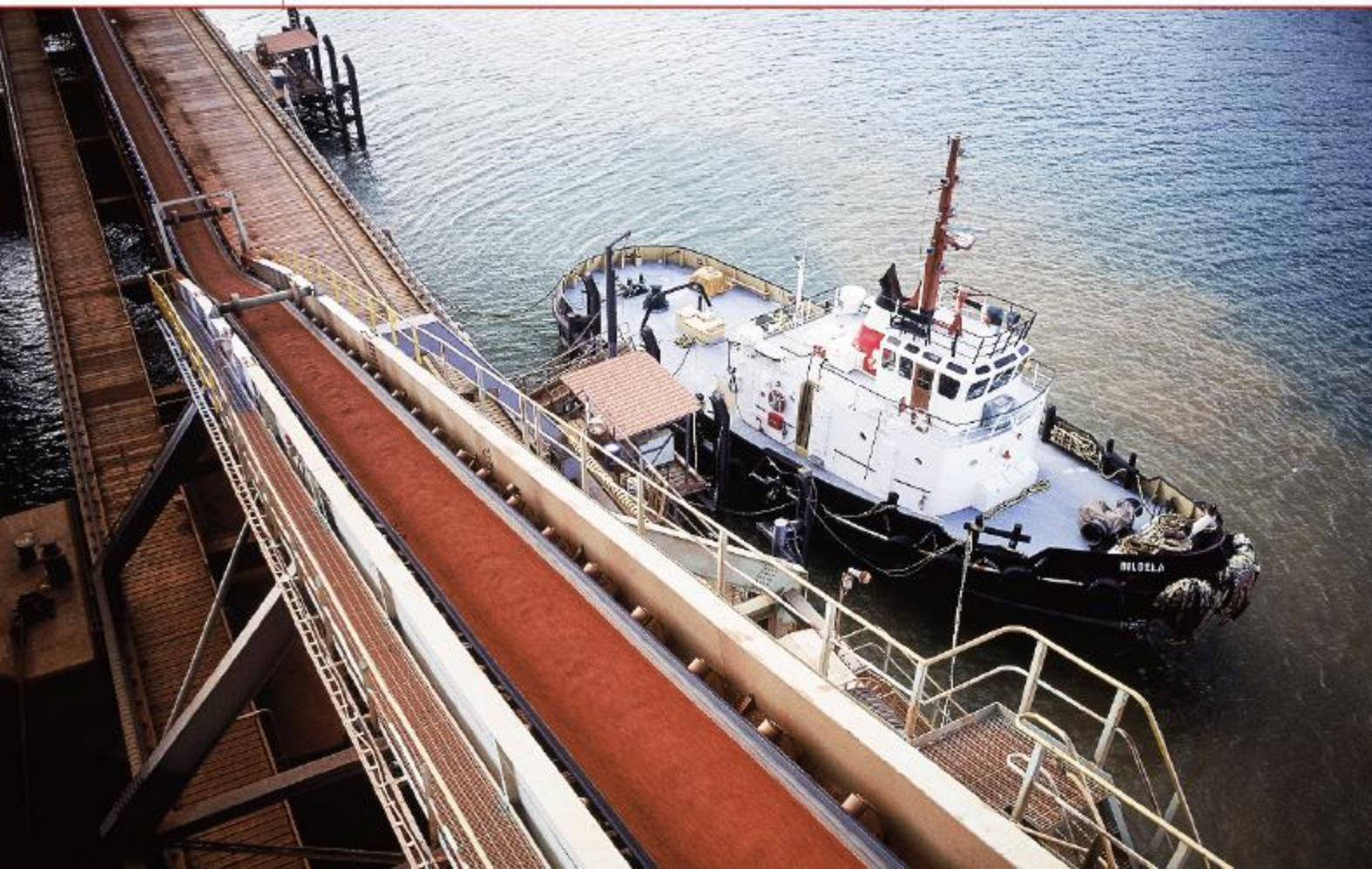
Polyester conveyor belt also called EP conveyor belts, whose tension resistant body is canvas woven by polyester in warp and polyamide in weft.

Features

The belts have characteristics of low elongation in warp and good through ability in weft, good water proof, and good wet strength, no mould, suitable for medium, long-distance and heavy-load transportation of materials.

Because of the high initial modulus of polyester, the belts can choose a relative low safety factor.

We provide various types of polyester conveyor belt with excellent quality and competitive price.



# EP CONVEYOR BELT

## Specification and technical index of EP conveyor belt

Fabric Type	Fabric Structure		Fabric Type	Fabric Thickness	Strength Series					Width	Cover Rubber Thickness		Length
	warp	weft			2ply	3ply	4ply	5ply	6ply		Upper	Lower	
Polyester (EP)	Polyester (E)	Polyamide (P)	EP-80	0.60	160	240	320	320	480	400-2500	2.0-8	0-4.5	<=500
			EP-100	0.75	200	300	400	400	600	400-2500			
			EP-150	1.0	300	450	600	600	900	400-2500			
			EP-200	1.1	400	600	800	800	1200	500-2500			
			EP-250	1.25	500	750	1000	1000	1500	500-2500			
			EP-300	1.35	600	900	1200	1200	1800	500-2500			
			EP-350	1.45		1050	1400	1400	2100	800-2500			
			EP-400	1.55			1600	1600	2400	1000-2500			
EP-500	1.70				2000	2000	3000	1000-2500					

We could offer belt with cover grade in accordance to International standard such as DIN 22102, RMA, AS 1332, SABS 1173/2000, IS 1891, BS 490, JIS K 6322, etc.



# STEEL CORD

## Steel Cord Conveyor Belt

Performance	Steel cord conveyor belt is extensively applied in coal, mining, port, metallurgy, power, chemical sectors for long-distance, large amount and high-speed conveying of materials.
Features	<ul style="list-style-type: none"> <li>• <b>High tensile strength:</b> Steel cord conveyor belt is suitable for large span, long distance transportation of materials.</li> <li>• <b>Small elongation in use:</b> It needs only a very short take-up stroke distance.</li> <li>• <b>Small diameter of drive pulley:</b> Steel cord conveyor belt body has a layer of longitudinally arranged steel cords as its skeleton, and thus is resistant to flex fatigue. Therefore, drive pulley of smaller diameter can be used to make the equipment smaller.</li> <li>• <b>High adhesion between rubber and steel cord:</b> The steel cords are coated with zinc on their surface, and also the rubber used has the property of good adhesion with steel cords. Therefore, the rubber is tightly adhered to the steel cords and is resistant to shock and difficult to drop, so the rubber belts are long in life.</li> <li>• <b>Even tension of steel cords:</b> Out of our advanced techniques in manufacturing, the steel cords are very evenly arranged and have the same tension, so the belts are well balanced in running and difficult to run awry.</li> <li>• <b>Good troughability:</b> As the belt body has no transverse skeleton, it is easy to form a deep trough, so the belts can load more materials and prevent the materials from escaping.</li> <li>• <b>Good troughability:</b> Steel cord conveyor belt body has no transverse skeleton, it is easy to form a deep trough, so the belts can load more materials and prevent the materials from escaping.</li> <li>• <b>Inspection of the belt with X-rays:</b> Users can X-rays to inspect damages of the skeleton steel cords on the conveyor machines to prevent accidents from happening.</li> </ul>
Cover Compounds	General, Fire-resistant, Cold-resistant, Abrasion-resistant, Heat-resistant and Chemical-resistant.
Standards offered	GB/T9770, DIN22131, EN ISO 15236, SANS1366 and AS1333.

## CONVEYOR BELT

# STEEL CORD

## Main technical index of ST series steel cord conveyor belt



Strength of the belt specifications	ST630	ST800	ST1000	ST1250	ST1600	ST2000	ST2500	ST3150	ST3500	ST4000	ST4500	ST5000	ST5400	ST6300
Longitudinal Tensile Strength	630	800	1000	1250	1600	2000	2500	3150	3500	4000	4500	5000	5400	6300
Maximal Nominal Diameter of the steel wire (mm)	3.0	3.5	4.0	4.5	5.0	6.0	7.2	8.1	8.6	8.9	9.7	10.9	11.3	12.3
Space between cord (Pitch)	10	10	12	12	12	12	15	15	15	15	16	17	17	18
Top cover thickness	5	5	6	6	6	8	8	8	8	8	8	8.5	9	10
Bottom cover thickness	5	5	6	6	6	6	6	8	8	8	8	8.5	9	10
Quality	18	19.5	21.5	22.2	26.1	33.1	35.3	41.1	45	45	51	59	62	65
Width specifications	Number of steel cords													
800	75	75	63	63	63	63	50	50						
1000	95	95	79	79	79	79	64	64	64	64	59	55	55	54
1200	113	113	94	94	94	94	76	76	77	77	71	66	66	63
1400	133	133	111	111	111	111	89	89	90	90	84	78	78	74
1600	151	151	126	126	126	126	101	101	104	104	96	90	90	85
1800		171	143	143	143	143	114	114	117	117	109	102	102	96
2000			159	159	159	159	128	128	130	130	121	113	113	107
2200						176	141	141	144	144	134	125	125	118
2400							193	155	155	157	157	146	137	129
2600							209	168	168	170	170	159	149	140
2800										184	184	171	161	151

07

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# HEAT RESISTANT

## The Carcass of the Heat Resistant Conveyor Belt

Performance	The carcass of the heat resistant conveyor belt selects cotton canvas or EP canvas as skeleton material. This kind of conveyor belt adopt ethylene-propylene rubber or styrene butadiene rubber as coating with good heat resistance.
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Features	Suitable for conveying hot material like powder or clump materials at high temperature. Ideal for conveying sintered ores, cokes, soda ash, chemical fertilizer, slag and foundry. It can resist high temperature.
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Features	The rubber compound used in the cover have been designed to avoid premature aging due to contact with any source of heat.
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Features	It can be divided into four types according to working temperature range: HRT-1 $\leq 100^{\circ}\text{C}$ , HRT-2 $\leq 125^{\circ}\text{C}$ , HRT-3 $\leq 150^{\circ}\text{C}$ , HRT-2 $\leq 175^{\circ}\text{C}$ , EPDM $\leq 250^{\circ}\text{C}$ , Burning Through $\leq 400^{\circ}\text{C}$
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08

## Models

Heat resistant conveyor belts fall into three models

Mode1: able to with stand the test temperature of less than  $100^{\circ}\text{C}$ , code S1

Mode2: able to with stand the test temperature of less than  $120^{\circ}\text{C}$ , code S2

Mode3: able to with stand the test temperature of less than  $150^{\circ}\text{C}$ , code S3

Mode4: able to with stand the test temperature of less than  $180^{\circ}\text{C}$ , code S4



**CONVEYOR BELT**

**HEAT RESISTANT**



# FLAME RESISTANT

## Flame Resistant Conveyor Belt

- |             |  |
|-------------|--|
| Performance | Flame Resistant Conveyor Belt is a conveyer belt made of cotton canvas, nylon canvas or EP canvas and formed through the processes of pressing, shaping, vulcanizing, etc.   |
| Usage       | <ul style="list-style-type: none"> <li>Flame Resistant Conveyor Belt is suitable for conveying various non-corrosive and thornless materials.</li> <li>It is better for conveying materials in blocks, in grains, or in powder, such as coal in bulk or in bales, in the easily burned or easily explosive environment above coal mine wells.</li> </ul> |

Cover Type	Standards	Minimum Tensile Strength (MPa)	Minimum Elongation (%)	Abrasion	Material Covered
Fire Resistant	SANS-F	17	350	180	Material with fire hazards, e.g. Coal
	IS-1891(FR Grade)	17	350	200	
	ISO-340(FR Grade)	17	350	180	
	AS-F(FR Grade)	14	300	200	
	AS-1332(FR Grade)	14	300	200	
	DIN S Grade	17	350	180	
	DIN K Grade	17	400	200	
	MSHA-FR	17	350	200	
	CAN/CSA (FR Grade)	17	350	200	

# FLAME CONVEYOR BELT RESISTANT

## Cover Rubber Property

ITEM	Tensile Strength	Elongation at break	Abrasion
	MPa	%	mm <sup>3</sup>
	≥ 18	≥ 450	≤ 200
	≥ 14	≥ 400	≤ 250

## Safety Property

ITEM	Flame retardant grades	
	K2	K3
Duration	The total duration of flame of 6 test pieces with covers is less than 45s, any individual test piece does not exceed 15s	Average value of duration of flame of 3 test pieces with covers does not exceed 60s
Anti-static property	≤ 3 x 10 <sup>8</sup> Ω	
Reappearance	There should be no reappearance of flame on any test pieces	

11

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## SIDEWALL CONVEYOR BELT

Example



## PIPE BELT

Example



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12



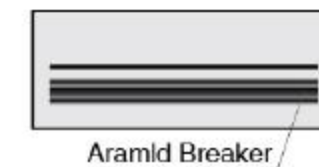
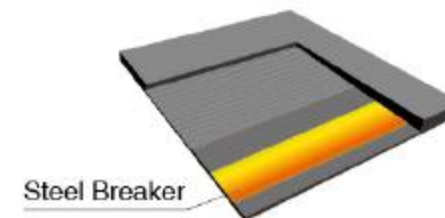
## STRAIGHT WARP CONVEYOR BELT

Example



## RIP-STOP CONVEYOR BELT

Example



CHEMICAL RESISTANT CONVEYOR BELT  
OIL RESISTANT CONVEYOR BELT  
COLD RESISTANT CONVEYOR BELT

Workshop & Machines



Test Machines



Loading and Packing

