

Steel Cord Belts

Steel cord conveyor belts are widely used in high strength, long distance and heavy load transportation of materials, and they are also used in high strength and short distance transportation of materials on special occasions.

Characteristics

1. High tensile strength: The belts are suitable for large span, long distance transportation of materials.
2. Small elongation in use: The belts need only a very short take-up stroke distance.
3. Small diameter of drive pulley: The belt body has a layer of longitudinally arranged steel cords as its skeleton, and thus is resistant to flex fatigue. Therefore, a drive pulley of smaller diameter can be used to make the equipment smaller.
4. High adhesion between rubber and steel cord: 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.
5. Even tension of steel cords: Because of 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 away.
6. Good trough ability: 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.
7. Inspection of the belt with X-rays: Users can use X-rays to inspect damages of the skeleton steel cords on the conveyor machines to prevent accidents from happening.

Standard belt specification								
Belt strength (st-NO.)	Max Cord Dia (mm)	Composition	Pitch (mm)	Standard working tension (N/mm)	Standard Cover Thickness(mm)	Belt weight(Kg/m ²)	Min .Pull ey Dia (mm)	Cord Strength KN/piece
St-630	3.0	6×7+IWS	10	90	5×5	19.1	800	6.93
St-800	3.5	6×7+IWS	10	110	5×5	20.6	800	8.8
St-1000	4.0	6×7+IWS	12	140	6×6	24.7	800	13.2
St-1250	4.5	6×7+IWS	12	175	6×6	25.4	800	16.5
St-1600	5.0	6×19+IWS	12	225	6×6	26.0	1000	21.12
St-2000	6.0	6×19+IWS	12	285	8×6	30.0	1000	26.4
St-2500	7.2	6×19W+IWS	15	355	8×6	32.2	1250	41.25

St-3150	8.1	6×19W+IWS	15	450	8×8	35.7	1400	51.98
St-3500	8.6	6×19W+IWS	15	500	8×8	44.9	1500	57.7
St-4000	8.9	6×19W+IWS	15	570	8×8	46.6	1600	66
St-4500	9.7	6×19W+IWS	16	645	8×8	49	1800	79.2
St-5000	10.9	6×19W+IWS	17	715	8.5×8.5	53.6	1800	93.5
St-5400	11.3	6×19W+IWS	17	760	9×9	57.5	2000	101

Cover rubber property and grades								
Test items		Property Indexes						
		GB9770-2001				DIN22131-88		
		D	H	L	P	W	X	Y
Tensile strength	Mpa ≥	18	25	20	14	18	25	20
Pull to break the elongation rate	% ≥	400	450	400	350	400	450	400
After aging(70..7D) Change rate of tensile strength Change rate of elongation	%	-25~+25	-25~+25	-25~+25	-25~+25	-25~+25	-25~+25	-25~+25
Abrasion	≤	90 MM ³	120 MM ³	150 MM ³	200 MM ³	90 MM ³	120 MM ³	150 MM ³

St2000

Cover rubber property and grades													
strength	St630	St800	St1000	St1250	St1600	St2000	St2500	St3150	St3500	St4000	St4500	St5000	St5400
Adhesion N/mm GB9770-2001	60	70	80	95	105	105	130	140	145	150	165	175	180
Adhesion N/mm DIN22131-88	60	70	80	95	105	105	130	140	145	150	165	175	180

Steel Cord FR Grade

1. Characteristics and Uses

Fire-resistant steel cord conveyor belt has the merits of conveying materials at the occasions of high strength, long distance, and large load as common steel cord conveyor belt. However, it also has fire-resistance and anti-static properties, and it is thus suitable for conveying materials under coalmine wells.

2. Cover Property and Grade

Tensile strength: =15Mpa

Elongation at break: =350%

Aging test(70?×168h)

Change rate of tensile strength: -25~+25%

Change rate of elongation at break: -25~+25%

Abrasion =200mm3

Safety property			
Items			Indexes
Anti-static property	Average electrical resistance of both surfaces		$3 \leq 10^8$
Drum friction	Surface temperature of drum.		≤ 325
	Any test piece shall not show any sign of flame or glow		
Burning on spirit burner (flame or glow)	Burning with cover rubber Average duration of flame	Average duration of flame for six test pieces	≤ 3
		Duration of flame for any individual test piece	≤ 10
	Burning without cover rubber	Average duration of flame for six test piece	≤ 5
		Duration of flame for any individual test piece	≤ 15
Burning on propane burner	Length that is completely undamaged by flame		≥ 250 MM

Nylon Rubber Conveyor Belts

Nylon is one of the best quality synthetic fiber the rubber industry uses today. The nylon canvas is woven by nylon ribbers both in warp and in weft. It is the most widely used fabric in rubber industry, and its outstanding merits are its high abrasion resistance, high tensile strength and good fatigue resistance. Conveyor belts with nylon canvas inside have the characteristics of thin belt body, high tensile strength, good shock resistance, good trough ability, high adhesion between plies, splendid flexibility and long working life. Nylon conveyor belts are suitable for medium, long distance and heavy-load transportation of materials, widely used in mining, metallurgical industry and architectural industry ports and etc.

Specification and technical data of multi-ply nylon conveyor belt

Fabric type	Fabric structure		Fabric specs	Ply thickness (mm/P)	N/mm Strength series					Cover thickness		Width mm	Length m
	Warp	Weft			2 ply	3 ply	4 ply	5 ply	6 ply	Upper	Bottom		
Nylon (NN)	Nylon (N)	Nylon (N)	NN-100	0.70	200	300	400	500	600	1.5-8	0-4.5	400-2500	≤ 300
			NN-125	0.75	250	375	500	625	750			500-2500	
			NN-150	0.80	300	450	600	750	900				
			NN-200	0.90	400	600	800	1000	1200				
			NN-250	1.10	500	750	1000	1250	1500				
			NN-300	1.25	-	900	1200	1500	1800				
			NN-350	1.35	-	1050	1400	1750	2100				
			NN-400	1.70	-	-	1600	2000	2400				
			NN-500	1.80	-	-	2000	2500	3000				

Adhesion and elongation of the belt:					
Belt carcass	Adhesive strength			Elongation	
	Between plies N/mm	N/mm Between rubber and carcass		Longitudinal Elongation at break % = ≥	Longitudinal elongation % ≤
		Rubber thickness=1.5mm	Rubber thickness>1.5mm		
Nylon canvas	≥4.50	≥3.2	≥3.5	10	2.0

Cover properties of the belts:					
Cover grade	Tensile strength ≥		Elongation ≤	Abrasion ≥	Change rate of tensile strength and elongation after aging %
	Mpa	kgf/cm ²	%	mm ³ /1.61KM	
Heavy (H)	24	240	450	120	-25~+25
Medium (M)	18	180	400	100	-25~+25
Light (L)	15	150	350	200	-30~+30

Fr Grade Conveyor belt

Product characteristics

The product is made of cotton canvas, nylon canvas or EP canvas and finished through the processes of calendering, assembling, vulcanizing etc. It is suitable for conveying various non corrosive and thorn less materials in bales, in grains, or in powder, such as coal in bulk or in bales, under the condition of flammable or explosive environment above coalmine wells.

Cover rubber property		
Item	Class L	Class D
Tensile strength MPa	≥14	≥18
Elongation at break %	≥400	≥450

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 15 S	Average value of duration of flame of 3 test pieces with covers does not exceed 60S
Anti-static property	$\leq 3 \times 10^8 \Omega$	
Reappearance	There should be no reappearance of flame on any test piece	