HEAVYWEIGHT CONVEYOR BELT CATALOG

ABOVEGROUND • OVERLAND • UNDERGROUND



Belts Designed to Meet All Application Needs.

HEAVYWEIGHT CONVEYOR BELT CATALOG 2012

GOODYEAR ENGINEERED PRODUCTS
GOODYEAR RUBBER PRODUCTS INC.
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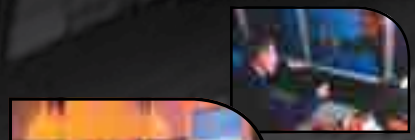
We Ship World Wide

Superior Performance, Lower Cost-Per-Ton.

Goodyear Engineered Products heavyweight conveyor belts deliver heavyweight benefits - the kind that accelerate your business. With any of our heavyweight belts you get the performance it takes to achieve a lower cost-per-ton conveyed for a wide variety of end-use applications.

In addition to superior construction, when you purchase Goodyear Engineered Products Heavyweight Conveyor Belts, our sales associates and distributors are part of the deal. They're there when you need them with after-the-sale support. This ensures that you get the most out of every belt and that the quality you expect lasts and lasts.



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BELT CONSTRUCTION

Goodyear Engineered Products conveyor belts are designed from the inside out to endure the everyday working abuse of tons of coal, aggregate, wood and hard rock. Layers of specially designed fabric plies are sandwiched between rubber skim coats for adhesion and load support. Bottom and top cover compounds are added for maximum protection of the belt carcass. These compounds are comprised of different polymers, fillers and plasticizers and come in a wide variety of cover gauges.

For over 90 years, our breakthrough fabric designs have been tested in some of the toughest conveyor belt applications worldwide. These high-quality belt constructions give you the confidence you need for operating performance.

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Conveyor Belt Components

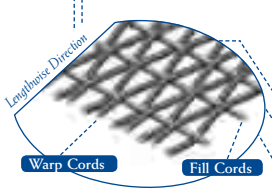
Top Cover

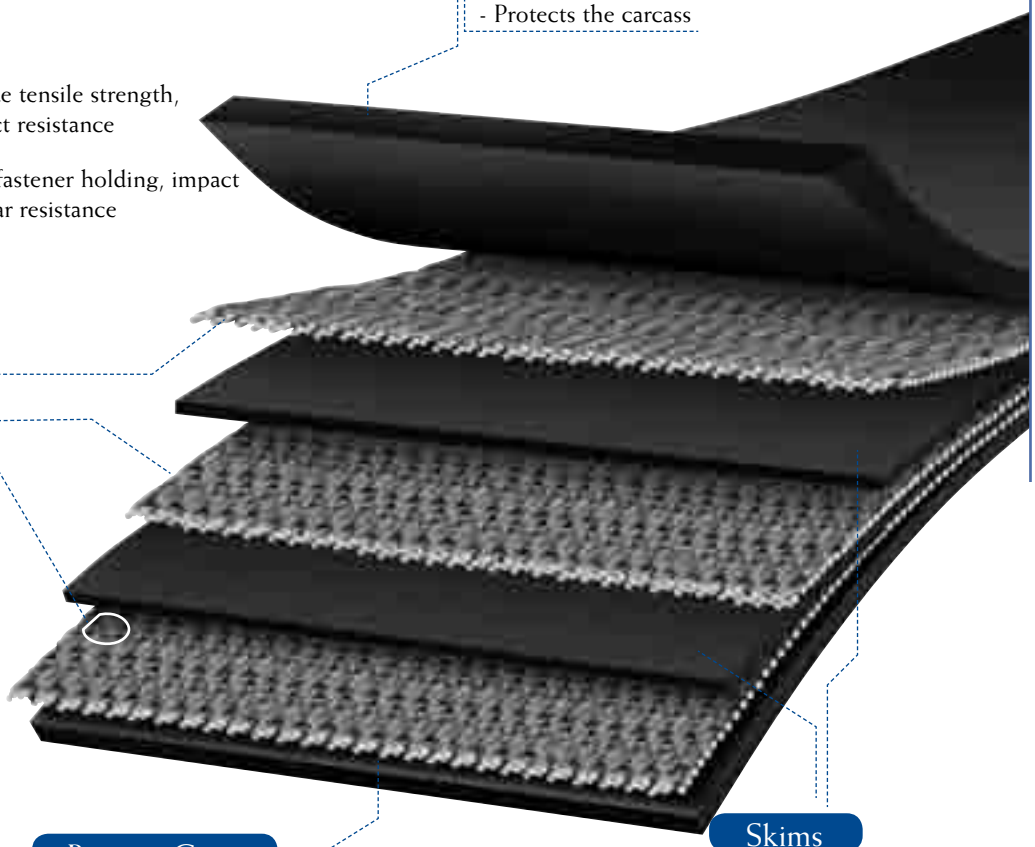
- Protects the carcass

Fabric Plies

Warp Cords - Provide tensile strength, transverse tear, impact resistance

Fill Cords - Provide fastener holding, impact resistance, rip and tear resistance





Bottom Cover

- Protects the carcass

Skims

- Rubber between the plies
- Provide adhesion
- Provide load support
- Provide impact resistance

BELT CONSTRUCTION NOMENCLATURE EXAMPLE:

Rubber Compound		Number of Plies		Top Cover Gauge		
Plylon Plus®	Stacker®	375	3/48	3/16"	x	1/16"
Belt Construction		PIW Rating (pounds per inch of width)	Belt Width			Bottom or Pulley Cover Gauge

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ABOVEGROUND

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ABOVEGROUND MARKETS	PRODUCT: ConquestXP™	Plylon Plus®	Plylon®	Raider®	Solar-Shield® XL 750	Wood Sawyer®	Pathfinder®	Xtra-Grip™
COAL / PREP PLANTS	•	•					•	•
AGGREGATE	•	•	•	•				•
CEMENT	•	•	•	•			•	•
BULK HANDLING TERMINAL	•	•	•	•		•	•	•
WOOD/PULP AND PAPER	•	•	•	•		•		•
STEEL/FOUNDRY	•	•	•	•	•		•	•
PACKAGE HANDLING		•	•	•				•
HARD ROCK MINING	•	•	•				•	•
GRAIN HANDLING		•	•			•	•	•
POWER GENERATION			•		•			•
BAGGAGE HANDLING		•	•				•	•
SAND AND GRAVEL		•	•	•				•
PAGE NO.	8	12	18	22	24	28	36	40

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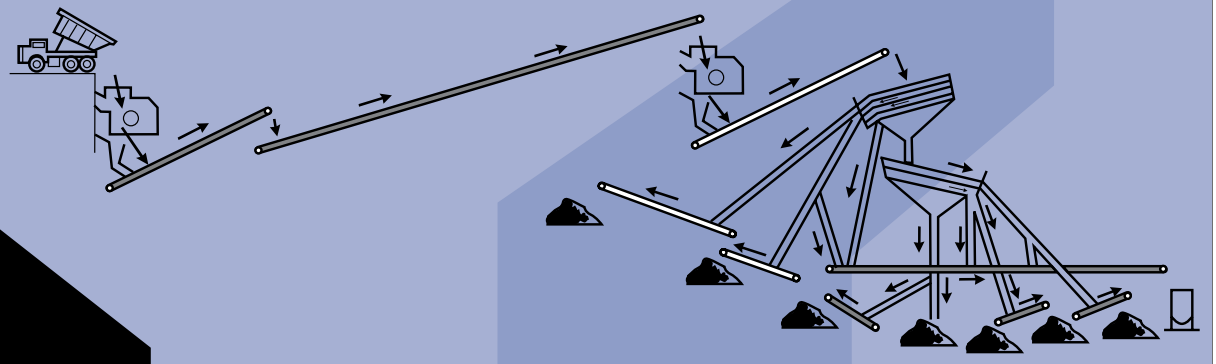
Example of:

Aggregate, Hard Rock Mining, Sand and Gravel Process



Process	Primary Crusher Mainline, Transfer, Overland, Pit Belt	Secondary Crusher Wash Plant	Stacker, Load Out, Radial Stacker
Goodyear Engineered Products Conveyor Belt Recommendations	**Conquest XP™ or Plylon Plus®**	**Plylon Plus® Plylon®**	**Plylon® Raider®**
Typical Material Size	6" and higher	6" - 3"	3" Minus
Application Description	High abuse and/or higher tension.	Moderate abuse and low tension.	Low abuse.
	Critical belt lines where uptime is a premium.	Typically the wash plant or screening area.	Typically short center-to-center systems which utilize screw take-ups.

Typical Material: Limestone, granite, ores, taconite, cement, rock, etc.

Note: For proper cover compounds and gauge, please consult pages 82-87.

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CONQUESTXP™

New Product

CONQUESTXP

DESCRIPTION:

This rugged, fabric-reinforced conveyor belt withstands high abuse applications. It's made with a revolutionary patented Fortress™ Technology weave design, holds up to the most demanding applications, and delivers up to three times longer life, proving ConquestXP™ provides a lower cost-per-ton with unsurpassed system savings.

Markets

- Aggregate
- Cement
- Coal
- Foundry
- Hard Rock
- Pulp and Paper
- Steel Production
- Wood Products

Applications

- Log Debarkers
- Log Decks
- Mainlines
- Pit Belts
- Primary Crushers
- Secondary Crushers
- Ship Unloaders
- Trash and Recycling
- Any High Abuse Applications

Cover Compounds

- Defender®
- Stacker®
- Survivor®
- Global X®
- MonsterHide™

(See pages 82-87 for more specific details.)

See the process diagram for Aggregate, Hard Rock Mining, Sand and Gravel markets on page 6 for alternative belt recommendations.

GET A LOWER
COST-PER-TON CONVEYED.

Tension Range

330 to 880 PIW

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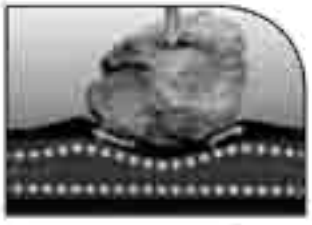
Features & Benefits

Innovative patented fabric weave

The new dual layer twill fabric gives ConquestXP™ improved load bearing and impact resistance.



Exceptional impact resistance

The new ConquestXP has industry-leading impact resistance. Loading point impact damage can be a major cause of belt failure. Design Engineers used an enhanced Dynamic Impact Tester to simulate loading impact force and its effects on belting.

High transverse tear strength

The dual layer twill fabric design enables high transverse tear strength. This minimizes tears that result from material punctures as well as edge tears from misaligned belts.

Superior rip resistance

Scrap metal or debris often get “hung up” in the structure of the conveyor, causing equipment damage and slits or cuts in long sections of the belt. Our fabric design helps dislodge and expel foreign objects and contain rips to a small area.

Enhanced mechanical fastener pull-out resistance

Rigorous dynamic and static testing means that ConquestXP belts will provide superior mechanical fastener retention as compared with multi-ply and straight-warp constructions.

CONQUESTXP

FORTIFIED WITH THE POWER OF FORTRESS™ TECHNOLOGY

Conveyor Belt Components

- Patent Pending Dual Layer Twill Weave Design.
- Fabric technology advancements for improved yarn design and increased yarn strength.
- More-abuse-resistant fabric design to reduce catastrophic failures.

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ConquestXP™ Conveyor Belt Data - Imperial

	ConquestXP 330/1	ConquestXP 440/1	ConquestXP 660/2	ConquestXP 880/2
Plies	1	1	2	2
Fabric Type	Dual Layer Twill (P/N)	Dual Layer Twill (P/N)	Dual Layer Twill (P/N)	Dual Layer Twill (P/N)
Vulcanized & Fastener Rating (piw)	330	440	660	880
Nominal carcass gauge (inch)	0.13	0.14	0.27	0.305
Nominal carcass weight (lbs/sq.ft.)	0.73	0.85	1.61	1.9
Approximate 1/32" cover weight (lbs/sq.ft.)	0.19	0.19	0.19	0.19
Average Permanent Elongation (%)*	1.00%	1.00%	1.20%	1.20%
Average Elastic Modulus (piw)	33,000	35,000	66,000	70,000
Step Length	Finger Splice	Finger Splice	Finger Splice	Finger Splice
Recommended Fasteners Plate	BR6	BR6	BR10	BR14
Hinge	R5	R5	R5-1/2	R6
Hinge	U35	U35	U35	U37/U37A

**Average Permanent Elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations specific to each system based on Minuteman calculations.*

ConquestXP Load Support (Maximum Belt Width) (inch)

Material Weight	0-40 lbs./cu.ft.			41-80 lbs./cu.ft.			81-120 lbs./cu.ft.			Over 120 lbs./cu.ft.		
Trough Angle	20	35	45	20	35	45	20	35	45	20	35	45
330/1	60	54	54	60	54	48	54	48	42	48	42	36
440/1	66	60	60	66	60	54	60	54	54	54	48	42
660/2	90	84	84	84	78	72	84	72	66	72	66	54
880/2	96	90	84	90	84	78	90	84	78	84	78	66

On systems with troughing idler spacing greater than 5 ft. or idler roll gap greater than, 1/2" consult your GTM.

ConquestXP Troughability Support (Minimum Belt Width) (inch)

Idlers	ConquestXP 330/1	ConquestXP 440/1	ConquestXP 660/2	ConquestXP 880/2
20 degree	18	18	24	30
35 degree	24	24	30	36
45 degree	24	30	36	42

If top cover and pulley cover are balanced (i.e. 3/16" x 3/16") or less than 1/16" differential (ie. 3/16" x 5/32"), add 6" to the minimum belt width. 6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded.
Additional break-in time is required when the belt has been stored prior to installation in ambient temperatures of less than 50 degrees Fahrenheit.

ConquestXP Minimum Pulley Diameters (inch)

	ConquestXP 330/1	ConquestXP 440/1	ConquestXP 660/2	ConquestXP 880/2
Over 80% tension	18	20	24	30
60% - 80% tension	16	18	20	24
40% - 60% tension	14	16	18	20
Up to 40% tension	12	14	16	18
Tails and Snubs	12	14	16	18

Note: The minimum cover for vulcanized splice is 3/32"
The recommended is maximum top to bottom cover ratio for one ply is 2 to 1 (example is 1/4" x 1/8") and for two ply is 3 to 1 (example is 3/8" x 1/8")
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge

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ConquestXP™ Conveyor Belt Data - Metric

	ConquestXP 330/1	ConquestXP 440/1	ConquestXP 660/2	ConquestXP 880/2
Plies	1	1	2	2
Fabric Type	Dual Layer Twill (P/N)	Dual Layer Twill (P/N)	Dual Layer Twill (P/N)	Dual Layer Twill (P/N)
Vulcanized & Fastener Rating (kN/m)	58	77	116	154
Nominal carcass gauge (mm)	3.3	3.6	6.9	7.7
Nominal carcass weight (kg/sq.m)	3.6	4.1	7.9	9.3
Approximate 1/32" cover weight (kg/sq.m)	0.19	0.19	0.19	0.19
Average Permanent Elongation (%)*	1.00%	1.00%	1.20%	1.20%
Average Elastic Modulus (kN/m)	5,779	6,130	11,559	12,259
Step Length (mm)	Finger Splice	Finger Splice	Finger Splice	Finger Splice
Recommended Fasteners Plate	BR6	BR6	BR10	BR14
Hinge	R5	R5	R5-1/2	R6
Hinge	U35	U35	U35	U37/U37A

**Average Permanent Elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations specific to each system based on Minuteman calculations.*

ConquestXP Load Support (Maximum Belt Width) (mm)

Material Weight	0-640 kg/m³			641-1280 kg/m³			1281-1920 kg/m³			Over 1920 kg/m³		
Trough Angle	20	35	45	20	35	45	20	35	45	20	35	45
330/1	1500	1350	1350	1550	1350	1200	1350	1200	1050	1200	1050	900
440/1	1650	1550	1550	1650	1550	1350	1550	1350	1350	1350	1200	1050
660/2	2300	2150	2150	2150	2000	1850	2150	1850	1650	1850	1650	1350
880/2	2450	2300	2150	2300	2150	2000	2300	2150	2000	2150	2000	1650

On systems with troughing idler spacing greater than 1.5m. or idler roll gap greater than 12.7mm, consult your GTM.

ConquestXP Troughability Support (Minimum Belt Width) (mm)

Idlers	ConquestXP 330/1	ConquestXP 440/1	ConquestXP 660/2	ConquestXP 880/2
20 degree	450	450	600	750
35 degree	600	600	750	900
45 degree	600	750	900	1050

If top cover and pulley cover are balanced (i.e. 4.7mm x 4.7mm) or less than 1.5mm differential (ie. 4.7mm x 3.9mm), add 152mm to the minimum belt width. 152mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded.
Additional break-in time is required when the belt has been stored prior to installation in ambient temperatures of less than 10 degrees Centigrade.

ConquestXP Minimum Pulley Diameters (mm)

	ConquestXP 330/1	ConquestXP 440/1	ConquestXP 660/2	ConquestXP 880/2
Over 80% tension	450	500	600	750
60% - 80% tension	400	450	500	600
40% - 60% tension	350	400	450	500
Up to 40% tension	300	350	100	450
Tails and Snubs	300	350	400	450

Note: The minimum cover for vulcanized splice is 2.4mm
The recommended is maximum top to bottom cover ratio for one ply is 2 to 1 (example is 4.5mm x 2.25mm) and for two ply is 3 to 1 (example is 9mm x 3mm)
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge

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PLYLON PLUS®

DESCRIPTION:

Plylon Plus® is our premium all-purpose fabric conveyor belt construction that can be used in a variety of industries and applications with most of our exclusive Goodyear Engineered Products rubber cover compounds.

Markets

- Aggregate
- Baggage Handling
- Bulk Handling Terminal
- Cement
- Coal
- Foundry
- Grain
- Hard Rock
- Package Handling
- Pulp and Paper
- Sand and Gravel
- Steel Production
- Wood Products

Applications

- Coal Prep Plant
- Log Debarkers
- Log Decks
- Mainlines
- Pit Belts
- Primary Crushers
- Secondary Crushers
- Ship Unloaders
- Stacker Conveyors
- Trash and Recycling

Cover Compounds

- 6740A
- ARMA®-SBR
- Defender®
- HT Nitrile
- OMEGA®
- Stacker®
- Survivor®
- ARMA® II

(See pages 82-87 for more specific details.)

See the process diagram for Aggregate, Hard Rock Mining, Sand and Gravel markets on page 7 for alternative belt recommendations.

Tension Range

250 PIW to 1800 PIW

GET A LOWER

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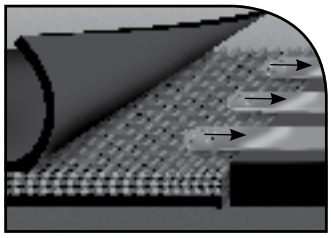
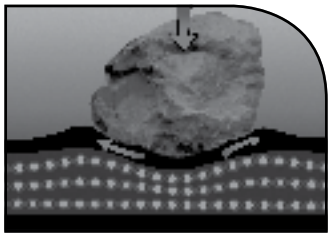
Features & Benefits



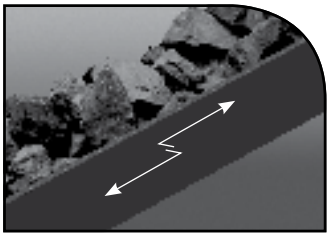
Excellent fastener holding retention

High strength fill cords enhance mechanical fastener holding ability and resist fastener pull-out for reliable performance and increased uptime.



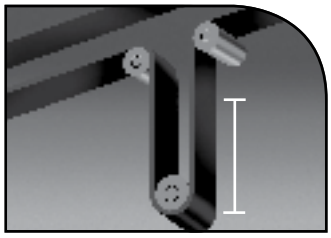
Excellent rip, tear and impact resistance

Specially designed crimped warp cords straighten on impact and then recover their original shape. This enables the fabric to absorb greater impact loads and resist tearing for long-lasting durability and a lower cost-per-ton conveyed.



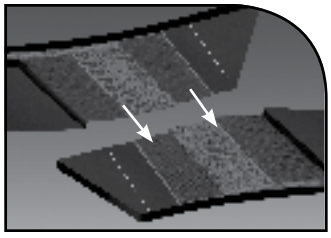
High ultimate strength

Plylon Plus withstands severe tension spikes at start-up, retains mechanical fasteners and withstands continuous flexing around pulleys. This higher ultimate strength makes a critical difference in abusive operating conditions.



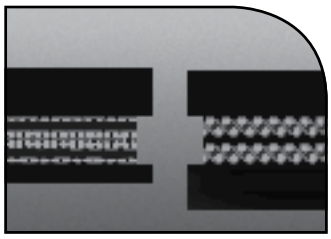
Reduced stretch

The combination of fabric design and dip process provides lower elasticity and permanent elongation on all specifications. This minimizes take-up concerns and reduces the number of splices at break-in. Contact your local GTM to calculate permanent and elastic elongation requirements for your specific systems.



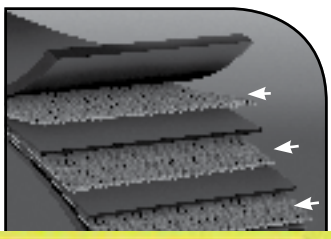
Standard bias step splices

A quick and effective technique, step splices greatly reduce downtime and are recognized throughout the industry as the standard. The vulcanized splice in Plylon Plus retains 100% of belt tension rating during all running conditions.
(See data table for proper step length on page 14).



Variety of cover compounds and cover gauges

Protect your product with the proper compound and cover gauge for the application. Plylon Plus has the flexibility to customize a belt to your application.



Variety of fabric carcasses

Choose from a selection of carcasses that provide outstanding strength, adhesion, impact absorption, and other properties. These include fabric carcasses from 250 to 1800 PIW.

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PLYLON PLUS CONVEYOR BELT DATA - Imperial

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of Plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Fabric Type*	P/N	P/N	P/P	P/N	P/P	P/N	P/P	P/N	P/N	P/P	P/P	P/N	P/N	P/N
Vulcanized & Fastener Rating (piw)	250	375	400	500	600	750	800	900	1000	1000	1200	1250	1350	1800
Nom. Carcass Gauge (in.)	0.129	0.169	0.178	0.229	0.251	0.246	0.340	0.300	0.337	0.429	0.518	0.427	0.453	0.613
nom. Carcass Weight (lbs/sq.ft.)	0.76	1.01	1.00	1.36	1.40	1.50	1.89	1.88	2.04	2.39	2.89	2.59	2.83	3.82
Approx 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Avg. Permanent Elongation (%) **	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5	0.8	0.8	0.8	0.8	1.5	1.5
Elastic modulus (piw)	30,000	45,000	44,000	60,000	66,000	56,250	88,000	62,532	74,000	110,000	132,000	92,500	93,798	125,064
Step Length (in.) ***	10	10	16	10	16	18	16	Finger	18	16	16	18	Finger	Finger
Recommended Fastener Plate	190	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14	NR	NR	NR	NR	NR	NR	NR
Hinge	R2	R5	R5	R5-1/2	R5-1/2	R6	R6	RAR8	RAR8	RAR8	RAR8	RAR8	NR	NR
Hinge	U35A	U35	U35	U35	U35	U37/U37	U37/U37	U38A	U38A	U38A	U38	U38	U38	U38B

Plylon Plus rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness,pulley diameters and system tension. Consult your GTM or fastener manufacturer. R-6 fasteners must be installed with stainless steel rivets when belt tensions exceed 800 piw for best results.

**P/P = Poly/Poly P/N = Poly/Nylon*

*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations*

**** Consult your GTM for vulcanized splice design for 900/2, 1350/3, and 1800/4 constructions.*

PLYLON PLUS LOAD SUPPORT (Maximum Belt Width) (in.)

PIW/Plies	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
250/2		54	48	48	48	42	36	42	42	30	36	30	NR
375/3		72	60	60	60	60	48	54	54	48	48	42	36
400/2		60	54	54	54	48	42	48	48	42	42	36	30
500/4		84	72	72	72	60	54	72	60	54	60	54	48
600/3		84	72	72	72	60	54	72	60	54	60	54	48
750/3		84	72	72	72	60	54	72	60	54	60	54	48
800/4		96	84	84	84	72	72	84	72	60	72	60	54
900/2		78	78	72	72	72	60	72	60	54	60	54	48
1000/4		96	84	84	84	72	72	84	72	60	72	60	54
1000/5		108	96	96	96	84	84	96	84	72	84	72	72
1200/6		116	108	108	108	96	96	108	96	84	96	84	84
1250/5		116	108	108	108	96	96	108	96	84	96	84	78
1350/3		96	96	84	96	96	84	96	84	72	96	84	72
1800/4		118	118	108	118	118	108	108	108	96	108	96	84

On systems with troughing idler spacing greater than 5 ft. OR idler roll gap greater than 1/2", consult your GTM.

PLYLON PLUS TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

Idlers	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
20 degree idlers	18	20	18	24	24	24	30	24	30	36	42	36	30	36
35 degree idlers	18	24	24	30	30	30	36	30	36	42	48	42	36	42
45 degree idlers	24	30	30	36	36	36	42	36	42	48	54	48	42	48

If top cover and pulley cover are balanced (ie. 3/16"x3/16") or less than 1/16" differential (ie. 3/16"x5/32"), add 6" to the minimum belt width.
6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50 degrees Fahrenheit
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge

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PLYLON PLUS CONVEYOR BELT DATA - Metric

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of Plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Fabric Type*	P/N	P/N	P/P	P/N	P/P	P/N	P/P	P/N	P/N	P/P	P/P	P/N	P/N	P/N
Vulcanized & Fastener Rating (kN/m)	44	66	70	88	105	131	140	158	175	175	210	219	236	315
Nom. Carcass Gauge (mm)	3.3	4.3	4.5	5.8	6.4	6.2	8.6	7.6	8.6	10.9	13.2	10.8	11.5	15.6
Nom. Carcass Weight (kg/sq.m)	3.7	4.9	4.9	6.6	6.8	7.3	9.2	9.2	10.0	11.7	14.1	12.6	13.8	18.7
Approx 1 mm cover wt (kg/sq.m)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Avg. Permanent Elongation (%) **	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.5	0.8	0.8	0.8	0.8	1.5	1.5
Elastic modulus (kN/m)	5,250	7,880	7,710	10,510	11,560	9,850	15,410	10,950	12,960	19,260	23,120	16,200	16,430	21,900
Step Length (mm)***	250	250	410	250	410	460	410	Finger	460	410	410	460	Finger	Finger
Recommended Plate Fastener	190	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14	NR	NR	NR	NR	NR	NR	NR
Hinge	R2	R5	R5	R5-1/2	R5-1/2	R6	R6	RAR8	RAR8	RAR8	RAR8	RAR8	NR	NR
Hinge	U35A	U35	U35	U35	U35	U37/U37	U37/U37	U38A	U38A	U38A	U38	U38	U38	U38B

Plylon Plus rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer. R-6 fasteners must be installed with stainless steel rivets when belt tensions exceed 140 kN/M for best results.
**P/P = Poly/Poly P/N = Poly/Nylon*
*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations*
**** Consult your GTM for vulcanized splice design for 900/2, 1350/3, and 1800/4 constructions.*

PLYLON PLUS LOAD SUPPORT (Maximum Belt Width) (mm)

PIW/Plies	Material Weight	0-640 kg/cu.m			641-1280 kg/cu.m.			1281-1920 kg/cu.m			Over 1920 kg/cu.m		
	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
250/2		1400	1200	1200	1200	1050	900	1050	1050	750	900	750	NR
375/3		1850	1550	1550	1550	1550	1200	1400	1400	1200	1200	1050	900
400/2		1550	1400	1400	1400	1200	1050	1200	1200	1050	1050	900	750
500/4		2150	1850	1850	1850	1550	1400	1850	1550	1400	1550	1400	1200
600/3		2150	1850	1850	1850	1550	1400	1850	1550	1400	1550	1400	1200
750/3		2150	1850	1850	1850	1550	1400	1850	1550	1400	1550	1400	1200
800/4		2450	2150	2150	2150	1850	1850	2150	1850	1550	1850	1550	1400
900/2		2000	2000	1850	1850	1850	1550	1850	1550	1400	1550	1400	1200
1000/4		2450	2150	2150	2150	1850	1850	2150	1850	1550	1850	1550	1400
1000/5		2750	2450	2450	2450	2150	2150	2450	2150	1850	2150	1850	1850
1200/6		2950	2750	2750	2750	2450	2450	2750	2450	2150	2450	2150	2150
1250/5		2950	2750	2750	2750	2450	2450	2750	2450	2150	2450	2150	2000
1350/3		2450	2450	2150	2450	2450	2150	2450	2150	1850	2450	2150	1850
1800/4		3000	3000	2750	3000	3000	2750	2750	2750	2450	2750	2450	2150

On systems with troughing idler spacing greater than 1.5 m OR idler roll gap greater than 12.7mm, consult Goodyear.

PLYLON PLUS TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

Idlers	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
20 degree idlers	450	500	450	600	600	600	750	600	750	900	1050	900	750	900
35 degree idlers	450	600	600	750	750	750	900	750	900	1050	1200	1050	900	1050
45 degree idlers	600	750	750	900	900	900	1050	900	1050	1200	1400	1200	1050	1200

If top cover and pulley cover are balanced (ie. 5mm x 5mm) or less than 2 mm differential (ie. 4mm x 3mm), add 150 mm to the minimum belt width.
150mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 10 degrees Centigrade.
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge

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PLYLON PLUS MINIMUM PULLEY DIAMETERS (in.)

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Over 80% Tension	16	18	16	24	24	30	30	30	36	36	42	42	36	42
60% to 80% Tension	14	16	14	20	20	24	24	24	30	30	36	36	30	36
40% to 60% Tension	12	14	12	18	18	20	20	24	24	24	30	30	30	36
Up to 40% Tension	12	14	10	18	16	18	18	20	20	20	30	24	24	30
Tails and Snubs	12	14	10	18	16	18	18	20	20	20	30	24	24	30

Plylon Plus HT belts (2/900, 3/1350, 4/1800) require a minimum pulley cover gauge of 1/8" if vulcanized splicing will be used.

ELEVATOR DATA

PLYLON PLUS ELEVATOR DATA - Imperial

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of Plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Fabric Type*	P/N	P/N	P/P	P/N	P/P	P/N	P/P	P/N	P/N	P/P	P/P	P/N	P/N	P/N
Industrial Service tension Capacity (piw)	195	290	310	385	465	580	620	700	775	775	930	970	1050	1400
Nom. Carcass Gauge (in.)	0.129	0.169	0.178	0.229	0.251	0.246	0.340	0.314	0.337	0.429	0.518	0.427	0.490	0.636
Nom. Carcass Weight (lbs/sq.ft.)	0.76	1.01	1.00	1.36	1.40	1.50	1.89	1.88	2.04	2.39	2.89	2.59	2.93	3.82
Approx 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Ave. Elastic modulus (piw)	30,000	45,000	44,000	60,000	66,000	56,250	88,000	62,532	74,000	110,000	132,000	92,500	93,798	125,064
Recommended Plate Fastener	190	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14	NR	NR	NR	NR	NR	NR	NR

Plylon Plus rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer.
Consult your GTM for vulcanized splice design for 900/2, 1350/3, and 1800/4 constructions.
**P/P = Poly/Poly P/N = Poly/Nylon*

PLYLON PLUS MINIMUM PULLEY DIAMETERS (in.)

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Over 80% Tension	16	18	18	24	30	30	36	36	36	42	48	48	42	48
60% to 80% Tension	14	16	16	22	24	24	30	30	30	36	42	42	36	42
Up to 60 % tension	12	14	14	20	20	20	24	24	24	30	36	36	30	36

PLYLON PLUS MAXIMUM BUCKET PROJECTION (in.)

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Spaced Industrial Max. Bucket Projection	7	8	9	11	10	10	11	11	12	12	12	12	13	15
Continuous Industrial Max. Bucket Projection	6	8	9	11	12	12	14	14	15	16	20	20	22	26

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PLYLON PLUS MINIMUM PULLEY DIAMETERS (mm)

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Over 80% Tension	400	450	400	600	600	750	750	900	900	900	1050	1050	900	1050
60% to 80% Tension	350	400	350	500	500	600	600	750	750	750	900	900	750	900
40% to 60% Tension	300	350	300	450	450	500	500	600	600	600	750	750	750	900
Up to 40% Tension	300	350	250	450	400	450	450	500	500	500	750	600	600	750
Tails and Snubs	300	350	250	450	400	450	450	500	500	500	750	600	600	750

Plylon Plus HT belts (2/900, 3/1350, 4/1800) require a minimum pulley cover gauge of 1/8" if vulcanized splicing will be used.

ELEVATOR DATA

PLYLON PLUS ELEVATOR BELT DATA - Metric

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of Plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Fabric Type	P/N	P/N	P/P	P/N	P/P	P/N	P/P	P/N	P/N	P/P	P/P	P/N	P/N	P/N
Industrial Service tension Capacity (Kn/M)	34	51	54	67	81	102	109	122	136	136	163	170	184	245
Nom. Carcass Gauge (mm)	3.3	4.3	4.5	5.8	6.4	6.2	8.6	8.0	8.6	10.9	13.2	10.8	12.4	16.2
Nom. Carcass Weight (kg/sq.m)	3.7	4.9	4.9	6.6	6.8	7.3	9.2	9.2	10.0	11.7	14.1	12.6	14.3	18.7
Approx 1 mm cover wt (kg/sq.m)	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Ave. Elastic modulus (kN/m)	5,250	7,880	7,710	10,510	11,560	9,850	15,410	10,950	12,960	19,260	23,120	16,200	16,430	21,900
Recommended Plate Fastener	190	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14	NR	NR	NR	NR	NR	NR	NR

Plylon Plus rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer.
Consult your GTM for vulcanized splice design for 900/2, 1350/3, and 1800/4 constructions.
**P/P = Poly/Poly P/N = Poly/Nylon*

PLYLON PLUS MINIMUM PULLEY DIAMETERS (mm)

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Over 80% Tension	400	450	450	600	750	750	900	900	900	1050	1200	1200	1200	1400
60% to 80% Tension	350	400	400	550	600	600	750	750	750	900	1050	1050	1050	1250
Up to 60 % tension	300	350	350	500	500	500	600	600	600	750	900	900	900	1100

PLYLON PLUS MAXIMUM BUCKET PROJECTION (mm)

	PLYLON PLUS 250/2	PLYLON PLUS 375/3	PLYLON PLUS 400/2	PLYLON PLUS 500/4	PLYLON PLUS 600/3	PLYLON PLUS 750/3	PLYLON PLUS 800/4	PLYLON PLUS 900/2	PLYLON PLUS 1000/4	PLYLON PLUS 1000/5	PLYLON PLUS 1200/6	PLYLON PLUS 1250/5	PLYLON PLUS 1350/3	PLYLON PLUS 1800/4
Number of plies	2	3	2	4	3	3	4	2	4	5	6	5	3	4
Spaced Industrial Max. Bucket Projection	180	200	225	280	250	250	280	280	300	300	300	300	330	380
Continuous Industrial Max. Bucket Projection	150	200	225	280	300	300	350	350	380	410	510	510	560	660

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Plylon®

PLYLON

DESCRIPTION:

Plylon® is a polyester reinforced conveyor belt that provides an economical alternative to Plylon Plus® in less-demanding applications.

Markets

- Aggregate
- Cement
- Crushed Stone
- Hard Rock
- Power Generation
- Sand and Gravel
- Steel Production

Applications

- Block Plants
- Load Out
- Radial Stackers
- Ready Mix
- Stacker Conveyors
- Trash and Recycling Plants
- Wash Plant

Cover Compounds

- 6740A
- ARMA®-SBR
- Defender®
- HT Nitrile
- OMEGA®

(See pages 82-87 for more specific details.)

See the process diagram for Aggregate, Hard Rock Mining, Sand and Gravel markets on page 7 for alternative belt recommendations.

Tension Range

220 PIW to 440 PIW

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COST-PER-TON CONVEYED.

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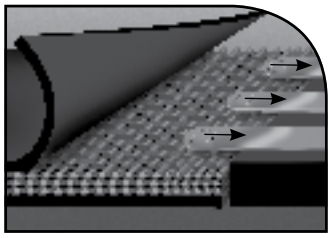
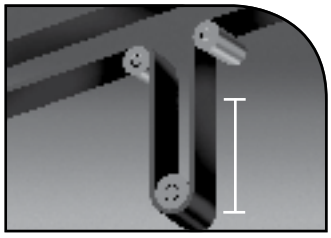
Features & Benefits



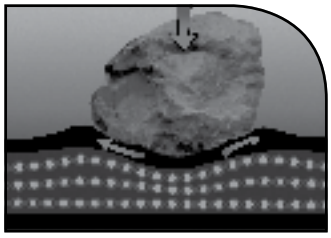
Excellent fastener retention

Plylon belt constructions offer superior mechanical fastener holding. Heavy polyester/ polyester cords positioned for maximum strength resist fastener pull-out even in abusive conditions.



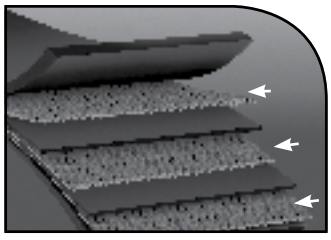
Reduced stretch

The combination of fabric design and dip process provides lower elasticity and permanent elongation on all specifications. This minimizes take-up concerns and reduces the number of splices at break-in. Contact your local GTM to calculate permanent and elastic elongation requirements for your specific systems.



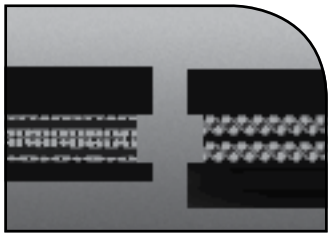
High-strength crimped cords absorb impact

By straightening on impact, the crimped warp cords enable the fabric to absorb impact loads and resist tearing. Plylon belting maintains the integrity of mechanical or vulcanized splices under demanding conditions.



Polyester/Polyester fabric carcass

Plylon belting is designed to handle sand, gravel, and small stone applications. The polyester fabric reinforcement provides greater breaking strength, impact and tear resistance than competitive brands.



Variety of cover compounds and cover gauges

Protect your product with the proper compound and cover gauge for the application.

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PLYLON CONVEYOR BELT DATA - Imperial

	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
Number of Plies	2	3	4
Fabric Type*	P/P	P/P	P/P
Vulcanized & Fastener Rating (piw)	220	330	440
Carcass Gauge (in.)	0.120	0.162	0.219
Carcass Weight (lbs/sq.ft.)	0.73	0.98	1.32
Approx 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19
Avg. Permanent Elongation (%) **	0.80	0.80	0.80
Elastic modulus (piw)	23,000	34,500	46,000
Step Length (in.)	10	10	10
Recommended Fastener Plate	140	190	BR-10
Hinge	R2	R2	R5
Hinge	U35A	U35A	U35

Plylon rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer.
**P/P = Polyester/Polyester*
*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations.*

PLYLON LOAD SUPPORT (Maximum Belt Width) (in.)

PIW/Plies	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
220/2		48	42	36	48	36	36	42	36	30	36	30	NR
330/3		60	54	48	60	48	42	54	48	42	48	42	36
440/4		72	60	54	66	60	48	60	54	48	54	48	42

On systems with troughing idler spacing greater than 5 ft. OR idler roll gap greater than 1/2", consult your GTM.

PLYLON TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

Idlers	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
20 degree idlers	18	18	24
35 degree idlers	18	24	30
45 degree idlers	24	30	36

If top cover and pulley cover are balanced (ie. 3/16"x3/16") or less than 1/16" differential (ie. 3/16"x5/32"), add 6" to the minimum belt width.
6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50 degrees Fahrenheit
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge

PLYLON MINIMUM PULLEY DIAMETERS (in.)

	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
Number of Plies	2	3	4
Over 80% Tension	16	18	24
60% to 80% Tension	14	16	20
40% to 60% Tension	10	12	16
Up to 40 % tension	10	12	16
Tails and Snubs	10	12	16

PLYLON ELEVATOR DATA - IMPERIAL

	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
Number of Plies	2	3	4
Fabric Type*	P/P	P/P	P/P
Industrial Service tension Capacity (piw)	170	250	350
Carcass Gauge (in.)	0.120	0.162	0.219
Carcass Weight (lbs/sq.ft.)	0.73	0.98	1.32
Approx 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19
Elastic modulus (piw)	23,000	34,500	46,000

Plylon rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
Consult Goodyear for fastener manufacturer.
**P/P = Poly/Poly*

PLYLON MAXIMUM BUCKET PROJECTION (in.)

	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
Number of Plies	2	3	4
Spaced Industrial Max. Bucket Projection	6	7	10
Continuous Industrial Max. Bucket Projection	5	7	10

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PLYLON CONVEYOR BELT DATA - Metric

	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
Number of Plies	2	3	4
Fabric Type*	P/P	P/P	P/P
Vulcanized & Fastener Rating (kN/m)	39	58	77
Carcass Gauge (mm)	3.05	4.11	5.56
Carcass Weight (kg/sq.m)	3.6	4.8	6.4
Approx 1 mm cover wt (kg/sq.m)	1.2	1.2	1.2
Avg. Permanent Elongation (%) **	0.80	0.80	0.80
Elastic modulus (kN/m)	4028	6042	8056
Step Length (mm)	250	250	250
Recommended Plate Fastener	140	190	BR-10
Hinge	R2	R2	R5
Hinge	U35A	U35A	U35

Plylon rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer.
**P/P = Polyester/Polyester*
*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations.*

PLYLON LOAD SUPPORT (Maximum Belt Width) (mm)

PIW/Plies	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
220/2		1200	1050	900	1200	900	900	1050	900	750	900	750	NR
330/3		1500	1400	1200	1500	1200	1050	1400	1200	1050	1200	1050	900
440/4		1850	1500	1400	1850	1400	1200	1500	1400	1200	1500	1200	1050

On systems with troughing idler spacing greater than 1.5 m OR idler roll gap greater than 12.7mm, contact your GTM.

PLYLON TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

Idlers	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
20 degree idlers	450	450	600
35 degree idlers	450	600	750
45 degree idlers	600	750	900

If top cover and pulley cover are balanced (ie. 5mm x 5mm) or less than 2 mm differential (ie. 4mm x 3mm), add 150 mm to the minimum belt width.
150mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 10 degrees Centigrade.
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

PLYLON MINIMUM PULLEY DIAMETERS (mm)

	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
Number of Plies	2	3	4
Over 80% Tension	400	450	600
60% to 80% Tension	350	400	500
40% to 60% Tension	250	300	400
Up to 40 % tension	250	300	400
Tails and Snubs	250	300	400

PLYLON ELEVATOR BELT DATA - METRIC

	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
Number of Plies	2	3	4
Fabric Type	P/P	P/P	P/P
Industrial Service tension Capacity (Kn/M)	30	44	61
Carcass Gauge (mm)	3.05	4.11	5.56
Carcass Weight (kg/sq.m)	3.6	4.8	6.4
Approx 1 mm cover wt (kg/sq.m)	1.2	1.2	1.2
Elastic modulus (kN/m)	4028	6042	8056

Plylon rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
Consult Goodyear for fastener manufacturer.
**P/P = Poly/Poly*

PLYLON MAXIMUM BUCKET PROJECTION (mm)

	PLYLON 220/2	PLYLON 330/3	PLYLON 440/4
Number of Plies	2	3	4
Spaced Industrial Max. Bucket Projection	150	180	250
Continuous Industrial Max. Bucket Projection	125	180	250

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RAIDER®

DESCRIPTION:

Goodyear Engineered Products Raider® is an economical polyester/polyester fabric belt construction. Raider belts are recommended for material less than 3" in diameter.

Markets

- Aggregate
- Package Handling
- Sand and Gravel

Applications

- 3" Minus Rock
- Load Out
- Low Abuse
- Radial Stacker
- Ready Mix
- Stacker

Cover Compounds

- Grade II
- MOR

(See pages 82-87 for more specific details.)

See the process diagram for Aggregate, Hard Rock Mining, Sand and Gravel markets on page 7 for alternative belt recommendations.

Tension Range

220 PIW to 600 PIW

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RAIDER CONVEYOR BELT DATA - Imperial

	RAIDER 220/2	RAIDER 330/3	RAIDER 440/4	RAIDER 600/3
Number Of Plies	2	3	4	3
Fabric Type	P/P	P/P	P/P	P/P
Vulcanized &Fastener Rating (piw)	220	330	440	600
Carcass Gauge (in.)	0.110	0.162	0.214	0.240
Carcass Weight (lbs/sq.ft.)	0.69	0.98	1.27	1.34
Approx 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19	0.19
Elastic modulus (piw)	23,000	34,500	46,000	80,000
Avg. Permanent Elongation (%) *	0.80	0.80	0.80	0.80
Splice Step Length (in.)	10"	10:"	10"	16"
Recommended Fastener Plate	140	190	BR10	BR10
Hinge	R2	R2	R5	R5-1/2
Hinge	U35A	U35A	U35	U35

RAIDER CONVEYOR BELT DATA - Metric

	RAIDER 220/2	RAIDER 330/3	RAIDER 440/4	RAIDER 600/3
Number Of Plies	2	3	4	3
Fabric Type	P/P	P/P	P/P	P/P
Vulcanized &Fastener Rating (kN/m)	220	330	440	600
Carcass Gauge (mm)	2.8	4.1	5.4	6.1
Carcass Weight (kg/sq m)	3.4	4.8	6.2	6.5
Approx 1mm cover wt (kg/sq m)	1.2	1.2	1.2	1.2
Elastic modulus (kN/m)	4,028	6,042	8,056	14,011
Avg. Permanent Elongation (%) *	0.80	0.80	0.80	0.80
Splice Step Length (mm)	250	250	250	400
Recommended Fastener Plate	140	190	BR10	BR10
Hinge	R2	R2	R5	R5-1/2
Hinge	U35A	U35A	U35	U35

*Rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters, and system tension. Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer. P/P = Poly / Poly . * Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult Goodyear field sales or GAD for elastic & total elongation calculations.*

RAIDER LOAD SUPPORT (Maximum Belt Width) (in.)

Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
Raider 220/2	48	42	36	48	36	36	42	36	30	36	30	NR
Raider 330/3	60	54	48	60	48	42	54	48	42	48	42	36
Raider 440/4	72	60	54	66	60	48	60	54	48	54	48	42
Raider 600/3	78	66	60	72	66	54	66	60	54	60	54	48

On systems with troughing idler spacing greater than 5ft. OR idler roll gap greater than 1/2", consult Goodyear.

RAIDER LOAD SUPPORT (Maximum Belt Width) (mm)

Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
Raider 220/2	1200	1050	900	1200	900	900	1050	900	750	900	750	NR
Raider 330/3	1550	1400	1200	1550	1200	1050	1400	1200	1050	1200	1050	900
Raider 440/4	1850	1550	1400	1650	1550	1200	1550	1400	1200	1400	1200	1050
Raider 600/3	2000	1650	1550	1850	1650	1400	1650	1550	1400	1550	1400	1200

On systems with troughing idler spacing greater than 1.5m OR idler roll gap greater than 12.7mm, consult Goodyear.

RAIDER TROUGHABILITY (Minimum Belt Width) (in.)
(Table based on ISO 703 Testing Procedure)

	RAIDER 220/2	RAIDER 330/3	RAIDER 440/4	RAIDER 600/3
Number of Plies	2	3	4	3
20 degree idlers	18	18	24	24
35 degree idlers	18	24	30	30
45 degree idlers	24	30	36	36

6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult Goodyear.

RAIDER TROUGHABILITY (Minimum Belt Width) (mm)
(Table based on ISO 703 Testing Procedure)

	RAIDER 220/2	RAIDER 330/3	RAIDER 440/4	RAIDER 600/3
Number of Plies	2	3	4	3
20 degree idlers	450	450	600	600
35 degree idlers	450	600	750	750
45 degree idlers	600	750	900	900

154.2mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult Goodyear.

RAIDER MINIMUM PULLEY DIAMETERS (in.)

	RAIDER 220/2	RAIDER 330/3	RAIDER 440/4	RAIDER 600/3
Number of Plies	2	3	4	3
Over 80% Tension	16	18	24	24
61% to 80% Tension	14	16	20	20
40% to 60% Tension	10	12	16	18
Up to 40% Tension	10	12	16	16
Tails and Snubs	10	12	16	16

RAIDER MINIMUM PULLEY DIAMETERS (mm)

	RAIDER 220/2	RAIDER 330/3	RAIDER 440/4	Raider 600/3
Number of Plies	2	3	4	3
Over 80% Tension	400	450	600	600
61% to 80% Tension	350	400	500	500
40% to 60% Tension	250	300	400	450
Up to 40% Tension	250	300	400	400
Tails and Snubs	250	300	400	400

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SOLAR-SHIELD® XL 750

DESCRIPTION:

Goodyear Engineered Products Solar-Shield® XL 750 heat belt is offered with polyester/nylon, polyester/polyester and fiberglass fabric reinforcements. It offers high performance in extreme hot material applications. The fiberglass fabric option offers the highest degree of burn-through resistance of any current available fabric reinforcement.

Markets

- Cement
- Foundry
- Iron Ore
- Steel Production
- Taconite

Applications

- Cement Clinker
- Coke Plants
- Hot Powdery Materials
- Sintered Ore
- Steel Mills
- Taconite Pellets

Cover Compounds

- SOLAR-SHIELD® XL 750

(See pages 82-87 for more specific details.)

GET A LOWER
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Tension Range

220 PIW to 1200 PIW

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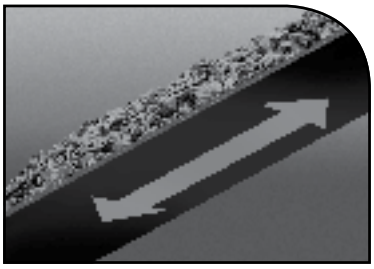
Features & Benefits

Heat-resistant cover resists cracking and hardening

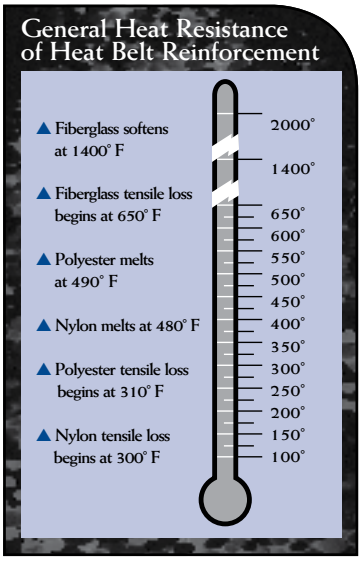
SOLAR-SHIELD® XL 750 belting performs over the long run, while retaining its flexibility despite punishing conditions and loads. Less cracking and hardening
translates into longer life and reduced replacement costs.

The SOLAR-SHIELD® XL 750 compound improves heat resistance above and beyond our 400°F compound and significantly extends belt life. The Solar-Shield XL 750 was designed to handle hot material loads up to 750°F, providing extreme longevity in severe heat applications.



High-temperature resistance to tearing and abrasion

Load after load, Solar-Shield XL 750 stands up to prolonged exposure. This reduced maintenance and downtime helps lower overall operating costs.



Synthetic carcass construction

Solar-Shield XL 750's synthetic carcass provides great dimensional stability and strength at high temperatures and operating tensions up to 1200 PIW.

Solar-Shield XL 750 carcass with fiberglass reinforcement

Fiberglass reinforcement throughout all plies of the carcass provides maximum protection when temperatures are not constant. The carcass stands up to "hot shots," resisting burn-through up to 1000°F.

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SOLAR-SHIELD XL 750 CONVEYOR BELT DATA - Imperial

	SOLAR-SHIELD 250/2	SOLAR-SHIELD 220/2	SOLAR-SHIELD 375/3	SOLAR-SHIELD 330/3 GL	SOLAR-SHIELD 400/2	SOLAR-SHIELD 500/4	SOLAR-SHIELD 600/3	SOLAR-SHIELD 800/4	SOLAR-SHIELD 1000/5	SOLAR-SHIELD 1200/6
Number of Plies	2	2	3	3	2	4	3	4	5	6
Fabric Type*	P/N	Glass	P/N	Glass	P/P	P/N	P/P	P/P	P/P	P/P
Vulcanized & Fastener Rating (piw)	250	220	375	330	400	500	600	800	1000	1200
Carcass Gauge (in.)	0.108	0.148	0.182	0.233	0.178	0.253	0.251	0.340	0.429	0.518
Carcass Weight (lbs/sq.ft.)	0.61	0.85	1.04	1.41	0.99	1.45	1.40	1.89	2.39	2.89
Approx 1/32" cover wt (lbs/sq.ft.)	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
Avg. Permanent Elongation (%) **	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Elastic modulus (piw)	30,000	37,000	45,000	55,500	44,000	60,000	66,000	88,000	110,000	132,000
Step Length (in.)	12	18	12	18	16	12	16	16	16	16

Solarshield rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
**P/P = Poly/Poly GL = Glass P/N = Poly / Nylon*
*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations*

SOLAR-SHIELD XL 750 LOAD SUPPORT (Maximum Belt Width) (in.)

	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
PIW/Plies - Fabric	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
250/2 - P/N		54	48	48	48	42	36	42	42	30	36	30	NR
220/2 - GL		54	48	42	48	42	36	42	42	NR	36	30	NR
375/3 - P/N		72	60	60	60	54	48	54	48	42	48	42	NR
330/3 - GL		72	60	60	60	54	48	54	48	42	48	42	NR
400/2 - P/P		60	54	54	54	48	42	48	48	42	42	36	30
500/4 - P/N		84	72	72	72	60	54	72	60	54	60	54	48
600/3 - P/P		84	72	72	72	60	54	72	60	54	60	54	48
800/4 - P/P		96	84	84	84	72	72	84	72	60	72	60	54
1000/5 - P/P		108	96	96	96	84	84	96	84	72	84	72	72
1200/6 - P/P		116	108	108	108	96	96	108	96	84	96	84	84

On systems with troughing idler spacing greater than 5 ft. OR idler roll gap greater than 1/2", consult your GTM.

SOLAR-SHIELD XL 750 TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

Idlers	SOLAR-SHIELD 250/2	SOLAR-SHIELD 220/2 GL	SOLAR-SHIELD 375/3	SOLAR-SHIELD 330/3 GL	SOLAR-SHIELD 400/2	SOLAR-SHIELD 500/4	SOLAR-SHIELD 600/3	SOLAR-SHIELD 800/4	SOLAR-SHIELD 1000/5	SOLAR-SHIELD 1200/6
Number of Plies	2	2	3	3	2	4	3	4	5	6
20 degree idlers	24	18	24	24	24	30	30	36	42	48
35 degree idlers	24	24	30	30	30	36	36	42	48	54
45 degree idlers	30	30	36	36	36	42	42	48	54	60

If top cover and pulley cover are balanced (ie. 3/16"x3/16") or less than 1/16" differential (ie. 3/16"x5/32"), add 6" to the minimum belt width.
6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50 degrees Fahrenheit
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

SOLAR-SHIELD XL 750 MINIMUM PULLEY DIAMETERS (in.)

Idlers	SOLAR-SHIELD 250/2	SOLAR-SHIELD 220/2 GL	SOLAR-SHIELD 375/3	SOLAR-SHIELD 330/3 GL	SOLAR-SHIELD 400/2	SOLAR-SHIELD 500/4	SOLAR-SHIELD 600/3	SOLAR-SHIELD 800/4	SOLAR-SHIELD 1000/5	SOLAR-SHIELD 1200/6
Number of Plies	2	2	2	3	3	4	3	4	5	6
Over 80% Tension	16	30	18	42	16	24	24	30	36	42
60% to 80% Tension	14	24	16	36	14	20	20	24	30	36
40% to 60% Tension	12	20	14	30	12	18	18	20	24	30
Up to 40% Tension	12	18	14	24	10	18	16	18	20	24
Tails and Snubs	12	18	14	24	10	18	16	18	20	24

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SOLAR-SHIELD XL 750 CONVEYOR BELT DATA - Metric

	SOLAR-SHIELD 250/2	SOLAR-SHIELD 220/2	SOLAR-SHIELD 375/3	SOLAR-SHIELD 330/3 GL	SOLAR-SHIELD 400/2	SOLAR-SHIELD 500/4	SOLAR-SHIELD 600/3	SOLAR-SHIELD 800/4	SOLAR-SHIELD 1000/5	SOLAR-SHIELD 1200/6
Number of Plies	2	2	3	3	2	4	3	4	5	6
Fabric Type	P/N	Glass	P/N	Glass	P/P	P/N	P/P	P/P	P/P	P/P
Vulcanized & Fastener Rating (kN/m)	44	39	66	58	70	88	105	140	175	210
Carcass Gauge (mm)	2.7	3.8	4.6	5.9	4.5	6.4	6.4	8.6	10.9	13.2
Carcass Weight (kg/sq.m)	3.0	4.2	5.1	6.9	4.8	7.1	6.8	9.2	11.7	14.1
Approx 1 mm cover wt (kg/sq.m)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Avg. Permanent Elongation (%) **	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Elastic modulus (kN/m)	5,250	6,480	7,880	9,720	7,710	10,510	11,560	15,410	19,260	23,120
Step Length (mm)	300	460	300	460	410	300	410	410	410	410

Solarshield rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
**P/P = Poly/Poly GL = Glass P/N = Poly / Nylon*
*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations.*

SOLAR-SHIELD XL 750 LOAD SUPPORT (Maximum Belt Width) (mm)

	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
PIW/Plies - Fabric	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
250/2 - P/N		1400	1200	1200	1200	1050	900	1050	1050	750	900	750	NR
220/2 - GL		1400	1200	1050	1200	1050	900	1050	1050	NR	900	750	NR
375/3 - P/N		1850	1550	1550	1550	1550	1200	1400	1400	1200	1200	1050	NR
330/3 - GL		1850	1500	1500	1500	1400	1200	1400	1200	1200	1200	1050	NR
400/2 - P/P		2150	1850	1850	1850	1500	1400	1850	1500	1200	1500	1400	1200
500/4 - P/N		2150	1850	1850	1850	1550	1400	1850	1550	1400	1550	1400	1200
600/3 - P/P		2150	1850	1850	1850	1500	1400	1850	1500	1400	1500	1400	1200
800/4 - P/P		2450	2150	2150	2150	1850	1850	2150	1850	1500	1850	1500	1400
1000/5 - P/P		2750	2450	2450	2450	2150	2150	2450	2150	1850	2150	1850	1850
1200/6 - P/P		2950	2750	2750	2750	2450	2450	2750	2450	2150	2450	2150	2150

On systems with troughing idler spacing greater than 1.5 m OR idler roll gap greater than 12.7mm, contact Goodyear.

SOLAR-SHIELD XL 750 TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

Idlers	SOLAR-SHIELD 250/2	SOLAR-SHIELD 220/2 GL	SOLAR-SHIELD 375/3	SOLAR-SHIELD 330/3 GL	SOLAR-SHIELD 400/2	SOLAR-SHIELD 500/4	SOLAR-SHIELD 600/3	SOLAR-SHIELD 800/4	SOLAR-SHIELD 1000/5	SOLAR-SHIELD 1200/6
Number of Plies	2	2	3	3	4	4	3	4	5	6
20 degree idlers	600	450	600	600	600	750	750	900	1050	1200
35 degree idlers	600	600	750	750	750	900	900	1050	1200	1400
45 degree idlers	750	750	900	900	900	1050	1050	1200	1400	1500

If top cover and pulley cover are balanced (ie. 5mm x 5mm) or less than 2 mm differential (ie. 4mm x 3mm), add 150 mm to the minimum belt width.
150mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 10 degrees Centigrade.
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

SOLAR-SHIELD XL 750 MINIMUM PULLEY DIAMETERS (mm)

Idlers	SOLAR-SHIELD 250/2	SOLAR-SHIELD 220/2 GL	SOLAR-SHIELD 375/3	SOLAR-SHIELD 330/3 GL	SOLAR-SHIELD 400/2	SOLAR-SHIELD 500/4	SOLAR-SHIELD 600/3	SOLAR-SHIELD 800/4	SOLAR-SHIELD 1000/5	SOLAR-SHIELD 1200/6
Number of Plies	2	2	2	3	3	4	3	4	5	6
Over 80% Tension	400	750	450	1050	400	600	600	750	900	1050
60% to 80% Tension	350	600	400	900	350	500	500	600	750	900
40% to 60% Tension	300	500	350	750	300	450	450	500	600	750
Up to 40% Tension	300	450	350	600	250	450	400	450	500	600
Tails and Snubs	300	450	350	600	250	450	400	450	500	600

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WOOD SAWYER® PLUS & WOOD SAWYER®

DESCRIPTION:

Increase efficiency and decrease downtime by installing Goodyear Engineered Products Wood Sawyer® Plus or Wood Sawyer® conveyor belts. Their outstanding service life results in a lower cost-per-ton for the wood industry. In the long run, that means carving out a better bottom line.

Markets

- Pulp and Paper
- Wood

Applications

- Broke Belt
- Chipper End Feed
- Log Debarkers
- Log Deck
- Log Sorter
- Planer Belt
- Pulp Belt
- Sander Belt
- Sawmills
- Tray Belt
- Any other application requiring moderate oil resistance

Cover Compounds

- Defender®
- MORS

(See pages 82-87 for more specific details.)

See the guide and process diagram for Wood Product Applications on pages 34-35.

GET A LOWER
COST-PER-TON CONVEYED.

Tension Range

220 PIW to 800 PIW

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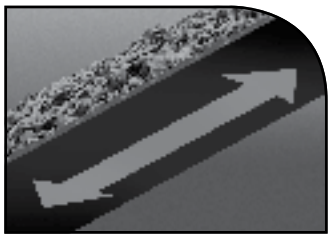
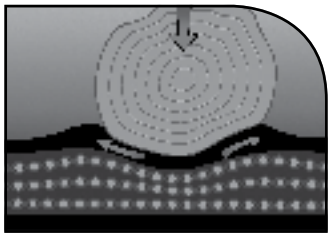
Features & Benefits



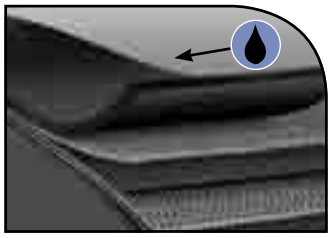
High ultimate strength

Goodyear Engineered Products Wood Sawyer and Wood Sawyer Plus withstand severe tension spikes at start-up, retain mechanical fasteners longer and withstand continuous flexing around pulleys. This higher ultimate strength makes a critical difference in abusive operating conditions.



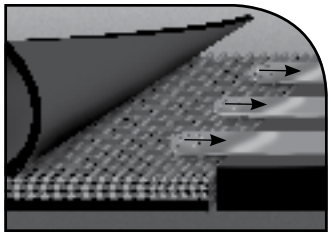
Superior abuse resistance

High strength crimped cords allow the fabric to absorb greater impact loads and resist tearing when stretched over objects trapped between the belts and the pulleys.



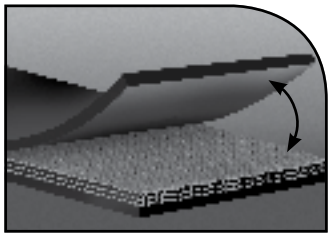
Superior MORS cover compound

MORS is recognized as the wood product industry's premium choice for moderate terpene resistance. Its abrasion-resistant properties make it the best value for handling wood chips.



Excellent fastener holding

Innovative fill cord design minimizes belt tracking problems and reduces damage due to misalignment. High strength cords in the fill direction work together to resist fastener pull-out.



Excellent adhesion values

Superior adhesion protects against premature belt failure due to heavy impact, abuse, trapped material and edge damage.

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WOOD SAWYER PLUS CONVEYOR BELT DATA - Imperial

	WS PLUS 250/2	WS PLUS 375/3	WS PLUS 400/2	WS PLUS 500/4	WS PLUS 600/3	WS PLUS 750/3	WS PLUS 800/4
Number of Plies	2	3	2	4	3	3	4
Fabric Type*	P/N	P/N	P/P	P/N	P/P	P/N	P/P
Vulcanized & Fastener Rating (piw)	250	375	400	500	600	750	800
Nom. Carcass Gauge (in.)	0.129	0.169	0.178	0.229	0.251	0.246	0.340
nom. Carcass Weight (lbs/sq.ft.)	0.76	1.01	1.00	1.36	1.40	1.50	1.89
Approx 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Avg. Permanent Elongation (%) **	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Elastic modulus (piw)	30,000	45,000	44,000	60,000	66,000	56,250	88,000
Step Length (in.)	10	10	16	10	16	18	16
Recommended Fastener Plate	190	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14
Hinge	R2	R5	R5	R5-1/2	R5-1/2	R6	R6
Hinge	U35A	U35	U35	U35	U35	U37/U37A	U37/U37A

Wood Sawyer Plus rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer. R-6 fasteners must be installed with stainless steel rivets when belt tensions exceed 800 piw for best results.

**P/P = Poly/Poly P/N = Poly/Nylon*

*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations*

WOOD SAWYER PLUS LOAD SUPPORT (Maximum Belt Width) (in.)

PIW/Plies	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
250/2		54	48	48	48	42	36	42	42	30	36	30	NR
375/3		72	60	60	60	60	48	54	54	48	48	42	36
400/2		60	54	54	54	48	42	48	48	42	42	36	30
500/4		84	72	72	72	60	54	72	60	54	60	54	48
600/3		84	72	72	72	60	54	72	60	54	60	54	48
750/3		84	72	72	72	60	54	72	60	54	60	54	48
800/4		96	84	84	84	72	72	84	72	60	72	60	54

On systems with troughing idler spacing greater than 5 ft. OR idler roll gap greater than 1/2", consult Goodyear.

WOOD SAWYER PLUS TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

Idlers	WS PLUS 250/2	WS PLUS 375/3	WS PLUS 400/2	WS PLUS 500/4	WS PLUS 600/3	WS PLUS 750/3	WS PLUS 800/4
20 degree idlers	18	20	18	24	24	24	30
35 degree idlers	18	24	24	30	30	30	36
45 degree idlers	24	30	30	36	36	36	42

If top cover and pulley cover are balanced (ie. 3/16"x3/16") or less than 1/16" differential (ie. 3/16"x5/32"), add 6" to the minimum belt width.
6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50 degrees Fahrenheit
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge

WOOD SAWYER PLUS MINIMUM PULLEY DIAMETERS (in.)

	WS PLUS 250/2	WS PLUS 375/3	WS PLUS 400/2	WS PLUS 500/4	WS PLUS 600/3	WS PLUS 750/3	WS PLUS 800/4
Number of plies	2	3	2	4	3	3	4
Over 80% Tension	16	18	16	24	24	30	30
60% to 80% Tension	14	16	14	20	20	24	24
40% to 60% Tension	12	14	12	18	18	20	20
Up to 40% Tension	12	14	10	18	16	18	18
Tails and Snubs	12	14	10	18	16	18	18

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WOOD SAWYER PLUS CONVEYOR BELT DATA - Metric

	WS PLUS 250/2	WS PLUS 375/3	WS PLUS 400/2	WS PLUS 500/4	WS PLUS 600/3	WS PLUS 750/3	WS PLUS 800/4
Number of Plies	2	3	2	4	3	3	4
Fabric Type*	P/N	P/N	P/P	P/N	P/P	P/N	P/P
Vulcanized & Fastener Rating (kN/m)	44	66	70	88	105	131	140
Nom. Carcass Gauge (mm)	3.3	4.3	4.5	5.8	6.4	6.2	8.6
Nom. Carcass Weight (kg/sq.m)	3.7	4.9	4.9	6.6	6.8	7.3	9.2
Approx 1 mm cover wt (kg/sq.m)	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Avg. Permanent Elongation (%) **	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Elastic modulus (kN/m)	5250	7880	7710	10510	11560	9850	15410
Step Length (mm)	250	250	410	250	410	460	410
Recommended Plate Fastener	190	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14
Hinge	R2	R5	R5	R5-1/2	R5-1/2	R6	R6
Hinge	U35A	U35	U35	U35	U35	U37/U37A	U37/U37A

Wood Sawyer Plus rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer. R-6 fasteners must be installed with stainless steel rivets when belt tensions exceed 800 piw for best results.

**P/P = Poly/Poly P/N = Poly/Nylon*

*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations*

WOOD SAWYER PLUS LOAD SUPPORT (Maximum Belt Width) (mm)

PIW/Plies	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
250/2		1400	1200	1200	1200	1050	900	1050	1050	750	900	750	NR
375/3		1850	1550	1550	1550	1550	1200	1400	1400	1200	1200	1050	900
400/2		1550	1400	1400	1400	1200	1050	1200	1200	1050	1050	900	750
500/4		2150	1850	1850	1850	1550	1400	1850	1550	1400	1550	1400	1200
600/3		2150	1850	1850	1850	1550	1400	1850	1550	1400	1550	1400	1200
750/3		2150	1850	1850	1850	1550	1400	1850	1550	1400	1550	1400	1200
800/4		2450	2150	2150	2150	1850	1850	2150	1850	1550	1850	1550	1400

On systems with troughing idler spacing greater than 1.5 m OR idler roll gap greater than 12.7mm, consult Goodyear.

WOOD SAWYER PLUS TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

Idlers	WS PLUS 250/2	WS PLUS 375/3	WS PLUS 400/2	WS PLUS 500/4	WS PLUS 600/3	WS PLUS 750/3	WS PLUS 800/4
20 degree idlers	450	500	450	600	600	600	750
35 degree idlers	450	600	600	750	750	750	900
45 degree idlers	600	750	750	900	900	900	1050

If top cover and pulley cover are balanced (ie. 5mm x 5mm) or less than 2 mm differential (ie. 4mm x 3mm), add 150 mm to the minimum belt width.
150mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 10 degrees Centigrade.
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

WOOD SAWYER PLUS MINIMUM PULLEY DIAMETERS (mm)

	WS PLUS 250/2	WS PLUS 375/3	WS PLUS 400/2	WS PLUS 500/4	WS PLUS 600/3	WS PLUS 750/3	WS PLUS 800/4
Number of plies	2	3	2	4	3	3	4
Over 80% Tension	400	450	400	600	600	750	750
60% to 80% Tension	350	400	350	500	500	600	600
40% to 60% Tension	300	350	300	450	450	500	500
Up to 40% Tension	300	350	250	450	400	450	450
Tails and Snubs	300	350	250	450	400	450	450

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WOOD SAWYER CONVEYOR BELT DATA - Imperial

	WS 220/2	WS 330/3	WS 440/4
Number of Plies	2	3	4
Fabric Type*	P/P	P/P	P/P
Vulcanized & Fastener Rating (piw)	220	330	440
Nom. Carcass Gauge (in.)	0.120	0.162	0.212
Nom. Carcass Weight (lbs/sq.ft.)	0.72	0.98	1.28
Approx. 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19
Avg. Permanent Elongation (%) **	0.80	0.80	0.80
Avg. Elastic modulus (piw)	23000	34500	46000
Step Length (in.)	10	10	10
Recommended Plate Fastener	140	190	BR-10
Hinge	R2	R2	R5
Hinge	U35A	U35A	U35

WOOD SAWYER CONVEYOR BELT DATA - Metric

	WS 220/2	WS 330/3	WS 440/4
Number of Plies	2	3	4
Fabric Type*	P/P	P/P	P/P
Vulcanized & Fastener Rating (kN/m)	39	58	77
Nom. Carcass Gauge (mm)	3.0	4.1	5.4
Nom. Carcass Weight (kg/sq.m)	3.5	48	6.2
Approx. 1mm cover wt (kg/sq.m)	1.2	1.2	1.2
Avg. Permanent Elongation (%) **	0.80	0.80	0.80
Avg. Elastic modulus (kN/m)	4030	6040	8060
Step Length (mm)	254	254	254
Recommended Plate Fastener	140	190	BR-10
Hinge	R2	R2	R5
Hinge	U35A	U35A	U35

Wood Sawyer P/P rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
Fastener size recommendation may vary due to cover thickness.
**P/P = Polyester/Polyester*
***Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations specific to each system based on Minuteman calculations.*

WOOD SAWYER TROUGHABILITY (Minimum Belt Width) (in.)
(Table based on ISO 703 Testing Procedure)

	WS 220/2	WS 330/3	WS 440/4
20 degree idlers	18	18	24
35 degree idlers	18	24	30
45 degree idlers	24	30	36

If top cover and pulley cover are balanced (ie. 3/16" x 3/16") or less than 1/16" differential (ie. 3/16" x 5/32"), add 6" to the minimum belt width.
Additional break in time is required when the belt has been stored prior to installation in ambient temperatures of less than 50 degrees Fahrenheit.

WOOD SAWYER TROUGHABILITY (Minimum Belt Width) (mm)
(Table based on ISO 703 Testing Procedure)

	WS 220/2	WS 330/3	WS 440/4
20 degree idlers	450	450	600
35 degree idlers	450	600	750
45 degree idlers	600	750	900

If top cover and pulley cover are balanced (ie. 5 mm x 5 mm) or less than 2 mm differential (ie. 4 mm x 3 mm), add 150 mm to the minimum belt width.
Additional break in time is required when the belt has been stored prior to installation in ambient temperatures of less than 50 degrees Fahrenheit.

WOOD SAWYER MINIMUM PULLEY DIAMETERS (in.)

	WS 220/2	WS 330/3	WS 440/4
Over 80% Tension	16	18	24
60% to 80% Tension	14	16	20
40% to 60% Tension	10	12	16
Up to 40% Tension	10	12	16
Tails and Snubs	10	12	16

WOOD SAWYER MINIMUM PULLEY DIAMETERS (mm)

	WS 220/2	WS 330/3	WS 440/4
Over 80% Tension	400	450	600
60% to 80% Tension	350	400	500
40% to 60% Tension	250	300	400
Up to 40% Tension	250	300	400
Tails and Snubs	250	300	400

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WOOD SAWYER LOAD SUPPORT (Maximum Belt Width) (in.)

PIW/Plies	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			Over 120 lbs/cu.ft.		
	Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
220/2		48	42	36	48	36	36	42	36	30	36	30	NR
330/3		60	54	48	60	48	42	54	48	42	48	42	36
440/4		72	60	54	66	60	48	60	54	48	54	48	42

On systems with troughing idler spacing greater than 5 ft. OR idler roll gap greater than 1/2 in., consult your GTM.

WOOD SAWYER LOAD SUPPORT (Maximum Belt Width) (mm)

PIW/Plies	Material Weight	0-640 kg/m³			641-1280 kg/m³			1281-1920 kg/m³			Over 1920 kg/m³		
	Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
220/2		1200	1050	900	1200	900	900	1050	900	750	900	750	NR
330/3		1500	1400	1200	1500	1200	1050	1400	1200	1050	1200	1050	900
440/4		1850	1500	1400	1850	1400	1200	1500	1400	1200	1500	1200	1050

On systems with troughing idler spacing greater than 1.5 m OR idler roll gap greater than 12.7 mm, consult your GTM.

WOOD SAWYER BAREBACK CONVEYOR BELT DATA - Imperial

	WS 220/2	WS 330/3	WS 440/4
Number of Plies	2	3	4
Fabric Type*	P/P	P/P	P/P
Vulcanized & Fastener Rating (piw)	220	330	440
Approx. 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19
Avg. Permanent Elongation (%) **	0.80	0.80	0.80
Avg. Elastic modulus (piw)	23000	34500	46000
Step Length (in.)	10	10	10
Recommended Plate Fastener	140	190	BR-10
Hinge	R2	R2	R5
Hinge	U35A	U35A	U35
Top Cover			
5/32" & under			
Nom. Carcass Gauge (in.)	0.144	0.196	0.272
Nom. Carcass Weight (lbs/sq.ft.)	0.78	1.10	1.57
3/16"			
Nom. Carcass Gauge (in.)	0.160	0.244	0.344
Nom. Carcass Weight (lbs/sq.ft.)	0.88	1.39	2.00
1/4" to 3/8"			
Nom. Carcass Gauge (in.)	NA	0.28	0.398
Nom. Carcass Weight (lbs/sq.ft.)	NA	1.61	2.32

WOOD SAWYER BAREBACK CONVEYOR BELT DATA - Metric

	WS 220	WS 330	WS 440
Number of Plies	2	3	4
Fabric Type*	P/P	P/P	P/P
Vulcanized & Fastener Rating (kN/m)	39	58	77
Approx. 1mm cover wt (kg/sq.m)	1.2	1.2	1.2
Avg. Permanent Elongation (%) **	0.80	0.80	0.80
Avg. Elastic modulus (kN/m)	4030	6040	8060
Step Length (mm)	254	254	254
Recommended Plate Fastener	140	190	BR-10
Hinge	R2	R2	R5
Hinge	U35A	U35A	U35
Top Cover			
4mm & under			
Nom. Carcass Gauge (mm)	3.66	4.98	6.91
Nom. Carcass Weight (kg/sq.m)	3.81	5.37	7.67
5mm			
Nom. Carcass Gauge (mm)	4.06	6.20	8.74
Nom. Carcass Weight (kg/sq.m)	4.30	6.79	9.76
6 to 10mm			
Nom. Carcass Gauge (mm)	NA	7.11	10.11
Nom. Carcass Weight (kg/sq.m)	NA	7.86	11.33

Wood Sawyer P/P rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
Fastener size recommendation may vary due to cover thickness.
P/P = Polyester/Polyester
**Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations specific to each system based on Minuteman calculations.*
Additional break in time is required when the belt has been stored prior to installation in ambient temperatures of less than 10 degrees Centigrade.

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CONVEYOR BELT

WOOD PRODUCT APPLICATIONS

Service Requirements	Product Options	Special Service Constructions	Top Cover Options*	Application Requirements
• Log Decks • Debarkers • Log Sorters • Chipper End Feed	ConquestXP™ Wood Sawyer® Plus	600/3 Poly/Nylon, Heavy Skims 440/4 Nylon/Nylon Rib Weave	Stacker® Defender® Sliderback Pulley Cover	Severe Impact Cut and Gouge Low Coefficient of Friction Sliderback Pulley Cover
• Wood Chips & Bark Belts • Hog Fuel	Wood Sawyer Plus Wood Sawyer Plus Xtra-Grip Wood Sawyer® Wood Sawyer Xtra-Grip	125PIW Poly/Nylon Plain Weave 110PIW Poly/Poly	MORS Defender	Terpene and Oil Xtra-Grip for High Incline Service
• Chipper Belts • Saw Cut-Offs • Sawdust Belts • Saw Dry-Hogs • Pulp Belts • Broke Belts	ConquestXP™ Wood Sawyer Plus Wood Sawyer®	Bare Back and Friction Back Belt Styles (All Products) 125PIW Poly/Nylon Plain Weave 110PIW Poly/Poly and Plain Weave 110PIW Nylon/Nylon Rib Weave	MORS Defender	Extensive Range of Widths Small Pulleys Bare or Friction Surface Bottom Typical
• Veneer Belts • Tray Belts	Wood Sawyer®	220 and 330 Poly/Poly Tan Slowdown 220/2 and 330/3 Poly/Poly Tray	MORS Defender	Terpene and Oil Severe Abrasion

*Top cover options are relative to amount of terpene in the wood type.

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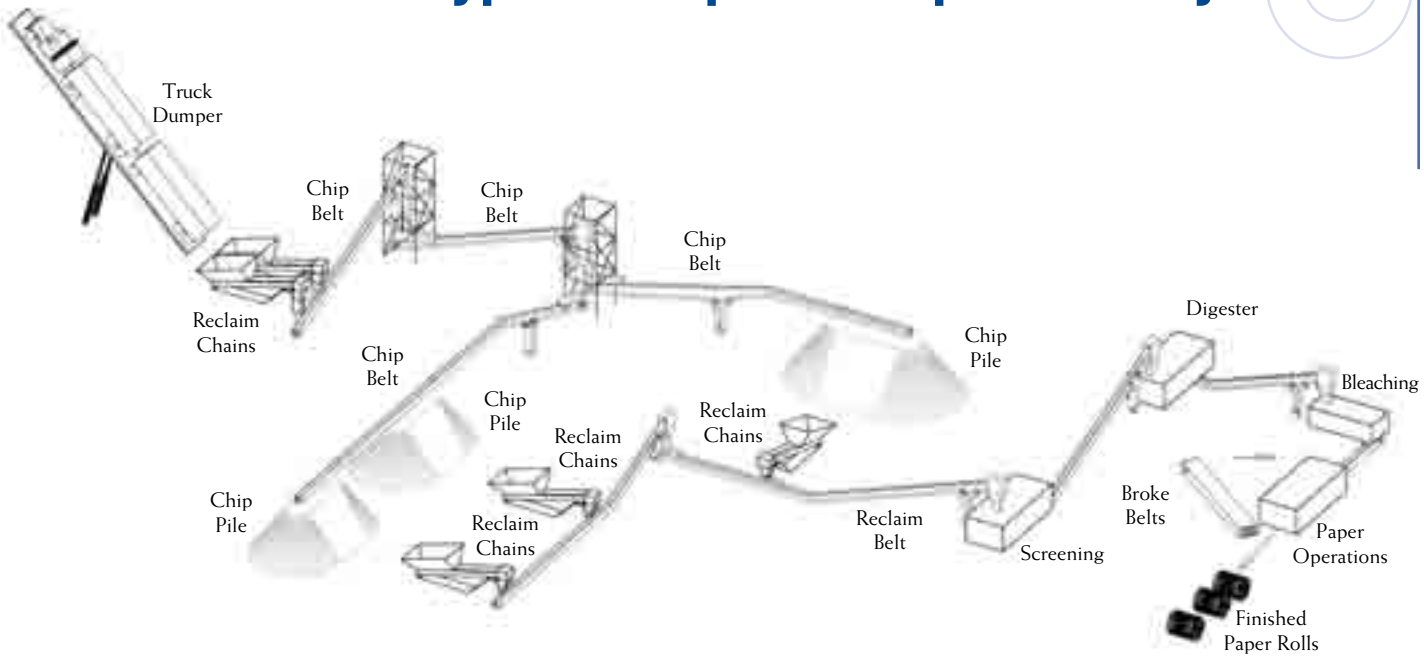
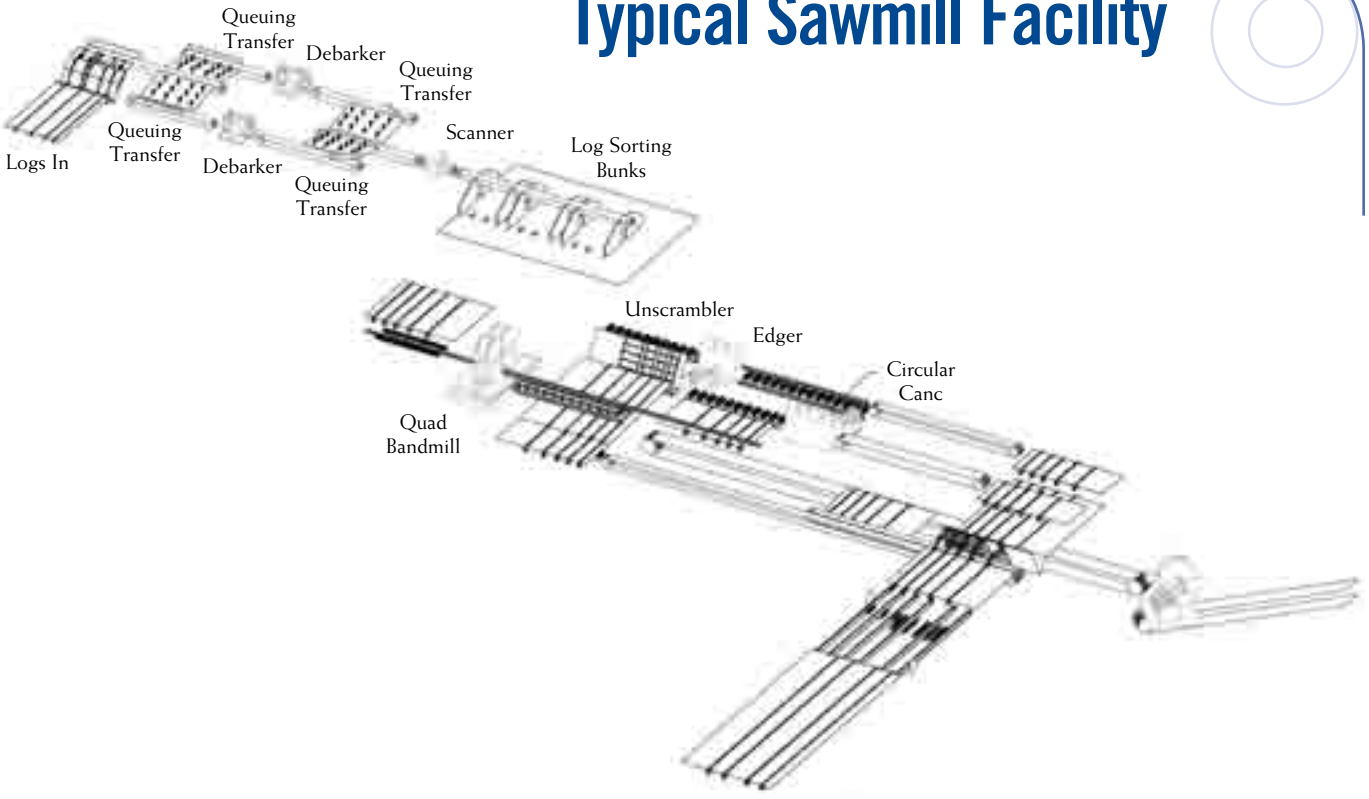
Typical Pulp and Paper Facility



Typical Sawmill Facility



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PATHFINDER®

DESCRIPTION:

Goodyear Engineered Products Pathfinder® is a polyester/nylon fabric reinforced belt designed to stand up to the unique operating conditions of grain handling facilities. Pathfinder's exceptionally low electrical resistance and superior oil resistance properties provide excellent operational safety and long life.

Markets

- Agriculture
- Bulk Handling Terminals
- Grain

Applications

- Grain Elevator
- Grain Storage
- Grain Transfer

Cover Compounds

- Pathfinder® Supreme
- Pathfinder® Plus
- PF+ CSA*

(See pages 82-87 for more specific details.)

** Meets Canadian specifications.*

Tension Range

220 PIW to 1250 PIW

GET A LOWER
COST-PER-TON CONVEYED.

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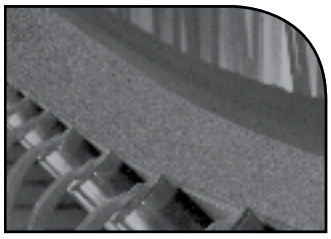
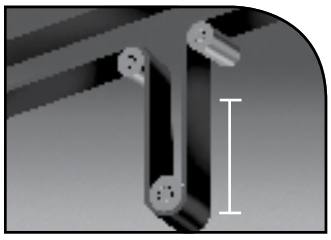
Features & Benefits



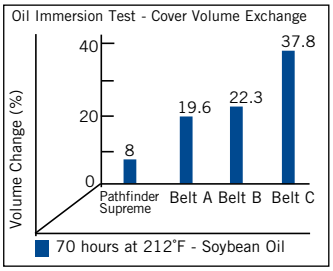
High ultimate strength

Pathfinder is designed to withstand harsh operating conditions. The tensile force required to break a 48" Pathfinder 330 PIW belt is 158,400 pounds.



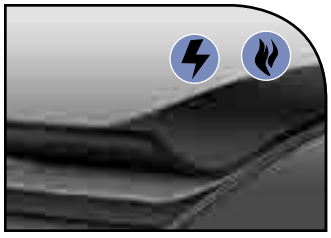
Low belt elongation

Low belt elongation increases productivity and minimizes downtime spent re-splicing grain belting. Permanent elongation averages 0.8% at 100% of rated operating tension.



Oil resistant covers

Pathfinder Supreme covers provide superior oil resistance to the potentially damaging effects of crushed and whole soybeans, oily grains and mineral oil dust suppressant sprays.

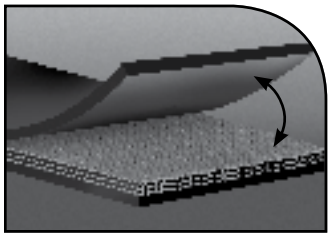


Static conductive, low electrical resistance, flame resistance

Pathfinder belts offer an exceptionally low electrical resistance of one megohm or less, far below Federal OSHA and ISO standard of 300 megohms. Internal testing ensures that belts meet or exceed the US MSHA/RMA 30 CFR 18.65 requirement for flame resistance.

Excellent bolt holding capabilities

High strength nylon fill cords provide excellent resistance to bolt pull-out. Excellent bolt holding ability enables the Pathfinder carcass to securely hold the buckets in elevator leg service.



Excellent adhesion values

Oil resistant skim coats, combined with our fabric treatment process, provide excellent adhesion values. Vulcanized splice life is maximized and edge damaging due to contact with conveyor structure is minimized.

Flexible crimped warp fabric design

Crimped warp design allows the outer ply to lengthen around small pulleys without interfering with the integrity of the warp cords. This flexibility contributes to longer splice life.

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PATHFINDER CONVEYOR/ELEVATOR BELT DATA - Imperial

	PF 220/2	PF 330/3	PF 400/2	PF 440/4	PF 600/3	PF 750/3	PF 800/4	PF 1000/4	PF 1000/5	PF 1200/6	PF 1250/5
Number of Plies	2	3	2	4	3	3	4	4	5	6	5
Fabric Type*	P/N	P/N	P/N	P/N	P/N	P/N	P/N	P/N	P/N	P/N	P/N
Vulcanized & Fastener Rating (piw)	220	330	400	440	600	750	800	1000	1000	1200	1250
Elevator Rating (piw)	200	280	360	400	540	650	740	910	910	1090	1130
Maximum Bucket Projection (in.)	6	8	9	10	11	11	12	13	13	13	13
Approx. Carcass Gauge (in.)	0.134	0.183	0.172	0.232	0.238	0.253	0.324	0.344	0.410	0.496	0.435
Approx. Carcass Weight (lbs/sq.ft.)	1.01	1.26	1.10	1.55	1.49	1.59	1.99	2.12	2.48	2.98	2.65
Approx 1/32 cover wt (lbs/sq.ft.)	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Belt modulus (piw)	22,000	33,000	38,000	44,000	57,000	55,500	76,000	74,000	95,000	114,000	92,500
Step Length (in.)	12	12	16	12	16	18	16	18	16	16	18
Recommended Fasteners Plate	140	190	BR-10	BR-10	BR-10	BR-14	BR-14	NA	NA	NA	NA
Hinge	R2	R2	R5	R5	R5-1/2	R6	R6	RAR8	RAR8	RAR8	RAR8
Hinge	U35A	U35A	U35	U35	U35	U37/U37A	U37/U37A	U38A	U38A	U38	U38

Pathfinder rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameter and system tension.
Consult your GTM or fastener manufacturer.
**P/N = Poly/Nylon*

PATHFINDER LOAD SUPPORT (Maximum Belt Width) (in.)

PIW/Plies	Type of Idler	In-Line			Offset Equal			Offset LC Roll		
	Degree of Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
220/2		48	42	36	66	54	48	72	60	54
330/3		66	54	48	72	66	60	78	72	66
400/2		48	42	36	66	54	48	72	60	54
440/4		72	66	60	84	78	72	84	84	78
600/3		66	54	48	72	66	60	78	72	66
750/3		66	54	48	72	66	60	78	72	66
800/4		78	66	60	84	78	72	84	84	84
1000/4		78	66	60	84	78	72	84	84	84
1000/5		84	78	72	96	84	78	96	96	84
1200/6		96	84	78	96	84	78	108	108	96
1250/5		84	78	72	96	84	78	96	96	84

On In-Line systems with troughing idler spacing greater than 5 ft. OR idler roll gap greater than 1/2 in., consult your GTM.

PATHFINDER TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

Idlers	PF 220/2	PF 330/3	PF 400/2	PF 440/4	PF 600/3	PF 750/3	PF 800/4	PF 1000/4	PF 1000/5	PF 1200/6	PF 1250/5
20 degree idlers	18	18	18	24	24	24	30	30	36	42	36
35 degree idlers	18	24	24	30	30	30	36	36	42	48	42
45 degree idlers	24	30	30	36	36	36	42	42	48	54	48

6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to installation in ambient temperatures of less than 50 degrees Fahrenheit.

PATHFINDER MINIMUM PULLEY DIAMETERS (in.)

Specifications	PF 220/2	PF 330/3	PF 400/2	PF 440/4	PF 600/3	PF 750/3	PF 800/4	PF 1000/4	PF 1000/5	PF 1200/6	PF 1250/5
Number of Plies	2	3	2	4	3	3	4	4	5	6	5
Over 80% Tension	18	20	18	30	24	30	30	36	36	42	42
60% to 80% Tension	16	18	16	24	20	24	24	30	30	36	36
40% to 60% Tension	14	16	14	20	18	20	20	24	24	30	30
Up to 40% Tension	12	16	12	20	16	18	18	20	20	30	24
Tails and Snubs	12	16	12	20	16	18	18	20	20	30	24

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PATHFINDER CONVEYOR/ELEVATOR BELT DATA - Metric

	PF 220/2	PF 330/3	PF 400/2	PF 440/4	PF 600/3	PF 750/3	PF 800/4	PF 1000/4	PF 1000/5	PF 1200/6	PF 1250/5
Number of Plies	2	3	2	4	3	3	4	4	5	6	5
Fabric Type*	P/N	P/N	P/N	P/N	P/N	P/N	P/N	P/N	P/N	P/N	P/N
Vulcanized & Fastener Rating (kN/m)	39	58	70	77	105	131	140	175	175	210	219
Elevator Rating (kN/m)	35	49	63	70	95	114	130	159	159	191	198
Maximum Bucket Projection (mm)	152	203	229	254	279	279	305	330	330	330	330
Approx. Carcass Gauge (mm)	3.4	4.6	4.4	5.9	6.0	6.4	8.2	8.7	10.4	12.6	11.0
Approx. Carcass Weight (kg/sq.m)	4.9	6.1	5.4	7.6	7.3	7.8	9.7	12.1	10.4	14.5	12.9
Approx 1 mm cover wt (kg/sq.m)	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3
Belt modulus (kN/m)	3,850	5,780	6,650	7,710	9,980	9,720	13,310	18,300	12,960	19,960	16,200
Step Length (mm)	300	300	410	300	410	460	410	460	410	410	460
Recommended Fasteners Plate	140	190	BR-10	BR-10	BR-10	BR-14	BR-14	NR	NR	NR	NR
Hinge	R2	R2	R5	R5	R5-1/2	R6	R6	RAR8	RAR8	RAR8	RAR8
Hinge	U35A	U35A	U35	U35	U35	U37/U37A	U37/U37A	U38A	U38A	U38	U38

Pathfinder rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameter and system tension.
Consult your GTM or fastener manufacturer.
**P/N = Poly / Nylon*

PATHFINDER LOAD SUPPORT (Maximum Belt Width) (mm)

PIW/Plies	Type of Idler	In-Line			Offset Equal			Offset LC Roll		
	Degree of Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
220/2		1200	1050	900	1700	1400	1200	1850	1500	1400
330/3		1700	1400	1200	1850	1700	1500	2000	1850	1700
400/2		1200	1050	900	1700	1400	1200	1850	1500	1400
440/4		1850	1700	1500	2150	2000	1850	2150	2150	2000
600/3		1700	1400	1200	1850	1700	1500	2000	1850	1700
750/3		1700	1400	1200	1850	1700	1500	2000	1850	1700
800/4		2000	1700	1500	2150	2000	1850	2150	2150	2150
1000/4		2000	1700	1500	2150	2000	1850	2150	2150	2150
1000/5		2150	2000	1850	2450	2150	2000	2450	2450	2150
1200/6		2450	2150	2000	2450	2150	2000	2750	2750	2450
1250/5		2150	2000	1850	2450	2150	2000	2450	2450	2150

On In-Line systems with troughing idler spacing greater than 1.5 m OR idler roll gap greater than 12.7 mm, consult your GTM.

PATHFINDER TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

Idlers	PF 220/2	PF 330/3	PF 400/2	PF 440/4	PF 600/3	PF 750/3	PF 800/4	PF 1000/4	PF 1000/5	PF 1200/6	PF 1250/5
20 degree idlers	450	450	450	600	600	600	750	750	900	1050	900
35 degree idlers	450	600	600	750	750	750	900	900	1050	1200	1050
45 degree idlers	600	750	750	900	900	900	1050	1050	1200	1350	1200

150 mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to installation in ambient temperatures of less than 10 degrees Centigrade.

PATHFINDER MINIMUM PULLEY DIAMETERS (mm)

Specifications	PF 220/2	PF 330/3	PF 400/2	PF 440/4	PF 600/3	PF 750/3	PF 800/4	PF 1000/4	PF 1000/5	PF 1200/6	PF 1250/5
Number of Plies	2	3	2	4	3	3	4	4	5	6	5
Over 80% Tension	450	500	450	750	600	750	750	900	900	1050	1050
60% to 80% Tension	400	450	400	600	500	600	600	750	750	900	900
40% to 60% Tension	350	400	350	500	450	500	500	600	600	750	750
Up to 40% Tension	300	400	300	500	400	450	450	500	500	750	600
Tails and Snubs	300	400	300	500	400	450	450	500	500	750	600

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XTRA-GRIP™

DESCRIPTION:

Goodyear Engineered Products Xtra-Grip™ conveyor belting provides increased material transfer inclines of five degrees or more due to its 1/4" high Chevron ribbed pattern versus conventional smooth belting.

Markets

- Aggregate
- Baggage Handling
- Bulk Handling Terminal
- Cement
- Coal
- Foundry
- Grain
- Hard Rock
- Package Handling
- Pulp and Paper
- Sand and Gravel
- Steel Production
- Wood Products

Applications

- Bark Belts
- Grain Storage
- Grain Transfer
- Ship Unloaders
- Stacker Conveyors
- Trash and Recycling Plants
- Wood Chips

Cover Compounds

- 6740A
- ARMA®-SBR
- Defender®
- HT Nitrile
- MORS
- Stacker®

(refer to Wood Sawyer™ Plus and Wood Sawyer™ for MORS Compound starting on page 34)

GET A LOWER
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Tension Range

220 PIW to 375 PIW

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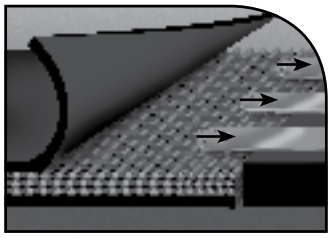
Features & Benefits

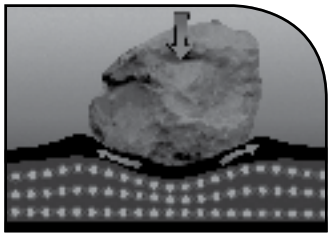
Load gripping rib pattern

The ribs of Xtra-Grip belting are 1/4" high chevrons that increase the permissible angle of incline by 5 degrees or more. Xtra-Grip works especially well with materials that have a high water content where slipping of the load on the belt might otherwise occur. The staggered Chevron design, molded into the top cover, can be run in either direction.



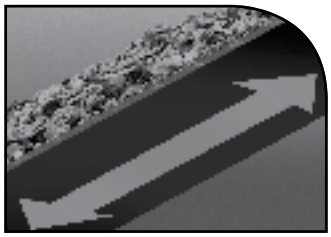
Excellent fastener holding retention

High strength fill cords enhance mechanical fastener holding ability and resist fastener pull-out for more reliable performance and increased uptime.



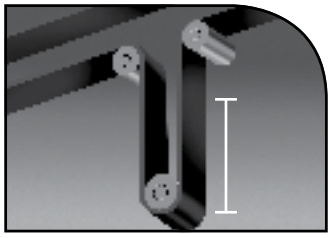
Excellent rip, tear and impact resistance

Specially designed crimped warp cords straighten on impact and then recover their original shape. This enables the fabric to absorb greater impact loads and resist tearing for long-lasting durability and a lower cost-per-ton conveyed.



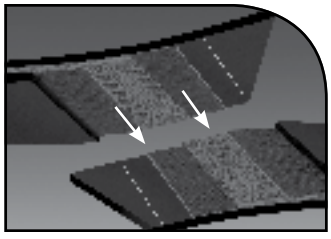
High ultimate strength

Xtra-Grip belts withstand severe tension spikes at start-up, retain mechanical fasteners and withstand continuous flexing around pulleys. This higher ultimate strength makes a critical difference in abusive operating conditions.



Reduced stretch

The combination of fabric design and dip process provides lower elasticity and permanent elongation on all specifications. This minimizes take-up concerns and reduces the number of splices at break-in. Contact your local GTM to calculate permanent and elastic elongation requirements for your specific systems.



Standard bias step splices

A quick and effective technique, step splices greatly reduce downtime and are recognized throughout the industry as the standard. The vulcanized splice in Xtra-Grip retains 100% of belt tension rating during running conditions.
(See data table for proper step length on page 42).

Variety of cover compounds

Protect your product with the proper compound and cover gauge for the application. Xtra-Grip conveyor belting can be customized to fit your application.

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XTRA-GRIP CONVEYOR BELT DATA - Imperial

	XTRA-GRIP 220/2	XTRA-GRIP 250/2	XTRA-GRIP 330/3	XTRA-GRIP 375/3
Number of Plies	2	2	3	3
Vulcanized & Fastener Rating (piw)	220	250	330	375
Fabric Type*	P/P	P/N	P/P	P/N
Carcass Gauge (in.)	0.120	0.129	0.162	0.169
Carcass Weight (lbs/sq.ft.)	0.72	0.76	0.98	1.01
Approx 1/32" cover wt (lbs/sq.ft.)	0.19	0.19	0.19	0.19
Avg. Permanent Elongation (%) **	0.8	0.8	0.8	0.8
Elastic modulus (piw)	23,000	30,000	34,500	45,000
Step Length (in.)	10	10	10	10
Recommended Plate Fastener	140	190	190	BR-10
Hinge	R2	R2	R2	R5
Hinge	U35A	U35A	U35A	U35

XTRA-GRIP rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer.
**P/P = Poly/Poly P/N = Poly/Nylon*
*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations.*

XTRA-GRIP LOAD SUPPORT (Maximum Belt Width) (in.)

PIW/Plies	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			81-120 lbs/cu.ft.		
	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
220/2		48	42	36	48	36	36	42	36	30	36	30	NR
250/2		54	48	48	48	42	36	42	42	30	36	30	NR
330/3		60	54	48	60	48	42	54	48	42	48	42	36
375/3		72	60	60	60	60	48	54	54	48	48	42	36

On systems with troughing idler spacing greater than 5 ft. OR idler roll gap greater than 1/2", consult your GTM.

XTRA-GRIP TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

Idlers	XTRA-GRIP 220/2	XTRA-GRIP 250/2	XTRA-GRIP 330/3	XTRA-GRIP 375/3
20 degree idlers	18	18	18	20
35 degree idlers	18	18	24	24
45 degree idlers	24	24	30	30

If top cover and pulley cover are balanced (ie. 3/16"x3/16") or less than 1/16" differential (ie. 3/16"x5/32"), add 6" to the minimum belt width.
6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50 degrees Fahrenheit
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

XTRA-GRIP MINIMUM PULLEY DIAMETERS (in.)

Specifications	XTRA-GRIP 220/2	XTRA-GRIP 250/2	XTRA-GRIP 330/3	XTRA-GRIP 375/3
Over 80% Tension	16	16	18	18
60% to 80% Tension	14	14	16	16
40% to 60% Tension	10	12	12	14
Up to 40% Tension	10	12	12	14
Tails and Snubs	10	12	12	14

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XTRA-GRIP CONVEYOR BELT DATA - Metric

	XTRA-GRIP 220/2	XTRA-GRIP 250/2	XTRA-GRIP 330/3	XTRA-GRIP 375/3
Number of Plies	2	2	3	3
Fabric Type*	P/P	P/N	P/P	P/N
Vulcanized & Fastener Rating (kN/m)	39	44	58	66
Carcass Gauge (mm)	3.0	3.3	4.1	4.3
Carcass Weight (kg/sq.m)	3.5	3.7	4.8	4.9
Approx 1 mm cover wt (kg/sq.m)	1.2	1.2	1.2	1.2
Avg. Permanent Elongation (%) **	0.8	0.8	0.8	0.8
Elastic modulus (kN/m)	4,030	5,250	6,040	7,880
Step Length (mm)	250	250	250	250
Recommended Plate Fastener	140	190	190	BR-10
Hinge	R2	R5	R2	R5
Hinge	U35A	U35A	U35A	U35

XTRA-GRIP rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters and system tension. Consult your GTM or fastener manufacturer.
**P/P = Poly/Poly P/N = Poly/Nylon*
*** Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations.*

XTRA-GRIP LOAD SUPPORT (Maximum Belt Width) (mm)

PIW/Plies	Material Weight	0-40 lbs/cu.ft.			41-80 lbs/cu.ft.			81-120 lbs/cu.ft.			81-120 lbs/cu.ft.		
	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
220/2		1200	1050	900	1200	900	900	1050	900	750	900	750	NR
250/2		1400	1200	1200	1200	1050	900	1050	1050	750	900	750	NR
330/3		1550	1400	1200	1500	1200	1050	1400	1200	1050	1200	1050	900
375/3		1850	1550	1550	1550	1550	1200	1400	1400	1200	1200	1050	900

On systems with troughing idler spacing greater than 1.5 m OR idler roll gap greater than 12.7mm, consult your GTM.

XTRA-GRIP TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

Idlers	XTRA-GRIP 220/2	XTRA-GRIP 250/2	XTRA-GRIP 330/3	XTRA-GRIP 375/3
20 degree idlers	450	450	450	500
35 degree idlers	450	450	600	600
45 degree idlers	600	600	750	750

If top cover and pulley cover are balanced (ie. 5mm x 5mm) or less than 2 mm differential (ie. 4mm x 3mm), add 150 mm to the minimum belt width.
150mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.
Additional break in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 10 degrees Centigrade.
Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge

XTRA-GRIP MINIMUM PULLEY DIAMETERS (mm)

Specifications	XTRA-GRIP 220/2	XTRA-GRIP 250/2	XTRA-GRIP 330/3	XTRA-GRIP 375/3
Over 80% Tension	400	400	400	450
60% to 80% Tension	350	350	350	400
40% to 60% Tension	300	300	300	350
Up to 40% Tension	250	300	250	350
Tails and Snubs	250	300	250	350

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SHIELD™

Helping to keep miners safe.

SHIELD

Introducing SHIELD

The underground conveyor belt compound that meets government flammability standards to enhance miner safety.

The most valuable resource to come out of the mine… is the one that goes in every day. In order to improve miner safety and meet new flammability requirements, we have developed a compound that's virtually halogen-free. The result? A belt compound that not only extinguishes flames quickly, but also gives off less-toxic gas and smoke.

Why SHIELD? Why Now?

New MSHA B.E.L.T. (Belt Evaluation Laboratory Test) standards became effective on December 31, 2008.

How Does it Work?

SHIELD is virtually halogen-free. That means it's virtually free of fluorine, chlorine and bromine, which are common elements in flame-resistant belts. When heated, they generate thick, irritating toxic smoke.

And because SHIELD is made from rubber instead of PVC or neoprene, it can be easily vulcanized into current specifications.

Features:

- Approved by MSHA as meeting part 14 (B.E.L.T.) requirement for flame resistance in coal mines
- SHIELD virtually eliminates the use of halogenated materials like chlorine and bromine, both of which can generate thick, toxic smoke.
- Maintains the same abrasion resistance and adhesions as conventional flame-resistant compounds.
- SHIELD is available on our full-line of fabric-reinforced underground belts, including Coal Quest® and Glide® Plus.
- Can be vulcanized into existing 2G (ARMA/ARMAII) compounds.*
- Exceeds flame-resistance requirement and provides peace of mind with higher safety standards.

**Use only genuine Goodyear Engineered Products splice materials for all of your vulcanized splices.*
SHIELD compound splice materials have also been certified to MSHA's part 14 requirements and are required for underground use.

Available on Coal Quest® and Glide® Plus conveyor belts.

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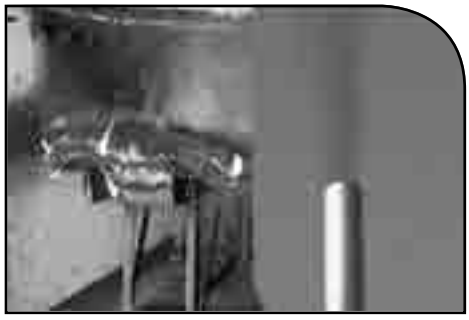
SHIELD. Tested to perform better.

The side-by-side comparison shows how SHIELD outperforms the existing 2G and B.E.L.T. belts, meeting new standards while reducing levels of smoke and toxicity.

The belt with SHIELD, as shown on the left, holds its integrity better. And as the smokestack comparison shows, SHIELD gives off much less smoke as well.



BELT WITH SHIELD

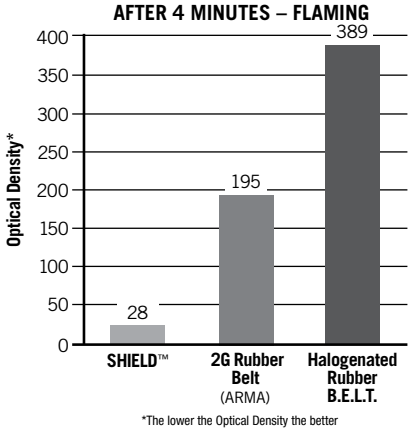
BELT WITHOUT SHIELD

SHIELD new standards without giving off dense and toxic smoke.

SHIELD is able to meet the new requirements, and produce much less smoke.

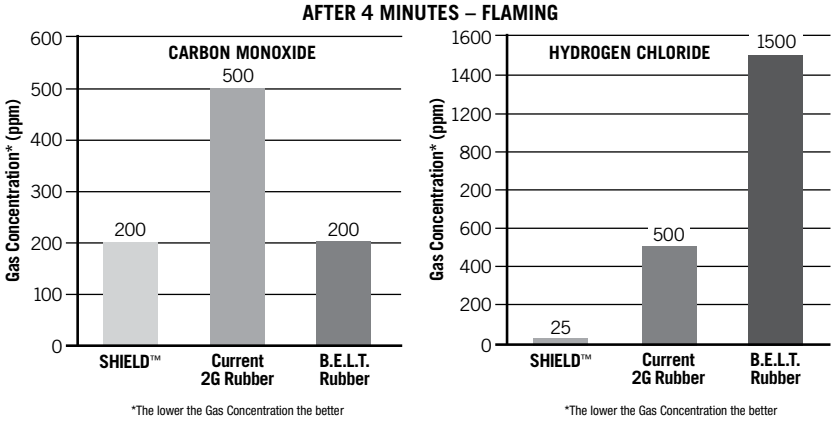
The following charts show how much less smoke and toxicity SHIELD gives off when compared to existing specifications.

SMOKE DENSITY FROM BELTS



*The lower the Optical Density the better

TOXIC GASES FROM BELTS



*The lower the Gas Concentration the better

*The lower the Gas Concentration the better

Smaller numbers mean big results.

While competitive products meet B.E.L.T. requirements, SHIELD far surpasses them in terms of smoke density.

COMPARISON OF STANDARDS – SMOKE DENSITY

	B.E.L.T.	Global Neoprene	SHIELD™	PVC
Smoke Density – Smold.	125	59	15	66
Smoke Density – Flaming	389	383	28	400

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COAL QUEST®

COAL QUEST

Our long history of innovation continues with the development of our exclusive, **patented**, polyester x nylon Goodyear Engineered Products Triple-Warp™ fabric weave. It's what makes Coal Quest your best choice in **severe applications such as panel, mainline, tripper or slope belts.** Coal Quest belt is available in 1-ply 400, 1-ply 600, 3-ply 600, 3-ply 800, and 3-ply 1,000 PIW configurations. The design of Coal Quest features a Triple-Warp fabric center ply surrounded by a pair of abuse-resistant and flexible outer plies. Coal Quest belts make for a construction that provides a wide range of benefits — superior mechanical fastener holding strength, unbeatable vulcanized splice capabilities, a high degree of flexibility, and great impact, tear and rip resistance.

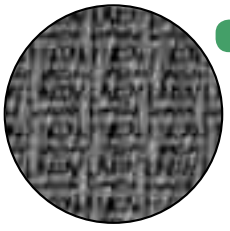
Designed for down-under durability

ABUSE-RESISTANT OUTER PLIES

Coal Quest constructions feature two rugged plies to provide further belt strength and added flexibility.

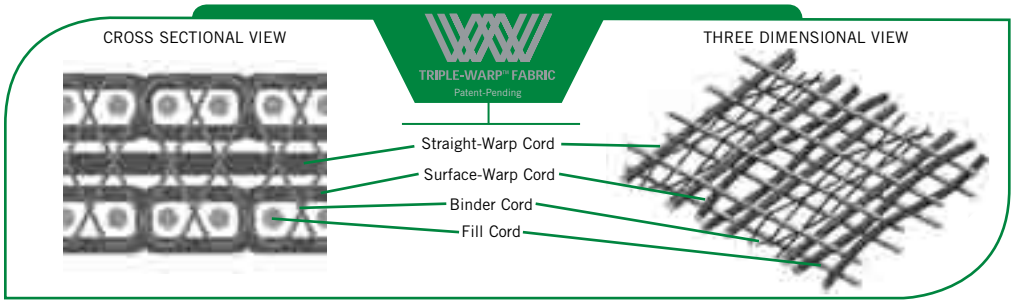
TOP & BOTTOM COVERS

The versatility to reduce the bottom cover gauge means lowering your overall belt cost without sacrificing performance, and a reduction in belt weight, which reduces system energy consumption. Unlike the heavier bottom covers required by straight-warp belts, Coal Quest customers can stipulate the exact cover gauge their belts require, both top and bottom.



TRIPLE-WARP™ CENTER PLY

Three independent warp cords in combination with nylon fill cords, join together to increase overall ply integrity in the patented Triple-Warp construction of Coal Quest belting. The combination of high strength crimped surface and straight-warp cords helps fend off rips, tears, punctures and other abusive elements. This provides an even greater measure of belt strength vs. traditional straight-warp and multi-ply fabric weaves. Typical straight-warp designs offer only small binder yarns to maintain the integrity of the weave which may result in edge stringing.



Tension Range

400 PIW to 1000 PIW

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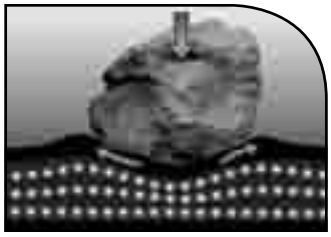
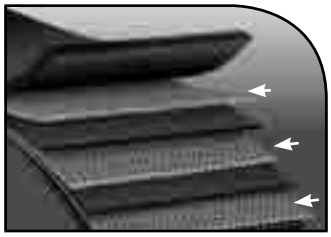
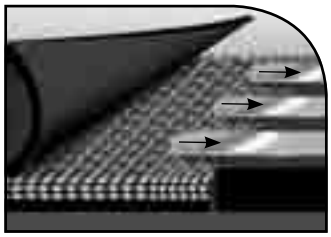
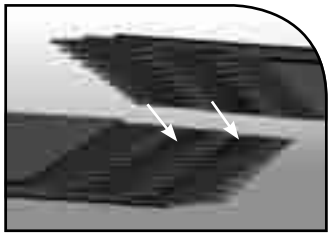
Features & Benefits









Flame Resistance

Underground coal belts require additional flame resistance and flame propagation cover properties. Our SHIELD™ compound exceeds MSHA's part 14, B.E.L.T. flame resistance and flame propagation requirements while also providing low smoke toxicity and density safety characteristics as well as outstanding abrasion resistance. We also offer standard ARMA compound for ASTM D378 Part 13.2 flame resistance and ARMA II where superior abrasion resistance is required. See the compounds section on page 82 for available compounds.

Impact Resistance

Goodyear Engineered Products underground belts come well prepared to withstand the worst. That's because loading impact damage, a major cause of belt failure, is already assessed and predicted at our Technical Center laboratory. During the design phase, our design engineers utilize an enhanced Dynamic Impact Tester to accurately simulate loading impact force and its effects on belting. It is information like this that contributed to the design of our Triple-Warp™ fabric weave.

Tear Resistance

A misaligned belt can suffer edge tears by running into the structure. Tears can also occur as a result of material punctures. Thanks to the extremely high transverse tear strength of Coal Quest belts, these occurrences are minimized and contained.

Rip Resistance

Scrap metal and other debris can penetrate and greatly damage a belt. If these foreign objects get hung up in the structure, it can lead to equipment damage, material spillage and even slits or cuts in long sections of the belt. The Triple-Warp fabric design of Coal Quest belting helps dislodge and expel foreign objects and contain rips to a small area.

Fastener Retention

The mechanical fastener splices of Coal Quest belts are rated at 100% of the rated working tension. At our world-class Technical Center, these splices have undergone rigorous dynamic and static testing, which enables the belt to offer superior mechanical fastener retention vs. multi-ply and straight-warp constructions.

Vulcanized Finger Splice

A finger over finger vulcanized splice is recommended for Goodyear Engineered Products Coal Quest belting. This splice method takes advantage of the supior strength properties of the Coal Quest carcass to offer 100% of the rated belt tension.

6-Pulley Dynamic Splice Fatigue Tester

FEATURES	Coal Quest	Straight-Warp
Resists fastener pullout	Excellent	Good
Handles severe impact	Excellent	Excellent
Transverse tear resistance	Excellent	Excellent
Rip resistance	Excellent	Excellent
Flexibility around small pulley diameters	Excellent	Poor
Option to utilize various cover gauges	Excellent	Poor
Resists edge fraying or stringing	Excellent	Poor
Minimum cost and time for vulcanized splice	Good	Poor

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COAL QUEST CONVEYOR BELT DATA - Imperial

	COAL QUEST 400/1	COAL QUEST 600/1	COAL QUEST 600/3	COAL QUEST 800/3	COAL QUEST 1000/3
Number Of Plies	1	1	3	3	3
Fabric Type	P/N	P/N	P/N	P/N	P/N
Vulcanized & Fastener Rating (piw)	400	600	600	800	1000
Carcass Gauge (in.)	0.136	0.168	0.274	0.323	0.356
Carcass Weight (lbs/sq.ft.)	0.80	1.02	1.74	1.95	2.19
Approx. 1/32" cover wt (lbs/sq.ft.)	0.24	0.24	0.24	0.24	0.24
Avg. Permanent Elongation (%) *	1.20	1.30	1.00	1.40	1.90
Elastic modulus (piw)	30,000	44,000	55,500	60,500	72,000
Splice Step Length (in.)	Finger	Finger	Finger	Finger	Finger
Recommended Fasteners: Hinge	R5	R5-1/2	R5-1/2	R6	R6
Hinge	U35	U35	U35	U36	U37

Rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters, and system tension.
Consult your GTM or fastener manufacturer. R6 fasteners must be installed with stainless steel rivets when belt tension exceeds 140kN/m for best results.
P/N = Poly / Nylon N/N = Nylon/Nylon
* *Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations. Consult your GTM for vulcanized splice method for Coal Quest constructions.(Do not use any bias or overlap design).*

COAL QUEST LOAD SUPPORT (Maximum Belt Width) (in.)

Material Weight	0-65 lbs/cu.ft.			65-100 lbs/cu.ft.		
Idler Angle	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
Coal Quest 400/1	54	48	42	54	48	42
Coal Quest 600/1	60	54	48	54	48	42
Coal Quest 600/3	72	60	54	60	54	48
Coal Quest 800/3	84	72	60	72	60	54
Coal Quest 1000/3	96	84	72	84	72	60

On In-Line systems with troughing idler spacing greater than 5 ft. or idler roll gap greater than 1/2". Consult your GTM.

COAL QUEST TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

	COAL QUEST 400/1	COAL QUEST 600/1	COAL QUEST 600/3	COAL QUEST 800/3	COAL QUEST 1000/3
Number Of Plies	1	1	3	3	3
20 degree idlers	18	24	30	30	30
35 degree idlers	24	30	36	36	36
45 degree idlers	24	30	42	42	42

6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.

COAL QUEST MINIMUM PULLEY DIAMETERS (in.)

	COAL QUEST 400/1	COAL QUEST 600/1	COAL QUEST 600/3	COAL QUEST 800/3	COAL QUEST 1000/3
Number Of Plies	1	1	3	3	3
Over 80% Tension	20	20	24	30	30
60% to 80% Tension	18	18	20	24	24
40% to 60% Tension	14	14	18	20	20
Up to 40% Tension	12	12	16	18	18
Tails and Snubs	12	12	16	18	18

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COAL QUEST CONVEYOR BELT DATA - Metric

	COAL QUEST 400/1	COAL QUEST 600/1	COAL QUEST 600/3	COAL QUEST 800/3	COAL QUEST 1000/3
Number Of Plies	1	1	3	3	3
Fabric Type	P/N	P/N	P/N	P/N	P/N
Vulcanized &Fastener Rating (kN/m)	70	105	105	140	175
Carcass Gauge (mm)	3.45	4.27	6.96	8.20	9.04
Carcass Weight (kg/m2)	3.91	4.98	8.50	9.52	10.69
Approx 1mm cover wt (kg/m2)	1.17	1.17	1.17	1.17	1.17
Elastic modulus (kN/m)	5255	7720	9720	10598	12610
Avg. Permanent Elongation (%) *	1.2	1.3	1	1.4	1.9
Splice Step Length (mm)	Finger	Finger	Finger	Finger	Finger
Recommended Fasteners: Hinge	R5	R6-1/2	R5-1/2	R6	R6
Hinge	U35	U35	U35	U36	U37

Rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters, and system tension.
Consult your GTM or fastener manufacturer. R6 fasteners must be installed with stainless steel rivets when belt tension exceeds 140kN/m for best results.
P/N = Poly / Nylon N/N = Nylon/Nylon
**Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations. Consult your GTM for vulcanized splice method for Coal Quest constructions. (Do not use any bias or overlap design).*

COAL QUEST LOAD SUPPORT (Maximum Belt Width) (mm)

Material Weight	(0-640 kg/cu.m.)			(641-1,280 kg/cu.m.)		
Idler Angle	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
Coal Quest 400/1	1372	1219	1067	1372	1219	1067
Coal Quest 600/1	1524	1372	1219	1372	1219	1067
Coal Quest 600/3	1829	1524	1372	1524	1372	1219
Coal Quest 800/3	2134	1829	1524	1829	1524	1372
Coal Quest 1000/3	2438	2134	1829	2134	1829	1524

On In-Line systems with troughing idler spacing greater than 1.5m or idler roll gap greater than 12.7mm. Consult your GTM.

COAL QUEST TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

	COAL QUEST 400/1	COAL QUEST 600/1	COAL QUEST 600/3	COAL QUEST 800/3	COAL QUEST 1000/3
Number Of Plies	1	1	3	3	3
20 degree idlers	457	609	762	762	762
35 degree idlers	610	762	914	914	914
45 degree idlers	610	762	1067	1067	1067

150mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.

COAL QUEST MINIMUM PULLEY DIAMETERS (mm.)

	COAL QUEST 400/1	COAL QUEST 600/1	COAL QUEST 600/3	COAL QUEST 800/3	COAL QUEST 1000/3
Number Of Plies	1	1	3	3	3
Over 80% Tension	508	508	610	762	762
61% to 80% Tension	457	457	508	610	610
40% to 60% Tension	356	356	457	508	508
Up to 40% Tension	305	305	406	457	457
Tails and Snubs	305	305	406	457	457

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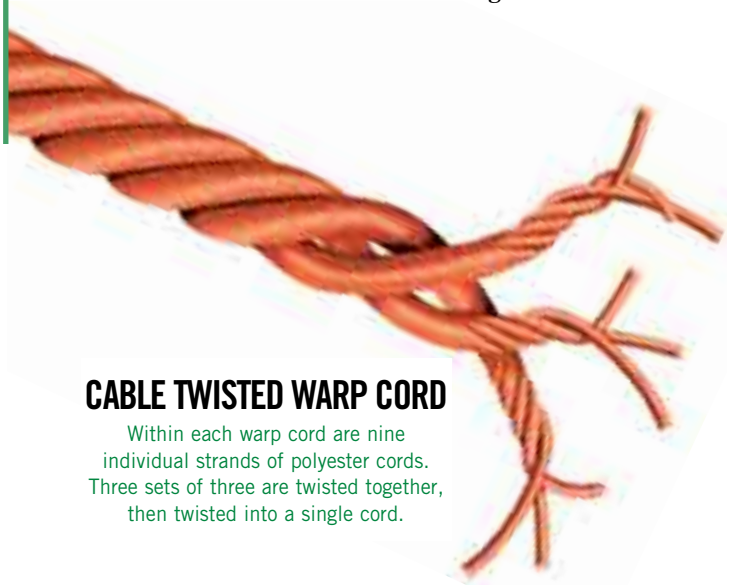
GLIDE® PLUS

GLIDE PLUS

In applications that include **mainline, slope, tripper, panel belt and other applications,** our Glide Plus belt has proven its dependability. The workhorse of our underground line-up, millions of feet of Glide Plus are operating underground worldwide with outstanding success. The key is our unique **double-faced 2-1 twill fabric design.**



CABLE TWISTED WARP CORD

Within each warp cord are nine individual strands of polyester cords. Three sets of three are twisted together, then twisted into a single cord.

*** Cord illustrated above is utilized in 2/1000, 3/1350, 4/1800 construction**

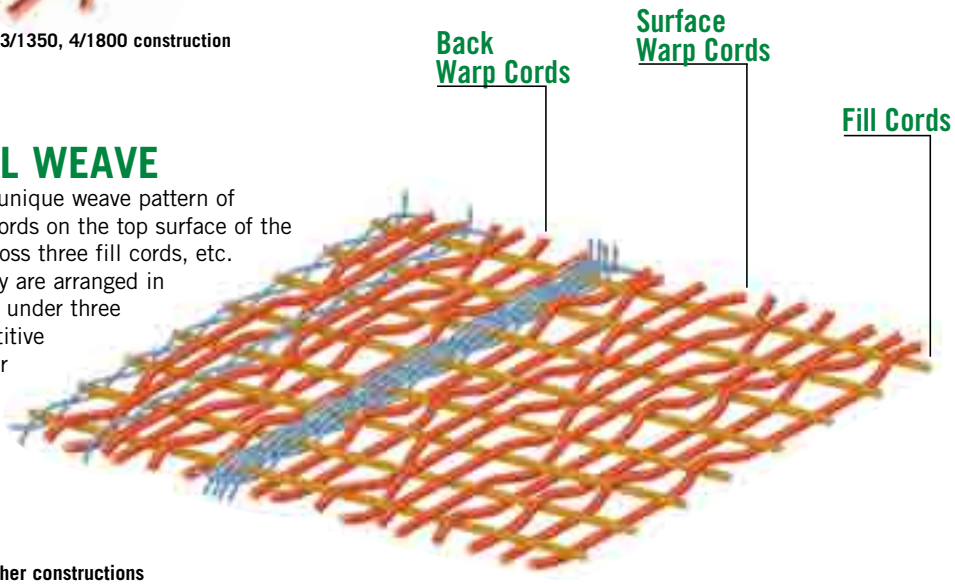
The polyester warp cords of the Glide Plus fabric are twisted into sets of individual strands, then fashioned into a cabled cord. Compare the two configurations, and you'll find that the Glide Plus belt provides significantly more **flexibility,** which enables you to reduce pulley size and costs. And that's just the beginning of the Glide Plus belt savings story.

Glide Plus conveyor belt demonstrates superior resistance to tears, rips and impact. It also provides unsurpassed adhesion values, and patented anti-stringing and fraying properties. In addition, our Glide Plus belt is designed with an average safety factor of 10:1, with an average breaking strength of up to 18,000 lbs./square inch.

If you want to reduce your downtime and maximize up time, Goodyear Engineered Products Glide Plus offers superior strength and durability for a lower cost per ton conveyed.

DOUBLE-FACED 2/1 TWILL WEAVE

Superior flexibility is further ensured by the unique weave pattern of Glide Plus. As shown below, the face warp cords on the top surface of the fabric cross three fill cords, go under one, cross three fill cords, etc. Beneath the fabric are back warp cords. They are arranged in the opposite fashion of the face cords, going under three fill cords, over one, under three, etc. Competitive belts place their warp cords over three, under three, etc., which compromises flexibility and promotes edge fray.



Warp Cords (Surface / Back)

Fill Cords

*** Offered in 2/1000, 3/1350, 4/1800, optional on other constructions**

Tension Range

400 PIW to 1800 PIW

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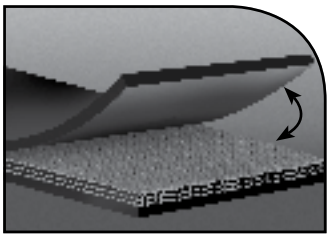
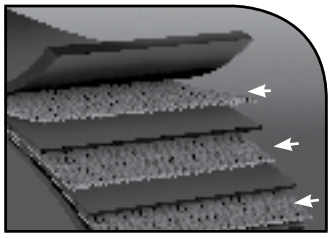
Features & Benefits



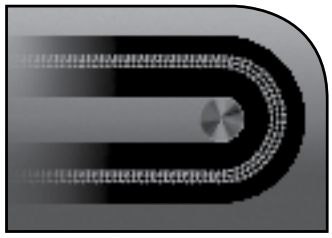
Flame Resistance

Underground coal belts require additional flame resistance and flame propagation cover properties. Our SHIELD™ compound exceeds MSHA's part 14, B.E.L.T. flame resistance and flame propagation requirements while also providing low smoke toxicity and density safety characteristics as well as outstanding abrasion resistance. We also offer standard ARMA and ARMA II compound for ASTM D378 Part 13.2 flame resistance. ARMA II can also be used where superior abrasion resistance is required.



Excellent Adhesion

The adhesion values of Glide Plus belting help reduce edge separation and prolong splice life, thereby preventing premature belt failure. High levels of adhesion help to prevent idler junction failure by providing increased load support over the idler junction gap. And by reducing the risk of delamination, the belt's high adhesion values help extend belt life.

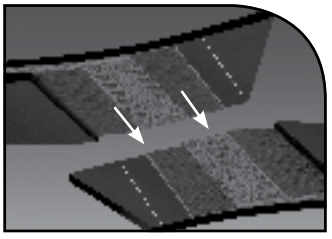


Rip Resistance

Often times, scrap metal and debris become lodged in the conveyor belt structure. When this happens, equipment damage, material spillage and even long cuts in the belt can occur. The double-faced twill weave design found in all Glide Plus belting helps dislodge and expel foreign objects from the system, while keeping belt rips confined to a small area.

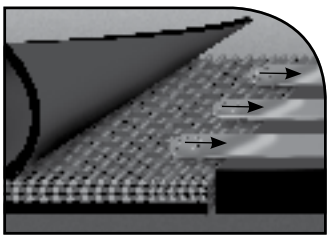
Transverse Tear

Thanks to the double-faced twill weave design of Glide Plus belts, belt tears and material punctures are kept to a minimum. Should they occur, however, the belt's unique twill weave design keeps them contained to help maintain your conveyor system's productivity.



Increased Dynamic Flexibility

Glide Plus belt customers enjoy significant pulley cost savings, since smaller pulleys may be utilized. And smaller pulleys allow you to conserve space in your underground applications without sacrificing belt performance. In addition, the cabled warp cord design of the Glide Plus belt provides extended splice life by offering superior resistance to mechanical and vulcanized splice fatigue.



Vulcanized Splice

Vulcanized splices can provide increased longevity and integrity when operating under normal conditions up to 100% of belts rated tension, resulting in minimum downtime.

Fastener Retention

The unique twill weave design enhances fastener holding ability and helps to expel any foreign objects that may penetrate the belt.

* Offered in 2/1000, 3/1350, 4/1800, optional on other constructions

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GLIDE PLUS CONVEYOR BELT DATA - Imperial

	GLIDE 400/2	GLIDE 500/2	GLIDE 600/3	GLIDE 750/3	GLIDE 800/4	GLIDE 1000/2	GLIDE 1000/4	GLIDE 1250/5	GLIDE 1350/3	GLIDE 1800/4
Number Of Plies	2	2	3	3	4	2	4	5	3	4
Fabric Type	P/P	P/N	P/P	P/N	P/P	P/N	P/N	P/N	P/N	P/N
Vulcanized & Fastener Rating (piw)	400	500	600	750	800	1000	1000	1250	1350	1800
Carcass Gauge (in.)	0.202	0.216	0.251	0.272	0.340	0.308	0.368	0.464	0.441	0.595
Carcass Weight (lbs/sq.ft.)	1.27	1.29	1.55	1.68	2.08	2.09	2.47	2.87	2.98	4.01
Approx. 1/32" cover wt (lbs/sq.ft.)	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Elastic modulus (piw)	38,500	36,800	57,750	55,200	77,000	60,000	73,600	92,000	90,000	125,050
Avg. Permanent Elongation (%) *	0.9	1.4	0.9	1.4	0.9	1.5	1.4	1.4	1.5	1.5
Splice Step Length (in.)	16	18	16	18	16	Finger	18	18	Finger	Finger
Recommended Fastener Plate	BR-10	BR-10	BR-10	BR-14	BR-14	NR	NR	NR	NR	NR
Hinge	R5	R5-1/2	R5-1/2	R6	R6	R6	R6	R6	R8	NR
Hinge	U35	U35	U35	U36	U36	U38A	U38A	U38	U38	U38

Rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters, and system tension. Consult your GTM or fastener manufacturer. R6 fasteners must be installed with stainless steel rivets when belt tension exceeds 140kN/m for best results.

P/N = Poly / Nylon

**Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations.*

Consult your GTM for vulcanized splice method for 1000/2, 1350/3, and 1800/4 constructions. (Do not use any bias or overlap design). Minimum cover thickness is 3.175mm for vulcanized splice.

GLIDE PLUS LOAD SUPPORT (Maximum Belt Width) (in.)

Material Weight	0-65 lbs/cu.ft.			65-100 lbs/cu.ft.		
Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
Glide 400/2	48	48	42	42	42	36
Glide 500/2	60	54	48	54	48	42
Glide 600/3	72	60	54	72	60	54
Glide 750/3	72	60	54	66	60	54
Glide 800/4	84	72	72	84	72	60
Glide 1000/2	72	72	60	72	60	54
Glide 1000/4	84	72	72	84	72	60
Glide 1250/5	108	96	96	108	96	84
Glide 1350/3	96	96	84	96	84	72
Glide 1800/4	118	118	108	108	108	96

On In-Line systems with troughing idler spacing greater than 5 ft. or idler roll gap greater than 1/2". Consult your GTM.

GLIDE PLUS TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

	Glide 400/2	Glide 500/2	Glide 600/3	Glide 750/3	Glide 800/4	Glide 1000/2	Glide 1000/4	Glide 1250/5	Glide 1350/3	Glide 1800/4
Number Of Plies	2	2	3	3	4	2	4	5	3	4
20 degree idlers	18	24	24	24	30	24	30	36	30	36
35 degree idlers	24	30	30	30	36	30	36	42	36	42
45 degree idlers	30	36	36	36	42	36	42	48	42	48

6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.

GLIDE PLUS MINIMUM PULLEY DIAMETERS (in.)

	Glide 400/2	Glide 500/2	Glide 600/3	Glide 750/3	Glide 800/4	Glide 1000/2	Glide 1000/4	Glide 1250/5	Glide 1350/3	Glide 1800/4
Number Of Plies	2	2	3	3	4	2	4	5	3	4
Over 80% Tension	22	22	24	24	30	30	36	42	36	42
61% to 80% Tension	18	18	20	20	24	24	30	36	30	36
40% to 60% Tension	16	16	18	20	20	24	24	30	30	36
Up to 40% Tension	14	14	16	18	18	20	20	24	24	30
Tails and Snubs	14	14	16	18	18	20	20	24	24	30

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GLIDE PLUS CONVEYOR BELT DATA - Metric

	Glide 400/2	Glide 500/2	Glide 600/3	Glide 750/3	Glide 800/4	Glide 1000/2	Glide 1000/4	Glide 1250/5	Glide 1350/3	Glide 1800/4
Number Of Plies	2	2	3	3	4	2	4	5	3	4
Fabric Type	P/P	P/N	P/P	P/N	P/P	P/N	P/N	P/N	P/N	P/N
Vulcanized & Fastener Rating (kN/m)	70	88	105	131	140	175	175	210	236	315
Carcass Gauge (mm)	5.13	5.49	6.38	6.91	8.64	7.82	9.35	11.79	11.20	15.11
Carcass Weight (kg/m2)	6.22	6.31	7.57	8.20	10.16	10.20	12.06	14.01	14.55	19.58
Approx. 1/32" cover wt (kg/m2)	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Elastic modulus (kN/m)	6,745	6,445	10,115	9,670	13,485	10,510	12,896	16,110	15,760	21,900
Avg. Permanent Elongation (%) *	0.9	1.4	0.9	1.4	0.9	1.5	1.4	1.4	1.5	1.5
Splice Step Length (mm)	406	457	406	457	406	Finger	457	457	Finger	Finger
Recommended Fastener Plate	BR-10	BR-10	BR-10	BR-14	BR-14	NR	NR	NR	NR	NR
Hinge	R5	R5-1/2	R5-1/2	R6	R6	R6	R6	R6	R8	NR
Hinge	U35	U35	U35	U36	U36	U38A	U38A	U38	U38	U38B

Rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters, and system tension. Consult your GTM or fastener manufacturer. R6 fasteners must be installed with stainless steel rivets when belt tension exceeds 140kN/m for best results.

P/N = Poly / Nylon

* *Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your GTM or GAD for elastic & total elongation calculations.*

Consult your GTM for vulcanized splice method for 1000/2, 1350/3, and 1800/4 constructions. (Do not use any bias or overlap design). Minimum cover thickness is 3.175mm for vulcanized splice.

GLIDE PLUS LOAD SUPPORT (Maximum Belt Width) (mm)

Material Weight	0-640 kg/cu.m.			641-1,280 kg/cu.m.		
Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
Glide 400/2	1219	1219	1067	1067	1067	914
Glide 500/2	1524	1372	1219	1372	1219	1067
Glide 600/3	1829	1524	1372	1829	1524	1372
Glide 750/3	1829	1524	1372	1676	1524	1372
Glide 800/4	2134	1829	1829	2134	1829	1524
Glide 1000/2	1829	1829	1524	1829	1524	1372
Glide 1000/4	2134	1829	1829	2134	1829	1524
Glide 1250/5	2743	2438	2438	2743	2438	2134
Glide 1350/3	2438	2438	2134	2438	2134	1829
Glide 1800/4	2997	2997	2743	2743	2743	2438

On In-Line systems with troughing idler spacing greater than 1.5m or idler roll gap greater than 12.7mm Consult your GTM.

GLIDE PLUS TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

	Glide 400/2	Glide 500/2	Glide 600/3	Glide 750/3	Glide 800/4	Glide 1000/2	Glide 1000/4	Glide 1250/5	Glides 1350/3	Glide 1800/4
Number Of Plies	2	2	3	3	4	2	4	5	3	4
20 degree idlers	457	610	610	610	762	610	762	914	762	914
35 degree idlers	610	762	762	762	914	762	914	1067	914	1067
45 degree idlers	762	914	914	914	1067	914	1067	1219	1067	1219

150mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.

GLIDE PLUS MINIMUM PULLEY DIAMETERS (mm)

	Glide 400/2	Glide 500/2	Glide 600/3	Glide 750/3	Glide 800/4	Glide 1000/2	Glide 1000/4	Glide 1250/5	Glides 1350/3	Glide 1800/4
Number Of Plies	2	2	3	3	4	2	4	5	3	4
Over 80% Tension	559	559	610	610	762	762	914	1067	914	1067
61% to 80% Tension	457	457	508	508	610	610	762	914	762	914
40% to 60% Tension	406	406	457	508	508	610	610	762	762	914
Up to 40% Tension	356	356	406	457	457	508	508	610	610	762
Tails and Snubs	356	356	406	457	457	508	508	610	610	762

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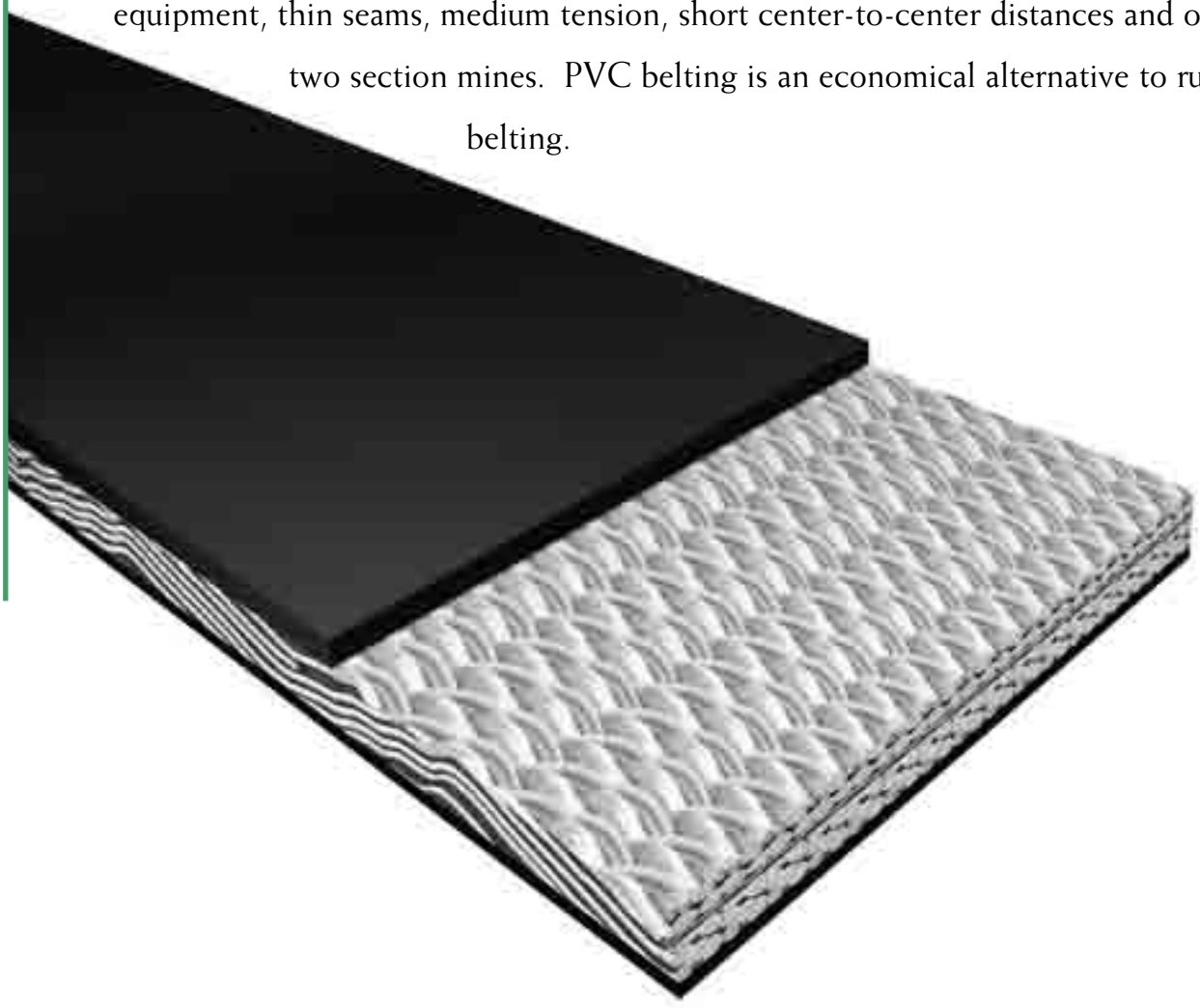
TOUGH COAT PVC™

TOUGH COAT PVC

Tough Coat PVC™ is a PVC (Poly Vinyl Chloride) solid-woven belt designed to resist a host of abusive elements. The abrasion-resistant PVC covers are ideal for coal, potash, trona and salt mining markets. The applications include: mainline belts, continuous mining equipment, thin seams, medium tension, short center-to-center distances and one or two section mines. PVC belting is an economical alternative to rubber belting.



Tension Range

680 PIW to 1800 PIW

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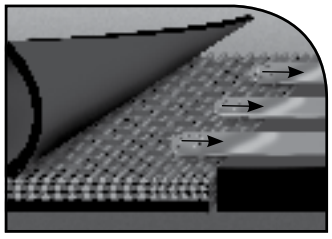
Features & Benefits

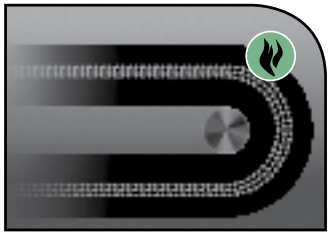
Solid-Woven Fabric Weave

This solid-woven design of polyester x nylon is impregnated with PVC, boasting a high internal adhesion level, making Tough Coat PVC belts resistant to abrasion and impact.



Fastener Retention

The solid-woven carcass properties offer excellent fastener holding ability. The short-edged fiber design eliminates fabric strings when the belt contacts structure.



Flame-Retardant Compounds

Can utilize a variety of PVC compounds to meet the following requirements: MSHA 28/33-1, AS-1332-1991 Grade S, CAN/CSA-M422-M87, SABS 971/80

Custom colored covers available

Contact your GTM for available custom color options.

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TOUGH COAT PVC CONVEYOR BELT DATA - Imperial

	Tough Coat PVC 680/1	Tough Coat PVC 800/1	Tough Coat PVC 1000/1	Tough Coat PVC 1250/1	Tough Coat PVC 1400/1	Tough Coat PVC 1600/1	Tough Coat PVC 1800/1
Number Of Plies	1	1	1	1	1	1	1
Vulcanized &Fastener Rating (piw)	385	450	570	715	800	915	1025
Carcass Gauge (in)	0.276	0.295	0.315	0.374	0.394	0.433	0.453
Carcass Weight (lbs/sq ft)	1.48	1.64	1.95	2.15	2.36	2.64	2.87
Cover Weight (lbs/sq ft) per 1mm	0.275	0.275	0.275	0.275	0.275	0.275	0.275
Avg. Permanent Elongation (%)	1.5	1.5	1.5	2.0	2.0	2.0	2.0

Rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters, and system tension.
Consult your GTM or fastener manufacturer. R6 fasteners must be installed with stainless steel rivets when belt tension exceed 800 piw for best results.

TOUGH COAT PVC LOAD SUPPORT (Maximum Belt Width) (in.)

Material Weight	0-65 lbs/cu.ft.			65-100 lbs/cu.ft.		
Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
680	54	48	42	48	42	36
800	60	54	48	54	48	42
1000	72	60	54	72	54	48
1250	72	72	60	72	60	54
1400	84	72	60	84	72	60
1600	84	72	60	84	72	60
1800	84	84	72	84	72	72

On In-Line systems with troughing idler spacing greater than 5 ft. or idler roll gap greater than 1/2", consult your GTM.

TOUGH COAT PVC TROUGHABILITY (Minimum Belt Width) (in.) (Table based on ISO 703 Testing Procedure)

	Tough Coat PVC 680/1	Tough Coat PVC 800/1	Tough Coat PVC 1000/1	Tough Coat PVC 1250/1	Tough Coat PVC 1400/1	Tough Coat PVC 1600/1	Tough Coat PVC 1800/1
20 degree idlers	24	24	30	30	30	36	36
35 degree idlers	30	30	36	36	36	42	42
45 degree idlers	36	36	42	42	42	48	48

6" narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.

TOUGH COAT PVC MINIMUM PULLEY DIAMETERS (in.)

	Tough Coat PVC 680/1	Tough Coat PVC 800/1	Tough Coat PVC 1000/1	Tough Coat PVC 1250/1	Tough Coat PVC 1400/1	Tough Coat PVC 1600/1	Tough Coat PVC 1800/1
Over 80% Tension	18	22	24	30	30	36	36
61% to 80% Tension	16	18	20	24	24	30	30
40% to 60% Tension	14	16	18	20	20	24	24
Up to 40% Tension	14	14	16	18	18	20	20
Tails and Snubs	12	14	16	18	18	20	20

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TOUGH COAT PVC CONVEYOR BELT DATA - Metric

	Tough Coat PVC 680/1	Tough Coat PVC 800/1	Tough Coat PVC 1000/1	Tough Coat PVC 1250/1	Tough Coat PVC 1400/1	Tough Coat PVC 1600/1	Tough Coat PVC 1800/1
Number Of Plies	1	1	1	1	1	1	1
Vulcanized &Fastener Rating (kN/m)	68	80	100	125	140	160	180
Carcass Gauge (mm)	7.01	7.49	8.00	9.50	9.91	11.00	11.51
Carcass Weight (kg/sq m)	7.23	8.01	9.50	10.50	11.50	12.90	14.00
Cover Weight (kg/sq m) per 1mm	1.34	1.34	1.34	1.34	1.34	1.34	1.34
Avg. Permanent Elongation (%)	1.5	1.5	1.5	2.0	2.0	2.0	2.0

Rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions. Fastener size recommendation may vary due to cover thickness, pulley diameters, and system tension.
Consult your GTM or fastener manufacturer. R6 fasteners must be installed with stainless steel rivets when belt tension exceed 800 piw for best results.

TOUGH COAT PVC LOAD SUPPORT (Maximum Belt Width) (mm)

Material Weight	0-65 kg/m3			65-100 kg/m3		
Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
680	1372	1219	1067	1219	1067	914
800	1524	1372	1219	1372	1219	1067
1000	1829	1524	1372	1829	1372	1219
1250	1829	1829	1524	1829	1524	1372
1400	2134	1829	1524	2134	1829	1524
1600	2134	1829	1524	2134	1829	1524
1800	2134	2134	1829	2134	1829	1829

On In-Line systems with troughing idler spacing greater than 1.5m or idler roll gap greater than 12.7mm, consult your GTM.

TOUGH COAT PVC TROUGHABILITY (Minimum Belt Width) (mm) (Table based on ISO 703 Testing Procedure)

	Tough Coat PVC 680/1	Tough Coat PVC 800/1	Tough Coat PVC 1000/1	Tough Coat PVC 1250/1	Tough Coat PVC 1400/1	Tough Coat PVC 1600/1	Tough Coat PVC 1800/1
20 degree idlers	610	610	762	762	762	914	914
35 degree idlers	762	762	914	914	914	1067	1067
45 degree idlers	914	914	1067	1067	1067	1219	1219

150mm narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your GTM.

TOUGH COAT PVC MINIMUM PULLEY DIAMETERS (mm)

	Tough Coat PVC 680/1	Tough Coat PVC 800/1	Tough Coat PVC 1000/1	Tough Coat PVC 1250/1	Tough Coat PVC 1400/1	Tough Coat PVC 1600/1	Tough Coat PVC 1800/1
Over 80% Tension	457	559	610	762	762	914	914
61% to 80% Tension	406	457	508	610	610	762	762
40% to 60% Tension	356	406	457	508	508	610	610
Up to 40% Tension	356	356	406	457	457	508	508
Tails and Snubs	305	356	406	457	457	508	508

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BELT CONSTRUCTION

Goodyear Engineered Products Flexsteel® belts are custom designed to meet the specific needs of the given application, providing superior protection against the abuse of conveying virtually any material. The steel cord provides superior impact resistance, with the number and size being selected to meet the desired operating tension and application needs. The insulation gum is specifically designed to encapsulate each steel cord filament to reduce internal friction while providing enhanced adhesion to the cover rubbers. Top and bottom covers provide maximum protection to the steel cord. The cover compounds are specifically designed to meet the demands of the application, and are available in a wide variety of rubber types and gauges.

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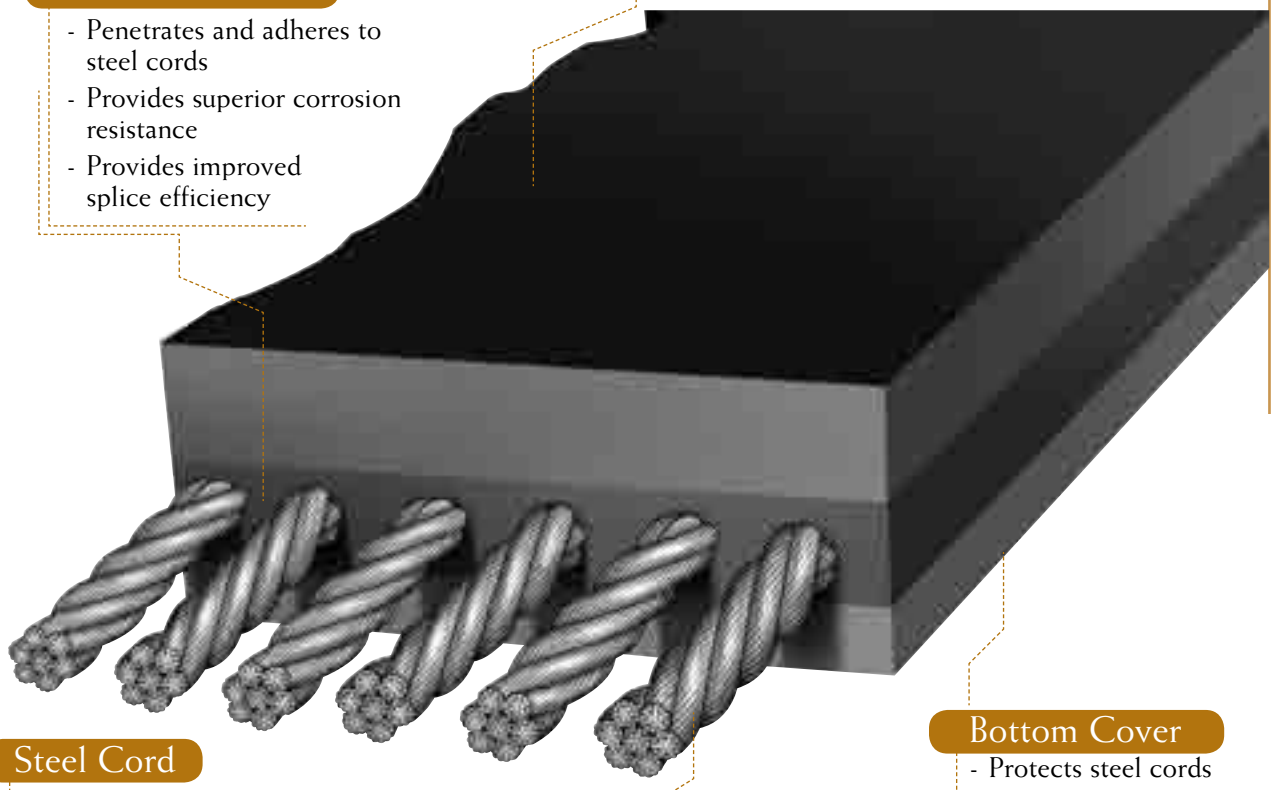
Conveyor Belt Components



Top Cover
- Protects steel cords
- Various compounds available

Insulation Gum
- Penetrates and adheres to steel cords
- Provides superior corrosion resistance
- Provides improved splice efficiency

Steel Cord
- Provides superior bonding to covers and insulation gum
- Allows high flexibility and low elongation
- Galvanized to provide barrier against corrosion

Bottom Cover
- Protects steel cords
- Various compounds available
- Helps determine power consumption

BELT CONSTRUCTION NOMENCLATURE EXAMPLE:

Flexsteel® Stacker® ST3500/48 3/4" x 1/4"

- Flexsteel® — Belt Construction
- Stacker® — Rubber Compound
- ST3500/48 — Belt breaking strength in kilonewtons per meter width
- 3/4" — Top Cover Gauge
- 1/4" — Bottom or Pulley Cover Gauge
- Belt Width Inches

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FLEXSTEEL®

FLEXSTEEL

Since we introduced the world's first steel reinforced belt to the material handling industry in 1942, we have continued to advance the technology to satisfy the most demanding and abusive conveyor applications. Using state-of-the-art technology, we ensure superior product design and maximum performance for our customers. Shipping from six production plants on five continents, Flexsteel® remains our premium global product. Our worldwide engineering group continues to design Flexsteel specifications that will provide a lower cost-per-ton of material conveyed for each customer's unique system.

Markets

- Aggregate
- Cement
- Coal
- Hard Rock
- Power Generation
- Steel Production

Applications

- Mainlines
- Overland Belts
- Pit Belts
- Ship Loaders
- Slope Belts
- Any high abuse application

Cover Compounds

- 6740A
- ARMA® II
- ARMA®-SBR
- Compound P
- Easyrider™
- FRAS-C
- Global X®
- Omega®
- Solar-Shield®
- Stacker®
- Style BLE
- Style B II
- Survivor®
- Other compounds available on request

Tension Range

ST500 to over ST10,000

GET A LOWER

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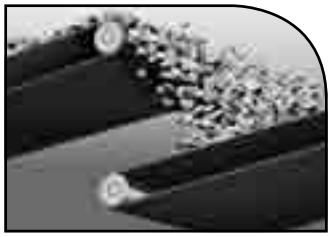
Features & Benefits

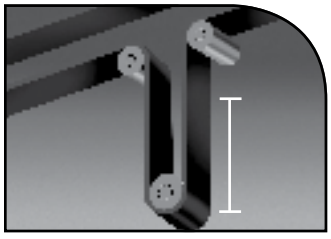
High Tension Capabilities

Flexsteel belts handle the most demanding applications. We continue to lead the industry in designing the strongest belts to meet the growing demand for long overland systems.



Fewer Transfer Points

Flexsteel's high-tension capabilities permit extremely long centers, exceptionally high lifts, and multiple horizontal curves. This allows the designer to reduce the number of transfer points to minimize a major source of maintenance headaches and downtime.

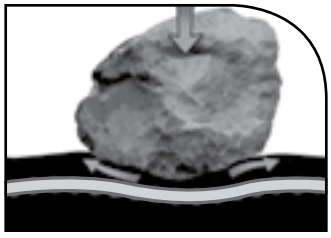


Limited Take-up Travel

Flexsteel belts elongate a maximum of 0.25% at rated tension. This allows lower cost take-up systems on many applications, and makes Flexsteel the preferred choice for long overland and short stacker/reclaiming systems, where minimum elongation is critical.

Life-long Splices

Our proven splicing methods, validated on our Two-Pulley Splice Tester, result in dynamic splice efficiencies in excess of the 50% rating defined in DIN 22110 Part 3. With proper technique, splices on Flexsteel belts should last the life of the belt. And when your belt is expected to last 20 years, that's a long time.



High Impact Resistance

Our advanced cover compounds and our insulation gum's superior adhesion combine to provide the impact, tear, and abuse resistance your applications demand.

Superior Troughing Characteristics

Because Flexsteel belts are not interwoven in the transverse direction, they offer superior troughability. Even the highest strength Flexsteel belts on steep angle idlers will trough perfectly, leading to easy belt training and full load capacity.

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Features & Benefits

Exceptional Belt Training

Flexsteel belts are built in a "uniplane" construction, where cords are laid in precisely the same plane with tension carefully controlled and equalized under cure. Belts run straight and true because cords are laid with alternating left and right hand twist. Flexsteel's superior troughing characteristics help ensure that the belt is in constant contact with idlers, which further enhances its ability to run straight.

Lower Cost-per-Ton

Fewer conveyors and splices, shorter take-ups, and reduced belt inventory add up to significant cost savings right up front. Longer belt life, life-long splices, excellent belt training, and reduced downtime save you even more down the road. It all adds up to the a lower cost-per-ton of material conveyed, which can make a major improvement in your bottom line.

Sensor Guard® with RFID Technology

Perhaps the most important feature of a Flexsteel belt is that it is available with Sensor Guard. The most widely known and most field-proven rip detection system in the world, Sensor Guard has saved companies millions of dollars in potential production losses, downtime, and spare belting.

See page 86 for details.

Packaging The Way You Want It

Packaging options include keeper bars, round steel reels, oblong reels, and cassette reels. All are designed to protect your investment and minimize the number of belt splices to lower installation costs, facilitate field installation, and reduce downtime and shipping costs.

Keeper Bar

Round Reel

Oblong Reel

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SUPERIOR STRENGTH, DURABILITY, EASE OF INSTALLATION

Goodyear Engineered Products Flexsteel conveyor belting has provided maximum protection against pounding and abuse in some of the world's largest and most demanding applications. Flexsteel belting is the only choice when extremely high tensions are present, having proven itself on copper and oil sands system operations at 6000 PIW (ST7000) tension.

Flexsteel is also the preferred belt on long overlands and short Stacker systems where minimum belt elongation is a critical design consideration. Flexsteel's steel cord reinforcement elongates a maximum of .25% at rated tension, allowing for acceptable take-up travel design on long overlands, as well as short Stacker/Reclaimer systems.

We have the capability to manufacture Flexsteel belts in long lengths up to 168" (4.2m) roll diameters, or 50 short ton (45.4 M.T.) rolls at some production locations. This allows for the minimum number of splices or joints in a conveyor system, which facilitates faster installation while providing a more reliable system. Specialized oblong packaging is available to further maximize belt lengths.

Additional time can be saved during installation by using another Flexsteel innovation, Preform™ Splice kits. Preform is a pre-grooved form that simplifies splicing by allowing you to "sandwich" the cables coming from either side between the formed rubber. Not only is the process of splicing made easier, but the belt itself is made stronger.

You can depend on Flexsteel steel cord belts to be precisely engineered to meet rigorous manufacturing standards. Rely on Flexsteel for strength, durability and ease of installation.

FLEXSTEEL: A TECHNICALLY SUPERIOR PRODUCT

Generations of our engineers have been involved for over 65 years in the design and application of Flexsteel conveyor belting. This cumulative experience translates into state-of-the-art technology, assuring superior product design, and maximum performance for our customers.

There are three component parts to Flexsteel belting, each one critical to belt performance:

ZINC GALVANIZED STEEL CORD:

Flexsteel belts are designed by selecting cord construction to provide the best specification for a particular application. The cords, made up of many wire filaments, are constructed to provide high flexibility, low elongation, and to permit efficient and high strength splice designs. The galvanized zinc coating produces a bonding agent between the cord and insulation gum and provides an important barrier against corrosion.

INSULATION GUM (CORE RUBBER):

Extensive rubber compounding technology has enabled Flexsteel engineers to develop a superior insulation gum bonding rubber, which penetrates and adheres to the steel cords. The result is excellent adhesions, corrosion resistance and splice efficiencies.

OUTER RUBBER COVERS:

The advanced compounds in Flexsteel's top and bottom covers are designed to protect the steel cord strength member against the abusive environmental conditions prevalent in most conveying applications. Compounds are available to withstand abrasion, jagged cutting and gouging, high impact, sub-zero temperatures, moderate heat, hardening effects of ozone attack and fire propagation. Special service compounds are available for unique applications, such as the oil sands in Canada, which require a compound that withstands both low temperatures and oil.

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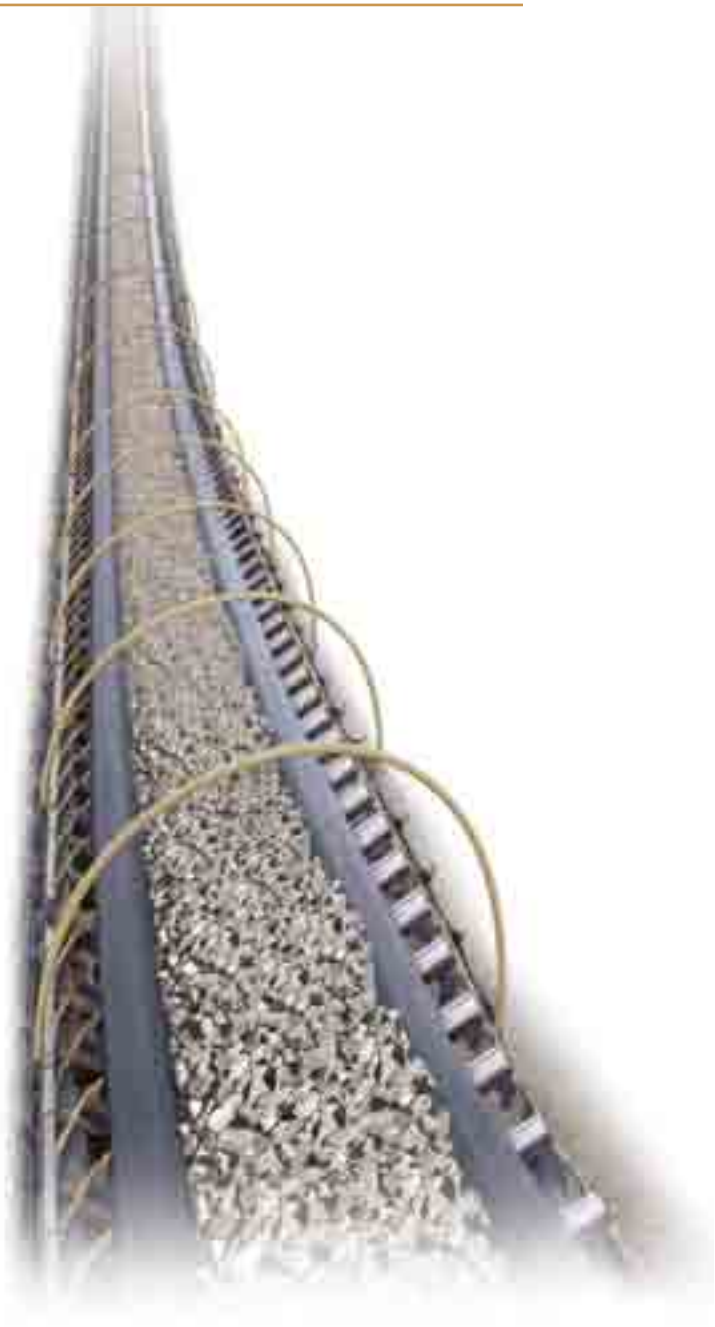
Easyrider™

There has been significant technical progress in the transport of bulk materials in the last several years. The next step to improved conveyor efficiency is the reduction of power required to operate these high performance systems. Just as some tires provide lower rolling resistance, depending upon their construction and compounds, a conveyor belt can also be designed to provide lower resistance as it rolls over the support idlers.

The power required to operate a typical conveyor belt has been studied, both theoretically and dynamically. As the belt passes over an idler, the pulley cover rubber passes through a compression/rebound cycle that absorbs power. It has been determined that on long center horizontal conveyors, the rolling resistance power loss due to the indentation effect can reach 61% of the total system power.

Using specialized pulley cover compounds, like Goodyear Engineered Products Easyrider, will help reduce total system power. Based on field measurement tests, Easyrider pulley covers will reduce the power consumption by up to 12%. This savings is realized year after year, resulting in an overall reduction to operating costs.

As an example, if your energy costs are $1 million per year, a 12% savings available with Easyrider represents a savings of $120,000 compared to other compounds! Over ten years, this can add up to savings of $1.2 million or more depending on your operation.



With Easyrider, there's reduced indentation energy loss.

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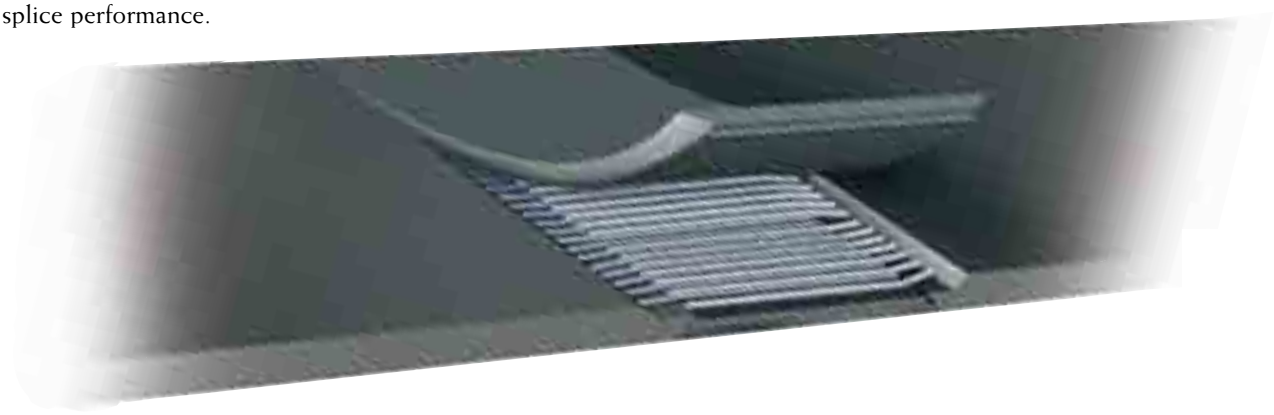
Preform™

Preform Patented Splice Technology Improves Splice Strength, and Saves Time!

There have been significant technical advancements in steel cord belt splicing in the past several years. Our patented Preform splices provide improved splice efficiency, along with reduced splice time, and improved performance. This means more dollars in your pocket.

Conventional splice methods involve the use of cements and rubber noodles. Cement drying time extends the overall splicing time, while providing the opportunity for increased contamination. The alternative laying of cord and noodle, further extends splice time, as constant chalk line checking, and adjustment to the noodle width is necessary to maintain cord alignment. Cord mis-alignment and contamination are critical factors in the resultant splice performance.



Preform Panel

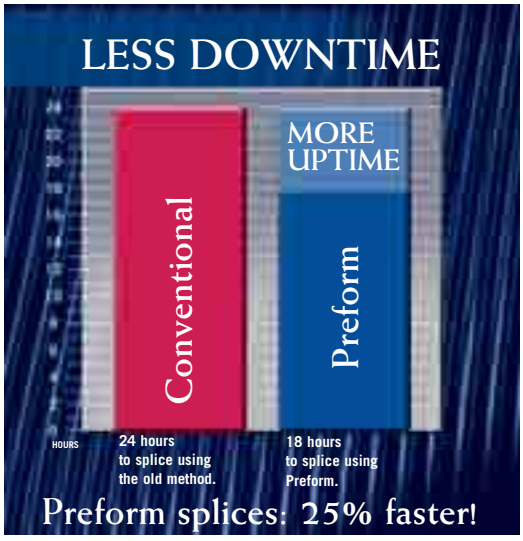
This illustration shows how the top and bottom multi-groove panels encase each cord, eliminating the need for noodles and ensuring cord alignment.

Preform Splice Method

Preform splices utilize preformed, multi-grooved top and bottom cover panels, eliminating the need for cements and noodles. Cement drying times are eliminated, reducing the possibility of splice contamination from dust infiltration. Cord laying time is significantly reduced, and the correct cord spacing and alignment is virtually guaranteed. The result is a stronger splice, with improved performance and life.

Improved Performance

Testing on the 2-Pulley Dynamic splice tester at our Technical Center in Marysville, Ohio, shows the results of two identical belts, one spliced using Preform, and one spliced using conventional splicing methods. This one test shows the Preform splice to withstand 33% more load cycles, or a theoretical 33% longer service life, than the conventional splice. Static pull splice strength tests conducted at an independent laboratory showed the Preform splice to be at least 10% stronger than a conventional splice.



Savings

Preform splices have been made successfully in many countries around the world. Savings of 16% to 25% were based on actual field measurements, comparing one splice technique versus the other, on the same belt, at the same time. Reduced splicing time, means more uptime and increased productivity.

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FLEXSTEEL STANDARD SPECIFICATIONS - Imperial

Belt Tension Rating	Minimum Ultimate Tension	Operating Tension	Cable Diameter (nominal)	Cable Pitch (Approximate)	Belt Modulus
	PIW	PIW	inches	inches	PIW
ST800	4568	685	0.142	0.688	329000
ST1000	5710	856	0.142	0.547	411000
ST1250	7138	1070	0.205	0.855	514000
ST1600	9137	1370	0.205	0.667	658000
ST2000	11421	1712	0.205	0.533	822000
ST2500	14276	2140	0.205	0.428	1027000
ST3150	17988	2697	0.315	0.729	1294000
ST3500	19987	2997	0.315	0.655	1438000
ST4000	22842	3425	0.362	0.753	1644000
ST4500	25697	3853	0.394	0.806	1849000
ST5000	28552	4281	0.433	0.820	2055000
ST5400	30836	4623	0.433	0.764	2219000
ST6000	34263	5137	0.488	0.850	2466000
ST6500	37118	5565	0.488	0.790	2671000
ST7000	39973	5993	0.488	0.738	2877000
ST7500	42828	6421	CONTACT VEYANCE		3082000
ST8000	45683	6849			3288000
ST8500	48539	7277			3493000
ST9000	51394	7705			3699000
ST9500	54249	8133			3904000
ST10000	57104	8561			4109000

Tension ratings are available in addition to those shown above. Other cable diameters may be substituted according to individual requirements.Operating tensions are based on a 6.67:1 safety factor. Cable pitch based on 48" wide belts.

FLEXSTEEL BELT THICKNESS - Imperial

Belt Tension Rating	PIW	600-1000	1001-2250	2251-3200	3201-3500	3501-4200	4201-4650	4651-6420
Cable Diameter	Inches	0.15	0.21	0.32	0.37	0.40	0.44	0.49

Approximate belt thickness = cable diameter + cover guages.

FLEXSTEEL BELT WEIGHT - Imperial

Belt Tension Rating	PIW	685	856	1070	1370	1712	2140	2697	2996
Carcass Weight	lb/ft²	1.4	1.5	2.1	2.3	2.6	2.9	4.2	4.4
Belt Tension Rating	PIW	3424	3852	4280	4623	5137	5565	5993	
Carcass Weight	lb/ft²	5.0	5.5	6.3	6.7	7.5	7.8	8.2	
Cover Compound		Stacker		Style BII		ARMA SBR		Compound P	
Cover Weight per 1/32" (lb/ft2)		0.18		0.19		0.20		0.19	

Approximate belt weight = carcass weight + cover weight. Minimum pulley cover requirements for belts with Sensor Guard® 3/16". Contact VTI Rep for minimum pulley cover that applies to your application. Minimum cover gauge is dependent on the belt rating.

RECOMMENDED PULLEY DIAMETERS - Imperial

Belt Tension Rating	Minimum Recommended Pulley Diameters (Percent of Rated Tension)				
PIW	>100% - 125%	75 - 100%	50 - 75%	<50%	Snubs
600 - 1000	36	30	24	16	16
1001 - 2250	48	42	30	24	16
2251 - 3200	60	54	42	36	30
3201 - 3500	72	60	54	42	36
3501 - 4200	78	72	54	42	36
4201 - 4650	84	72	54	48	36
4651 - 6420	90	78	66	54	42
6421 - 6800	96	84	66	54	42
6801 - 8561	120	102	78	60	54

Snubs are defined as having 6" or less belt contact and tension less than 50% of belt rating. Pulley sizes for Flexsteel belts are determined by face pressure on the pulley and/or the pulley-to-cable diameter ratio. All pulleys must be flat as crowned pulleys will cause excessive center tension in the high modulus steel cable product.

RECOMMENDED MINIMUM TRANSITION DISTANCE AT HALF TROUGH DEPTH

	Minimum transition distance (W = Belt Width) by Idler Angle		
Percent of rated tension	20 deg	35 deg	45 deg
More than 90%	2.0W	3.4W	4.0W
60% to 90%	1.6W	2.6W	3.2W
Less than 60%	1.0W	1.8W	2.2W

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FLEXSTEEL STANDARD SPECIFICATIONS - Metric

Belt Tension Rating	Minimum Ultimate Tension	Operating Tension	Cable Diameter (nominal)	Cable Pitch (Approximate)	Belt Modulus
	kN/m	kN/m	mm	mm	kN/m
ST800	800	120	3.6	17.5	58000
ST1000	1000	150	3.6	13.9	72000
ST1250	1250	187	5.2	21.7	90000
ST1600	1600	240	5.2	16.9	115000
ST2000	2000	300	5.2	13.5	144000
ST2500	2500	375	5.2	10.9	180000
ST3150	3150	472	8.0	18.5	227000
ST3500	3500	525	8.0	16.6	252000
ST4000	4000	600	9.2	19.1	288000
ST4500	4500	675	10.0	20.5	324000
ST5000	5000	750	11.0	20.8	360000
ST5400	5400	810	11.0	19.4	389000
ST6000	6000	900	12.4	21.6	432000
ST6500	6500	975	12.4	20.1	468000
ST7000	7000	1049	12.4	18.8	504000
ST7500	7500	1124	CONTACT VEYANCE		540000
ST8000	8000	1199			576000
ST8500	8500	1274			612000
ST9000	9000	1349			648000
ST9500	9500	1424			684000
ST10000	10000	1499			720000

Tension ratings are available in addition to those shown above. Other cable diameters may be substituted according to individual requirements.Operating tensions are based on a 6.67:1 safety factor. Cable pitch based on 1220mm wide belts.

FLEXSTEEL BELT THICKNESS - Metric

Belt Tension Rating	kN/m	ST701-ST1169	ST1170-ST2629	ST2630-ST3738	ST3739-ST4089	ST4090-ST4906	ST4907-ST5432	ST5433-ST7499
Cable Diameter	mm	3.6	5.2	8.0	9.2	10.0	11.0	12.4

Approximate belt thickness = cable diameter + cover guages.

FLEXSTEEL BELT WEIGHT - Metric

Belt Tension Rating	kN/m	ST800	ST1000	ST1250	ST1600	ST2000	ST2500	ST3150	ST3500
Carcass Weight	(kg/m²)	6.8	7.4	10.3	11.3	12.6	14.2	20.4	21.5
Belt Tension Rating	kN/m	ST4000	ST4500	ST5000	ST5400	ST6000	ST6500	ST7000	
Carcass Weight	(kg/m²)	24.6	27.0	31.0	32.5	36.4	38.4	40.3	
Cover Compound		Stacker		Style BII		ARMA SBR		Compound P	
Cover Weight per 1mm (kg/m²)		1.13		1.15		1.25		1.14	

Approximate belt weight = carcass weight + cover weight. Minimum pulley cover requirements for belts with Sensor Guard® 3/16". Contact VTI Rep for minimum pulley cover that applies to your application. Minimum cover gauge is dependent on the belt rating.

RECOMMENDED PULLEY DIAMETERS - Metric

Belt Tension Rating	Minimum Recommended Pulley Diameters (Percent of Rated Tension)				
kN/m	>100% - 125%	75 - 100%	50 - 75%	<50%	Snubs
ST701-ST1169	1000	800	630	400	315
ST1170-ST2629	1250	1000	800	630	400
ST2630-ST3738	1600	1400	1000	800	630
ST3739-ST4088	1800	1600	1250	1000	800
ST4089-ST4906	2000	1800	1400	1000	800
ST4907-ST5432	2000	1800	1400	1250	800
ST5433-ST7499	2400	2000	1600	1250	1000
ST7500-ST7943	2400	2200	1600	1400	1000
ST7944-ST10000	3000	2500	2000	1400	1250

Snubs are defined as having 6" or less belt contact and tension less than 50% of belt rating. Pulley sizes for Flexsteel belts are determined by face pressure on the pulley and/or the pulley-to-cable diameter ratio. All pulleys must be flat as crowned pulleys will cause excessive center tension in the high modulus steel cable product.

RECOMMENDED MINIMUM TRANSITION DISTANCE AT FULL TROUGH DEPTH

	Minimum transition distance (W = Belt Width) by Idler Angle		
Percent of rated tension	20 deg	35 deg	45 deg
More than 90%	4.0W	6.8W	8.0W
60% to 90%	3.2W	5.2W	6.4W
Less than 60%	2.0W	3.6W	4.4W

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PIPE CONVEYOR BELT

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CONFINE™

A well-rounded solution for securing materials over the long haul.

CONFINE

Designed to outperform conventional pipe conveyor belt.

Most pipe conveyor belt is using technology more than 15 years old. This can lead to numerous conveying issues, including fatigue-induced collapse of the pipe shape, opening of the overlap seal and downward rotation of the overlap seal. The unique patent-pending reinforcement of Confine provides enhanced transverse stiffness which allows greater resistance to collapse, excellent seal closure and resistance to downward rotation—regardless of the path the belt must travel.

Keeping it clean.

Because of its closed belt design, Confine provides dust-free transport of materials, keeping finer materials within the belt and not lost to the air. Meanwhile, the transported materials are protected from damaging external elements like wind and rain.

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Engineered to work a long way.

Developed using Finite Element Analysis (FEA) modeling to meet the demands of modern pipe conveyor systems, Confine is engineered to give you more. Comprehensive research, including dynamic belt testing to validate the FEA, allowed us to create a belt that can withstand the stresses of a long haul, especially around tight curves. Plus it's built with unique characteristics that allow Confine to keep its shape.

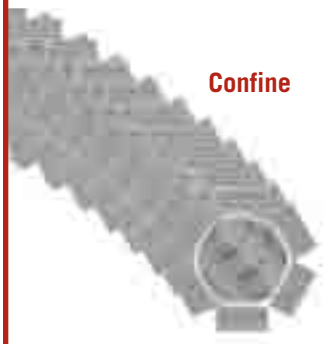
- Superb long-term transverse stiffness
- Excellent overlap seal
- Reduced buckling and minimized seam rotation in curves

The FEA modeling provides the basis to design a belt to meet the demanding requirements of pipe conveyor systems. This results in longer life compared to conventional pipe belts and a lower cost per ton conveyed.

CONFINE IS AVAILABLE IN THE FOLLOWING SIZES*

DIAMETER		BELT WIDTH		TYPE	
(mm)	(in)	(mm)	(in)	fabric	steel
150	5.9	600	23.6	•	
200	7.9	780	30.7	•	
250	9.8	1000	39.4	•	
300	11.8	1100	43.3	•	•
350	13.8	1300	51.2	•	•
400	15.7	1600	63.0	•	•
500	19.7	1900	74.8		•

*Contact us for additional sizes.



Confine

Standard Pipe Conveyor Belt

FEA modeling gives us the ability to predict how a specific belt design will perform in application. Our modeling can accurately predict pipe belt rotation in curves.

CONFINE

Typical Applications

- Copper
- Coal (power plants)
- Rock
- Gypsum
- Cement
- Pulp & paper
- Limestone
- Iron ore
- Fly ash
- Wet ash
- Fertilizer
- Glass
- Steel
- Wood chips

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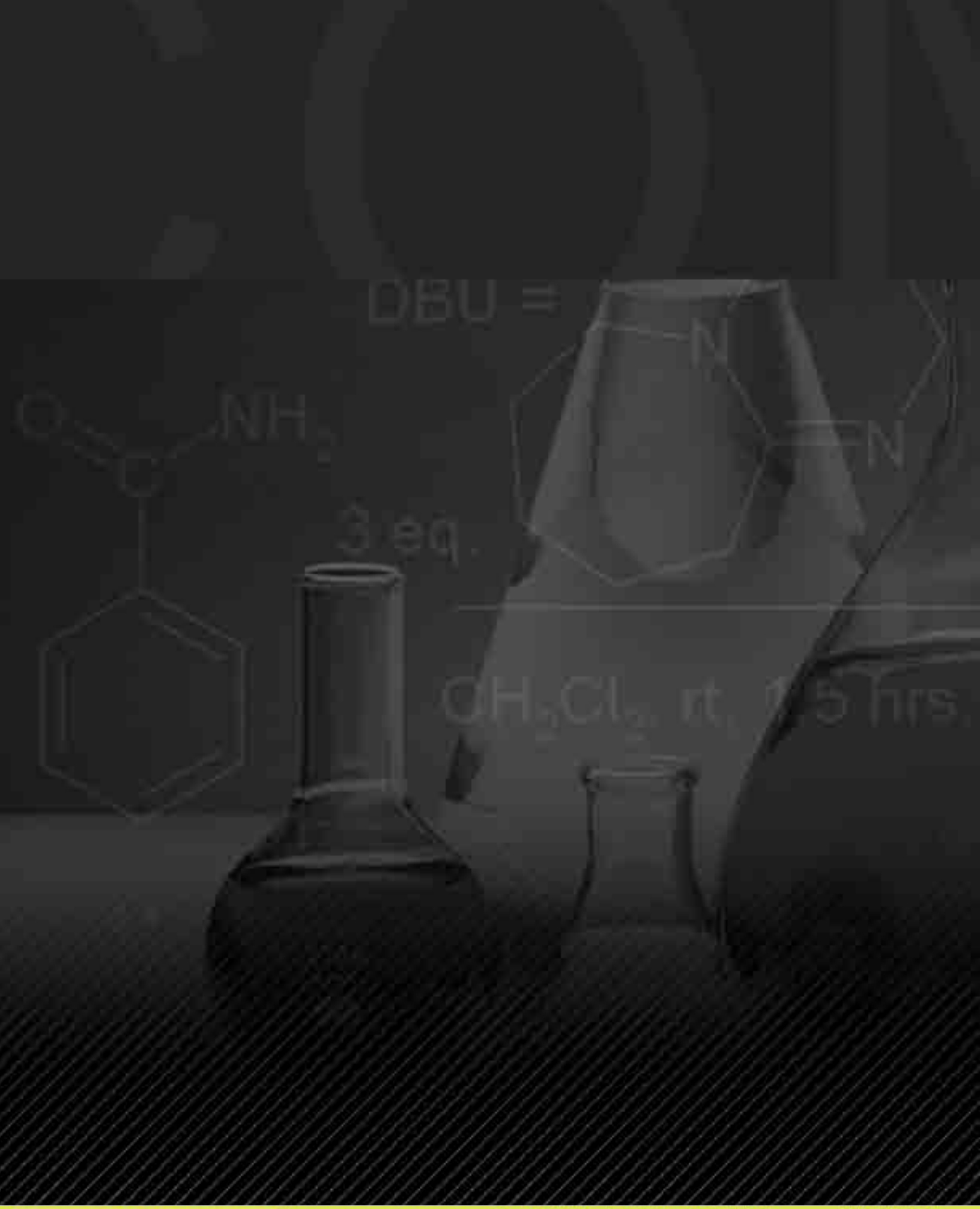

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COVER COMPOUNDS

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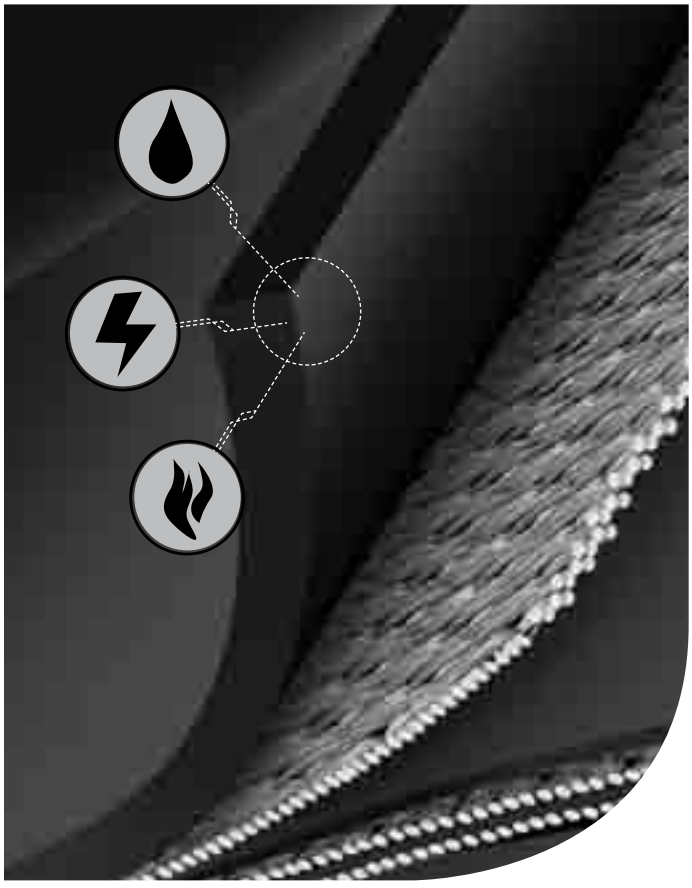
COVER COMPOUNDS



Protecting your investment with Goodyear Engineered Products cover compounds.

Goodyear Engineered Products cover compounds provide the ultimate protection for your belt carcass so that you realize a lower cost-per-ton conveyed and your system requires less maintenance. Our innovative, thermoset-formulated compounds provide protection and performance in even the toughest applications. Utilizing our compounding expertise, we offer a wide variety of cover compounds to meet your specific application requirement.

Our manufacturing process is vertically integrated and unique to the conveyor belt industry. Backed by extensive research and testing facilities, we have cover compounds to meet your rigorous requirements. We own mixing facilities that provide raw materials used in making our cover compounds, giving us more control over the quality of the product every step of the way.

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COMPOUNDS	Underground Coal Mining	Underground Mining Non-Coal	Coal - Prep Plants	Aggregate	Cement	Wood - Pulp & Paper	Steel or Foundry	Package Handling	Hard Rock Mining	Grain Handling	Bulk Handling Terminal	Power Generation	Baggage Handling	Sand and Gravel	Overland Transportation
	MARKETS														
Alumina - HOT							•								
ARMA®		•	•									•			
ARMA® II		•	•									•			
ARMA®-SBR		•	•									•			•
ARMATOUGH		•	•									•			
DEFENDER®			•	•	•	•	•	•	•		•		•	•	•
Easyrider™															•
FRAS-C			•				•				•	•			•
Grade II				•									•	•	
HT Nitrile					•										
Monsterhide				•					•					•	
MORS						•									
OMEGA®		•	•				•				•	•			•
PATHFINDER® Supreme										•					
Shield™		•	•									•			
Solar-Shield® XL 750					•		•								
Stacker®				•	•		•		•		•				•
Survivor®				•	•		•		•		•			•	•
6740-A					•		•								•

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ALUMINAHOT: Specifically designed compound intended for usage at alumina facilities where the alumina product is at or above 160°F.

ARMA® (Abrasion Resistant, Mining Application): Designed for non-coal mining underground applications that meets ASTM D378-13.2 (old MSHA CFR 30 part 18) flame test standard and provides good abrasion resistant characteristics.

ARMA® II: Designed for non-coal underground mining and surface applications that meets ASTM D378-13.2 (old MSHA CFR 30 part 18) flame test standard and offers 40% more abrasion resistance than ARMA®SBR.

ARMA®SBR: Designed especially for above-ground prep plants / power plant applications mining underground and meets ASTM D378-13.2 (old MSHA CFR 30 part 18) flame test standard.

ARMATOUGH: Designed for the underground coal mining market, it meets the MSHA CFR part 14 (B.E.L.T.) flame test standard, is an RMA Grade II compound that is ozone resistant, and offers 40% more abrasion resistance than SHIELD™. The compound is designed for the most abusive underground applications including slope belts.

DEFENDER®: An RMA Grade II rubber compound designed to provide excellent abrasion resistance, good gouge resistance and excellent flexing life.

EASYRIDER®: A low rolling resistance steel cord compound for the pulley side only which is designed to educe the energy cost by minimizing friction losses. Proven with over 200 miles of belt in operation, energy consumption is reduced by as much as 20% compared to standard compounds.

FRAS-SA & FRAS-C: Fire retardant antistatic belting is certified by the Canadian Department of Energy, Mines and Resources, Ottawa to CAN/CSA M422M87, Type C, for below surface use as well as other mining operations. FRAS-SA offers minimum of 40% better abrasion resistance than FRAS-C compound.

GLOBAL X®: Meets RMA Grade I and DIN X standard. Offers superior cut, gouge resistance and very good abrasion resistance.

GRADE II: An RMA Grade II rubber compound offered only in Raider Belting and designed to provide good abrasion resistance, good gouge resistance and excellent flexing life.

HT NITRILE: An oil resistant compound formulated for applications demanding higher resistance to heat, oil and abrasion. It is resistant to temperatures up to 300°F, abrasion flexing, oxidation and the effect of corrosive atmospheres.

MONSTER HIDE: Monster Hide is a RMA Grade II compound providing the ultimate in Cut & Gouge protection. It is a durable addition to an already powerful line-up of Cut & Gouge Compounds in our product line-up, Monster Hide, GlobalX and Stacker.

MORS: Compounded to resist the terpene content of wood chips and moderately oily grains. It has good abrasion resistance and is a good value for handling moderately oily material where fire resistance is not required.

OMEGA®: Moderate resistance to oil and static conductive.

O.M.E.G.A. meets ASTM D378-13.2 (old MSHA CFR 30 part 18) flame test standard.

PATHFINDER® SUPREME: Designed especially for the grain industry where oily grains and controlled mineral or vegetable oil dust suppressive sprays come in contact with the belt.

PATHFINDER® PLUS: Designed especially for the grain industry where oily grains and controlled mineral or vegetable oil dust suppressive sprays come in contact with the belt. Suitable to -40°F.

SHIELD™: Underground coal mining compound that meets MSHA CFR 30 part 14 (B.E.L.T.) flame test standard. Virtually halogen-free self extinguishing compound that produces very low smoke and toxicity levels. SHIELD-OZ is an above ground compound that meets MSHA CFR 30 part 14 (B.E.L.T.) flame test standard.

SOLAR-SHIELD® XL 750: An exceptional hot material compound with superior heat resistance against hardening and cracking. It is designed to carry hot loads at temperatures up to 750°F and retain its superior heat resistant qualities.

STACKER®: Premium RMA Grade I Rubber Compound, designed for superior resistance to cutting, gouging, and abrasion.

SURVIVOR®: Superior abrasion resistance. Ideal for crushed stone, trap rock, ore, copper, taconite and other abrasive applications.

6740A: Compounded for excellent heat and abrasion resistance in temperature ranges of 350°F for lumpy material and up to 250°F for hot baking loads.

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COVER COMPOUNDS

Aboveground • Underground • Flexsteel®

ABRASION COMPOUNDS

Compound	International Standards	Abrasion Resistance	Low Temperature	High Temperature (Lumpy Material)	Cut & Gouge Resistance	Oil Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
Survivor®	RMA Grade I, DIN Z, AS Grade A, N & E	**Superior**	-55F	150F	Very Good	No	No	Yes	54-64
Stacker®	RMA Grade I, DIN W & Z, AS Grade N & E	**Excellent**	-55F	150F	Excellent	No	No	Yes	55-65
Defender®	RMA Grade II, AS Grade E	**Excellent**	-40F	212F	Very Good	No	No	Yes	55-65
Grade II	RMA Grade II	**Very Good**	-30F	150F	Good	No	No	Yes	55-70
ABRASION & FLAME RESISTANCE									
ARMA® II	RMA Grade II, AS Grade E	**Excellent**	-40F	150F	Very Good	No	ASTMD378 -13.2	Yes	53-63
ARMA®-SBR	RMA Grade II, AS Grade E	**Very Good**	-40F	212F	Good	No	ASTMD378 -13.2	Yes	52-62
ARMATOUGH	RMA Grade II, AS Grade E	**Excellent**	-30F	150F	Very Good	No	B.E.L.T.	Yes	57-67
FRAS-SA	RMA Grade II, AS Grade E, CSA-C	**Very Good**	-40F	160F	Fair	No	CSA-C	Yes	55-65
FRAS-C	RMA Grade II, AS Grade E, CSA-C	**Good**	-40F	160F	Fair	No	CSA-C	Yes	55-65
HT Nitrile	RMA Grade II	**Very Good**	-15°F	300°F	Fair	Superior	No	No	56-66

CUT & GOUGE COMPOUNDS

Compound	International Standard	Cut & Gouge Resistance	Abrasion Resistance	Low Temperature	High Temperature (Lumpy Material)	Oil Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
Monster Hide	RMA Grade II, AS Grade E	**Ultimate**	Very Good	-40F	150F	No	No	Yes	67-77
Global X®	RMA Grade I, DIN X, Y & Z, AS Grade M, N & E	**Superior**	Very Good	-55F	150F	No	No	Yes	56-66
Stacker®	RMA Grade I, DIN W & Z, AS Grade N & E	**Excellent**	Excellent	-55F	150F	No	No	Yes	55-65
Defender®	RMA Grade II, AS Grade E	**Very Good**	Excellent	-40F	212F	No	No	Yes	55-65

HEAT COMPOUNDS

Compound	International Standard	High Temperature (Lumpy Material)	Low Temperature	Abrasion Resistance	Cut & Gouge Resistance	Oil Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
Solar-Shield® XL750	---	**750°F**	-40°F	Very Good	Fair	No	No	Yes	65-75
Alumina-HOT	---	**400°F**	-40°F	Very Good	Fair	No	No	Yes	62-72
Style 6740A	RMA Grade II, AS Grade E	**350°F**	-40°F	Very Good	Very Good	No	No	Yes	52-62
Defender®	RMA Grade II, AS Grade E	**212°F**	-40°F	Excellent	Very Good	No	No	Yes	55-65

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OIL COMPOUNDS

Compound	International Standards	Oil Resistance	Low Temperature	High Temperature (Lumpy Material)	Abrasion Resistance	Cut & Gouge Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
HT Nitrile	RMA Grade II	Superior	-15°F	300°F	Very Good	Fair	No	No	56-66
Pathfinder® Supreme	---	Very Good	-30°F	150°F	Fair	Fair	ASTMD378 -13.2	Yes	55-65
Pathfinder® Plus	---	Very Good	-40°F	150°F	Fair	Fair	ASTMD378 -13.2	Yes	55-65
MORS - Woodsawyer®	---	Good	-20°F	150°F	Good	Good	No	Yes	57-67

FLAME-RESISTANT COMPOUNDS

Compound	International Standards	Flame Resistance	Low Temperature	High Temperature (Lumpy Material)	Abrasion Resistance	Cut & Gouge Resistance	Oil Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
ARMA®	---	ASTMD378 -13.2	-30°F	150°F	Good	Good	No	Yes	56-66
ARMA® II	RMA Grade II, AS Grade E	ASTMD378 -13.2	-40°F	150°F	Excellent	Very Good	No	Yes	53 - 63
ARMA®-SBR	RMA Grade II, AS Grade E	ASTMD378 -13.2	-40°F	212°F	Very Good	Good	No	Yes	52-62
ARMATOUGH	RMA Grade II, AS Grade E	B.E.L.T.	-30°F	150°F	Excellent	Very Good	No	Yes	57-67
FRAS-SA	RMA Grade II, AS Grade E, CSA-C	CSA-C	-40°F	160°F	Very Good	Fair	No	Yes	55-65
FRAS-C	RMA Grade II, AS Grade E, CSA-C	CSA-C	-40°F	160°F	Good	Fair	No	Yes	55-65
O.M.E.G.A.®	---	ASTMD378 -13.2	-20°F	150°F	Good	Fair	Good	Yes	56-66
Pathfinder® Supreme	---	ASTMD378 -13.2	-30°F	150°F	Fair	Fair	Very Good	Yes	55-65
SHIELD™	---	B.E.L.T.	-30°F	150°F	Very Good	Good	No	Yes	60-70
SHIELD-OZ™	---	B.E.L.T.	-30°F	150°F	Very Good	Good	No	Yes	60-70

HEAT & OIL COMPOUNDS

Compound	International Standard	High Temperature (Lumpy Material)	Oil Resistance	Low Temperature	Abrasion Resistance	Cut & Gouge Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
HT Nitrile	RMA Grade II	300°F	Superior	-15°F	Very good	Fair	No	No	56-66

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ABRASION COMPOUNDS

Compound	International Standard	High Temperature (Lumpy Material)	Low Temperature	Abrasion Resistance	Cut & Gouge Resistance	Oil Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
Style BII	RMA Grade II, AS Grade E	150°F	-30°F	Excellent	Very Good	No	No	Yes	56-66

SPECIALTY COMPOUNDS

Compound	International Standard	High Temperature (Lumpy Material)	Low Temperature	Abrasion Resistance	Cut & Gouge Resistance	Oil Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
Style-B LE	RMA Grade II, AS Grade E	212°F	-40°F	Excellent	Very Good	No	No	Yes	56-66

OIL COMPOUNDS

Compound	International Standard	High Temperature (Lumpy Material)	Low Temperature	Abrasion Resistance	Cut & Gouge Resistance	Oil Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
P	None	120°F	-67°F	Excellent	Excellent	Excellent	No	Yes	55-65

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BELT MONITORING

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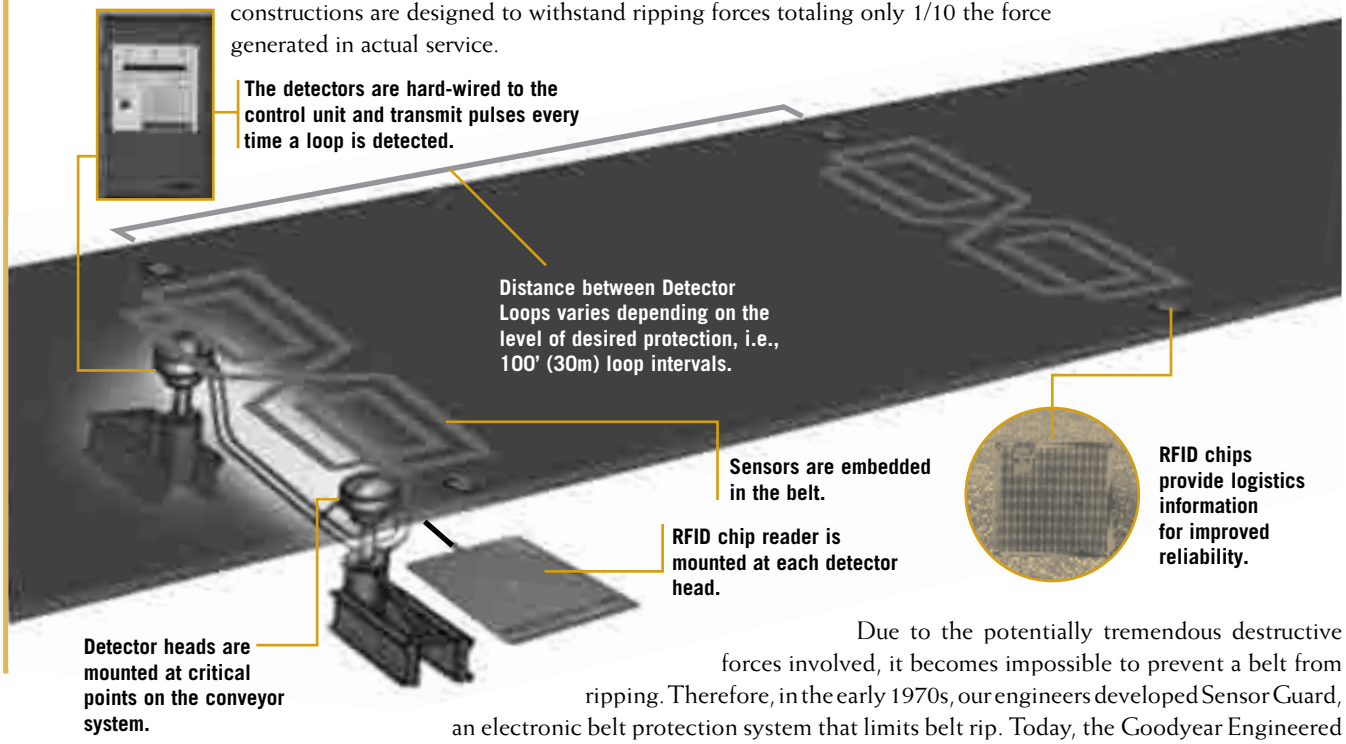
SENSOR GUARD®

SENSOR GUARD

SENSOR GUARD ELECTRONIC BELT PROTECTION SYSTEM:
PROTECTING YOUR STEEL CORD INVESTMENT.

We know that even with a quality belt, a soundly engineered system and an effective preventative maintenance program, any conveyor system can suffer belt rips. As conveyors get longer, 3,000 HP and higher drives become more common, generating tensions in the hundreds-of-thousands-of-pounds range (700+ KN range). Even the most advanced belt constructions are designed to withstand ripping forces totaling only 1/10 the force generated in actual service.



Due to the potentially tremendous destructive forces involved, it becomes impossible to prevent a belt from ripping. Therefore, in the early 1970s, our engineers developed Sensor Guard, an electronic belt protection system that limits belt rip. Today, the Goodyear Engineered Products Sensor Guard system stands alone as the most proven and reliable rip detection system in the world, with installations on every continent except Antarctica. In coal, copper, iron ore and other applications, Sensor Guard has proven itself by reducing downtime costs, replacement costs and lost production.

AN INDUSTRY INNOVATION FROM THE START.

The original Sensor Guard is a perfect example of the breakthrough engineering shared by many of our products. Sensor Guard with RFID Technology works on the premise of closed-circuit sensor loops and RFID chips embedded in the belt, monitored by electromagnetic detectors and an RFID Read Head, placed at high potential damage points.

As the conveyor belt moves, these loops and chips pass over the detectors and Read Head which record the loop and RFID chip information. If the belt begins to rip, a sensor loop is also cut. As this cut loop passes over a detector, no pulse is generated. The lack of pulse is recognized by the control unit, and Sensor Guard automatically signals the conveyor control system to stop, to minimize further damage. Similarly, when excessive lateral belt movement occurs, failure of a loop to pass over a detector within a prescribed distance or time will cause an automatic belt stop signal. The system identifies exactly where the event occurs, based on the RFID chip information gathered.

This system combines the advantages of a processor and RFID chips, with the Sensor Guard system's unparalleled tradition of reliability, value and proven performance in the harshest of mining environments.

Ethernet capability allows to you to remotely monitor the system, to ensure proper settings and determine that the systems are functioning as intended. All without having to leave your office.

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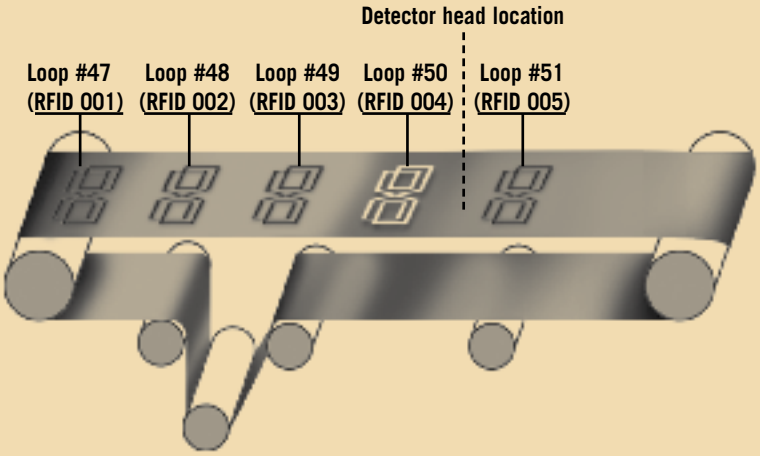
HOW SENSOR GUARD HELPS PREVENT MAJOR BELT DAMAGE.

By enhancing the original product's damage prevention properties with a state-of-the-art microprocessor, RFID technology, Ethernet capabilities, and improved loop wire, we made Sensor Guard even "smarter", more reliable and easier to use.

It protects your conveyor belt investment with advanced capabilities that keep belt rips to an absolute minimum, saving you more time and money than ever before. RFID Technology reduces nuisance shutdowns, meaning increased up-time for your production operation.

Detector Head pulses monitored by control unit.



Belt protection system monitors integrity of conveyor belt			
L 47	5.2 SEC	500 CTS	101.5 ft
T 001	1.0 SEC	10 CTS	2.1 ft
L 48	5.2 SEC	500 CTS	101.5 ft
T 002	1.0 SEC	10 CTS	2.1 ft
L 49	5.2 SEC	500 CTS	101.5 ft
T 003	1.0 SEC	10 CTS	2.1 ft
L 50	5.2 SEC	500 CTS	101.5 ft
T 004	1.0 SEC	10 CTS	2.1 ft
L 51	5.2 SEC	500 CTS	101.5 ft
T 005	1.0 SEC	10 CTS	2.1 ft

Detector head pinpoints position of impact or rip damage created on the conveyor belt at Loop #50.

A SHARP MEMORY AND ADDED FLEXIBILITY GIVE SENSOR GUARD WITH RFID TECHNOLOGY MORE BRAIN POWER.

Sensor Guard with RFID Technology has Continuous Automatic Synchronization meaning reduced nuisance shutdowns, increased production time, and fewer conveyor re-starts.

- Protection begins the minute your conveyor system starts moving, regardless of direction or speed of travel.
- The new unit maintains a log of the last 50 events that have occurred with your conveyor belt. Obtaining a hard copy of the log is as easy as a push of a button, because the new system features a printer port to which you can connect any parallel printer.
- The detector heads on Sensor Guard with RFID Technology can protect a wider range of conveyor belt widths.
- New loop design offers improved flexibility, durability, and increased service life.
- Ethernet capability offers remote monitoring, to ensure your system is operating as you intend it to. Faster troubleshooting, quicker resolution to system events, all from the comfort of your office.
- Stop-at-Loop function stops the belt at a given location for maintenance.
- Upgrading to Sensor Guard with RFID Technology is easier than you think. Once RFID chips are in place in the belt, software and hardware enhancements to your existing Sensor Guard 2000 systems are available. The new Sensor Guard system is compatible with your existing belt, simplifying installation and reducing spare parts inventory.
- Sensor Guard with RFID Technology can tell you exactly where each loop is located, which allows you to identify and locate a malfunctioning loop quickly. You can then electronically delete it and the system will maintain a higher level of protection for the remainder of the belt, thus minimizing potential belt damage while production continues to flow.
- Proven reliability and durability of Sensor Guard is enhanced with RFID Technology.

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CORD GUARD® XD

CORD GUARD XD

24/7 Rip Detection and Cord Monitoring

Cord Guard® XD identifies rips in real-time, then stops the belt to minimize damage. It also simultaneously monitors the condition of your belt's steel reinforcing cords. Then, using patent-pending technology, it pinpoints the exact location of any potential problems so you can swiftly determine how to resolve them. The around-the-clock monitoring helps to maximize your productivity and minimize your downtime.

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All New Rip Insert Design!

This product utilizes patent-pending metal rip inserts, which are incorporated into the pulley cover of the conveyor belt. When magnetized by a permanent magnet, the insert exhibits unique and measurable magnetic characteristics. If a belt begins to rip, the insert will also be damaged which changes its magnetic characteristics. This change is then detected by one of our sensor arrays.

Patented RFID technologies are utilized in every rip insert. The RFID chip uniquely identifies each rip insert in the event they are damaged. Additionally, this technology permits Cord Guard XD to correlate its rip insert map with the physical conveyor belt and reduce nuisance alarms.

rip insert

Patent-Pending Sensor Arrays

The key monitoring components of Cord Guard XD are the patent-pending continuous arrays, which are designed to identify any rip events or reinforcing cord damage occurring across the full width of the belt. These arrays are permanently installed in both the loading and discharge areas of the conveyor system, where rip damage is most likely to start. In the loading area, a profiled array is used to detect rips where the conveyor belt is troughed. A flat array is used on the return side of the belt right after the head pulley to monitor for rips starting in the discharge area.

no rip event

Computer Interface

The Cord Guard XD control unit can be accessed via an Ethernet connection to a computer or to a plant's operations network. The web-based platform of Cord Guard XD is very easy to understand, with the location and identification number of each rip insert clearly displayed. By clicking on the image of any rip insert or cord damage indicator, additional details on its condition will be displayed at the bottom of the screen.

When an insert is damaged, the image changes to reflect the location across the width of the belt and the extent of the rip. Then the Cord Guard XD control unit immediately sends a signal, which can be programmed to stop the belt operation.

Reinforcing cord damage is similarly detected and then tracked. Cord damage can be classified into 5 levels of severity with alarms set at each level to alert the operator. On-demand reporting is instantly available for use in maintenance planning.

new rip event occured

What Does This Mean For You?

Peace of mind. Knowing the advanced technology of Cord Guard XD is monitoring your conveyor belts for both steel cord damage and longitudinal rips will put you at ease. With the capability to stop your conveyor if significant cord damage or a rip event occurs, Cord Guard XD helps to minimize expensive belt damage, lost production and downtime resulting in improved performance.

How Cord Guard XD Works:

1. As the belt moves, a flat permanent magnet magnetizes the rip insert, which then displays unique magnetic characteristics.
2. The patent-pending sensor arrays measure the magnetic properties of each of the rip inserts and records them along with the RFID information, which is identified as a function of belt position, to create a rip insert location map.
3. In the event of a longitudinal rip, the system identifies the change in the magnetic characteristics of the damaged rip insert in real time. Once Cord Guard XD detects rip insert damage, an alarm is generated that trips a relay to stop the conveyor belt to minimize rip damage.

If you want 24/7, real-time rip detection, call your Veyance Sales Representative or visit **www.goodyearep.com/cordguardxd**.

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CUSTOMER SATISFACTION ACTIVITIES

Pre-Sale

Evaluate Current Situation "Listen to Customer"

Perform system or plant survey

- Use Conveyor Analysis Form. *(See page 96)*
- Use Our Advanced Service Tools. *(See pages 92-93)*

Analyze system for optimum performance

- Conduct Minuteman® Computer Analysis.
- Use Red Handbook CD-ROM. *(See page 92)*
- Use "B.E.L.T. F.I.T.S." criteria. *(See page 94)*

Help customers understand product benefits

- Utilize Heavyweight Catalog.
- Demonstrate "Lower Cost-per-Ton."

Present customer with Goodyear Engineered Products belt & splice recommendations

- Provide Minuteman® results.
- Quote each specification.

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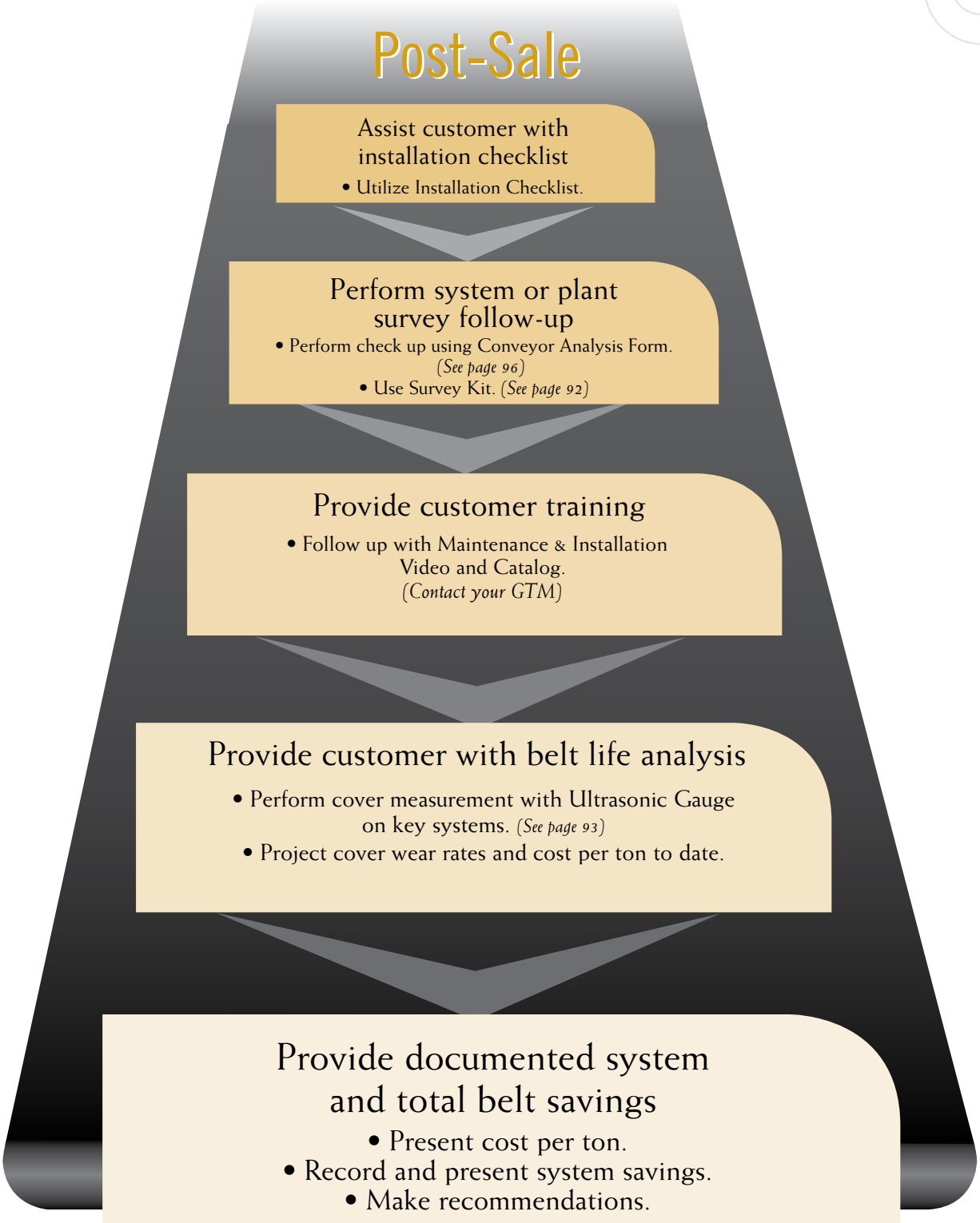
Goodyear Engineered Products Authorized Distributors provide a full range of services to ensure customer satisfaction, both before and after the sale. We conduct detailed analyses before we recommend the product for your application. Then, after the sale, we assist with installation and training. We take it one step further by documenting your total system and belt savings.



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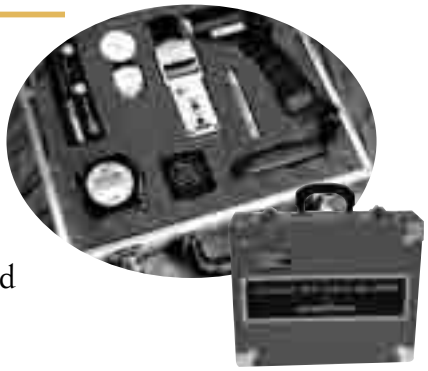
Goodyear Engineered Products are backed by the most experienced conveyor belt pros in the business. Their expertise and access to advanced service tools are your assurance of the highest quality support and product value.

Our Sales and Engineering Team can assist with custom belt design, critical belt surveys, troubleshooting and splice installation supervision. Our engineers draw on the capabilities of our Worldwide Technical Center, which houses leading edge technologies and equipment. They also utilize the most experienced outside consultants and academic researchers.



Red Handbook of Conveyor & Elevator Belting is available on CD-ROM. To access key information with the click of a mouse, including links to component manufacturers, internal links to production information and up-to-date engineering tables.

To locate your Goodyear Engineered Products Authorized Distributor visit www.goodyearep.com/conveyorbelt

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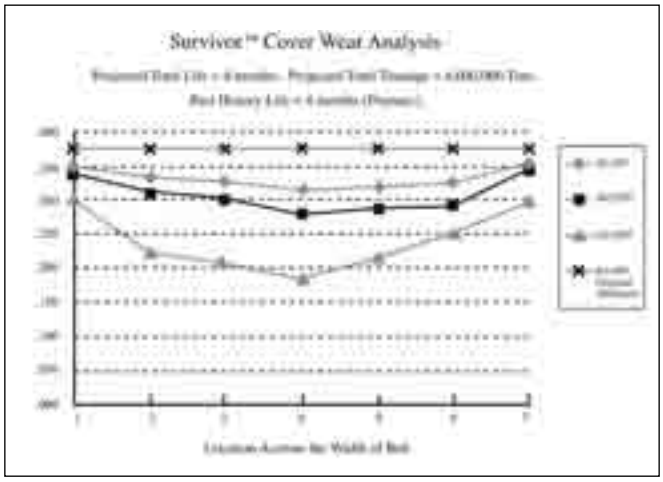
To increase productivity and predict belt cover life, Technical Managers and Authorized Distributors utilize a high-tech ultrasonic gauge. It's the perfect planning tool for cover wear management, belt life, determining budget parameters and scheduling downtime.



Minuteman® is the automated belt selection and design system utilized by Technical Managers and Authorized Distributors. Typically used with systems under 5,000 ft. center-to-center distance, the Minuteman program helps identify the proper belt for your application, as well as provides information on required horsepower, counter-weight and conveyor capacity. To receive a belt recommendation, contact your Technical Manager or an Authorized Distributor.

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BELT SELECTION

Your application may be in the cement industry, power generation or package handling. There is a Goodyear Engineered Products belt to suit your needs, in the size and material you need.

It may be our premium Plylon Plus® all-purpose fabric conveyor belt or Solar-Shield® with fiberglass reinforcement for extreme hot material applications. The following forms can help determine what's right for your application.

As you go through the forms in this book, keep the following criteria in mind. It will help you analyze your belting needs and determine which belt is the right choice.

B.E.L.T. F.I.T.S.

- **B** Belt Covers
- **E** Elongation
- **L** Load Support
- **T** Troughability
- **F** Flex Life
- **I** Impact
- **T** Tensile Strength
- **S** Splice

Make sure your "Belt Fits!"

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MINUTEMAN® BELT ANALYSIS SHEET

Customer Information:

Name/Location: _____
Address: _____
City: _____
State: _____
Zip: _____
Contact: _____
Phone: _____
Email: _____

General Info

Conveyor Description #: _____

Inputs:

Belt Width: _____ in
Belt Speed: _____ fpm
Tons per Peak Hour: _____ stph
Material Density: _____ lb/ft3
Angle of Idlers: _____ deg
Carrying Idler Spacing: _____ ft
Drive Wrap Angle: _____ deg

Material Information:

Name of the Material: _____
Max Material Size: _____ in
Max Drop Height: _____ ft
Max Material Temp: _____ °F
Min Ambient Temp: _____ °F
Is Any Oil Present: Yes No (Circle One)

Pulleys

	Head	Tail
Pulley Diameter:		

	Drive	Take-up
Pulley Diameter:		

Transition:

	Head	Tail
Length:		

Take-Up

Take-Up Tension: _____ T2
Counter Weight: _____ C

Type of Splice: Vulcanized Mechanical (Circle One)

Stations/Flight Information (Please Draw Diagram)

Information needed:

Stations
Drives
Take-Up
Length
C-C Distance

Additional Comments:

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CONVEYOR BELT ANALYSIS

Customer _____
Mine/Plant/Quarry _____
Key personnel _____

Date _____
Location _____
Conveyor description _____

DATA REQUIRED
Belt width _____ in.
Center-to-center distance _____ ft.
Horizontal length _____ ft.
Vertical lift _____ ft.
Angle of incline _____ deg.
Belt speed _____ fpm.
Material _____
Material density _____ lb./cu.ft.
Maximum lump size _____ in.
Refuse (% and type) _____
Tons per hour (max) _____ tph.
Hours in service per day _____ hrs.
Days in service per week _____ days
Operating temperature range _____ °F
Transition lengths
Head _____ in.
Tail _____ in.
Other _____ in.

VERTICAL CURVES
Curve radius _____
Angle into curve _____
Angle out of curve _____
Length of curve _____
Idler spacing on curve _____
**Note each curve individually.*

DRIVE DATA
No. of drives _____
No. of motors per drive _____
HP per motor _____
Acceleration time _____
Drive pulley(s) Lagged ____ yes/no _____
Degree of warp _____
Location _____
Brake (y/n) _____ time _____ sec.

TAKE-UP DATA
Location _____
Hydraulic _____
Rod diameter _____ in.
Cylinder diameter _____ in.
Rope ratio _____
Take-up pressure _____ lbs.
Gravity: Weight _____ lbs.
Travel _____ ft.

TAKE-UP DATA CONTINUED
Screw _____
Travel _____ in.

Comments (include previous belt history)
_____
_____

TURNOVERS
(yes/no) Location _____

PULLEY DIAMETERS
Head _____ in.
Tail _____ in.
Drive _____ in.
Take-up _____ in.
Snub _____ in.
Bend _____ in.

LOADING
Location _____
No. of loading pts. _____
Impact idlers/slider bed _____
In line/angle to feed belt _____ deg.
Belt inclination at feed pt. _____ deg.
Vertical drop _____ ft.
Chute angle to horizontal _____ deg.
Chute bottom to belt distance _____ ft.
Skirtboard length _____ ft.

IDLERS
Carrying side angle _____ deg.
CEMA type _____
Roller diameter _____ in.
Carrying side spacing _____ ft.
Steel/rubber _____ rigid/garland
Return side angle _____ deg.
Return side spacing _____ ft.
Steel/rubber _____
Idler manufacturer _____

SPLICES
Type _____
Mech (type and size) _____
PIN _____
Vulc (step length) _____ in.

MASTER FORM. Photocopy for Use.

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VEYANCE TECHNOLOGIES, INC.
Quotation Provisions

TERMS AND CONDITIONS OF SALE

Veyance Technologies, Inc. and its affiliates offer a number of different terms and conditions for the purchase of materials, services and products and the sale of products depending on the location of the transaction. These may vary from time to time and for different product categories and locations. Please see our terms and conditions of sale at: http://www.goodyearep.com/Terms.aspx. While every effort is made to keep these up to date, there may be discrepancies. If you have any questions, please ask for a copy of our terms and conditions when accepting or placing orders with us.

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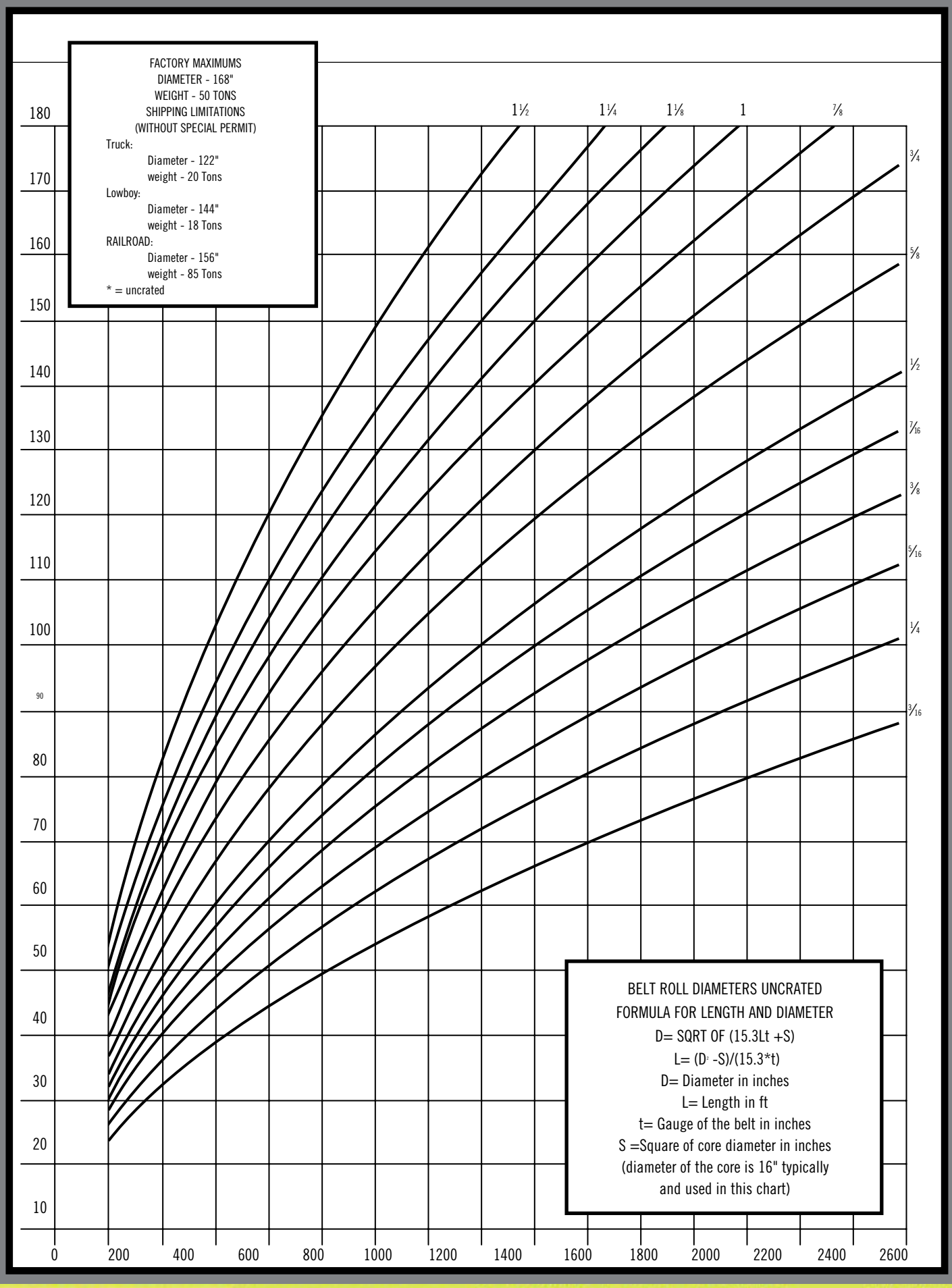
IMPERIAL BELT ROLL DIAMETERS



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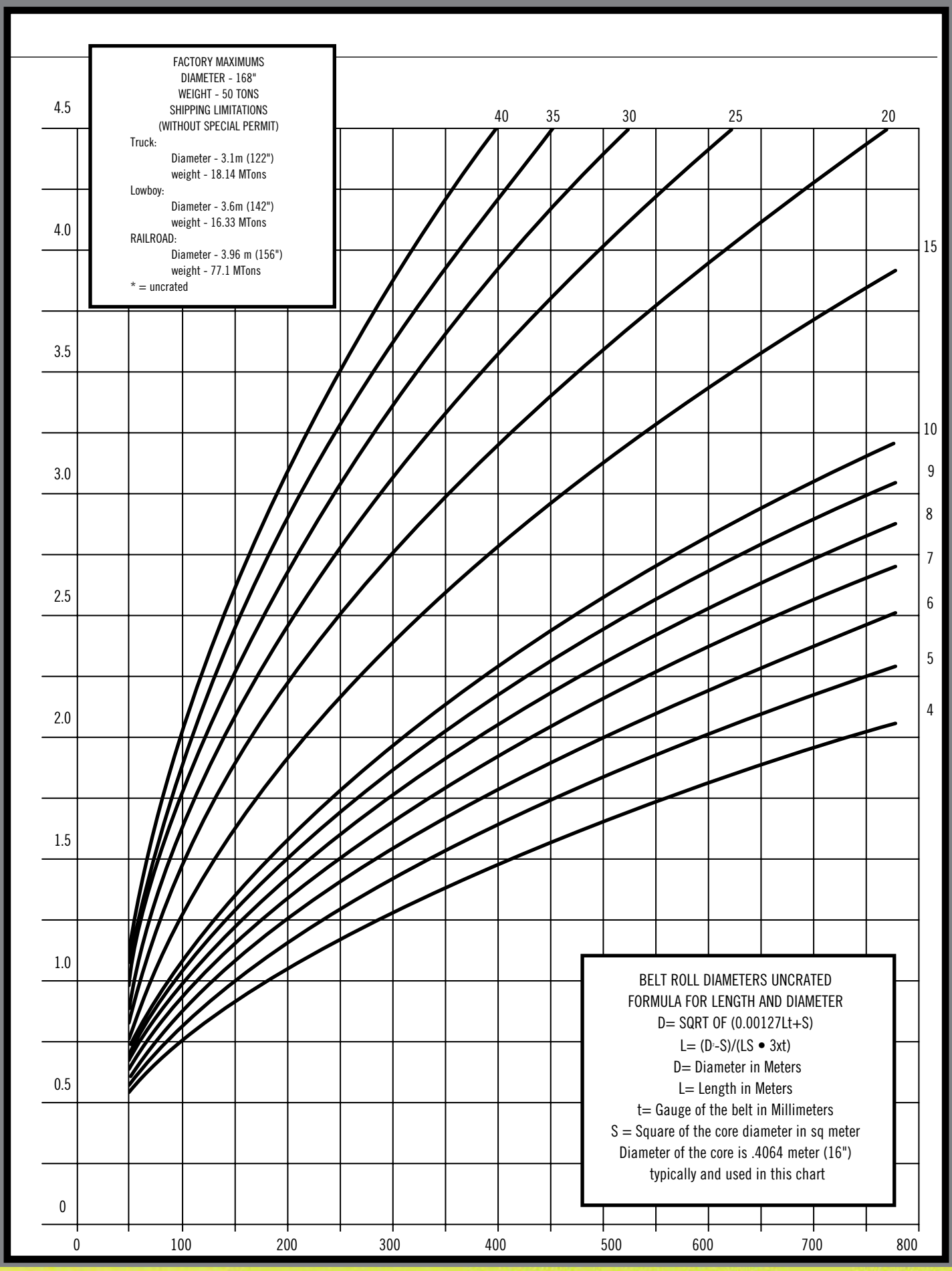
METRIC BELT ROLL DIAMETERS



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We Ship World Wide

Investing in Research and in You.

Every day, the ongoing commitment to research by Veyance Technologies Inc., exclusive manufacturer of Goodyear Engineered Products Conveyor Belt, pays off for our customers. It's demonstrated in part by a $5 million plus investment in our state-of-the-art Worldwide

Conveyor Belt Technical Center in Marysville, Ohio.

With these advanced facilities and equipment at their disposal, our research and development team creates new products, cutting-edge technologies, and improved quality assurance measures. This enables us to bring unique products to market faster than ever, while continuing to deliver conveyor belts that provide the industry's lowest cost-per-ton capabilities. In short, by increasing an already strong research and development drive, we ultimately increase your efficiency and decrease your downtime.

Here's a brief look at some of the many investments we have made.

World's Most Powerful Dynamic Splice Tester

Proving Flexsteel® belts and splices for your next generation designs.

Larger and more powerful than the University of Hannover's testing machine, our dynamic splice tester is the only machine in the world capable of proving splice efficiencies 50% or greater on belt tensions over ST10,000.

Tests: DIN 22110/3; internally developed test standards.

DIN Abrasion Tester

Designing belts to last longer.

All of our cover compounds are tested and reported per Australian Standard 1683.21 rotating head test. It is the most severe abrasion test with the highest correlation to field measurements. This testing allows us to develop compounds like Survivor®, Stacker®, Premarc®, ARMA® II and Defender® – all with superior wear resistance for longer belt life.

Tests: Australian Standard 1683.21, DIN 53516, ISO 4649.

Load Support Tester

Pushing technology to test real life situations.

A belt's ability to span the idler junction is critical to its success. That's why we developed this advanced testing system, which simulates idler angles from 20° to 60°, tests idler gaps from 10mm to 25mm, and measures the amount of sag a belt experiences.

Tests: Internally developed test standards.

Six-Pulley Splice Tester

Developing stronger splices and higher tension fabric.

This dynamic splice test assists in developing high-tension fabric belts and stronger splices for future market requirements. It provides improved technical information and greatly reduces product development cycles.

Tests: DIN 22110/2

Instron® 5500R

Increasing your uptime by reducing rips and tears.

How often is your conveyor down due to rips and tears? Our Instron machine is used to develop stronger belts with some of the industry's best rip, tear, and fastener pullout properties. Goodyear Engineered Products Conquest®, Coal Quest®, and Conquest LW belts are all prime examples.

Tests: ASTM 378-12, 16, & 18: ISO 283, 505, & 1120; AS 13334.3 & .8; DIN 22102-2.6, 22110-6.1; internally developed test standards

GOODYEAR RUBBER PRODUCTS INC.
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Dynamic H – Block Tester

Increased integrity means longer life.

We know that each cord's adhesion to the insulation gum is critical to a steel cord belt's performance – better adhesion means better load sharing, corrosion resistance, and idler junction performance to name just a few of the benefits. This test simulates the real-life, dynamic conditions that a belt experiences.

Tests: AS 1333-6.10

Ultrasonic Belt Gauge

On site, Technical Managers and Authorized Distributors use a custom-programmed, high-tech ultrasonic gauge to accurately measure the depth of the belt cover. This gauge helps determine the level of wear and belt cover life and can help you decide when to schedule belt replacement.

Impact Tester

Developing belts that take a beating.

Many material handling applications experience belt punctures that typically occur in the loading zone. Therefore, we developed this machine to dynamically test a belt's ability to withstand impact damage. Case in point, our patented Triple-Warp™ fabric used in Conquest®, Coal Quest®, and Conquest LW belts.

Tests: Internally developed test standards.

Finite Element Analysis

Bringing new products to market faster.

Used throughout our entire development process, finite element analysis correlates data to actual manufacturing, processing, and field performance before a belt or splice design is ever attempted. The end result is an optimized product and a reduced development cycle, allowing us to bring superior products to market more quickly.

Smarter from the Ground Up.

One of the most powerful components that goes into our heavyweight conveyor belting is your input. You see, in many cases we talk to customers to find out what their specific performance needs are for a variety of applications. We think that's a smart way to make belting. Sure, Research and Development can do a lot to help customers succeed, but it can do even more when it is informed by valuable customer input as well.

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