

2015 Heavyweight Conveyor Belt Catalog





# Superior Performance, Lower Cost-Per-Ton



ContiTech 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 ContiTech 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.











# **Table of Contents**

Introduction	
Belt Construction	4
Aboveground	
Applications	6
Products Fortress XP™ Plylon Plus® Spartan® Solar-Shield® XL 750 Wood Sawyer® Plus Pathfinder® Plus	7 12 20 22 26 34
Flexsteel®	
Products Flexsteel® Easyrider™ Preform™	40 45 46
Pipe Conveyor Belts	
<b>Products</b> ContiPipe™	51

Cover Compounds	
Performance Applications	54 55
Additional Information	
Customer Satisfaction	61
Advanced Service Tools	63
Belt Selection	64
Minuteman® Belt Analysis	65
Conveyor Belt Analysis	66
Belt Roll Diameters	67
Terms and Conditions	68
Research	69









Call Toll Free: 1-866-711-4673 International:+1-727-342-5086

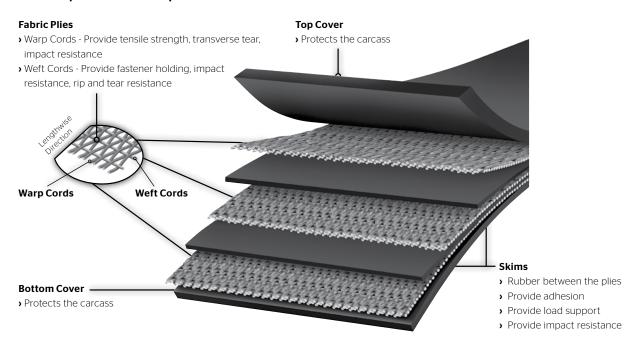
# **Belt Construction**

ContiTech conveyor belts are designed from the inside out to endure the everyday working abuse of tons of coal, aggregate, wood and hard rock.

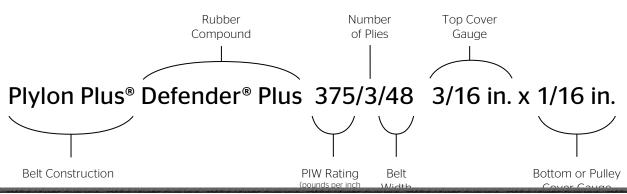
Layers of specially designed fabric plies are sandwiched between rubber skim coats for adhesion and load support. Bottom and top cover compounds are added for maximum protection of the belt carcass. These compounds are comprised of different polymers, fillers and plasticizers and come in a wide variety of cover gauges.

For over 100 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.

### **Conveyor Belt Components**



### **Belt Construction Nomenclature Example**











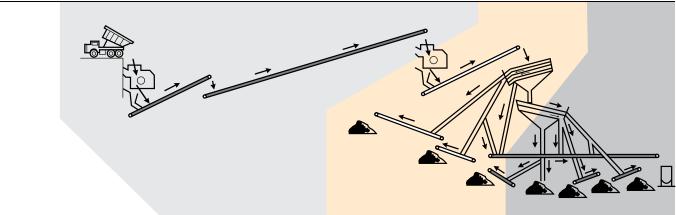
Call Toll Free: 1-866-711-4673 International:+1-727-342-5086

# **Abovegound Markets**

# **Applications**

	Products					
Aboveground Markets	Fortress XP™	Plylon Plus®	Spartan®	Solar-Shield® XL 750	Wood Sawyer® Plus	Pathfinder® Plus
Coal and Prep Plants	•	•				•
Aggregate	•	•	•			
Cement	•	•	•	•		
Bulk Handling Terminal	•	•	•		•	•
Wood, Pulp and Paper	•	•	•		•	
Steel and Foundry	•	•	•	•		
Package Handling		•	•			
Hard Rock Mining	•	•				
Grain Handling		•			•	•
Power Generation		•		•		
Baggage Handling		•				
Sand and Gravel		•	•			
#	7	12	20	22	26	34

### 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
ContiTech Conveyor Belt Recommendations	Fortress XP™ Plylon Plus®	Plylon Plus®	Spartan®
Typical Material Size	6 in. and higher	3 in 6 in.	3 in. 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.





# Fortress XP™ Belts

This rugged, fabric-reinforced conveyor belt withstands high abuse applications. It is made with a revolutionary Fortress™ technology weave design, holds up to the most demanding applications and delivers up to three times longer life, proving Fortress XP™ 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

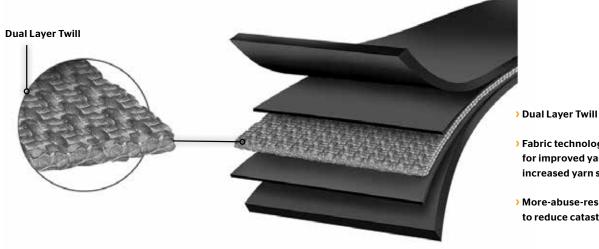
### **Cover Compounds**

- > Defender® Plus
- ) Stacker®
- ) Global X®
- ) MonsterHide™
- > 6740A

See pages 56-61 for more specific details.

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

Fortified with the Power of Fortress™ Technology **Conveyor Belt Components** 



- 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.

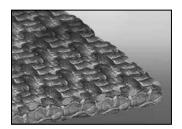
Get a lower cost-per-ton conveyed

Tension Range: 330 to 1250 PIW



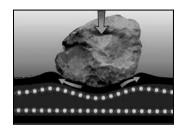


### Features & Benefits



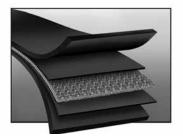
### Innovative fabric weave

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



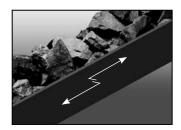
### **Exceptional impact resistance**

Fortress XP™ has industry-leading impact resistance. Loading point impact damage can be a cause of belt failure. Design engineers used an enhanced Dynamic Impact Tester to simulate loading impact force and its effects on belting.



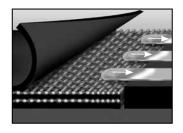
### High transverse tear strength

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.



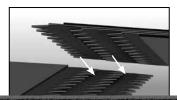
### Superior rip resistance

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 contains rips to a small area.



### Enhanced mechanical fastener pull-out resistance

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



### **Vulcanized Finger Splice**

A full carcass finger vulcanized splice is recommended for ContiTech Fortress  $XP^{\mathsf{TM}}$  belting. This splice method takes advantage of the superior strength properties of the Fortress  $XP^{\mathsf{TM}}$  carcass to offer 100% of the rated belt tension.





# **Fortress XP™ Belts**

### Fortress XP™ Conveyor Belt Data

	Fortress XP 330/1	Fortress XP 440/1	Fortress XP 500/1	Fortress XP 625/1	Fortress XP 660/2	Fortress XP 880/2	Fortress XP 1000/2	Fortress XP 1250/2
Plies	1	1	1	1	2	2	2	2
Fabric Type*	Dual Layer Twill (P/N)							
Average Permanent Elongation (%)**	1.00%	1.20%	1.50%	1.50%	1.00%	1.20%	1.50%	1.50%
Step Length	Finger Splice							
Recommended Fastener Plate	BR6	BR6	BR10	BR10	BR10	BR14	NR	NR
Hinge	R5	R5	R5-1/2	R5-1/2	R5-1/2	R6	RAR8	RAR8
Hinge	U35	U35	U35	U35	U35	U37/U37A	U38A	U38
Imperial								
Vulcanized & Fastener Rating (PIW)	330	440	500	625	660	880	1000	1250
Nominal Carcass Gauge (in.)	0.130	0.140	0.164	0.181	0.270	0.305	0.357	0.389
Nominal Carcass Weight (lb./sq. ft.)	0.73	0.85	0.91	1.21	1.61	1.90	1.95	2.17
Approximate 1/32 in. Cover Weight (lb./sq. ft.)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Average Elastic Modulus (PIW)	33,000	35,000	37,500	40,000	66,000	70,000	75,000	80,000
Metric								
Vulcanized & Fastener Rating (kN/m)	58	77	88	110	116	154	175	219
Carcass Gauge (mm)	3.30	3.56	4.17	4.60	6.86	7.75	9.07	9.88
Carcass Weight (kg/sq.m)	3.56	4.15	4.44	5.91	7.86	9.27	9.52	10.59
Approx 1mm cover wt (kg/sq.m)	1.13	1.13	1.13	1.13	1.13	1.13	1.13	1.13
Elastic modulus (kN/m)	5,780	6,130	6,570	7.010	11,560	12,260	13,130	14,010

<sup>\*</sup>P/N = Poly/Nylon. \*\*Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for elastic and total elongation calculations specific to each system based on Minuteman\* calculations.





### Fortress XP™ Load Support - Maximum Belt Width

Material Weight	0-40 lb./cu. ft. (0-640 kg/cu. m)				41-80 lb./cu. ft. (641-1280 kg/cu. m)			lb./cu. ft. 920 kg/cu.	.m)	Over 120 lb./cu. ft. (Over 1920 kg/cu. m)		
Trough Angle	20	35	45	20	35	45	20	35	45	20	35	45
Inches												
330/1	72	66	54	66	54	48	60	48	42	48	42	36
440/1	84	72	60	72	60	54	66	54	48	60	48	42
500/1	84	72	60	72	60	54	66	54	48	60	48	42
625/1	84	72	66	72	66	60	72	60	54	66	54	48
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
1000/2	102	96	96	96	84	84	96	84	78	84	78	72
1250/2	108	108	102	102	90	90	102	90	78	90	78	78
Millimeters												
330/1	1830	1680	1370	1680	1370	1220	1520	1220	1070	1220	1070	910
440/1	2130	1830	1520	1830	1520	1370	1680	1370	1220	1520	1220	1070
500/1	2130	1830	1520	1830	1520	1370	1680	1370	1220	1520	1220	1070
625/1	2130	1830	1680	1830	1680	1520	1830	1520	1370	1680	1370	1220
660/2	2290	2130	2130	2130	1980	1830	2130	1830	1680	1830	1680	1370
880/2	2440	2290	2130	2290	2130	1980	2290	2130	1980	2130	1980	1680
1000/2	2590	2440	2440	2440	2130	2130	2440	2130	1980	2130	1980	1830
1250/2	2740	2740	2590	2590	2290	2290	2590	2290	1980	2290	1980	1980

On systems with troughing idler spacing greater than 5 ft. (1.5m) or idler roll gap greater than 1/2 in. (12.7mm), consult your Sales Representative or ContiTech.

### Fortress XP™ Troughability Support - Minimum Belt Width

Fortress XP 330/1	Fortress XP 440/1	Fortress XP 500/1	Fortress XP 625/1	Fortress XP 660/2	Fortress XP 880/2	Fortress XP 1000/2	Fortress XP 1250/2
18	18	18	18	24	30	30	36
24	24	24	24	30	36	36	42
24	30	30	30	36	42	42	48
460	460	460	460	610	760	760	910
610	610	610	610	760	910	910	1070
610	760	760	760	910	1070	1070	1220
	18 24 24 24 460 610	330/1 440/1  18 18 24 24 24 30  460 460 610 610	330/1     440/1     500/1       18     18     18       24     24     24       24     30     30       460     460     460       610     610     610	330/1     440/1     500/1     625/1       18     18     18     18       24     24     24     24       24     30     30     30       460     460     460     460       610     610     610     610	330/1     440/1     500/1     625/1     660/2       18     18     18     18     24       24     24     24     30     30     36       460     460     460     460     610     610     610     760	330/1     440/1     500/1     625/1     660/2     880/2       18     18     18     18     24     30       24     24     24     30     36       24     30     30     36     42       460     460     460     610     760       610     610     610     610     910	330/1     440/1     500/1     625/1     660/2     880/2     1000/2       18     18     18     18     24     30     30       24     24     24     30     36     36       24     30     30     36     42     42       460     460     460     610     760     760       610     610     610     610     910     910

If top cover and pulley cover are balanced (i.e., 3/16 in. x 3/16 in. x 4.7mm x 4.7mm) or less than 1/16 in. (1.5mm) differential (i.e., 3/16 in. x 5/32 in. or 4.7mm x 3.9mm), add 6 in. (152mm) to the minimum belt width. 6 in. (152mm) narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your Sales Representative. Additional break-in time is required when the belt has been stored prior to installation in ambient temperatures of less than  $50^{\circ}F$  ( $10^{\circ}C$ ).



# **Fortress XP™ Belts**

### Fortress XP™ Minimum Pulley Diameters

	Fortress XP 330/1	Fortress XP 440/1	Fortress XP 500/1	Fortress XP 625/1	Fortress XP 660/2	Fortress XP 880/2	Fortress XP 1000/2	Fortress XP 1250/2
Inches								
Over 80% Tension	18	20	20	22	24	30	36	36
60% - 80% Tension	16	18	18	20	20	24	30	30
40% - 60% Tension	14	16	16	18	18	20	30	30
Up to 40% Tension	12	14	14	16	16	18	24	24
Tails and Snubs	12	14	14	16	16	18	24	24
Millimeters								
Over 80% Tension	460	510	510	560	610	760	910	910
60% - 80% Tension	410	460	460	510	510	610	760	760
40% - 60% Tension	360	410	410	460	460	510	760	760
Up to 40% Tension	300	360	360	410	410	460	610	610
Tails and Snubs	300	360	360	410	410	460	610	610

Note: The minimum cover for vulcanized splice is 1/8 in. (3.2mm). The recommended is maximum top to bottom cover ratio for one ply is 2:1 (i.e., is 1/4 in. x 1/8 in. or 4.5mm x 2.25mm) and for two ply is 3:1 (i.e., is 3/8 in. x 1/8 in. or 9mm x 3mm). Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

# Elevator Data

### Fortress XP™ Elevator Belt Data

	Fortress XP 330/1	Fortress XP 440/1	Fortress XP 500/1	Fortress XP 625/1	Fortress XP 660/2	Fortress XP 880/2	Fortress XP 1000/2	Fortress XP 1250/2
Plies	1	1	1	1	2	2	2	2
Fabric Type*	P/N	P/N						
Recommended Fastener Plate	BR6	BR6	BR10	BR14	BR14	BR14	NR	NR
Imperial								
Vulcanized & Fastener Rating (PIW)	264	350	400	500	525	700	800	1000
Nominal Carcass Gauge (in.)	0.130	0.140	0.164	0.181	0.270	0.305	0.357	0.389
Spaced Industrial Max. Bucket Projection (in.)	8	9	10	11	12	12	12	12
Continuous Industrial Max. Bucket Projection (in.)	8	9	10	11	13	14	15	16
Metric								
Industrial Service Tension Capacity (kN/m)	46	61	70	88	92	123	140	175
Nominal Carcass Gauge (mm)	3.3	3.6	4.2	4.6	6.9	7.7	9.1	9.9
Spaced Industrial Max. Bucket Projection (mm)	200	230	250	280	300	300	300	300
Continuous Industrial Max. Bucket Projection (mm)	200	230	250	280	330	360	380	410

Fortress XP<sup>™</sup> 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.

\*P/N = Poly/Nylon



# **Plylon Plus® Belts**

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 ContiTech rubber cover compounds.

### **Markets**

### Aggregate

- Baggage handling
- > Bulk handling terminal
- Cement
- Coal
- Crushed stone
- Foundry
- ) Grain
- ) Hard rock
- > Package handling
- > Power generation
- > 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
- ) Block plants
- ) Load out
- > Radial stackers
- > Ready mix
- Wash plant

### **Cover Compounds**

- ) 6740A
- > Defender® Plus
- > FR-2G
- > FRAR-2G
- > FRORS-2G
- > HT Nitrile
- Monsterhide
- > Protector
- ) Stacker®
- Survivor®
- > Survivor® Plus

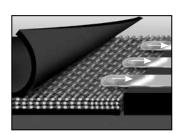
See pages 53-59 for more specific details.

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.

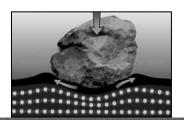
Tension Range: 220 to 1800 PIW

### 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.

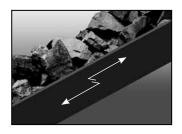


### Excellent rip, tear and impact resistance

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.







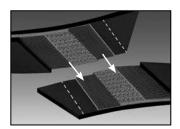
### High ultimate strength

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

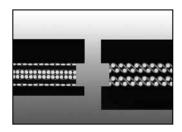
The combination of fabric design and dip process provides lower elasticity and permanent elongation on all specifications. This minimizes take-up concerns and reduces the number of splices at break-in. Contact your local Sales Representative to calculate permanent and elastic elongation requirements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



### Standard bias step splices

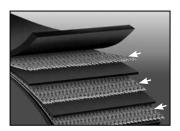
A quick and effective technique, step splices greatly reduce downtime and are recognized throughout the industry as the standard. The vulcanized splice in Plylon Plus® retains 100% of belt tension rating during all running conditions.

See data tables for proper step length on pages 15-16.



### 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 220 to 1800 PIW.



# **Plylon Plus® Belts**

### Plylon Plus® Conveyor Belt Data

	Pylon Plus 220/2	Plylon Plus 250/2	Pylon Plus 330/3	Plylon Plus 375/3	Plylon Plus 400/2	Pylon Plus 440/4	Plylon Plus 500/4	Plylon Plus 600/3	Plylon Plus 750/3
# of Plies	2	2	3	3	2	4	4	3	3
Fabric Type*	P/P	P/N	P/P	P/N	P/P	P/P	P/N	P/P	P/P
Average Permanent Elongation (%)**	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	1.0
Recommended Fastener Plate	140	190	190	BR-10	BR-10	BR-10	BR-10	BR-10	BR-14
Hinge	R2	R2	R2	R5	R5	R5	R5-1/2	R5-1/2	R6
Hinge	U35A	U35A	U35A	U35	U35	U35	U35	U35	U37/U37A
Imperial									
Vulcanized & Fastener Rating (PIW)	220	250	330	375	400	440	500	600	750
Nom. Carcass Gauge (in.)	0.121	0.135	0.161	0.169	0.178	0.221	0.229	0.251	0.272
Nom. Carcass Weight (lb./sq. ft.)	0.76	0.85	1.06	1.07	0.97	1.39	1.45	1.44	1.61
Approximate 1/32 in. Cover Weight (lb./sq. ft.)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Elastic Modulus (PIW)	23,000	30,000	34,500	45,000	44,000	46,000	60,000	66,000	67,500
Step Length (in.)***	10	10	10	10	16	10	10	16	18
Metric									
Vulcanized & Fastener Rating (kN/m)	39	44	58	66	70	77	88	105	131
Nom. Carcass Gauge (mm)	3.07	3.4	4.09	4.3	4.5	5.61	5.8	6.4	6.3
Nom. Carcass Weight (kg/sq. m)	3.7	4.2	5.2	5.2	4.7	6.8	7.1	7.0	7.3
Approximate 1mm Cover Weight (kg/sq. m)	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Elastic Modulus (kN/m)	4,030	5250	6,040	7880	7710	8,060	10,510	11,560	9840
Step Length (mm)***	250	250	250	250	410	250	250	410	460

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 Sales Representative or fastener manufacturer. R-6 fasteners must be installed with stainless steel rivets when belt tensions exceed 800 PIW (140 kN/m) for best results.

Plylon Plus\* 800/4-1800/4 continued on page 15





<sup>\*</sup>P/P = Poly/Poly and P/N = Poly/Nylon

<sup>\*\*</sup>Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for elastic and total elongation calculations.

<sup>\*\*\*</sup>Consult your Sales Representative for vulcanized splice design for 900/2, 1350/3 and 1800/4 constructions.

### Plylon Plus® Conveyor Belt Data

continued from page 14

	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
# of Plies	4	2	4	5	6	5	3	4
Fabric Type*	P/P	P/N	P/P	P/P	P/P	P/P	P/N	P/N
Average Permanent Elongation (%)**	0.8	1.5	1.0	0.80	0.80	1.0	1.5	1.5
Recommended Fastener Plate	BR-14	NR	NR	NR	NR	NR	NR	NR
Hinge	R6	RAR8	RAR8	RAR8	RAR8	RAR8	NR	NR
Hinge	U37/U37A	U38A	U38A	U38A	U38	U38	U38	U38B
Imperial								
Vulcanized & Fastener Rating (PIW)	800	900	1000	1000	1200	1250	1350	1800
Nom. Carcass Gauge (in.)	0.340	0.300	0.368	0.429	0.518	0.464	0.453	0.613
Nom. Carcass Weight (lb./sq. ft.)	1.96	1.88	2.18	2.47	2.89	2.75	2.84	3.84
Approximate 1/32 in. Cover Weight (lb./ sq. ft.)	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
Elastic Modulus (PIW)	88,000	62,500	90,000	110,000	132,000	112,500	93,800	125,100
Step Length (in.)***	16	Finger	18	16	16	18	Finger	Finger
Metric								
Vulcanized & Fastener Rating (kN/m)	140	158	175	175	210	219	236	315
Nom. Carcass Gauge (mm)	8.6	7.6	9.3	10.9	13.2	11.79	11.5	15.6
Nom. Carcass Weight (kg/sq. m)	9.6	9.2	10.64	12.1	14.1	13.43	13.9	18.7
Approximate 1mm Cover Weight (kg/sq. m)	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Elastic Modulus (kN/m)	15,410	10,950	15,760	19,260	23,120	19,700	16,430	21,910
Step Length (mm)***	410	Finger	460	410	410	460	Finger	Finger

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 Sales Representative or fastener manufacturer. R-6 fasteners must be installed with stainless steel rivets when belt tensions exceed 800 PIW (140 kN/m) for best results.





<sup>\*</sup>P/P = Poly/Poly and P/N = Poly/Nylon

<sup>\*\*</sup>Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for elastic and total elongation calculations.

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

# **Plylon Plus<sup>®</sup> Belts**

Plylon Plus® Load Support - Maximum Belt Width

	Material Weight	· · · · · · · · ·	0-40 lb./cu. ft. (0-640 kg/cu. m)			/cu. ft. 0 kg/cu. n	1)	81-120 lb (1281-19	o./cu. ft. 20 kg/cu.	m)	Over 120 lb./cu. ft. (Over 1920 kg/cu. m)			
PIW/Plies	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	
Inches														
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	
400/2		60	54	54	54	48	42	48	48	42	42	36	30	
440/4		72	60	54	66	60	48	60	54	48	54	48	42	
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	
Millimeters	5													
220/2		1220	1070	910	1220	910	910	1070	910	760	910	760	NR	
250/2		1370	1220	1220	1220	1070	910	1070	1070	760	910	760	NR	
330/3		1520	1370	1220	1520	1220	1070	1370	1220	1070	1220	1070	910	
375/3		1830	1520	1520	1520	1520	1220	1370	1370	1220	1220	1070	910	
400/2		1520	1370	1370	1370	1220	1070	1220	1220	1070	1070	910	760	
440/4		1830	1520	1370	1680	1520	1220	1520	1370	1220	1370	1220	1070	
500/4		2130	1830	1830	1830	1520	1370	1830	1520	1370	1520	1370	1220	
600/3		2130	1830	1830	1830	1520	1370	1830	1520	1370	1520	1370	1220	
750/3		2130	1830	1830	1830	1520	1370	1830	1520	1370	1520	1370	1220	
800/4		2440	2130	2130	2130	1830	1830	2130	1830	1520	1830	1520	1370	
900/2		1980	1980	1830	1830	1830	1520	1830	1520	1370	1520	1370	1220	
1000/4		2440	2130	2130	2130	1830	1830	2130	1830	1520	1830	1520	1370	
1000/5		2740	2440	2440	2440	2130	2130	2440	2130	1830	2130	1830	1830	
1200/6		2950	2740	2740	2740	2440	2440	2740	2440	2130	2440	2130	2130	
1250/5		2950	2740	2740	2740	2440	2440	2740	2440	2130	2440	2130	1980	
1350/3		2440	2440	2130	2440	2440	2130	2440	2130	1830	2440	2130	1830	
1800/4		3000	3000	2740	3000	3000	2740	2740	2740	2440	2740	2440	2130	

On systems with troughing idler spacing greater than 5 ft. (1.5 m) OR idler roll gap greater than 1/2 in. (12.7mm), consult your Sales Representative or ContiTech.



### Plylon Plus® Troughability - Minimum Belt Width

Table based on ISO 703 Testing Procedure

Idlers	220/2	250/2	330/3	375/3	400/2	440/4	500/4	600/3	750/3	800/4	900/2	1000/4	1000/5	1200/6	1250/5	1350/3	1800/4
Inches																	
20 degree	18	18	18	20	18	24	24	24	24	30	24	30	36	42	36	30	36
35 degree	18	18	24	24	24	30	30	30	30	36	30	36	42	48	42	36	42
45 degree	24	24	30	30	30	36	36	36	36	42	36	42	48	54	48	42	48
Millimeters																	
20 degree	460	460	460	510	460	610	610	610	610	760	610	760	910	1070	910	760	910
35 degree	460	460	610	610	610	760	760	760	760	910	760	910	1070	1220	1070	910	1070
45 degree	610	610	760	760	760	910	910	910	910	1070	910	1070	1220	1370	1220	1070	1220

If top cover and pulley cover are balanced (i.e., 3/16 in.x3/16 in. or 5mm x 5mm) or less than 1/16 in. (2mm) differential (i.e., 3/16 in.x5/32 in. or 4mm x 3mm), add 6 in. (150mm) to the minimum belt width. 6 in. (150mm) narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your Sales Representative. Additional break-in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50°F (10°C). Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

### Plylon Plus® Minimum Pulley Diameters

	Plylon Plus 220/2	Plylon Plus 250/2	Plylon Plus 330/3	Plylon Plus 375/3	Plylon Plus 400/2	Plylon Plus 440/4	Plylon Plus 500/4	Plylon Plus 600/3	Plylon Plus 750/3	Plylon Plus 800/4	Plylon Plus 900/2
# of Plies	2	2	3	3	2	4	4	3	3	4	2
Inches											
Over 80% Tension	16	16	18	18	16	24	24	24	30	30	30
60% to 80% Tension	14	14	16	16	14	20	20	20	24	24	24
40% to 60% Tension	10	12	14	14	12	16	18	18	20	20	24
Up to 40% Tension	10	12	14	14	10	16	18	16	18	18	20
Tails and Snubs	10	12	14	14	10	16	18	16	18	18	20
Millimeters											
Over 80% Tension	410	410	460	460	410	610	610	610	760	760	760
60% to 80% Tension	360	360	410	410	360	510	510	510	610	610	610
40% to 60% Tension	250	300	300	360	300	410	460	460	510	510	610
Up to 40% Tension	250	300	300	360	250	410	460	410	460	460	510
Tails and Snubs	250	300	300	360	250	410	460	410	460	460	510

Plylon Plus\* HT belts (2/900, 3/1350, 4/1800) require a minimum pulley cover gauge of 1/8 in. (3.18mm) if vulcanized splicing will be used.

Plylon Plus® 1000/4-1800/4 continued on page 18





# **Plylon Plus<sup>®</sup> Belts**

### Plylon Plus® Minimum Pulley Diameters

continued from page 17

	Plylon Plus 1000/4	Plylon Plus 1000/5	Plylon Plus 1200/6	Plylon Plus 1250/5	Plylon Plus 1350/3	Plylon Plus 1800/4
# of Plies	4	5	6	5	3	4
Inches						
Over 80% Tension	36	36	42	42	36	42
60% to 80% Tension	30	30	36	36	30	36
40% to 60% Tension	24	24	30	30	30	36
Up to 40% Tension	20	20	30	24	24	30
Tails and Snubs	20	20	30	24	24	30
Millimeters						·
Over 80% Tension	910	910	1070	1070	910	1070
50% to 80% Tension	760	760	910	910	760	910
40% to 60% Tension	610	610	760	760	760	910
Up to 40% Tension	510	510	760	610	610	760
Tails and Snubs	<u></u> <u>510</u>	510		610	610	

Plylon Plus HT belts (2/900, 3/1350, 4/1800) require a minimum pulley cover gauge of 1/8 in. (3.18mm) if vulcanized splicing used.



# Elevator Data

### Plylon Plus® Elevator Belt Data

	Plylon Plus 220/2	Plylon Plus 250/2	Plylon Plus 330/3	Plylon Plus 375/3	Plylon Plus 400/2	Plylon Plus 440/4	Plylon Plus 500/4	Plylon Plus 600/3	Plylon Plus 750/3	Plylon Plus 800/4	Plylon Plus 900/2
# of Plies	2	2	3	3	2	4	4	3	3	4	2
Fabric Type*	P/P	P/N	P/P	P/N	P/P	P/P	P/N	P/P	P/P	P/P	P/N
Recommended Plate Fastener	140	190	190	BR-10	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14	NR
Imperial											
Industrial Service Tension Capacity (PIW)	170	195	250	290	310	350	385	465	580	620	700
Nom. Carcass Gauge (in.)	0.121	0.135	0.161	0.169	0.178	0.221	0.229	0.251	0.246	0.340	0.300
Spaced Industrial Max. Bucket Projection	6	7	7	8	9	10	11	10	10	11	11
Continuous Industrial Max. Bucket Projection	5	6	7	8	9	10	11	12	12	14	14
Metric											
Industrial Service Tension Capacity (kN/m)	30	34	44	51	54	61	67	81	102	109	123
Nom. Carcass Gauge (mm)	3.07	3.43	4.09	4.29	4.52	5.61	5.82	6.38	6.25	8.64	7.62
Spaced Industrial Max. Bucket Projection	150	180	180	200	230	250	280	250	250	280	280
Continuous Industrial Max. Bucket Projection	130	150	180	200	230	250	280	300	300	360	360

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 Sales Representative or fastener manufacturer. Consult your Sales Representative for vulcanized splice design for 900/2, 1350/3 and 1800/4 constructions. \*P/P = Poly/Poly and P/N = Poly/Nylon

### Plylon Plus® Elevator Belt Data

	Plylon Plus 1000/4	Plylon Plus 1000/5	Plylon Plus 1200/6	Plylon Plus 1250/5	Plylon Plus 1350/3	Plylon Plus 1800/4
# of Plies	4	5	6	5	3	4
Fabric Type*	P/P	P/P	P/P	P/P	P/N	P/N
Recommended Plate Fastener	NR	NR	NR	NR	NR	NR
Imperial						
Industrial Service Tension Capacity (PIW)	775	775	930	970	1050	1400
Nom. Carcass Gauge (in.)	0.337	0.429	0.518	0.427	0.453	0.613
Spaced Industrial Max. Bucket Projection	12	12	12	12	13	15
Continuous Industrial Max. Bucket Projection	15	16	20	20	22	26
Metric						
Industrial Service Tension Capacity (kN/m)	136	136	163	170	184	245
Nom. Carcass Gauge (mm)	8.56	10.90	13.16	10.85	11.51	15.57
Spaced Industrial Max. Bucket Projection	300	300	300	300	330	380
Continuous Industrial Max. Bucket Projection	380	410	510	510	560	660

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 Sales Representative or fastener manufacturer. Consult your Sales Representative for vulcanized splice design for 900/2, 1350/3 and 1800/4 constructions.

\*P/P = Poly/Poly and P/N = Poly/Nylon



Call Toll Free: 1-866-711-4673 We Ship World Wide

# Spartan® Belts

ContiTech Spartan® is an economical fabric belt construction. Spartan® belts are recommended for material less than 3 inches in diameter.

### **Markets Applications Cover Compounds** Aggregate > 3 inch Minus Rock > General Trade ) Package Handling ) Load Out ) Grain ) Sand and Gravel ) Low Abuse ) MOR > Radial Stacker > Ready Mix See pages 56-61 for more specific details. Stacker

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: 220 to 600 PIW

### Spartan® Conveyor Belt Data

	Spartan 220/2	Spartan 330/3	Spartan 440/4	Spartan 600/3
# of Plies	2	3	4	3
Fabric Type*	P/P	P/P	P/P	P/P
Average Permanent Elongation (%)**	0.80	0.80	0.80	0.80
Recommended Fastener Plate	140	190	BR-10	BR-10
Hinge	R2	R2	R5	R5-1/2
Hinge	U35A	U35A	U35	U35
Imperial				
Vulcanized & Fastener Rating (PIW)	220	330	440	600
Carcass Gauge (in.)	0.066	0.104	0.143	0.191
Carcass Weight (lb./sq. ft.)	0.53	0.83	1.13	1.36
Approximate 1/32 in. Cover Weight (lb./sq. ft.)	0.19	0.19	0.19	0.19
Elastic Modulus (PIW)	26,000	39,000	52,000	56,000
Step Length (in.)	10	10	10	16
Metric				
Vulcanized & Fastener Rating (kN/m)	39	58	77	600
Carcass Gauge (mm)	1.68	2.64	3.63	6.07
Carcass Weight (kg/sq. m)	2.6	4.1	5.5	6.6
Approximate 1mm Cover Weight (kg/sq. m)	1.17	1.17	1.17	1.17
Elastic Modulus (kN/m)	4550	6830	9110	9810
Step Length (mm)	250	250	250	410

Spartan\* 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 Sales Representative or fastener manufacturer.

\*P/P = PolV/PolV

\*\*Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for electrical and total





# Spartan® Belts

### Spartan® Load Support - Maximum Belt Width

	Material Weight	0-40 lb./cu. ft. (0-640 kg/cu. m)			41-80 lb./ (641-1280	cu.ft. Okg/cu.m)		81-120 lb./cu. ft. (1281-1920 kg/cu. m)		
PIW/Plies	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
Inches										
220/2		42	36	30	36	30	24	30	24	18
330/3		48	42	36	48	36	30	42	36	30
440/4		54	48	42	54	48	36	48	42	36
600/3		72	60	60	66	60	54	60	54	48
Millimeters										
220/2		1070	910	760	910	760	610	760	610	460
330/3		1220	1070	910	1220	910	760	1070	910	760
440/4		1370	1220	1070	1370	1220	910	1220	1070	910
600/3		1830	1520	1520	1680	1520	1370	1520	1370	1220

On systems with troughing idler spacing greater than 5ft. (1.5m) OR idler roll gap greater than 1/2 in. (12.7mm), consult your Sales Representative or ContiTech.

### Spartan® Troughability - Minimum Belt Width

Table based on ISO 703 Testing Procedure

Idlers	Spartan 220/2	Spartan 330/3	Spartan 440/4	Spartan 600/3
Inches				
20 degree idlers	14	16	20	24
35 degree idlers	16	20	24	30
45 degree idlers	20	24	30	36
Millimeters				
20 degree idlers	360	410	610	610
35 degree idlers	410	510	760	760
45 degree idlers	510	610	910	910

If top cover and pulley cover are balanced (i.e., 3/16 in. x 3/16 in. or 5mm x 5mm) or less than 1/16 in. (2mm) differential (i.e., 3/16 in. x 5/32 in. or 4mm x 3mm), add 6 in. (150mm) to the minimum belt width. 6 in. (150mm) narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your Sales Representative. Additional break-in time is required when the belt has been stored prior to insulation in ambient temperatures of less than  $50^{\circ}$ F ( $10^{\circ}$ C). Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

### Spartan® Minimum Pulley Diameters - Minimum Belt Width

Table based on ISO 703 Testing Procedure

	Spartan 220/2	Spartan 330/3	Spartan 440/4	Spartan 600/3
Inches				
Over 80% Tension	14	16	20	24
60% to 80% Tension	12	14	18	20
40% to 60% Tension	8	10	14	18
Up to 40% Tension	8	10	14	16
Tails and Snubs	8	10	14	16
Millimeters				
Over 80% Tension	360	410	510	610
60% to 80% Tension	300	360	460	510
40% to 60% Tension	200	250	360	460
Up to 40% Tension	200	250	360	410
Tails and Snubs	200	250	360	410





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	Applications	Cover Compounds
<ul><li>Cement</li><li>Foundry</li></ul>	<ul><li>Cement Clinker</li><li>Coke Plants</li></ul>	Solar-Shield® XL 750
<ul><li>) Iron Ore</li><li>) Steel Production</li><li>) Taconite</li></ul>	<ul><li>) Hot Powdery Materials</li><li>) Sintered Ore</li><li>) Steel Mills</li><li>) Taconite Pellets</li></ul>	See pages 53-59 for more specific details.

Features & Benefits

Get a lower cost-per-ton conveyed.



### Heat-resistant cover resists cracking and hardening

Solar-Shield $^{\circ}$  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.

Tension Range: 220 to 1200 PIW

The Solar-Shield® XL 750 compound improves heat resistance above and beyond our 400°F (204°C) compound and significantly extends belt life. The Solar-Shield® XL 750 was designed to handle hot material loads up to 750°F (399°C), providing extreme longevity in severe heat applications.



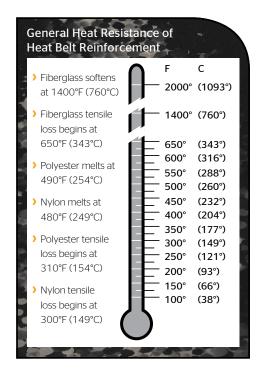
### High-temperature resistance to tearing and abrasion

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





### Features & Benefits



### 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 (538°C).

### Solar-Shield® XL 750 Conveyor Belt Data

	Solar-Shi	eld								
	250/2	220/2 GL	375/3	330/3 GL	400/2	500/4	600/3	800/4	1000/5	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
Average Permanent Elongation (%)**	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Imperial										
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 (lb./sq. ft.)	0.63	1.02	1.07	1.58	0.93	1.50	1.37	1.88	2.34	2.83
Approximate 1/32 in. Cover Weight (lb./sq. ft.)	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18
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

Solar-Shield\* rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.
\*P/P = Poly/Poly: P/N = Poly/Nylon





Solar-Shield® XL 750 Conveyor Belt Data

continued from page 23

	Solar-Shi	olar-Shield										
	250/2	220/2 GL	375/3	330/3 GL	400/2	500/4	600/3	800/4	1000/5	1200/6		
Number of Plies	2	2	3	3	2	4	3	4	5	6		
Fabric Type*	P/N	GL	P/N	GL	P/P	P/N	P/P	P/P	P/P	P/P		
Average Permanent Elongation (%)**	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80	0.80		
Metric												
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)	3.1	5.0	5.2	7.7	4.5	7.3	6.7	9.2	11.4	13.8		
Approximate 1mm Cover Weight (kg/sq. m)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1		
Elastic Modulus (kN/m)	5250	6480	7880	9720	7710	10,510	11,560	15,410	19,260	23,120		
Step Length (mm)	300	460	300	460	410	300	410	410	410	410		

Solar-Shield\* rated belt tension can exceed 100%, with a maximum of 150%, during starting and stopping conditions.

### Solar-Shield® XL 750 Load Support - Maximum Belt Width

Material Weight		0-40 lb./cu. ft. (0-640 kg/cu. m)				41-80 lb./cu. ft. (641-1280 kg/cu. m)			81-120 lb./cu. ft. (1281-1920 kg/cu. m)			Over 120 lb./cu. ft. (Over 1920 kg/cu. m)		
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	
Inches														
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	
Millimeters														
250/2 - P/N		1370	1220	1220	1220	1070	910	1070	1070	760	910	760	NR	
220/2 - GL		1370	1220	1070	1220	1070	910	1070	1070	NR	910	760	NR	
375/3 - P/N		1830	1520	1520	1520	1370	1220	1370	1220	1070	1220	1070	NR	
330/3 - GL		1830	1520	1520	1520	1370	1220	1370	1220	1070	1220	1070	NR	
400/2 - P/P		1520	1370	1370	1370	1220	1070	1220	1220	1070	1070	910	760	
500/4 - P/N		2130	1830	1830	1830	1520	1370	1830	1520	1370	1520	1370	1200	
600/3 - P/P		2130	1830	1830	1830	1520	1370	1830	1520	1370	1520	1370	1200	
800/4 - P/P		2440	2130	2130	2130	1830	1830	2130	1830	1520	1830	1520	1400	
1000/5 - P/P		2740	2440	2440	2440	2130	2130	2440	2130	1830	2130	1830	1850	
1200/6 - P/P		2950	2740	2740	2740	2440	2440	2740	2440	2130	2440	2130	2150	





P/P = Poly/Poly; P/N = Poly/Nylor

<sup>\*\*</sup>Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for elastic and total elongation calculations.

### Solar-Shield® XL 750 Troughability - Minimum Belt Width

Table based on ISO 703 Testing Procedure

	Solar-Shield													
Idlers	250/2	220/2 GL	375/3	330/3 GL	400/2	500/4	600/3	800/4	1000/5	1200/6				
Inches														
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				
Millimeters														
20 degree idlers	610	460	610	610	610	760	760	910	1070	1220				
35 degree idlers	610	610	760	760	760	910	910	1070	1220	1370				
45 degree idlers	760	760	910	910	910	1070	1070	1220	1370	1520				

If top cover and pulley cover are balanced (i.e., 3/16 in. x3/16 in. or 5mm x 5mm) or less than 1/16 in. (2mm) differential (i.e., 3/16 in. x 5/32 in. or 4mm x 3mm), add 6 in. (150mm) to the minimum belt width. 6 in. (150mm) narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your Sales Representative. Additional break-in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50°F (10°C).

Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

### Solar-Shield® XL 750 Minimum Pulley Diameters

	Solar-Shield											
	250/2	220/2 GL	375/3	330/3 GL	400/2	500/4	600/3	800/4	1000/5	1200/6		
Inches												
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		
Millimeters												
Over 80% Tension	410	760	460	1070	410	610	610	760	910	1070		
60% to 80% Tension	360	610	410	910	360	510	510	610	760	910		
40% to 60% Tension	300	510	360	760	300	460	460	510	610	760		
Up to 40% Tension	300	460	360	610	250	460	410	460	510	610		
Tails and Snubs	300	460	360	610	250	460	410	460	510	610		





# **Wood Sawyer® Plus Belts**

Increase efficiency and decrease downtime by installing ContiTech Wood Sawyer® Plus 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 **Applications Cover Compounds** > Pulp and paper > Defender® Plus > Broke belt > Wood > Chipper end feed ) LTORS Monsterhide ) Log debarkers ) Log deck MORS ) Stacker® Log sorter > Planer belt See pages 53-59 for more specific details. > Pulp belt > Sander belt Sawmills > Tray belt

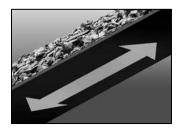
 Any other application requiring moderate oil resistance

See the guide and process diagram for Wood Product Applications on pages 32-33.

Get a lower cost-per-ton conveyed.

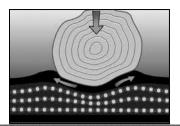
**Tension Range: 220 to 800 PIW** 

### Features & Benefits



### High ultimate strength

ContiTech 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.

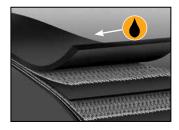


### Superior abuse resistance

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.

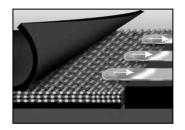






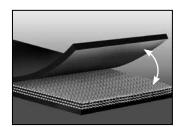
### Superior MORS cover compound

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.

### Wood Sawyer® Plus Conveyor Belt Data

	WS Plus 220/2	WS Plus 250/2	WS Plus 330/3	WS Plus 375/3	WS Plus 400/2	WS Plus 440/4	WS Plus 500/4	WS Plus 600/3	WS Plus 750/3	WS Plus 800/4
# of Plies	2	2	3	3	2	4	4	3	3	4
Fabric Type*	P/P	P/N	P/P	P/N	P/P	P/P	P/N	P/P	P/P	P/P
Average Permanent Elongation (%)**	.80	0.8	.80	0.8	0.8	.80	0.8	0.8	1.0	8.0
Recommended Fastener Plate	140	190	190	BR-10	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14
Hinge	R2	R2	R2	R5	R5	R5	R5-1/2	R5-1/2	R6	R6
Hinge	U35A	U35A	U35A	U35	U35	U35	U35	U35	U37/37A	U37/U37A
Imperial										
Vulcanized & Fastener Rating (PIW)	220	250	330	375	400	440	500	600	750	800
Nom. Carcass Gauge (in.)	.125	0.135	.169	0.169	0.178	.233	0.229	0.251	0.272	0.340
Nom. Carcass Weight (lb./sq. ft.)	.79	0.85	1.05	1.07	0.98	1.46	1.45	1.44	1.61	1.93
Approximate 1/32 in.	.19	0.19	.19	0.19	0.19	.19	0.19	0.19	0.19	0.19
Cover Weight (lb./sq. ft.)										
Elastic Modulus (PIW)	23,000	30,000	34,500	45,000	44,000	46,000	60,000	66,000	67,500	88,000
Step Length (in.)***	10	10	10	10	16	10	10	16	18	16

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 Sales Representative or fastener manufacturer. R-6 fasteners must be installed with stainless steel rivets when belt tensions exceed 800 PlW for best results.

Metric continued on page 28





<sup>\*</sup>P/P = Poly/Poly and P/N = Poly/Nylon

<sup>\*\*</sup>Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for elastic and total elongation calculations.

<sup>\*\*\*</sup>Consult your Sales Representative for vulcanized splice design for 900/2, 1350/3 and 1800/4 constructions.

# **Wood Sawyer® Plus Belts**

### Wood Sawyer® Plus Conveyor Belt Data

continued from page 27

	WS Plus 220/2	WS Plus 250/2	WS Plus 330/3	WS Plus 375/3	WS Plus 400/2	WS Plus 440/4	WS Plus 500/4	WS Plus 600/3	WS Plus 750/3	WS Plus 800/4
# of Plies	2	2	3	3	2	4	4	3	3	4
Fabric Type*	P/P	P/N	P/P	P/N	P/P	P/P	P/N	P/P	P/P	P/P
Average Permanent Elongation (%)**	.80	0.80	.80	0.80	0.80	.80	0.80	0.80	0.80	0.80
Recommended Plate Fastener	140	190	190	BR-10	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14
Hinge	R2	R2	R2	R5	R5	R5	R5-1/2	R5-1/2	R6	R6
Hinge	U35A	U35A	U35A	U35	U35	U35	U35	U35	U37/ U37A	U37/ U37A
Metric										
Vulcanized & Fastener Rating (kN/m)	39	44	58	66	70	77	88	105	131	140
Nom. Carcass Gauge (mm)	3.18	3.4	4.29	4.3	4.5	5.92	5.8	6.4	6.9	8.6
Nom. Carcass Weight (kg/sq. m)	3.9	4.2	5.1	5.2	4.8	7.1	7.1	7.0	7.86	9.4
Approximate 1mm Cover Weight (kg/sq. m)	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17	1.17
Elastic Modulus (kN/m)	4,030	5,250	6,040	7,880	7,710	8,060	10,510	11,560	9,840	15,410
Step Length (mm)***	250	250	250	250	410	250	250	410	460	410

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 Sales Representative or fastener manufacturer. R-6 fasteners must be installed with stainless steel rivets when belt tensions exceed 800 PIW for best results.

### Wood Sawyer® Plus Load Support - Maximum Belt Width

	Material Weight 0-40 lb./cu. ft.				41-80 lb./	41-80 lb./cu. ft.			81-120 lb./cu. ft.			
PIW/Plies	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg		
Inches												
220/2		48	42	36	48	36	36	42	36	30		
250/2		54	48	48	48	42	36	42	42	30		
330/3		60	54	48	60	48	42	54	48	42		
375/3		72	60	60	60	60	48	54	54	48		
400/2		60	54	54	54	48	42	48	48	42		
440/4		72	60	54	66	60	48	60	54	48		
500/4		84	72	72	72	60	54	72	60	54		
600/3		84	72	72	72	60	54	72	60	54		
750/3		84	72	72	72	60	54	72	60	54		
800/4		96	84	84	84	72	72	84	72	60		

On systems with troughing idler spacing greater than 5 ft. (1.5m) OR idler roll gap greater than 1/2 in. (12.7mm), consult Sales Representative or ContiTech.

Millimeters continued on page 29





<sup>\*</sup>P/P = Poly/Poly and P/N = Poly/Nylon

<sup>\*\*</sup>Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for elastic and total elongation calculations.

<sup>\*\*\*</sup>Consult your Sales Representative for vulcanized splice design for 900/2, 1350/3 and 1800/4 constructions.

# **Wood Sawyer® Plus Belts**

Wood Sawyer® Plus Load Support - Maximum Belt Width

continued from page 28

	Material Weight	0-40 lb./cu. ft. (0-640 kg/cu. m) 41-80 ll			41-80 lb./	cu. ft. (641-12	80 kg/cu. m)	81-120 lb./cu. ft. (1281-1920 kg/cu. m)			
PIW/Plies	Trough Idlers	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	
Millimeters	;										
220/2		1220	1070	910	1220	910	910	1070	910	760	
250/2		1370	1220	1220	1220	1070	910	1070	1070	760	
330/3		1520	1370	1220	1520	1220	1070	1370	1220	1070	
375/3		1830	1520	1520	1520	1520	1220	1370	1370	1220	
400/2		1520	1370	1370	1370	1220	1070	1220	1220	1070	
440/4		1830	1520	1370	1680	1520	1220	1520	1370	1220	
500/4		2130	1830	1830	1830	1520	1370	1830	1520	1370	
600/3		2130	1830	1830	1830	1520	1370	1830	1520	1370	
750/3		2130	1830	1830	1830	1520	1370	1830	1520	1370	
800/4		2440	2130	2130	2130	1830	1830	2130	1830	1520	

On systems with troughing idler spacing greater than 5 ft. (1.5m) OR idler roll gap greater than 1/2 in. (12.7mm), consult Sales Representative.

### Wood Sawyer® Plus Troughability - Minimum Belt Width

Table based on ISO 703 Testing Procedure

Idlers	WS Plus 220/2	WS Plus 250/2	WS Plus 330/3	WS Plus 375/3	WS Plus 400/2	WS Plus 440/4	WS Plus 500/4	WS Plus 600/3	WS Plus 750/3	WS Plus 800/4
Inches										
20 degree idlers	18	18	18	20	18	24	24	24	24	30
35 degree idlers	18	18	24	24	24	30	30	30	30	36
45 degree idlers	24	24	30	30	30	36	36	36	36	42
Millimeters										
20 degree idlers	460	460	460	510	460	610	610	610	610	760
35 degree idlers	460	460	610	610	610	760	760	760	760	910
45 degree idlers	610	610	760	760	760	910	910	910	910	1070

If top cover and pulley cover are balanced (i.e., 3/16 in.x3/16 in. or 5mm x 5mm) or less than 1/16 in. (2mm) differential (i.e., 3/16 in.x 5/32 in. or 4mm x 3mm), add 6 in. (150mm) to the minimum belt width. 6 in. (150mm) narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your Sales Representative. Additional break-in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50°F (10°C).

Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.



### Wood Sawyer® Plus Minimum Pulley Diameters

	WS Plus 220/2	WS Plus 250/2	WS Plus 330/3	WS Plus 375/3	WS Plus 400/2	WS Plus 440/4	WS Plus 500/4	WS Plus 600/3	WS Plus 750/3	WS Plus 800/4
Inches										
Over 80% Tension	16	16	18	18	16	24	24	24	30	30
60% to 80% Tension	14	14	16	16	14	20	20	20	24	24
40% to 60% Tension	10	12	12	14	12	16	18	18	20	20
Up to 40% Tension	10	12	12	14	10	16	18	16	18	18
Tails and Snubs	10	12	12	14	10	16	18	16	18	18
Millimeters										
Over 80% Tension	410	410	460	460	410	610	610	610	760	760
60% to 80% Tension	360	360	410	410	360	510	510	510	610	610
40% to 60% Tension	250	300	300	360	300	410	460	460	510	510
Up to 40% Tension	250	300	300	360	250	410	460	410	460	460
Tails and Snubs	250	300	300	360	250	410	460	410	460	460

If top cover and pulley cover are balanced (i.e., 3/16 in. x 3/16 in. or 5mm x 5mm) or less than 1/16 in. (2mm) differential (i.e., 3/16 in. x 5/32 in. or 4mm x 3mm), add 6 in. (150mm) to the minimum belt width. 6 in. (150mm) narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your Sales Representative. Additional break-in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50°F (10°C).

Above tables are based on top cover gauge equal or greater than the bottom (pulley) cover gauge.

# Bareback Data

### Wood Sawver® Plus Bareback Conveyor Belt Data

	Imperial			Metric		
	WS Plus 220/2	WS Plus 330/3	WS Plus 440/4	WS Plus 220	WS Plus 330	WS Plus 440
# of Plies	2	3	4	2	3	4
Fabric Type*	P/P	P/P	P/P	P/P	P/P	P/P
Average Permanent Elongation (%)**	0.80	0.80	0.80	0.80	0.80	0.80
Recommended Plate Fastener	140	190	BR-10	140	190	BR-10
Hinge	R2	R2	R5	R2	R2	R5
Hinge	U35A	U35A	U35	U35A	U35A	U35
Vulcanized & Fastener Rating (PIW or kN/m)	220	330	440	39	58	77
Approximate 1/32 in. (1mm) Cover Weight (lb./sq. ft. or kg/sq. m)	0.19	0.19	0.19	1.17	1.17	1.17
Average Elastic Modulus (PIW or kN/m)	23,000	34,500	46,000	4030	6040	8060
Step Length (in./mm)	10	10	10	250	250	250

Wood Sawyer\* Plus 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.



<sup>\*</sup>P/P = Polyester/Polyester

<sup>\*\*</sup>Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult your Sales Representative or Distributor for elastic and 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 50°F (10°C).

# **Wood Sawyer® Plus Belts**

# Bareback Data (continued)

### Wood Sawyer® Plus Bareback Conveyor Belt Top Cover

### **Top Cover**

Imperial	5/32 in.			3/16 in.			1/4 in. t	o 3/8 in.	
Nom. Carcass Gauge (in./mm)	0.137	0.185	0.257	0.155	0.234	0.33	NA	0.274	0.392
Nom. Carcass Weight (lb./sq. ft. or kg/sq. m)	0.81	1.12	1.57	0.93	1.43	2.22	NA	1.69	2.68
Metric	4mm & l	Jnder		5mm			6 to 10	mm	
				J					
Nom. Carcass Gauge (in./mm)	3.48	4.7	6.53	3.94	5.94	8.38	NA	6.96	9.96

Wood Sawyer\* Plus 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





# **Wood Products Applications**

# For Conveyor Belts

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

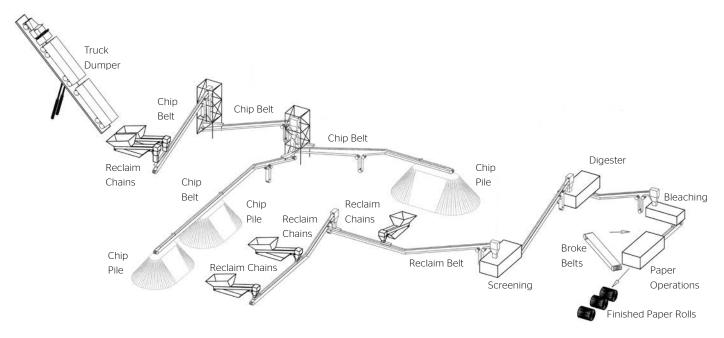




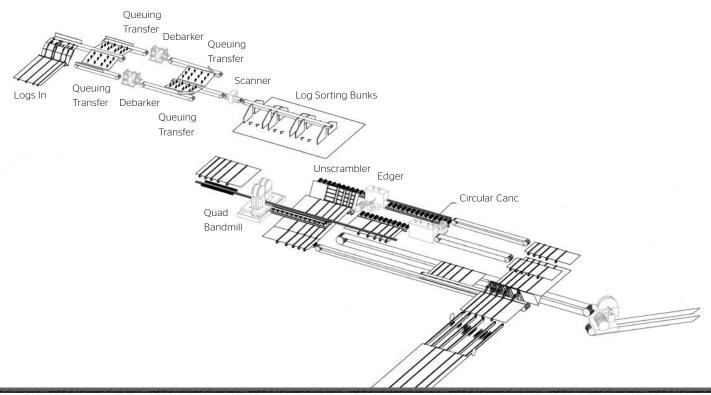


# **Wood Product Applications**

# Typical Pulp and Paper Facility



# Typical Sawmill Facility







# Pathfinder® Plus Belts

ContiTech Pathfinder® Plus is a reinforced belt designed to stand up to the unique operating conditions of grain handling facilities. Pathfinder® Plus' exceptionally low electrical resistance and superior oil resistance properties provide excellent operational safety and long life.

# Markets Applications Cover Compounds Agriculture Bulk handling terminals Grain elevator Grain storage Grain Fethfinder® Arctic Pathfinder® Supreme Peth CSA\* Meets Canadian specifications. See pages 53-59 for more specific details.

Get a lower cost-per-ton conveyed.

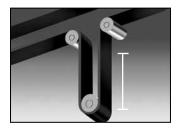
Tension Range: 250 to 1250 PIW

## Features & Benefits



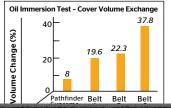
### High ultimate strength

Pathfinder® Plus is designed to withstand harsh operating conditions. The tensile force required to break a 48 in. Pathfinder 375 PIW belt is 180,000 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.





# Pathfinder® Plus Belts

### Features & Benefits



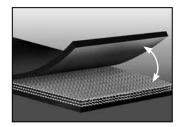
### Static conductive, low electrical resistance, flame resistance

Pathfinder® Plus 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.



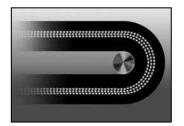
### **Excellent bolt holding capabilities**

High strength fill cords provide excellent resistance to bolt pull-out. Excellent bolt holding ability enables the Pathfinder® Plus 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.



#### Pathfinder® Plus Conveyor Belt Data

	PF 250/2	PF 375/3	PF 400/2	PF 500/4	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/P	P/N	P/P	P/P	P/P	P/P	P/P	P/P	P/P
Avg. Permanent Elongation (%)**	8.0	8.0	0.8	8.0	8.0	1.0	0.8	1.0	0.8	8.0	1.0
Recommended Fastener Plate	190	BR-10	BR-10	BR-10	BR-10	BR-14	BR-14	NR	NR	NR	NR
Hinge	R2	R5	R5	R5-1/2	R5-1/2	R6	R6	RAR8	RAR8	RAR8	RAR8
Hinge	U35A	U35	U35	U35	U35	U37/ U37A	U37/ U37A	U38A	U38A	U38	U38
Imperial											
Vulcanized & Fastener Rating (PIW)	250	375	400	500	600	750	800	1000	1000	1200	1250
Elevator Rating (PIW)	225	340	360	450	540	650	740	910	910	1090	1130
Maximum Bucket Projection (in.)	7	9	9	11	11	11	12	13	13	13	13
Nom. Carcass Gauge (in.)	0.135	0.178	0.180	0.229	0.251	0.272	0.340	0.368	0.421	0.502	0.464
Nom. Carcass Weight (lb./sq. ft.)	0.89	1.16	1.08	1.48	1.49	1.65	2.02	2.23	2.55	3.09	3.23
Approximate 1/32 in. Cover Weight (lb./sq. ft.)	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Elastic Modulus (PIW)	30,000	45,000	44,000	60,000	66,000	67,500	88,000	74,000	110,000	132,000	112,500
Step Length (in.)	10	10	16	10	16	18	16	18	16	16	18
Metric											
Vulcanized & Fastener Rating (kN/m)	44	66	70	88	105	131	140	175	175	210	219
Elevator Rating (kN/m)	39	60	63	79	95	114	130	159	159	191	198
Maximum Bucket Projection (mm)	178	229	229	279	279	279	305	330	330	330	330
Nom. Carcass Gauge (mm)	3.4	4.5	4.6	5.8	6.4	6.0	8.6	8.3	10.7	12.8	10.2
Nom. Carcass Weight (kg/sq. m)	4.3	5.7	5.3	7.2	7.3	7.2	9.9	9.9	12.5	15.1	12.5
Approximate 1mm Cover Weight (kg/sq. m)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Elastic Modulus (kN/m)	5250	7880	7710	10,510	11,560	11,820	15,410	15,760	19,260	23,120	19,700
Step Length (mm)	250	250	410	250	410	460	410	460	410	410	460

Pathfinder 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 Sales Representative or fastener manufacturer.





<sup>\*</sup>P/N = Poly/Nylon and P/P = Poly/Poly

\*\*Average permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure.. Consult your sales representative or distributor for elastic and total elongation calculators.

# Pathfinder® Plus Belts

#### Pathfinder® Plus Load Support - Maximum Belt Width

PIW/Plies - Fabric	Type of Idler	In-Line			Offset Eq	ual		Offset LC	Roll	
		20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
Inches	Degree of Idlers									
250/2		48	42	36	66	54	48	72	60	54
375/3		60	60	48	72	66	60	78	72	66
400/2		54	48	42	66	60	54	72	66	60
500/4		72	60	54	84	72	60	90	78	66
600/3		72	60	54	84	72	60	90	78	66
750/3		72	60	54	84	72	60	90	78	66
800/4		84	72	72	96	84	84	102	90	90
1000/4		84	72	72	96	84	84	102	90	90
1000/5		96	84	84	102	90	90	108	96	96
1200/6		96	84	84	102	90	90	108	96	96
1250/5		96	84	84	102	90	90	108	96	96
Millimeters	Trough Idlers									
250/2		1200	1100	900	1700	1400	1200	1800	1500	1400
375/3		1500	1500	1200	1800	1700	1500	2000	1800	1700
400/2		1400	1200	1100	1700	1500	1400	1800	1700	1500
500/4		1800	1500	1400	2100	1800	1500	2300	2000	1700
600/3		1800	1500	1400	2100	1800	1500	2300	2000	1700
750/3		1800	1500	1400	2100	1800	1500	2300	2000	1700
300/4		2100	1800	1800	2400	2100	2100	2600	2300	2300
1000/4		2100	1800	1800	2400	2100	2100	2600	2300	2300
1000/5		2400	2100	2100	2600	2300	2300	2700	2400	2400
1200/6		2400	2100	2100	2600	2300	2300	2700	2400	2400
1250/5		2400	2100	2100	2600	2300	2300	2400	2400	2400

On systems with troughing idler spacing greater than 5 ft. (1.5m) OR idler roll gap greater than 1/2 in. (12.7mm), consult your Sales Representative.

### Pathfinder® Plus Troughability - Minimum Belt Width

Procedure								T	able based	on ISO 70	3 Testing
Idlers	PF 250/2	PF 375/3	PF 400/2	PF 500/4	PF 600/3	PF 750/3	PF 800/4	PF 1000/4	PF 1000/5	PF 1200/6	PF 1250/5
Inches											
20 degree idlers	18	20	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
Millimeters											
20 degree idlers	500	500	500	600	600	600	800	800	900	1100	900
35 degree idlers	500	600	600	800	800	800	900	900	1100	1200	1100
45 degree idlers	600	800	800	900	900	900	1100	1100	1200	1400	1200

6 in. (150mm) narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult your Sales Representative but not when referring to technology. Additional break-in time is required when the belt has been stored prior to insulation in ambient temperatures of less than 50°F (10°C).



#### Pathfinder® Plus Minimum Pulley Diameters

Specifications	PF 250/2	PF 375/3	PF 400/2	PF 500/4	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
Inches											
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
Millimeters											
Over 80% Tension	500	500	500	800	600	800	800	900	900	1100	1100
60% to 80% Tension	400	500	400	600	500	600	600	800	800	900	900
40% to 60% Tension	400	400	400	500	500	500	500	600	600	800	800
Up to 40% Tension	300	400	300	500	400	500	500	500	500	800	600
Tails and Snubs	300	400	300	500	400	500	500	500	500	800	600





Flexsteel®





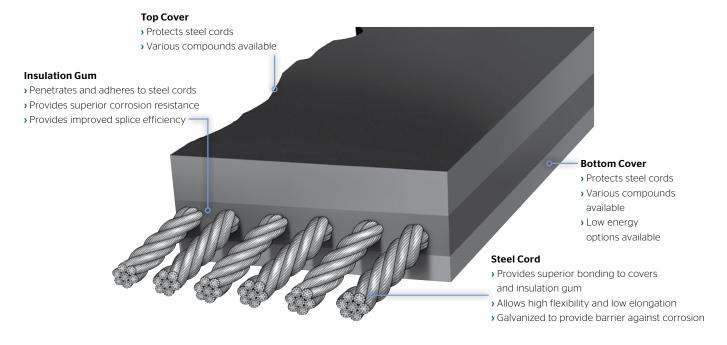
Call Toll Free: 1-866-711-4673 International:+1-727-342-5086

ContiTech 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.

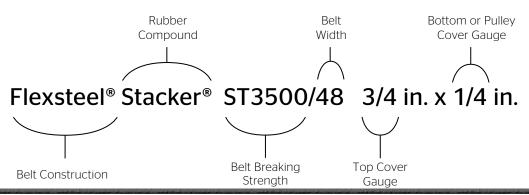
Flexsteel® Belts' steel cord provides superior impact resistance, with the number and size being selected to meet the desired operating tension and application needs. The insulation gum is specifically designed to encapsulate each steel cord filament to reduce internal friction while providing enhanced 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.

### **Conveyor Belt Components**



# **Belt Construction Nomenclature Example**







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 **Applications Cover Compounds** Aggregate Mainlines **)** 6740A > Cement Overland belts > FR-2G > Coal > Pit belts > FRAR-2G > Ship loaders > FRORS-2G > Hard rock > Power generation > Slope belts > Easyrider™ > Steel production Any high abuse applications > FRAS-C ) Global X® > Solar-Shield® > Stacker® > Style BLE > Style B II > Survivor® > Survivor® Plus > Other compounds available on request

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: ST500 to over ST10000** 





# A Technically Superior Product

Generations of our engineers have been involved for over 70 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.

# Superior strength, durability, ease of installation

ContiTech's 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 in. (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 "sandwhich" 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.

# 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 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.



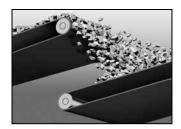


## Features & Benefits



### **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**

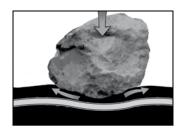
Flexsteel® belts elongate a maximum of 0.25% at rated tension. This allows lower cost take-up systems on many applications and makes Flexsteel® the preferred choice for long overland and short stacker/reclaiming systems, where minimum elongation is critical.



### **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 is a long time.

See Preform™ Patented Splice Technology on page 48.



#### 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.



### **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. Overland conveyors are typically more efficient than trucks or rail. It all adds up to the a lower cost-per-ton of material conveyed, which can make a major improvement in your bottom line.



### **Industry-leading Belt Monitoring System**

If your operation demands belt rip and transverse tear detection, cord or splice damage detection, look to ContiTech for periodic assessments or 24/7 real-time monitoring of your ContiTech belt systems.

# Packaging the Way You Want It

Packaging options include keeper bars, HEX steel reels and oblong 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



HEX Reel



Oblong Reel





# **Easyrider™ Pulley Covers**

There has been significant technical progress in the transport of bulk materials in the last several years.

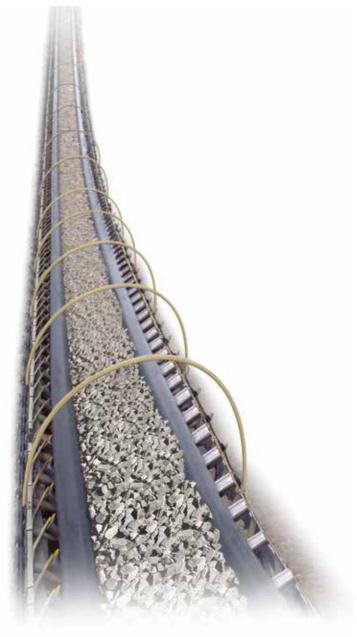
The next step to improved conveyor efficiency is the reduction of power required to operate these high performance systems. Just as some tires provide lower rolling resistance depending upon their construction and compounds, a conveyor belt can also be designed to provide lower resistance as it rolls 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 from our Easyrider™ family of low rolling resistance compounds will reduce power consumption. Our LRR Easyrider™ compound will reduce energy consumption by up to 20% and our SLRR Easyrider™ compound will reduce energy consumption by up to 32%. 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 32% savings available with Easyrider™ represents a savings of \$320,000 compared to other compounds. Over ten years, this can add up to savings of \$3.2 million or more depending on your operation.









# Preform<sup>™</sup> 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 misalignment 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 to ensure cord alignment and uniformly accurate spacing.

### 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.

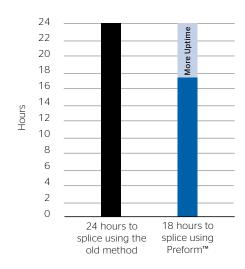
### **Improved Performance**

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%

### 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.

#### **Less Downtime**



Preform™ Splices: 25% faster





#### Flexsteel® Standard Specifications

Belt Tension Rating	Minimum Ultimate Tension	Operating Tension	Cable Diameter (Nominal)	Cable Pitch (Approximate)	Belt Modulus
Imperial	PIW	PIW	in.	in.	PIW
ST800	4568	685	0.142	0.688	329,000
ST1000	5710	856	0.142	0.547	411,000
ST1250	7138	1070	0.173	0.639	514,000
ST1600	9137	1370	0.173	0.498	658,000
ST2000	11,421	1712	0.173	0.398	822,000
ST2500	14,276	2140	0.205	0.428	1,027,000
ST3150	17,988	2697	0.260	0.492	1,294,000
ST3500	19,987	2997	0.315	0.655	1,438,000
ST4000	22,842	3425	0.362	0.753	1,644,000
ST4500	25,697	3853	0.394	0.806	1,849,000
ST5000	28,552	4281	0.433	0.820	2,055,000
ST5400	30,836	4623	0.433	0.764	2,219,000
ST6000	34,263	5137	0.433	0.850	2,466,000
ST6500	37,118	5565	0.488	0.790	2,671,000
				_	
ST7000	39,973	5993	0.488	0.738	2,877,000
ST7500	42,828	6421	_		3,082,000
ST8000	45683	6849			3,288,000
ST8500	48,539	7277	Contact ContiTech		3,493,000
ST9000	51,394	7705			3,699,000
ST9500	54,249	8133			3,904,000
ST10000	57,104	8561	_		4,109,000
	kN/m	kN/m	mm	mm	kN/m
ST800	800	120	3.6	17.5	58,000
ST800 ST1000	800 1000	120 150	3.6 3.6	17.5 13.9	58,000 72,000
ST800 ST1000 ST1250	800 1000 1250	120 150 187	3.6 3.6 4.4	17.5 13.9 16.2	58,000 72,000 90,000
ST800 ST1000 ST1250 ST1600	800 1000 1250 1600	120 150 187 240	3.6 3.6	17.5 13.9 16.2 12.7	58,000 72,000
ST800 ST1000 ST1250 ST1600	800 1000 1250	120 150 187	3.6 3.6 4.4	17.5 13.9 16.2	58,000 72,000 90,000
5T800 5T1000 5T1250 5T1600 5T2000	800 1000 1250 1600	120 150 187 240	3.6 3.6 4.4 4.4	17.5 13.9 16.2 12.7	58,000 72,000 90,000 115000
ST800 ST1000 ST1250 ST1600 ST2000 ST2500	800 1000 1250 1600 2000	120 150 187 240 300	3.6 3.6 4.4 4.4 4.4	17.5 13.9 16.2 12.7 10.2	58,000 72,000 90,000 115000 144,000
ST800 ST1000 ST1250 ST1600 ST2000 ST2500 ST3150	800 1000 1250 1600 2000 2500	120 150 187 240 300 375	3.6 3.6 4.4 4.4 4.4 5.2	17.5 13.9 16.2 12.7 10.2	58,000 72,000 90,000 115000 144,000 180,000
ST800 ST1000 ST1250 ST1600 ST2500 ST3150 ST3500	800 1000 1250 1600 2000 2500 3150	120 150 187 240 300 375 472	3.6 3.6 4.4 4.4 4.4 5.2 6.6	17.5 13.9 16.2 12.7 10.2 10.9 12.5	58,000 72,000 90,000 115000 144,000 180,000 227,000
ST800 ST1000 ST1250 ST1600 ST2000 ST2500 ST3150 ST3500	800 1000 1250 1600 2000 2500 3150 3500	120 150 187 240 300 375 472 525	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000
ST800 ST1000 ST1250 ST1600 ST2000 ST2500 ST3150 ST3500 ST4000 ST4500	800 1000 1250 1600 2000 2500 3150 3500 4000	120 150 187 240 300 375 472 525 600	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000
ST800 ST1000 ST1250 ST1600 ST2500 ST2500 ST3150 ST3150 ST4000 ST4500	800 1000 1250 1600 2000 2500 3150 3500 4000 4500	120 150 187 240 300 375 472 525 600 675	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000
5T800 5T1000 5T1250 5T1600 5T2500 5T3150 5T3500 5T4000 5T5000 5T5400	800 1000 1250 1600 2000 2500 3150 3500 4000 4500 5000	120 150 187 240 300 375 472 525 600 675 750	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0 11.0	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5 20.8	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000 360,000
5T800 5T1000 5T1250 5T1250 5T2000 5T2500 5T3150 5T3500 5T4000 5T5000 5T5400	800 1000 1250 1600 2000 2500 3150 3500 4000 4500 5000 5400	120 150 187 240 300 375 472 525 600 675 750 810	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0 11.0	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5 20.8 19.4	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000 360,000 389,000
ST800 ST1000 ST1250 ST1600 ST2000 ST2500 ST3150 ST3500 ST4500 ST4500 ST5400 ST5400 ST5400 ST5400 ST5600	800 1000 1250 1600 2000 2500 3150 3500 4000 4500 5000 5400 6000	120 150 187 240 300 375 472 525 600 675 750 810 900	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0 11.0 11.0	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5 20.8 19.4 21.6	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000 360,000 389,000 432,000
Metric  5T800  5T1000  5T1250  5T1600  5T2500  5T3500  5T4000  5T4500  5T5400  5T6000  5T6500  5T7500	800 1000 1250 1600 2000 2500 3150 3500 4000 4500 5000 5400 6000 6500 7000	120 150 187 240 300 375 472 525 600 675 750 810 900 975 1049	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0 11.0 11.0 12.4	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5 20.8 19.4 21.6 20.1	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000 360,000 389,000 432,000 468,000 504,000
5T800 5T1000 5T1250 5T1600 5T2000 5T2500 5T3150 5T4500 5T4500 5T4500 5T5400 5T6000 5T6500	800 1000 1250 1600 2000 2500 3150 3500 4000 4500 5000 5400 6000 6500 7000	120 150 187 240 300 375 472 525 600 675 750 810 900 975 1049	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0 11.0 11.0 12.4	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5 20.8 19.4 21.6 20.1	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000 360,000 389,000 432,000 468,000 504,000
5T800 5T1000 5T1250 5T1250 5T1600 5T2000 5T2500 5T3500 5T4500 5T5400 5T5400 5T6500 5T6500 5T7500 5T7500	800 1000 1250 1600 2000 2500 3150 3500 4000 4500 5000 5400 6000 6500 7000 7500 8000	120 150 187 240 300 375 472 525 600 675 750 810 900 975 1049 1124 1199	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0 11.0 11.0 12.4 12.4	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5 20.8 19.4 21.6 20.1	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000 360,000 389,000 432,000 468,000 504,000 576,000
5T800 5T1000 5T11250 5T1250 5T1600 5T2000 5T2500 5T3150 5T3500 5T4000 5T5400 5T5400 5T6000 5T6500 5T77000 5T7500 5T8000 5T8000	800 1000 1250 1600 2000 2500 3150 3500 4000 4500 5000 5400 6000 6500 7000 7500 8000 8500	120 150 187 240 300 375 472 525 600 675 750 810 900 975 1049 1124 1199 1274	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0 11.0 11.0 12.4	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5 20.8 19.4 21.6 20.1	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000 360,000 389,000 432,000 468,000 504,000 540,000 576,000 612,000
5T800 5T1000 5T1250 5T1600 5T2000 5T2500 5T3500 5T4000 5T4500 5T5400 5T5400 5T6500 5T7000	800 1000 1250 1600 2000 2500 3150 3500 4000 4500 5000 5400 6000 6500 7000 7500 8000	120 150 187 240 300 375 472 525 600 675 750 810 900 975 1049 1124 1199	3.6 3.6 4.4 4.4 4.4 5.2 6.6 8.0 9.2 10.0 11.0 11.0 12.4 12.4	17.5 13.9 16.2 12.7 10.2 10.9 12.5 16.6 19.1 20.5 20.8 19.4 21.6 20.1	58,000 72,000 90,000 115000 144,000 180,000 227,000 252,000 288,000 324,000 360,000 389,000 432,000 468,000 504,000 576,000

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 in. (1220mm) wide belts.





#### Flexsteel® Belt Thickness

Imperial						
Belt Tension Rating	PIW	600-1000	1001-1926	1927-2251	2252-2825	2826-3200
Cable Diameter	in.	0.15	0.18	0.21	0.26	0.32
Belt Tension Rating	PIW	3201-3500	3501-4200	4201-4650	4651-6420	
Cable Diameter	in.	0.37	0.40	0.44	0.49	
Metric						
Belt Tension Rating	kN/m	ST701-ST1169	ST1170-ST2250	ST2251-ST2629	ST2630-ST3300	ST3301-ST3738
Cable Diameter	mm	3.6	4.4	5.2	6.6	8.0
Belt Tension Rating	kN/m	ST3739-ST4089	ST4090-ST4906	ST4907-ST5432	ST5433-ST7499	
Cable Diameter	mm	9.2	10.0	11.0	12.4	

Approximate belt thickness = cable diameter + cover gauges.

#### Flexsteel® Belt Weight

1070	1370	1712
2.1	2.3	2.6
2997	3425	3853
4.4	5.0	5.5
5137	5565	5993
7.5	7.8	8.2
ST1250	ST1600	ST2000
10.3	11.3	12.6
ST3500	ST4000	ST4500
21.5	24.6	27.0
ST6000	ST6500	ST7000
36.4	38.4	40.3

Approximate belt weight = carcass weight + cover weight. Minimum pulley cover requirements for belts with Sensor Guard\* 3/16 in. (4.8mm). Contact your Sales Representative for minimum pulley cover that applies to your application. Minimum cover gauge is dependent on the belt rating. Average cover weight per 1/32 in. (1mm) is .19 lb/sq. ft. (1.18 kg/sq. m). Contact your sales representative for specific weight information.





#### **Recommended Minimum Pulley Diameters**

	Percent of Rated	Tension			
Belt Tension Rating	>100% - 125%	75 - 100%	50 - 75%	<50%	Snubs
Imperial (PIW)					
600 - 1000	36	30	24	16	16
1001 - 1926	42	36	30	20	18
1927 - 2251	48	42	30	24	24
2252 - 2825	54	48	36	30	30
2826 - 3200	60	54	42	36	36
3201 - 3500	72	60	54	42	42
3501 - 4200	78	72	54	42	42
4201 - 4650	84	72	54	48	48
4651 - 6420	90	78	66	54	54
6421 - 6800	96	84	66	54	54
6801 - 8561	120	102	78	60	60
Metric (kN/m)					
ST701-ST1169	1000	800	630	400	400
ST1170-ST2250	1000	1000	630	500	500
ST2251-ST2629	1250	1000	800	630	500
ST2630-ST3300	1250	1250	1000	800	630
ST3301-ST3738	1600	1400	1000	800	800
ST3739-ST4088	1800	1600	1250	1000	1000
ST4089-ST4906	2000	1800	1400	1000	1000
ST4907-ST5432	2000	1800	1400	1250	1250
ST5433-ST7499	2400	2000	1600	1250	1250
ST7500-ST7943	2400	2200	1600	1400	1400
ST7944-ST10000	3000	2500	2000	1400	1400

Snubs are defined as having 6 in. (152.4mm) 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.

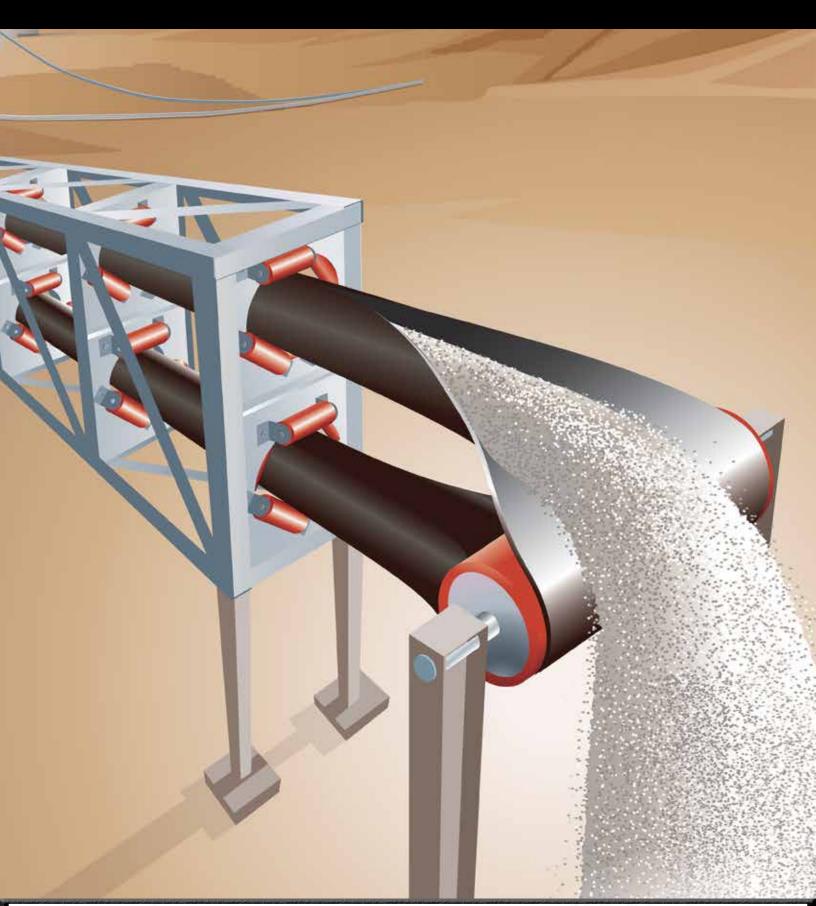
Minimum Transition Distance (W - Relt Width ) by Idler Angle

#### Recommended Minimum Transition Distance at Half & Full Trough Depth

		ansition distance	w - Beit Widtii)			
	Half Trough			Full Trough		
Percent of Rated Tension	20 Deg	35 Deg	45 Deg	20 Deg	35 Deg	45 Deg
More than 90%	2.0W	3.4W	4.0W	4.0W	6.8W	8.0W
60% to 90%	1.6W	2.6W	3.2W	3.2W	5.2W	6.4W
Less than 60%	1.0W	1.8W	2.2W	2.0W	3.6W	4.4W

Snubs are defined as having 6 in. (152.4mm) 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.







Call Toll Free: 1-866-711-4673 International:+1-727-342-5086

# **ContiPipe™ Conveyor Belts**

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

# Designed to outperform conventional pipe conveyor belt.

Most pipe conveyor belt is using technology more than 20 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 ContiPipe™ 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, ContiPipe™ 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.

### **Conveyor Belt Components**



# **Typical Applications**

- Copper
- > Coal (power plants)
- > Rock
- ) Gypsum
- > Cement

- > Pulp and paper
- ) Limestone
- ) Iron ore
- > Fly ash
- ) Wet ash

- > Fertilizer
- ) Glass
- > Steel
- > Wood chips





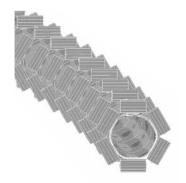
### Engineered to work a long way.

Developed using Finite Element Analysis (FEA) modeling to meet the demands of modern pipe conveyor systems, ContiPipe™ 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 is built with unique characteristics that allow ContiPipe<sup>™</sup> 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.

#### **ContiPipe™**



#### **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.

#### ContiPipe™

Sizes*								
Diameter		Belt Width		Туре				
in.	mm	in.	mm	Fabric	Steel			
5.9	150	23.6	600	•				
7.9	200	30.7	780	•				
9.8	250	39.4	1000	•				
11.8	300	43.3	1100	•	•			
13.8	350	51.2	1300	•	•			
15.7	400	63.0	1600	•	•			
19.7	500	74.8	1900		•			
23.6	600	88.6	2250	•				

\*Contact us for additional sizes.





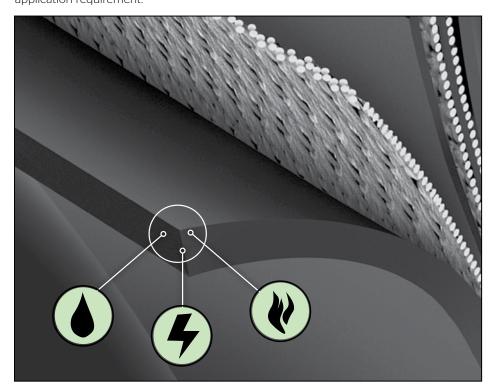


Call Toll Free: 1-866-711-4673 International:+1-727-342-5086

# Protecting your investment with ContiTech cover compounds.

ContiTech 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.

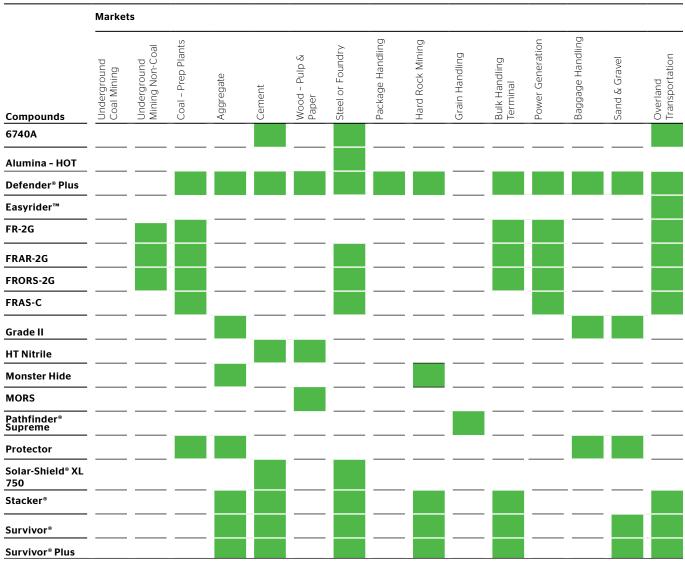






# **Applications**

Cover Compounds





-866-711-4673 We Ship
-727-342-5086 World Wide

# Standard Compounds

**6740A:** Compounded for excellent heat and abrasion resistance in temperature ranges of 350°F (177°C) for lumpy material and up to 250°F (121°C) for hot baking loads.

**Alumina - HOT:** Specifically designed compound intended for usage at alumina facilities where alumina material temperatures range up to 400°F.

Defender® Plus: An ARPM Grade I rubber compound designed to provide excellent abrasion resistance, very good gouge resistance and excellent flexing life.

**Easyrider®:** A low rolling resistance family of compounds for the pulley cover side only which is designed to reduce the energy cost by minimizing indention energy loss to idlers. Proven with over 600 miles of belt in operation, the LRR Easyrider™ compound can provide up to 20% reduction in energy consumption compared to standard compounds and the SLRR Easyrider™ compound can provide up to 32% reduction in energy consumption.

FR-2G: Designed especially for aboveground prep plants, power plants and non-coal underground mining applications and meets industry where oily grains and controlled mineral or vegetable ASTM D378-13.2 (old MSHA CFR 30 part 18) flame test standard. oil dust suppressive sprays come in contact with the belt.

FRAR-2G: Designed for non-coal underground mining and surface applications that meet ASTM D378-13.2 (old MSHA CFR 30 part 18) flame test standard and offers approximately 70% more abrasion resistance than FR-2G.

FRORS-2G: Moderate resistance to oil and static conductive, this compound is designed for oily coal or coke material. FRORS-2G meets ASTM D378-13.2 (old MSHA CFR 30 part 18) flame test standard.

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 approximately 40% better abrasion resistance than FRAS-C compound.

**GRADE II:** An ARPM Grade II rubber compound designed to provide good abrasion and gouge resistance and very good flex life.

GLOBAL X®: Meets ARPM Grade I and DIN X standards. Offers superior cut and gouge resistance and very good abrasion resistance.

**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 (149°C), abrasion flexing, oxidation and the effect of corrosive atmospheres.

MonsterHide: MonsterHide is an ARPM Grade II compound providing the ultimate in cut and gouge protection. The compound is designed to absorb impacts from large sharp rock.

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

**Pathfinder® Arctic:** 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 (-40°C).

Pathfinder® Supreme: Designed especially for the grain

**Protector:** A Grade II compound for applications requiring good abrasion and gouge resistance and very good flex life.

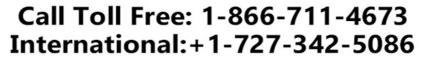
Solar-Shield® XL 750: An exceptional hot material compound with superior heat resistance against hardening and cracking. It is designed to carry hot loads at intermittent temperatures up to 750°F (399°C) and retain its superior heat resistant qualities.

Stacker®: Premium ARPM Grade I Rubber Compound, designed for excellent resistance to cutting, gouging and abrasion.

Survivor®: Superior abrasion resistance. Ideal for high speed, small diameter crushed stone, trap rock, ore, copper, taconite and other abrasive applications.

**Survivor® Plus:** The ultimate in abrasion resistance, offering up to 40% more abrasion resistance than Survivor.® Ideal for high speed, abrasive material applications.







#### **Abrasion Compounds**

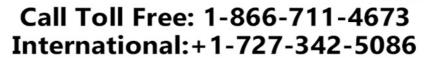
Compound	International Standards	Abrasion Resistance	Low Temperature	High Temperature (Lumpy Material)	Cut & Gouge Resistance	Oil Resistance	Flame Resistance	ISO 284 Static Conductive	ASTM D2240A Shore A Hardness
Abrasion									
Survivor® Plus	ARPM Grade I, DIN Z, AS Grade A, N & E	Ultimate	-55°F (-48°C)	150°F (66°C)	Good	No	No	Yes	55-65
Survivor®	ARPM Grade I, DIN Z, AS Grade A, N & E	Superior	-55°F (-48°C)	150°F (66°C)	Very Good	No	No	Yes	54-64
Stacker®	ARPM Grade I, DIN W & Z, AS Grade N & E	Excellent	-55°F (-48°C)	150°F (66°C)	Excellent	No	No	Yes	55-65
Defender® Plus	ARPM Grade I, DIN Z, AS Grade N & E	Excellent	-40°F (-40°C)	212°F (100°C)	Very Good	No	No	Yes	55-65
Protector	ARPM Grade II, AS Grade E	Good	-30°F (-34°C)	150°F (66°C)	Good	No	No	Yes	55-65
Grade II	ARPM Grade II	Good	-30°F (-34°C)	150°F (66°C)	Good	No	No	Yes	55-70
Abrasion & Fla	me Resistance								
FRAR-2G	ARPM Grade II, DIN Z, AS Grade E	Excellent	-40°F (-40°C)	150°F (66°C)	Good	No	ASTMD378 - 13.2	Yes	53-63
FR-2G	ARPM Grade II, DIN Z, AS Grade E	Good	-40°F (-40°C)	212°F (100°C)	Good	No	ASTMD378 - 13.2	Yes	52-62
FRAS-SA	ARPM Grade II, DIN Z, AS Grade E, CSA-C	Good	-40°F (-40°C)	160°F (71°C)	Fair	No	CSA-C	Yes	55-65
FRAS-C	ARPM Grade II, AS Grade E, CSA-C	Fair	-40°F (-40°C)	160°F (71°C)	Fair	No	CSA-C	Yes	55-65
Abrasion & Oil	Resistance								
HT Nitrile	ARPM Grade II, DIN Z, AS Grade N	Good	-15°F (-26°C)	300°F (149°C)	Fair	Superior	No	No	56-66
LTORS	-	Excellent	-40°F (-40°C)	120°F (49°C)	Good	Very Good	No	Yes	55-65



Call Toll Free: 1-866-711-4673
International: +1-727-342-5086
We Ship
World Wide

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
Cut & Gouge Co	mpounds								
Monster Hide	RMA Grade II, DIN Z, AS Grade E	Very Good	-40°F (-40°C)	150°F (66°C)	Ultimate	No	No	Yes	67-77
Global X®	RMA Grade I, DIN X, Y & Z, AS Grade M, N & E	Very Good	-55°F (-48°C)	150°F (66°C)	Superior	No	No	Yes	56-66
Stacker®	RMA Grade I, DIN W & Z, AS Grade N & E	Excellent	-55°F (-48°C)	150°F (66°C)	Excellent	No	No	Yes	55-65
Defender® Plus	ARPM Grade I, DIN Z, AS Grade N & E	Excellent	-40°F (-40°C)	212°F (100°C)	Very Good	No	No	Yes	55-65
Heat Compoun	ıds								
Solar-Shield® XL750	RMA Grade II, AS Grade E	Good	-40°F (-40°C)	750°F (399°C)	Fair	No	No	Yes	68-78
Alumina-HOT	RMA Grade II, AS Grade E	Good	-40°F (-40°C)	400°F (204°C)	Fair	No	No	Yes	68-78
Style 6740A	RMA Grade II, DIN Z, AS Grade N & E	Very Good	-40°F (-40°C)	350°F (177°C)	Very Good	No	No	Yes	52-62
Defender® Plus	ARPM Grade I, DIN Z, AS Grade N & E	Excellent	-40°F (-40°C)	212°F (100°C)	Very Good	No	No	Yes	55-65
Oil Compounds	<u> </u>								
HT Nitrile	ARPM Grade II, DIN Z, AS Grade N	Good	-15°F (-26°C)	300°F (149°C)	Fair	Superior	No	No	56-66
Pathfinder® Supreme	-	Fair	-30°F (-34°C)	150°F (66°C)	Fair	Very Good	AST- MD378-13.2	Yes	55-65
Pathfinder® Arctic	-	Fair	-40°F (-40°C)	150°F (66°C)	Fair	Very Good	AST- MD378-13.2	Yes	55-65
MORS - Wood Sawyer® Plus	-	Fair	-20°F (-29°C)	150°F (66°C)	Good	Good	No	Yes	57-67
LTORS	_	Excellent	-40°F (-40°C)	120°F (49°C)	Good	Very Good	No	Yes	55-65







#### **Cover 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
Flame-Resista	ant Compounds								
FRAR-2G	ARPM Grade II, DIN Z, AS Grade E	Excellent	-40°F (-40°C)	150°F (66°C)	Good	No	ASTMD378 - 13.2	Yes	53-63
FR-2G	ARPM Grade II, DIN Z, AS Grade E	Good	-40°F (-40°C)	212°F (100°C)	Good	No	AST- MD378-13.2	Yes	
FRORS-2G	ARPM Grade II, DIN Z, AS Grade E	Good	-40°F (-40°C)	212°F (100°C)	Good	No	AST- MD378-13.2	Yes	52-62
FRAS-SA	ARPM Grade II, DIN Z, AS Grade E, CSA-C	Good	-40°F (-40°C)	160°F (71°C)	Fair	No	CSA-C	Yes	55-65
FRAS-C	ARPM Grade II, AS Grade E, CSA-C	Fair	-40°F (-40°C)	160°F (71°C)	Fair	No	CSA-C	Yes	55-65
Pathfinder® Supreme	-	Fair	-30°F (-34°C)	150°F (66°C)	Fair	Very Good	AST- MD378-13.2	Yes	55-65
Heat & Oil Co	mpounds								
HT Nitrile	ARPM Grade II, DIN Z, AS Grade N	Good	-15°F (-26°C)	300°F (149°C)	Fair	Superior	No	No	56-66

#### Additional Flexsteel® Only 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
Abrasion Comp	oounds								
Style BII	ARPM Grade II, AS Grade E	Excellent	-30°F (-34°C)	150°F (66°C)	Very Good	No	No	Yes	56-66
Specialty Com	pounds								
Defender® Plus	ARPM Grade I, DIN Z, AS Grade N & E	Excellent	-40°F (-40°C)	212°F (100°C)	Very Good	No	No	Yes	55-65
Oil Compounds	S								
Р	None	Excellent	-67°F (-55°C)	120°F (49°C)	Excellent	Excellent	No	Yes	55-65







Call Toll Free: 1-866-711-4673 International:+1-727-342-5086

# **Customer Satisfaction**

# Service Capabilities

# **Pre-Sale**

Evaluate current situation "Listen to Customer"

### Perform system or plant survey

- > Use Conveyor Belt Analysis Form (See page 66).
- > Use our Advanced Service Tools (See pages 63-64).

### Analyze system for optimum performance

- > Conduct Minuteman® Computer Analysis.
- > Use "B.E.L.T. F.I.T.S" criteria (See page 64).

### Help customers understand product benefits

- > Utilize Heavyweight Catalog.
- > Demonstrate "lower cost-per-ton."

Present customer with ContiTech belt & splice recommendations

- > Provide Minuteman® results.
- > Quote each specification.



Call Toll Free: 1-866-711-4673 International:+1-727-342-5086

# **Post-Sale**

Assist customer with Installation Checklist > Utilize Installation Checklist.

### Perform system or plant survey follow-up

- > Perform check-up using Conveyor Belt Analysis Form (See page 66).
- > Use Survey Kit.

# Provide customer training

> Follow up with Maintenance and Installation Video and Catalog (Contact your Sales Representative).

### Provide customer with belt life analysis

- > Perform cover measurement with Ultrasonic Gauge on key systems (See pages 63 and 66).
- > Project cover wear rates and cost-per-ton to date.

ContiTech 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

# Provide documented system and total belt savings

- > Present cost-per-ton.
- > Record and present system savings.
- Make recommendations.





# **Advanced Service Tools**

ContiTech is 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.



### We meet your needs

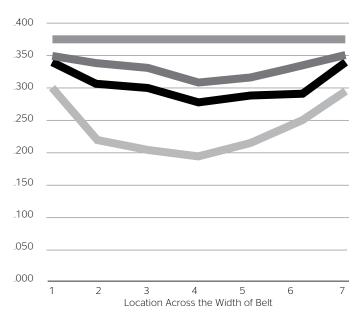
Our sales and engineering team can assist with custom belt design, critical belt surveys, troubleshooting and splice installation supervision. Our engineers draw on the capabilities of our Worldwide Technical Center which houses leading edge technologies and equipment. They also utilize the most experienced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

### High-tech Ultrasonic Gauge available



To increase productivity and predict belt cover life, technical managers and distributors utilize a high-tech Ultrasonic Gauge. It is the perfect planning tool for cover wear management, belt life, determining budget parameters and scheduling downtime.

#### **Survivor® Cover Wear Analysis**



Projected total life = 8 months Projected total tonnage = 6,000,000 tons Past history life = 4 months (Premarc)

8/1/13 Original Thickness

10/1/13 10/22/13

12/14/13

To locate your Distributor, visit www.contitech.us.





#### Minuteman®



Minuteman® is the automated belt selection and design system utilized by technical managers and distributors. Typically used with systems under 5,000 ft. (1524m) 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 a Distributor.



# **Belt Selection**

Your application may be in the cement industry, power generation or package handling. There is a ContiTech 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® XL 750 with fiberglass reinforcement for extreme hot material applications. The following forms can help determine what's right for your application.

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

Make sure your "Belt Fits!"

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





# Minuteman® Belt Analysis Sheet

Customer Information		Material Infor	mation		
Name/Location:		Name of the Material:			
Address:		Max Material Size:		i	n.
City:		Max Drop Height:			ft.
State:Zip:		Max Material Temp: _			Ϋ́F
Contact:		Min Ambient Temp: _			,Ł
Email:		Is any oil present?:	Yes N	o 🗌	
General Information		Pulleys	Head	Tail	
Conveyor Description #:		Pulley Diameter:			
Inputs		Pulley Diameter:	Drive	Take-Up	
Belt Width:	in.				
Belt Speed:	fpm	Transition	Head	Tail	
Tons per Peak Hour:	stph	Length:			
Material Density:	lb./cu. ft.	Take-Up			
Angle of Idlers:	deg	Take-Up Tension:		T2 T2 T2	
Carrying Idler Spacing:	ft.	Counter Weight:		Ψ	
Drive Wrap Angle:	deg	Type of Splice: Vulca		Mechanical	
Stations/Flight Information Please draw diagram					
Information Needed: Stations Drives Take-Up Length C-C Distance					







# **Conveyor Belt Analysis**

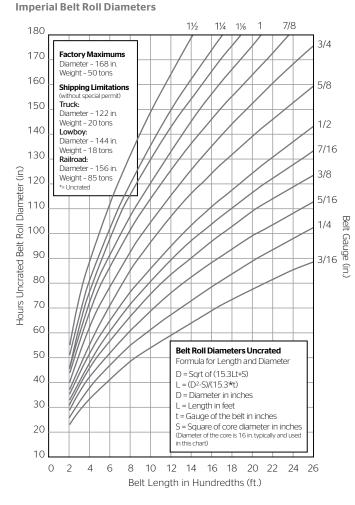
Master Form. Photocopy for use.

Customer:	Date:			
Mine/Plant/Quarry:	Location:			
Key Personnel:	Conveyor Description:			
Data Required	Take-Up Data (continued)			
Belt Width: ir	n. Comments (Include previous belt history):			
Center-to-Center Distance: f	t			
Horizontal Length:f	t			
Vertical Lift: f	t.			
Angle of incline: deg				
Belt Speed: fpn				
Material:	_			
Material Density:lb./cu.f	t. Pulley Diameters			
Maximum Lump Size:in.				
Refuse (% and Type):	_ Tail: in.			
Tons Per Hour (Max.):tpl	n Drive: in.			
Hours In Service Per Day: hr:				
Days In Service day				
Operating Temperature Range: °I	Bend: in.			
Transition Lengths	Loading			
Head: ir	ı. Location:			
Tail: ir	n. # of Loading Pts.:			
Other: ir				
	In Line/Angle to Feed Belt: deg			
Vertical Curves*	Belt Inclination at Feed Pt.: deg			
Curve Radius:	_ Vertical Drop:			
Angle into Curve:	Chute Angle to Horizontal:			
Angle out of Curve:	Chute Bottom to Belt Distance: ft.			
Length of Curve:	Skirtboard Length:ft.			
Idler Spacing on Curve:	=			
*Note each curve individually.	Idlers			
	Carrying Side Angle: deg			
Drive Data	CEMA Type:			
# of Drives:				
# of Motors per Drive:	Carrying Side Spacing: ft.			
HP per Motor:				
Acceleration Time:	Return Side Angle: deg			
Drive Pulley(s): Lagged Yes/No	_ Return Side Spacing: ft.			
Location:	Steel/Rubber:			
Brake (Yes/No): Time Sec	dler Manufacturer:			
Take-Up Data	Splices			
Location:				
Hydraulic:	_ Mech (Type & Size):			
Rod Diameter: ir	n. PIN:			
Cylinder Diameter: ir	n.			
Rope Ratio:	-			
Take-Up Pressure: lb	).			
Gravity: Weight lk				
Travel	t.			

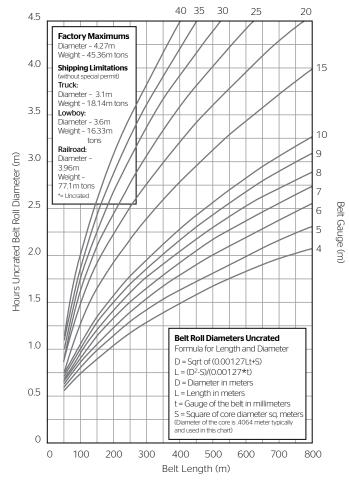




# **Belt Roll Diameters**



#### **Metric Belt Roll Diameters**







# Terms and Conditions of Sale

### 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.veyance.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.





# Investing in Research and in You

Every day, the ongoing commitment to research by conveyor belt manufacturer ContiTech pays off for our customers. It is demonstrated in part by a \$5 million plus investment in our state-of-the-art worldwide research and development facilities.



#### Innovation Center in Fairlawn, 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:



### **Dynamic Splice Tester**

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

Our dynamic splice tester is one of two machines in the world capable of proving splice efficiencies 50% or greater on belt tensions over ST10000.

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 DIN 53516 non-rotating head test. This testing allows us to develop compounds like Survivor, Stacker, Survivor Plus and Defender Plus – all with superior wear resistance for longer belt life.

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







### 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 Dual-Layer Twill fabric used in Fortress XP.™ 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.





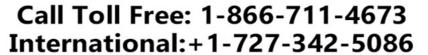
Notes	





Notes	
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_
	_







Notes





# ContiTech

Contact
ContiTech AG
NAFTA Headquarters
703 S. Cleveland Massillon Road
Fairlawn, OH 44333-3023 U.S.A.
1-800-235-8872

#### Canada

1-800-263-7788 FAX 1-888-464-4397

#### Mexico

1-800-439-7373 FAX 1-800-062-0918

#### Germany

+49 (0)511 938 02 mailservice@contitech.de

#### www.contitech.us



#### ContiTech. Engineering Next Level

As a division of the Continental Group, ContiTech is a recognized innovation and technology leader in natural rubber and plastics. As an industry partner with a firm future ahead of us, we engineer solutions both with and for our customers around the world. Our bespoke solutions are specially tailored to meet the needs of the market. With extensive expertise in materials and processes, we are able to develop cutting-edge technologies while ensuring we make responsible use of resources. We are quick to respond to important technological trends, such as function integration, lightweight engineering and the reduction of complexity, and offer a range of relevant products and services. That way, when you need us, you'll find we're already there.



GOODYEARBELTING.COM

