

CONQUEST®

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DESCRIPTION:

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

Markets

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

Applications

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

Cover Compounds

- Defender™
- Stacker®
- Survivor®

(See pages 74-78 for more specific details.)

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

Tension Range

400 to 800 PIW

GET A LOWER
COST-PER-TON CONVEYED.

GOODYEAR
ENGINEERED PRODUCTS



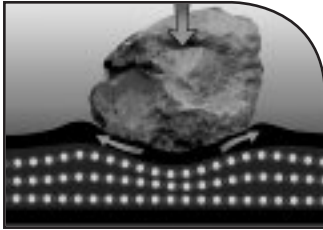
Features & Benefits

Patented polyester/nylon Triple-Warp® weave

The heavy Triple-Warp weave center ply is sandwiched between flexible abuse-resistant outer plies. Conquest belts from Goodyear Engineered Products are strong and provide a better overall value than multi-ply and straight-warp fabric constructions in high abuse applications.

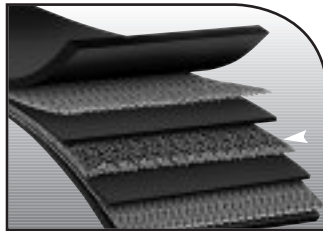
Tested for impact resistance

Loading point impact damage can be a major cause of belt failure. Goodyear EP's design engineers use an enhanced Dynamic Impact Tester to simulate loading impact force and its effects on belting. Conquest provides better impact resistance than plain weave constructions with equivalent PIW rating.



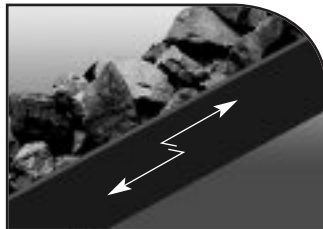
High transverse tear strength

The Triple-Warp fabric design incorporates extremely high transverse tear strength. This minimizes tears that result from material punctures as well as edge tears from misaligned belts.



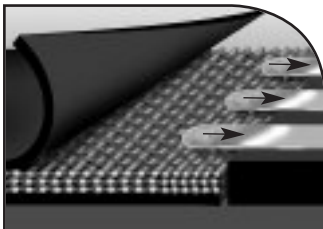
Superior rip resistance

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 belt. The Triple-Warp fabric design helps dislodge and expel foreign objects and contain rips to a small area.



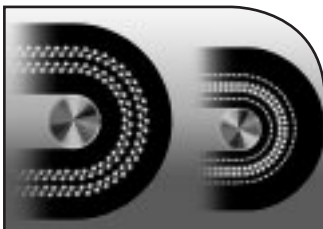
Superior mechanical fastener holding strength

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



Triple-Warp design offers a high degree of flexibility

With its superior flexibility around small pulleys, a Conquest belt saves significant investment dollars compared with the large pulleys required for straight-warp belt systems. This translates into a cost-per-pulley savings of up to 80%.



F E A T U R E S	Conquest	Straight-Warp
Resists fastener pullout	Excellent	Good
Handles severe impact	Excellent	Excellent
Transverse tear resistance	Excellent	Excellent
Rip resistance	Excellent	Excellent
Flexibility around small pulley diameters	Excellent	Poor
Option to utilize various cover gauges	Excellent	Poor
Resists edge fraying or stringing	Excellent	Poor
Minimum cost and time for vulcanized splice	Good	Poor

CONQUEST

CONQUEST CONVEYOR BELT DATA - Imperial

	CONQUEST 400	CONQUEST 600	CONQUEST 800
Plies	1	3	3
Fabric Type	Triple-Warp	Triple-Warp	Triple-Warp
Vulcanized & Fastener Rating (piw)	400	600	800
Impact Index*	1.8	3.7	4.0
Nom. Carcass Gauge (in.)	0.131	0.265	0.313
Nom. Carcass Weight (lbs./sq. ft.)	0.460	1.40	1.70
Approx. 1/32" cover wt. (lbs./sq. ft.)	0.19	0.19	0.19
Avg. Permanent Elongation (%)**	1.2	1.0	0.8
Avg. Elastic Modulus (piw)	30,000	54,800	75,000
Step Length (in.)	Finger Splice	Finger Splice	Finger Splice
Recommended Fasteners	Plate	BR10	BR14
	Hinge	R5	R6
	Hinge	U35	U37/U37A

*Impact index provides a relative impact absorption value on any Goodyear Engineered Products' construction assuming that the material size, material shape, drop height, impact idlers/bed, top cover and pulley cover are the same.

**Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult Goodyear EP's field sales or GAD for elastic & total elongation calculations specific to each system based on Minuteman 2000 calculations.

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

PIW/Plies	Material Weight Trough Idlers	(0-640 kg/cu.m)			(641-1,280 kg/cu.m)			(1,281-1,920 kg/cu.m)			(Over 1,920 kg/cu.m)		
		20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
400/1		54	48	48	54	48	42	48	42	42	42	36	30
600/3		96	84	84	84	72	72	84	72	60	72	60	54
800/3		96	84	84	84	72	72	84	72	60	72	60	54

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

CONQUEST TROUGHABILITY (Minimum Belt Width) (in.)

Idlers	CONQUEST 400/1	CONQUEST 600/3	CONQUEST 800/3
20 degree idlers	18	30	30
35 degree idlers	24	36	36
45 degree idlers	24	42	42

If top cover and pulley cover are balanced, i.e. 3/16" x 3/16" or less than 1/16" differential, i.e. 3/16" x 5/32", add 6" to the minimum belt width.

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

Additional break in time is required when the belt has been stored prior to installation in ambient temperatures of less than 50 degrees Fahrenheit.

CONQUEST MINIMUM PULLEY DIAMETERS (in.)

	CONQUEST 400/1	CONQUEST 600/3	CONQUEST 800/3
Over 80% Tension	20	24	30
60% to 80% Tension	18	20	24
40% to 60% Tension	14	18	20
Up to 40% Tension	12	16	18
Tails and Snubs	12	16	18

CONQUEST CONVEYOR BELT DATA - Metric

	CONQUEST 400	CONQUEST 600	CONQUEST 800
Plies	1	3	3
Fabric Type	Triple-Warp	Triple-Warp	Triple-Warp
Vulcanized & Fastener Rating (kN/m)	70	105	140
Impact Index*	1.8	3.7	4.0
Nom. Carcass Gauge (mm.)	3.3	6.7	8.0
Nom. Carcass Weight (kg/sq.m)	2.2	6.8	8.3
Approx. 1/32" cover wt. (kg/sq. m)	1.2	1.2	1.2
Avg. Permanent Elongation (%)**	1.2	1.0	0.8
Avg. Elastic Modulus (kN/m)	5,255	9,600	13,130
Step Length (mm.)	Finger Splice	Finger Splice	Finger Splice
Recommended Fasteners			
Plate	BR10	BR10	BR14
Hinge	R5	R5-1/2	R6
Hinge	U35	U35	U37/U37A

*Impact index provides a relative impact absorption value on any Goodyear Engineered Products' construction assuming that the material size, material shape, drop height, impact idlers/bed, top cover and pulley cover are the same.

**Average Permanent elongation values at 100% of rated belt tension are based on ISO 9856 test procedure. Consult Goodyear EP's field sales or GAD for elastic & total elongation calculations specific to each system based on Minuteman 2000 calculations.

CONQUEST LOAD SUPPORT (Maximum Belt Width) (mm.)

PIW/Plies	Material Weight Trough Idlers	(0-640 kg/cu.m)			(641-1,280 kg/cu.m)			(1,281-1,920 kg/cu.m)			(Over 1,920 kg/cu.m)		
		20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg	20 deg	35 deg	45 deg
400/1		1380	1230	1230	1380	1230	1230	1230	1080	1085	1080	930	778
600/3		2450	2150	2150	2150	1850	1850	2150	1850	1550	1850	1550	1400
800/3		2450	2150	2150	2150	1850	1850	2150	1850	1550	1850	1550	1400

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

CONQUEST TROUGHABILITY (Minimum Belt Width) (mm.)

Idlers	CONQUEST 400/1	CONQUEST 600/3	CONQUEST 800/3
20 degree idlers	450	750	750
35 degree idlers	600	900	900
45 degree idlers	600	1050	1050

If top cover and pulley cover are balanced, i.e. 4.7 mm. x 4.7 mm. or less than 1.5 mm. differential, i.e. 4.7 mm. x 3.9 mm., add 152 mm. to the minimum belt width. 152 mm. narrower widths are possible if the belt is broken in for an extended period of time fully loaded. Consult Goodyear EP.

Additional break in time is required when the belt has been stored prior to installation in ambient temperatures of less than 10 degrees Centigrade.

CONQUEST MINIMUM PULLEY DIAMETERS (mm.)

	CONQUEST 400/1	CONQUEST 600/3	CONQUEST 800/3
Over 80% Tension	500	600	750
60% to 80% Tension	450	500	600
40% to 60% Tension	350	450	500
Up to 40% Tension	300	400	450
Tails and Snubs	300	400	450