

FENNER **DUNLOP**

CONVEYOR BELTING AMERICAS



A range of
heavyweight rubber
conveyor belts
suitable for a variety of
applications including:

- Aggregate
- Forest Products
- Agriculture
- Grain Handling
- Coal Mining
- Coal Prep Plants
- Power Generation
- Steel and Foundry
- Splicing
- Hard Rock Mining



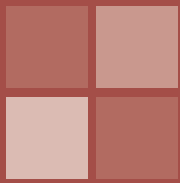


TABLE OF CONTENTS

2	ABOUT FENNER DUNLOP
4	PRODUCT PREVIEW
5	COMPOUNDS
11	USFLEX
14	ROYALON
18	HARVESTFLEX
21	HARVESTLINE
22	SECURITY
24	HOTSHOT
26	SPLICE PROGRAM
28	SUPPORT
30	TRANSITIONS
32	ROLL DIAMETERS



FENNER



DUNLOP

Fenner Dunlop... A World Class Organization

Fenner Dunlop Americas, the world's fastest growing manufacturer of conveyor belting, is assisting businesses like yours stay ahead of its competitors by offering the most complete conveyor belt product range in the market.

Recognized as a world leader in belt manufacturing, **Fenner Dunlop** has responded to increased demand for its products by expanding its production capacity, utilizing state-of-the-art equipment, including one of the largest and the longest rubber belt presses in the world!

Additionally, **Fenner Dunlop** employs advanced weaving techniques for its fabrics. A "one-of-a-kind" fabric treatment process is used to unite the carcass, skims and the covers into a composite of high integrity to meet the specific needs of every installation.

With five manufacturing facilities located in Charlotte, North Carolina; Port Clinton, Ohio;

Toledo, Ohio; Atlanta, Georgia; and Bracebridge, Ontario, Canada, **Fenner Dunlop** delivers the highest quality belting to Authorized **Scandura** Branded Distributors and major belt users throughout North and South America.

Every **Fenner Dunlop** customer can have complete confidence in **Scandura** Branded Products, and in the services provided from on-site technical support to new product development.

About Fenner Dunlop Distribution

Fenner Dunlop has one of the largest Distribution networks in the industry, dedicated to exceeding the needs of the end-user. The **Fenner Dunlop** Distribution Network is strategically located throughout North America. Each is technically qualified to recommend and to furnish the proper belt to satisfy the most demanding belt requirements.



FENNER  DUNLOP
CONVEYOR BELTING AMERICAS



GLOBAL LEADERSHIP

With nine manufacturing facilities on five continents, and almost 150 years of experience, no other company brings as much expertise to your conveyor application needs.

Beginning with the production of the first leather belts and progressing to the world's latest technology in textile and steel reinforcements, **Fenner Dunlop** has participated in the complete history of conveyor belting.

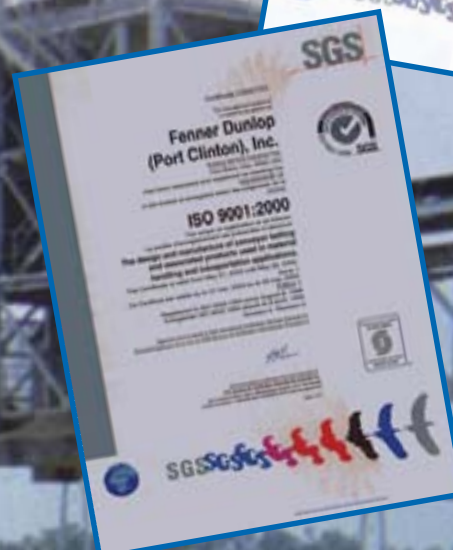
WORLD CLASS QUALITY

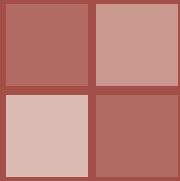
Fenner Dunlop's Scandura Brand is unrivaled in its reputation for providing products and services that exceed our customers' expectations. **Fenner Dunlop** believes that quality goes well beyond the scope of manufacturing. It begins with the ability to understand customers' needs and to translate those needs into expectations to transform materials into products that provide the greatest value to conveyor belt users. **Fenner Dunlop** recognizes that quality is a personal responsibility.

Fenner Dunlop's North American manufacturing facilities are all ISO 9001:2000 certified utilizing a universal quality policy throughout all the facilities.

COMMITMENT

Conveyor Belting is our core business. Our commitment is confirmed as **Fenner Dunlop** continues to return profits into the business as an investment in manufacturing equipment, laboratory and testing facilities, and the development of our human resources. No other manufacturer can demonstrate this level of financial commitment to its markets.





USFLEX[®]

The unique straight-warp carcass of UsFlex[®] is engineered to provide outstanding rip, tear and impact resistance. Made to be flexible and lighter weight, UsFlex[®] offers excellent load support, troughability and tracking. High strength and very low stretch makes UsFlex[®] a clear choice for the roughest applications.

ROYALON[®]

Royalon[®] is Scandura's premier heavy duty plied conveyor belt product line. Royalon[®] is constructed with tough synthetic fabric plies vulcanized together with premium rubber skims, creating superior adhesions to form a high performance carcass. Armoring this carcass with the correct cover compound guarantees maximum maintenance-free belt life.

SECURITY[®]

Scandura's Security[®] belting is an economical, high-strength reduced-ply rubber belt used in general service applications such as coal, sand & gravel, and aggregates. Security[®] is engineered to be the economical solution for our customers.

UTILITY BELT

Scandura's Utility Belt product is a proven performer in the agricultural industry. Widely used as a "Potato Belt", it is available in standard Grade II cover compounds and a variety of cover gauges. Utility belt is versatile, economical, and available.

POWERGUARD[®]

PowerGuard[®] is designed and constructed to combat the harshest above ground coal handling environments in power generation and coal preparation plants, where leaching agents and dust suppressants can be major influences on belt deterioration. Scandura now offers two new compounds, Guardian and G2, specifically formulated to address these problems.

HARVESTFLEX[®]

HarvestFlex[®] is the most durable heavy duty rubber belt available in the agricultural industry today. Used as a conveyor belt or elevator belt in the grain, feed, milling and other agricultural applications, HarvestFlex[®] uses Scandura's premier Flex-style construction to provide maximum durability.

HARVESTLINE[®]

Harvestline[®] has enjoyed being the first choice of grain elevator superintendents for the last 30 years. Harvestline[®] utilizes a traditional ply construction widely used throughout the grain industry. Compared to other traditional ply products, Harvestline[®] offers superior load support, low elongation, and excellent bolt retention.

HOT SHOT[®]

Designed for extreme heat applications, HotShot[®] is manufactured by uniting a glass fiber carcass with Scandura's Super Sahara[®] cover compound. The result is a superior belt built for handling cement clinker, calcined lime, foundries and other heat applications where burn-through and spiking temperatures are a concern.

Operating Conditions Demand The Correct Cover Compound

Scandura covers are designed for specific applications to ensure greater belt life, which equates to cost savings for the customer. Each cover compound is derived and engineered from natural and/or synthetic rubber polymers.

Whether the primary operational concern is abrasion, heat, oil or sub-zero temperatures, **Scandura** has a wide range of cover compounds designed specifically to meet the most demanding operating requirements.

General Service Covers

Matchless® (RMA Grade I)

- Superior endurance against combined cutting, gouging and heavy impact.
- Recommended for transporting large, heavy lump ores, rocky earths, granite trap rock and quartz.
- Unequaled in conveying heavy logs from the debarker.
- Good abrasion resistance.
- Superb for glass cullet handling and other types of sharp, abrasive material.

Matchless® Plus (RMA Grade I)

- Provides enhanced features to Matchless® with increased cut and gouge characteristics.
- Compound for the most severe cut, gouge and impact applications.
- Compliant with DIN Standard "X"

Giant® Gold (RMA Grade I)

- Superior endurance against heavy, continuous abrasion
- Good resistance to cutting and gouging
- Cost effective upgrade from Grade II products

Giant® (RMA Grade II)

- Excellent where heavy, continuous abrasion is the primary concern.
- Good resistance to cutting and gouging.
- Recommended for most above-ground abrasive material handling applications, such as crushed ores and rock, slag limestone, potash, trona, salt, sand aggregates and other abrasives.

Giant® SAR

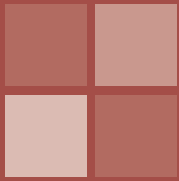
(Super Abrasion Resistant)

- Provides increased service life without increasing cover thickness.
- Exhibits excellent abrasion resistant characteristics.
- Compliant with DIN Standard "Y"

G2 (RMA Grade II)

- High quality grade II compound specifically designed to counter the negative effects of leaching agents as well as dust suppressants.
- Recommended for Power Generation Facilities and Coal Prep Plants





Oil Resistant Covers

ORP (Oil Resistance Plus)

- Superior resistance to materials containing high concentrations of animal fats and oils.
- Recommended for use involving heavy exposure to aromatic hydrocarbons such as petroleum based oily coke, benzol and toluene.

ORN (Oil Resistant Neoprene)

- Excellent resistance to abrasion and deteriorating effects of heavy concentrations of crude oils, lubricating oils and greases.
- Recommended for conveying lightly oily covered coke, abrasive granules and dry sulfur.

MOG (Moderate Oil Resistance – Grade II)

- Resistant to the deteriorating effects of moderately oily materials and terpenes.
- Superior abrasion resistance to MOR

MOR (Moderate Oil Resistance)

- Recommended for specialized service such as waste disposal, sewage, sludge and lightly oil treated materials.
- Resistant to the deteriorating effects of moderately oily materials and terpenes.

ORWP (Oil Resistant Wood Products)

- Premium moderately oil resistant compound for the Forest Products Industry.
- Resists deteriorating effects of terpenes. Ideal for lumber and wood chip handling.

FORP- Ultimate (Flame & Oil Resistance Plus)

- Provides maximum oil resistance to the destructive effects of grain oils and oil based dust suppressant additives. Temperature range **0° to 200° F (-20° to 95° C)**.
- Surpasses U.S. Occupational Safety and Health Administration specifications for static conductivity. Cover is also flame retardant per MSHA Title 30, Section 18.65 requirements.

FFOR (Flame, Freeze, & Oil Resistance)

- Moderate oil resistant covers for grain handling.
- Compounded for colder operating climates. Temperature range **-40° to 200° F (-40° to 95° C)**.
- Surpasses U.S. Occupational Safety and Health Administration specifications for static conductivity. FFOR Cover compound is also flame retardant per MSHA Title 30, Section 18.65 requirements.



High Temperature Covers

Super Sahara™

- Temperature resistant to **400° F (205° C)** for abrasive coarse lumps (2 inches +/- 50mm +) and **350° F (175° C)** for abrasive fines.
- Recommended wherever a premium high temperature belt is required. Provides maximum service life on enclosed systems with high environmental temperatures.

Sahara™

- Temperature resistant to **300° F (150° C)** for abrasive coarse lumps (2 inches +/- 50mm +) and **250° F (120° C)** for abrasive fines.

Sahara™ SAR (Super Abrasion Resistant)

- Provides superior abrasion resistance in elevated operating temperature environments.
- Temperature resistant to **300° F (150° C)** for abrasive coarse lumps (2 inches +/- 50mm +) and **250° F (120° C)** for abrasive fines.

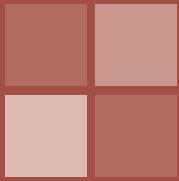
Super SHOR (Super Sahara™ Heat & Oil Resistant)

- Excellent resistance to oil and heat up to **400° F (205° C)** for coarse lumps (2 inches +/- 50mm +) and **350° F (175° C)** for abrasive fines.
- Recommended for conveying hot mixtures containing diesel oil as well as kerosene, petroleum coke, hot asphalt, paving mixes and carbon pitch.

SHOR (Sahara™ Heat & Oil Resistant)

- Excellent resistance to oil and heat up to **300° F (150° C)** temperatures for coarse lumps (2 inches +/- 50mm +) and **250° F (120° C)** for abrasive fines.
- Recommended for conveying hot mixtures containing diesel oil as well as kerosene, petroleum coke, hot asphalt, paving mixes and carbon pitch.





Flame Resistant Covers

MSHA-F

- Meets U.S. Mine Safety and Health Administration requirements per MSHA Title 30, Section 18.65.

Fire Boss[®]

- Meets MSHA Title 30 and ISO 340 standards.
- Ideal when an increased level of fire resistance is desirable.

Fire Boss Plus[®]

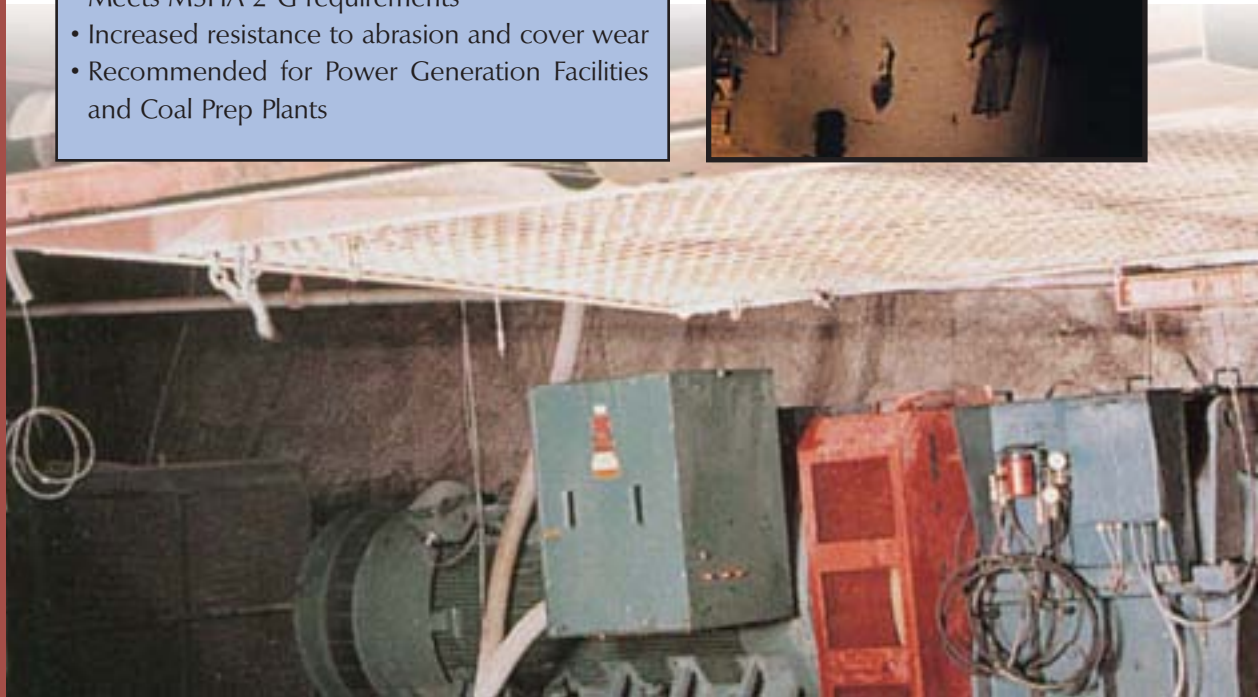
- Grade I compound
- Compliant with ASTM E162 and the Australian standards AS4606 / AS1332 providing a high degree of resistance to fire propagation with Premium abrasion and moderate oil resistance.

MSHA-FAR/FFAR and CSA-FAR/FFAR

- Highly abrasion resistant cover compound for mining and industrial applications where MSHA and CSA specifications are required.
 - **FAR** - For Underground applications
 - **FFAR** - For Surface applications
 - **FSAR** - Premium abrasion resistant underground compound

Guardian

- Specifically designed to counter the negative effects of leaching agents as well as dust suppressants.
- Meets MSHA 2-G requirements
- Increased resistance to abrasion and cover wear
- Recommended for Power Generation Facilities and Coal Prep Plants





Special Requirement Covers

As new mining safety standards are introduced, **Fenner Dunlop's** research and development has designed compounds to meet the proposed safety requirements of the B.E.L.T., Factory Mutual Specifications and ISO 340 for flame retardant conveyor belting.

MSHA - Meets U.S. Mine Safety and Health Administration requirements per MSHA Title 30, Section 18.65.

OSHA - Surpasses U.S. Occupational Safety and Health Administration specifications for static conductivity.

CSA - Meets Canadian Standards Association M422 – M87 current specification for Grade C or B2.

Contact **Fenner Dunlop** for special applications and / or cover compounds.



RECOMMENDED COVER THICKNESS

CLASS OF MATERIAL	MINIMUM TOP COVER		MINIMUM BOTTOM COVER	
	(Inches)	(mm)	(Inches)	(mm)
NON-ABRASIVE MATERIALS - WOOD CHIPS, PULP, GRAIN, LOOSE CEMENT, POTASH ORE, OR VERY FINE COAL	1/16 to 1/8	1.5 to 3.0	1/16	1.5
MILDY ABRASIVE MATERIALS - SHARP SAND, CLINKER, EARTH, BITUMINUS COAL AND ROCK UNDER 3" SIZE.	1/8 to 3/16	3.0 to 4.5	1/16	1.5
ABRASIVE MATERIALS - ANTHRACITE COAL, COKE, SINTER, GRAVEL, OR CRUSHED STONE. OVERBURDEN OR COAL UP TO 10" SIZE. IRON AND COPPER ORES OR LIMESTONE UNDER 6" SIZE	3/16 to 1/4	4.5 to 6.0	3/32	2.0
HEAVY ABRASIVE MATERIALS - IRON, COPPER, ROCK ORES, ZINC, LEAD ORES, OR ROM COAL, LIMESTONE OR SLAG UNDER 9" SIZE.	1/4 to 3/8	6.0 to 9.5	1/8	3.0
HEAVY, SHARP ABRASIVE MATERIALS - TRAP ROCK, QUARTZ, HARD ORES, SLAG, GLASS CULLET. ANY HARD HEAVY SHARP ORE OVER 9" SIZE.	3/8 to 3/4	9.5 to 19	3/16	4.5

DECIMAL EQUIVELANTS FOR COVER THICKNESS

3/64"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	9/32"	5/16"	11/32"	3/8"	13/32"	7/16"	15/32"	1/2"
.047	.062	.094	.125	.156	.188	.219	.250	.281	.312	.344	.375	.406	.438	.469	.500

COVER WEIGHT FACTORS (PIW)	1/32"	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"	9/32"	5/16"	11/32"	3/8"	13/32"	7/16"	15/32"	1/2"
GENERAL PURPOSE	.016	.032	.048	.064	.080	.096	.112	.128	.144	.160	.176	.192	.208	.224	.240	.256
FIRE RESISTANT	.018	.036	.054	.072	.090	.108	.126	.144	.162	.180	.198	.216	.234	.252	.270	.288
OIL RESISTANT	.017	.033	.050	.067	.084	.100	.117	.134	.150	.167	.184	.200	.217	.234	.251	.268
FIRE & OIL RESISTANT	.018	.035	.053	.071	.088	.106	.124	.141	.159	.177	.195	.212	.230	.248	.266	.284
HEAT RESISTANT	.015	.030	.045	.059	.074	.089	.104	.119	.133	.148	.163	.178	.193	.208	.223	.238
HEAT & OIL RESISTANT	.017	.034	.052	.069	.086	.103	.120	.137	.155	.172	.189	.206	.223	.240	.257	.274

RECOMMENDED SERVICE TEMPERATURES	HOT MAXIMUM		COLD - LOW
	LOAD TEMPERATURE		
	FINES OR MIXED	COURSE 2" OR OVER	TEMPERATURE LIMIT
TYPE OF BELT			
MATCHLESS, MATCHLESS PLUS	180°F	200°F	-50°F
GIANT, GIANT GOLD, GIANT SAR, G2,	180°F	200°F	-40°F
MOR, ORP, ORWP, MOG	180°F	200°F	-10°F
ORN, FOR-N, FIRE BOSS PLUS	205°F	225°F	-15°F
FORP ULTIMATE, MSHA-F, FIRE BOSS	180°F	200°F	-0°F
FORP, FF	180°F	200°F	-30°F
FFOR, FAR, FFAR, FSAR, EMR-FF, EMR-FFOR	180°F	200°F	-40°F
SUPER SAHARA, SUPER SHOR	350°F	400°F	-60°F
SUPER SAHARA OR	300°F	350°F	-10°F
SAHARA, SAHARA SAR	250°F	300°F	-40°F
SAHARA OR	250°F	300°F	-10°F
CSA FAR/FFAR	180°F	200°F	-40°F
GUARDIAN	200°F	225°F	-30°F



UsFlex®

Engineered to Provide Superior Rip, Tear and Impact Resistance

The unique straight-warp carcass of **UsFlex®** is engineered to provide high strength and low stretch, excellent load support combined with outstanding troughability. The **UsFlex®** straight warp belt construction provides unrivaled rip, tear and impact resistance.

The combination of our straight-warp **UsFlex®** carcass with specially compounded rubber covers creates the toughest conveyor belt available today.

Straight-warp Construction

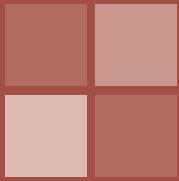
While traditional plied belting utilizes a conventional crimp-weave fabric, in plain or crow's foot patterns, the **UsFlex®** straight-warp carcass construction incorporates a

completely different concept. The lengthwise and crosswise belt strength is concentrated in parallel planes of heavyweight, high-tenacity, straight yarns which are then locked together by a unique binder system. Each of these planes provides the reinforcing effect of multiple plies of conventional fabric, with no crimping to weaken the yarns and cause stretch. The unique **UsFlex®** construction keeps belt stretch or elongation to an absolute minimum.

UsFlex® - Stronger, Tougher

UsFlex® belting has longitudinal rip resistance more than five times that of multiple-ply belts of equivalent rating because the straight-warp construction uses the full strength of the carcass. The carcass binder system acts as a built-in breaker to resist impact and puncture.





Cover Ratio

Balanced cover ratios are extremely important in conveyor belt manufacturing. Conveyor belt cupping, curling and tracking problems are greatly reduced with a well-balanced conveyor belt. **UsFlex®** takes this concept a step further by incorporating a top to bottom cover thickness ratio that will insure correct troughability in the most stringent applications.

The Right Belt for the Job

The exceptional abuse-resistant qualities of **UsFlex®** make it the overwhelming choice for withstanding high-energy impact when compared to multi-ply belts of an equivalent strength and tension rating. The **UsFlex®** carcass has been specifically engineered to sustain the utmost energy absorption possible while assuring longest belt life at lowest operating cost and maximum tons conveyed.

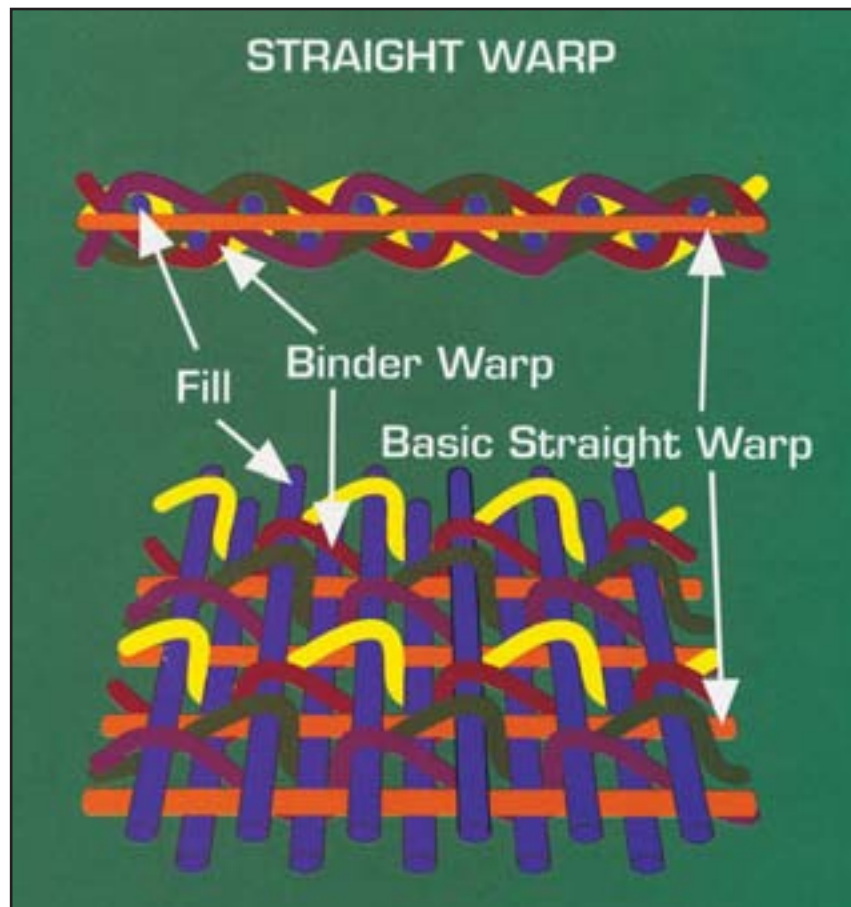
UsFlex® is available in single unit construction with tension ratings to 550 lbs. PIW (96 kN/m) and double unit carcass with tension ratings to 1500 lbs. PIW (262 kN/m).

UsFlex® single unit construction: Available with tension ratings to 550 lbs. PIW (96 kN/m) and should have a 2:1 or 1:1 cover ratio.

Example – 1/16" x 1/16", 1/8" x 1/16", 3/16" x 3/32", 1/4" x 1/8"

UsFlex® double unit construction: Available with tension ratings to 1500 lbs. (262 kN/m) and should have a 3:1 or 1:1 cover ratio.

Example – 3/16" x 1/16", 1/4" x 3/32", 3/8" x 1/8"



USFLEX® SPECIFICATIONS		USFLEX®			USFLEX®			USFLEX®			USFLEX®		
BELT STYLE		UFI-190	UFI-245	UFI-330	UFI-440	UFI-550	UFI-440	UFI-550	UFI-660	UFI-800	UFI-1000	UFI-1250	UFI-1500
NUMBER OF PLYS		1	1	1	1	1	2	2	2	2	2	2	2
TENSION RATINGS ³		190	245	330	440	550	440	550	660	800	1000	1250	1500
APPROX CARCASS GAUGE ⁴ (INCHES)		.075	.107	.139	.151	.169	.210	.234	.269	.301	.321	.380	.390
APPROX CARCASS WEIGHT ⁵ (LBS/IN/FT)		.035	.049	.068	.074	.083	.091	.098	.123	.132	.148	.165	.168
IMPACT RATING ¹ (FT-LBS)		475	630	920	1170	1375	1460	1560	1820	2185	2450	2745	3050
MINIMUM PULLEY DIAMETER													
81% - 100% TENSION		14"	16"	18"	20"	20"	24"	24"	30"	36"	36"	36"	36"
61% - 80% TENSION		12"	14"	16"	18"	18"	20"	20"	24"	24"	30"	30"	30"
UP TO 60% TENSION		10"	12"	14"	16"	16"	18"	18"	20"	20"	24"	24"	24"
MINIMUM BELT WIDTH (INCHES) FOR EMPTY BELT TROUGHING²													
IDLER TYPE	20°	12"	16"	20"	24"	24"	24"	24"	24"	30"	30"	30"	30"
	35°	14"	20"	24"	30"	30"	30"	30"	30"	36"	36"	36"	36"
	45°	16"	24"	30"	36"	36"	36"	36"	36"	42"	42"	42"	42"
MAXIMUM BELT WIDTH (INCHES) FOR LOAD SUPPORT²													
20° IDLERS	0 - 40 # /CU.FT.	48"	60"	72"	84"	84"	84"	84"	84"	84"	84"	84"	84"
	41 - 80 # /CU.FT.	36"	48"	66"	72"	72"	84"	84"	84"	84"	84"	84"	84"
	81 - 120 # /CU.FT.	30"	42"	60"	66"	72"	84"	84"	84"	84"	84"	84"	84"
	OVER 120 # /CU.FT.	24"	36"	48"	60"	66"	72"	72"	72"	84"	84"	84"	84"
35° IDLERS	0 - 40 # /CU.FT.	42"	48"	66"	72"	72"	84"	84"	84"	84"	84"	84"	84"
	41 - 80 # /CU.FT.	30"	36"	54"	60"	66"	72"	72"	84"	84"	84"	84"	84"
	81 - 120 # /CU.FT.	24"	36"	48"	54"	60"	66"	66"	72"	84"	84"	84"	84"
	OVER 120 # /CU.FT.	20"	30"	42"	48"	54"	60"	60"	72"	84"	84"	84"	84"
45° IDLERS	0 - 40 # /CU.FT.	36"	42"	54"	60"	66"	72"	72"	84"	84"	84"	84"	84"
	41 - 80 # /CU.FT.	30"	36"	48"	54"	60"	72"	72"	84"	84"	84"	84"	84"
	81 - 120 # /CU.FT.	24"	30"	42"	48"	54"	60"	60"	72"	84"	84"	84"	84"
	OVER 120 # /CU.FT.	20"	24"	36"	42"	48"	54"	54"	66"	72"	72"	84"	84"
ELEVATOR													
TENSION RATING³													
ELEVATOR SERVICE (GRAIN, WOOD, CHIPS, ETC)		120	195	280	370	440	370	440	550	690	870	1060	1150
ELEVATOR SERVICE (INDUSTRIAL MINING, ETC)		100	175	250	330	400	330	400	480	620	775	940	1050
MINIMUM PULLEY	81% - 100% TENSION	14"	16"	18"	20"	20"	24"	24"	30"	36"	36"	36"	36"
	61% - 80% TENSION	12"	14"	16"	18"	18"	20"	20"	24"	24"	30"	30"	30"
	UP TO 60% TENSION	10"	12"	14"	16"	16"	18"	18"	20"	20"	24"	24"	24"
MAX BUCKET PROJECTION	CENTRIFUGAL	7"	8"	10"	10"	10"	12"	12"	14"	15"	16"	17"	18"
	CONTINUOUS	NR	7"	9"	10"	12"	12"	13"	15"	16"	18"	20"	22"

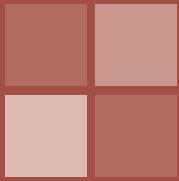
1 Maximum impact is based on 10% lumps, with 90% fines (or sized material, up to 4" lumps), plus the use of the appropriate rubber idlers and good design of the loading and transfer conditions. If these conditions are not met, fully, down-rate the impact to one-half (or less) that shown in the table.

2 Troughability and Load Support Tables can be influenced by certain cover gauge and compound combinations used.

3 Tension ratings reflect a minimum 10:1 per ply safety factor. With appropriate selection & installation, a minimum 4:1 safety factor can be applied with mechanical fasteners.

4 Add gauge of both covers to carcass gauge to obtain the overall gauge.

5 Add carcass weight to appropriate cover weight to obtain the total belt weight (in pounds per inch of width per linear foot of length).



ROYALON

Royalon® High Performance Belting

Royalon® is Scandura's premier heavy duty plied conveyor belt product line. Royalon® is constructed with tough synthetic fabric plies vulcanized together with premium rubber skims, creating superior adhesions to form a high performance carcass. Armoring this carcass with the correct cover compound guarantees maximum maintenance-free belt life.

The Right Belt For The Job

Whether conveying coal, aggregate, sand, grain, wood products or mineral ore, Royalon® can be manufactured to suit a specific application by utilizing one of two versatile fabric designs:

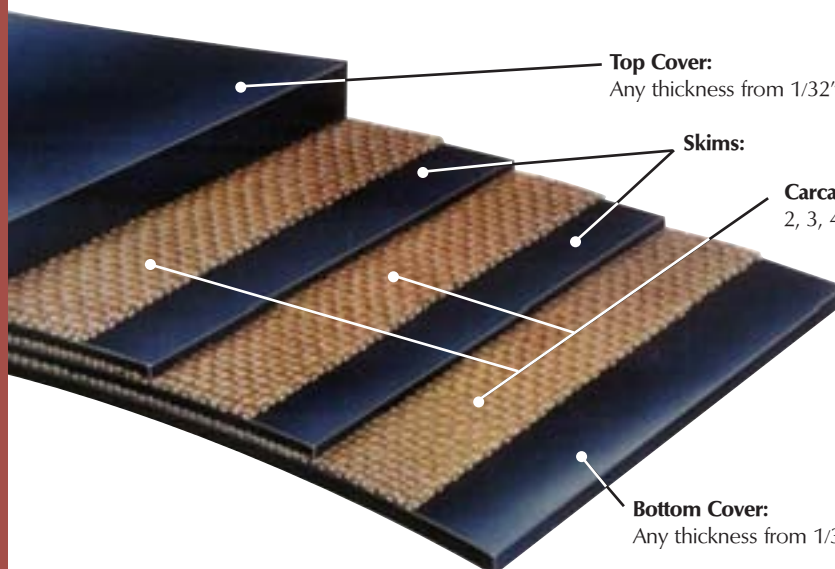
1. Polyester Warp With Nylon Filling

This design offers the advantages of low stretch, high strength polyester as the warp member combined with the excellent fastener retention, impact resistance, and troughability characteristics of the nylon fill members.

2. Nylon Warp With Nylon Filling

This design delivers maximum resistance to impact and damage from material trapped between the belt and the pulley. Excellent fastener retention, troughability and flexibility around small pulleys are also provided by the nylon carcass.

The Royalon® carcass offers unsurpassed resistance to abrasion, cutting, gouging and tearing. These properties along with low stretch, excellent load support, and increased fastener retention, will offer longer service life than most other plied belts.



Top Cover:

Any thickness from 1/32" to 1" (1mm to 25mm)

Skims:

Carcass:

2, 3, 4, 5, or 6 plies

Bottom Cover:

Any thickness from 1/32" to 1/2" (1mm to 25mm)

Belt Stretch And Elongation

The standard fabric construction for **Royalon®** is polyester/nylon. Polyester warp yarns yield lower stretch or elongation. **Royalon®** is the better alternative than conveyor belts constructed with nylon warp yarns when stretch needs to be controlled and kept to a nominal amount. **Royalon®** reduces down time and costs by eliminating extra splices having to be installed due to stretch.

Royalon®

ROYALON® SPECIFICATIONS		ROYALON® 80		ROYALON® 110			
BELT STYLE		2-160	2-220	3-330	4-440	5-550	
NUMBER OF PLYS		2	2	3	4	5	
TENSION RATING ³ (PIW)		160	220	330	440	550	
APPROX CARCASS GAUGE ⁴ - INCHES		.090	.120	.182	.222	.286	
APPROX CARCASS WEIGHT ⁵ (LBS/IN/FT)		.043	.059	.094	.116	.144	
IMPACT RATING ¹ (FT/LBS)		335	475	665	875	1100	
MINIMUM PULLEY DIAMETER							
81% - 100% TENSION		14"	16"	20"	28"	30"	
61% - 80% TENSION		12"	14"	18"	22"	24"	
UP TO 60% TENSION		10"	12"	16"	20"	22"	
MINIMUM BELT WIDTH (INCHES) FOR EMPTY BELT TROUGHING²							
IDLER TYPE		20°	14"	16"	20"	24"	30"
		35°	18"	20"	24"	30"	30"
		45°	NR	24"	30"	36"	36"
MAXIMUM BELT WIDTH (INCHES) FOR LOAD SUPPORT²							
20° IDLERS		0 - 40 # /CU.FT.	36"	48"	60"	72"	72"
		41 - 80 # /CU.FT.	30"	42"	54"	66"	72"
		81 - 120 # /CU.FT.	30"	36"	48"	60"	66"
		OVER 120 # /CU.FT.	NR	30"	42"	54"	60"
35° IDLERS		0 - 40 # /CU.FT.	36"	42"	54"	72"	72"
		41 - 80 # /CU.FT.	24"	36"	48"	60"	72"
		81 - 120 # /CU.FT.	24"	30"	42"	54"	60"
		OVER 120 # /CU.FT.	NR	24"	36"	48"	54"
45° IDLERS		0 - 40 # /CU.FT.	30"	42"	48"	60"	72"
		41 - 80 # /CU.FT.	24"	36"	42"	54"	66"
		81 - 120 # /CU.FT.	NR	NR	36"	48"	54"
		OVER 120 # /CU.FT.	NR	NR	30"	42"	48"
ELEVATOR							
TENSION RATING³							
ELEVATOR SERVICE (GRAIN, WOOD, CHIPS, ETC)		120	190	280	370	475	
ELEVATOR SERVICE (INDUSTRIAL MINING, ETC)		100	170	250	330	425	
MINIMUM PULLEY DIAMETER							
81% - 100% TENSION		16"	16"	20"	28"	36"	
61% - 80% TENSION		14"	14"	18"	22"	30"	
UP TO 60% TENSION		12"	12"	16"	20"	24"	
MAX BUCKET PROJECTION							
CENTRIFUGAL		6"	6"	8"	10"	10"	
CONTINUOUS		NR	5"	7"	10"	12"	

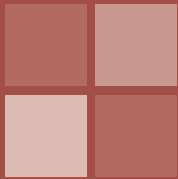
1 Maximum impact is based on 10% lumps, with 90% fines (or sized material, up to 4" lumps), plus the use of the appropriate rubber idlers and good design of the loading and transfer conditions. If these conditions are not met, fully, down-rate impact to one-half (or less) than that shown.

2 Troughability and Load Support Tables can be influenced by certain cover gauge and compound combinations used.

3 Tension Ratings reflect a minimum 10:1 per ply safety factor. With the appropriate selection & installation, a minimum of 4:1 safety factor can be applied with mechanical fasteners.

4 Add gauge of both covers to carcass gauge to obtain the overall gauge.

5 Add carcass weight to appropriate cover weight to obtain the total belt weight (In pounds per inch of width per linear foot of length).



ROYALON® SPECIFICATIONS		ROYALON® 125		
BELT STYLE		2-250	3-375	4-500
NUMBER OF PLYS		2	3	4
TENSION RATING ³ (PIW)		250	375	500
APPROX CARCASS ⁴ GAUGE - INCHES		.134	.196	.240
APPROX CARCASS WEIGHT ⁵ (LBS/IN/FT)		.056	.085	.104
IMPACT RATING ¹ (FT-LBS)		500	730	1035
MINIMUM PULLEY DIAMETER				
81% - 100% TENSION		16"	20"	28"
61% - 80% TENSION		14"	18"	24"
UP TO 60% TENSION		12"	16"	20"
MINIMUM BELT WIDTH (INCHES) FOR EMPTY BELT TROUGHING ²				
IDLER TYPE	20°	14"	20"	30"
	35°	18"	24"	30"
	45°	24"	30"	36"
MAXIMUM BELT WIDTH (INCHES) FOR LOAD SUPPORT ²				
20° IDLERS	0 - 40 # /CU.FT.	54"	72"	84"
	41 - 80 # /CU.FT.	48"	60"	72"
	81 - 120 # /CU.FT.	42"	54"	66"
	OVER 120 # /CU.FT.	36"	48"	60"
35° IDLERS	0 - 40 # /CU.FT.	48"	60"	72"
	41 - 80 # /CU.FT.	42"	60"	66"
	81 - 120 # /CU.FT.	36"	54"	60"
	OVER 120 # /CU.FT.	30"	42"	54"
45° IDLERS	0 - 40 # /CU.FT.	48"	60"	72"
	41 - 80 # /CU.FT.	36"	54"	60"
	81 - 120 # /CU.FT.	30"	48"	54"
	OVER 120 # /CU.FT.	NR	36"	48"
ELEVATOR				
TENSION RATING ³ (PIW)				
ELEVATOR SERVICE (GRAIN, WOOD, CHIPS, ETC)		210	320	425
ELEVATOR SERVICE (INDUSTRIAL MINING, ETC)		195	290	390
MINIMUM PULLEY DIAMETER				
81% - 100% TENSION		16"	20"	30"
61% - 80% TENSION		14"	18"	26"
UP TO 60% TENSION		12"	16"	22"
MAXIMUM BUCKET PROJECTION				
CENTRIFUGAL		7"	9"	11"
CONTINUOUS		6"	8"	11"

1 Maximum impact is based on 10% lumps, with 90% fines (or sized material, up to 4" lumps), plus the use of the appropriate rubber idlers and good design of the loading and transfer conditions. If these conditions are not met, fully, down-rate the impact to one-half (or less) that shown in the table.

2 Troughability and Load Support Tables can be influenced by certain cover gauge and compound combinations used.

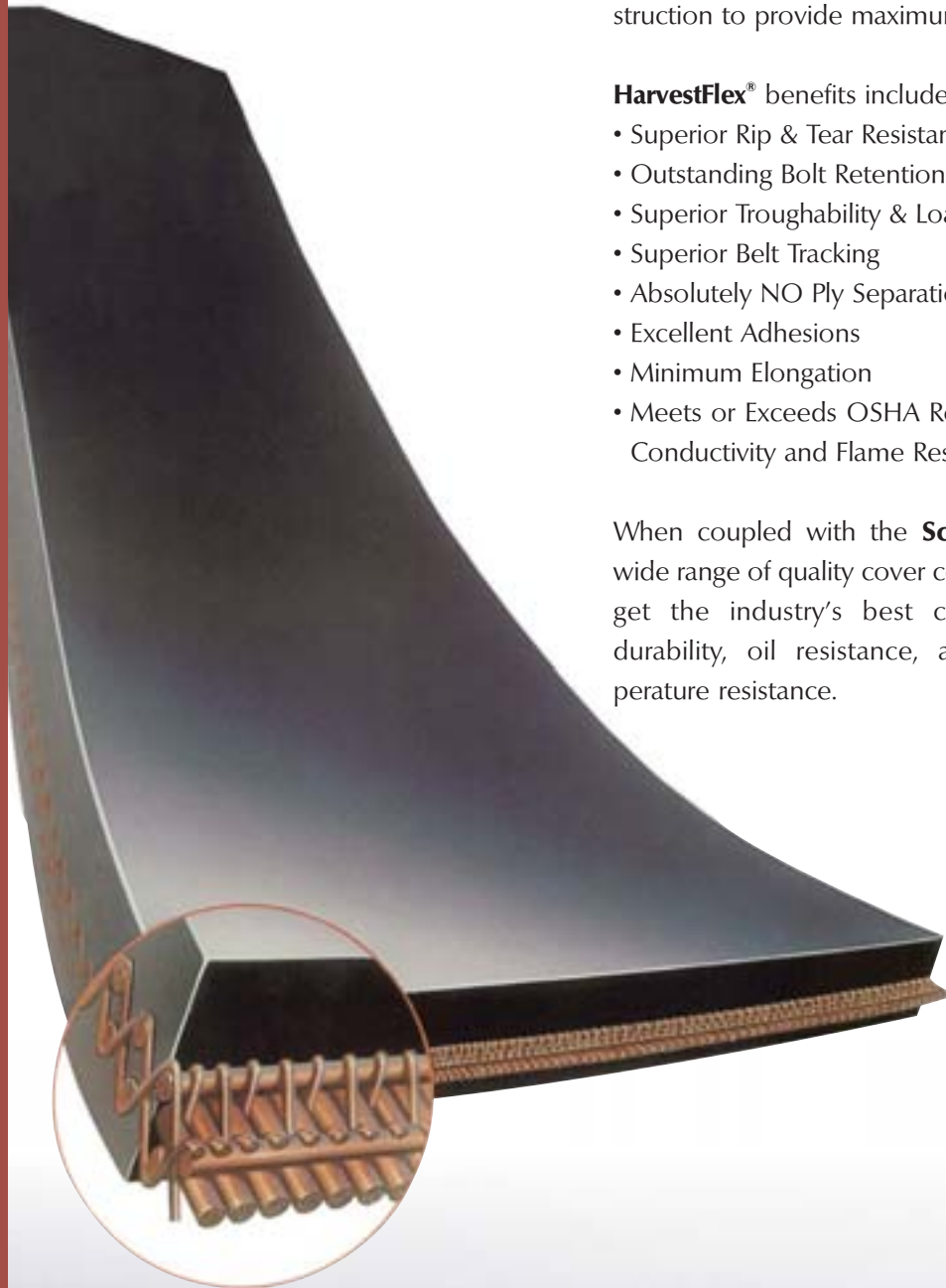
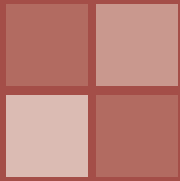
3 Tension ratings reflect a minimum 10:1 per ply safety factor. With appropriate selection & installation, a minimum 4:1 safety factor can be applied with mechanical fasteners.

4 Add gauge of both covers to carcass gauge to obtain the overall gauge.

5 Add carcass weight to appropriate cover weight to obtain the total belt weight (in pounds per inch of width per linear foot of length).

ROYALON® 150					ROYALON® 200					ROYALON® 250				ROYALON® 300				ROYALON® 500				
2-300	3-450	4-600	5-750		2-400	3-600	4-800	5-1000	6-1200		2-500	3-750	4-1000	5-1250		2-600	3-900	4-1200	5-1500		3-1500	4-2000
2	3	4	5		2	3	4	5	6		2	3	4	5		2	3	4	5		3	4
300	450	600	750		400	600	800	1000	1200		500	750	1000	1250		600	900	1200	1500		1500	2000
.150	.183	.252	.321		.168	.210	.288	.366	.444		.192	.246	.336	.426		.166	.261	.356	.451		.414	.560
.067	.082	.116	.150		.084	.110	.155	.200	.245		.089	.117	.165	.212		.078	.131	.185	.238		.188	.260
665	875	1250	1320		805	1005	1290	1455	1690		915	1110	1300	1480		915	1130	1340	1555		1400	1750
18"	22"	28"	32"		20"	24"	28"	36"	48"		20"	24"	28"	40"		20"	28"	36"	48"		42"	48"
16"	18"	24"	26"		18"	20"	24"	32"	42"		18"	20"	24"	32"		18"	22"	30"	36"		36"	42"
14"	16"	20"	22"		16"	18"	20"	26"	36"		16"	18"	20"	28"		16"	18"	24"	30"		30"	36"
18"	24"	30"	36"		20"	28"	30"	36"	42"		24"	30"	36"	42"		28"	30"	36"	48"		42"	48"
20"	30"	36"	36"		24"	30"	36"	42"	48"		30"	36"	42"	48"		30"	36"	42"	54"		48"	54"
28"	36"	42"	42"		30"	36"	42"	48"	54"		36"	42"	48"	54"		36"	42"	48"	60"		54"	60"
60"	72"	84"	84"		66"	84"	84"	84"	84"		72"	84"	84"	84"		72"	84"	84"	84"		84"	84"
54"	60"	84"	84"		60"	72"	84"	84"	84"		66"	72"	84"	84"		72"	84"	84"	84"		84"	84"
48"	54"	72"	84"		54"	66"	84"	84"	84"		60"	72"	84"	84"		60"	72"	84"	84"		84"	84"
42"	48"	66"	72"		48"	60"	72"	84"	84"		54"	60"	72"	84"		54"	66"	72"	84"		84"	84"
54"	66"	84"	84"		60"	72"	84"	84"	84"		66"	72"	84"	84"		72"	84"	84"	84"		84"	84"
48"	60"	72"	72"		54"	60"	84"	84"	84"		60"	66"	84"	84"		60"	72"	84"	84"		84"	84"
42"	54"	66"	66"		48"	54"	72"	72"	84"		54"	60"	72"	84"		54"	60"	72"	84"		84"	84"
36"	42"	54"	60"		42"	48"	60"	66"	84"		48"	54"	66"	72"		48"	54"	66"	84"		72"	84"
48"	60"	72"	84"		54"	66"	72"	84"	84"		60"	72"	84"	84"		66"	72"	84"	84"		84"	84"
42"	54"	66"	72"		48"	60"	72"	84"	84"		54"	66"	72"	84"		54"	66"	72"	84"		84"	84"
36"	48"	60"	60"		42"	54"	60"	72"	84"		48"	54"	60"	84"		48"	60"	66"	84"		72"	84"
30"	36"	54"	54"		36"	42"	54"	66"	72"		42"	48"	54"	72"		42"	54"	60"	72"		72"	72"
260	390	520	645		345	520	690	870	1030		425	645	870	1060		520	765	1030	1275		1275	1700
230	350	465	580		310	465	620	775	930		385	580	775	960		465	695	930	1155		1155	1540
18"	22"	32"	36"		20"	30"	36"	42"	54"		22"	30"	34"	46"		22"	34"	42"	54"		48"	54"
16"	20"	26"	30"		18"	24"	30"	36"	48"		18"	24"	30"	38"		18"	28"	36"	42"		42"	48"
14"	18"	22"	24"		16"	20"	24"	30"	42"		16"	20"	24"	32"		16"	22"	30"	36"		36"	42"
7"	10"	11"	11"		10"	10"	11"	12"	12"		10"	11"	12"	12"		10"	11"	12"	12"		12"	14"
6"	9"	12"	14"		9"	12"	14"	16"	20"		8"	14"	14"	18"		8"	14"	14"	18"		14"	16"





HarvestFlex[®]

HarvestFlex[®] is the most durable heavy duty rubber belt available in the agricultural industry today. Used as a conveyor belt or elevator belt in the grain, feed, milling and other agricultural applications, **HarvestFlex**[®] uses **Scandura's** premier Flex-style construction to provide maximum durability.

HarvestFlex[®] benefits include:

- Superior Rip & Tear Resistance
- Outstanding Bolt Retention
- Superior Troughability & Load Support
- Superior Belt Tracking
- Absolutely NO Ply Separation
- Excellent Adhesions
- Minimum Elongation
- Meets or Exceeds OSHA Requirements for Conductivity and Flame Resistance.

When coupled with the **Scandura** brand's wide range of quality cover compounds, you get the industry's best combination of durability, oil resistance, and cold temperature resistance.



Durability

A single ply of **HarvestFlex**[®] provides more textile reinforcement than an equivalently rated ply construction. Coupled with the straight-warp weave design, **HarvestFlex**[®] delivers rip and tear values five times greater than plied belt.

Bolt Retention

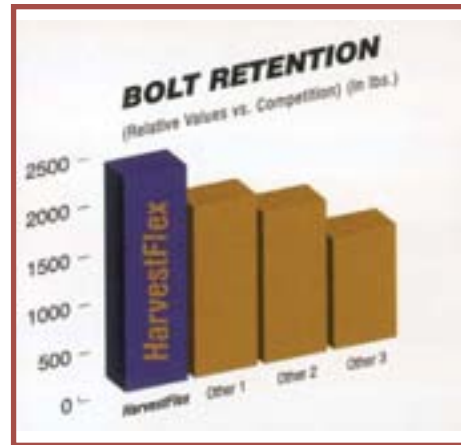
Scandura's Flex-style carcass provides bolt retention that is far superior to competitive brands. In lab testing, utilizing the RMA #123 test procedure, **HarvestFlex**[®] demonstrated bolt retention values up to 95% higher than other manufacturers. Together with **HarvestFlex's**[®] low elongation properties, this can result in less maintenance downtime related to bucket issues.

Troughability

Proper belt troughability is synonymous with belt tracking. **HarvestFlex**[®] with its Flex-style carcass conforms easily to all idler profiles ensuring easy belt tracking without sacrificing load support.

Bucket Elevators

Scandura HarvestFlex[®] is unsurpassed for bucket elevator service in either centrifugal discharge or a continuous bucket system. Selection of the most suitable **HarvestFlex**[®] belt style demands that all of the pertinent data and information be considered.



HARVESTFLEX® SPECIFICATIONS		HARVESTFLEX®			HARVESTFLEX®			HARVESTFLEX®			HARVESTFLEX®		
BELT STYLE		HFI-190	HFI-245	HFI-330	HFI-440	HFI-550	HFII-440	HFII-550	HFII-660	HFII-800	HFII-1000	HFII-1250	HFII-1500
NUMBER OF PLYS		1	1	1	1	1	2	2	2	2	2	2	2
TENSION RATINGS ³		190	245	330	440	550	440	550	660	800	1000	1250	1500
APPROX CARCASS GAUGE ⁴ (INCHES)		.075	.107	.139	.151	.169	.210	.234	.269	.301	.321	.380	.390
APPROX CARCASS WEIGHT ⁵ (LBS/IN/FT)		.035	.049	.068	.074	.083	.091	.098	.123	.132	.148	.165	.168
IMPACT RATING ¹ (FT-LBS)		475	630	920	1170	1375	1460	1560	1820	2185	2450	2745	3050
MINIMUM PULLEY DIAMETER													
81% - 100% TENSION		14"	16"	18"	20"	20"	24"	24"	30"	36"	36"	36"	36"
61% - 80% TENSION		12"	14"	16"	18"	18"	20"	20"	24"	24"	30"	30"	30"
UP TO 60% TENSION		10"	12"	14"	16"	16"	18"	18"	20"	20"	24"	24"	24"
MINIMUM BELT WIDTH (INCHES) FOR EMPTY BELT TROUGHING²													
IDLER TYPE	20°	12"	16"	20"	24"	24"	24"	24"	24"	30"	30"	30"	30"
	35°	14"	20"	24"	30"	30"	30"	30"	30"	36"	36"	36"	36"
	45°	16"	24"	30"	36"	36"	36"	36"	36"	42"	42"	42"	42"
MAXIMUM BELT WIDTH (INCHES) FOR LOAD SUPPORT²													
20° IDLERS	0 - 40 # /CU.FT.	48"	60"	72"	84"	84"	84"	84"	84"	84"	84"	84"	84"
	41 - 80 # /CU.FT.	36"	48"	66"	72"	72"	84"	84"	84"	84"	84"	84"	84"
	81 - 120 # /CU.FT.	30"	42"	60"	66"	72"	84"	84"	84"	84"	84"	84"	84"
	OVER 120 # /CU.FT.	24"	36"	48"	60"	66"	72"	72"	72"	84"	84"	84"	84"
35° IDLERS	0 - 40 # /CU.FT.	42"	48"	66"	72"	72"	84"	84"	84"	84"	84"	84"	84"
	41 - 80 # /CU.FT.	30"	36"	54"	60"	66"	72"	72"	84"	84"	84"	84"	84"
	81 - 120 # /CU.FT.	24"	36"	48"	54"	60"	66"	66"	72"	84"	84"	84"	84"
	OVER 120 # /CU.FT.	20"	30"	42"	48"	54"	60"	60"	72"	84"	84"	84"	84"
45° IDLERS	0 - 40 # /CU.FT.	36"	42"	54"	60"	66"	72"	72"	84"	84"	84"	84"	84"
	41 - 80 # /CU.FT.	30"	36"	48"	54"	60"	72"	72"	84"	84"	84"	84"	84"
	81 - 120 # /CU.FT.	24"	30"	42"	48"	54"	60"	60"	72"	84"	84"	84"	84"
	OVER 120 # /CU.FT.	20"	24"	36"	42"	48"	54"	54"	66"	72"	72"	84"	84"
ELEVATOR													
TENSION RATING³													
ELEVATOR SERVICE (GRAIN, WOOD, CHIPS, ETC)		120	195	280	370	440	370	440	550	690	870	1060	1150
ELEVATOR SERVICE (INDUSTRIAL MINING, ETC)		100	175	250	330	400	330	400	480	620	775	940	1050
MINIMUM PULLEY	81% - 100% TENSION	14"	16"	18"	20"	20"	24"	24"	30"	36"	36"	36"	36"
	61% - 80% TENSION	12"	14"	16"	18"	18"	20"	20"	24"	24"	30"	30"	30"
	UP TO 60% TENSION	10"	12"	14"	16"	16"	18"	18"	20"	20"	24"	24"	24"
MAX BUCKET PROJECTION	CENTRIFUGAL	7"	8"	10"	10"	10"	12"	12"	14"	15"	16"	17"	18"
	CONTINUOUS	NR	7"	9"	10"	12"	12"	13"	15"	16"	18"	20"	22"

1 Maximum impact is based on 10% lumps, with 90% fines (or sized material, up to 4" lumps), plus the use of the appropriate rubber idlers and good design of the loading and transfer conditions. If these conditions are not met, fully, down-rate the impact to one-half (or less) that shown in the table.

2 Troughability and Load Support Tables can be influenced by certain cover gauge and compound combinations used.

3 Tension ratings reflect a minimum 10:1 per ply safety factor. With appropriate selection & installation, a minimum 4:1 safety factor can be applied with mechanical fasteners.

4 Add gauge of both covers to carcass gauge to obtain the overall gauge.

5 Add carcass weight to appropriate cover weight to obtain the total belt weight (in pounds per inch of width per linear foot of length).

HARVESTLINE®

HarvestLine® has enjoyed being the first choice of elevator superintendents for the last 30 years.

HarvestLine® utilizes a traditional ply construction widely used throughout the grain industry. Compared to other traditional ply products, HarvestLine® offers:

- Superior load support & troughability
- Excellent bolt retention/bucket projection ratings
- Outstanding cover and ply adhesions
- Low elongation
- Meets OSHA Requirements for Conductivity and Flame Resistance
- Excellent for vulcanized splicing or mechanical fasteners.

Harvestline® is used widely in all conveyor and elevator belting applications.

Load Support

Proper load support is critical to the longevity of belt life.

HarvestLine® carcass is designed to ensure proper bridging of the idler junction gaps, including the demanding deep trough, in-line idler arrangements.

Low Elongation

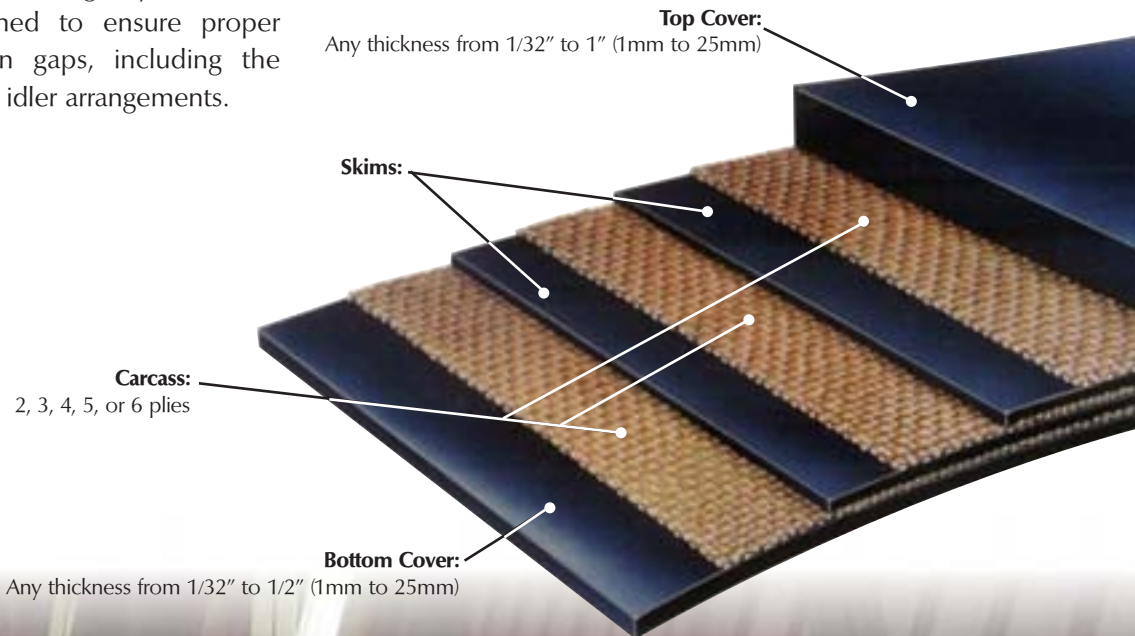
If take-up travel is limited, belt stretch characteristics are crucial for optimum performance. In the field, HarvestLine® has continually demonstrated trouble free, low elongation.

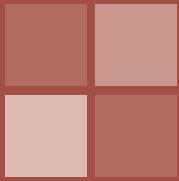
Bolt Retention

When compared to equivalent plied constructions, HarvestLine® belt exhibits higher bolt retention properties. This also translates to higher maximum bucket projections ratings.

Bucket Elevators

Scandura Harvestline® is a superb selection for bucket elevator service in either centrifugal discharge or a continuous bucket system. Selection of the most suitable belt for any bucket elevator installation demands that all of the pertinent data and information be considered.





Economic Solution®

Scandura's Security® belting is an economical; high-strength reduced-ply rubber belt used in general service applications such as crushed stone, hard rock, sand & gravel, ready mix, cement, phosphate, coal, and recycling.

Applications

Security® is designed for general purpose applications where material size is 4" or less, material drop is 3' or less, and idler troughing angle is 35 degrees or less.

Construction

Security® is offered in 2, 3, and 4 ply 110 LB/Ply carcass constructions and has excellent fastener retention factors of 4 to 1.

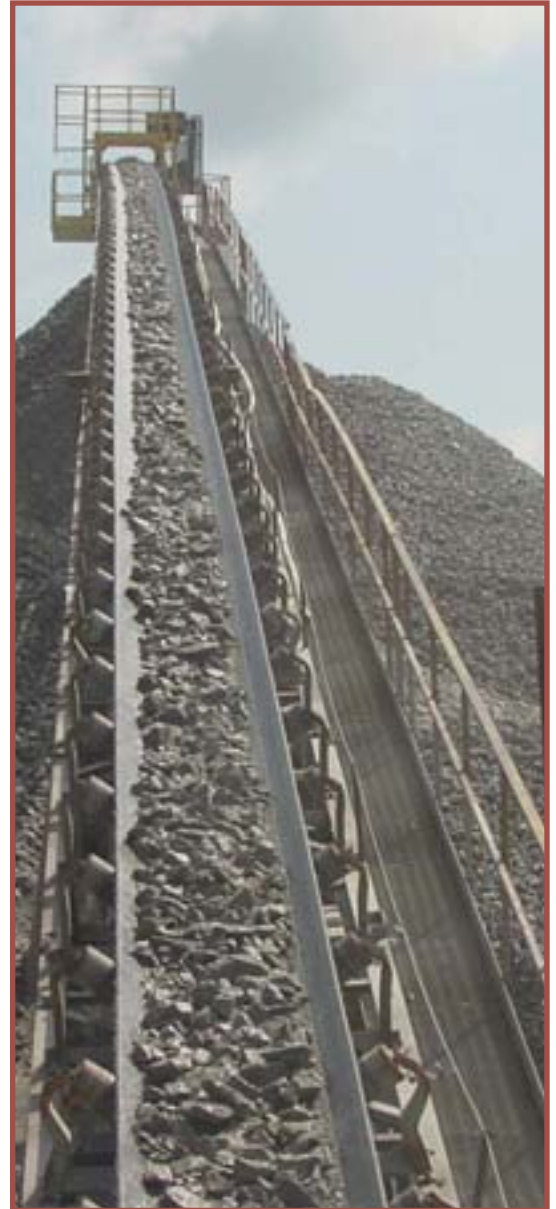
Available Cover

Compounds:

Giant® Gold (RMA Grade I) – Superior endurance against heavy above ground abrasive materials with good resistance to cutting and gouging.

Grade II – for above-ground, abrasive materials handling.

M.O.R. (Moderate Oil Resistance) – for applications such as wood chips or pulp and paper.



SECURITY® SPECIFICATIONS		SECURITY 110		
BELT STYLE		2-220	3-330	4-440
NUMBER OF PLYS		2	3	4
TENSION RATING ² (PIW)		220	330	440
APPROX CARCASS GAUGE ³ - INCHES		.110	.150	.192
APPROX CARCASS WEIGHT ⁴ (LBS/IN/FT)		.053	.075	.098
MINIMUM PULLEY DIAMETER				
81% - 100% TENSION		16"	20"	24"
61% - 80% TENSION		14"	18"	20"
UP TO 60% TENSION		12"	14"	18"
MINIMUM BELT WIDTH (INCHES) FOR EMPTY BELT TROUGHING¹				
IDLER TYPE	20°	14"	20"	24"
	35°	18"	24"	30"
MAXIMUM BELT WIDTH (INCHES) FOR LOAD SUPPORT¹				
20° IDLERS	0 - 40 # /CU.FT.	42"	60"	72"
	41 - 80 # /CU.FT.	36"	54"	60"
	81 - 120 # /CU.FT.	30"	42"	54"
35° IDLERS	0 - 40 # /CU.FT.	36"	54"	60"
	41 - 80 # /CU.FT.	30"	48"	54"
	81 - 120 # /CU.FT.	24"	36"	48"
AVAILABLE STANDARD CONSTRUCTIONS AND COVERS		Available widths: 60" & 72" Lengths: 600', 1,200', and 2,400'		
2-220	1/8" X 1/16"	Grade II	or	MOR
2-220	3/16" X 1/16"	Grade II	or	MOR
3-330	3/16" X 1/16"	Grade II	or	MOR
3-330	1/4" X 1/16"	Grade II	or	MOR
4-440	1/4" X 1/16"	Grade II	or	MOR

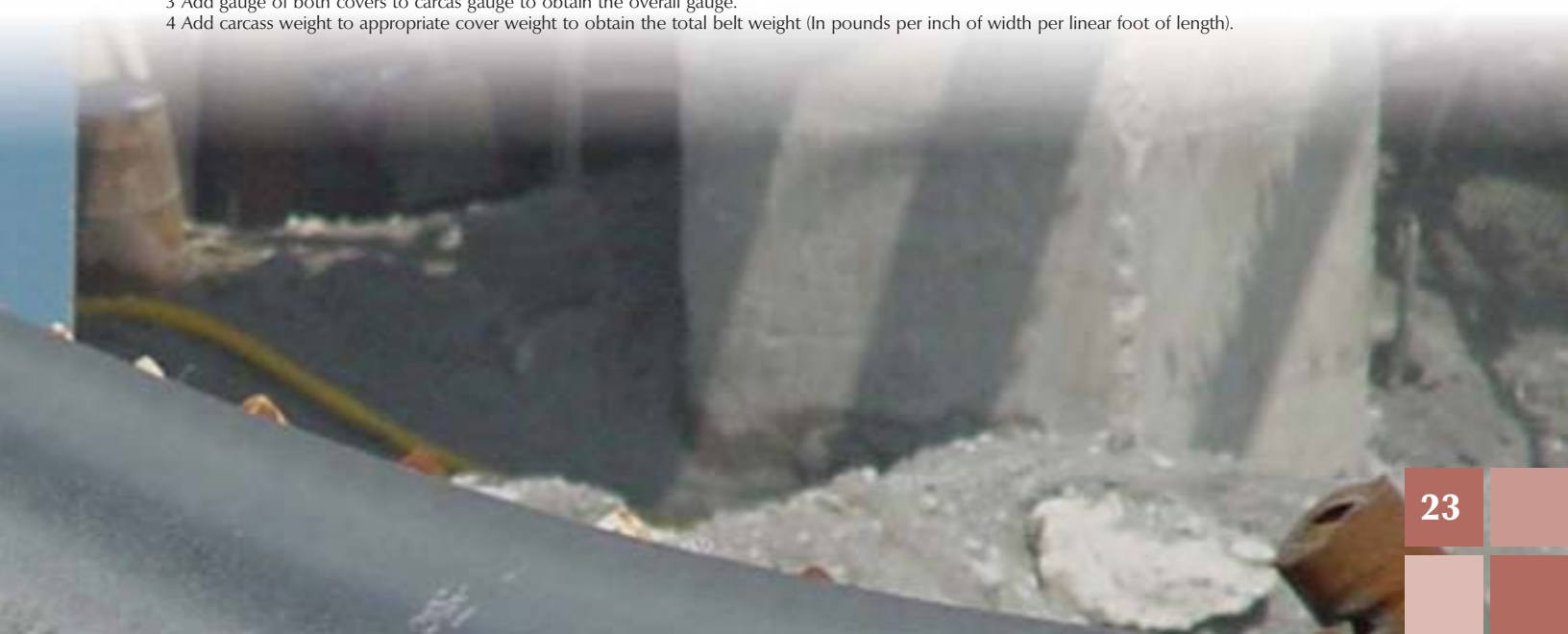
Note: Security is designed for general purpose applications where material size is 4" or less, material drop is 3' or less and the idler troughing angle is less than 35° or less, and the material weight is no more than 120 lbs/cubic ft.

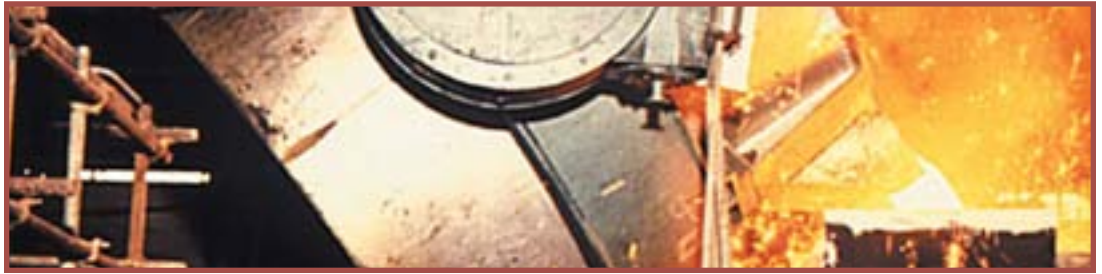
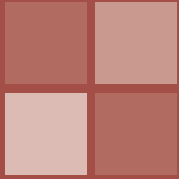
1 Troughability and Load Support Tables can be influenced by certain cover gauge and compound combinations used.

2 Tension Ratings reflect a minimum 8-10:1 safety factor. With the appropriate selection & installation, a minimum of 4:1 safety factor can be applied with mechanical fasteners.

3 Add gauge of both covers to carcass gauge to obtain the overall gauge.

4 Add carcass weight to appropriate cover weight to obtain the total belt weight (In pounds per inch of width per linear foot of length).





High temperatures can have a devastating effect on conventional belt carcasses. Damage ranges from distortion and premature delamination to burn-through, cover peeling and fastener pull-out. **HotShot®** was developed to solve many of these problems.

HotShot®'s fiberglass carcass gives it burn-through resistance up to 1000° F. This belt also features a unique micro-ply construction that eliminates the risk of ply separation. All **HotShot®** belting comes equipped with **Scandura's** premium heat resistant **Super Sahara®** compound.

HotShot® is the ideal choice for the following applications:

- Cement clinker kilns
- Conveying foundry parts
- Sinter coking mills
- Lime plants
- Smelting and refining mills
- Calcined coke
- Casting sand
- Any cherry red material where burn-through is a problem.



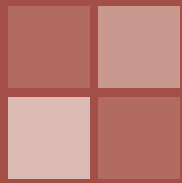
HotShot Belt Style	Rated Belt Tension (lb/in)	Carcass Material	Standard Covers	Minimum Pulley Diameter (in)	Minimum Belt Width for empty Troughing (in)		
					20°	35°	45°
300	300	Fiberglass	Super Sahara 1/4" X 1/8"	20"	18"	24"	30"

Use mechanical splices only

- Not recommended for use on systems with wing pulleys.



SPLICE



PROGRAM

A wide range of textiles and elastomers are used in the manufacture of **Scandura** conveyor belting. There are numerous ways to splice **Scandura** conveyor belting, not all are proper. This program is based on a splice school certification class where attendees are trained in the latest splice procedures and material usage for **Scandura** conveyor belting.

In order for a company to become certified, program requirements must be met at the completion of a splice school where areas of training include Plyed & Straight-warp belting, Steel Cord and Lightweight belting.

After the certified splice company has completed training school, and is a proven user of **Fenner Dunlop** splice materials, the company is offered the elite splice program, "Gold Crown".

The fully certified companies are eligible to receive special splice ID labels with their name and **Scandura's** name on the labels. The labels have punch-outs for the month/day/year and splice number made that day.

These labels are vulcanized to the splice.





FENNER DUNLOP
Certified Splice Training Schools

ing reviews, based on the understanding gained in our classroom sessions, Fenner Dunlop permits company of George Duck and Scandura provides the highest quality in standardized splice education. Those commitments are designed to enhance the skill level and knowledge base of all your employees to make your company more effective, and more competitive in the conveyor belt service market place for these brands.

School Host & Session Leader - Michael Crovatos

You are sure to enjoy Mike's humor, presentation skills and knowledge as he discusses the why & how of belt splicing procedures and materials.

Mike has 20 years experience in the splicing industry. He has worked on the NIHA Technical Committee and presented at many of the NIHA training sessions. He has also worked with the BMA Conveyor Belt Handbook Committee on updating splicing standards.

Class enrollment is limited! Reserve your place now!
Call To Set Up a Class (704) 604-5098

SCANDURA Splice Company

SATISFACTION GUARANTEED 100%

Unless you feel 100% satisfied that we delivered what you expected, we'll refund your money. What's to lose?

CERTIFIED SPLICE PROGRAM
FENNER DUNLOP

Value added services continue to make the difference in meeting and exceeding customer expectations in today's competitive market. Fenner Dunlop is committed to providing the highest quality products and services. Fenner Dunlop has established a Certified Splicing Program to ensure that all splicing is done to the highest standards.

As a leader in conveyor belt technology, Fenner Dunlop has developed a training system that ensures all splicing is done to the highest standards of quality. A multi-targeted training program is available for all splicing applications. Fenner Dunlop has established a Certified Splicing Program to ensure that all splicing is done to the highest standards.

The Certified Splicing Program is based on the most advanced splicing systems that are available. It is designed to ensure that all splicing is done to the highest standards of quality. Fenner Dunlop has established a Certified Splicing Program to ensure that all splicing is done to the highest standards.

"Gold Crown" Program

"Gold Crown" splicing program is the highest quality splicing available. It is designed to ensure that all splicing is done to the highest standards of quality. Fenner Dunlop has established a Certified Splicing Program to ensure that all splicing is done to the highest standards.

CERTIFICATION in the splicing process is provided by Fenner Dunlop. It is designed to ensure that all splicing is done to the highest standards of quality. Fenner Dunlop has established a Certified Splicing Program to ensure that all splicing is done to the highest standards.

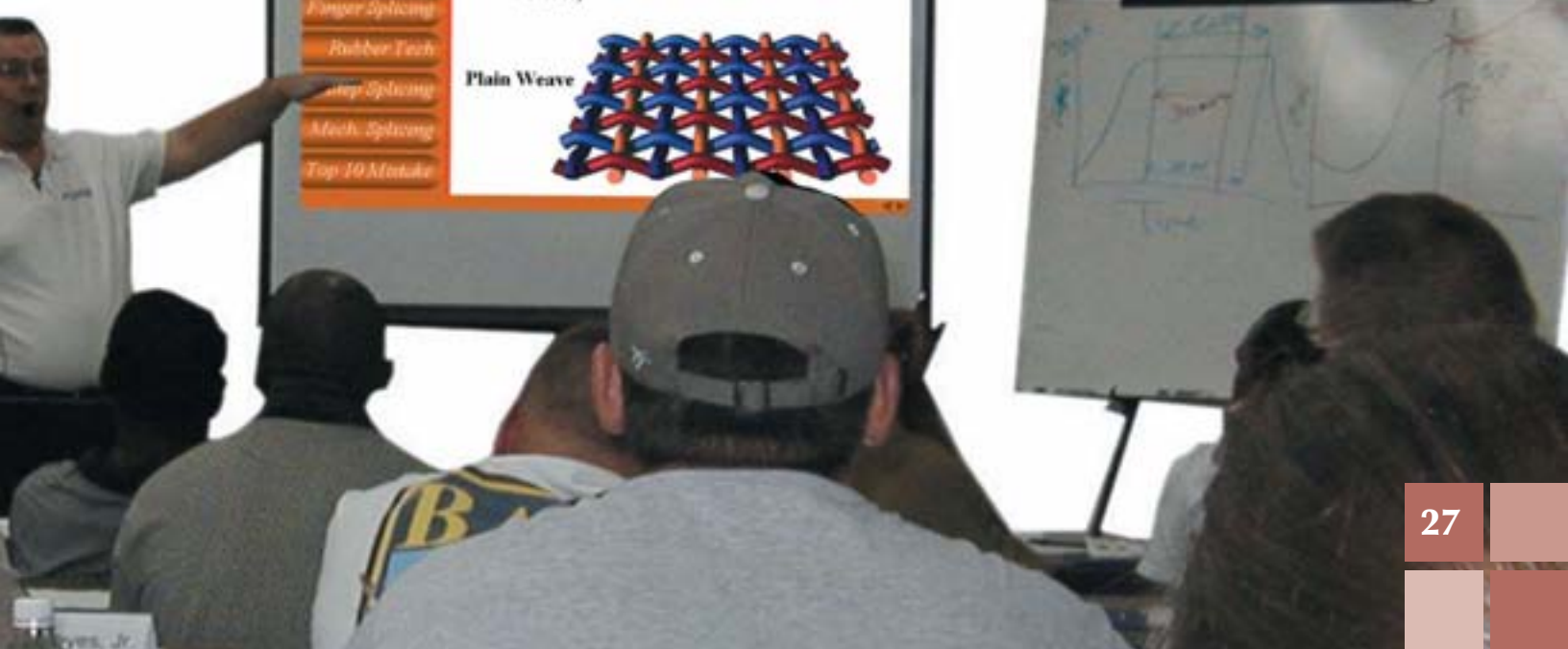
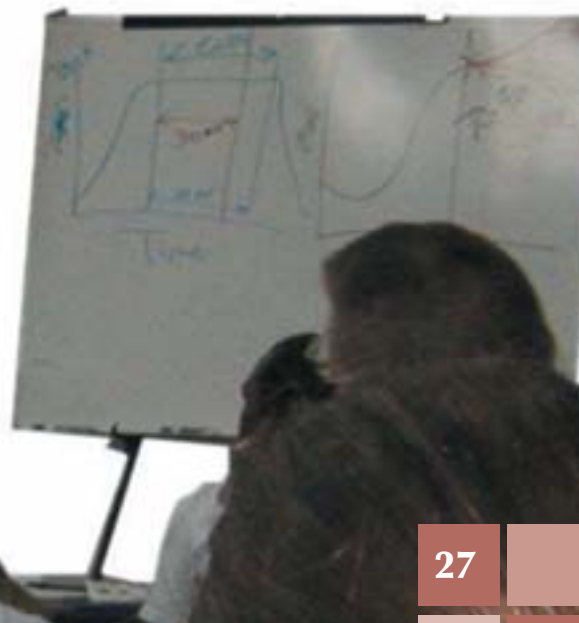
FENNER DUNLOP
CONVEYOR BELT AMERICA

Splice Program
 Conveyor Tech
 Belting Basics
 Splice Tech
 Finger Splicing
 Rubber Tech
 Snap Splicing
 Mech. Splicing
 Top 10 Mistake

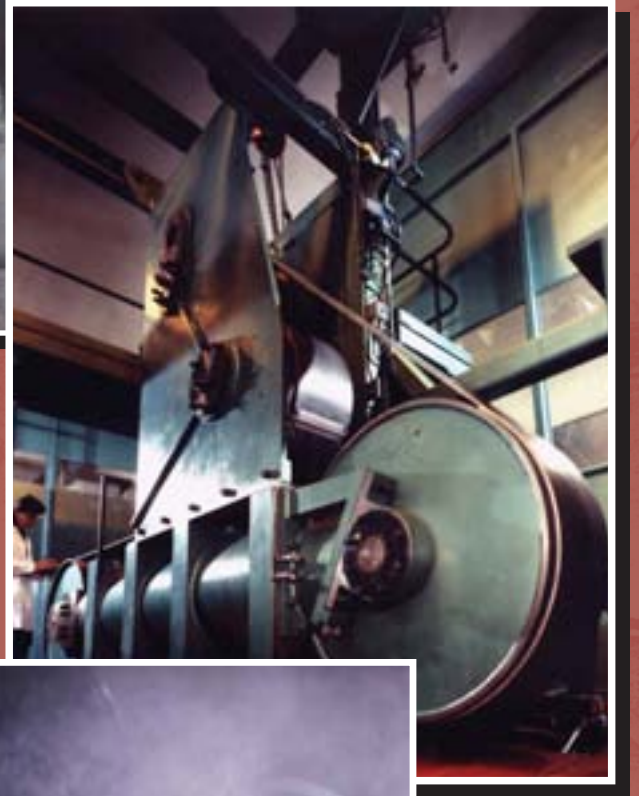
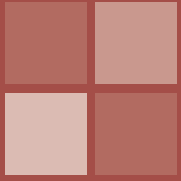
Carcass Design

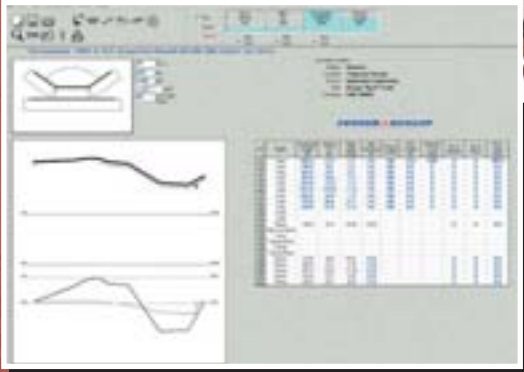
- Conventional plied belting
 - Traditional weave (Warp/Fill over and under)

Plain Weave



SUPPORT





Customer Service

Fenner Dunlop Customer Service Representatives are the backbone and bloodline of the Sales organization. Their knowledge, support, and dedication to the demanding, everyday needs of the **Fenner Dunlop** Distribution Network truly set them apart in the industry.

Technical Support

The Technical team continually works to develop new and innovative solutions to your conveying problems. All testing and development is done in our on-site laboratories adhering to the most stringent standards in the industry. All **Fenner Dunlop** facilities are ISO 9001:2000 certified. The Research & Development team is dedicated to producing new, cost effective products that increase efficiency and reduce down time, while extending belt life.

Application Engineering

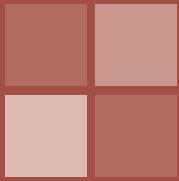
Combine decades of field experience with today's technology and you will find that **Fenner Dunlop** is uniquely qualified to solve the most problematic conveying challenges. Application Engineers are on call to support and assist, utilizing the best computer-aided design, selection and troubleshooting tools of any belt manufacturer in the world.

Sales Engineers

Fenner Dunlop Americas sales representatives and field engineers operate from a variety of locations throughout the US, Canada, Mexico and South America, offering technical, maintenance, safety and design assistance not only for troubleshooting and repair, but also for installation of custom-tailored belts. Onsite conveyor surveys and training are value added services offered to enhance belt life.

Belt Wizard

Fenner Dunlop utilizes Belt Wizard, an advanced belt calculation computer program that provides proper belt recommendations, as well as assists in complete system analysis, addressing all belt and conveyor interface issues for any bulk handling conveyor. This CEMA-based program is not only accurate, but immediate, providing solutions for our customers via the internet or by consulting a **Fenner Dunlop** Engineer.



Recommended Minimum Transition Distance

(At terminal pulleys for troughed belts)

A troughed conveyor belt changes from a troughed shape to a flat one in its passage from troughing idlers to a head pulley. Conversely, in its passage from a tail pulley to troughing idlers, it changes back into a troughed shape. At the area of change, the transition must occur over sufficient conveyor length in order to avoid excessive tension in the belt edges at a terminal pulley where the belt operating tension is high. At a low tension terminal, excessive edge tension will rarely be encountered, but here sufficient transition distance must be provided to keep the belt tension at the bottom of the trough great enough to avoid buckling and subsequent problems with belt splices.

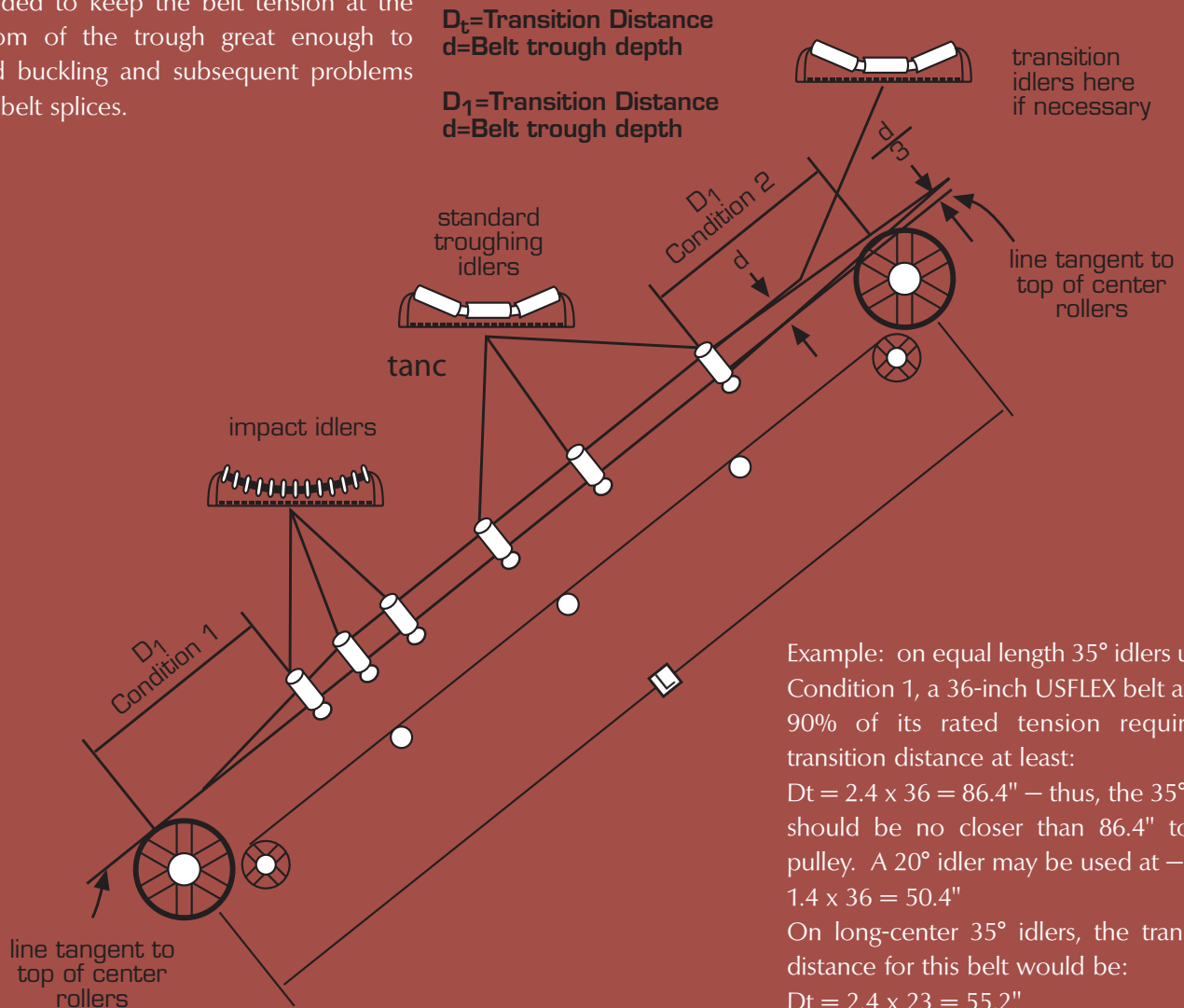
When required, belt support within the transition distance may be provided by using 20°, 27 1/2°, idlers between the pulley and the first (or last) 45° idler; or by using transition idlers with adjustable concentrator rolls.

Calculating Transition Distance

Multiplying the belt width (inches) by the table transition distance factor will give the minimum recommended transition distance (inches).

Long-center-roll idlers with unequal length rolls use factors in table, but use constant B = 23 instead of actual belt width.

D _t	=	F _t x b
D _t	=	Minimum Transition Distance, Inches
F _t	=	Transition Distance Factor
b	=	Belt Width, inches



Example: on equal length 35° idlers under Condition 1, a 36-inch USFLEX belt at 80 - 90% of its rated tension requires a transition distance at least:

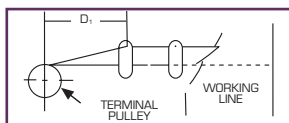
$D_t = 2.4 \times 36 = 86.4''$ — thus, the 35° idler should be no closer than 86.4" to the pulley. A 20° idler may be used at — $D_t = 1.4 \times 36 = 50.4''$

On long-center 35° idlers, the transition distance for this belt would be:

$D_t = 2.4 \times 23 = 55.2''$

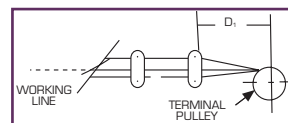
The following table lists the multiplying factors to be used according to type of belt, idler trough angle, belt elevation at the terminal pulley, and percent of belt rated tension at the terminal.

Condition 1



Top working face of pulley at belt's full troughed depth, with its working line tangent to the top of the central (horizontal) roll of the adjacent troughing idler ... Commonly used arrangement at tail and other low tension terminals.

Condition 2

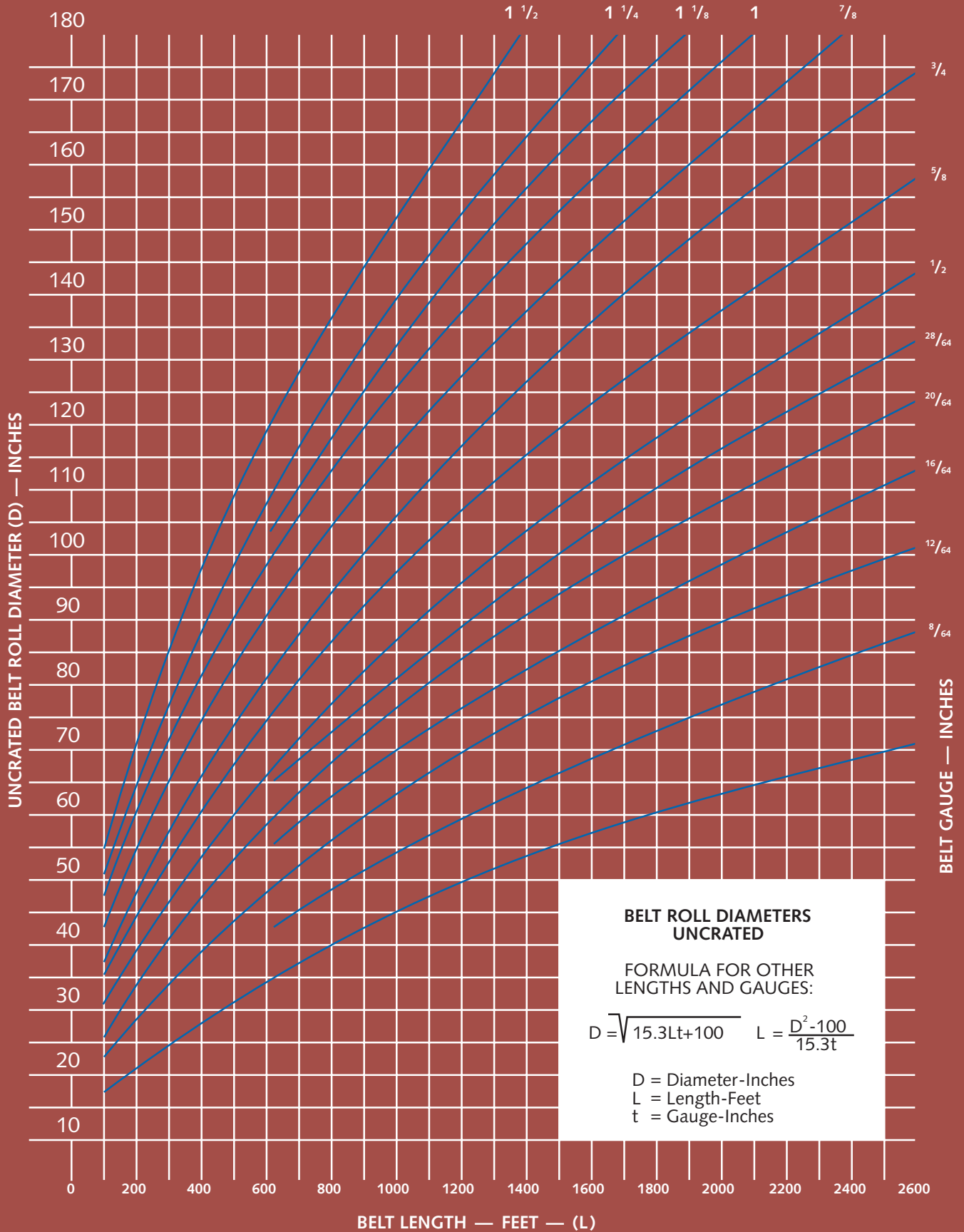


Top working face of pulley elevated to troughed load depth median. Working line tangent to pulley is above central roll of adjacent idler approximately 1/3 of belt's trough depth. Recommended arrangement for high tension terminals.

Idler	% Rated Tension	Condition 1		Condition 2	
		USFLEX I	Royalon and USFLEX II	USFLEX I	Royalon and USFLEX II
20°	90-100	1.8	1.8	1.2	1.2
	80-90	1.4	1.4	0.9	1.0
	70-80	1.2	1.2	0.8	0.8
	60-70	1.0	1.1	0.7	0.7
	30-60	0.9	1.0	0.6	0.6
	20-30	1.1	1.1	0.8	0.7
	10-20	1.6	1.2	1.0	0.8
	5-10	2.2	1.4	1.5	1.0
27 1/2°	90-100	2.4	2.4	1.6	1.6
	80-90	1.9	1.9	1.3	1.2
	70-80	1.6	1.6	1.0	1.0
	60-70	1.4	1.4	0.9	0.9
	30-60	1.3	1.3	0.8	0.8
	20-30	1.5	1.4	1.0	0.9
	10-20	2.1	1.6	1.4	1.1
	5-10	3.0	1.9	2.0	1.2
35°	90-100	3.0	3.2	2.0	2.1
	80-90	2.4	2.4	1.6	1.6
	70-80	2.0	2.0	1.3	1.4
	60-70	1.8	1.8	1.2	1.2
	30-60	1.6	1.6	1.1	1.1
	20-30	1.9	1.8	1.3	1.2
	10-20	2.6	2.0	1.8	1.4
	5-10	3.7	2.4	2.5	1.6
45°	90-100	3.8	3.9	2.5	2.6
	80-90	2.9	3.0	1.9	2.0
	70-80	2.4	2.5	1.6	1.6
	60-70	2.2	2.2	1.4	1.5
	30-60	2.0	2.0	1.3	1.4
	20-30	2.3	2.2	1.5	1.5
	10-20	3.3	2.5	2.2	1.6
	5-10	4.6	3.0	3.1	2.0

Note: Transition tables should only be used as a general guideline and should not be a factor in the final determination for the accurate transition distance for a particular application. Consult your Belt Wizard or a **Fenner Dunlop** Engineer for the proper transition distances

ROLL DIAMETERS



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Fenner Dunlop Conveyor
Belting Americas
21 Laredo Drive
Scottsdale, Georgia 30079-0865

Telephone:
(404) 294-5272
Fax:
(404) 297-3174

Internet:
www.fennerdunlopamericas.com

Fenner Dunlop is proud to partner with distributors that are focused on providing quality conveyor belts and superior service to the industry. For this reason, **Fenner Dunlop** has one of the strongest distributor networks in the belting industry. To promote and distinguish **Fenner Dunlop** distributors as conveyor belt professionals, we have three distributor classifications.



Fenner Dunlop Authorized Distributors actively call on and work with belt users in their business area. They must have an operating slitter, sufficient inventory to service their customers, delivery capability, a professional sales force and financial stability. The **Fenner Dunlop** Authorized Distributor is vital to promoting, selling and delivering our products to the market.



Advanced Service Distributors (ASD) are authorized distributors of **Fenner Dunlop** products that have completed **Fenner Dunlop's** comprehensive Sales and Technical Training Program. The ASD has been factory trained and certified in belt constructions, selection, trouble shooting and conveyor maintenance.



Total Conveyor Service Distributors (TCS D) are authorized distributors of **Fenner Dunlop** products that service all aspects of the conveyor belt industry. The TCS D distributor provides not only conveyor belt and technical expertise, but also conveyor components and in-house factory trained field service personnel. The TCS D offers a complete conveyor system service package.



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Contact your authorized Fenner Dunlop Distributor for any and all of your conveyor and elevator belting applications.

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