



The Next Step in Belting



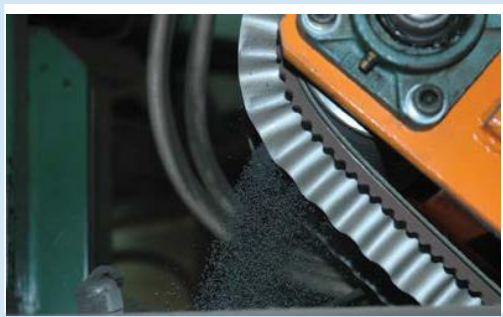
Flat Belts
Industrial Applications

Conveying Solutions



Flat Belts Industrial Applications

For over 55 years Volta has been manufacturing conveyor belting for industrial applications from highest quality Thermoplastic Elastomer (TPE) material with unique homogenous characteristics. These belts are most suitable for conveying ceramics, glass, cardboard, metal parts and recycling, etc. A wide range of colors, thicknesses, hardnesses and surface textures are available. Standard Belt Width = 1524 mm (60") / 2032mm (80").



- Does not absorb industrial oils, fluids and chemicals.
- Absorbs the impact of falling products well to ensure a long belt life.
- Very low abrasion - no joints prone to wear and tear.
- Improved resistance to cuts and punctures.
- High carrying capacity with excellent grip.
- Safer product conveyance on shock-absorbing materials.
- On magnetic conveyors and separators, thinner belting means more intensity in a given magnetic field.

Homogeneous Belts									
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on S.Steel (bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%	
						mm	Inch	kg/cm	lbs/in
FK	Green 17	59D	-20° C to 75° C -5° F to 170° F	0.28	3	88	3 1/2	3.20	17.60
					4	105	4 1/4	4.20	23.50
					6.5	195	7 11/16	6.50	36.40
FZ	Green 05	95A/46D	-30° C to 70° C -20° F to 158° F	0.36	2.5	35	1 3/8	1.50	8
					3	40	1 5/8	1.8	9.6
					4	60	2 3/8	2.60	13.60
					5	80	3 1/8	3.20	16.80
FL	Brown	80A	-40° C to 50° C -40° F to 120° F	0.55	2.5	17	2 1/32	0.30	1.80
					3	20	3/4	0.40	2.20
					4	30	1 3/16	0.60	3.40
					5	35	1 3/8	0.70	3.90
Homogeneous Embossed Bottom Belts									
FEPZ	Green 05	86A	-30° C to 50° C -20° F to 120° F	0.35	3	30	1 3/16	0.80	5.10
FEST	Green 05	65A	-40° C to 55° C -40° F to 125° F	0.70	2	9	1 1/32	0.30	1.68
					3	14	9/16	0.45	2.52
FEZ	Green 05	95A/46D	-30° C to 70° C -20° F to 158° F	0.20	2	30	1 3/16	0.80	4.50
					2.5	35	1 3/8	1	5.60
					3	40	1 5/8	1.30	6.60
					4	60	2 3/8	1.60	9
					5	80	3 1/8	2.10	11.80

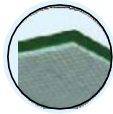
Conveyor Belts Top & Bottom Surfaces



Smooth Top



Embossed Bottom



Reinforced Bottom

Reinforced Belts									
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on S.Steel (bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%	
						mm	mm	Inch	kg/cm
FRL*	Brown	80A	-40° C to 50° C -40° F to 120° F	0.20	2	10	3/8	5	28
					3*	30	1 ³ / ₁₆	12	67
					5*	60	2 ³ / ₈	13	73
FRZ*	Green 05	95A/46D	-30° C to 70° C -20° F to 158° F	0.20	2	25	1	6	33.50
					2.5	32	1 ¹ / ₄	6.50	36
					3*	36	1 ⁷ / ₁₆	7	39
					4	50	2	7.50	41.70
					5	65	2 ⁹ / ₁₆	9	50
FRG*	Grey	95A/46D	-30° C to 70° C -20° F to 158° F	0.20	2	27	1 ¹ / ₁₆	6	33.50
					3	36	1 ³ / ₈	7	39
					4	60	2 ³ / ₈	7.50	41.70
FRG ST	Green 05	65A 95A/46D	-30° C to 60° C -20° F to 140° F	0.20	3	35	1 ³ / ₈	6	33
	Grey				3.5	40	1 ⁵ / ₈	6	33
					5	60	2 ³ / ₈	7	39
FRPZ*	Green 05	86A	-30° C to 50° C -20° F to 120° F	0.20	2	20	3/4	5.20	29.12
					3	30	1 ³ / ₁₆	5.60	31.36
					4	40	1 ⁵ / ₈	6	33.60
					6	80	3 ¹ / ₈	6.80	38.08
					8	100	4	7.60	42.56

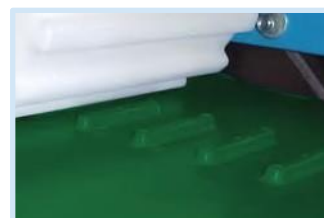
Note: *Check availability before placing the order.

Tips for Splicing & Fabricating:

- Reinforced belts should be butt welded on an angle (bias). Increasing the contact zone improves belt strength and means the break in the reinforcement is not stressed across the width at one point.
- When welding guides onto reinforced belts, it is preferable to machine the reinforcement off with an end mill/router and to heat weld directly onto the homogeneous base belt.
- Volta offers a number of cleat/flight configurations including scooped and angled. Throughput assessments can be made to assist in designing elevators for given volumes of material transfer.
- Unlike modular belts where molds can restrict design, Volta material offers more scope for ingenuity and innovation.

The Positive Drive Concept - SuperDrive™

The additional advantage of the Positive Drive mechanism prevents any slippage or off-tracking, reducing maintenance costs dramatically. Lack of tensioning prevents elongation and allows for simple cleaning procedure and long belt life.



SuperDrive™ Belts										
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on UHMW* (bottom)	Thickness	Minimum Pulley Diameter **		Maximum Pull Force width		
					mm	mm	Inch	kg/cm	lbs/in	
FEZ-SD-ITM2	Green 05	95A	-30° C to 70° C -20° F to 158° F	0.25	3	80	3¼	5	28	
					4	120	4¾	6.6	37	

Note: All Inch sizes have been converted from metric sizes.
 *UHMW - Ultra-High Molecular Weight material (PE-1000).
 **Minimum Pulley Diameter - Normal Flex

Electro Static Dissipative (ESD) Belts

This special belt is created from Electro Static Dissipative (ESD) material that ensures the continuous release of electro static charge and prevents the build-up and impulsive, unwanted release of static charge.








Electro Static Dissipative (ESD) Belts												
Product & Color			Shore Hardness	Temperature Range	Coefficient of Friction on S.Steel (bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%		ESD	
						mm	mm	Inch	kg/cm	lbs/in		
	FRBL - ESD	Black	90A	0°C to 50°C / -32°F to 120°F	0.20	2	30	1 ³ / ₁₆	2.5	14	10 ⁷ - 10 ⁸	
	FNBL-CB-ESD*	Black	90A	0°C to 50°C / -32°F to 120°F	0.38	1	20	²⁵ / ₃₂	1.8	10.08	10 ⁷ - 10 ⁸	
						2.4	40	1 ⁵ / ₈	2.4	13.44		

Note: *Belts can only be made endless with mechanical systems or finger splice. Pull force values are recommended only when using finger splice.

Warning: Volta ESD belts are not ATEX certified at this time.

Belt Coating Materials

These materials are supplied in strips for welding onto suitable surfaces (PU timing) to give a variety of effects.

Belt Coating Materials										
Products	GST - 4	MST - 6	GWG - 4	FEST	FSTF			FSTF - ST	FSTF - ST Strips	
Color	Green 05	Green 05	Green 05	Green 05	Green 05	Green 21	Green 05	Green 05	Green 21	Green 21
Illustration										
Description	Super Grip	Multi Grip	Wood Grip	High Grip	Foam**			Foam & High Grip Top	Foam & High Grip Strips	
Shore Hardness	65A	65A	65A	65A	65A			65A	65A	
Size (mm)	Width*	50	50	72	1524	140	150	160	60	60
	Thickness	4	6	3.75	2,3	14	6-12	4	4	4
CoF (Stainless Steel)	0.85	0.88	0.77	1.10	0.90			0.90	0.90/1.10	
Temp. Range	-40° C to 55° C / -40° F to 125° F									

Note: *Width - Maximum available width.

**Foam - Made from 65A shore material, actual hardness is lower. Check availability before placing an order.



Roller Coating Sleeves

The Roller Coating Sleeves have an abrasion resistant surface that is ideal for covering rollers where the product on the system may be damaged or marked by contact. Using VOLTA tools, the sleeves are easily mounted without lubricants or glues. Sleeves are available with a smooth surface and in dimensions from 27mm O.D. to 95 mm O.D.

Contact your local distributor for further details regarding the dimensions and availability of Ribbed Sleeves.

Volta Endless Making Tools

FBW - Flat Butt Welding

The FBW System performs a butt-weld merging belts edge to edge.



FT - Electrode Welding System

The FT Welding System provides electrode welding technology.



P-100 & P-200 Narrow Butt Welding Tools

P-100 pliers for belts up to 100mm
P-200 pliers for belts up to 200mm



Hinge Lace System and Metal Lace

The Volta Lace system is supplied welded on and allows a belt to be assembled and subsequently opened and removed with ease. Volta lace is compatible with Volta G, GZ, PZ, Z, L, LG and M Family Flat Belts from 2.5mm to 5mm thickness. All Volta flat belt material is easy to clean without removing from conveyor and therefore we only recommend lace when absolutely necessary.

| Using Volta tools, belts can be made endless on-site, reducing downtime.

| Heat-welded fabrications. Fusing of the solid flat belt with matching material flights, sidewalls, guides, etc. result in a nearly unbreakable fabrication and superior performance.

| Volta material is ideal for forming slides or hammocks to gently support and break the fall of the product on the belt.

Industrial Applications



FRZ - 2
Screw conveying



FRPZ - 6
Hammocks in glass recycling



FRZ - 4
Metal recycling



FEZ - 3.2
Industrial chemical conveyor



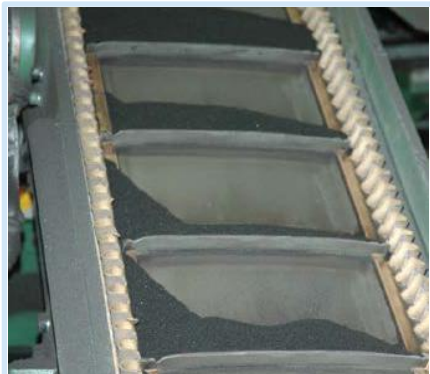
FEZ - 3.2
Nails production



FRZ - 5
Glass conveying



FRPZ - 6
Glass recycling



FRG - 3
Chemical powder conveying



FK - 3
Brick pre - oven conveying



The Next Step in Belting



Industrial Grade Flat Belts

Conveying Solutions



The Light Side of Heavy Duty

The distinguishable Volta design with fully extruded tough top layer is particularly durable while excelling in rough recycling applications where sharp edges of broken glass, metal, plastic, etc. could easily damage the belt. Our thick solid belt has proven to be highly cut & abrasion resistant and long lasting in these heavy duty, aggressive conditions.

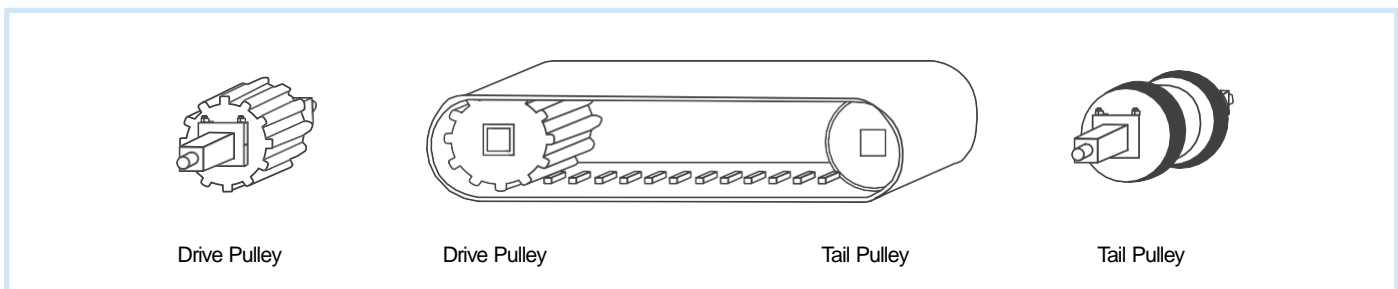


Revealing the Volta Heavy Duty Advantage

- ✓ 6mm-8mm thick solid belts stand up to the harsh conditions of heavy duty industrial applications.
- ✓ The belt materials' flexible character is highly resistant to abrasion and inhibits surface cuts from spreading.
- ✓ Homogeneous smooth surface does not crumble or crack.
- ✓ Material is non-corrosive and long-lasting.
- ✓ Reinforced bottom belts used to prevent elongation on very long conveyors.
- ✓ Lightweight belt and conveyor construction reducing energy consumption.
- ✓ Ease of installation – simple on-site welding.
- ✓ Can withstand extremely cold conditions –temperatures of up to -20°C.
- ✓ Can be used in conjunction with metal detectors or magnetic systems.
- ✓ Superior lifetime - less maintenance and downtime on critical work stations.

Positive Drive Concept: SuperDrive™

- ✓ The additional advantage of the Positive Drive mechanism eliminates slippage and pretensioning while carrying heavy loads. This reduces elongation and strain on the belt, extending belt life and performance.
- ✓ Integral teeth on the drive-side of the SuperDrive™ belt serve as a built-in guide system for the belt.



SuperDrive™ components

✓ **Thick, solid upper layer resists cuts, cut expansion & impact punctures.**

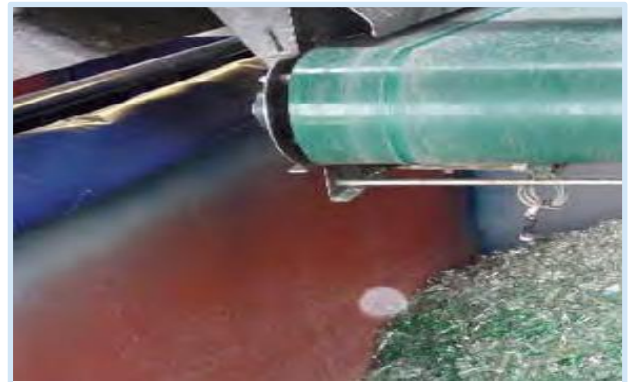
Fully extruded belts of up to 8mm thick solid material with option of fabric reinforcement on bottom. This superior, strong surface withstands cuts that can pierce the upper surface of the belt. There are no fabric layers dividing the belt's strength and damage caused by aggressive products will only penetrate a fraction of the top surface. The belt material resists spreading of cuts giving the Volta belt a much longer operational life than conventional conveyor belting.



FRZ-5mm with welded Sidewalls: METAL RECYCLING

✓ **Absorb the impact of falling products well to ensure a long belt life.**

Volta thick TPE belts act as a good cushion for heavy objects falling onto the conveyor. The elasticity of the belt softens the fall of the product and displays exceptional resistance to heavy wear and tear. The high resistance to abrasion and cuts allows long term operation under the harshest conditions.



FRPZ-6: GLASS RECYCLING

✓ **Resistant to chemicals.**

The sealed surface of this homogeneous material will not absorb industrial liquids, grease or chemical remains. Delamination as seen on regular plied belts where liquids seep into the fabric layers and cause breakdown of the belt is eliminated.



FZ-5: CONVEYING CAUSTIC SODA

✓ **Highly resistant to abrasion caused by rough materials.**

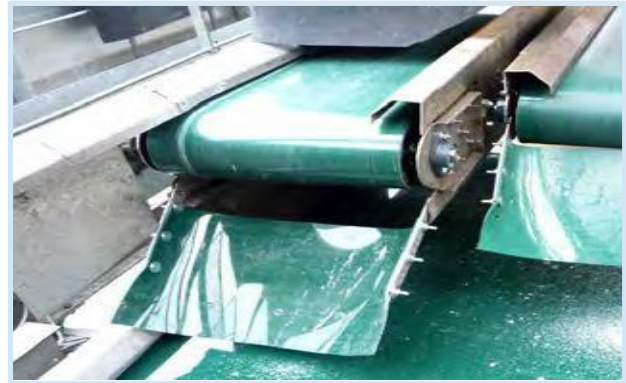
Abrasion resistant material gives you a longer belt life - less downtime and fewer intervals in production time.



FRZ-4: HEAVY BRICK CONVEYING

✓ **Flexible material ideal for forming slides or hammocks to soften the fall onto belt.**

Belt material absorbs the impact of falling products. Simple to cut and attach hammocks along the line. Resists cut and abrasion from sharp objects and does not encourage spreading of cuts.



FRPZ-6 with Hammocks : PLASTIC PARTS CONVEYING

✓ **Non-absorbent to industrial oils, fluids and chemicals.**

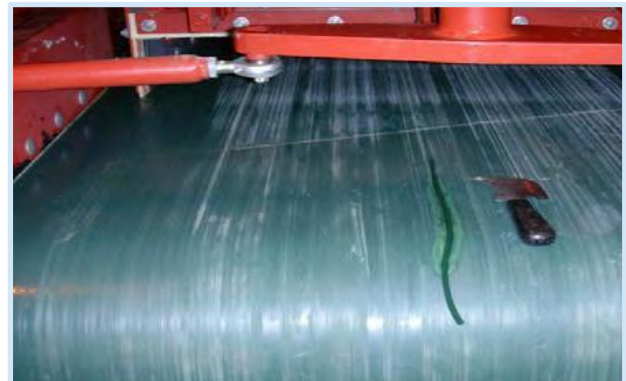
Sealed belt surface has no reaction to chemicals. Perfect material for incline applications where fabrications are needed. This resistant quality also inhibits pungent odors.



FRG-3 with thermo welded sidewalls and flights:
CHEMICAL POWDER (RECYCLED SEWAGE)

✓ **Easily repaired on site with electrode weld.**

Quick and easy repair by heat welding an electrode into the cut. No need to remove the belt. Keeps maintenance and downtime costs down to a minimum.



FRPZ-8 Belt

✓ **Energy saving – lightweight conveyor construction suitable to low powered motor.**

Reduce energy and maintenance costs with lightweight simple basic components of the conveyor construction. Improve plant production flow and efficiency with the Volta solution.



Belt repaired on site.

Easy and quick thermo-welded fabrications using Volta state-of-the-art tools.

Volta provides you with a choice of tools specially designed to ensure high quality heat welding of the full range of belts.

- ✓ Using VOLTA lightweight tools, belts can be made endless & repaired on-site, within minutes, reducing downtime. No more finger-splice weak points to deal with.
- ✓ When using Volta tools only electrical power is needed and no water cooling or air pressure is required. No more use for adhesives.
- ✓ Heat-welded fabrications. Fusing of the solid flat belt with matching material flights, sidewalls, guides, etc. result in a nearly unbreakable fabrication and superior performance.

Volta tips for best results when fabricating reinforced flat belts:

- ✓ Reinforced belts are butt-welded in an angle of less than 90° to ensure that the weld is not located along a single point and in order to give a longer line of contact between the joined edges.
- ✓ Belts can be equipped with bottom guides to prevent off-tracking. The fabric reinforcement can be machined off and the guide heat welded directly onto the base belt making the join solid and unbreakable.
- ✓ Scoop cleats can be fitted to increase belt capacity and gusseted cleats can assist in elevating heavy loads.

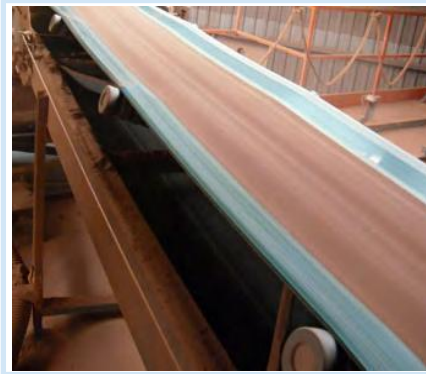


**Custom-made fabrications
are our specialty.**

Industrial Applications



Volta Belt with Guide



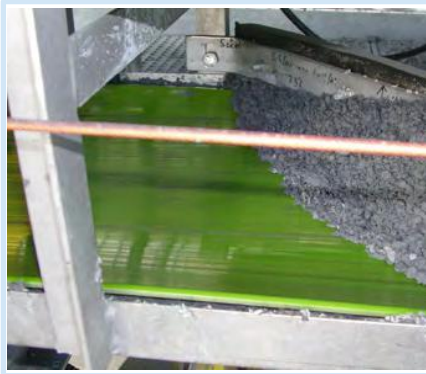
Floor Tile Production



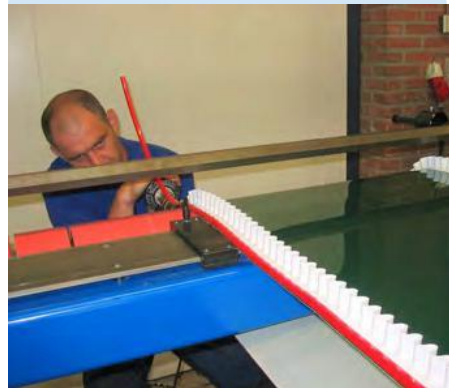
Sewage Treatment



Metal parts conveying



Metal Separator



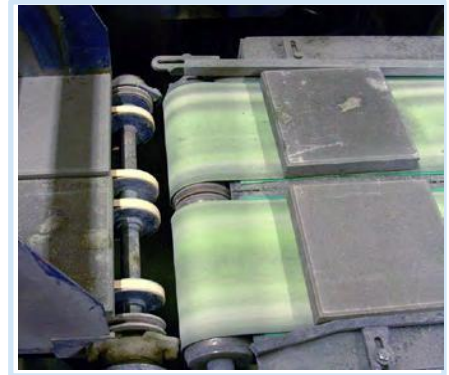
Volta Fabrication



Volta Belt with Flights



Eddy Current Conveyor



Brick Conveying

Volta Power® for the Wood Industry Products



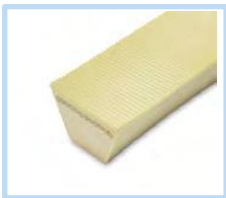
Classical Power Belt with Smooth Top

Sections	A	B	20	C	25	D
Width (~)	13	17	20	22	25	32
Height (~)	11	14	15	17	19	23
Min. Pulley (mm)*	80	140	180	200	280	400



Classical Power Belt with ITO (Impression Top Oval) & Waffle Top

Sections	A	B	20	C	25	D
Width (~)	13	17	20	22	25	32
Height (~)	11	14	15	17	19	23
Min. Pulley (mm)*	80	140	180	200	280	400



Classical Power Belt with Roof Top

Sections	D/32
Width (~)	32
Height (~)	24
Min. Pulley (mm)*	400



Banded Belt with Waffle & Smooth Top

Volta Power® produces a line of special white banded belts. The belts are available with smooth, soft top (PKR0) or with waffle top (PKR2). These belts are designed to be used on processing machinery requiring a belt that is non-marking and has high grip. In addition, the belt provides excellent strength and carrying capacity.

The benefits of the banded belts are:

- increased transmission efficiency
- reduced maintenance cost
- eliminates belt twisting and reduces whipping
- ensures even belt tension

Volta Power® for the Wood Industry Products



Special Dimension Belts with Waffle Top

Dimensions	48x15	50x20
Min. Pulley (mm)*	140	200



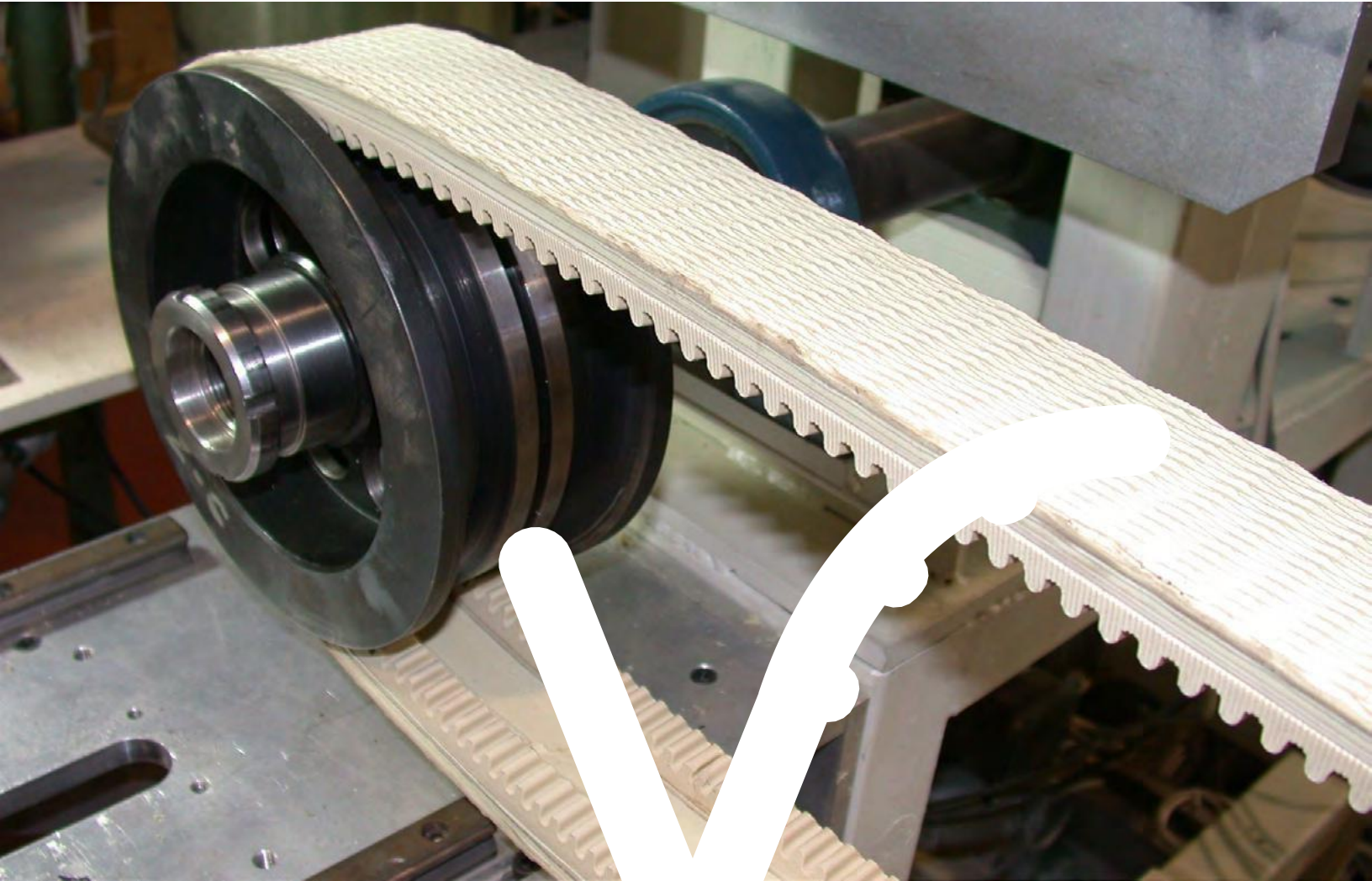
Special Banded Belt

Dimensions	62x18	67x17	70x17	75x17
Min. Pulley (mm)*	200	200	200	200

Classical, narrow, banded and conveyor belts are also available in white.



The Next Step in Belting



Wood Industry
Conveying Solutions



Wood processing machinery performs many unique and difficult applications. Volta Belting Technology has the product range, experience and technologies to provide solutions for these machine-based applications.

The product range includes:

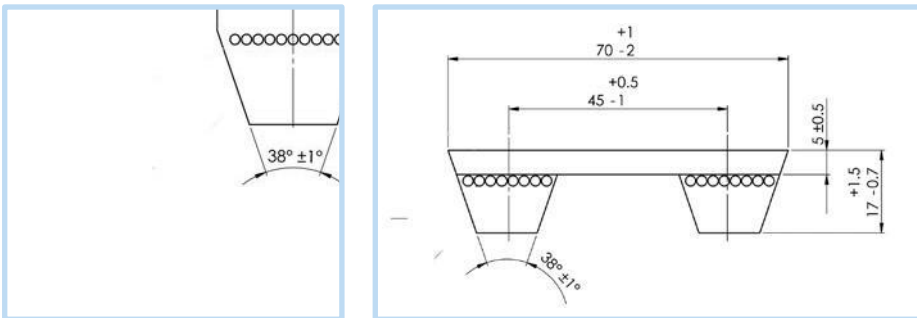
- ✓ 1524 mm/60" wide flat belts on cutting & gluing lines and for transporting in the wood industry.
- ✓ White Volta Power® Transmission belts for applications requiring high grip and non-marking characteristics.
- ✓ Belt coatings for flat wide belts, profiles and timing belts.
- ✓ Belts for specific use machines such as edge banders and tenoners.
- ✓ Roller coating sleeves.

Volta Power® in the Wood Industry

The Volta Power® product line includes belts specially designed for wood processing machinery produced from white colored Thermoplastic Rubber (TPR) that combines the performance properties of Thermo set rubber with the capabilities of the Thermoplastics' processing equipment. Compared to rubber, TPR gives a better quality final product with superior dimensional accuracy.



Our unique computerized production system enables us to manufacture standard or non-standard power transmission belts in any length up to 70 meters without minimum quantities and shipping within days.



Typical (Machine) Applications

Double-end tenoners and edge banders are designed for high-speed processing of panel shaped workpieces such as:

- direct coated panels
- cork
- MDF
- plywood
- hard foam
- plastics
- core board
- post forming or cement-bonded fiber
- solid wood

This work requires a belt that will firmly grip any material used without marking the final product.

Typical Machine

- HOMAG
- STEFANI
- BIESSE
- IDM
- IMA
- CELASCHI
- OLZ-HER
- NARDELLO



Flat Belts in the Wood Industry

The belts made for Industrial Applications are manufactured from Thermoplastic Elastomer (TPE) material with unique homogeneous characteristics. These belts are most suitable for conveying wood and are available in a wide range of colors, thicknesses, hardnesses and surface textures. Quality thermo-welded fabrications are custom-made to suit your specific needs perfectly.

Standard Belt Width = 1524mm /60”.



The product range includes:

- ✓ High carrying capacity with excellent grip.
- ✓ Soft, non-marking belts treat the product conveyed with extreme care.
- ✓ The belts absorb the impact of the falling products well ensuring long life.
- ✓ Resistant to chemical action from moisture, paints and other compounds and resistant to glues adhering to the belt surface.
- ✓ The belt materials' flexible character is highly resistant to abrasion and inhibits surface cuts from spreading.
- ✓ Homogeneous smooth surface does not crumble or crack (as seen in rubber belting).
- ✓ Reinforced - bottom belts used to prevent elongation on very long conveyors.
- ✓ Quick and easy to repair and to make endless with Volta thermo welding tools.

Classical Power Belt with Smooth Top

Belt Type	Color	Shore Hardness	Thickness mm	Industry	Application	Reinforced	Non-Marking	Grip	Resists Paints & Glues	Quick Splice & Repair	Resistant to Abrasion
FRL	Brown	80A	2	Wood Flooring	Dimpter of Graycon Sorters	✓	✓	high	✓	✓	✓
			3	Melamine	Transfers						
				Cabinet Manufacture	Dimpter Sorters						
5	Plywood	Skinner Saws, Trim Saws, Jumper Belts, Inclines									
FRZ	Green 05	95A/46D	4	Wood Flooring	Dimpter of Graycon Sorters	✓	✓	medium	✓	✓	✓
				Plywood	Putty Lines						
			Cabinet Manufacture	Dimpter Sorters							
3	Plywood	Veneer Stackers, Jumper Belts, Putty Lines									
FRG	Grey	95A/46D	2	Plywood	Set of Narrow Spaced Belts	✓	✓	medium	✓	✓	✓
			3		Alignment Belt						
FK	Green 17	59D	3	Sawmill	Cut Board Transfer Belts	✓	✓	low	✓	✓	✓
			4	Raw Timber	Feeding Belt						
FRPZ	Green 05	86A	3	Floor Lamination	Feeding Belt	✓	✓	high	✓	✓	✓

Roller Coating Sleeves

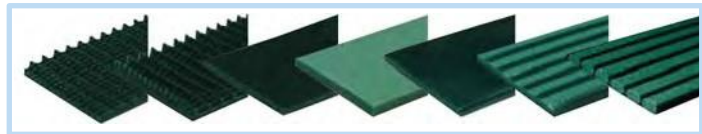
Volta Sleeves have an abrasion resistant, soft, non-marking surface that is ideal for coating rollers. Using Volta proprietary tools, the sleeves are easily mounted without lubricants or glues. Sleeves are available with a smooth surface and in dimensions from 27 mm O.D. to 95 mm O.D.

Contact your local distributor for further details regarding the dimensions and availability of Ribbed Sleeves.



Belt Coatings

A wide range of heat-welded coatings can be applied to achieve extra grip and added protection against forceful impact of falling wood.



Volta Products in the Wood Industry

Product Types	Non- marking	Resistant to abrasion	Resistant to paints and glue	High grip	Dimensional stability	Hard material	Soft material	Surface texture
PU V belts	✓	✓	✓	✓	✓	✓	✓	
PU Round belts	✓	✓	✓	✓	✓	✓	✓	
A * section	✓	✓	✓	✓	✓	✓		
B * section	✓	✓	✓	✓	✓	✓		
C * section	✓	✓	✓	✓	✓	✓		
D * section	✓	✓	✓	✓	✓	✓		
Double-C	✓	✓	✓	✓	✓	✓		
48x15	✓	✓	✓	✓	✓	✓		
50x20	✓	✓	✓	✓	✓	✓		
SP-2x20 (67x17) *	✓	✓	✓	✓	✓	✓		
SP-2C (70x17) *	✓	✓	✓	✓	✓	✓		
PU Waffle	✓	✓	✓	✓	✓		✓	
FSTF	✓			✓	✓		✓	
FST	✓		✓	✓	✓		✓	
FSTF-ST strips	✓			✓	✓		✓	✓
Machine tapes (SM)	✓		✓	✓	✓		✓	
Sleeves, Standard Smooth	✓	✓	✓	✓	✓		✓	
Sleeves, Special Ribbed**	✓	✓	✓	✓	✓		✓	✓

*Available with a standard smooth top PKR0 and Waffle top PKR2 patterns.

Wood Industry



Edge Bander
Belt Section: SP - 2C
Quantity In Machine: 1



Post forming
Belt Section: SP - 2C
Quantity In Machine: 1



Wood Processing
Belt Section: SP - 2C
Quantity In Machine: 1



Tenoners
Belt Section: D - PKR0
Quantity In Machine: 2



Tenoners
Belt Section: D - PKR0
Quantity In Machine: 2



Edge Bander
Belt Section: 48x15
Quantity In Machine: 1

Volta Power® for the Wood Industry Products



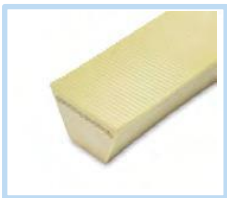
Classical Power Belt with Smooth Top

Sections	A	B	20	C	25	D
Width (~)	13	17	20	22	25	32
Height (~)	11	14	15	17	19	23
Min. Pulley (mm)*	80	140	180	200	280	400



Classical Power Belt with ITO (Impression Top Oval) & Waffle Top

Sections	A	B	20	C	25	D
Width (~)	13	17	20	22	25	32
Height (~)	11	14	15	17	19	23
Min. Pulley (mm)*	80	140	180	200	280	400



Classical Power Belt with Roof Top

Sections	D/32
Width (~)	32
Height (~)	24
Min. Pulley (mm)*	400



Banded Belt with Waffle & Smooth Top

Volta Power® produces a line of special white banded belts. The belts are available with smooth, soft top (PKR0) or with waffle top (PKR2). These belts are designed to be used on processing machinery requiring a belt that is non-marking and has high grip. In addition, the belt provides excellent strength and carrying capacity.

The benefits of the banded belts are:

- increased transmission efficiency
- reduced maintenance cost
- eliminates belt twisting and reduces whipping
- ensures even belt tension

Volta Power® for the Wood Industry Products



Special Dimension Belts with Waffle Top

Dimensions	48x15	50x20
Min. Pulley (mm)*	140	200



Special Banded Belt

Dimensions	62x18	67x17	70x17	75x17
Min. Pulley (mm)*	200	200	200	200

Classical, narrow, banded and conveyor belts are also available in white.



The Next Step in Belting



Ceramics Industry

Conveying Solutions



Volta Belting manufactures high quality belting for the ceramics industry. All materials are characterized by high dimensional accuracy and consistency, delivering a long lasting and dependable performance.

Powder Lines

Volta flat belts can be installed quickly and safely. They reduce the percentage of reject tiles where other belts will deteriorate and release belt particles into the powder flow resulting in black burnt flecks on the tile surface.



Tile Transportation

Volta is the pioneer of TPE profiles for ceramic tiles and today manufactures original belts and sleeves for most of the leading ceramic machine producers' delivered around the world. The classic range includes:

1. V profiles for conveying

These belts suit all known sizes and pulley diameters and are known for dimensional stability and lifetime.



2. Roof top (crescent) and Y profiles for glazing lines



3. Grip Top belts for stop/start applications



4. Round profiles for corners



5. Sleeves (➤), flat belt (➤) and double V profile (➤) for tile handling out of the oven

These materials prevent cracking and enable fast and trouble-free throughput.



All Volta materials are weldable with specially designed tooling that enables factories around the world to perform the servicing on site without delay and downtime.



Easy Overlap Welder (EZOL) for Reinforced profiles



F51 Pliers for larger profiles



R8 Mini Pliers for smaller profiles



Kit for small profile welding



The Next Step in Belting



Recycling Industry
Conveying Solutions



- ✓ Recycling evolved from being a sideshow to a major production industry. More and more materials either have sufficient economic value to warrant recycling and/ or are recycled out of necessity to protect the planet.
- ✓ It would be absurd if the recycling industry did not do its utmost to reduce its own carbon footprint by reducing energy consumption and the changeover of the large quantities of plastics and textiles used as belting.
- ✓ Volta is the only belt producer in the world to make serious advances in belts for recycling solid waste, whether it's used on conventional conveyor types or on magnetic systems such as Eddy Current separators.

Industrial or Household



Sorted or Mixed



Volta's Materials



Last Longer



Chemical and oil resistant



Abrasion and cut resistant



Functions under water without degradation

Common Recycling Processes

- | Transfer of solid waste: unbroken, in large pieces, granular or in powder form
- | Sorting lines: including where manual sorting is incorporated or high-speed belts are used with optical sorters
- | Magnetic conveyor systems: magnetic drums, overband conveyors and Eddy Current separators

Unique Belt Advantages

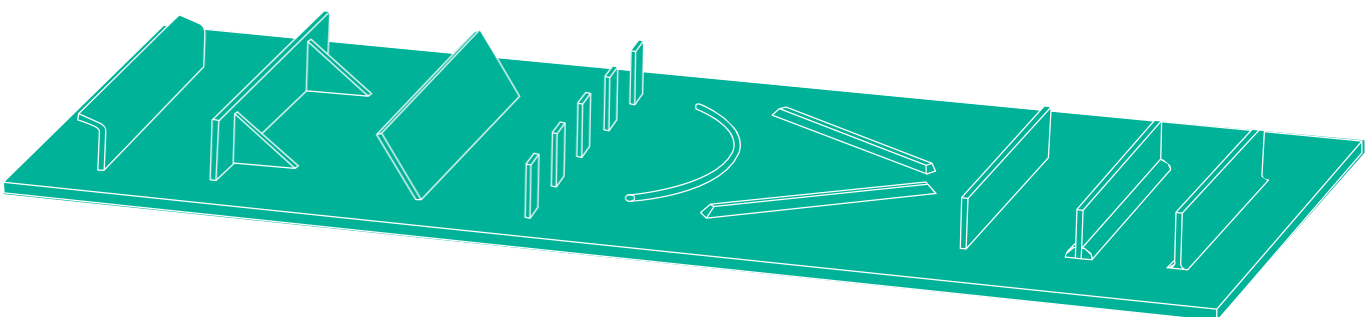
- | Volta SuperDrive™ offers thermoplastic positive drive belts with self-tracking. Conveyor design is simplified, and the lightweight package of conveyor and belt can handle heavy loads with small motors and reduced electrical consumption.
- | On-site welding is fast and reduces downtime and maintenance on systems that require high throughput.
- | Elevators suffer less damage to cleats from falling materials and from abrasion.
- | Thin belts are more durable than conventional ply/ fabric belts, thus reducing the air gap and increasing the magnetic field intensity acting on metals in separation applications.
- | High impact and abrasion-resistance than any other belt type.
- | Difficult to assemble and maintain, extra thick rubber belts can be conveniently replaced by over 50% thinner thermoplastic belts without loss of lifetime.
- | Butt welded joints reduce vibrations even at high speed.

- | Belts can work underwater and can be perforated with custom-made hole designs.
- | Dual layer belts are available for gauging belt lifetime during use.
- | Special 6mm positive drive belts can handle extra heavy loads and accumulation.
- | All belts can work on roller beds and in troughs.
- | Anti-static belts are available.
- | Repairs can be performed on cuts and tears and patches (Dutchmen) can be welded in seamlessly.
- | Where cleaning is essential to eliminate odors or remove particles, the belts clean up better and faster than any other available belt material, saving time and costly resources.
- | Funnels and chutes can be custom-made to solve problems such as wear, impact, and noise at infeed and outfeed points.
- | 100% homogeneous skirting materials are available for protecting belts. Do not curl in outdoor applications.
- | Tooling can be acquired for inhouse belt replacement along with training for technicians and maintenance staff. The necessary skills can be acquired in minutes.

Recommended Belt Types and Fabrication Options

Applications	Type	Code	Thicknesses	Colour	Extra Features
General conveying belt for wet ambient	Flat homogeneous	FEZ	2, 2.5, 3, 4, 5 mm		
General conveying impact belt for wet ambient	Flat homogeneous	FEPZ	3, 6 mm		
General conveying – High grip top surface for inclines	Flat reinforced	FRG/ST	3, 3.5, 5 mm		Double layer for monitoring wear progress
General conveying abrasion resistant belt	Flat reinforced	FRZ	2, 2.5, 3, 4, 5 mm		
General conveying abrasion resistant belt for wet ambient	Flat reinforced	FRG	2, 3, 4 mm		
General conveying impact belt	Flat reinforced	FRPZ	2, 3, 4, 6, 8, 10 mm		
General conveying impact belt	Flat reinforced	FRBL ESD	2, 2.5 mm		Anti-static, no fabrications
Positive drive – All ambientes	Positive Drive homogeneous	FMB SD	3, 4, 6 mm		
Positive drive – Dry ambient	Positive Drive homogeneous	FEZ SD	3, 4 mm		
Positive Drive – Special	Positive Drive homogeneous	FMB SD MD	3 mm		Metal detectable

*Fabrications include: Cleats, cleats with gusset, sidewalls, guides, and perforations. Special options are available with most materials.



Volta - Recycling Applications



Car Parts



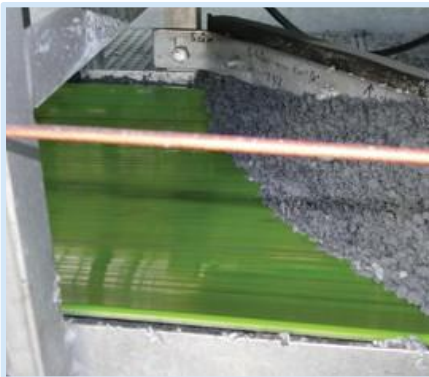
Aluminum



Magnetic Metal Separator



Glass



Paper



Sewage Treatment Lines



Magnetic Metal Separator

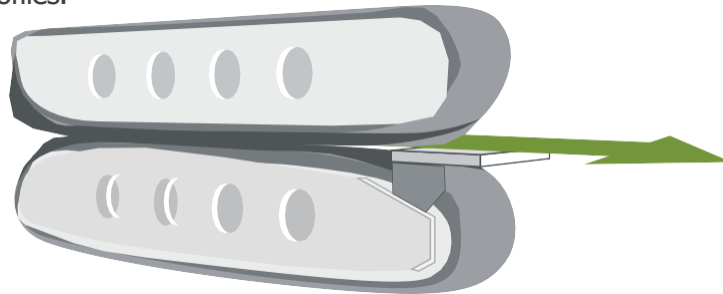


Biomass



FRPZ-8 belt repaired with electrode

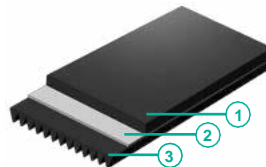
"Haul-offs" are pulley-driven parallel belts that contact opposite sides of in-process products, usually by means of rollers exerting suitable pressure for the belts to grip and haul them, with the desired controlled pulling action. These work in pairs and are custom made with a cover layer that is suitable for the shape and consistency of the hauled product. A sectioned cover, known as "caterpillar", allows added flexibility for the belt to fit small pulleys. A cord or fabric reinforcement layer is selected to withstand the belts' pull-force, while the base layer fits pressure-roller and drive pulley profiles.



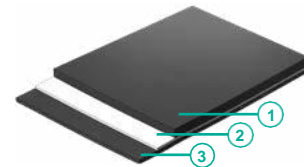
The Volta Power line has a wide range of Haul-off belts produced on either Flat or Poly-V bases. Other bases, such as Timing or Banded-V are available by request. Polyurethane Haul-off belts are outstanding for low wear and chemical resistance. V-section bases are self-centering, eliminating the need for added belt guides. Non-marking cover textures provide a variety of solutions for your process needs.

Pitch Width (mm)	
PJ	2.34
PL	4.70
PM	9.40

Poly-V Haul off belt



FLAT Haul off belt



1. PU (Polyurethane) Cover Layer - Product-Hauling Side of Belt

- Shore hardness: 72A
- High abrasion resistance
- Excellent grip properties
- Excellent chemical resistance
- Homogeneous coating
- All half round and V-grooves on request
- Options for smooth surfaces and lateral grooved surfaces

2. Polyester Cord Reinforcement Layer

- Tensile strength of the cord - up to 670 kg/cm belt width
- Cord layer is truly endless no weak point

3. PU (Polyurethane) Base Layer - Pulley-Side

- Shore hardness: 80A
- Customized profiles on the pulley

Outside lengths are available from 1200 mm to an unlimited maximum. Widths manufactured range from 50 mm to 400 mm. Thicknesses are typically from 8 mm to more than 30 mm.

Unique belts are designed for use in plastic extrusion, as well as for the production of bundled cables.

The belts mobilize the processing of extruded profiles and hose; also in drawing and rolling of plastic, metal or other materials as shaped profiles, tubes or rods. Haul-off belts handle materials in stacks or rolls, for printing, labeling and packaging. These are useful in cable and wire production, hose, tubing and rod manufacturing.



Volta Haul off belt benefits

✓ **Withstand exposure to Harsh Environments:**

Volta Power belts are highly resistant to chemicals, hydrolysis, oils and exposure to very low temperatures, down to -40°C.

✓ **High Performance and Operating Life:**

Non-Marking Thermo-Plastic Polyurethane in a resistant belt design offers extended service in tough applications.

✓ **No Minimum Quantity Required:**

Volta Power technology allows us to manufacture these belts in small quantities, in no time.

Volta Tube Winding Belts

Volta's new spiral core winding belts offer maximum winding precision for cardboard and paper spiral tube manufacturing. These belts give precise results, reducing waste and increasing tube quality. Volta belts have a durable surface to ensure consistent grip and movement of materials being processed. All belts are truly endless and can be made to exact dimensional tolerances to provide a tight wrap on mandrels.

Belt Construction:

- Lower layer - Polyurethane 80A or 72A Shore hardness
- Reinforcement - Polyester cord
- Upper layer - Polyurethane 80A or 72A Shore hardness

Polyurethane Upper (or Lower) Layer:

Polyurethane 80A or 72A Shore hardness.

Advantages of Polyurethane upper (or lower) layer:

- High abrasion / wear resistance
- Excellent coefficient of friction
- New 72A Shore for improved high grip

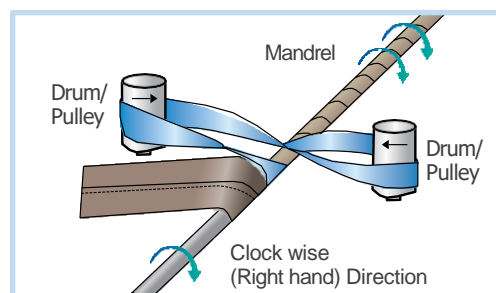


Figure 1

Pre-Twist

Volta offers belts with a pre-twist incorporated in the belt construction. The pre-twist offers a smooth, low tension operation. The pre-twist direction should be defined according to the winding direction of the tube production process. Refer to Figure 1.

- Pre-twist with one wrap is used for the common practice of one wrap around the tube.
- Pre-twist with a double wrap is used to wind the belt twice around the tube.

The two full wraps offer a higher grip and are generally used for thicker tube walls.



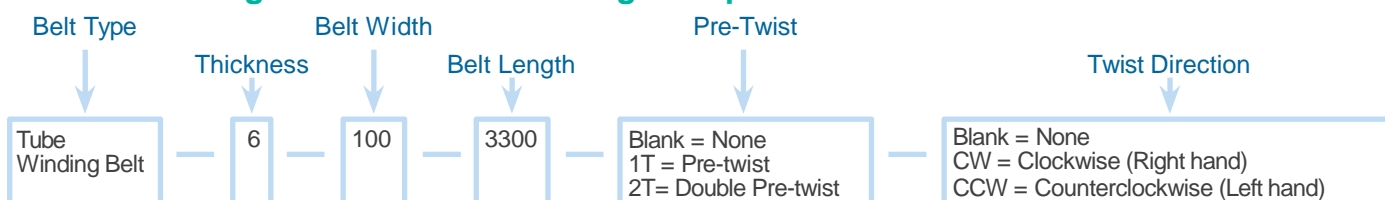
Double Pre-Twist

Advantages:

- Truly endless
- Any length from minimum 960mm/37.8"
- Pre-twist for improved performance
- Double pre-twist for tube double wrap
- High breaking strength
- Low stretching

Belt Type	Color	Thickness	Shore	Tensile Strength		Minimum Cardboard Tube / Mandrel Diameter	
				N/cm width	LBS/inch width		
Tube Winding Belt FLB	Blue	4 mm	80A	3250	1853	30 mm	1 1/6"
Tube Winding Belt FL	Brown	6 mm	80A	5830	3324	70 mm	2 3/4"
Tube Winding Belt FLB	Blue	8 mm	80A	5830	3324	76 mm	3"
Tube Winding Belt FTB	Blue 10	4 mm	72A	3250	1853	25 mm	1"
Tube Winding Belt FTB	Blue 10	6 mm	72A	5830	3324	63 mm	2 1/2"
Tube Winding Belt FTB	Blue 10	8 mm	72A	5830	3324	70 mm	2 3/4"
Tube Winding Belt FFL	Brown	8 mm	76A	5830	3324	70 mm	2 3/4"

When ordering a Volta Tube Winding Belt please use the information as below:



Example:

Tube Winding Belt FLB - 4 - 100x3300 - 1T - CW (Tube Winding Belt FLB - 4 - 100x3300 - Pre-Twist - Clockwise)
 Tube Winding Belt FLB - 4 - 4"x130" - 1T - CW (Tube Winding Belt FLB - 4 - 4"x130" - Pre-twist - Clockwise)

Electro-Static Dissipative (ESD) Belts & Anti-Static (AS) Profiles

Conveyor belts for certain uses must not collect electro-static charges, especially where impulsive releases of built-up charges could cause damage to conveyed products or cause other hazards.

Most belts are made of polymers that are insulators, with high surface resistivity that does not allow electrostatic charges to flow and dissipate. Belts are considered to be insulators when their surface resistivity is greater than 10^{12} ohms/square ($10^{12} \Omega/\text{sq.}$)

For cases where electrostatic protection is required, Volta makes special belting in two low resistivities that allow charges to dissipate onto grounded elements which contact the belt.

Available Resistivity Ranges:

Volta ESD - Electro-Static Dissipative: With resistivity below 10^8 ohms/square ($10^8 \Omega/\text{sq.}$),

ESD materials offer Volta's highest level of antistatic protection to date. ESD is useful in processes that are very sensitive to electrostatic discharges as in the manufacturing of electronics components. ESD belts are mechanically joined or finger-spliced to meet specified pull-strengths.

Volta AS - Anti-Static profiles resistivity is lower than 10^{10} ohm/square ($10^{10} \Omega/\text{sq.}$)

Allows electro-static charges to flow and dissipate to grounded elements.

Available Resistivity Ranges:

Although the ability to dissipate charges is only measured on a belt's surface, Volta meets the required levels of electrostatic protection by making the AS profiles and the ESD belts special raw materials with lower surface and internal resistivity. Other manufacturers use coatings, surface-applied salts or solutions that wear-off or even contaminate conveyed products. Although these electrostatic protection methods may be less costly than Volta's approach, their ability to dissipate charges is lost as coatings wear-off or when conducting salts are removed by cleaning. Other manufacturers' ESD/AS belts can lose their conductive coatings or active salts simply through changes in weather and humidity.

Volta ESD belts and AS profiles have been successfully implemented in electronics manufacturing facilities and other uses where these abrasion resistant materials have resulted in lower maintenance and service costs as well as reduced product loss. The dense resilient thermoplastic is quick and easy to install and cushions sensitive conveyed materials such as glass screens and components.

Following these guidelines, Volta offers the following:

Flat Belts

Electro Static Dissipative (ESD) Belts												
Product & Color			Shore Hardness	Temperature Range	Coefficient of Friction on S.Steel (bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%		Range Ohms (Ω)/ Square	
						mm	mm	Inch	kg/cm	lbs/in		
	FRBL-ESD	Black	90A	0°C to 50°C / -32°F to 120°F	0.20	2	30	1 3/16	2.5	14	10 ⁷ - 10 ⁸	
						2.5	37.5	1 1/2	3.12	17.44		
	FNBL-CB-ESD*	Black	90A	0°C to 50°C / -32°F to 120°F	0.38	1	20	25/32	1.8	10.08	10 ⁷ - 10 ⁸	
						2.4	40	1 5/8	2.4	13.44		

*Belts can only be made endless with mechanical systems or finger splice. Pull force values are recommended only when using finger splice.



WARNING: Volta ESD belts are not ATEX certified at this time

Round Profiles

Round Anti Static (AS) Profiles						
Product & Color	Code	Hardness	Range - top surface	Diameter	Min. Pulley	
				mm	mm	Inch
	RPD-2-AS	88A/37D	10 ⁹ -10 ¹⁰ ohms/sq	2	20	13/16
	RPD-3-AS	88A/37D	10 ⁹ -10 ¹⁰ ohms/sq	3	30	1 3/16
	RPD-4-AS	88A/37D	10 ⁹ -10 ¹⁰ ohms/sq	4	40	1 9/16
	RPD-5-AS	88A/37D	10 ⁹ -10 ¹⁰ ohms/sq	5	50	2
	RPD-6-AS	88A/37D	10 ⁹ -10 ¹⁰ ohms/sq	6	60	2 3/8
	RPD-8-AS	88A/37D	10 ⁹ -10 ¹⁰ ohms/sq	8	80	3 1/8



WARNING: Volta AS profiles are not ATEX certified at this time