



*Conveying Solutions*

# *Flat Belts - General Industry*





# Flat Belts For the General Industry

For over 40 years Volta has been manufacturing General Conveyor Belting from highest quality Thermoplastic Elastomers (TPE) material with unique homogenous characteristics. These belts are most suitable for conveying ceramics, glass, cardboard, metal parts, recycling, etc. A wide range of colors, thicknesses, hardnesses and surfaces textures are available. Standard Belt Width = 1524mm / 60".



- ➔ Does not absorb industrial oils, fluids and chemicals.
- ➔ Absorbs the impact of falling products well to ensure a long belt life.
- ➔ Low coefficient of friction makes the belts highly resistant to abrasion.
- ➔ Resists cuts, cut expansion and impact punctures.
- ➔ High carrying capacity with excellent grip.
- ➔ Soft, non-marking belt treats the product conveyed with extreme care.
- ➔ Thin, resilient belts reduce the need for strong magnetic fields.

### Homogenous Belts

Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%	
					mm	mm	Inch	kg/cm	lbs/in
FK	Green	59D	-20° C to 75° C -5° F to 170° F	0.28	1.8	60	2 <sup>3</sup> / <sub>8</sub>	1.90	10.60
					2.5	80	3 <sup>1</sup> / <sub>8</sub>	2.50	14
					3	88	3 <sup>1</sup> / <sub>2</sub>	3.20	17.60
					4	105	4 <sup>1</sup> / <sub>4</sub>	4.20	23.50
					5	150	5 <sup>7</sup> / <sub>8</sub>	5	28
					6.5	195	7 <sup>1</sup> / <sub>8</sub>	6.50	36.40
FZ	Green	95A/46D	-30° C to 60° C -20° F to 140° F	0.36	2	30	1 <sup>3</sup> / <sub>16</sub>	1.20	6.40
					2.5	35	1 <sup>3</sup> / <sub>8</sub>	1.50	8
					3.2	43	1 <sup>3</sup> / <sub>4</sub>	2	10.80
					4	60	2 <sup>3</sup> / <sub>8</sub>	2.60	13.60
					5	80	3 <sup>1</sup> / <sub>8</sub>	3.20	16.80
FL*	Brown	80A	-40° C to 50° C -40° F to 120° F	0.55	2.5	17	2 <sup>1</sup> / <sub>32</sub>	0.30	1.80
					3	20	3/4	0.40	2.20
					4	30	1 <sup>3</sup> / <sub>16</sub>	0.60	3.40
					5	35	1 <sup>3</sup> / <sub>8</sub>	0.70	3.90
					8	60	2 <sup>3</sup> / <sub>8</sub>	1.20	6.80

### Homogenous Embossed Bottom Belts

FEPZ	Green	86A	-30° C to 50° C -20° F to 120° F	0.35	3	30	1 <sup>3</sup> / <sub>16</sub>	0.80	5.10
					4	40	1 <sup>5</sup> / <sub>8</sub>	1.10	6.30
FEST	Green	65A	-40° C to 55° C -40° F to 125° F	0.70	2	9	1 <sup>1</sup> / <sub>32</sub>	0.30	1.68
					3	14	9/16	0.45	2.52
					4	18	2 <sup>3</sup> / <sub>32</sub>	0.60	3.36
					5	22	7/8	0.75	4.20
FEZ	Green	95A/46D	-30° C to 60° C -20° F to 140° F	0.20	2	30	1 <sup>3</sup> / <sub>16</sub>	0.80	4.50
					2.5	35	1 <sup>3</sup> / <sub>8</sub>	1	5.60
					3.2	43	1 <sup>3</sup> / <sub>4</sub>	1.30	7.30
					4	60	2 <sup>3</sup> / <sub>8</sub>	1.60	9
					5	80	3 <sup>1</sup> / <sub>8</sub>	2.10	11.80

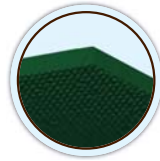
## General Conveyor Belts Top & Bottom Surfaces



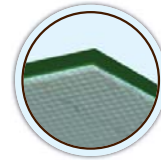
Smooth Top



ITR -10  
Impression Top  
Rough



Embossed Bottom



Reinforced Bottom

### Reinforced Belts

Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on Steel (Bottom)	Thickness		Minimum Pulley Diameter		Pull Force: Pretension of 1%	
					mm		mm	Inch	kg/cm	lbs/in
FRL*		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
FRGZ		95A/46D	-30° C to 60° C -20° F to 140° 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
FRG		95A/46D	-30° C to 60° C -20° F to 140° 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		65A	-30° C to 60° C -20° F to 140° F	0.20	3.5		40	1 5/8	6	33
		95A/46D			5		60	2 3/8	7	39
FRLG		80A	-40° C to 50° C -40° F to 120° F	0.20	5.5		70	2 3/4	13	73
FRPZ		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
<b>Reinforced Impression Top Belts</b>										
FRL - ITR 10		80A	-40° C to 50° C -40° F to 120° F	0.20	4		30	1	3.40	19

**Notes:** \*FL & FRL - FDA approved. Declaration of Conformity in compliance with EU Regulations No.: 10/2011, 1935/2004 and Directive 2002/72/EC. Suited to HACCP standards.

## Volta Tips for Best Results when Fabricating Reinforced Flat Belts

- ➔ Always join reinforced belts at an angle. This increases the area that the joint covers and creates stronger reinforcement at the joint which reduces stretching and improves the belts performance across the joined area.
- ➔ When placing a guide on fabric surface of the flat belt, the reinforcement fabric should be removed from the area that the guide will cover, with a router. This will allow you to heat weld the guide material directly to the base belt material, forming one solid unit that will not tear or come apart from the base belt.
- ➔ Check the different flight options available. The High Frequency (HF) welded flights that Volta offers give you the ultimate smooth, strong joint. Scoop cleats form a 'pocket' to elevate your product & angled cleats are highly suitable for incline applications.
- ➔ Tailor-made fabrications are our specialty.

## Electro Static Dissipative (ESD) Belts

This special belt is created from electro static dissipative (ESD) material that ensures the continuous release of electric 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 Steel (Bottom)	Thickness			Minimum Pulley Diameter		Pull Force: Pretension of 1%		ESD Ratio Ohms (Ω)/ Square
					mm	mm	Inch	kg/cm	lbs/in			
FEBL - ESD	Black	86A	-20° C to 50° C -5° F to 120° F	0.35	1.6	20	¾	0.40	2.20	10 <sup>9</sup> - 10 <sup>10</sup>		
					2	25	1	0.48	2.74			
					2.5	30	1 3/16	0.60	3.30			
FRBL - ESD	Black	86A	-30° C to 50° C -20° F to 120° F	0.20	2	25	1	5	28	10 <sup>9</sup> - 10 <sup>10</sup>		
					4	50	2	6	33.50			
					8	100	4	7.60	42.56			

## 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.



## Belt Coating Materials

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

Belt Coating Materials											
Products	GST - 4	MST - 6	FEST	FSTF			FSTF - ST	FSTF - ST Strips	FSTF - STX Strips	GWG - 4	
Illustration											
Description	Super Grip	Multi Grip	High Grip	Foam**			Foam & High Grip Top	Foam & High Grip Strips	Foam & High Grip Double Strips	Wood Grip	
Shore Hardness	65A	65A	65A	65A			65A	65A	65A	65A	
Size(mm)	Width*	50	50	1524	140	150	160	60	60	60	72
	Thickness	4	6	2, 3, 4, 5	14	6-12	4	4	4	4	3.75
Temp. Range	-40° C to 55° C / -40° F to 125° F										

**Notes:** Width\* - Maximum available width. \*\*Foam - Made from 65A shore material, actual hardness is lower.



## Roller Coating Sleeves

The Roller Coating Sleeves have an abrasion resistant, soft, non-marking surface that is ideal for roller coatings where the finished product is being conveyed on rollers. Using VOLTA tools, the sleeves are easily mounted with no lubricants or glues. Sleeves are available with a smooth or ribbed surface and in dimensions from 12 mm O.D. to 95 mm O.D.

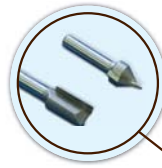
## Welding Tools

Volta provides you with a choice of tools especially designed to ensure high quality heat welded endless making of the full range of Flat belts. Our tools have a lightweight design which makes each tool compact, rugged and easy to use in the field and workshop. When using Volta tools only electrical power is needed and no water cooling or air pressure is required.



### ← FBW - Butt Welding Tool

The FBW System was created to butt-weld flat belts making them endless. The FBW Welding System should be used with suitable adaptors available for special textured top flat belts. The FBW Welding System includes a built-in adapter and stoppers for splicing SuperDrive™.



### ⇒ FT - Electrode Welding Kit

The FT Welding System is a tool for electrode welding joints, highly suitable for Volta flat belts. The FT Welding System uses a router to cut the bevel on the belt edges and to trim the weld on completion. The weld is carried out by using a Leister Hot Air Gun and Volta electrodes.



### ← P-100 & P-200 Narrow Butt Welding Tools

The P-100 pliers are suitable for butt welding narrow flat belts of up to 100mm and for best results they should be used together with the Welder W-141/142.

The P-200 pliers are suitable for butt welding narrow flat belts of up to 200mm and for best results they should be used together with the Welder W-241/242.

### ⇒ Volta Hinge Lace system and Metal Lace

The Volta Lace is a device that allows you to easily open the belt for cleaning or servicing of the conveyor. Volta lace is compatible with Volta 'M' Family Flat Belts of 2.5 to 5 mm 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. = nearly unbreakable fabrication and superior performance.*
- *Ideal material for forming slides or hammocks to gently support and break the fall of the product on the belt.*

## ↓ *Volta Belts in the General Conveying Industry*



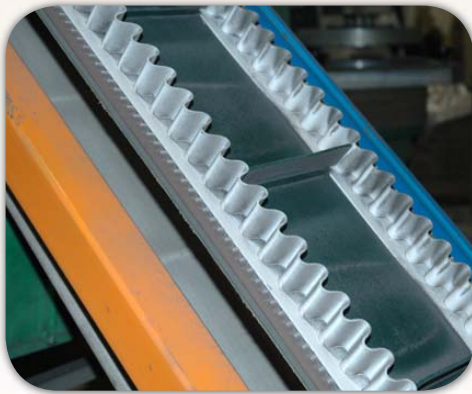
FRGZ - 2  
Screw conveying



FRPZ - 6  
Hammocks in glass recycling



FRGZ - 4  
Metal recycling



FEZ - 3.2  
Industrial chemical conveyor



FEZ - 3.2  
Nails production



FRGZ - 5  
Glass conveying



FRPZ - 6  
Glass recycling



FRG - 3  
Chemical powder conveying



FK - 3  
Brick pre - oven conveying

**Corporate Headquarters  
Sales and Manufacturing**  
sales@voltabelting.com

**USA**  
Tel: +1 973 276 7905  
Fax: +1 973 276 7908  
Toll Free: 1-877-VOLTAUS

**EUROPE**  
Tel: +31-546-580166  
Fax: +31-546-579508

[www.voltabelting.com](http://www.voltabelting.com)