



Conveying Solutions
Flat Belts - Food Industry



The Next Step in Belting

Flat Belts for the Food Industry

- ➔ Volta has been manufacturing belts from homogenous Thermoplastic Elastomer (TPE) materials for over 40 years.
- ➔ The base belts are cut and abrasion resistant and have no ply or hinged elements which harbor bacteria.
- ➔ Volta products are the optimal choice where superior hygiene, conveying and cost efficiency are targets.

Homogeneous Belts										
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%		Approvals
					mm	mm	Inch	kg/cm	lbs/in	
FHB		59D	-20° C to 75° C -5° F to 170° F		1.5	50	2	1.50	8.40	FDA/ USDA/ EU
					2	70	2¾	2	11.20	
					3	90	3½	3	16.80	
					4	110	4¾	4	22.40	
					5	150	5⅞	5	28.00	
					6	180	7	6	33.60	
FHW		59D	-20° C to 75° C -5° F to 170° F	0.28	1*	34	1⅜	1	5.60	FDA/ USDA/ EU
					1.5	50	2	1.50	8.40	
					2	70	2¾	2	11.20	
					2.5	80	3⅛	2.50	14.00	
					3	90	3½	3	16.80	
					4	110	4¾	4	22.40	
					5	150	5⅞	5	28.00	
					6	180	7	6	33.60	
FMB		95A/46D	-30° C to 60° C -20° F to 140° F	0.36	1.6	21	1⅜ ₁₆	0.96	5.37	FDA/ USDA/ EU
					2	30	1⅜ ₁₆	1.20	6.80	
					2.5	35	1⅜ ₈	1.50	8.40	
					3	40	1⅝ ₈	1.80	10.10	
					4	60	2⅜ ₈	2.40	13.50	
					5	80	3⅛ ₈	3	16.90	
					6	90	2⅝ ₈	3.60	20.25	
					7	105	4⅓ ₃	4.20	23.80	
					8	120	4½ ₂	4.80	27.20	
FW		95A/46D	-30° C to 60° C -20° F to 140° F	0.36	2	30	1⅜ ₁₆	1.14	6.40	FDA/ USDA/ EU
					3*	40	1⅝ ₈	1.70	9.60	
					4*	60	2⅜ ₈	2.28	12.80	
FMW		95A/46D	-30° C to 60° C -20° F to 140° F	0.36	1.6	21	1⅜ ₁₆	0.96	5.37	FDA/ USDA/ EU
					2	30	1⅜ ₁₆	1.20	6.80	
					2.5	35	1⅜ ₈	1.50	8.40	
					3	40	1⅝ ₈	1.80	10.10	
					4	60	2⅜ ₈	2.40	13.50	
					5	80	3⅛ ₈	3	16.90	
					7	105	4⅓ ₃	4.20	23.80	
					8	120	4½ ₂	4.80	27.20	
FTB		72A	-40°C to 40°C -40°F to 104°F	1.25	2.5	16	⅝ ₈	0.475	2.66	FDA/ USDA/ EU
					3	19	¾ ₄	0.57	3.2	
Low Temperature (LT) Homogenous Belts										
FMB		95A/46D	-35°C to 40°C -31°F to 104°F	0.4	1.6	16	⅝ ₈	0.64	3.60	FDA/ USDA/ EU
					2	30	1⅜ ₁₆	0.80	4.40	
					3	40	1 ⅝ ₈	1.20	6.70	
					4	60	2 ⅜ ₈	1.60	9	
					5	80	3 ⅛ ₈	2	11.20	
					6	90	2 ⅝ ₈	2.40	13.40	

Note: * Not standard. Standard belt width=1524mm/60".

Flat Belt Top Surfaces



Smooth



ITO -50
Impression Top
Oval



ITR -10
Impression Top
Rough



IRT
Impression
Roof Top



SP
Spikes



CT
Crescent Top



MC
Mini Cleats

Flat Belt Bottom Surfaces



Smooth



Embossed



Reinforced

Homogeneous Embossed Bottom Belts

Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%		Approvals
					mm	mm	Inch	kg/cm	lbs/in	
FEHB		95D	-20° C to 75° C	0.20	3	90	3½	3	16.80	FDA/ USDA/ EU
FEHW			-5° F to 170° F		4	110	4¾	4	22.40	
FELB		80A	-40° C to 50° C -40° F to 120° F	0.45	1.6	10	¾	0.32	1.79	FDA/ EU
					2	12	½	0.40	2.24	
					3	20	13/16	0.60	3.36	
FELW		80A	-40° C to 50° C -40° F to 120° F	0.45	1.6	10	¾	0.32	1.79	FDA/ EU
					2	12	½	0.40	2.24	
					2.5	15	9/16	0.50	2.80	
					3	20	13/16	0.60	3.36	
FEMB		95A/46D	-30° C to 60° C -20° F to 140° F	0.25	1.6	24	15/16	0.60	3.60	FDA/ USDA/ EU
					2	30	1¾	0.80	4.50	
					2.5	35	1⅝	1	5.60	
					3	40	1⅝	1.20	6.80	
					4	60	2¾	1.60	9.20	
FEMW		95A/46D	-30° C to 60° C -20° F to 140° F	0.25	2	30	1¾	0.80	4.50	FDA/ USDA/ EU
					2.5	35	1⅝	1	5.60	
					3	40	1⅝	1.20	6.80	
					4	60	2¾	1.60	9.20	
					5	80	3½	2.10	11.70	
FEW		95A/46D	-30°C to 60° C -20° F to 140° F	0.25	2	30	1¾	0.76	4.20	FDA/ USDA/ EU
					3	40	1⅝	1.12	6.30	
					4	60	2¾	1.50	8.40	
FETB		72A	-40°C to 40°C -40°F to 104°F	1	1.6	10	¾	0.29	1.6	FDA/ USDA/ EU
					2	13	½	0.36	2	
					3	19	¾	0.55	3	
Reinforced Belts										
FRLB		80A	-40° C to 50° C -40° F to 120° F	0.20	1.6	8	5/16	4	22	FDA/ EU
					2	10	¾	5	28	
FRLW		80A	-40° C to 50° C -40° F to 120° F	0.20	1.6	8	5/16	4	22	FDA/ EU
					2	10	¾	5	28	
					2.5	15	9/16	6.20	35	
					3	18	11/16	7.50	42	
FRMB		95A/46D	-30° C to 60° C -20° F to 140° F	0.20	2	25	1	6	33.50	FDA/ USDA/ EU
					3	35	1¾	7	39	
FRMW		95A/46D	-30° C to 60° C -20° F to 140° F	0.20	2	25	1	6	33.50	FDA/ USDA/ EU
					2.5	30	1¾	6.50	36.20	
					3	35	1⅝	7	39	
FRTB*		72A	-40°C to 40°C -40°F to 104°F	0.20	1.6	8	5/16	2.60	14.90	FDA/ USDA/ EU

Note: FRTB PF* - Pull Force calculated with Finger-Splice welding

Impression Top Belts											
Product & Color			Shore Hardness	Temperature Range	Coefficient of Friction on Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%		Approvals
						mm	mm	Inch	kg/cm	lbs/in	
ITO 50	FELB - ITO50		80A	-40° C to 50° C -40° F to 120° F	0.45	2	12	1/2	0.32	1.87	FDA/ EU
						2.5	15	9/16	0.40	2.32	
						3	18	11/16	0.50	2.80	
	FELW - ITO50		80A	-40° C to 50° C -40° F to 120° F	0.45	2	12	1/2	0.32	1.87	FDA/ EU
						2.5	15	9/16	0.40	2.32	
						3	18	11/16	0.50	2.80	
	FMB - ITO50		95A/46D	-30° C to 60° C -20° F to 140° F	0.36	2.5	35	1 3/8	1.50	8.40	FDA/ USDA/ EU
	FEMB - ITO50		95A/46D	-30° C to 60° C -20° F to 140° F	0.25	2	30	1 3/16	0.60	3.36	FDA/ USDA/ EU
						2.5	35	1 3/8	0.74	4.20	
						3	40	1 5/8	0.94	5.26	
						5	70	2 3/4	1.48	8.40	
	FEMW - ITO50		95A/46D	-30° C to 60° C -20° F to 140° F	0.25	2	30	1 3/16	0.60	3.36	FDA/ USDA/ EU
						2.5	35	1 3/8	0.74	4.20	
						3	40	1 5/8	0.94	5.26	
	FHW - ITO50		59D	-20° C to 75° C -5° F to 170° F	0.28	2	70	2 3/4	1.50	8.40	FDA/ USDA/ EU
						2.5	80	3 1/8	2	11.20	
						3	90	3 1/2	2.50	14	
ITR10	FELW - ITR10		80A	-40° C to 50° C -40° F to 120° F	0.45	3	18	11/16	0.52	2.94	FDA/ EU
						4	25	1	0.70	3.92	
IRT	FELB - IRT		80A	-40° C to 50° C -40° F to 120° F	0.45	4	25	1	0.60	3.40	FDA/ EU
	FEMB - IRT		95A/46D	-30° C to 60° C -20° F to 140° F	0.25	3.5	40	1 9/16	1	5.60	FDA/ USDA/ EU
						4	55	2 3/16	1.20	6.80	
	FMB - IRT		95A/46D	-30° C to 60° C -20° F to 140° F	0.36	3.5	52.5	2 1/8	2.10	11.80	FDA/ USDA/ EU
						4	60	2 3/8	2.40	13.50	
Spikes*	FELB - SP		80A	-40° C to 50° C -40° F to 120° F	0.45	2	20	13/16	0.40	2.24	FDA/ EU
						2.5	24	15/16	0.50	2.80	
						3	28	1 1/8	0.60	3.36	
	FEMB - SP		95A/46D	-30° C to 60° C -20° F to 140° F	0.25	2	40	1 5/8	0.80	4.50	FDA/ USDA/ EU
						2.5	45	1 3/4	1	5.60	
						3	50	2	1.20	6.80	
	FEMW - SP		95A/46D	-30° C to 60° C -20° F to 140° F	0.25	2	40	1 5/8	0.80	4.50	FDA/ USDA/ EU
						2.5	45	1 3/4	1	5.60	
						3	50	2	1.20	6.80	
Crescent Top	FELB - CT		80A	-40° C to 50° C -40° F to 120° F	0.45	3	35	1 3/8	0.60	3.36	FDA/ EU
	FMB - CT		95A/46D	-30° C to 60° C -20° F to 140° F	0.40	3	60	2 3/8	1.80	10.12	FDA/ USDA/ EU
	FEMB - CT				0.25	3	60	2 3/8	1.20	6.75	
	FEMW - CT					2.5	50	2	1	5.60	
Mini Cleats	FELB - MC		80A	-40° C to 50° C -40° F to 120° F	0.45	2.5	40	1 5/8	0.50	2.80	FDA/ EU
	FELW - MC		80A	-40° C to 50° C -40° F to 120° F	0.45	2.5	40	1 5/8	0.50	2.80	FDA/ EU
						3	50	2	0.60	3.40	
	FEMB - MC		95A/46D	-30° C to 60° C -20° F to 140° F	0.25	3	70	2 3/4	1.20	6.80	FDA/ USDA/ EU

Note: Spikes - *Height of Spikes above base belt is 2.8 mm.

Reinforced Impression Top Belts									
Product & Color	Shore Hardness	Temperature Range	Coefficient of Friction on Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%		Approvals
				mm	mm	Inch	kg/cm	lbs/in	
FRLB - ITO50	80A	-40°C to 50°C / -40°F to 120°F	0.20	2.5	15	9/16	3.20	18	FDA/ EU
FRLW - ITO50	80A	-40° C to 50° C -40° F to 120° F	0.20	2.5	15	9/16	3.20	18	FDA/ EU
				3	18	11/16	3.48	21.60	
FRMB - ITO50	95A/46D	-30° C to 60° C -20° F to 140° F	0.20	2.5	32	1 1/4	4.10	24	FDA/ USDA/ EU
				3	36	1 7/16	4.30	25.20	
FRMW - ITO50	95A/46D	-30° C to 60° C -20° F to 140° F	0.20	2.5	32	1 1/4	4.10	24	FDA/ USDA/ EU
				3	36	1 7/16	4.30	25.20	
FRLW - ITR10	80A	-40°C to 50°C / -40°F to 120°F	0.20	4	30	1	3.40	19	FDA/ EU

Covered Bottom Flat Belts

Ideal for special applications, for example in bakeries and confectionary where reinforcement is necessary and hygiene cannot be compromised. The fabric reinforcement is thermally-coated with a thin layer of Volta TPE to provide a seal, preventing both contamination and delamination. As an extra precaution, belt edges can be thermo-sealed or recessed to prevent fraying and the ingress of contaminants.



Fabric Reinforcement coated with homogeneous Volta material.

Covered Bottom/ Covered Bottom Impression Top Belts									
Product & Color	Shore Hardness	Temperature Range	Coefficient of Friction on Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%		Approvals
				mm	mm	Inch	kg/cm	lbs/in	
FRLB - CEB - B	80A	-40° C to 50° C -40° F to 120° F	0.30	2	19	3/4	2.20	12.40	FDA/ EU
				3	30	1 1/4	2.80	15.60	
FRLW - CEB - B	80A	-40° C to 50° C -40° F to 120° F	0.30	2	19	3/4	2.20	12.40	FDA/ EU
				3	30	1 1/4	2.80	15.60	
FRLW - CEB - C	80A	-40° C to 50° C -40° F to 120° F	0.20	2	19	3/4	2.20	12.40	FDA/ EU
				3	30	1 1/4	2.80	15.60	
FRLW - CB	80A	-40°C to 50°C / -40°F to 120°F	0.45	2	19	3/4	3.10	17.40	FDA/ EU
FRMB - CEB - B	95A/46D	-30° C to 60° C -20° F to 140° F	0.30	3	40	1 5/8	6.80	38	FDA/ USDA/ EU
FRMB - CEB - C			0.30	3	40	1 5/8	6.80	38	FDA/ EU
FRMB - CB			0.45	3	40	1 5/8	7.20	40	FDA/ USDA/ EU
FRMW - CEB - C			0.30	3	40	1 5/8	6.80	38	FDA/ USDA/ EU
FRLB - CEB - B - ITO50	80A	-40°C to 50°C / -40°F to 120°F	0.30	2.5	15	9/16	3.50	18	FDA/ EU

Belt Coating Materials for the Food Industry							
Products	GIB	MIB	WIB	FEIB	FEMB/FEMW-SP	FELB-SP	FLB-IST
Illustration							
Description	Super Grip	Multi Grip	Wood Grip	High Grip	Spikes	Spikes	Saw Tooth
Hardness	62A	62A	62A	62A	95A	80A	80A
Size (mm)	Width*	50	50	70	1524	1524	1524
	Thickness	4	6	4	2/ 2.5/ 3/ 4	2/ 2.5/ 3**	2/ 2.5/ 3**
CoF (Steel)	0.98	1.08	1.05	0.95	0.25	0.45	0.55
Temperature Range	-20° C to +40° C				-30° C to +60° C	-40° C to +50° C	-40° C to +50° C

Note: Width* - Maximum available width. **Height of Spikes above base belt is 2.8 mm.

Aramid Cord Reinforced Belts

A food grade flat belt with special tensioning members hermetically encased in non-porous homogeneous material which has been tested for durability. Used mainly in applications such as loads on long, narrow belts with small diameter pulleys.



Aramid Cord Reinforced (ACR) Belt										
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 0.2%		Approvals
					mm	mm	Inch	kg/cm	lbs/in	
FMB-ACR		95A/46D	-30°C to 60°C -20°F to 140°F	0.36*	3.2	80	3 1/8	3.50	19.60	FDA/ EU
Aramid Cord Reinforced (ACR) Embossed Bottom Belt										
FEMB-ACR		95A/46D	-30° C to 60° C -20° F to 140° F	0.25**	3.2	80	3 1/8	2.60	14.50	FDA/ EU
Aramid Cord Reinforced (ACR) Impression Top Belt										
FLB-ITO50 -ACR		80A	-40°C to 50°C -40°F to 120°F	0.55*	2.5	20	0.79	4.40	24.70	FDA/ EU
Aramid Cord Reinforced (ACR) Impression Top & Embossed Bottom Belt										
FELB-ITO50 -ACR		80A	-40°C to 50°C -40°F to 120°F	0.45**	2.5	20	0.79	4	22.40	FDA/ EU
Low Temperature (LT)Aramid Cord Reinforced (ACR) Embossed Bottom Belt										
FELB-LT-ITO50 -ACR		80A	-40°C to 50°C -40°F to 120°F	0.45**	2.5	18	0.7	4	22.40	FDA/ EU
Low Temperature (LT)Aramid Cord Reinforced (ACR)Impression Top & Embossed Bottom Belt										
FEMB-LT-ITO50-ACR		95A/46D	-35°C to 50°C -30°F to 120°F	0.25**	2.5	40	1.57	4	22.40	FDA/ EU

Note: The Pull Force for ACR has been calculated on the basis of finger splice weld.

Endless Making Techniques



FT - Electrode Welding System
The FT Welding System provides electrode welded technology.



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

Volta Hinge Lace system

Volta lace is compatible with Volta 'M' material belts from 2.5 to 5 mm thickness. All Volta flat belt material is easy to clean without removing from conveyor and therefore lace is used only where absolutely necessary. The strength of the belt will be affected at the joint where lace is used.



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