

***Volta Belting  
Technology***

**/// Motech**

# About Volta Belting

Volta Belting Technology Ltd. has been a world leader in the manufacture of Thermoplastic Elastomer (TPE) belting and profiles for over 50 years. Volta Belting's homogeneous belts are known for their high material strength, superior dimensional exactitude and stability. The materials are cut and wear -resistant and impervious to water, oils and other fluids. They are easy to install on-site, with a minimum of contamination to the work area, and, if damaged, can be repaired efficiently by closing tears or replacing sections. Volta belting's positive drive flat belts are uniquely designed to overcome the numerous shortcomings associated with conventional conveyor belts: suitability in wet (even submerged) conditions without off-tracking and without the need for friction rollers, thereby saving on conveyor design and bringing the food processing industry closer to its goal of providing safe, affordable food for all. The food-grade belts are FDA/USDA/USDA Dairy approved and confirm to EC regulations. The materials also support HACCP principles and are suited to CIP procedures. In general industries, the belts come into their own by offering superior durability (for a "lifetime") and savings in maintenance and downtime. Volta Belting serves specialized industries such as wood and furniture, paper and packaging production, metal processing, automotive, recycling and mechanized logistic facilities. Volta Belting offers the largest range of round and trapezoid (V) profiles. In a number of key industries, the profiles can be used as rings to drive roller beds. Volta Belting provides experienced sales and technical service support in more than 50 countries, covering major industrial centers throughout North and South America, Europe, Asia and Africa. On site training is available at Volta Belting's main fabrication centers in North America and Europe. Volta Belting's innovative belting technology guarantees extended productivity, lower costs of ownership and optimal operation in every installation.



## The Next Step in Belting



Fresh Cut Potato Industry

Conveying Solutions



# French Fry Processing Successes Using Volta Belts

The world consumes a lot of potatoes and potato processing lines are some of the largest and most sophisticated in the food industry, especially in terms of throughput volume and capacity.

The most critical aspect for conveying systems in potato processing plants is hygiene (sanitation). In answer to this challenge, Volta homogenous belts are highly resistant to the aggressive nature of starch which tends to corrode the belt surface.

Before food reaches the consumer's table, it has already come into contact with harvesting equipment, freezers, cold storage units, a wide array of transportation vehicles in various containers, and has passed through processing machinery.

Worker safety, product quality, equipment reliability, sanitation, and ease of maintenance are all top concerns for conveyors in the potato processing industry. Hygiene is important to potato processors and continues to rise in importance given the increased focus on food safety in addition to more demanding production schedules.

Hygiene standards in the food industry are extremely high, especially when it comes to conveyor belts as these are in direct contact with food.

Food products routinely make contact with conveyor belting, and public awareness of the industry's reliance on easily-broken modular belting has risen. The presence of plastic fragments from this source, either as foreign bodies or contamination in the food, is now common knowledge.

As a manufacturer of food-grade conveyor belts with over 50 years of industry experience, Volta Belting Technology firmly stands behind the safety and stability of all Volta food-grade belts to prevent the problems found with inferior belt types.



## Raw Intake / Receiving

Raw Intake or Receiving is the location and process where the raw potatoes are off-loaded into the processing plant. During the process, significant amounts of dirt, sand, mud, vines, and rocks are mixed in loosely or are already adhered to the potatoes. These materials, including the potatoes, can be referred to as 'products'. The products create a very harsh working atmosphere for a conveyor, causing severe abrasion and impact. In some plants, the potatoes and 'products' are dumped from trucks onto a steel pan or hopper and simply gravitate onto the belt surface.

Volta food-grade materials possess mechanical features which make them ideally suited to static elements such as funnels or chutes.

When modular belts are used, the free fall of the potato during intake and washing can break belt materials. Plastic parts can then go into the potato, creating hazard points.

Volta uses homogeneous food-grade materials, including transparent and translucent conform designs for funnels, chutes, pipes, and similar elements.

The flexible material is ideal for forming and is used on potato intake chutes and other areas where a gentle transfer can prevent bruising.

The belt material absorbs the impact of falling products, preventing waste and rejects.

Measurements, like those for hopper linings, are often difficult or inaccurate, therefore all elements are custom-made and can even be fitted and welded on site.

Hammocks are used to reduce noise and damage to sensitive products in freefall.

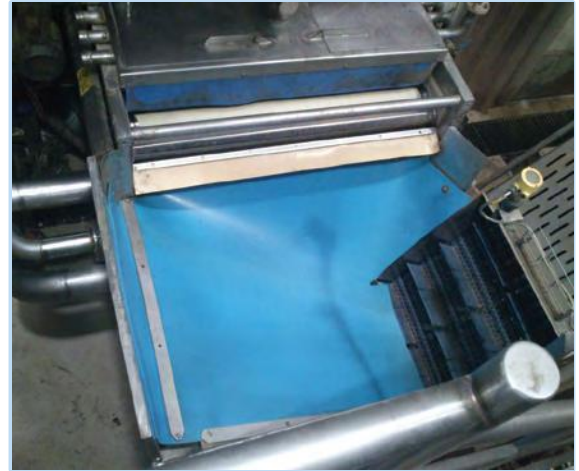


The very first location where Volta solved problems was the steel pan or hopper.

**❗ The Problem:** The constant impact of the 'products' on the pan repeatedly broke the welds between the pan and the conveyor frame.

**✓ The Solution:** We replaced the entire steel pan with a thick, dense, homogenous Volta material and bolted it to a steel framework that was created by the plant. These hygienic TPE pans were much less expensive than the steel version and the end users could employ them for at least 2 seasons without needing repair.

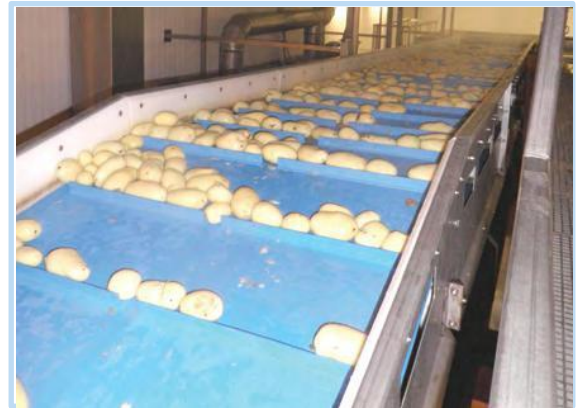
From here, the 'product' cascades down the pan onto the first conveyor belt which is typically at an incline, moving the 'product' into the plant and onto the next place where Volta SuperDrive™ solved another problem.



**❗ The Problem:** The constant impact of the 'product' landing on the conveyor would, in the past, cause the cleats to detach as well as heavy wear and tear. The belt would need to be replaced on a monthly basis.

**✓ The Solution:** These conveyors were changed to suit a SuperDrive™ with short (1 to 1.5" high), double electrode welded cleats. These belts proved incredibly successful, with some plants reporting multiple seasons of work free of trouble and maintenance.

The mixed-in vines, rocks, and other debris are then removed from the 'product' and the potatoes are transferred into the 'wet end'.



## Wet End / Washing and De-stoning

After this process, the potatoes are washed clean and are on their way to the peeler. (N.B. some restaurants prefer their fries to still have peel on them and some lines will send the potatoes on, bypassing the peeler).

After the peeler, most of the conveyors are troughed and commonly use PVC 120 white or 3-ply white Nitrile belts.

**❗ The Problem:** These old-tech belts were unhygienic and wore out very quickly. Some had mechanical issues with 'stringing', fibers loosening from the reinforcement fabric in the belting and wrapping around bearings. This caused breakdowns and the entry of foreign bodies into the product flow. The fast wearing was largely due to residual liquids and the presence of starch seeping out of peeled potatoes and cracking the surface of both PVC and white Nitrile rubber.

**✓ The Solution:** These conveyors were retrofitted to accept Volta SuperDrive™ which has proven to solve all the problems noted above. Volta belts are highly resistant to the aggressive nature of starch, don't contain fibers, and do not deposit fragments and belt parts into the product flow. A thick SuperDrive™ is preferred for conveying whole potatoes to absorb impact and prevent bruising should the potatoes be dropped onto these conveyors. The ease with which a Volta belt can be welded on-site has eliminated the use of lacing – another benefit from the changeover and another bonus for the processor.



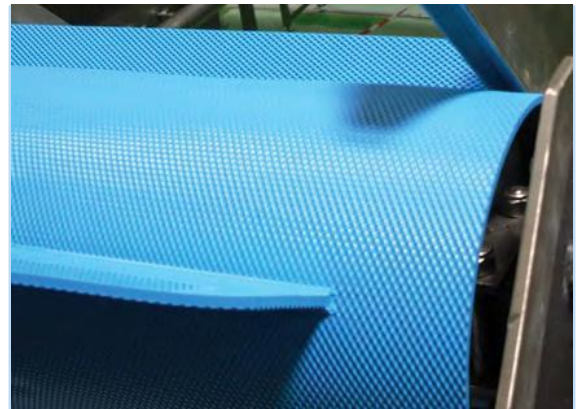
## Inspection & Sorting

In some plants, the potatoes are then inspected using visual inspection machines which detect brown spots, blemishes, and other imperfections. They also attend to any last residue of 'product' that may be on or in the potatoes. In some cases, inspection takes place after the potatoes have been cut into strips. Volta SuperDrive™ belts have been used on the conveyors that feed the inspection machinery and the takeaway conveyors handling output from the inspection machines. SuperDrive™ belts are also highly successful on takeaway conveyors removing the rejected material which, if safe, is further processed for animal feed.



**○ The Problem:** When a French fry is still raw and wet, it tends to stick to the surface of the belting due to surface tension, thus products can travel around the head pulley and then drop - often onto the floor. This was previously corrected by spraying water on the head pulley or attempting to blow the fries off the belt with an air jet. Water is ever more expensive and now considered a finite resource, so avoiding this is necessary.

**✓ The Solution:** Volta SuperDrive™ with the ITO-50 texture allowed the plants to put an end to the water spraying of the head pulleys as it allows the fries to easily drop off of the belting. The texture is easy to clean and features the benefits of all Volta food-grade materials.



## Further (manual) Inspection

However, isolated pieces of 'product' can still make it through the visual inspection machines without being removed. Therefore a person is often stationed next to a troughed conveyor prior to the packaging and ensuing freezing process.

**○ The Problem:** The previously mentioned issues of 'stringing' and wear continue to be a problem when using white PVC or Nitrile rubber belts. Additionally, detached cleats add to the foreign bodies that can ride along with the good fries. Furthermore, white belts have been demonstrated as a direct cause of headaches and nausea in inspection personnel.

**✓ The Solution:** SuperDrive™ belts with small ridge cleats welded using Volta 'electrode' profile have replaced the traditional belts and solved these issues. The small ridges help carry wet French fries up any slight incline commonly used in this process. The blue color is preferred and greatly reduces requests for breaks or headache medications from the inspectors. These belts have been seen to last for many years in some plants.

Our new SuperDrive™ belt with Mini Cleat (MC) top will replace this belts. The fully extruded cleats and the benefits of the positive drive conveying enhances the incline conveyance capability of carrying bulk product on large width belts, usually 36 inches (92mm) wide that run with a trough and usually up an incline by up to 25 degrees. The MC top prevents product rollback on the incline without requiring flights.



## Packaging

There is a wide array of applications in packaging. In most cases, Volta has retrofitted conveyors that were using modular belting, but some older plants were still using Nitrile and PVC belts. One of the most successful applications is conveyors that carry bagged fries through the metal detector. This is another area where a slight incline is common.

❶ **The Problem:** Bagged product moving on an incline through a metal detector on modular belting with rubber inserts to keep the bags from sliding back. These inserts soon wear out and then the bags begin sliding back toward the tail of the conveyor. This causes pileup and necessitates the stopping of the line and for bags to be pushed manually up the incline.

✓ **The Solution:** The conveyors were retrofitted with DualDrive™ used upside down with the drive lugs facing up as small cleats carry the bags up the incline. This doesn't give them the tracking that SuperDrive™ does.

A new FMB-SD-MC-ITM2 will be used here. The fully extruded Mini Cleat (MC) top on our SuperDrive™ homogeneous material enhances the incline conveyance capability of carrying bulk product by up to 25 degrees. These belts afford the end users excellent durability.

## Conclusion:

In conclusion, within a potato/French-fry plant, Volta offers many varied uses and benefits for end users. Contact Volta to reduce maintenance, and improve cost-efficiency, hygiene, and auditor compliance.



# French Fry Processing Successes Using Volta Belts



SD™ in Potato Intake



SD™ at Wet End



SD™ at Wet End



SD™ at Wet End



SD™ French fries elevator



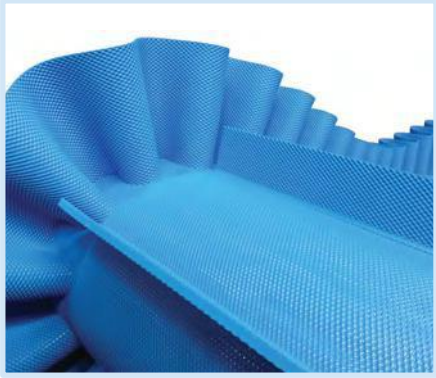
SD™ in French fries conveying



SuperDrive™ lines



Clear material used for Funnels



SuperDrive™ with ITO50 texture



## The Next Step in Belting



## Hygienic Belting for Tomato Processing

Conveying Solutions



The demand for hygienic belts has come from concerns about public safety and also from the increasing liability of companies who do not conform to legislation (such as FDA or EU) or to guidelines.

Guidelines are drafted by a variety of organizations and the most recent one on conveyors and belt comes from EHEDG ([www.ehedg.org](http://www.ehedg.org)). This is the most progressive document of its kind and the first to consider whether all "food grade" belts are actually "food grade" for use in humid applications or if only the raw materials they are made from are truly "food grade".



This document (EHEDG Guideline 43), together with the Handbook of Hygienic Design constitutes the most advanced statement on belts.

For the first time modular belts are not considered hygienic and ply/fabric belts are required to be protected by a coating of sealed plastic on the edges and underneath. This new approach leaves solid thermoplastic belting as the only plastic material that should be allowed to come into contact with food. The Guideline does not have the force of law and so there is no demand for such belts to be removed but certainly for replacement belts and new conveyors these belt types should be phased out.

End Users, particularly corporations, are conscious of their public image and of their duty to the public. Supermarket chain auditors and others involved in sourcing processed food are beginning to ask processors to conform to hygienic design rules and so OEMs and conveyor builders are also asked to fall into line. Projects will be decided on the ability of an OEM to integrate such belting material into the production lines. Homogeneous thermoplastic belts have come of age and are now central to the food processing industry and to best practice in food production.

Volta has been a pioneer in this field for many years. No other belting company has such a deep involvement in and commitment to food hygiene or has produced such a comprehensive range of belting products, positive drive systems and fabrications solely for this purpose, equipping tens of thousands of conveyors worldwide.



Volta SuperDrive™ Belt



Volta SuperDrive™ Belt

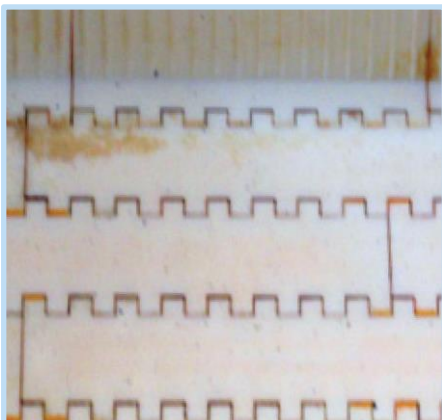
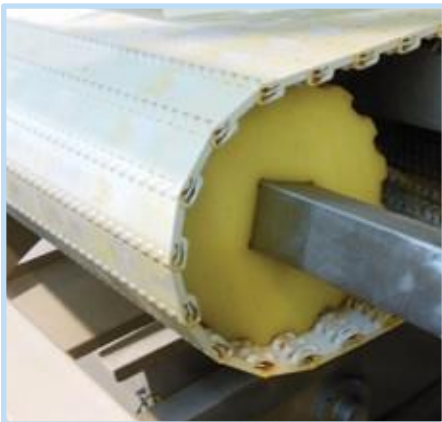


In the tomato processing industry, Volta is able to offer a revolutionary technology that complies with the highest hygienic standards used in modern food processing as described above and also provides the factory with cost benefits;

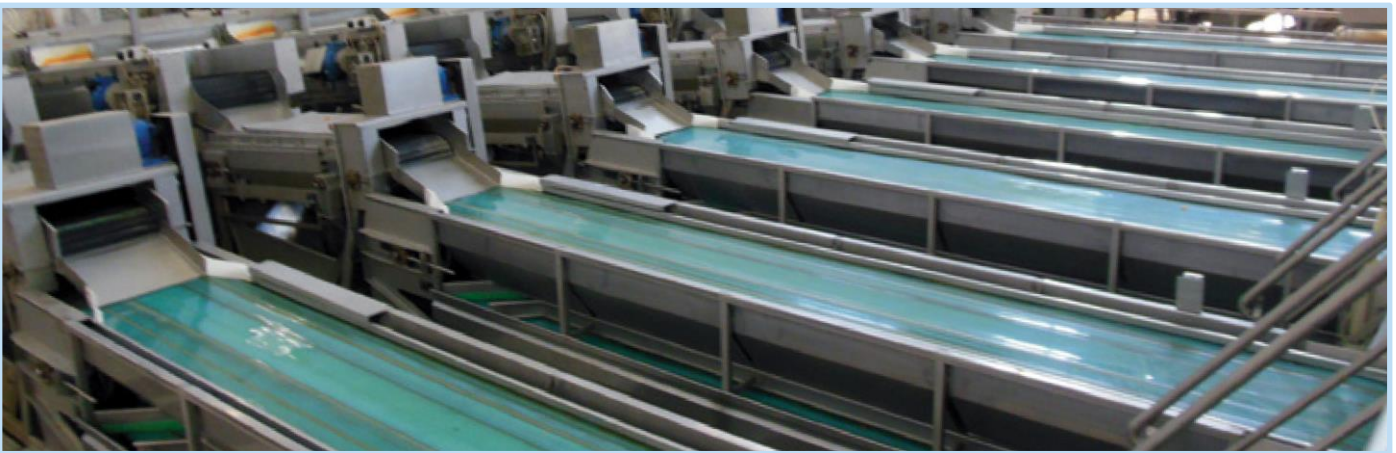
1. Less breakdowns on intake/washing belts (no stoppages)
2. Positive drive belts on roundabout/merry-go-round systems that prevent juice leaking into conveyor; belts work with no breakdowns and last for three or more seasons
3. Cheaper alternative to steel belts on sorting lines after cooking/blanching and removal of non-food grade black rubber guides
4. Breakage-free belts for elevators – no risk of plastic fragments; no leakage of juice; easy to clean (on line)
5. All belts are made from food grade materials and fabricated with food grade technology
6. On-site 24/7 service given
7. Unique production methods and technology which saves a factory thousands of cubic metres of water in a season, saves down time and maintenance, wastes less product and gives an improved working environment

Volta has wide experience in the tomato industry and has proven time and again that homogeneous thermoplastic belts are the future.

## Old Tomato Processing Systems

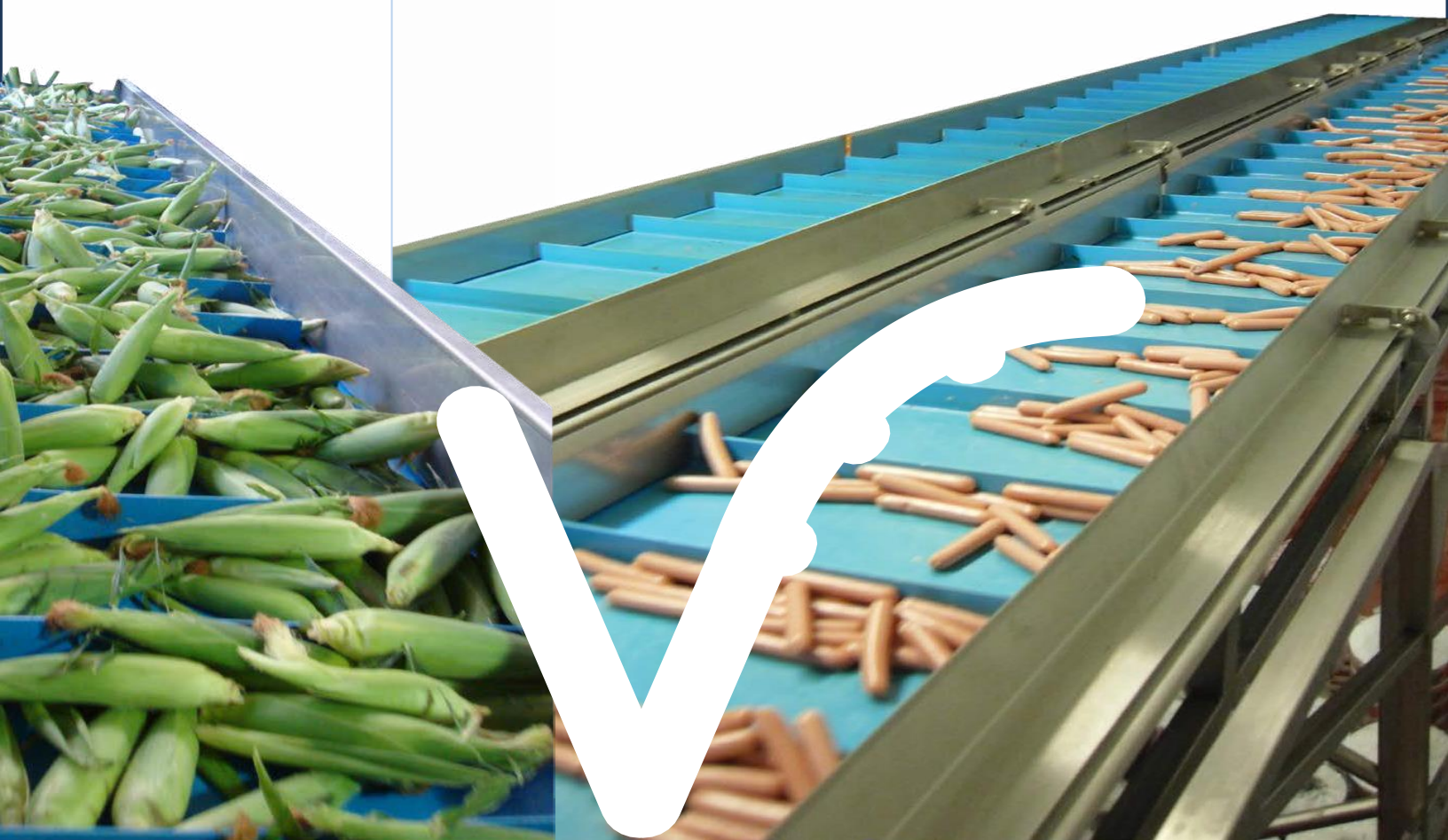


## Installing Volta Belts



## Volta Belts in Action





Flat Belts Food Industry  
Conveying Solutions

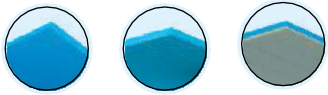
**/// Motech**

- Volta has been manufacturing belts from homogenous Thermoplastic Elastomer (TPE) materials for over 55 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 S.Steel (Bottom)	Thickness		Minimum Pulley Diameter		Pull Force: Pretension of 1%		Certifications
					mm		mm	Inch	kg/cm	lbs/in	
FHB	Blue16	59D	-20° C to 75° C -5° F to 170° F	0.28	2		70	2 <sup>3</sup> / <sub>4</sub>	2	11.20	FDA/USDA /EU
					3		90	3 <sup>9</sup> / <sub>16</sub>	3	16.80	
					4		110	4 <sup>3</sup> / <sub>8</sub>	4	22.40	
					5		150	5 <sup>7</sup> / <sub>8</sub>	5	28.00	
					6		180	7	6	33.60	
FHB	Blue13	59D	-20° C to 75° C -5° F to 170° F	0.28	4		110	4 <sup>3</sup> / <sub>8</sub>	4	22.40	FDA/USDA /EU
FHW	Off white	59D	-20° C to 75° C -5° F to 170° F	0.28	1.5		50	2	1.50	8.40	FDA/USDA /EU
					2		70	2 <sup>3</sup> / <sub>4</sub>	2	11.20	
					3		90	3 <sup>9</sup> / <sub>16</sub>	3	16.80	
					4		110	4 <sup>3</sup> / <sub>8</sub>	4	22.40	
					5		150	5 <sup>7</sup> / <sub>8</sub>	5	28.00	
					6		180	7	6	33.60	
FMB	Blue	95A/46D	-30° C to 70° C -20° F to 158° F	0.40	2.5		35	1 <sup>3</sup> / <sub>8</sub>	1.50	8.40	FDA/USDA /EU
					3		40	1 <sup>5</sup> / <sub>8</sub>	1.80	10.10	
					4		60	2 <sup>3</sup> / <sub>8</sub>	2.40	13.50	
					5		80	3 <sup>1</sup> / <sub>8</sub>	3	16.90	
					6		90	3 <sup>9</sup> / <sub>16</sub>	3.60	20.25	
FMW	Beige	95A/46D	-30° C to 70° C -20° F to 158° F	0.40	2.5		35	1 <sup>3</sup> / <sub>8</sub>	1.50	8.40	FDA/USDA /EU
					3		40	1 <sup>5</sup> / <sub>8</sub>	1.80	10.10	
					4		60	2 <sup>3</sup> / <sub>8</sub>	2.40	13.50	
					5		80	3 <sup>1</sup> / <sub>8</sub>	3	16.90	
					6		90	3 <sup>9</sup> / <sub>16</sub>	3.60	20.25	
FMWC	Clear	95A/46D	-30° C to 70° C -20° F to 158° F	0.40	2.5		35	1 <sup>3</sup> / <sub>8</sub>	1	8.40	FDA/USDA /EU
					3		40	1 <sup>5</sup> / <sub>8</sub>	1.2	6.70	
					4		60	2 <sup>3</sup> / <sub>8</sub>	1.6	9	
					5		80	3 <sup>1</sup> / <sub>8</sub>	2	11	
					6		90	3 <sup>9</sup> / <sub>16</sub>	2.4	13.4	
FTB	Blue13	72A	-40° C to 40° C -40° F to 104° F	1.25	3		19	<sup>3</sup> / <sub>4</sub>	0.57	3.2	FDA/ EU
Hydrolysis & Chemical Resistant (DR) Homogenous Belts											
FDR	Blue15	53D	-30° C to 70° C -20° F to 158° F	0.55	4		80	3 <sup>1</sup> / <sub>16</sub>	2.4	13.5	FDA/USD A/ EU
Low Temperature (LT) Homogeneous Belts											
FMB-LT	Blue15	95A/46D	-35° C to 65° C -31° F to 149° F	0.36	3		40	1 <sup>5</sup> / <sub>8</sub>	1.20	6.70	FDA/ EU
					4		60	2 <sup>3</sup> / <sub>8</sub>	1.60	9	
					5		80	3 <sup>1</sup> / <sub>8</sub>	2	11.20	
					6		90	3 <sup>9</sup> / <sub>16</sub>	2.40	13.40	
Metal Detectable (MD) Homogeneous Belts											
FMB-MD	Blue 09	95A	-20° C to 60° C -5° F to 140° F	0.50	3		75	3	1.80	10.1	FDA/ EU

Standard belt width = 1524mm (60"). Some of the belts are also available in 2032mm (80") width. Please contact Volta Belting representative for additional information.

## Flat Belt Bottom Surfaces



Smooth    Embossed    Reinforced

## Flat Belt Impression Top Surfaces



ITM Matt Top    ITS - 70 Impression Top Square    ITO - 50 Impression Top Oval    ITR - 10 Impression Top Rough    IRT Impression Roof Top    SP Spikes    CT Crescent Top    MC Mini Cleats    IST Impression Saw Tooth    INT Impression NubTop    ITP Impression Top Fine Points    ITD - 60 Impression Top Diamond

Homogeneous Embossed Bottom Belts										
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction S.Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 1%		Certifications
						mm	mm	Inch	kg/cm	
FBHB	Blue 16	59D	-20° C to 75° C -5° F to 170° F	0.20	3	90	3 <sup>9</sup> / <sub>16</sub>	3	16.80	FDA/USDA /EU
FEMB	Blue	95A/46D	-30° C to 70° C -20° F to 158° F	0.25	1.6	24	1 <sup>5</sup> / <sub>16</sub>	0.60	3.60	FDA/USDA /EU
					2	30	1 <sup>3</sup> / <sub>8</sub>	0.80	4.50	
					2.5	35	1 <sup>3</sup> / <sub>8</sub>	1	5.60	
					3	40	1 <sup>5</sup> / <sub>8</sub>	1.20	6.80	
					4	60	2 <sup>3</sup> / <sub>8</sub>	1.60	9.20	
FBMW	Beige	95A/46D	-30° C to 70° C -20° F to 158° F	0.25	5	80	3 <sup>1</sup> / <sub>8</sub>	2.10	11.70	FDA/USDA /EU
					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	40	1 <sup>5</sup> / <sub>8</sub>	1.20	6.80	
					4	60	2 <sup>3</sup> / <sub>8</sub>	1.60	9.20	
FEMB-MD**	Blue 09	95A	-20° C to 60° C -5° F to 140° F	0.25	2	50	2	0.80	4.5	FDA/EU
					3	75	3	1.20	6.8	
FELB	Blue	80A	-40° C to 50° C -40° F to 120° F	0.45	1.6	10	3 <sup>8</sup> / <sub></sub>	0.32	1.79	FDA/EU
					2	12	1 <sup>2</sup> / <sub></sub>	0.40	2.24	
					2.5	15	1 <sup>9</sup> / <sub>32</sub>	0.50	2.80	
					3	20	1 <sup>3</sup> / <sub>16</sub>	0.60	3.36	
FELB	Blue 02	80A	-40° C to 50° C -40° F to 120° F	0.45	1.6	10	3 <sup>8</sup> / <sub></sub>	0.32	1.79	FDA/EU
					2	12	1 <sup>2</sup> / <sub></sub>	0.40	2.24	
FELW	White 16	80A	-40° C to 50° C -40° F to 120° F	0.45	1.6	10	3 <sup>8</sup> / <sub></sub>	0.32	1.79	FDA/EU
					2	12	1 <sup>2</sup> / <sub></sub>	0.40	2.24	
					2.5	15	1 <sup>9</sup> / <sub>32</sub>	0.50	2.80	
					3	20	1 <sup>3</sup> / <sub>16</sub>	0.60	3.36	
					4	26	1 <sup>13</sup> / <sub>32</sub>	0.80	4.48	
FETB	Blue 10	72A	40° C to 40° C -40° F to 104° F	1	1.6	10	3 <sup>8</sup> / <sub></sub>	0.29	1.6	FDA/EU
					2	13	1 <sup>2</sup> / <sub></sub>	0.36	2	
					3	19	3 <sup>4</sup> / <sub></sub>	0.55	3	
Reinforced Belts										
FRMB	Blue	95A/46D	-30° C to 70° C -20° F to 158° F	0.20	2	25	1	6	33.50	FDA/USDA /EU
					3	35	1 <sup>3</sup> / <sub>8</sub>	7	39	
FRMW	Beige	95A/46D	-30° C to 70° C -20° F to 158° F	0.20	2	25	1	6	33.50	FDA/USDA /EU
					2.5	30	1 <sup>3</sup> / <sub>16</sub>	6.50	36.20	
					3	35	1 <sup>3</sup> / <sub>8</sub>	7	39	
					4	70	2 <sup>3</sup> / <sub>4</sub>	7.5	42	
FRLB	Blue	80A	-40° C to 50° C -40° F to 120° F	0.20	1.6	8	5 <sup>1</sup> / <sub>16</sub>	4	22	FDA/ EU
					2	10	3 <sup>8</sup> / <sub></sub>	5	28	
FRLW	White 16	80A	-40° C to 50° C -40° F to 120° F	0.20	1.6	8	5 <sup>1</sup> / <sub>16</sub>	4	22	FDA/ EU
					2	10	3 <sup>8</sup> / <sub></sub>	5	28	
					3	18	1 <sup>11</sup> / <sub>16</sub>	7.50	42	
FRTB*	Blue 10	72A	-40° C to 40° C -40° F to 104° F	0.20	1.6	8	5 <sup>1</sup> / <sub>16</sub>	2.60	14.90	FDA/ EU

**Note:** Standard belt width = 1524mm (60"). Some of the belts are also available in 2032mm (80") width. Please contact Volta Belting representative for additional information.

\*FRTB-Blue10 - Pull Force (PF) calculated with Finger Splice welding.

\*\*FEMB-MD-Blue09-Metal Detectable belt.

Impression Top Belts														
	Product & Color			Shore Hardness	Temperature Range	Coefficient of Friction on S.Steel (Bottom)	Thickness			Minimum Pulley Diameter		Pull Force: Pretension of 1%		Certifications
							mm	mm	Inch	kg/cm	lbs/in			
IT M	FEMB-ITM-LT*	Blue 15		95A/46D	-35°C to 50°C -20°F to 120°F	0.25	1	10	3/8	0.26	1.45	FDA/EU		
	FELB- ITS70	Blue		80A	-40°C to 50°C -40°F to 120°F	0.45	1.6 2	10 12	3/8 1/2	0.24 0.30	1.40 1.74	FDA/EU		
IST	FELB - IST	Blue		80A	-40°C to 50°C -40°F to 120°F	0.45	4**	35	1 3/8	0.40	2.20	FDA/EU		
ITD60	FLB -ITD60	Blue 02		80A	-40°C to 50°C -40°F to 120°F	0.55	2	12	1/2	0.46	2.58	FDA/EU		
	FELB - ITD60	Blue 02		80A	-40°C to 50°C -40°F to 120°F	0.45	1.8	11	7/16	0.3	1.68	FDA/EU		
ITO50	FELB - ITO50	Blue		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			
							5	35	1 3/8	0.90	5			
	FELB - ITO50	Blue 02		80A	-40° C to 50° C -40° F to 120° F	0.45	3	18	11/16	0.50	2.80	FDA/EU		
	FMB-ITO50	Blue		95A/46D	-30°C to 70°C -20°F to 158°F	0.36	2.5	35	1 3/8	1.50	8.40	FDA/USDA/ EU		
	FEMB-ITO50	Blue		95A/46D	-30°C to 70°C -20°F to 158°F	0.25	2	30	1 3/16	0.60	3.36	FDA/USDA/ EU		
							3	40	1 5/8	0.94	5.26			
FEMW-ITO50	Beige		95A/46D	-30°C to 70°C -20°F to 158°F	0.25	2.5	35	1 3/8	0.74	4.20	FDA/USDA/ EU			
FEMB -ITO50-MD**	Blue 09		95A	-20°C to 60°C -5°F to 140°F	0.25	2	50	2	0.60	3.36	FDA/EU			
						3	75	3	1	5.6				
ITR10	FELW - ITR10	White16		80A	-40°C to 50°C -40°F to 120°F	0.45	4	25	1	0.70	3.92	FDA/ EU		
IRT	FELB - IRT	Blue		80A	-40°C to 50°C -40°F to 120°F	0.45	4	25	1	0.60	3.40	FDA/USDA/ EU		
	FEMB - IRT	Blue		95A/46D	-30°C to 70°C -20°F to 158°F	0.25	3.5	40	1 5/8	1	5.60	FDA/EU		
Spikes SP**	FELB-SP	Blue		80A	-40°C to 50°C -40°F to 120°F	0.45	2	20	1 3/16	0.40	2.24	FDA/USDA/ EU		
							2.5	24	1 5/16	0.50	2.80			
							3	28	1 1/8	0.60	3.36			
	FEMB-SP	Blue		95A/46D	-30°C to 70°C -20°F to 158°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	Blue		95A/46D	-30°C to 70°C -20°F to 158°F	0.25	2	40	1 5/8	0.80	4.50	FDA/USDA/ EU			
						2.5	45	1 3/4	1	5.60				
IT P	FELB - ITP	Blue 02		80A	-40°C to 50°C -40°F to 120°F	0.45	2	12	1/2	0.40	2.24	FDA/EU		
INT	FEMB - INT	Blue		95A/46D	-30°C to 70°C -20°F to 158°F	0.25	2	50	2	0.80	4.50	FDA/USDA /EU		
CT	FELB - CT	Blue		80A	-40°C to 50°C -40°F to 120°F	0.45	3	35	1 3/8	0.60	3.36	FDA/EU		
Crescent Top - CT	FMB - CT	Blue		95A/46D	-30°C to 70°C -20°F to 158°F	0.36	3	60	2 3/8	1.80	10.12	FDA/USDA /EU		
	FEMB - CT	Blue		95A/46D	-30°C to 70°C -20°F to 158°F	0.25	3	60	2 3/8	1.20	6.75	FDA/USDA /EU		
	FEMW - CT	Beige		95A/46D	-30°C to 70°C -20°F to 158°F	0.25	2.5	50	2	1	5.60	FDA/USDA /EU		
	FEMB - CT-MD**	Blue 09		95A	-20°C to 60°C -5°F to 140°F	0.25	3	95	3 3/16	1.2	6.75	FDA/EU		
Mini Cleats	FELB - MC	Blue		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		
	FEMB - MC	Blue		95A/46D	30°C to 70°C -20° F to 158°F	0.25	3	70	2 3/4	1.20	6.80	FDA/USDA /EU		

Standard belt width = 1524mm (60"). Some of the belts are also available in 2032mm (80") width. Please contact Volta Belting representative for additional information.

**Note:** \*FEMB-ITM-LT - Min. Pulley diameter for temperature ≥5°C / 41°F. \*FELB-2-ITO50 - not standard.

\*\* FELB-IST - Base - 2mm; total belt height 4mm. \*\*Spikes -Height of Spikes above base belt is 2.8mm.

\*\*FEMB-ITO50-MD & FEMB-CT-MD-Blue09-Metal Detectable belts.

## Reinforced Impression Top Belts

Product & Color			Shore Hardness	Temperature Range	Coefficient of Friction on S.Steel (Bottom)	Thickness		Minimum Pulley Diameter		Pull Force: Pretension of 1%		Certifications
						mm		mm	Inch	kg/cm	lbs/in	
FRMB - ITO50	Blue		95A/46D	30° C to 70° C -20° F to 158°	0.20	2.5		32	1 ¼	4.10	24	FDA/USDA /EU
FRMW - ITO50	Beige		95A/46D	30° C to 70° C	0.20	2.5		32	1 ¼	4.10	24	FDA/USDA /EU
						3		36	1 7/16	4.30	25.20	
FRLB - ITO50	Blue		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	White 16		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	
FRLW - ITR10	White 16		80A	-40° C to 50° C -40° F to 120° F	0.20	4		30	1 3/16	3.40	19	FDA/EU
FRLB - ITS70	Blue 02		80A	-40° C to 50° C	0.20	2		10	3/8	5	28	FDA/EU

### Covered Bottom Flat Belts

Ideal for special applications, for example in bakeries and confectioneries 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 S.Steel (Bottom)	Thickness		Minimum Pulley Diameter		Pull Force: Pretension of 1%		Certifications
						mm		mm	Inch	kg/cm	lbs/in	
FRLB - CEB - B	Blue		80A	-40° C to 50° C -40° F to 120° F	0.30	2		19	3/4	2.20	12.40	FDA/EU
FRLW - CEB - C	White 16				0.30	3		30	1 ¼	2.80	15.60	FDA/EU
FRLW - CB	White 16				0.40	2		19	3/4	3.10	17.40	FDA/EU
FRMB - CEB - B	Blue		95A/46D	-30°C to 60°C -20°F to 120°F	0.30	0.80		12	1 5/3	3.50	19.6060	FDA/USDA /EU
					0.30	3		40	1 5/8	4.80	38	
FRMW - CEB - C	Beige		95A/46D	-30°C to 60°C -20°F to 120°F	0.30	3		40	1 5/8	4.80	38	

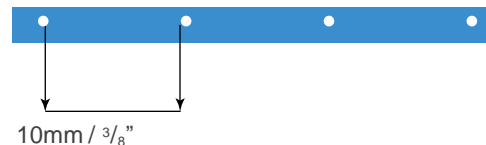
## Belt Coating Materials for the Food Industry

Products	GIB*-Blue17	MIB*-Blue17	WIB*-Blue17	FEIB-Blue-17	FEMB-SP-Blue FEMW-SP-Beige	FELB-SP-Blue	FELB-IST-Blue
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	2/2.5/3	4***
CoF (Stainless Steel)	0.98	1.08	1.05	0.95	0.25	0.45	0.45
Temperature Range	-20° C to 40° C				-30° C to 70° C		-40° C to 50° C
Certifications	FDA/EU				FDA/USDA/EU		FDA/ EU

**Note:** \*Width - Maximum available width | \* For dry use only | \*\* Height of Spikes above the base belt is 2.8mm | \*\*\* FELB-IST - Total belt thickness.

## 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 with significant loads on long narrow belts with small diameter pulleys.



### Aramid Cord Reinforced (ACR) Embossed Bottom Belts

Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on S.Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 0.2%		Certifications
						mm	Inch	kg/cm	lbs/in	
FELB-ACR	Blue	80A	-40°C to 50°C -40°F to 120°F	0.45	2.5	20	0.79	4	22.40	FDA/EU

### Aramid Cord Reinforced (ACR) Impression Top & Embossed Bottom Belts

FELB-ACR-ITO50	Blue	80A	-40°C to 50°C -40°F to 120°F	0.45	2.5	20	0.79	4	22.40	FDA/EU
FELB-ACR-ITO50	Blue 02	80A	-40°C to 50°C -40°F to 120°F	0.45	2.5	20	0.79	4	22.40	FDA/EU
FELB-ACR-IST	Blue 02	80A	-40°C to 50°C -40°F to 120°F	0.45	4*	35	1.38	4.2	23.40	FDA/EU

### Low Temperature (LT) Aramid Cord Reinforced (ACR) Impression Top & Embossed Bottom Belts

FELB-ACR-ITO50-LT	Blue 15	80A	-40°C to 50°C -40°F to 120°F	0.45	2.5	18	0.70	4	22.40	FDA/EU
FEMB-LT ITO50-ACR	Blue 15	95A/46D	-35°C to 50°C -30°F to 120°F	0.25	2.5	40	1.57	4	22.40	FDA/EU

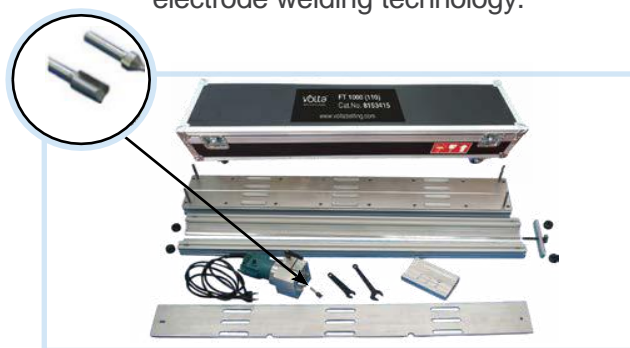
**Note:** Standard belt width = 1524mm (60"). Some of the belts are also available in 2032mm (80") width. Please contact Volta Belting representative for additional information.  
\*FELB-ACR-IST – Base belt thickness = 2mm // Total belt thickness including Saw tooth impression top = 4mm.  
Pull force in table relates to a finger splice weld 20x50 mm. The calculation takes into account the weld splice which has strength of 28kg/cm. Note that various finger splice methods and different tools can result in differing belt strengths.

## Endless Splicing Techniques

**FBW - Flat Butt Welding System** The FBW System performs a butt-weld, fusing belts edge to edge.



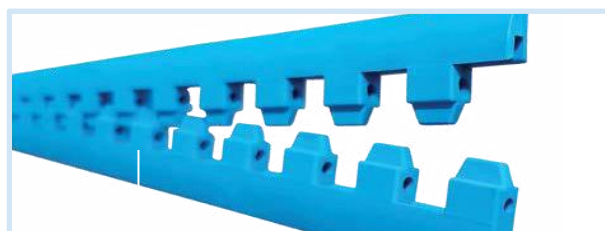
**FT - Electrode Welding System** The FT Welding System provides electrode welding technology.



## Volta RoundFlex™ Lace

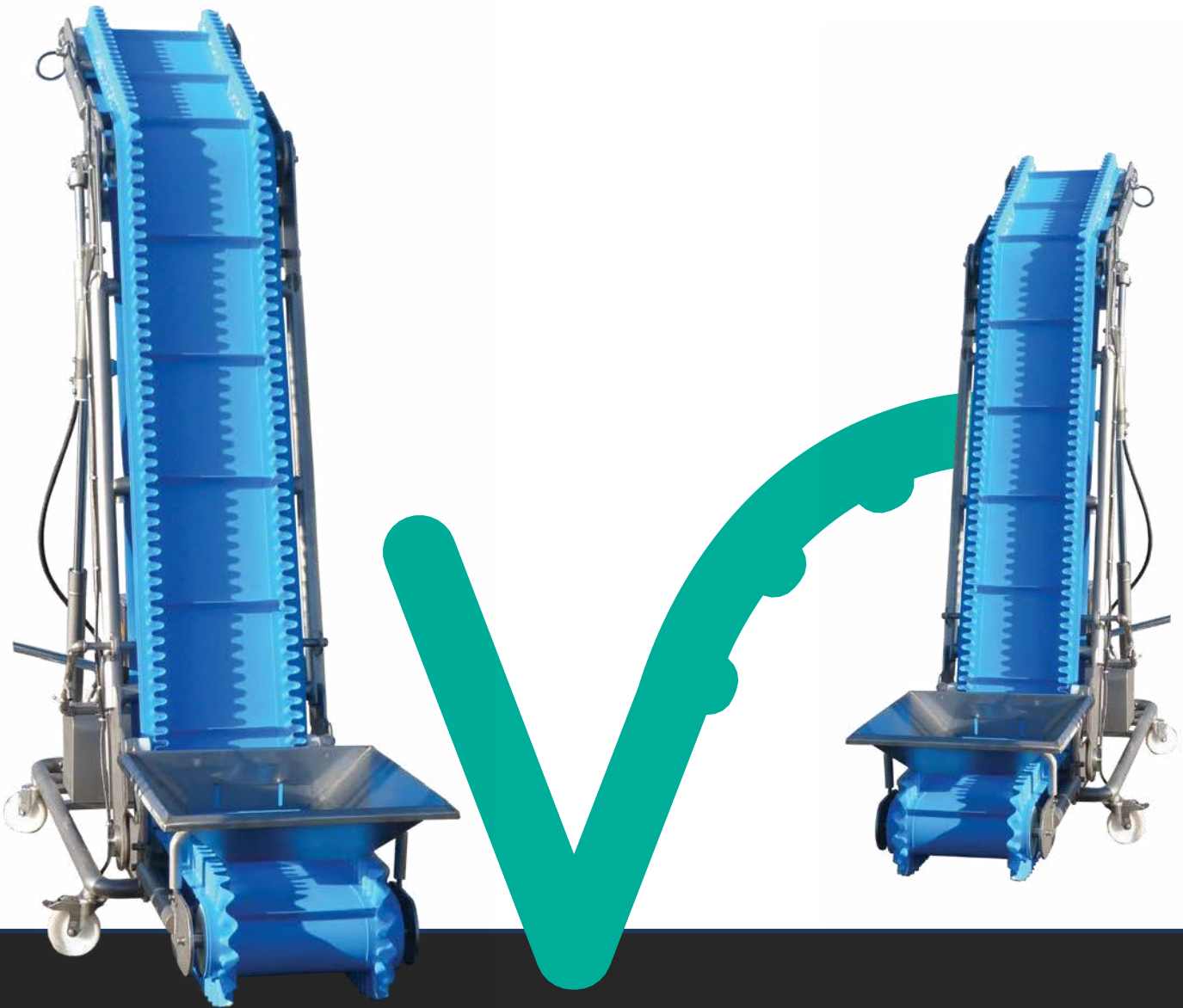
New, improved geometry for a better grip on pulleys. Compatible with Volta MB, MW, MB-MD and DR material belts from 2.5 to 5mm thickness. All Volta flat belt materials are easy to clean without removing from conveyor and therefore lace is used only where absolutely necessary. The strength of the belt will be affected at the joint where lace is used.

RoundFlex™ Lace





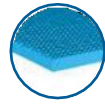
# The Next Step in Belting



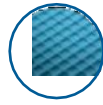
Food Grade Positive Drive Line  
Conveying Solutions



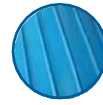
## SuperDrive™



ITE  
Impression  
Top Embossed



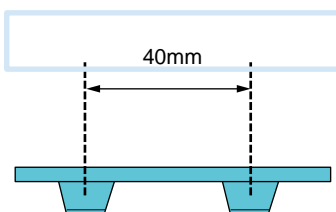
ITO-50  
Impression  
Top Oval



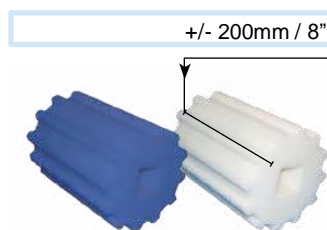
MC  
Mini  
Cleats

The homogeneous Positive Drive, recognized worldwide as the best choice where hygiene and conveying efficiency are essential.

Smooth Top SuperDrive™ Belts											
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on UHMW	Thickness	Minimum Pulley Diameter		Maximum Pull Force		Certifications	
						mm	Inch	kg/cm	lbs/in		
FHB-SD	Blue 16	55D	-20°C to 90°C -5°F to 194°F	0.20	3	126	4 <sup>31</sup> / <sub>32</sub>	7	39.2	FDA/USDA/EU	
					4	176	6 <sup>15</sup> / <sub>16</sub>	9	50.40		
					6	300	11 <sup>13</sup> / <sub>16</sub>	14	78.40		
FHW-SD	Off White	55D	-20°C to 90°C -5°F to 194°F	0.20	3	126	4 <sup>31</sup> / <sub>32</sub>	7	39.2	FDA/USDA/EU	
					4	176	6 <sup>15</sup> / <sub>16</sub>	9	50.40		
FHB-SD	Blue 13	55D	-20°C to 90°C -5°F to 194°F	0.20	3	126	4 <sup>31</sup> / <sub>32</sub>	7	39.2	FDA/USDA/EU	
					4	176	6 <sup>15</sup> / <sub>16</sub>	9	50.40		
FEHB-SD-ITM2	Blue 16	55D	-20°C to 90°C -5°F to 194°F	0.18	3	126	4 <sup>31</sup> / <sub>32</sub>	7	39.2	FDA/USDA/EU	
					4	176	6 <sup>15</sup> / <sub>16</sub>	9	50.40		
FMB-SD	Blue	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1</sup> / <sub>4</sub>	6.25	35	FDA/USDA/EU	
					4	120	4 <sup>3</sup> / <sub>4</sub>	8	44.80		
					6	240	9 <sup>3</sup> / <sub>4</sub>	12.50	70		
FMW-SD	Beige	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1</sup> / <sub>4</sub>	6.25	35	FDA/USDA/EU	
					4	120	4 <sup>3</sup> / <sub>4</sub>	8	44.80		
FMB-SD	Blue 02	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1</sup> / <sub>4</sub>	6.25	35	FDA/USDA/EU	
FEMB-SD-ITM2	Blue	53D	-20°C to 70°C -5°F to 158°F	0.22	3	80	3 <sup>1</sup> / <sub>4</sub>	6.25	35	FDA/USDA/EU	
					4	120	4 <sup>3</sup> / <sub>4</sub>	8	44.80		
Impression Top SuperDrive™ Belts											
FHB-SD-ITO50	Blue 16	55D	-20°C to 90°C -5°F to 194°F	0.20	3	126	4 <sup>31</sup> / <sub>32</sub>	7	39.2	FDA/USDA/EU	
					4	176	6 <sup>15</sup> / <sub>16</sub>	9	50.40		
FHB-SD-ITE	Blue 16	55D	-20°C to 90°C -5°F to 194°F	0.20	3	126	4 <sup>31</sup> / <sub>32</sub>	7	39.2	FDA/USDA/EU	
FMB-SD-ITO50	Blue	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1</sup> / <sub>4</sub>	6.25	35	FDA/USDA/EU	
FMB-SD-ITE	Blue	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1</sup> / <sub>4</sub>	6.25	35	FDA/USDA/EU	
FMW-SD-ITE	Beige	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1</sup> / <sub>4</sub>	6.25	35	FDA/USDA/EU	
FMB-SD-MC	Blue	53D	-20°C to 70°C -5°F to 158°F	0.28	3	100	4	6.25	35	FDA/USDA/EU	
Hydrolysis & Chemical Resistant SuperDrive™ Belts											
FDR-SD	Blue 15	53D	-20°C to 70°C -5°F to 158°F	0.30	3	80	3 <sup>1</sup> / <sub>4</sub>	4.7	26.3	FDA/USDA/EU	
					4	120	4 <sup>3</sup> / <sub>4</sub>	6.25	35		
FDR-SD-ITO50	Blue 15	53D	-20°C to 70°C -5°F to 158°F	0.30	3	80	3 <sup>1</sup> / <sub>4</sub>	4.7	26.3	FDA/USDA/EU	
FEDR-SD-ITM2	Blue 15	53D	-20°C to 70°C -5°F to 158°F	0.22	3	80	3 <sup>1</sup> / <sub>4</sub>	4.7	26.3	FDA/USDA/EU	
FEDR-SD-ITO50	Blue 15	53D	-20°C to 70°C -5°F to 158°F	0.22	3	80	3 <sup>1</sup> / <sub>4</sub>	4.7	26.3	FDA/USDA/EU	
Low Temperature (LT) SuperDrive™ Belts											
FMB-SD-LT	Blue 15	95A/46D	-35°C to 65°C -31°F to 149°F	0.30	3	80	3 <sup>1</sup> / <sub>4</sub>	3	16.80	FDA/EU	
Metal Detectable (MD) SuperDrive™ Belt											
FMB-SD-MD	Blue 09	53D	-20°C to 60°C -5°F to 140°F	0.28	3	100	4	6	33.6	FDA/EU	
FMB-SD-ITO50-MD	Blue 09	53D	-20°C to 60°C -5°F to 140°F	0.28	3	100	4	6	33.6	FDA/EU	

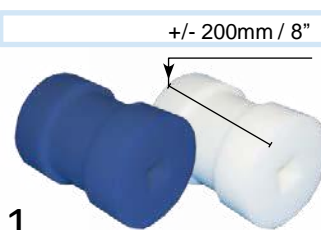


Pitch size for reference only

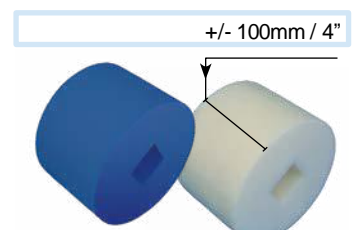


SuperDrive™ Drive Pulley

11



SuperDrive™ Tail Pulley



SuperDrive™ Support Pulley

# Mini SuperDrive™

Food Grade - Positive Drive Line

The only trackable Mini Positive Drive product.

The MiniSD™ design is similar to the world leader, Volta SuperDrive™; scaled down for a smaller minimum pulley. Standard belt width: 1524mm/60" or 2032mm/80". Please contact Volta Belting representative for additional information.

Smooth Top Mini SuperDrive™ Belts											
Product & Color		Shore Hardness	Temperature Range***	Coefficient of Friction on UHMW	Thickness	Minimum Pulley Diameter*		Maximum Pull Force**		Certifications	
						mm	mm	Inch	kg/cm		lbs/in
FHB-MSD	Blue 16	55D	-20°C to 90°C -5°F to 194°F	0.20	2	80	3.15	4.5	25.2	FDAUSDA/EU	
					2.5	100	4	5.6	31.36		
FMB-MSD	Blue	95A/46D	-20°C to 70°C -5°F to 158°F	0.28	2.5	48	1.89	4	22.4	FDAUSDA/EU	

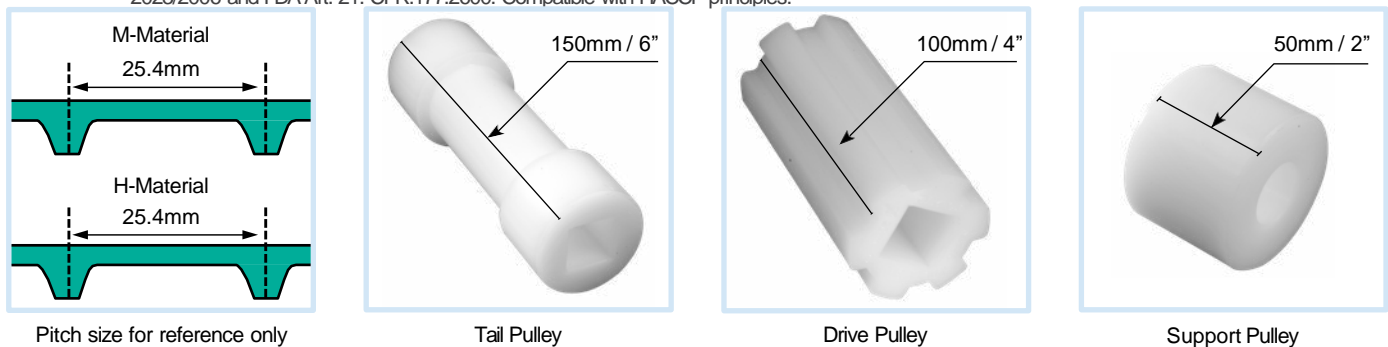
Impression Top Mini SuperDrive™ Belts											
Product & Color		Shore Hardness	Temperature Range***	Coefficient of Friction on UHMW	Thickness	Minimum Pulley Diameter*		Maximum Pull Force**		Certifications	
					mm	mm	Inch	kg/cm	lbs/in		
FMB-MSD-ITO50	Blue	95A/46D	-20°C to 70°C -5°F to 158°F	0.28	2.5	48	1.89	4	22.4	FDAUSDA/EU	
FMB-MSD-MC	Blue	95A/46D	-20°C to 70°C -5°F to 158°F	0.28	2.5	80	3.15	4	22.4	FDAUSDA/EU	

**Note:** \* Minimum Pulley Diameter – Normal Flex. Dimensions are relevant for an ambient temperature above 0°C / 32°F.

\*\* Maximum Pull Force – in kg/cm width & lb/in width.

\*\*\*To determine the allowable Pull force, check the "Temperature Correction Factor" table.

Declaration of Conformity in compliance with Food Contact Regulations: EU No.-10/2011 amended by 2017/752, 1935/2004 and 2023/2006 and FDA Art. 21. CFR.177.2600. Compatible with HACCP principles.



# Mini DualDrive™

A scaled-down version of the original DualDrive™ tooth geometry. Standard belt width: 2032mm/80".

Smooth Top Mini DualDrive™ Belts											
Product & Color		Shore Hardness	Temperature Range***	Coefficient of Friction on UHMW	Thickness	Minimum Pulley Diameter*		Maximum Pull Force**		Certifications	
						mm	mm	Inch	kg/cm		lbs/in
FMB-MDD	Blue	95A/46D	-20°C to 70°C -5°F to 158°F	0.28	2.5	48	1.89	4	22.4	FDAUSDA/EU	

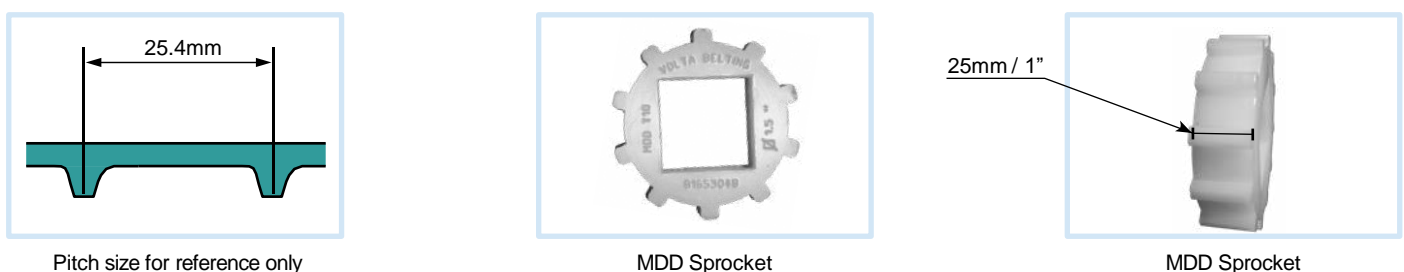
  

Impression Top Mini DualDrive™ Belts											
Product & Color		Shore Hardness	Temperature Range***	Coefficient of Friction on UHMW	Thickness	Minimum Pulley Diameter*		Maximum Pull Force**		Certifications	
					mm	mm	Inch	kg/cm	lbs/in		
FMB-MDD-ITO50	Blue	95A/46D	-20°C to 70°C -5°F to 158°F	0.28	2.5	48	1.89	4	22.4	FDAUSDA/EU	

**Note:** \* Minimum Pulley Diameter – Normal Flex. Dimensions are relevant for an ambient temperature above 0°C / 32°F.

\*\* Maximum Pull Force – in kg/cm width & lb/in width.

\*\*\*To determine the allowable Pull force, check the "Temperature Correction Factor" table. Declaration of Conformity in compliance with Food Contact Regulations: EU No.-10/2011 amended by 2017/752, 1935/2004 and 2023/2006 and FDA Art. 21. CFR.177.2600. Compatible with HACCP principles.



## DualDrive™

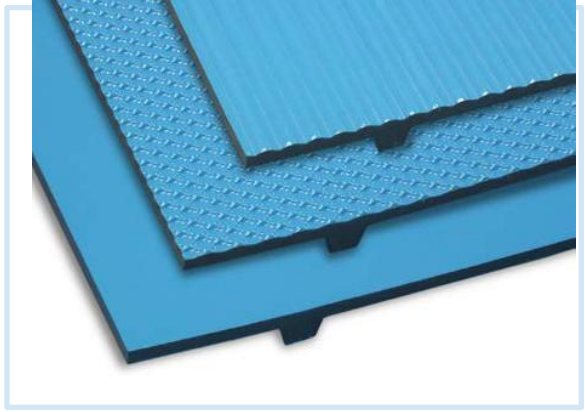
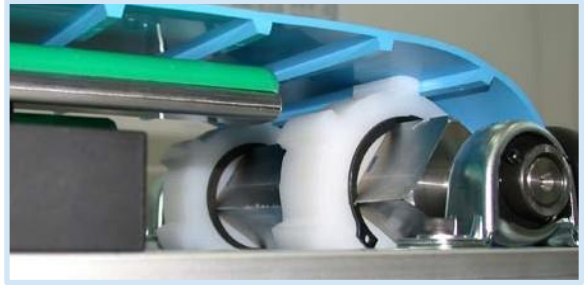
- Minimal retrofitting required. DualDrive™ is suited to some 2" pitch modular belt sprockets but for both reliability and hygiene these should be replaced.
- DualDrive™ is a fully extruded Positive Drive belt with drive teeth running the full width of the belt at a 2" pitch.

### Mechanical Benefits:

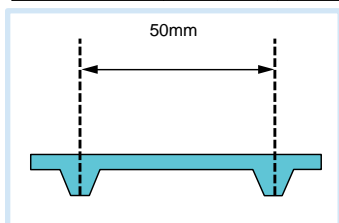
- Replaces modular systems that require extensive cleaning and lengthy soaking and wear quickly at the joints.
- Greatly reduced noise levels in comparison with to modular belts.
- Integrated teeth for a Positive Drive with no slippage.
- No pretension of the belt is needed.
- Extruded in 30 or 60m (100 or 200ft) length and 1524mm (60") width.

### Material Features:

- Smooth or textured homogeneous surface.
- Special texture available for non-stick applications.
- No ply/fraying of fibers.
- Easy and effective cleaning.
- No cracks or crevices that can potentially harbor bacteria.



Smooth Top DualDrive™ Belts											
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on UHMW	Thickness	Minimum Pulley Diameter		Maximum Pull Force		Certifications	
						mm	mm	Inch	kg/cm		lbs/in
FHB-DD	Blue 16	55D	-20°C to 90°C -5°F to 194°F	0.20	3	126	4 <sup>31/32</sup>	7	39.2	FDA/USDA/EU	
FHB-DD	Blue 02	53D	-20°C to 90°C -5°F to 194°F	0.28	3	80	3 <sup>1/4</sup>	6	33.6	FDA/USDA/EU	
FMB-DD	Blue	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1/4</sup>	6	33.6	FDA/USDA/EU	
					4	120	4 <sup>3/4</sup>	7.7	43		
FMB-DD-ITM2	Blue	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1/4</sup>	6	33.6	FDA/USDA/EU	
FMW-DD	Beige	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1/4</sup>	6	33.6	FDA/USDA/EU	
FMW-DD-ITM2	Beige	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1/4</sup>	6	33.6	FDA/USDA/EU	
Impression Top DualDrive™ Belts											
FMB-DD-ITO50	Blue	53D	-20°C to 70°C -5°F to 158°F	0.28	3	80	3 <sup>1/4</sup>	6	33.6	FDA/USDA/EU	
FMB-DD-IRT	Blue	53D	-20°C to 70°C -5°F to 158°F	0.28	4	100	4	6	33.6	FDA/USDA/EU	
Hydrolysis & Chemical Resistant DualDrive™ Belts											
FDR-DD	Blue 15	53D	-20°C to 70°C -5°F to 158°F	0.30	3	80	3 <sup>1/4</sup>	4.7	26.3	FDA/USDA/EU	
FDR-DD-ITM2	Blue 15	53D	-20°C to 70°C -5°F to 158°F	0.30	3	80	3 <sup>1/4</sup>	4.7	26.3	FDA/USDA/EU	
Low Temperature (LT) DualDrive™ Bel											
FMB-DD-LT	Blue 15	95A/46D	-35°C to 65°C -31°F to 149°F	0.30	3	80	3 <sup>1/4</sup>	3	16.80	FDA/EU	
Metal Detectable (MD) DualDrive™ Belt											
FMB-DD-MD	Blue 09	53D	-20°C to 60°C -5°F to 140°F	0.28	3	100	4	6	33.6	FDA/EU	



Pitch size for reference only



Machined Drive Sprockets



Machined Drive Sprockets



Molded Drive Sprocket

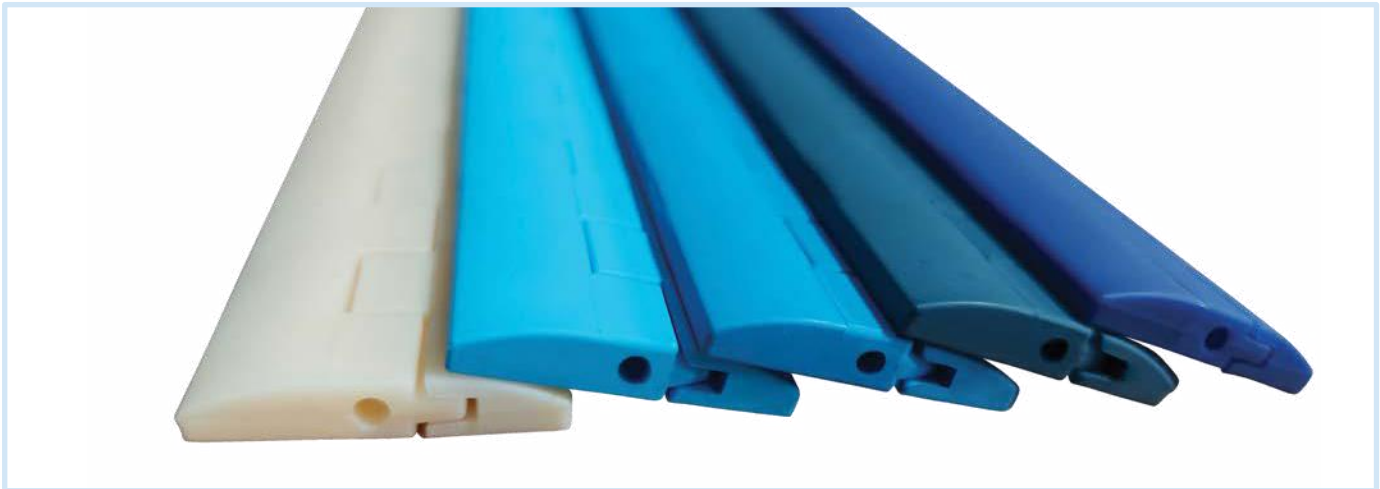


Molded Tail Roller

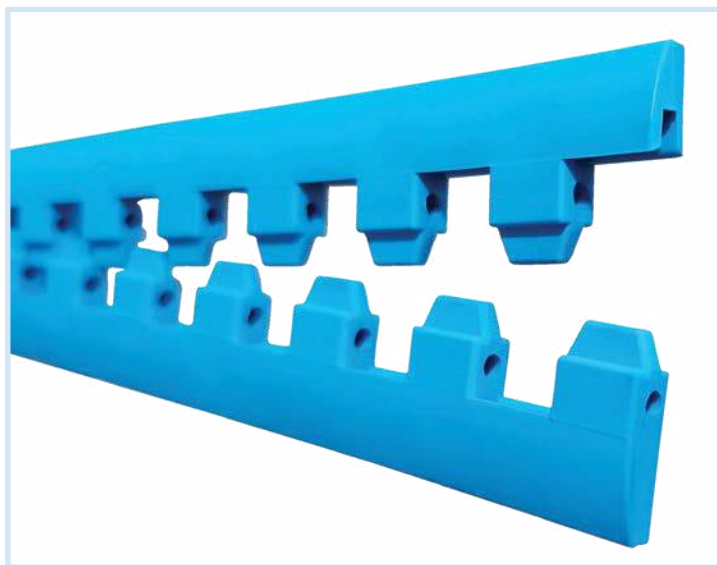
## Volta RoundFlex™ Lace

New, improved geometry for a better grip on pulleys. Compatible with Volta MB, MW, MB-MD and DR material Flat and Positive Drive belts including MSD & MDD belts from 2.5 to 5mm thickness.

All Volta belt materials are easy to clean without removing from conveyor and therefore we only recommend lace when absolutely necessary. The strength of the belt will be affected at the joint where lace is used.



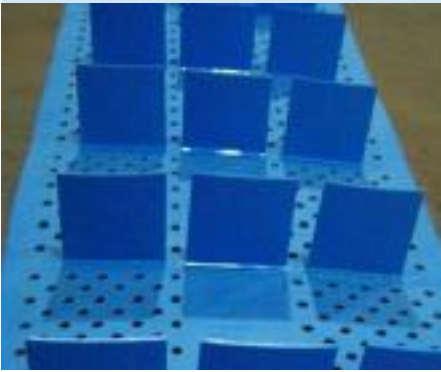
RoundFlex™ Lace



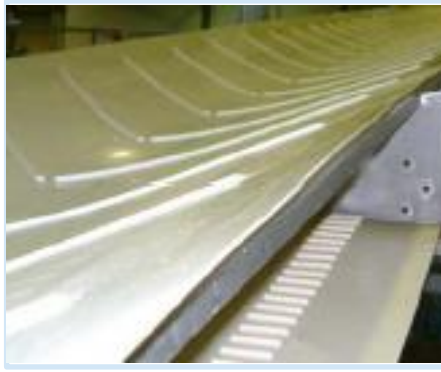
RoundFlex™ Lace

We are committed to providing a complete package focusing on servicing our customers all the way, up until the belts are safely installed and the conveyor is running smoothly.

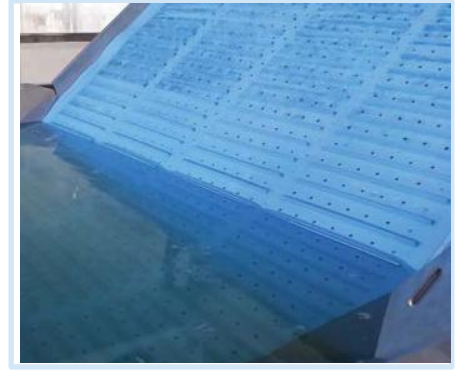
## Fabrications on Positive Drive Belts



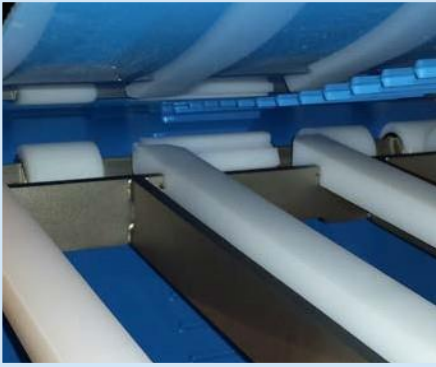
Perforated SuperDrive™  
with Spaced Flights



SuperDrive™ Trough Conveyor with  
Chevron Flights



Perforated Mini DualDrive™ Belt



Mini SuperDrive™ Belt



Perforated DD-IRT Belt



SuperDrive™ Z-elevator with Flights,  
Guides and Sidewalls



DualDrive™ with Impression Top IRT  
Flights & Guides



SuperDrive™ with Flights Working  
under Water

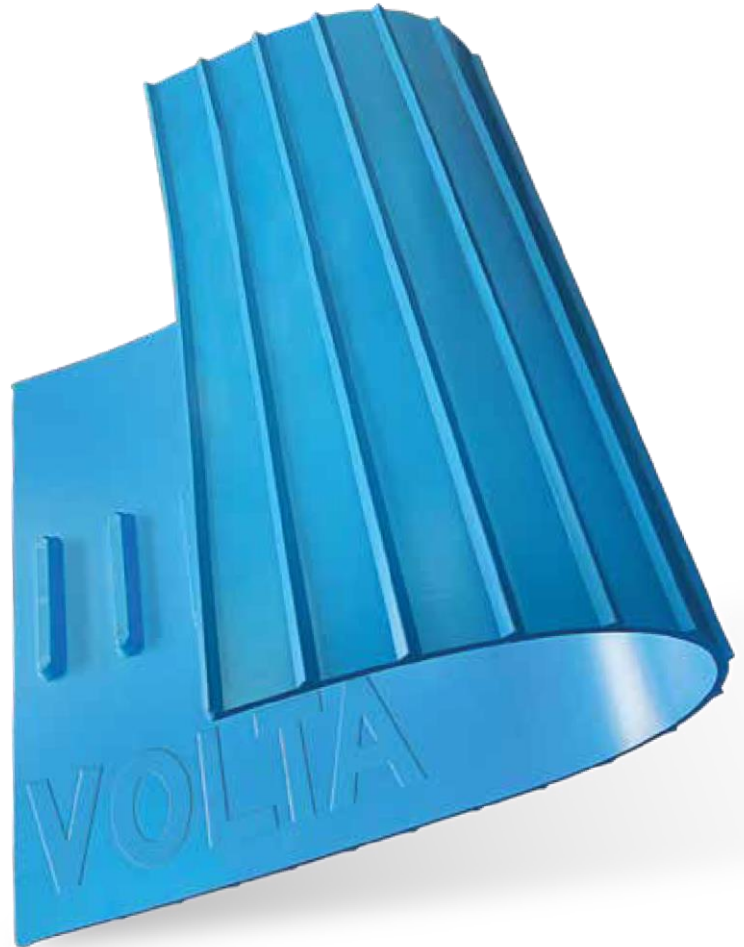


SuperDrive™ with Sidewalls  
and Special Flights

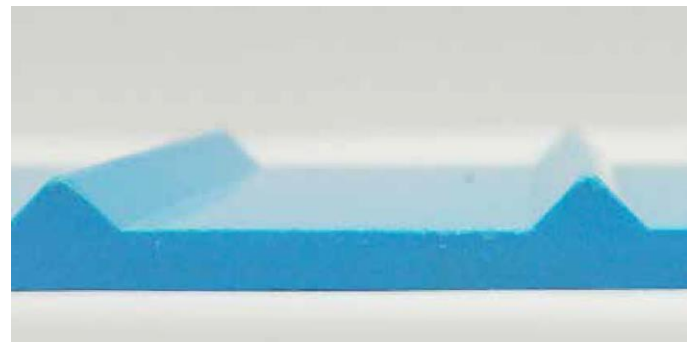
The built-in guide mechanism and the new textured top keep your product safe and steady.

**We are excited to present our new  
Positive Drive Belt: FMB-SD-MC**

- ✓ The fully extruded Mini Cleat (MC) top on our SuperDrive<sup>TM</sup> homogeneous material enhances the incline conveyance capability of carrying bulk product by up to 25 degrees.
- ✓ The MC profile prevents product rollback on the incline without requiring flights.
- ✓ Mini Cleat (MC) top eliminates the need for fabricated cleats.
- ✓ The fully extruded, integrated teeth of the Super Drive<sup>TM</sup> function as a positive drive system and serve as a built-in guide mechanism to reduce tension and off-tracking.
- ✓ The result is eco-friendly SuperDrive<sup>TM</sup> belts that allow for a drastic reduction in water usage as well as the conversion of precious lost time spent on cleaning to increased production time.
- ✓ SuperDrive<sup>TM</sup> belt with Mini Cleat (MC) top are a cutting-edge solution for the potato, meat, fruit, and cheese industries. Suitable applications include, but are not limited to, French fries, chicken cutlets, cold cuts, bacon, sliced peaches and pears, shredded cheese, and nuts.



**Use this belt to keep your products  
safe and steady and earn more  
money than before.**



## Molded BLUE Sprockets for DualDrive<sup>TM</sup>



Volta offers molded sprockets in blue Acetal for the DualDrive<sup>TM</sup> belts. These are offered in addition to the standard white and blue machined sprockets.

### DualDrive<sup>TM</sup> Molded Sprockets

Number of Teeth	Drive Sprocket	Tail Roller
6T	DD-I-Sprocket-93.4mm/3.67"	DD-I-Tail Sprocket-84.3mm/3.32"
8T	DD-I-Sprocket-125.6mm/4.94"	DD-I-Tail Sprocket-116.5mm/4.59"
10T	DD-I-Sprocket-157.7mm/6.20"	DD-I-Tail Sprocket-148.5mm/5.85"

- Compatible with 40mm and 1.5" square bore shafts
- Light weight
- Have excellent chemical and abrasion resistance
- Easy to clean



## The Next Step in Belting



### Metal Detectable Flat Belts

Conveying Solutions



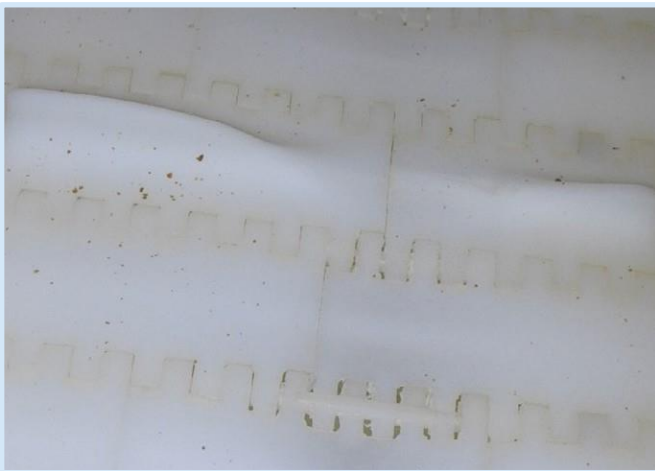
## Metal Detectable (MD) Volta belts for the food industry

As you are aware, consumer safety has become a prominent issue in recent years due to heightened public awareness, increasingly stringent legal regulations, and the challenging responsibility of managing an automated food processing line. The ever-changing demands and pressures for superior food safety are driven internally by managers along with external pressures from consumers, industry regulators, and global associations.

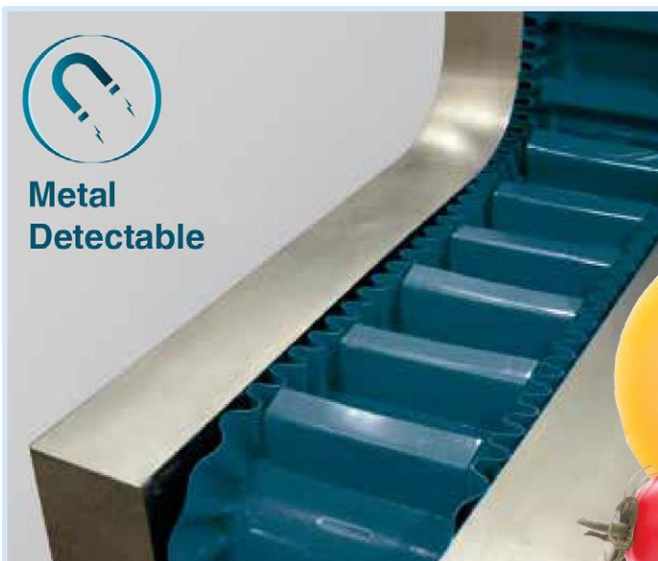
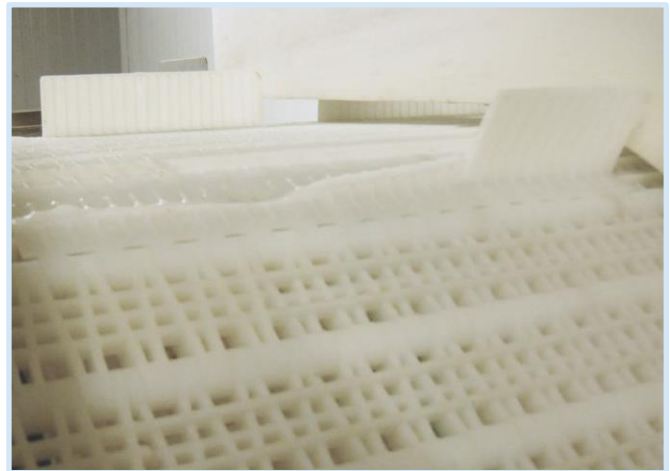
Often called “farm to fork”, the path from raw food to a finished and packaged product is one that has hazardous contact points. Before consumers have their food on their tables, that food has come into contact with harvesting equipment, slaughterhouses, freezers, cold storages, a wide array of transportation means, and various processing machinery. Although most contaminants (much of which is ferrous) are removed in early processing stages, trace contaminants can still remain in foods. Thus, metal detection is often used as a last line of defense in most processing facilities.

Food routinely makes contact with conveyor belting and with the widespread use of fragile modular belting, concerns arise over plastic contaminants being deposited into the flow of food due to wear and tear. Volta firmly stands behind the safety and stability of all Volta food grade belts as a solution for alternative inferior belting types. Our ultimate goal is to eliminate any concerns and fears held by processors and consumers regarding food safety.

Abraded by Frozen Food



Broken cleats/flights



Metal detectable plastic is an important necessity to all types of food processors. Many would never consider allowing pens, electric ties, and plasters within the hygienic zone if they were not detectable.

While Volta Belting’s materials are resistant to cuts and breakage, food grade metal detectable belts have been developed to meet high demands and to give quality assurance and production teams the confidence in knowing that their products will meet the strictest food safety requirements.

Detectability is determined by contaminant type, size, the size of the detector’s aperture, the orientation of the detectable material, and the frequency at which the detector is calibrated. Small particles may pass undetected if the food product has a similar phase angle to the contaminant (dry and moist products produce different signals), or if the particle passes through the center of a sufficiently large detector.

Metal Detectable (MD) Positive Drive Belts												
Product & Color		Shore Hardness	Temperature Range	CoF UHMW (bottom)	Thickness		Minimum Pulley Diameter		Maximum Pull Force		Certifications	
					mm		mm	Inch	kg/cm	lbs/in		
<b>SuperDrive™ Metal &amp; Detectable Belt</b>												
FMB-SD-MD	Blue 09		53D	-20°C to 60°C -5°F to 140°F	0.28	3		100	4	6	33.6	FDA/EU
FMB-SD-ITO50-MD	Blue 09		53D	-20°C to 60°C -5°F to 140°F	0.28	3		100	4	6	33.6	FDA/EU
<b>DualDrive™ Metal Detectable Belt</b>												
FMB-DD-MD	Blue 09		53D	-20°C to 60°C -5°F to 140°F	0.28	3		100	4	6	33.6	FDA/EU

Metal Detectable (MD) Food Conveying Belts												
Product & Color		Shore Hardness	Temperature Range	CoF UHMW (bottom)	Thickness		Minimum Pulley Diameter		Pull Force: Pretension 1%		Certifications	
					mm		mm	Inch	kg/cm	lbs/in		
<b>Flat, Homogeneous Metal Detectable Belts</b>												
FMB-MD	Blue 09		95A	-20°C to 60°C -5°F to 140°F	0.28	3		75	3	1.80	10.1	FDA/EU
<b>Flat, Homogeneous Embossed Bottom Metal Detectable Belts</b>												
FEMB-MD	Blue 09		95A	-20°C to 60°C -5°F to 140°F	0.20	2		50	2	0.80	4.5	FDA/EU
						3		75	3	1.20	6.8	
<b>Flat, Homogeneous Impression Top Metal Detectable Belts</b>												
FEMB-ITO50-MD	Blue 09		95A	-20°C to 60°C -5°F to 140°F	0.20	2		50	2	0.60	3.36	FDA/EU
						3		75	3	1	5.6	
FEMB-CT-MD	Blue 09		95A	-20°C to 60°C -5°F to 140°F	0.20	3		95	3 3/16	1.2	6.75	

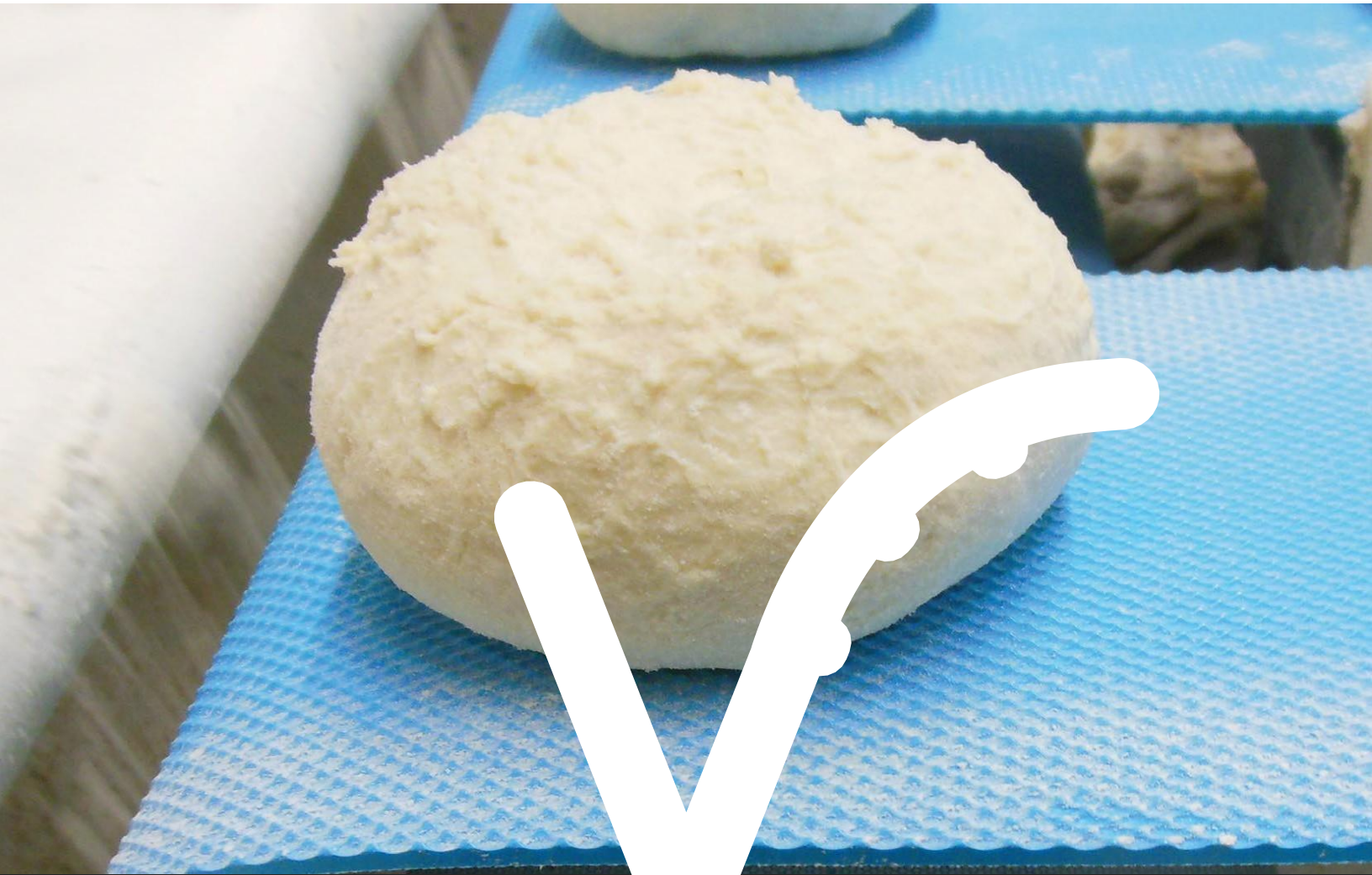
## Guidelines and Suggested Materials for the Fabrication of Metal Detectable (MD) belts:

- ✓ The Metal Detectable material (MD) should be treated as a separate family of materials in terms of fabrications.
  - ✓ Sidewalls: It is possible to weld Sidewalls from MD material (FMB-MD) with a thickness of 2mm only.
  - ✓ Flights: It is recommended to use MD material for flights – FMB-MD.
  - ✓ Guides: Use the VLB-MD guide for the Metal Detectable belts.
  - ✓ Electrodes: Use EVMB-MD electrode.
  - ✓ RoundFlex™ Lace: Item code LMD-R
- Endless Closure of Belts: Volta recommends joining the Metal Detectable (MD) Positive Drive belts with a butt weld using an FBW Tool.





## The Next Step in Belting



Aramid Cord Reinforced Flat Belts  
Conveying Solutions

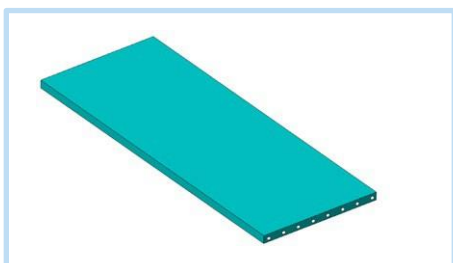


A food grade flat belt with special tensioning members fully sealed in a dense homogeneous material which has been tested for durability. Used, for example, where heavy or unevenly loaded products are carried. The Volta code for this Aramid cord reinforcement is ACR and the splicing method advised is a finger splice.

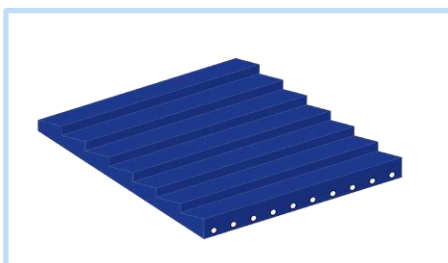


## Aramid Cord Reinforced Flat Belt Range

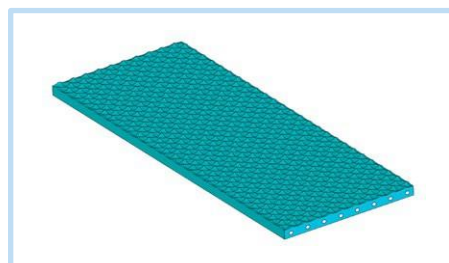
Embossed Bottom Belt



IST - Impression Saw Tooth



ITO50-Impression Top Oval



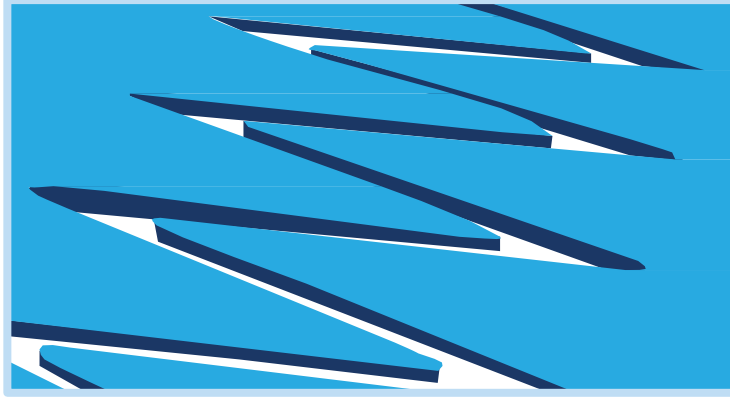
Aramid Cord Reinforced (ACR) Embossed Bottom Belts											
Product & Color		Shore Hardness	Temperature Range	Coefficient of Friction on S.Steel (Bottom)	Thickness	Minimum Pulley Diameter		Pull Force: Pretension of 0.2%		Certifications	
					mm	mm	Inch	kg/cm	lbs/in		
FELB-ACR	Blue	80A	-40°C to 50°C -40°F to 120°F	0.45	2.5	20	0.79	4	22.40	FDA/EU	
Aramid Cord Reinforced (ACR) Impression Top & Embossed Bottom Belts											
FELB-ACR-ITO50	Blue	80A	-40°C to 50°C -40°F to 120°F	0.45	2.5	20	0.79	4	22.40	FDA/EU	
FELB-ACR-ITO50	Blue 02	80A	-40°C to 50°C -40°F to 120°F	0.45	2.5	20	0.79	4	22.40	FDA/EU	
FELB-ACR-IST	Blue 02	80A	-40°C to 50°C -40°F to 120°F	0.45	4*	35	1.38	4.2	23.40	FDA/EU	
Low Temperature (LT) Aramid Cord Reinforced (ACR) Impression Top & Embossed Bottom Belts											
FELB-ACR-ITO50-LT	Blue 15	80A	-40°C to 50°C -40°F to 120°F	0.45	2.5	18	0.70	4	22.40	FDA/EU	
FEMB-LT-ITO50-ACR	Blue 15	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:** \* FELB-IST-ACR – Base belt thickness = 2mm // Total belt thickness including Saw tooth impression top = 4mm.

\*\* Available belt width: 1524mm/60inch-standard or 2032mm/80inch. Please contact Volta Belting representative for additional informations. Pull force in table relates to a finger splice weld 20x50 mm. The calculation takes into account the weld splice which has strength of 28kg/cm. Note that various finger splice methods and different tools can result in differing belt strengths

## Guidelines for Finger Splice Welding of the Volta Aramid Cord Reinforced (ACR) Belts

The Finger splice, with its increased contact area overlapping reinforcement cords, ensures the best weld in terms of belt strength.



**Important Note:** All information in the finger splice instructions is to be used as general guidelines only, based on experience from service centers using a variety of equipment. It has been noted that the exact temperature of a specific welding bar and the pressure required will vary from press to press or even on the same press when used in a workshop and then on site. Prior to first use, it is recommended to run a small set of trials to calibrate a given press. Prior to repeated use in a different environment and/or with a different thickness or texture, a test should be made to confirm the quality of weld is consistent and that every splice is hermetically closed and free from bubbles and cracks.

### For Splicing "L" Material Belts:

- | After switching on the press, wait for both the top and bottom platens to heat to 180°C.
- | When cutting the belt to the finger pattern, cut away any protruding Aramid fibers. Do not attempt to drill out the ends of these fibers into the belt surface.
- | Place belt in position on heated area. Do not leave for any length of time without continuing the operation.
- | Place an appropriate silicone pad across the top side of the belt in order to preserve the original belt surface (smooth or textured) as far as is possible.
- | Apply 2 Bar of pressure for 4 minutes.
- | Wait for the belt to cool down in the press (approx. 15 minutes) and then release.

### For Splicing "M-LT" Material Belts

- | After switching on the press, wait for both platens to heat to 180°C.
- | When cutting the belt to the finger pattern, cut away any protruding Aramid fibers. Do not attempt to drill out the ends of these fibers into the belt surface.
- | Place belt in position on heated area. Do not leave for any length of time without continuing the operation.
- | Place an appropriate silicone pad across the top side of the belt in order to preserve the original belt surface (smooth or textured) as far as is possible.
- | Apply 2.5 Bar of pressure for 6 or 7 minutes.
- | Wait for the belt to cool down in the press (approx. 20 minutes) and then release.

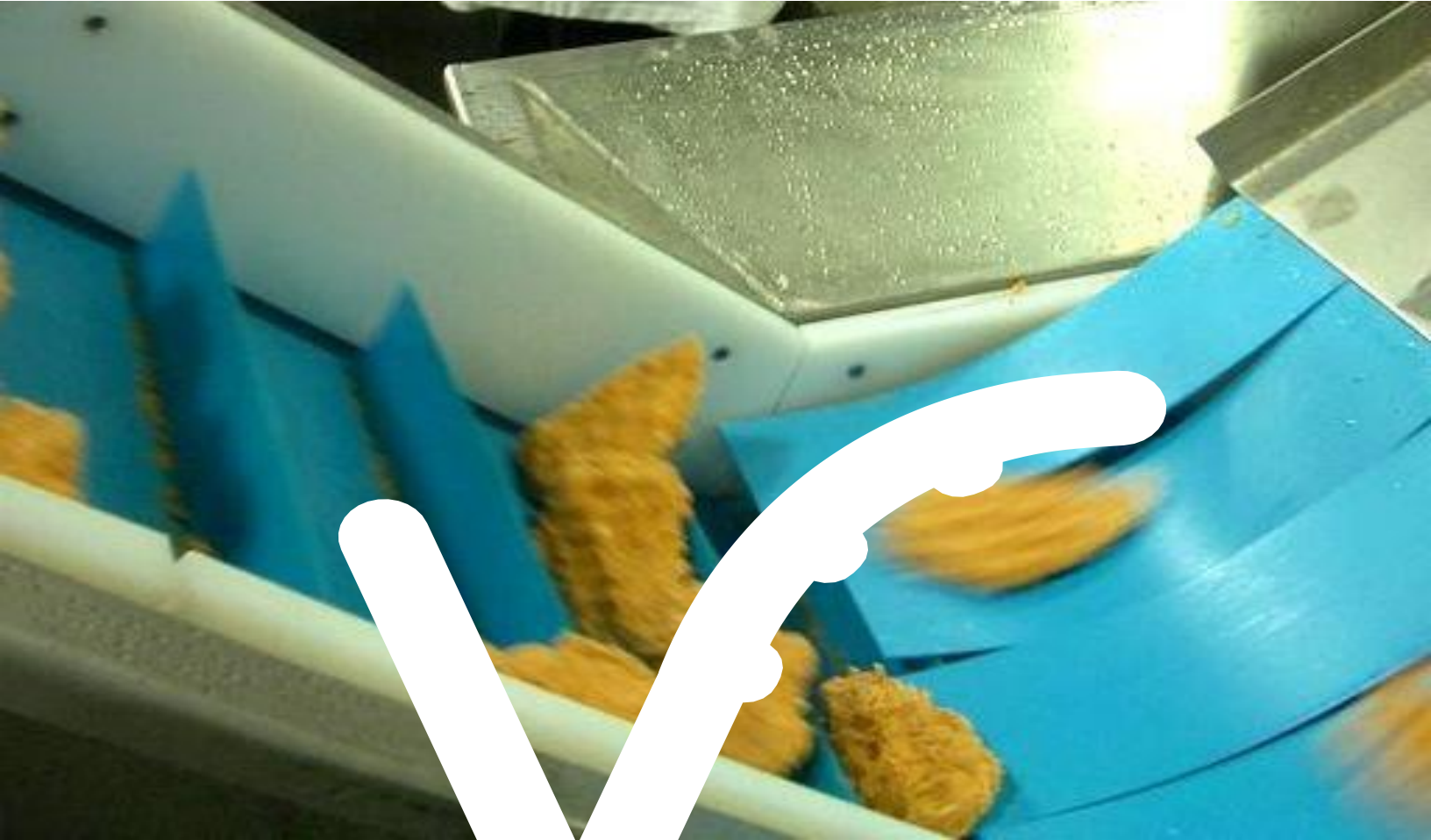
## Benefits:

- ✓ Reinforced belts with no fabric exposed
- ✓ No fraying, no delamination
- ✓ Eliminate contaminated reinforced fabric which is difficult to clean
- ✓ Fully extruded
- ✓ Food approved
- ✓ Compatible with HACCP principles
- ✓ Permits versatile applications such as soft base belts on small pulley diameters
- ✓ Can replace reinforced belts in wet applications where the sealed reinforcement hinders contamination and in bakery applications using flour
- ✓ High resistance to oils, fats and hydrolysis





The Next Step in Belting



Food Grade Accessories  
Conveying Solutions

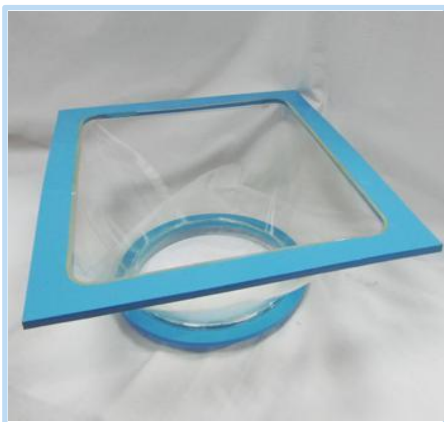


Volta food grade materials possess mechanical characteristics which make them ideally suited to static elements such as funnels or chutes. These elements are common in free fall of food products and chemicals and, when fabricated from conventional, inflexible materials such as polycarbonate or steel, can be hazard points or elements of concern in production for a number of reasons;

- | Hard elements causing damage to product in free fall
- | Elements from inflexible materials can jam when (irregular and bulky) product flow is at maximum
- | Polycarbonate elements are often cracked when removed for cleaning and refastened with bolts by maintenance staff
- | With solids, noise levels can be high
- | Bolts and fasteners can be difficult to open
- | Steel elements do not offer visibility into the product flow
- | Low cleanability



✓ Volta uses homogeneous food grade materials, including transparent and translucent conform to designs for funnels, chutes, pipes and similar elements to eliminate all the above problems. Flanges can be welded on to facilitate the fixing of the Volta funnels in the flow line.



Square to round flanged funnel



Double funnel

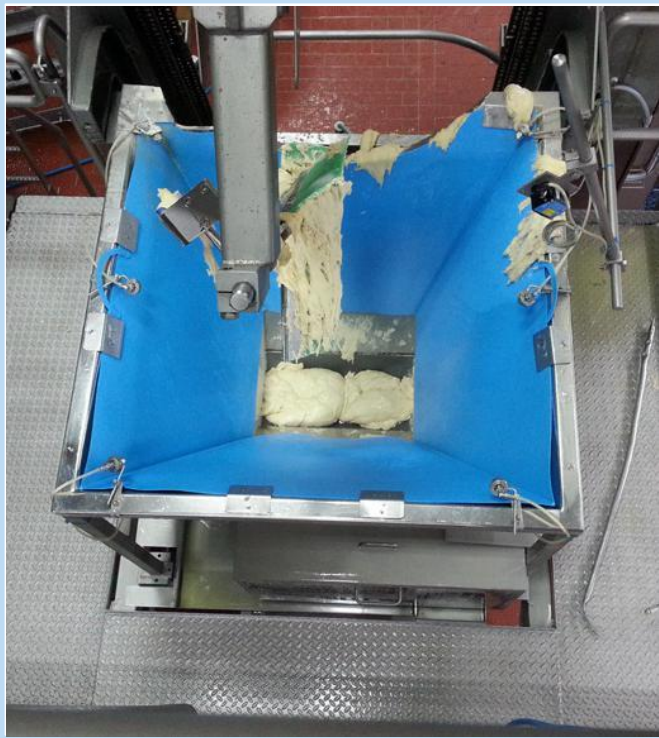


Double-flanged funnels

**Base Materials used for funnels**

Product & Color			Shore Hardness	Temperature Range	Thickness	Certifications
FMB	Blue		95A / 46D	-30° C to 70° C / -20° F to 158° F	2	FDA/USDA/EU
FMW	Beige				2.5	
FMWC	Clear				3	

✓ All elements are custom-made and can even be fitted and welded on site where measurements are difficult or inaccurate such as for hopper linings.



Hopper

✓ Hammocks are used to reduce noise and damage to sensitive products in freefall - examples range from vegetables to hard boiled sweets.



Hammock

✓ Simple flat pieces are available for use on tables, intake chutes and as skirting and scrapers. Skirting can be used as a simple means of containment and is an effective means of protecting conveyor features such as bearings and supports. Product is not lost and will not fall into the conveyor bed and support structure.



Chute Installed



Skirting



Sorting Table



Scraper

**The use of correctly selected Volta material will not groove or damage the moving Volta conveyor belt.**

## Volta - Food Grade Accessories



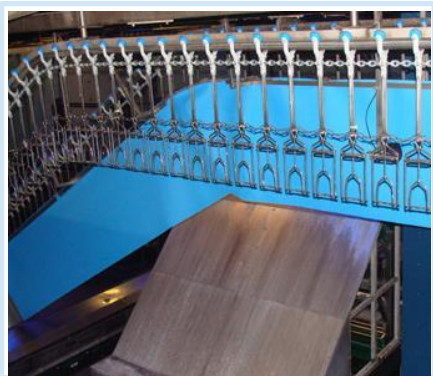
Custom made funnels



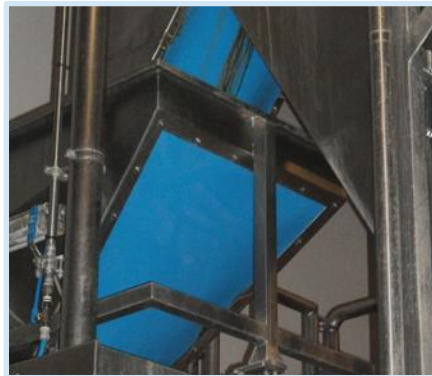
Pipes



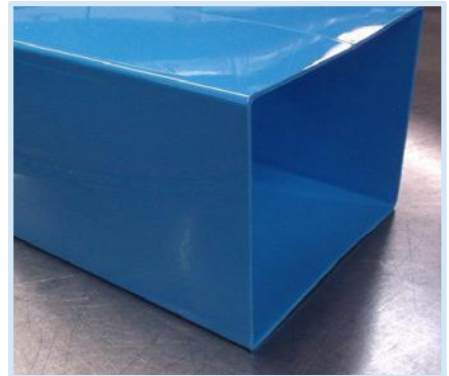
Special funnel



Skirting



Chute lining



Squared-off tube



Funnels from Volta material



Double funnel



Silo funnel