

# Section 5.

## Conveyor Belts

### Contents

#### 5.1 Introduction

#### 5.2 Major Applications

- 5.2.1 Food Industry (x)
- 5.2.2 Packaging and Wrapping
- 5.2.3 Electronics
- 5.2.4 Treadmill
- 5.2.5 Logistics and Airport
- 5.2.6 Textile and Printing
- 5.2.7 Marble and Stone
- 5.2.8 Brick, Ceramic and Glass
- 5.2.9 Wood Industry

#### 5.3 Generate your Customised Belt

- 5.3.1 Configurator (x)
- 5.3.2 Patterns

#### 5.4 Most Orion™ Common Belts

#### 5.5 New Special Orion™ Belts

#### 5.6 New Special Orion™ Food Belts

- 5.6.1 Solid and PVK (x)
- 5.6.2 Clean Belts

#### 5.7 PU Thermoweldable Orion™ Belts

#### 5.8 Profiles

#### 5.9 Technical Fabrics

#### 5.10 Properties

#### 5.11 Coated Fabrics

#### 5.12 Belts

#### 5.13 Tapes

#### 5.14 Applications

#### 5.15 Polyester Conveyor Belts

#### 5.16 Additional Belt Types

# 5.

## 5. Conveyor Belts

### 5.1 Introduction

ORION™ Rubber and Plastic Belts are the result of many years of experience designing and manufacturing power transmission parts and Flat Belts for industrial and automotive sectors.

In the light duty conveyor belt range, ORION™ developed a concept of “market-oriented innovation”, taking the best advantage of extensive international cooperation and market research.

The extensive range of ORION™ Light Duty Conveyor and Process belts offers a choice of a standard line that is based in the most common market applications and profiles demands or a Configurator tool that allows customers to select a wide range of components to customize their own belt.

The standard product range has more than 740 different types that are able to match almost all the industrial needs. But with our concept of **CREATIVITY IN MOTION** we go further by offering our Configurator Tool that responds to a demand of every customer and application with a perfect belt.

Changing the production process with Textile Carcass ranges from Polyester, Polyamide, Fiberglass, or Aaramid, Cotton with a conveying surface in PVC, Polyurethane, Polyolefin, Polyester, Elastomer, or Silicone, but not only in materials is where the changes are operated, we meet the demanding market requirements in terms of belt thickness, hardness, strength resistance, patterns, colours as well as by application and compliance.

We provide a Customized Belt Solutions to offer our customers a cost saving and cost effective quantity of belts to meet the required application.



## 5. Conveyor Belts

### 5.2 Major Applications

#### 5.2.1 Food Industry

##### ABSOLUTE SAFETY FOR FOOD

ORION™ food belts are designed and manufactured using superior quality material in accordance to FDA, USDA and new EU regulation standards. ORION™ belts are manufactured to a lower level of chemical migration specified in the standards.

ORION™ belts are used in the following markets:

- > Fruits & Vegetables
- > Meat & Poultry processing
- > Fish
- > Baked goods and woven products
- > Confectionaery Note spelling with e and not a Confectionery
- > Cheese
- > Food and Beverage
- > Vineyards



Orion™ belts are provided in PVC and PU that meet the most stringent industry standards, both for conveying food in direct contact, is non-toxic and tasteless as well for any packed product.

Orion™ belts feature:

- have an excellent resistant to oils and fat
- high tensile strength
- impregnated on the boittom side, easy to clean
- resistant to high and low temperatures
- anitsticking belt surface
- anitbacterial
- excellent resistant to chemical

Available with SEALED EDGES as a greater guarantee of side production



## 5. Conveyor Belts

### 5.2 Major Applications

#### 5.2.2 Packaging and Wrapping

Orion™ BELTS offer safe and hygienic packaging of any product includes belts for vertical-form sealers accumulation and inclined belts, capping and labelling machines, check weightiers and thermo retractable tunnels.

#### 5.2.3 Electronics

Orion™ developed a whole line for the electronic industry of ANTISTATIC and NON-CONDUCTIVE belts with a smooth surface, and which are antifriction and dimensionally stable.

#### 5.2.4 Treadmill

Orion™ belts come in a range warranty of stable and high precision Treadmill Belts that come are available in a variety of thicknesses and top cover patterns, anti-static coating compounds, low noise fabric, long lifespan, and high precision for both home and gym purposes.

#### 5.2.5 Logistics and Airport

- > Distribution
- > Parcel Handling
- > Postal automation
- > Airports

Orion™ belts have characteristics of light weight, small elongation, long service life and no ageing even when subjected to continuous changes of temperature. They are not affected by the sun or continuous ozone exposure. We have an extensive range of low noise, anti-static belts, cut resistant and flame retardant that meet all industry requirements.

## 5. Conveyor Belts

### 5.2 Major Applications

#### 5.2.6 Textile and Printing

One of the most demanding industries for belt consumption, our Research and Development team have dedicated resources to creating solutions that match the demanding requirements of dimension stability, low noise, flatness, antistatic and high chemical resistance. Orion™ Conveyor belts offer an extensive range of thickness and hardness for all printing applications.

#### 5.2.7 Marble and Stone

Orion™ belts used in stone conveying, cutting, calibrating, spitting, grinding, and polishing applications have characteristics of high mechanical resistance, cut resistance, wear and abrasion resistance, flatness and are known for long life.

#### 5.2.8 Brick, Ceramic and Glass

Orion™ offer a wide range of belts suitable for the ceramic industry. Resistance to elongation, temperature, humidity and abrasion are common in this sector of the industry using some high grip for inclined conveyors, and belts with anti-adherence PU covers for Screen Printing and finishing lines.

#### 5.2.9 Wood Industry

Featuring strong stretching resistance and high flatness the Orion™ line of wood processing conveyor belts, in addition to floor and wood processing equipment, are widely used in particle board production lines.



5.3 Generate your Customized Belt

5.3.1 Configurator

With an excellent management of raw materials and the capability of changing the production process, our Configurator is an innovative idea that enables our customers to create the application perfect belt!

**2**

Step 1

Choose the number of Piles

- 1 Ply
- 2 Plies
- 3 Plies
- 4 Plies

**EM 0,5**

Step 2

Choose the Type of Fabric

- EM** Polyester Rigid
- EF** Polyester Flexible
- EC** Polyester Cotton
- ESM** Polyester Spun Rigid
- ESF** Polyester Spun Flexible
- ESM** Polyester/ Aramid
- NW** Non Woven
- C** Cotton
- S** Solid Interwoven

**0,5**

Step 3

Choose the Bottom Thickness

- 0mm
- 0,3mm
- 0,5mm
- 1mm

**D-**

Step 4

Pattern of the Bottom

- D** Diamond
- M** Mat
- G** Glossy

**1,0**

Step 5

Thickness of the Top

- 0mm
- 0,3mm
- 0,5mm
- 1mm
- 1,5mm
- 2mm
- 3mm
- 4mm

**RS**

Step 6

Choose the Pattern  
In the next pages

**/3**

Step 7

Total Thickness

- 1mm
- 2mm
- 3mm
- ...
- 12,5mm

**AG**

Step 8

Choose the Colour

- AG** Apple Green
- Y** Yellow
- P** Petrol
- TM** Transparent
- W** White
- R** Red
- SB** Sky Blue
- B** Black
- O** Orange
- GR** Grey

**U**

Step 9

Choose of Top Material

- Default means PVC**
- E** Polyester
- C** Cotton
- P** Polydefin
- U** Polyurethane
- S** Silicone
- R** Rubber

**/AS**

Step 10

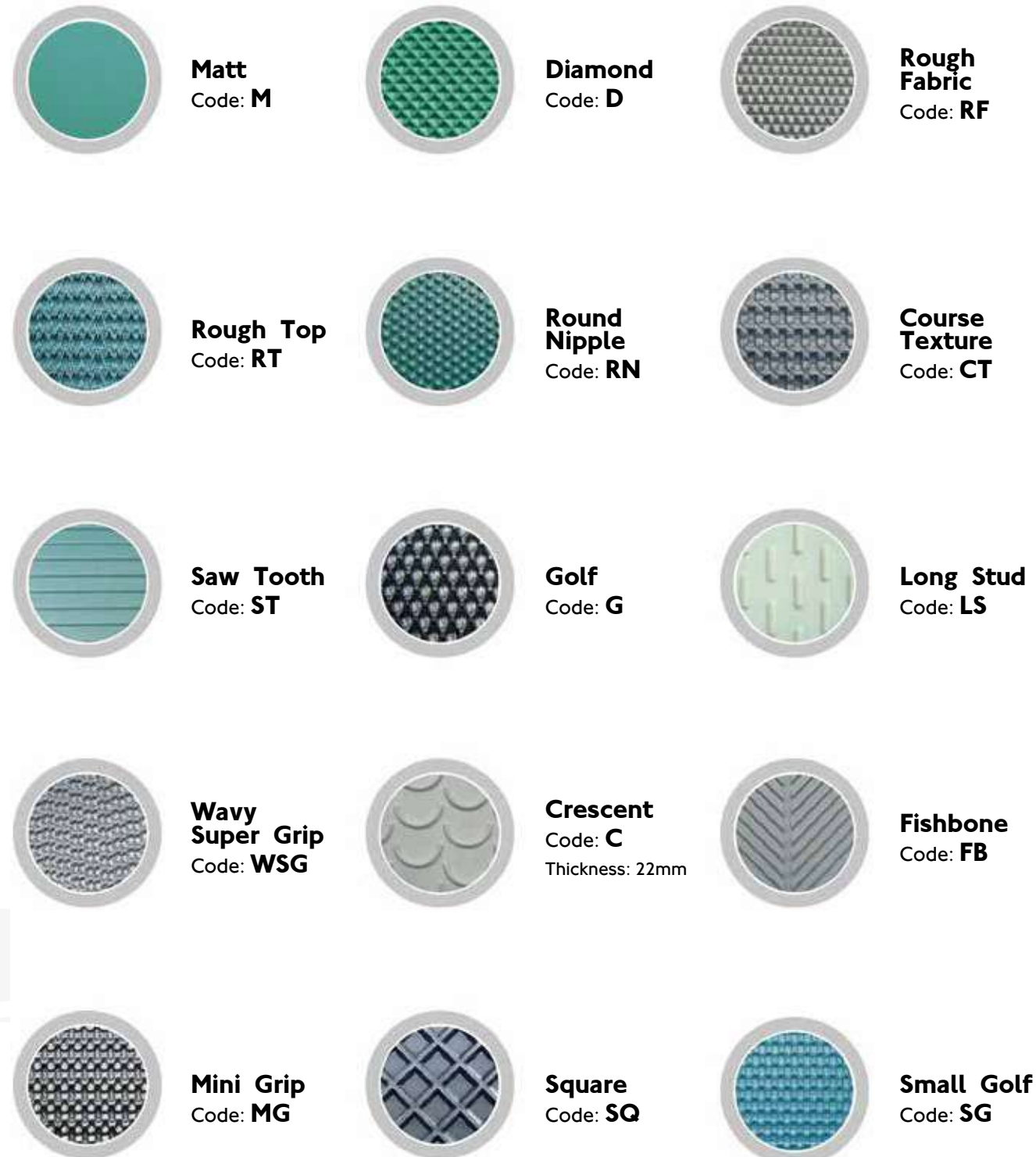
Special Indications

- FDA** Food Approval
- WR** Wear Resistant
- F** Fire Resistant
- AS** Anti-Static
- LD** Low Noise
- D** Diadhesive
- H** Hard
- AO** Anti-Oil

5. Conveyor Belts

5.3 Generate your Customized Belt

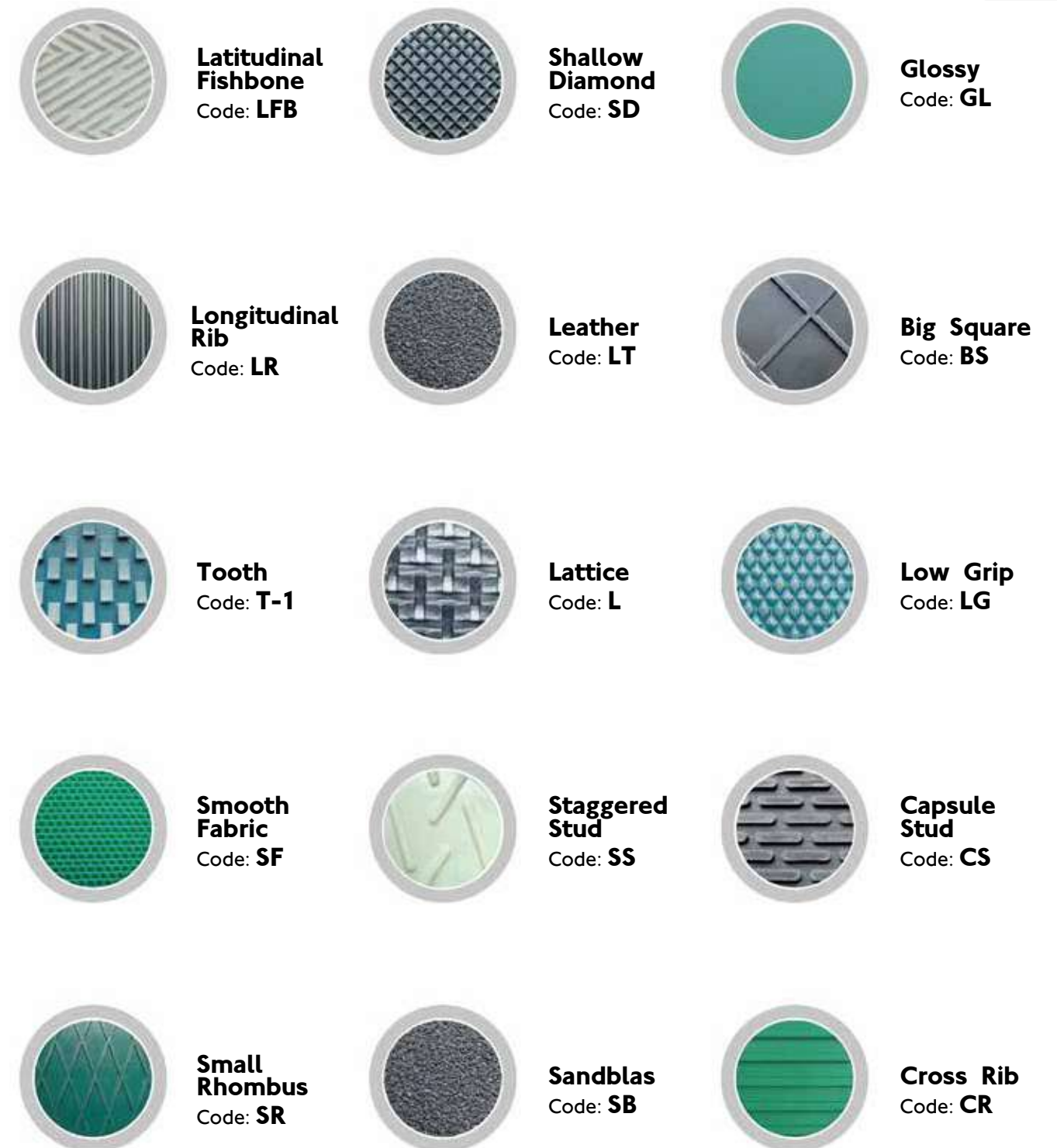
5.3.2 Patterns



5. Conveyor Belts

5.3 Generate your Customized Belt

5.3.2 Patterns





5. Conveyor Belts

5.3 Generate Your Customized Belt

5.3.2 Patterns



**Rough Matt**  
Code: **RM**



**Tooth**  
Two-Direction  
Code: **T-2**



**Small Nipple**  
Code: **SN**



**Big Nipple**  
Code: **BN**



**Triangle**  
Code: **T**



**Harlequin**  
Code: **H**



**Fine Matt**  
Code: **FM**



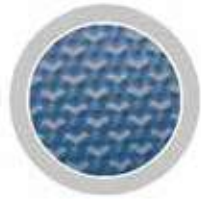
**Rice**  
Code: **RC**



**Super Grip Fabric**  
Code: **SGF**



**Mini Grip Fabric**  
Code: **MGF**



**Y Pattern**  
Code: **Y**



**Super Grip**  
Code: **SG**



**Small Diamond**  
Code: **SD**



**Granule Profile**  
Code: **GR**



**Convex Rhombus**  
Code: **CR**

5. Conveyor Belts

5.3 Generate Your Customized Belt

5.3.2 Patterns



**Small Saw Tooth**  
Code: **SST**



**Round Stud**  
Code: **RS**



**Oval Stud**  
Code: **OS**



5. Conveyor Belts

5.4 Most Common Orion™ Belts

Type Number	Fabric		Material Colour		Bottom Cover		Belt Thickness mm	Belt Weight kg/m <sup>2</sup>	Hardness Shore A	1% Elongation Strength	Roller Diameter Min	Width Max	Temp	Special Characteristics		
	Ply	Weft			Thickness	Surface									Thickness	Surface
IEM 0+0.5/1.0AG	1	Rigid	PVC	APPLE GREEN		Fabric	0.5	Glossy	1.0	1.2	65	4	70	4000	-10/+80	
IEM 0+0.5/1.0W	1	Rigid	PVC	WHITE		Fabric	0.5	Glossy	1.0	1.2	65	4	70	4000	-10/+80	
IEM 0.3+0.3/1.2AGM	1	Rigid	PVC	APPLE GREEN	0.3	Glossy	0.3	Matt	1.2	1.5	65	4	70	4000	-10/+80	
IEM 0.3+0.3M/1.2W	1	Rigid	PVC	WHITE	0.3	Glossy	0.3	Matt	1.2	1.5	65	4	70	4000	-10/+80	
<b>2EM 0+0/L6W</b>	2	Rigid	PVC	WHITE		Fabric	1.6	1.7		8	25	4000	-10/+80			
2EM 0+0/1.6BAS	2	Rigid	PVC	WHITE		Fabric	7.0	G	1.6	1.6	65	6	25	3000	-10/+80	AS
2EC 0+0/1.8WFDA	2	Rigid	PVC	WHITE		EC Fabric		EC Fabric	1.8	2.0		8	25	4000	-10/+80	FDA
2EM/EC O+O/1.8WFDA	2	Rigid	PVC	WHITE		Fabric		EC Fabric	1.8	2.0		8	25	4000	-10/+80	FDA
IEC O+ID/1.8 TM	1	Rigid	PVC	T RANSPARENT		EC Fabric	1.0	D	1.8	7.9	65	4	25	2000	-10/+80	
IEC O+IRN/1.8 TM	1	Rigid	PVC	T RANSPARENT		EC Fabric	1.0	RN	1.8	7.9	65	4	25	2000	-10/+80	
2EM 0+0.5/2.0AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	0.5	Glossy	2.0	2.4	65	8	30	4000	-10/+80	AS
2EM 0+0.5/2.0W	2	Rigid	PVC	WHITE		Fabric	0.5	Glossy	2.0	2.4	65	8	30	4000	-10/+80	
2EM 0+0.5/2.0WAS AO	2	Rigid	PVC	WHITE		Fabric	0.5	Glossy	2.0	2.4	65	8	30	4000	-10/+80	AS AO
2EM O+O.SM/2.0 B	2	Rigid	PVC	BLACK		Fabric	0.5	Matt	2.0	2.4	75	70	30	4000	-10/+80	
2EM 0+0.5M/2.0 BASF	2	Rigid	PVC	BLACK		Fabric	0.5	Matt	2.0	2.4	75	8	30	4000	-10/+80	ASF
2EM O+0.5 D /2.0AG	2	Rigid	PVC	APPLE GREEN		Fabric	0.5	D	2.0	2.4	75	8	30	4000	-10/+80	
2EM 0+0.5D/2.0AG/A 0	2	Rigid	PVC	APPLE GREEN		Fabric	0.5	D	2.0	2.4	75	8	30	4000	-10/+80	AO
2EM 0+0.5D/2.0 W	2	Rigid	PVC	WHITE		Fabric	0.5	D	2.0	2.4	65	8	30	4000	-10/+80	
2EM 0+0.5D/2.0WFDA	2	Rigid	PVC	WHITE		Fabric	0.5	D	2.0	2.4	65	8	30	4000	-70/+80	FDA
2EM 0+0.5D/2.0 BASF	2	Rigid	PVC	BLACK		Fabric	0.5	D	2.0	2.4	65	8	30	4000	-10/+80	ASF
2EM 0+0.SSF/2.0AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	0.5	SF	2.0	2.4	65	8	30	2000	-70/+80	AS
2ESM 0+1.0G/2.3 BAS	2	Rigid	PVC	BLACK		EC Fabric	1.0	G	2.3	0.2	65	8	30	2000	-10/+80	AS
2ESM 0+1.0LG/2.3 BAS	2	Rigid	PVC	BLACK		EC Fabric	1.0	LG	2.3	2.2	65	70	30	2000	-10/+80	AS
2ESM 0+1.0 SD /2.3BAS	2	Rigid	PVC	BLACK		EC Fabric	1.0	SD	2.3	2.2	65	8	30	2000	-10/+80	AS
2ECM 0+0/2.5 W	2	Rigid	PVC	WHITE		EC Fabric		ECM-Fabric zw	2.5	2.8		8	25	4000	-10/+80	FDA
2EM 0+0.8 ZW/2.5B	2	Rigid	PVC	BLACK		Fabric	0.8	zw	2.5	2.7	55	70	50	2000	-10/+80	
2EM O+L/2.5AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	1.0	Glossy	2.5	2.7	75	8	50	4000	-10/+80	
2EM O+L/2.5W	2	Rigid	PVC	WHITE		Fabric	7.0	Glossy	2.5	2.7	65	8	50	4000	-10/+80	
2EM 0+L/2.5 WAS FDA	2	Rigid	PVC	WHITE		Fabric	7.0	Glossy	2.5	2.7	65	8	50	4000	-10/+80	AS FDA
2EM O+L/2.5 B	2	Rigid	PVC	BLACK		Fabric	7.0	Matt	2.7	2.9	75	70	50	4000	-10/+80	
2EM 0+L 0LR/2.7B	2	Rigid	PVC	BLACK		Fabric	7.0	LR	2.7	2.5	75	70	50	2000	-10/+80	
2EM 0+L/2.7P	2	Rigid	PVC	PET ROL		Fabric	7.0	L	2.7	3.0	75	70	50	2000	-10/+80	
IEM O+O F/3.0W	1	Rigid	PVC	WHITE		Fabric	7.0	Felt	3.0	3.3		4	60	2000	-10/+80	
2EM O+L/3.0AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	7.0	Glossy	3.0	3.6	75	8	60	4000	-10/+80	AS
2EM 0+L/3.0W	2	Rigid	PVC	WHITE		Fabric	7.0	Glossy	3.0	3.6	65	8	60	4000	-10/+80	
2EM O+L/3.0WAS FDA	2	Rigid	PVC	WHITE		Fabric	7.0	Glossy	3.0	3.6	65	8	60	4000	-10/+80	AS FDA
2EM O+L/3.0 BFR	2	Rigid	PVC	BLACK		AFabric	7.0	Glossy	3.0	3.6		8	60	4000	-70/+80	FR
2EF O+L 0/3.0 BAS	2	Flexible	PVC	BLACK		EFFabric	1.0	Glossy		3.6		8	60	4000	-10/+80	AS
2EM 0.5D+0.8/3.0AG	2	Rigid	PVC	APPLE GREEN	0.5	D	0.8	Glossy		3.6		8	50	4000	-70/+80	
2EM 0.5D+0.8/3.0W	2	Rigid	PVC	WHITE	0.5	D	0.8	Glossy		3.6		8	50	4000	-10/+80	
2EF 0.5D+0.8/3.0SBFDA	2	Flexible	PVC	SKY BLUE	0.5	D	0.8	Glossy		3.6		8	50	4000	-70/+80	FDA
2EM O.SM+0.5/3.0P	2	Rigid	PVC	PETROL	0.5	Matt	0.5	Glossy		3.6	75	8	50	4000	-10/+80	
2EM 0.SM+0.5/3.0W	2	Rigid	PVC	WHITE	0.5	Matt	0.5	Glossy		3.6		8	50	4000	-70/+80	
2EM O.SM+O.SM/3.0 B H	2	Rigid	PVC	BLACK	0.5	Matt	0.5	Matt		3.6	80	70	50	4000	-10/+80	HARD
3EM O+L/4.0PAS	3	Rigid	PVC	PETROL		Fabric		Glossy	4.0	4.8		72	700	4000	-10/+80	AS
3EM O+L/4.0AGAS	3	Rigid	PVC	APPLE GREEN		Fabric		Glossy	4.0	4.8	75	72	700	4000	-10/+80	AS
3EM O+L 0/4.0WFDA	3	Rigid	PVC	WHITE		Fabric		Glossy	4.5	5.0		72	700	4000	-10/+80	FDA
2EM 0+2. SSGF/4. 5P	2	Rigid	PVC	PETROL		Fabric	2.5	SGF	4.5	4.0		70	80	2000	-10/+80	
2EM 0+2. SSGF/4. 5BAS	2	Rigid	PVC	BLACK		ESM Fabric	2.5	SGF		4.0		70	80	2000	-10/+80	AS
2EF 1.0D +L 5/4. 5W	2	Flexible	PVC	WHITE	1.0	D	1.5	Glossy	4.5	5.0		70	760	3000	-10/+80	
2EM 0+3.0LS/4. 5AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	2.5	LS		4.3	75	8	80	2000	-10/+80	AS
2EM 0+2.SSS/4. 5AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	2.5	SS	4.5	4.6	75	8	80	2000	-10/+80	AS
2EM 0+2.SST/4. 5AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	3.0	ST	4.5	4.4		8	60	2000	-10/+80	AS
2EM 0+3.0SG/5.0AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	3.0	SG		4.6	70	8	80	3000	-10/+80	AS
2EM 0+3.0SG/5.0P AS	2	Rigid	PVC	PETROL		Fabric	3.0	SG		4.6	70	8	80	3000	-30/+80	AS
2EM 0+2. 8FB/5. 0AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	2.8	FB		4.3		8	80	2000	-10/+80	AS
2EM 0+2. 8FB/5. 0WFDA	2	Rigid	PVC	WHITE		Fabric	2.8	FB		4.3		8	80	2000	-10/+80	FDA
2EM 0+2.SRS /5.0AGAS	2	Rigid	PVC	APPLE GREEN		Fabric	2.5	RS		4.0	75	8	80	2000	-10/+80	AS
2EM 0+2.SRS /5.0W	2	Rigid	PVC	WHITE		Fabric	2.5	RS	5.0	4.0	65	8	80	2000	-10/+80	
2EM 0+3. SWSG/5. 0P AS	2	Rigid	PVC	PETROL		Fabric	3.5	WSG	6.0	5.6		8	80	3000	-10/+80	AS
2EM LOD+3.0C R /6. 0 B	2	Rigid	PVC	BLACK		D		BLS	4.5	75				2000	-10/+80	

5. Conveyor Belts

5.4 Most Common Orion™ Belts

Type Number	Fabric		Material Colour		Bottom Cover		Top Cover		Belt Thickness mm	Belt Weight kg/m <sup>2</sup>	Hardness Shore A	1% Elongation Strength	Roller Diameter Min	Width Max	Temp	Special Characteristics
	Ply	Weft			Thick-ness	Surface	Thickness	Surface								
3 EM 0+2.0/6. 0 AG AS	3	Rigid	PVC	APPLE GREEN		Fabric	2.0	Glossy	6	7.2	75	12	120	4000	-10/+80	AS
3 EM 0+2.0/6. 0 W FDA	3	Rigid	PVC	WHITE		Fabric	2.0	Glossy	6	7.2	65	12	120	4000	-10/+80	FDA
3 EM 0+2.0/6. 0 B WR	3	Rigid	PVC	BLACK		Fabric	2.0	Glossy	6	7.2	65	12	120	4000	-10/+80	AS WR
3 EM L0+2.0M/6. 0 W	3	Rigid	PVC	WHITE	1.0	Glossy	2.0	Matt	6	7.2	75	12	120	4000	-10/+80	
3 EFL0+2.0M/6. 0 W	3	Flexible	PVC	WHITE	1.0	D	2.0	Matt	6	6.8	75	14	120	4000	-10/+80	
3 EM 0+ 3.0M/6. 0 W	3	Rigid	PVC	WHITE		Fabric	2.0	Matt	6	5.3	75	12	120	2000	-10/+80	
3 EF 0+2. 0/6. 0 P	3	Flexible	PVC	PETROL		EF Fabric	2.0	Glossy	6	7.2	75	50	120	3000	-10/+80	
4 EM 0+2. 0/6. 0 P	4	Rigid	PVC	PETROL		Fabric	2.0	Glossy	6	7.2	75	18	120	4000	-10/+80	
3 EF 0+ 2. 5SG/7.0 P	3	Flexible	PVC	PETROL		EF Fabric	2.5	SG	7	7.9	75	50	350	2200	-10/+80	
3 EF 0+2. SLG/7.0 P	3	Flexible	PVC	PETROL		EF Fabric	2.5	LG	7	7.9	75	50	350	2200	-10/+80	
2 EM 0+7.0TI/9.0 P	2	Rigid	PVC	PETROL		EM Fabric	7.0	TI	9	9.9	75	8	120	3000	-10/+80	
4 EF 0+2. SRN/9.0 SB	4	Flexible	PVC	SKY BLUE		EF Fabric	2.5	RN	9	9.9	75	50	350	2200	-10/+80	
2 EM0+6.0BS/9. 0B	2	Rigid	PVC	BLACK		EM Fabric	6.0	BS	9	8.5	75	10	100	2000	-10/+80	
4 EF 0+2. SSG/9. 0 P	4	Flexible	PVC	PETROL		EF Fabric	2.5	SG	9	9.9	75	70	450	2200	-10/+80	
4 EF 0+2.5 LG/9. 0 P	4	Flexible	PVC	PETROL		EF Fabric	2.5	LG	9	9.9	75	70	450	2200	-10/+80	
3 EM 0+6. 0CS/9. 0B	3	Rigid	PVC	BLACK		Fabric	6.0	cs	9	9.9	55	16	120	2000	-10/+80	
3 EM 0+6. 0SQ/9. 0B	3	Rigid	PVC	BLACK		Fabric	6.0	SQ	9	8.5	55	16	120	2000	-10/+80	
3 EF 2. 5MG+2. 5MG/9. 0 P	3	Flexible	PVC	PETROL	2.5	MG	2.5	MG	9	9.9	75	50	350	2000	-10/+80	
3 EF 0+3. 0SG/10. 0B	3	Flexible	PVC	BLACK		EF Fabric	3.0	SG	10	17.5	75	50	350	2200	-70/+80	
3 EF 0+7. 0TI/17. 5 SB	3	Flexible	PVC	SKY BLUE		EF Fabric	7.0	TI	11.5	8.1	75	50	350	3000	-10/+80	
3 EF 0+7. 0T2/TI. 5 SB	3	Flexible	PVC	SKY BLUE		EF Fabric	7.0	T2	11.5	8.1	75	50	350	2200	-70/+80	
4 EF 0+7. 0T2/12. 5 SB	4	Flexible	PVC	SKY BLUE		EF Fabric	7.0	T2	12.5	9.1	75	70	350	2200	-10/+80	
IEM 0+0.2/0. 7W UAS	1	Rigid	PU	WHITE		Fabric	0.2	Glossy	0.7	0.9	93	6	3	4000	-20/+80	
IEM 0+0. 2/0. 8 P UA S	1	Rigid	PU	PETROL		Fabric	0.3	Glossy	0.8	1	93	6	3	4000	-20/+80	
IEM 0+0. 2/0. 8 W UA S	1	Rigid	PU	WHITE		Fabric	0.3	Matt	0.8	1	93	6	3	4000	-20/+80	
IEM 0+0. 2/0. 8 B U A S	1	Rigid	PU	SKY BLUE		Fabric	0.3	Glossy	0.8	1	93	6	3	4000	-20/+80	
2 EM 0+0.3/1. 1 W UA S	2	Rigid	PU	WHITE		Fabric	0.3	Glossy	1.1	1.3	93	12	30	4000	-20/+80	
2 EM 0+0.5/1.5 P UA S	2	Rigid	PU													



## 5. Conveyor Belts

### 5.5 New Special Orion™ Belts

Type Number	Fabric		Material Colour		Bottom Cover		Belt Thickness	Belt Weight	Hardness	1% Elongation	Roller Diameter	Width		Temp	Special Characteristics	
	Ply	Weft			Thickness	Surface						Thickness	Surface			mm
PVK100	1	Flexible	PVC	BLACK	0.1	Impregnation	0.1	Impregnation	3	3.5	14	60	2000	-15/+80		
PVK125	1	Flexible	PVC	BLACK	0.1	Impregnation	0.1	Impregnation	3.5	4	21	80	2000	-15/+80		
PVK150	1	Flexible	PVC	BLACK	0.1	Impregnation	0.1	Impregnation	4	4.5	25	120	2000	-15/+80		
SO LID100 0.1+1.0/2.7B	1	Flexible	PVC	BLACK	0.1	Impregnation	1.2	Glossy	2.7	2.9	65	18	40	2000	-15/+80	
<b>SOLID100/0L +L 0/2.7W</b>	1	Flexible	PVC	WHITE	0.1	Impregnation	1.2	Glossy	2.7	2.9	65	18	40	2000	-15/+80	
SOLID100/0.1+L 2/3.4B	1	Flexible	PVC	BLACK	0.1	Impregnation	1.4	Glossy	3.4	3.9	65	21	50	2000	-15/+80	
SOLID100/0.1+L 2/3.4W	1	Flexible	PVC	WHITE	0.1	Impregnation	1.4	Glossy	3.4	3.9	65	21	50	2000	-15/+80	
SO LID150/0.1+L 2/4.2B	1	Flexible	PVC	BLACK	0.1	Impregnation	2	Glossy	4.2	4.7	65	26	65	2000	-15/+80	
SOLID 200/0.1+L S/5.2B	1	Flexible	PVC	BLACK	0.1	Impregnation	2	Glossy	5.2	5.7	65	32	100	2000	-15/+80	
SO LID 120/0.1+3.0SG/6.0B	1	Flexible	PVC	BLACK	0.1	Impregnation	3	5g	6	5.6	65	26	65	2000	-15/+80	
SOI LD 120/0.1+3.0C/6.0B	1	Flexible	PVC	BLACK	0.1	Impregnation	3	C	6	5.2	26	65	2000	-15/+80		
NW25W	1	Flexible	NW	WHITE	1.2	NW	1.2	NW	2.5	1.5	10	30	2000	10/+120		
NW25GR	1	Flexible	NW	GREY	1.2	NW	1.2	NW	2.5	1.5	10	30	2000	10/+120		
NW40GR	1	Flexible	NW	GREY	1.95	NW	7.95	NW	4	2.5	10	70	2000	10/+120		
NW60GR	1	Flexible	NW	GREY	2.7	NW	2.7	NW	5.5	3.5	10	100	2000	10/+120		

### 5.6 New Special Orion™ Food Belts

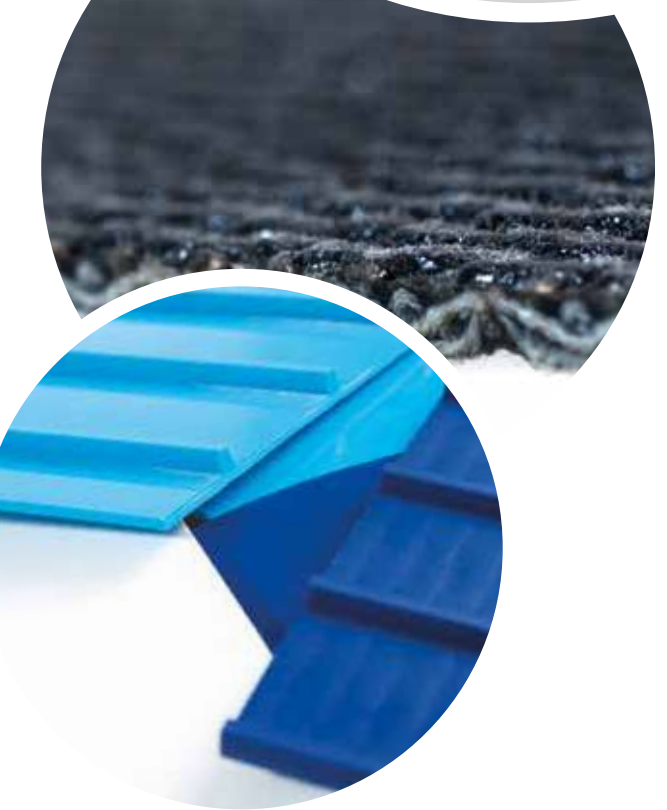
Type Number	Fabric		Material Colour		Bottom Cover		Belt Thickness	Belt Weight	Hardness	1% Elongation	Roller Diameter	Width		Temp	Special Characteristics	
	Ply	Weft			Thickness	Surface						Thickness	Surface			mm
C CLEAN SO LID L0+L0/2.7 SB		Flexible	PU	SKY BLUE	1	Matt	1	Impregnation	2.7	2.9	90	18	20	2000	-15/+80	
CLEAN SOLID L0+L0/2.7 W		Flexible	PU	WHITE	1	Matt	1	Impregnation	2.7	2.9	90	18	20	2000	-15/+80	
CLEAN SOLID 1.4. +1.4/34. SB		Flexible	PU	SKY BLUE	1.4	Matt	1.4	Impregnation	3.4	3.9	90	21	30	2000	-15/+80	
CLEAN SOLID 1.4+ 1.4/3.4 W		Flexible	PU	WHITE	1.4	Matt	1.4	Glossy	3.4	3.9	90	21	30	2000	-15/+80	
C CLEAN HOMOGENEOUS -1.5	CORD	ARAMID	TPU	SB/W/DB				Glossy	1.5		93	8	10	2000	10/+120	
CLEAN HOMOGENEOUS -2	CORD	ARAMID	TPU	SB/W/DB				Glossy	2		95	16	10	1400	10/+120	
CLEAN HOMOGENEOUS -3	CORD	ARAMID	TPU	SB/W/DB					3		95	16	10	1400	10/+120	
C CLEAN HOMOGENEOUS DRIVE 25	CORD	ARAMID	TPU	SB/W/DB					3		95	16	10	1400	10/+120	
CLEAN HOMOGENEOUS DRIVE 50	CORD	ARAMID	TPU	SB/W/DB					3		95	16	10	1400	10/+120	

#### 5.8.1 Solid and PVK The compact belts of Orion™

- > Different fabric designs
- > High abrasion and puncture resistant
- > High flexibility when compared with rubber or steel belts
- > High strength that allows heavy weights carrying

#### 5.8.2 Clean Belts The premium food belts of Orion™

- > **CLEAN SOLID and CLEAN SOLID DRIVE**  
A compact solution that can be supplied with one or two rows of teeth up to 2000mm with a customized pitch.
- > **CLEAN HOMOGENEOUS and CLEAN HOMOGENEOUS DRIVE**  
A aramid core sealed with a thermoplastic polyurethane that can be produced up to 7400mm.
- > High release
- > Cleanability
- > Temperature resistance - Oil resistance
- > Easy to clean
- > Improving downtime
- > Lifetime
- > Dimensional stability
- > Excellent price value offer





## 5. Conveyor Belts

### 5.7 PU Thermoweldable Orion™ Belts

#### 5.7.1 Round Belts

Item	Size	M/Roll	Hardness	Colour
400-0E-RS-02-PU	DIAM 2mm	400M	90A	RED
400-0E-RS-03-PU	DIAM 3mm	400M	90A	RED
200-0E-RS-04-PU	DIAM 4mm	200M	90A	RED
200-0E-RS-05-PU	DIAM 5mm	200M	90A	RED
200-0E-RS-06-PU	DIAM 6mm	200M	90A	RED
100-0E-RS-08-PU	DIAM 8mm	100M	90A	RED
SO-0E-RS-10-PU	DIAM 10mm	SOM	90A	RED
30-0E-RS-12-PU	DIAM 12mm	30M	90A	RED
30-0E-RS-15-PU	DIAM 15mm	30M	90A	RED
30-0E-RS-18-PU	DIAM 18mm	30M	90A	RED
30-0E-RS-20-PU	DIAM 20mm	30M	90A	RED
400-0E-RR-02-PU	DIAM 2mm	400M	BSA	GREEN
400-0E-RR-03-PU	DIAM 3mm	400M	BSA	GREEN
200-0E-RR-04-PU	DIAM 4mm	200M	BSA	GREEN
200-0E-RR-05-PU	DIAM 5mm	200M	BSA	GREEN
200-0E-RR-06-PU	DIAM 6mm	200M	BSA	GREEN
100-0E-RR-07-PU	DIAM 7mm	100M	BSA	GREEN
100-0E-RR-08-PU	DIAM 8mm	100M	BSA	GREEN
SO-0E-RR-10-PU	DIAM 10mm	SOM	BSA	GREEN
30-0E-RR-12-PU	DIAM 12mm	30M	BSA	GREEN
30-0E-RR-15-PU	DIAM 15mm	30M	BSA	GREEN
30-0E-RR-18-PU	DIAM 18mm	30M	BSA	GREEN
30-0E-RR-20-PU	DIAM 20mm	30M	BSA	GREEN

#### 5.7.2 V-Belts

Item	Profile	Size	M/Roll	Hardness	Colour
SO-0E-M-PU RED	V-BELT	8x5	50M	90A	RED
SO-0E-Z-PU RED	V-BELT	10x6	50M	90A	RED
30-0E-A-PU RED	V-BELT	13x8	30M	90A	RED
30-0E-B-PU RED	V-BELT	17x11	30M	90A	RED
30-0E-C-PU RED	V-BELT	22x14	30M	90A	RED
SO-0E-M-PU GREEN	V-BELT	8x5	50M	90A	GREEN
SO-0E-Z-PU GREEN	V-BELT	10x6	50M	90A	GREEN
30-0E-A-PU GREEN	V-BELT	13x8	30M	90A	GREEN
30-0E-B-PU GREEN	V-BELT	17x11	30M	90A	GREEN
30-0E-C-PU GREEN	V-BELT	22x14	30M	90A	GREEN
SO-0E-M-PU WHITE	V-BELT	8x5	50M	90A	WHITE
SO-0E-Z-PU WHITE	V-BELT	10x6	50M	90A	WHITE
30-0E-A-PU WHITE	V-BELT	13x8	30M	BSA	WHITE
30-0E-B-PU WHITE	V-BELT	17x11	30M	BSA	WHITE
30-0E-C-PU WHITE	V-BELT	22x14	30M	BSA	WHITE
30-0E-A-PU C	V-BELT GRIP COATED	13x8	30M	BSA	RED/GREEN
30-0E-B-PU C	V-BELT GRIP COATED	17x11	30M	BSA	RED/GREEN
30-0E-C-PU C	V-BELT GRIP COATED	22x14	30M	BSA	RED/GREEN
30-0E-A-PU P	V-BELT GRIP PENTAGON	13x8	30M	BSA	RED
30-0E-B-PU P	V-BELT GRIP PENTAGON	17x11	30M	BSA	RED
30-0E-C-PU P	V-BELT GRIP PENTAGON	22x14	30M	BSA	RED



## 5. Conveyor Belts

### 5.8 Profiles

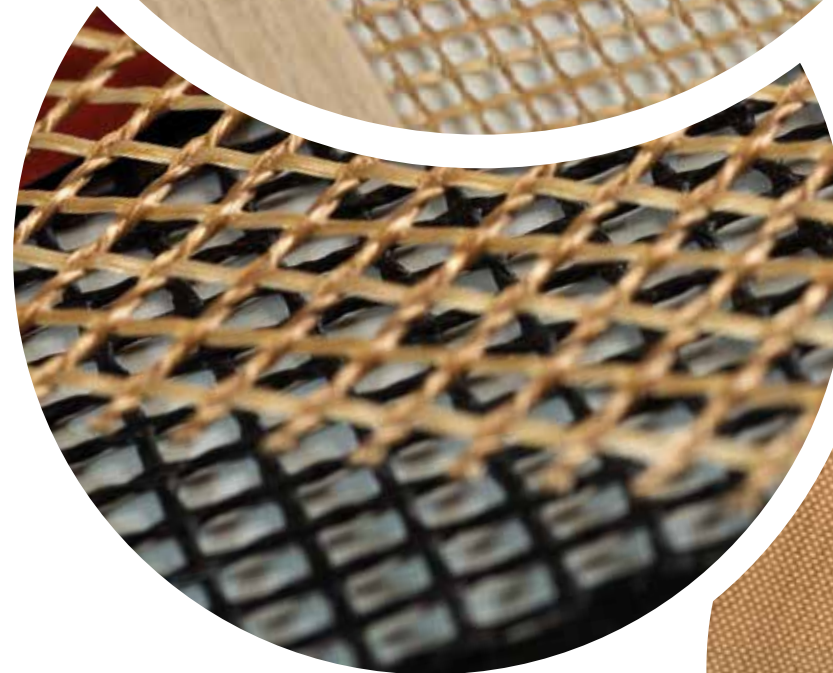
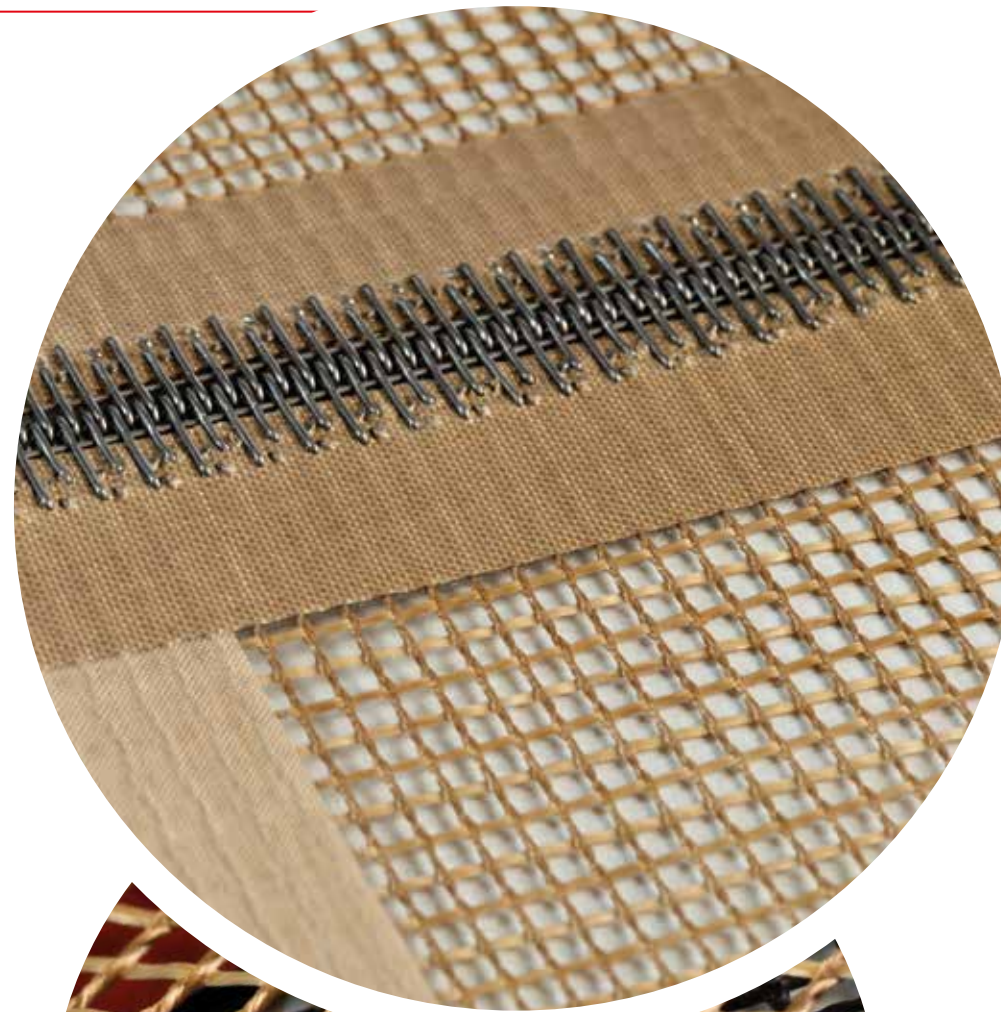
#### 5.8.1 PVC Cleats

Appearance	Type	Hardness (Shore A)	Specification B*H (mm)	Colour	Min. diameter (mm)	
					Top	Bottom
	D6	60	6*4	GREEN / WHITE / TRANSPARENT	40	30
	D8		8*5		50	40
	D10		10*6		70	60
	D13		13*8		100	80
	D17		17*11		110	90
	D22		22*14		180	120
	D30		30*18		200	150
	UD6	65	6*4	GREEN / WHITE / TRANSPARENT	40	30
	UD8		8*5		50	40
	UD10		10*6		70	60
	UD13		13*8		100	80
	UD17		17*11		110	90
	T20	60	20*20	GREEN / WHITE / TRANSPARENT		90
	T30		25*20			120
	T40		25*40			120
	T50		25*50			120
	T60		40*60			150
	T75		45*75			160
	T80		47*80			180
	X30		25*30			40
	X40	60	30*40	GREEN / WHITE / TRANSPARENT		60
	X50		30*50			80
	X60		35*60			80
	X70		40*70			100
	X80		43*80			120
	UT20	86	10*20	GREEN / WHITE / TRANSPARENT		35
	UT30		15*30			40
	UT40		15*40			40

## 5.9 Technical Fabrics

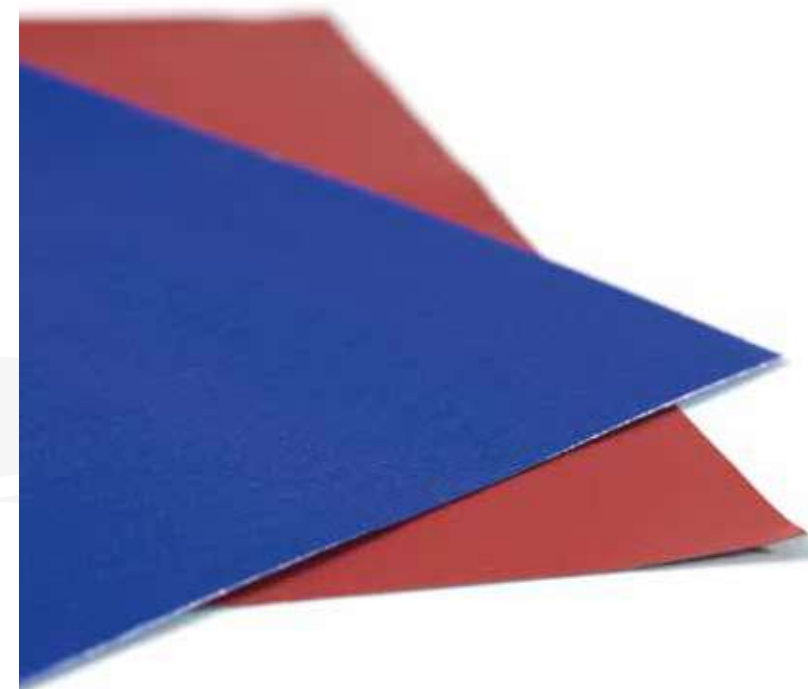
The **High Temperature Conveyor Belts** division at Orion™ was established as a response to market needs that require current technical solutions and constant improvements with a large and increasingly international market, looking to rationalize and lower costs.

Our first aim is to offer a wide range of solutions that can perform under extreme conditions to the technical features with consistency and long life associated with Orion™ belts.



There are multiple applications for technical fabrics:

- > Food Processing
- > Processing of plastic materials
- > Textiles
- > Packaging
- > Manufacture of wooden boards
- > Retracting tunnels
- > Non-stick surfaces
- > Thermosealing
- > Chemical protection
- > Electrical and thermal insulation
- > Food sheets (pastry shops, bakeries, etc.)
- > Conveyor belts
- > Expansion joints
- > Unmolding
- > Rubber Extrusion
- > Screen Printing





## 5. Conveyor Belts

### 5.10 Properties

#### Chemical Resistance

Ideally suited to any type of chemical, acids, solvents, etc, with the exception of alkaline metals at melting point, because they attack Teflon. Hydrofluoric acid is not recommended because it attacks the fiberglass, although not the Teflon.

#### Thermal resistance

Its characteristics are not affected at temperatures from -700 oC to +260°C continuously, with great dimensional stability, conveyor belts can even pass from a cooking oven to freezing tunnel without being affected by the sudden change in temperature.

#### Nonstick

On the belt surface there is no adhesion of sticky products for example, adhesives or glues, dyes, lacquers, polyester, sugar, melted chocolate, molten plastic, etc. Note that some products may “hold” on the surface as long as they are not cured, cooked or soft, but are released as soon as they vulcanize, crosslink or cook.

#### Self-lubricating

Its coefficient of friction is very low, of 0.04 on uns lubricated steel, with the advantage that the higher the pressure the lower the coefficient of friction, in some cases reaching 0.02.

#### Durability

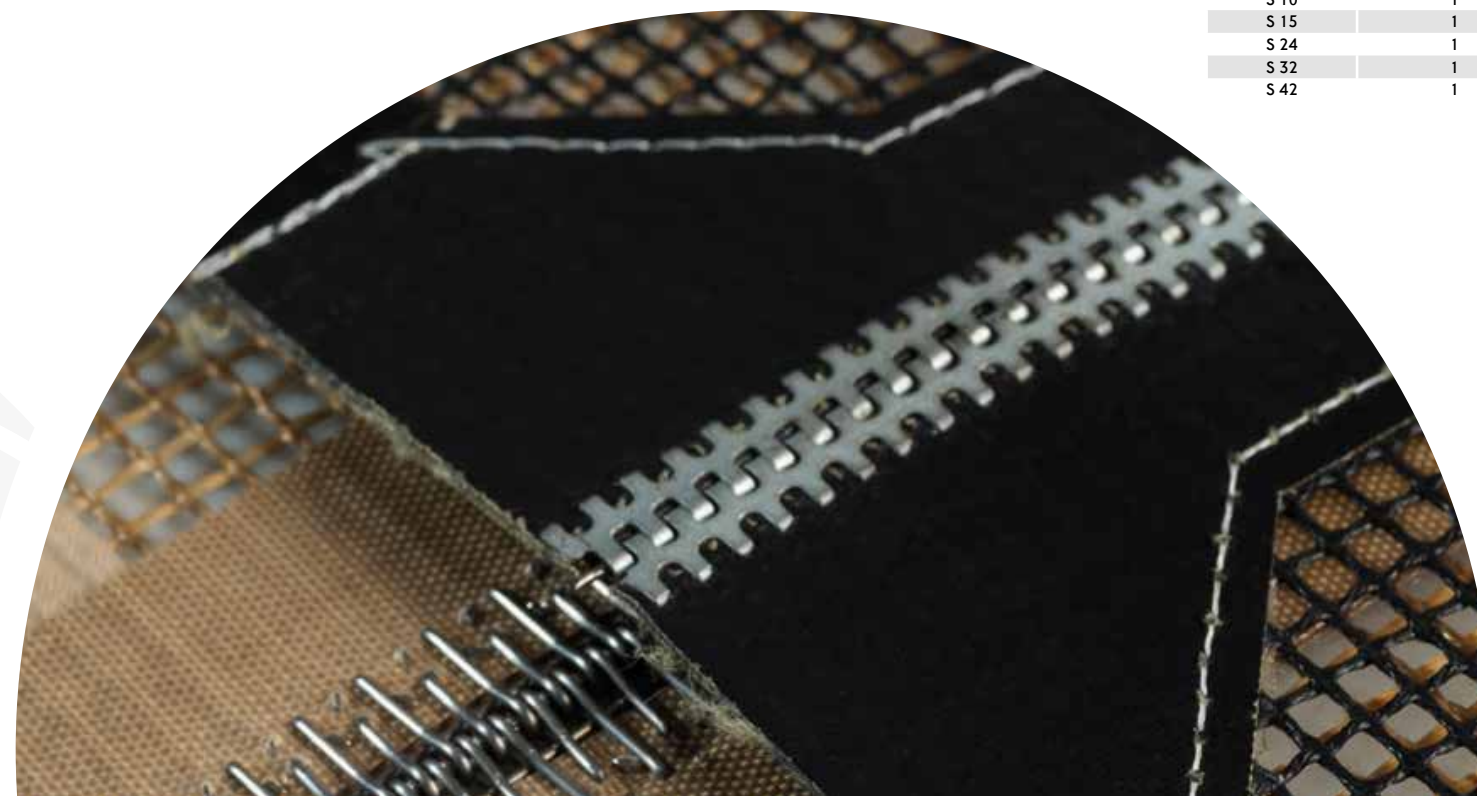
They do not age even when subjected to continuous changes in temperatures and are not affected by continuous exposure to the sun or ozone, although ozone causes normal aging of the products.

## 5. Conveyor Belts

### 5.11 Coated Fabrics

#### 5.11.1 with PTFE and Silicone

Reference	Width	Thickness	Weight	PTFE	Strength	Breakness
	Meters	Micras	g/m <sup>2</sup>	% Content	N/5cm	N/5cm
<b>Industrial</b>						
I-3	1	80	155	66	700	2000
I-3	1, 1.5	126	255	65	1100	3000
I-6	1, 1.5	142	300	63	1100	3600
I-10	1, 1.5, 2	245	490	58	2000	4000
I-11	1, 1.5, 2	260	490	58	2000	4300
I-14	1, 1.5, 2.4	350	735	60	3000	3500
<b>Food Master</b>						
FM 7	1, 1.5, 2, 2.5	215	271	63	1800	-
FM 10	1, 1.5, 2, 2.4	250	390	64	2000	-
FM 11	1, 1.5, 2, 2.5	265	271	65	2000	-
FM 14	1, 1.5, 2, 2.4	350	390	63	2800	-
<b>Anti-Static</b>						
A 3	1	79	146	66	700	-
A 5	1, 1.5	125	255	58	1100	-
A 6	1, 1.5	140	296	63	1100	-
A 10	1, 1.5, 2, 2.4	235	490	58	2000	-
A 11	1, 1.5, 2, 2.4	260	550	63	2000	-
A 14	1, 1.5, 2.4	340	680	57	3000	-
<b>Open Mesh</b>						
1 X 1 GG	1.5	670	520	21	3500	Glass
2 X 2 GG	2.5	770	445	26	1500	Glass
4 X 4 GG	2.7, 3.2, 3.7	980	460	32	1800	Glass
4 X 4 GG AS	2.7, 3.2	950	460	32	1600	Glass AS
4 X 4 KG	3	1250	644	35	4500	Kevlar / Glass
4 X 4 KK	2.6	770	310	46	2500	Kevlar / Glass
<b>Kevlar</b>						
K 15	2	370	475	52	5000	2000
K 15 AS	2	370	570	59	5000	-
K 17	1.6	240	720	63	2800	3000
K 17 AS	1.5	420	630	57	2800	-
<b>Silicone</b>						
S 10	1	240	340	-	1000	-
S 15	1	380	540	-	2000	-
S 24	1	550	760	-	3000	-
S 32	1	780	1080	-	4000	-
S 42	1	1060	1480	-	4200	-





## 5. Conveyor Belts

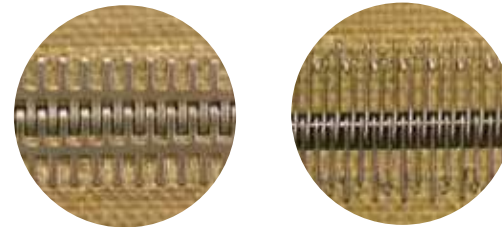
### 5.12 Belts

In the production of conveyor belt for the PTFE coated fabrics we need to take into consideration some of the basic parameters such as:

- > Fabric
- > Joint
- > Edge Reinforcements
- > Tracking and Guiding Devices

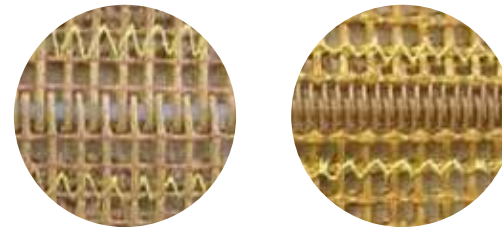
#### Metallic Splices

The use of splices are the most durable and easy to use. Belts can be installed without taking machinery apart. An overlap can be added to these splices to reduce mark-off and heat transfer to your material.



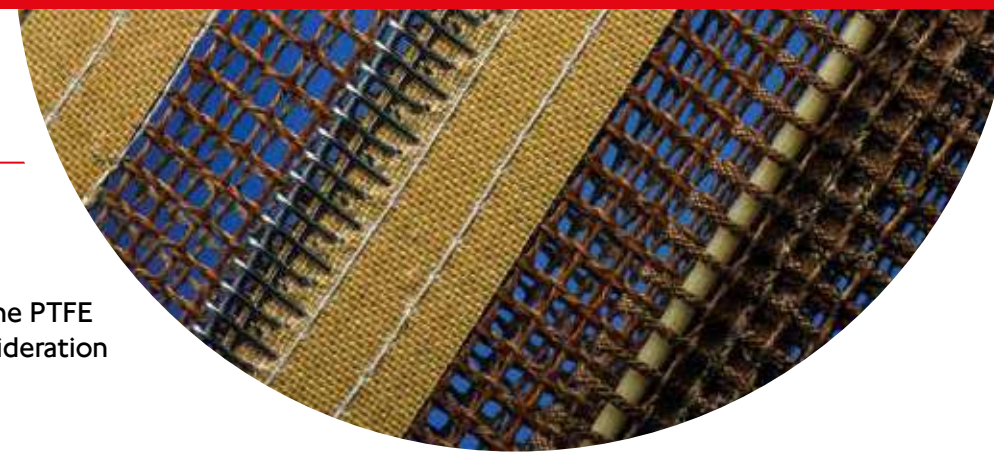
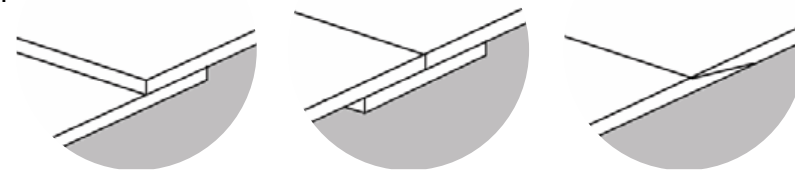
#### Non-Metallic Splices

A bullnose joint or peek lacing are ideal when metal lacing cannot be used. All are durable and flexible.



#### Endless Splices

90° or 45° angle butt splices, overlap splices and carfed splices can be heat sealed in customer machines or supplied already endless.



## 5. Conveyor Belts

### 5.13 Tapes

Reference	Width	Thickness	Adhesive	Adhesion
	Meters	Micras	Micras	n/25.4 mm
<b>Industrial Adhesive</b>				
IA3	1	75	40	7.6
IA5	1. 1.5	122	50	10
IA6	1. 1.5	138	50	10
IA10	1. 1.5	235	65	11
IA14	1. 1.5	340	80	12
<b>Anti-Static Adhesive</b>				
AS3	1	79	40	7.6
AS5	1	125	50	10
AS6	1	140	50	10
AS10 /	1	235	65	11
<b>Skived PTFE Adhesive</b>				
SA3	1	76	35	10
SA5	1	127	50	10
SA10	1	254	65	11
SA20	1	508	80	12





5.14 Applications

- > Cement Plants
- > Chemical Industry
- > Steel Works
- > Hot Asphalt Heating Stations
- > Recycling, Waste Sorting
- > Metal Processing
- > Timber Industry
- > Fertilizers Handling
- > Corn and Earthworks Conveying
- > Tunnel Construction
- > Conveying Fine Grained Material
- > Silo Conveyors
- > Bridge Conveyors



5.15 Polyester Conveyor Belt



The Orion™ Rubber Conveyor Belt is a robust construction designed to convey materials under medium and long distance, high load and high speed conditions.

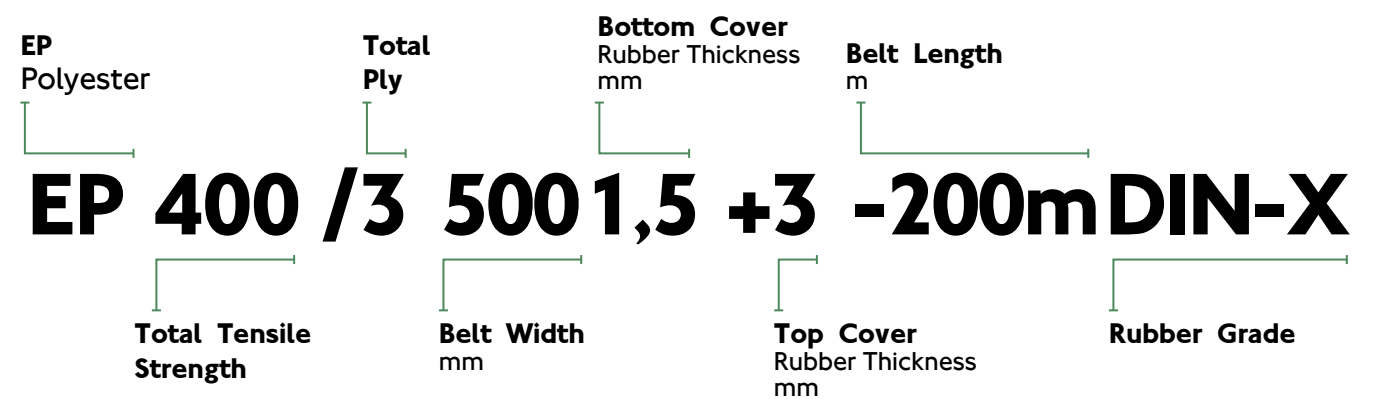
Features

- > Exceptional shock and impact resistance to the carrying surface
- > Superior in mechanical fastener holding ability
- > Excellent throughability and flexibility
- > Smaller pulley diameter required
- > High resistance to tension low elongation
- > Outstanding dimension stability
- > Impact resistance

Specifications and technical data of multi-ply Polyester Conveyor Belt

- > Different Rubber Grades (Din Z, W, Y, X)
- > Possibility of width between 400mm to 2500mm
- > Maximum lengths of 500m

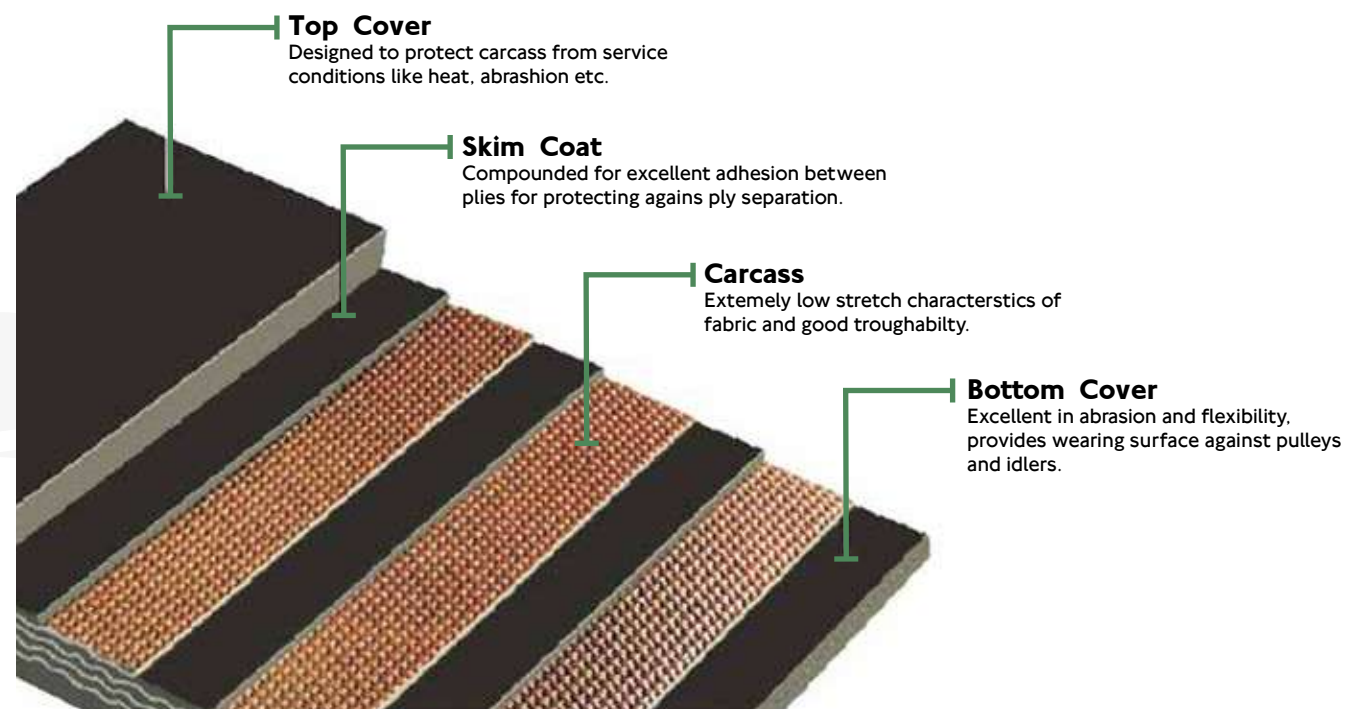
Belt Code Definition



## 5. Conveyor Belts

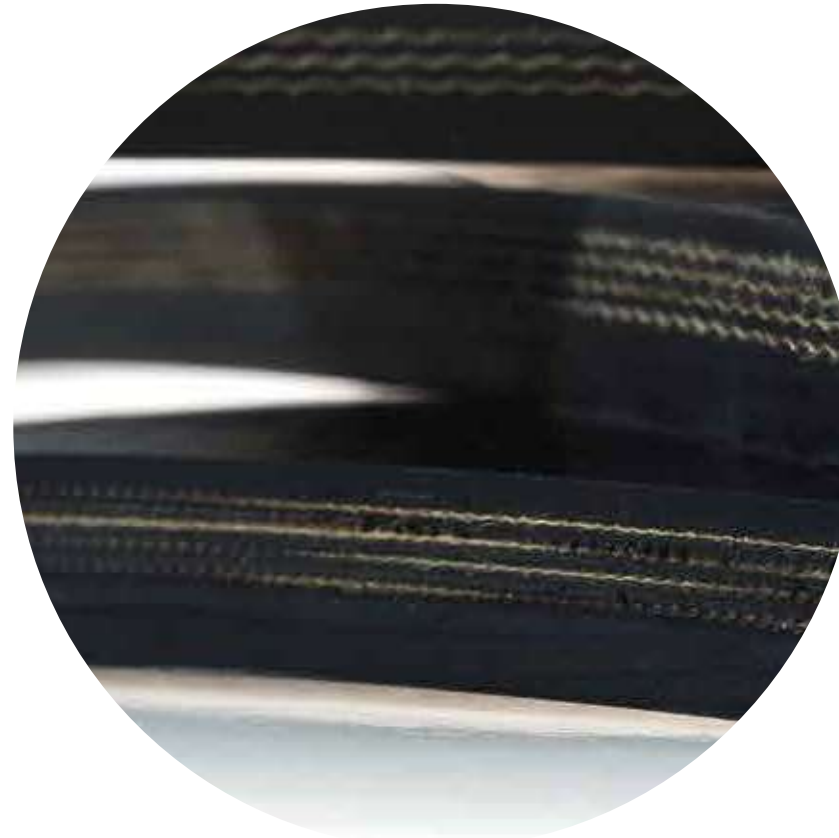
### 5.15 Polyester Conveyor Belts

Belt Type	Fabric Type	No. of Plies	Carcass		Max Working Tension	
			Thickness mm	Weight mm	Vulcanises N/mm	Fastened N/mm
200/2	100	2	2.1	2.5	20	16
250/2	125	2	2.3	2.7	25	20
315/0	160	2	2.9	3.5	32	26
315/3	100	3	3.3	4	32	26
400/2	200	2	3.1	3.7	40	32
400/3	125	3	3.6	4.3	40	32
500/2	250	2	3.3	4	50	40
500/3	160	3	4.5	5.4	50	40
500/4	125	4	4.9	5.9	50	40
630/3	200	3	4.8	5.8	63	50
630/4	160	4	6.1	7.3	63	50
800/3	250	3	5.1	6.1	80	64
800/4	200	4	6.5	7.8	80	64
1000-4	250	4	6.9	8.3	100	80
1000/5	200	5	8.2	9.9	100	80
1250/5	250	5	8.7	10.4	125	
1250/6	200	6	9.9	11.9	125	
1500/6	250	6	10.4	12.5	125	



## 5. Conveyor Belts

### 5.16 Additional Belt Types



#### 5.4.1 Chevron Belts

Profiles from 15mm to 32mm high and width between 300mm to 1500mm

- > Rubber cleats, guides and sidewalls are also available for the complete range.

#### 5.4.2 Steel Cable Conveyor Belts

Widely used in high strength, long distance and heavy load.

- > ST630 ST800 ST1000 ST1250 ST1600 ST2000 ST2500 ST3150

#### 5.4.3 Heat Resistant Conveyor Belts

According to the application and heat resistance properties.

- > T-1 Material upto 125O
- > T-2 Material upto 150O
- > T-3 Material upto 200O

Used in: Cement Plants, Chemical Industries, Steelworks, Hot Asphalt Heating Stations.

#### 5.4.4 Oil and Grease Resistant Conveyor Belts

These belts are available in different constructions ranging from smooth belts, super grip, chevron belts.

Used in: Concrete Plants, Recycling, Waste Sorting, Metal Processing, Timber Industry, Fertilizer Handling, Corn and Earthworks Conveying.

#### 5.4.5 Pipe Conveyor Belts

The special carcass construction means the belt runs like a tube. With a closed system we can convey bulk solids in horizontal or vertical curves. Suitable for: Cement and Concrete Plants, Heating Stations, Tunnel Construction, conveying fine grained material, silo conveyors, bridge conveyors.