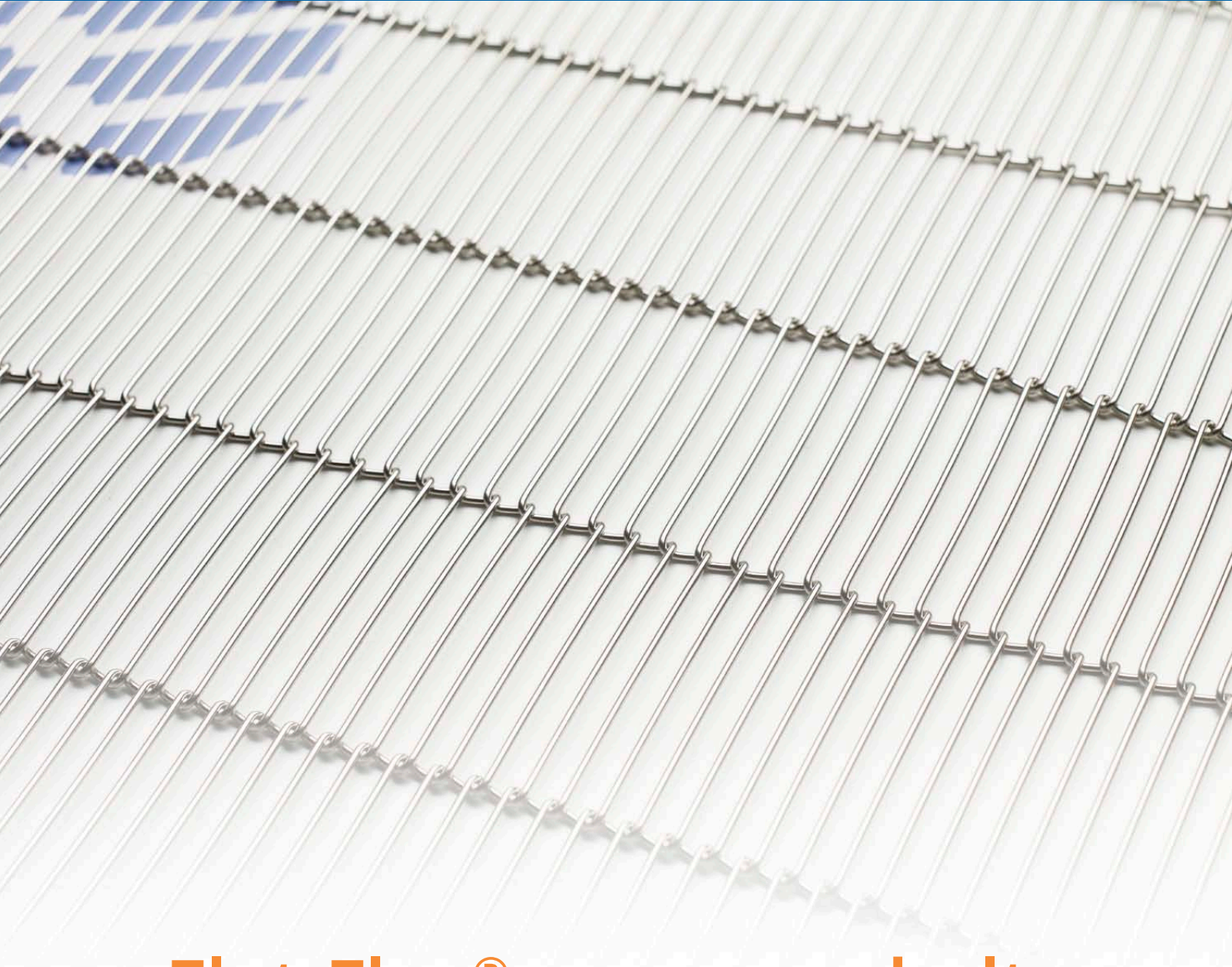




The Trusted Metal Conveyor Belt Manufacturer™



## Flat-Flex<sup>®</sup> conveyor belts

The proven conveyor belt technology

[www.wirebelt.co.uk](http://www.wirebelt.co.uk)



Flat-Flex® conveyor belts have over  
85 years of trusted performance.

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# Flat-Flex<sup>®</sup> conveyor belts

## The proven conveyor belt technology

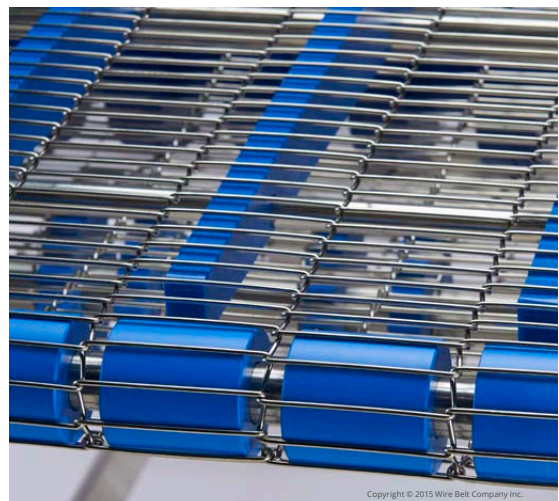
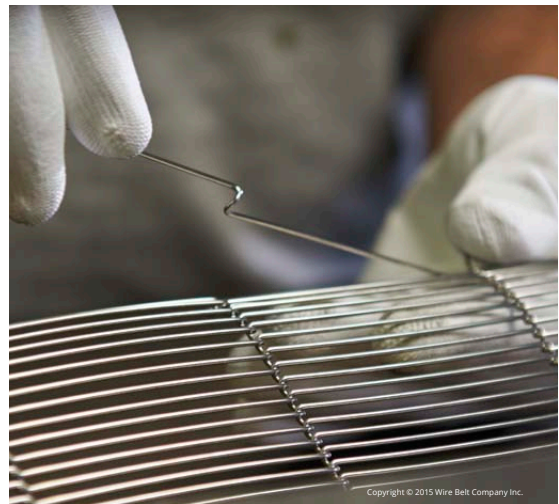
Flat-Flex<sup>®</sup> belts have over 85 years of trusted performance in the industry. With up to 86% open surface area, Flat-Flex<sup>®</sup> belts promote maximum flow through and are the proven solution for major processors. Flat-Flex<sup>®</sup> USDA approved design and clean in place capability make it even easier to keep your line hygienic, and with many wire diameters and pitches to choose from, you'll be able to find the right belt for your product.

The unique features of Flat-Flex<sup>®</sup> conveyor belts offer numerous benefits that increase productivity, help contain costs and improve your overall product quality, including:

- Large open area - up to 86%
- Small transfers
- Non-slip positive drive
- Very low belt mass for improved operating efficiency
- Accurate tracking
- Hygienic design, Easy to clean, clean-in-place capability
- USDA approved

Whatever your needs, Wire Belt Company's Technical Sales Engineers will work with you to determine the best Flat-Flex<sup>®</sup> belt configuration to accommodate your product, process, application and maintenance requirements.

If you require a unique belt or conveyor to deliver the best conveyor performance, we will not hesitate to design and deliver a totally customised solution for your application. Our aim is your complete satisfaction with the performance of our products. We are confident we can provide the right belt, sprockets and other components you need.





Battering and breading applications

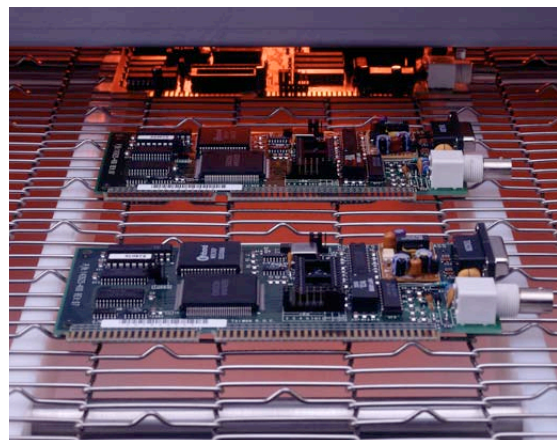
### Typical Flat-Flex® Applications

Flat-Flex® has many and varied uses, below is a list of typical applications. If you have an application that is not listed below, contact our Technical Sales Engineers to see if Flat-Flex® belts are right for your needs.

- Transport
- Cooking
- Heating
- Drying
- Cooling
- Coating
- Drainage
- Freezing
- Enrobing
- Frying
- Baking
- Dough Rolling
- Battering
- Breading
- Shrink Wrapping
- Sterilisation
- Soldering
- Architectural Mesh
- Shuttling
- Turning
- Side Shifting
- Collating
- Crumbing
- Searing
- Glazing
- Preparation
- Sieving

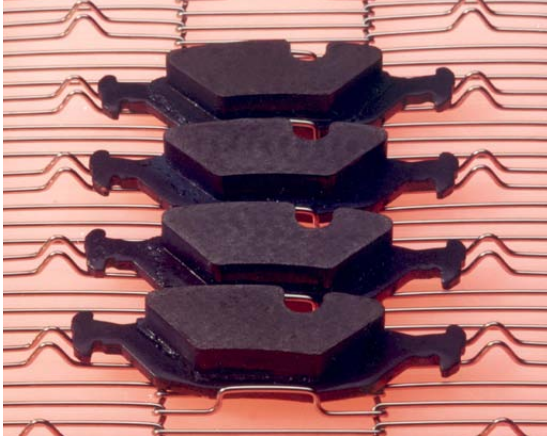


Chocolate enrobing



Printed circuit board handling for minimum contact point support

## FLAT-FLEX® CONVEYOR BELTS



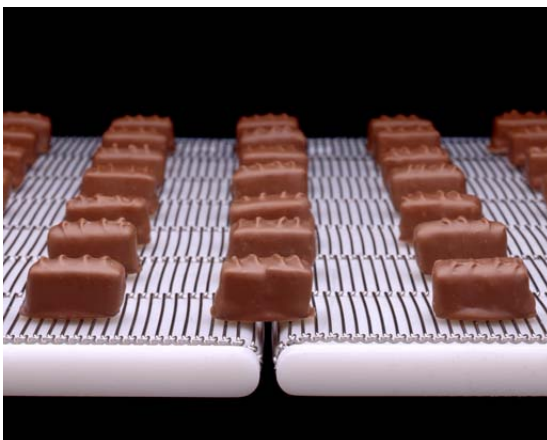
Flat-Flex® conveyor belts designed with flights for processes that require special handling and belt design



Freezing applications for seafood processing



Frying applications



Cooling applications



Pizza baking applications

### Standard Belt Data

Flat-Flex® is available in a wide range of wire diameters & pitches. Available in widths ranging from 28mm to 4,500mm. The following table gives a broad indication of availability:

Wire Dia. Range	Pitch Range
0.9mm - 1.27mm	4.0mm - 12.7mm
1.4mm - 1.6mm	5.5mm - 15.0mm
1.8mm - 2.8mm	8.0mm - 20.32mm
3.4mm - 4.0mm	19.05mm - 25.0mm

**Note:** Due to pitch and wire dia. combination ratios not all pitches are available in the corresponding wire diameters stated.

The below data is an extract from our full range of Flat-Flex® belting. There is a wider range of pitch and wire diameter variations available, please ask our Customer Service Team or Technical Sales Engineers if you do not see the specification you require;

Pitch and Wire Diameter (mm)	Average weight (kg/m²)	Max belt tension per space (N)	Minimum transfer roller outside diameter (mm)	Minimum recommended reverse bend diameter (mm)*	Typical open area (%)	Edge Availability		
						Single Loop Edge (SLE)	Double Loop Edge (DLE)	C-Cure Edge (SLE CC)
4.24 x 0.90	1.3	13.4	12	43	77	•	•	
4.30 x 1.27	2.6	44.5	12	43	67	•		
5.5 x 1.0	1.35	19.6	12	55	79	•	•	
5.5 x 1.27	2.2	44.5	12	55	73	•	•	
5.6 x 1.0	1.33	19.6	12	56	79.5	•	•	
5.64 x 0.90	1.0	13.4	12	57	82	•	•	
6.0 x 1.27	1.9	44.5	16	60	76	•	•	
6.35 x 1.27	2.0	44.5	16	64	77	•	•	
6.40 x 1.40	2.7	55	20	64	76	•		•
7.26 x 1.27	1.6	44.5	16	73	80	•	•	•
7.26 x 1.60	2.5	66.7	19	73	75	•		•
9.60 x 2.08	3.5	97.8	25	96	75	•		•
12.0 x 1.83	2.3	80.0	29	120	81	•		
12.7 x 1.83	2.2	80.0	29	127	82	•		•
12.7 x 2.35	3.6	133.4	38	127	78	•		•
12.7 x 2.8	5.1	191.3	38	127	72	•		•
20.32 x 2.35	2.6	133.4	38	203	85	•		

Wire Belt Company produces in excess of 100 pitch & wire diameter specifications. If you do not locate your specification in the table above then please consult with Customer Services.

\*Check with our Technical Sales Engineers if the belt requires a smaller reverse bend diameter.

## Materials available

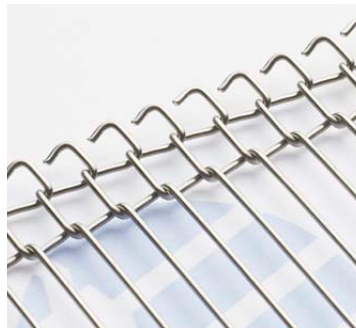
Flat-Flex® belts are available in a wide variety of materials; the standard is 1.4310 (302) stainless steel (popular because it is FDA approved for direct contact with food). Other materials available include: 1.4404 (316L) stainless steel, various carbon steels, and specialist materials suitable for high temperature applications.

Flat-Flex® can be supplied with a PTFE-coating for applications requiring a non-stick surface. High friction finishes are also available.

## Edge loop types:



C-Cure-Edge™



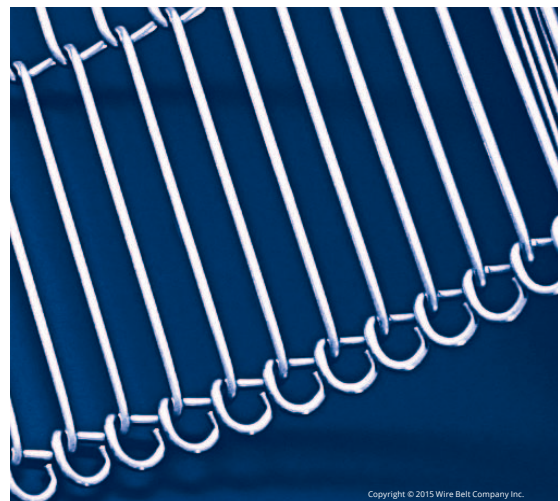
Double Loop Edges



Single Loop Edges

*Check the reference chart on page 5 for edge availability per mesh.*

- **C-Cure-Edge™** Single Loop Edge technology eliminates the possibility of the belt edge catching and tangling. They are an available option for a selected range of Flat-Flex® belts.
- **Double Loop Edges** for more demanding applications. This option reinforces the outside edge of the belt. Available on belt wire diameters 0.90mm to 1.27mm.
- **Single Loop Edges** are the most common belt edge finish and are a default standard for 1.27mm wire diameters and above.



C-Cure-Edge™ U.S. Patent number 5,404,998



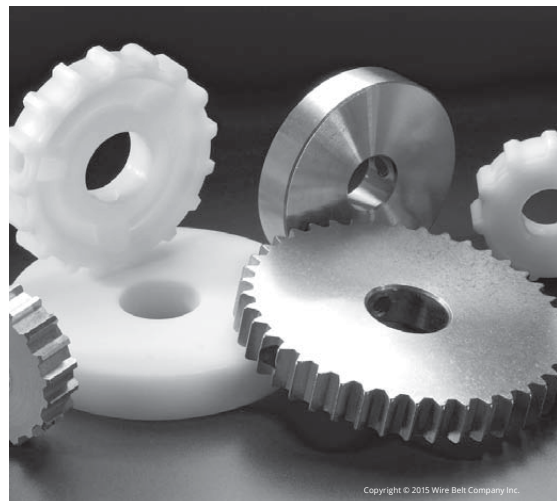
## Standard Flat-Flex<sup>®</sup> Drive Components

### Sprockets and Blanks

When choosing the most appropriate sprocket material for your application, it is important to look at the conditions under which the belt will operate. Conditions such as abrasion, corrosion, high/low temperature variations, surrounding temperature, type of process performed, etc. all have an impact on sprocket selection.

Wire Belt Company offer a comprehensive range of standard sprockets and can also manufacture to order sprockets for new or replacement applications to suit any specified Flat-Flex<sup>®</sup> belt.

Please contact Wire Belt Technical Sales Engineers for information on non standard sprockets.



**General Best Practice:** Wire Belt recommends that only genuine Wire Belt sprockets and blanks be used with Flat-Flex<sup>®</sup> belts. Commercially available sprockets can cause the belt to surge, jump teeth, and may cause premature failure.

Blanks are used to complement sprockets and also as belt supports... especially along the outside edges of the belt. When used on the same shaft with drive sprockets, blanks should be the same diameter as the root diameter of the sprockets and made of the same material. Blanks may also be used for support in other areas, such as on idler shafts.



## Clean-Sweep™ Sprockets

### Deflect buildup and lengthen life

Wire Belt's innovative line of Clean-Sweep™ sprockets are specifically designed to deflect the amount of product buildup accumulated on your conveyor's drive. This means that there is less of a chance for product loss, carryout, belt skipping due to product buildup, and belt breakage due to incorrect contact with the sprocket teeth. Clean-Sweep™ sprocket's tooth chamfer is machined to reduce drive friction and lengthen belt life.

- Deflects product buildup at the drive
- Lowers product carryout
- Tooth chamfer reduces drive friction - lessening belt wear
- Easy-to-clean in place design
- Eliminates belt skipping due to product buildup
- Engineered specifically for use with Flat-Flex® belts
- Direct replacement for any of our standard sprockets
- Available in stainless steel and PEEK materials



## Sprocket Material

Available material types include:

**Type 1.4305 (303) stainless steel** - which is highly recommended for all applications, especially in food processing industries as it is FDA approved for direct contact with food.

**POM (PolyOxyMethylene) plastic** - otherwise known as Acetal - usually preferred for light loads, where the operating temperature range is limited to between -20°C to +80°C, and is also FDA approved for food processing applications.

**PEEK (PolyEtherEther-Ketone)** - high performance engineering thermoplastic that can operate at high temperatures, up to 240°C, and is less abrasive on your stainless steel belts than metal drive components.



## PEEK Drive Components

### HIGH PERFORMANCE DRIVE COMPONENTS

Wire Belt introduces our line of PEEK drive components. PEEK is an abbreviation for PolyEtherEther-Ketone, a high performance engineering thermoplastic that can operate at high temperatures and is less abrasive to your stainless steel belts than metal drive components. PEEK can be used continuously to 240°C and in hot water or steam without permanent loss in physical properties. Our PEEK line is available for all drive components including: sprockets, blanks and end rollers.

- Enhanced strength
- Less abrasive to stainless steel
- Can be used continuously to 240°C
- Outstanding chemical resistance
- Excellent mechanical properties
- Excellent wear characteristics
- Resistant to hot water and steam
- FDA compliant for food contact applications



## PEEK Typical Properties

	Units	PEEK
Tensile strength	MPa (N/mm <sup>2</sup> )	100
	psi	14,500
Heat deflection temperature @ 1.82 MPa (264 psi)	°C	152
Maximum continuous service temperature in air	°C	240
Minimum continuous service temperature in air	°C	-50
Melting point	°C	343

### EZ-Splice® joining strand

Using EZ-Splice® belt joining strand during installation will dramatically extend your belt life! Belt installations that are rushed and improperly made are often the cause of belt breakage and downtime. EZ-Splice® is a pre-formed, pre-bent joining strand that requires no bending or weaving during installation. This helps to prevent any weak spots in the belt joint.

EZ-Splice® joining strands are available for these pitch and wire sizes for Flat-Flex® belts:

Pitch (mm)	Wire Diameter (mm)
7.26	1.27
7.26	1.60
9.6	2.08
12.7	1.83
12.7	2.35
12.7	2.8

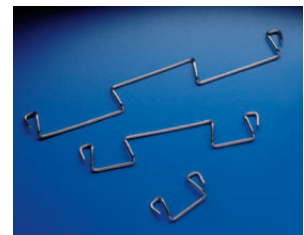


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EZ-Splice® U.S. Patent number 4,754,871

### Belt Joining Clips

Belt clips are used for joining the belt during installation and for making fast minor repairs to the belt. They are available in one space and three space units. If you would like clips, these should be ordered at the same time you place your belt order.



### Belt Joining Tubes

Joining tubes can be used to create a hybrid joint between a full strand weave and the use of joining clips. A single strand is cut into smaller single space sections, which are woven into the belt and joined together by crimping a stainless steel joining tube onto adjacent wire sections.



### Belt Maintenance Tools

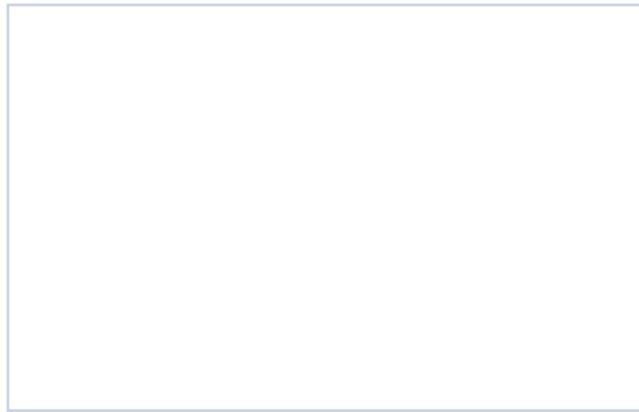
Wire Belt Company offers a range of belt maintenance tools for easy removal, repair or installation of metal conveyor belts. All tools are packaged in a reusable storage sleeve to help maintain the tools precision and cleanliness.





The Trusted Metal Conveyor Belt Manufacturer™

Distributed by:



**Our policy is one of continuous improvement and we reserve the right to change specifications at any time and without notice, or modify these to suit manufacturing processes**