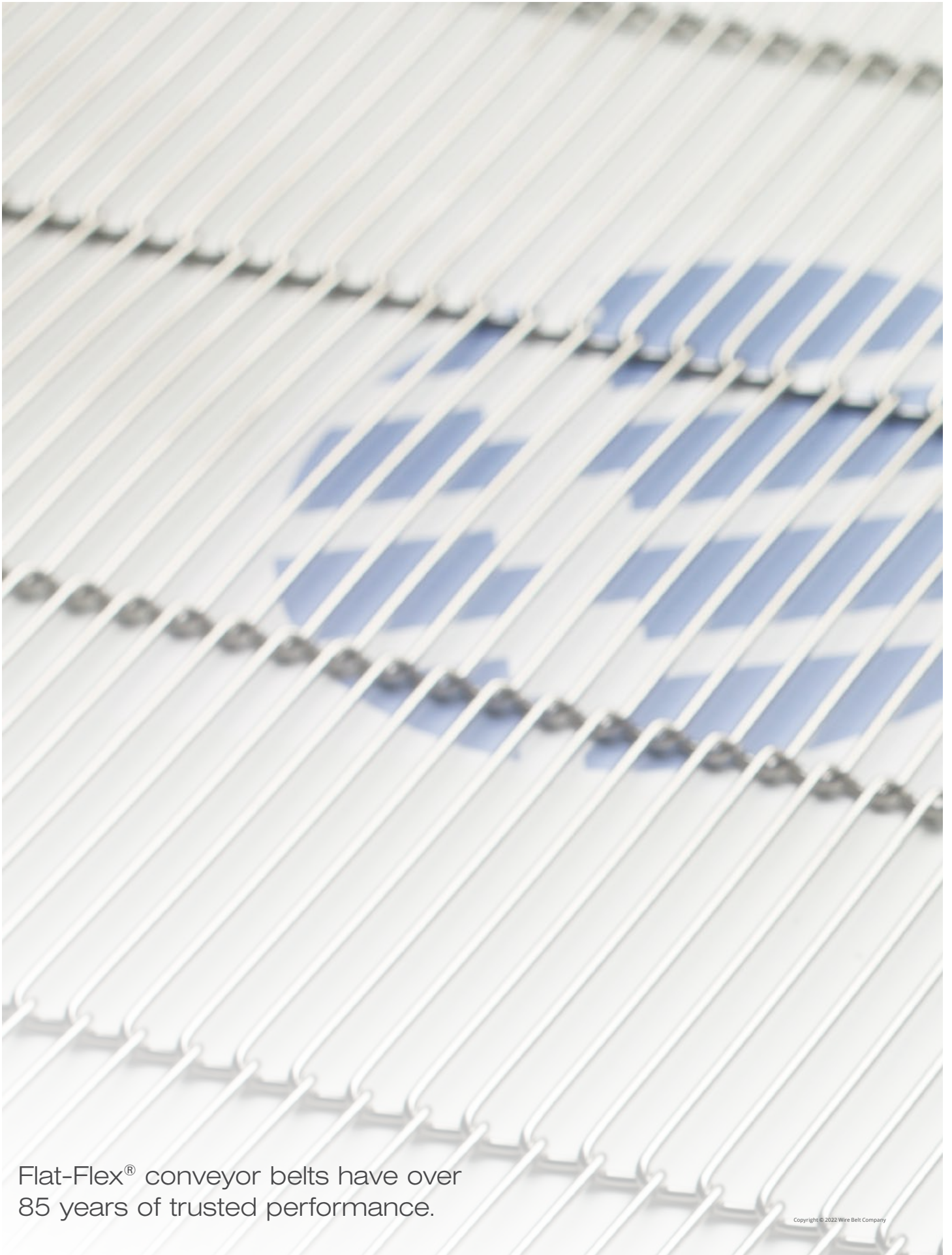


# FLAT-FLEX<sup>®</sup> CONVEYOR BELTS

THE PROVEN CONVEYOR BELT TECHNOLOGY

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[WWW.WIREBELT.CO.UK](http://WWW.WIREBELT.CO.UK)



Flat-Flex<sup>®</sup> conveyor belts have over  
85 years of trusted performance.

# FLAT-FLEX<sup>®</sup> CONVEYOR BELTS

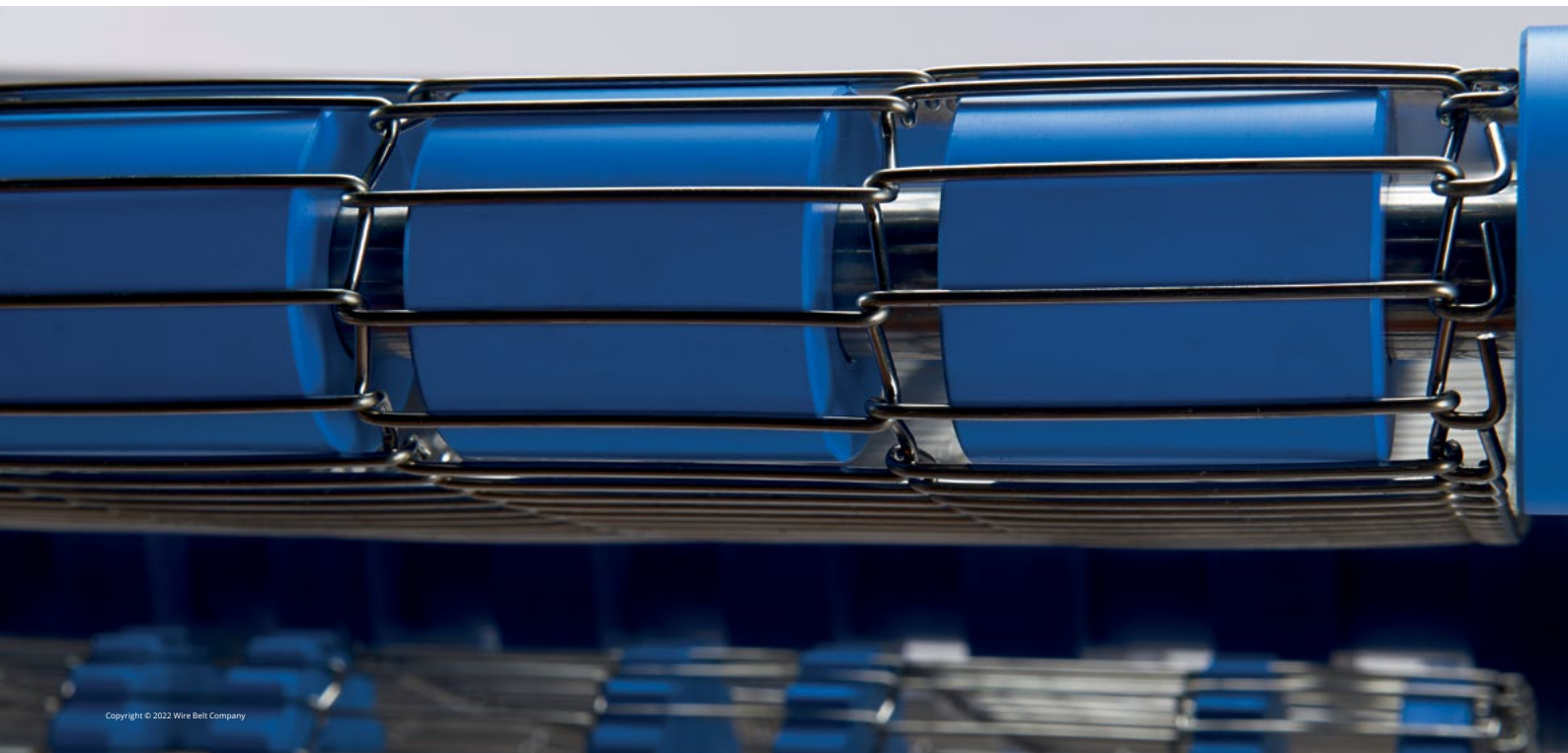
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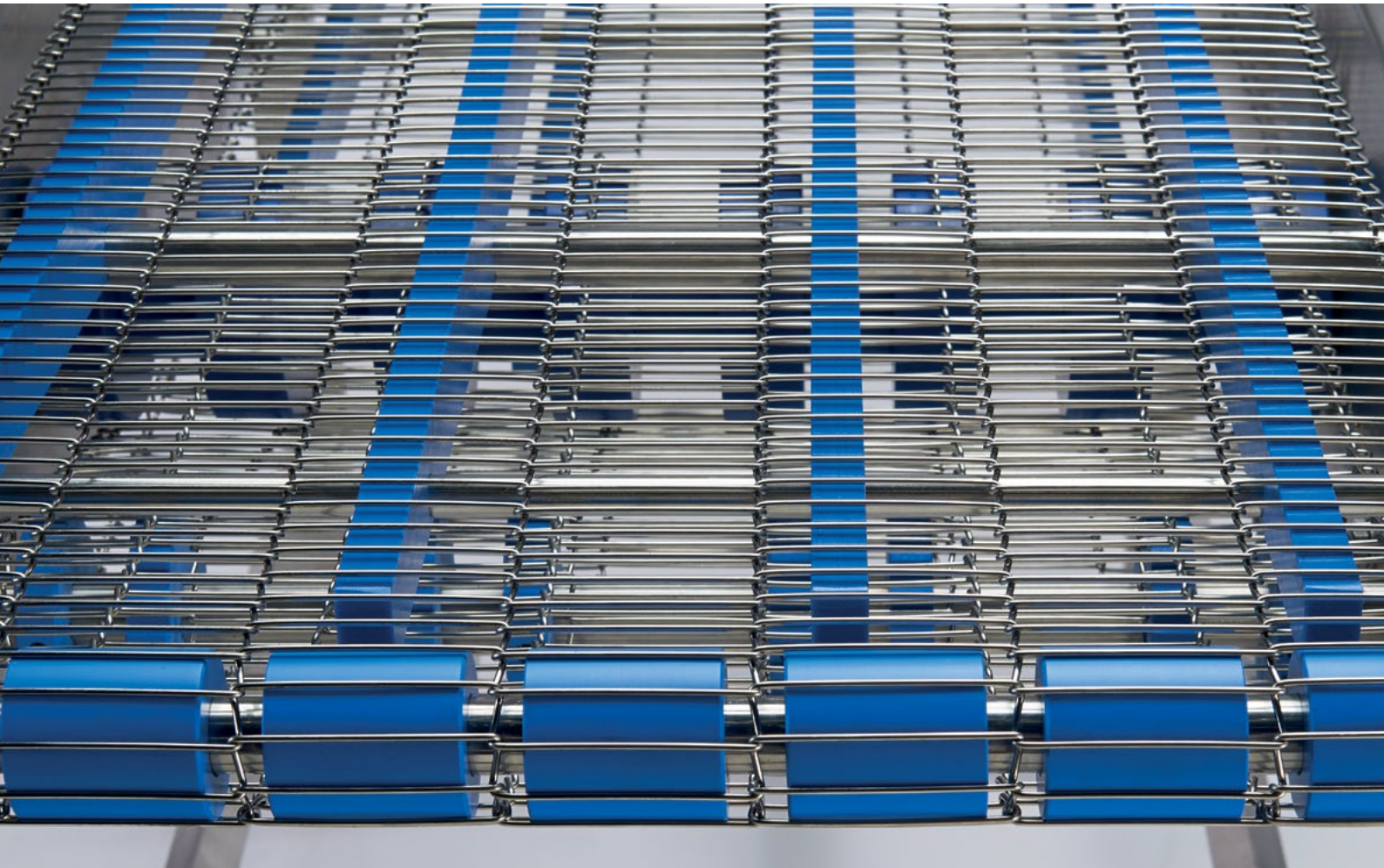
Flat-Flex<sup>®</sup> belts have over 85 years of trusted performance in the industry. With up to 86% open surface area, belts promote maximum flow through and are the proven solution for major processors and Original Equipment Manufacturers.

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.

## ADVANTAGES OF FLAT-FLEX<sup>®</sup>

- Large open area – up to 86%  
Excellent flow through for coating, heat, and cooling operations
- Small transfers  
Allows smooth transfer of small product between conveyors
- Non-slip positive drive  
Accurate tracking, and consistent flow in short and long circuits
- Very low belt mass  
Improved operating efficiency
- Hygienic Design  
Easy to clean, clean-in place capability
- USDA Accepted  
Food safe with no risk to products





## FLAT-FLEX<sup>®</sup> CONVEYOR BELTS

### TYPICAL APPLICATIONS

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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.

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

- Architectural Mesh
- Baking
- Battering
- Breeding
- Coating
- Collating
- Cooking
- Cooling
- Drainage
- Drying
- Enrobing
- Freezing
- Frying
- Glazing
- Heating
- Preparation
- Searing
- Shrink Wrapping
- Shuttling
- Side Shifting
- Sieving
- Soldering
- Sterilisation
- Transport
- Washing



# FLAT-FLEX® CONVEYOR BELTS

## BELT DATA

### STANDARD BELT DATA

Flat-Flex® is available in a wide range of wire diameters & pitches. The data below is an extract from our full range of Flat-Flex® belting. There is a wider range of pitch and wire diameter variations available.

The below data is an extract from our full range of Flat-Flex® belting.

FLAT-FLEX® METRIC REFERENCE CHART								
Diameter (mm)	Average weight (kg/m <sup>2</sup> )	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.

Available in widths ranging from 28mm to 4,500mm

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

# FLAT-FLEX<sup>®</sup> CONVEYOR BELTS

## MATERIALS AVAILABLE

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Flat-Flex<sup>®</sup> 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: 1.4401 (316) stainless steel, various carbon steels, and specialist materials suitable for high temperature applications.

### EDGE LOOP TYPES:



C-Cure-Edge™

- 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<sup>®</sup> belts.



Double Loop Edges

- Double Loop Edges for more demanding applications. This option reinforces the outside edge of the belt.



Single Loop Edges

- Single Loop Edges are the most common belt edge finish and are a default standard.

# FLAT-FLEX<sup>®</sup> DRIVE COMPONENTS

## SPROCKETS AND BLANKS

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When looking for the best drive components for your machine, look no further than Wire Belt's customised sprockets and blanks.

Wire Belt Company offers 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.

We can guarantee the perfect fit to keep your lines running smoothly and efficiently. Whatever drive component you may be looking for, we offer a variety of materials to meet your needs.

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 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.

### WIRE BELT DRIVE COMPONENT ADVANTAGES:

- Precision machined to fit your exact belt
- Manufactured to optimise your belt performance
- Minimises unnecessary wear & tear on your belt like generic sprockets can
- Designed to increase belt life, saving you money!
- Deflect product build up & lengthen life with Clean-Sweep sprockets
- Available in stainless steel, polyacetal plastic or PEEK (PolyEtherEther-Ketone).





# FLAT-FLEX® DRIVE COMPONENTS

## 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.



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- Deflects product build-up 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 build-up
- 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

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.

### 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 degrees Celsius to +80 degrees Celsius and is also FDA approved for food processing applications.

PEEK (PolyEtherEther-Ketone) – high performance engineering thermoplastic that can operate at high temperatures and is less abrasive on your stainless-steel belts than metal drive components. PEEK can be used continuously to 250 degrees Celsius and in hot water or steam without permanent loss in physical properties.



## 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 on your stainless steel belts than metal drive components. PEEK can be used continuously to 250°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 250°C
- Outstanding chemical resistance
- Excellent mechanical properties
- Excellent wear characteristics
- Resistant to hot water and steam
- FDA compliant for food contact applications

	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

# FLAT-FLEX® CONVEYOR BELTS

## ACCESSORIES

### EZ-SPLICE® JOINING STRAND

Longer belt life, stronger belt joints  
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 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

### EZ-Splice Profiling Pliers



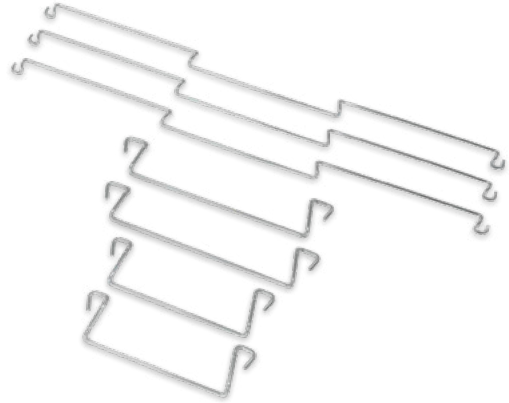
# FLAT-FLEX<sup>®</sup> CONVEYOR BELTS

## ACCESSORIES

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### BELT JOINING CLIPS

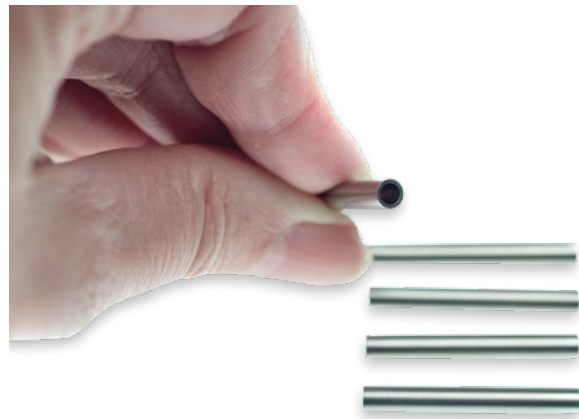
Belt Clips are used for joining the belt during installation and for making fast minor repairs to the belt. They are available in one space and three space units. If you would like clips, these should be ordered at the same time you place your belt order.



### BELT JOINING TUBES

Joining tubes can be used to create a hybrid join 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 the adjacent wire sections.

This method maintains the belt strength of a full strand weave while eliminating the distortion that occurs during the weaving process. It is important to consider whether joining tubes could mark product or have hygiene implications when choosing this method.



### 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.





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.

