



# CAM-GRID<sup>®</sup>

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THE MOST ADAPTABLE BELT FOR SPIRAL CAGE SYSTEMS



**CAMBRIDGE**  
ENGINEERED SOLUTIONS



# CAM-GRID

THE MOST ADAPTABLE BELT FOR SPIRAL CAGE SYSTEMS

SUPERIOR STRENGTH • STRAIGHT & SPIRAL APPLICATIONS



**CAMBRIDGE**  
ENGINEERED SOLUTIONS

EASY TO CLEAN

Cam-Grid belts are our most application-adaptable product for spiral systems. Cambridge offers a complete series of Cam-Grid products for spiral systems at various tension ratings:

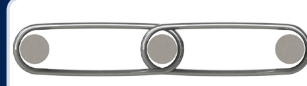


\*Cam-Grid belts are also available for straight running applications.

## ALL CAM-GRID BELTS PROVIDE INDUSTRY-LEADING BENEFITS:



NORMAL STAINLESS STEEL



SPRING TEMPER STAINLESS STEEL

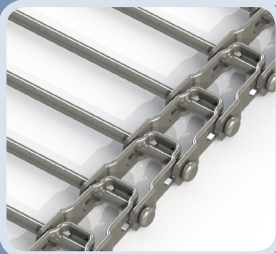
Mesh overlays are constructed with spring temper stainless steel, which aids in fatigue and damage resistance

### OBLONG SLOT IN CAM-GRID



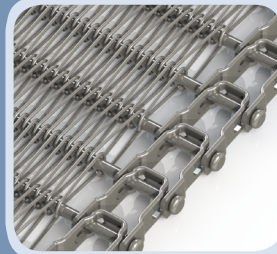
Fully collapsible construction for easy cleaning: each outer link has an oblong slot that holds the rod, which allows better access for sanitation and reduced area for bacteria build-up

### RODS ONLY CONSTRUCTION



- Provides maximum air circulation
- Ideal for larger products and products carried in trays
- Reduced overall belt weight for greater energy efficiency

### MESH OVERLAY CONSTRUCTION



- Ideal when product support or smaller openings are needed
- Recommended for extremely delicate products like soft dough, beef patties, fish products, etc.

## APPLICATIONS

- BAKING
- COOKING
- COOLING
- FREEZING
- GLAZING
- ICING
- PROOFING

## PROVEN RESULTS



A meat processor was using another company's belting for their spiral freezer, and they experienced broken links and bent rods within just one month of installation. They upgraded the belting to Leading Edge Performance Grid and it continues to run perfectly after one year.



# CAM-GRID SPECIFICATIONS

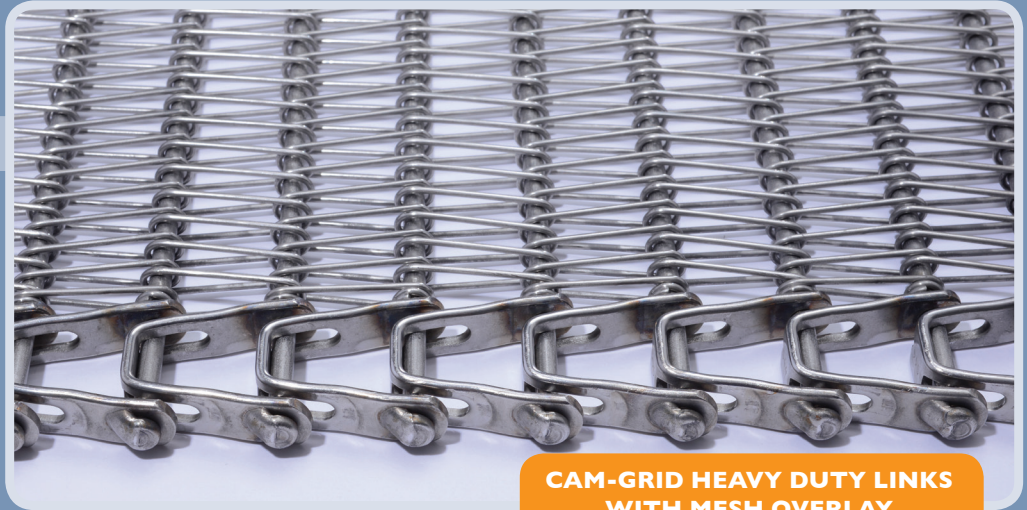
## STANDARD RADIUS BELTS



CAM-GRID RODS ONLY



CAM-GRID STANDARD DUTY WITH MESH OVERLAY



CAM-GRID HEAVY DUTY LINKS WITH MESH OVERLAY

### CAM-GRID SPECIFICATIONS: STANDARD RADIUS BELTS

<b>BELT PITCH</b>	3/4" or 1" (19.1 mm or 25.4 mm)		
<b>LINKS</b>	3/4" pitch standard duty: 7/16" x .080" (11.1 mm x 2.0 mm) 3/4" pitch heavy duty non-collapsing*: 7/16" x .105" (11.1 mm x 2.7 mm) 1" pitch standard duty: 7/16" x .080" (11.1 mm x 2.0 mm) nominal 1" pitch heavy duty: 1/2" x .105" (12.7 mm x 2.7 mm) nominal *Heavy duty non-collapsing links may be used only on outer edge in spiral applications		
<b>RODS</b>	6 gauge – 0.192" (4.9 mm) diameter – high tensile rods with upset button head welds		
<b>MESH OVERLAY</b>	Standard mesh overlays available in 14 – 18 gauge wire Custom mesh specifications available for unique applications		
<b>BELT TURNING RADIUS</b>	Nominal inside turning radius is 2.2 x belt width Special links available for oversized (>2.2) radii		
<b>EFFECTIVE BELT CARRYING SURFACE</b>	Standard duty links: 2.3" (58.4 mm) less than overall belt width Heavy duty links: 2.9" (73.7 mm) less than the overall belt width		
<b>BELT WIDTH RANGE</b>	12" to 48" (305 mm to 1,219 mm) standard Custom widths available		
<b>MATERIALS</b>	T304 stainless steel throughout Rods and mesh also available in T316 stainless steel or high carbon steel (HCS) All mesh overlays are constructed with spring temper stainless steel		
<b>WELDING</b>	Welds join inside of links to rods and outside of links to rods and button heads		
<b>SPECIAL CONSTRUCTIONS</b>	Side plates available for 1" and 3/4" pitches Integral side plates/links available for 1" pitch Other special constructions and attachments are available for unique applications		
<b>SPROCKETS</b>	See page 3 for standard sprockets for 3/4" and 1" pitch Cam-Grid belts		
<b>TENSION LIMITS</b>	3/4" or 1" Pitch Standard Duty	200 lbs. (90.7 kg) straight run	100 lbs. (45.4 kg) turn or spiral
	3/4" Pitch Heavy Duty*	200 lbs. (90.7 kg) straight run	150 lbs. (68.0 kg) turn or spiral
	1" Pitch Heavy Duty	300 lbs. (136 kg) straight run	150 lbs. (68.0 kg) turn or spiral
*3/4" Heavy Duty link is non-collapsing. It is used only on outside edge in turn or spiral applications.			

# CAM-GRID SPECIFICATIONS

## REDUCED RADIUS BELTS

### REDUCED (1.7) RADIUS BELTING

- Saves valuable floor space
- Provides greater throughput because a wider belt can be used in the same amount of floor space
- Reduces energy costs due to greater load capacity in smaller systems
- Operates as a traditional low-tension system with tension on the outside edge
- Allows product loading from link to link

### CAM-GRID SPECIFICATIONS: REDUCED RADIUS BELTS

Specifications for Cam-Grid Reduced Radius belts are the same as Cam-Grid Standard Radius belts, except as noted below:

<b>BELT PITCH</b>	1" (25.4 mm) nominal		
<b>LINKS</b>	1" pitch standard duty: 7/16" x .080" (11.1 mm x 2.0 mm) 1" pitch heavy duty: 1/2" x .105" (12.7 mm x 2.7 mm)		
<b>BELT TURNING RADIUS</b>	Nominal inside turning radius is 1.7 x belt width		
<b>EFFECTIVE BELT CARRYING SURFACE</b>	Approximately 2.4" (61.0 mm) less than the overall belt width		
<b>SPECIAL CONSTRUCTION</b>	Integral side plates/links available for product retention		
<b>SPROCKETS</b>	Uses standard sprockets for 1" pitch Cam-Grid belts		
<b>TENSION LIMITS</b>	1" Pitch Standard Duty	200 lbs. (90.7 kg) straight run	100 lbs. (45.4 kg) turn or spiral
	1" Pitch Heavy Duty	300 lbs. (136 kg) straight run	150 lbs. (68.0 kg) turn or spiral

## CAM-GRID SPROCKETS



### CAM-GRID SPROCKETS

NO. OF TEETH/ DESIGNATION	PITCH DIAMETER		HUB DIA. (BOTTOM DIA.)		BORE SIZE		SPROCKET THICKNESS		APPROX. WEIGHT	
	IN	MM	IN	MM	IN	MM	IN	MM	LBS	KG
<b>For 3/4" pitch belts</b>										
12T	2.898	73.6	2.430	61.7	3/4 or 1	1.9 or 25.4	1.0	25.4	1.3	0.60
25T	5.938	150.8	5.500	139.7	1 to 4	25.4 to 101.6	1.5	38.1	2.0	0.91
<b>For 1" pitch belts</b>										
9T	3.128	79.5	2.625	66.7	3/4 or 1	1.9 or 25.4	1.0	25.4	1.3	0.60
13E	4.350	110.5	3.850	97.8	1 to 3	25.4 to 76.2	2.0	50.8	0.7	0.32
18E	6.117	155.4	5.617	142.7	1 to 4	25.4 to 101.6	2.0	50.8	1.6	0.73
23E	7.868	199.8	7.368	187.1	1 to 4	25.4 to 101.6	2.0	50.8	2.9	1.32

Materials: Stainless Steel, Steel, UHMW

# CAM-GRID SPECIFICATIONS

## TIGHT RADIUS BELTS

### TIGHT (1.1) RADIUS BELTING

- Available in Standard Duty and Heavy Duty Constructions
- Provides maximum throughput with a minimal footprint
- Rated up to 250 lbs. (113.4 kg) for turn or spiral applications

### CAM-GRID SPECIFICATIONS: STANDARD DUTY TIGHT RADIUS BELTS

Specifications for Cam-Grid Tight Radius belts are the same as Cam-Grid Standard Radius belts, except as noted below:

<b>BELT PITCH</b>	3/4" (19.1 mm)		
<b>LINKS</b>	Inner: standard collapsible 3/4" pitch – 7/16" x .080" (11.1 mm x 2.0 mm) Center: heavy duty non-collapsing 3/4" pitch – 7/16" x .105" (11.1 mm x 2.7 mm) Outer: standard collapsible 1" pitch – 7/16" x .080" (11.1 mm x 2.0 mm)		
<b>BELT TURNING RADIUS</b>	Nominal inside turning radius is 1.0 – 1.5 x belt width		
<b>EFFECTIVE BELT CARRYING SURFACE</b>	3.0" (76.2 mm) less than the overall belt width		
<b>SPECIAL CONSTRUCTION</b>	Integral side plates/links are available for outer belt edge only		
<b>SPROCKETS</b>	Uses standard sprockets for 3/4" Cam-Grid belts Drive sprockets are located only on the inner and center links of this belt		
<b>TENSION LIMITS</b>	Heavy Duty Link*	200 lbs. (90.7 kg) straight run	150 lbs. (68.0 kg) turn or spiral

\*Heavy duty links are located in the center load-bearing section of the belt, not on the outer edge

### CAM-GRID SPECIFICATIONS: HEAVY DUTY TIGHT RADIUS BELTS

Specifications for Cam-Grid Tight Radius belts are the same as Cam-Grid Standard Radius belts, except as noted below:

<b>BELT PITCH</b>	1" (25.4 mm) nominal		
<b>LINKS</b>	Inner: standard collapsible 1" pitch – 1/2" x .105" (12.7 mm x 2.7 mm) Center: heavy duty non-collapsing 1" pitch – 7/16" x .105" (11.1 mm x 2.7 mm) Outer: standard collapsible 1.33" pitch – 1/2" x .105" (12.7 mm x 2.7 mm)		
<b>BELT TURNING RADIUS</b>	Nominal inside turning radius is 1.1 x belt width		
<b>EFFECTIVE BELT CARRYING SURFACE</b>	4.0" (101.6 mm) less than the overall belt width		
<b>SPECIAL CONSTRUCTION</b>	Only standard construction currently available		
<b>SPROCKETS</b>	Uses standard sprockets for 1" pitch Cam-Grid belts (18E and 23E only) Drive sprockets are located only on the inner and center links of this belt		
<b>TENSION LIMITS</b>	Heavy Duty Link*	500 lbs. (226.8 kg) straight run	250 lbs. (113.4 kg) turn or spiral

\*Heavy duty links are located in the center load-bearing section of the belt and on the outer edge

# CAM-GRID EXTRA

## CAM-GRID EXTRA

- Tougher, stronger, and faster than traditional Cam-Grid belts
- Able to carry heavier loads for increased throughput without extra belt weight
- Outlasted a competitor's 300 lb. rated tangential tension belt 10 to 1 under identical test conditions in our life cycle lab
- Lasts up to 10 years without failure
- Also available with rods only construction

## CAM-GRID EXTRA SPECIFICATIONS

Specifications for Cam-Grid Extra belts are the same as Cam-Grid Standard belts, except as noted below:

<b>BELT PITCH</b>	1.5" (38.1 mm)
<b>LINKS</b>	Super Heavy Duty: .625" x .125" (15.9 mm x 3.2 mm)
<b>RODS</b>	4 gauge - 0.225" (5.7 mm) diameter – high tensile rods with upset button head welds
<b>MESH OVERLAY</b>	16 or 17 gauge spring temper wire
<b>BELT TURNING RADIUS</b>	Standard Radius: 2.0 – 2.4 : 1      Reduced Radius: 1.6 – 2.0 : 1 Note: Cam-Grid Extra can be flipped – even at 1.6:1 turn radius
<b>BELT WIDTH RANGE</b>	Standard Duty: 18" – 42" (457 mm – 1,067 mm) Heavy Duty: 18" – 54" (457 mm – 1,372 mm)
<b>EFFECTIVE BELT CARRYING SURFACE</b>	3.3" (83.8 mm) less than the overall belt width
<b>WELDING</b>	Standard Duty: plasma arc Heavy Duty: double compression
<b>STRENGTH RATINGS</b>	Standard Duty: 200 lbs. in turn (91 kg); 400 lbs. straight (181 kg) Heavy Duty: 300 lbs. in turn (136 kg); 600 lbs. straight (272 kg)
<b>TENSION LIMITS</b>	Super Heavy Duty Link      600 lbs. (272 kg) straight run      300 lbs. (136 kg) turn or spiral

## CAM-GRID EXTRA SPROCKETS

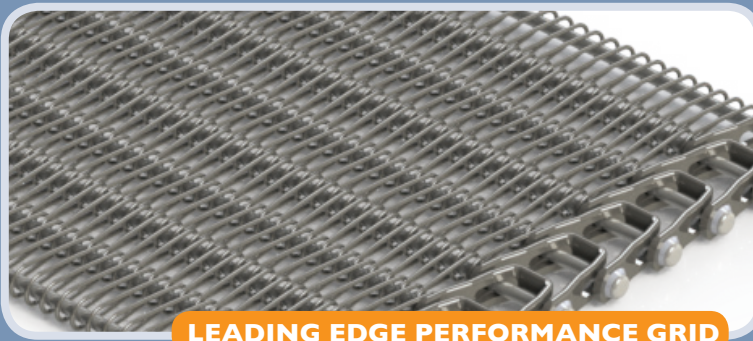
NO. OF TEETH/ DESIGNATION	PITCH DIAMETER		HUB DIA. (BOTTOM DIA.)		BORE SIZE		SPROCKET THICKNESS		APPROX. WEIGHT	
	IN	MM	IN	MM	IN	MM	IN	MM	LBS	KG
<b>13T</b>	6.443	163.7	5.521	140.2	1 to 4	25.4 to 101.6	2.0	50.8	1.6	0.73
<b>18T</b>	8.880	225.6	8.130	206.5	1 to 4	25.4 to 101.6	2.0	50.8	2.9	1.32

Materials: Stainless Steel, Steel, UHMW

# LEADING EDGE PERFORMANCE GRID



**PILOT WEAR MARK**



**LEADING EDGE PERFORMANCE GRID**

## LEADING EDGE PERFORMANCE GRID

- Designed for systems with high tangential tension ratings of 450 lbs. or more (204+ kg)
- Operates at sustained speeds up to 150 feet per minute (45.7 meters per minute)
- Pilot wear mark (see diagram, left) assures proper alignment and resists “racking” of the belt
- Double compression welds increase strength and reduce premature belt failure from weld fatigue

## LEADING EDGE PERFORMANCE GRID SPECIFICATIONS

Specifications for Leading Edge Performance Grid belts are the same as Cam-Grid Standard belts, except as noted below:

<b>BELT PITCH</b>	1" (25.4 mm) nominal
<b>LINKS</b>	1" pitch heavy duty: 1/2" x .105 (12.7 mm x 2.7 mm)
<b>RODS</b>	T304 stainless steel flattened oblong (.192" x .226" – 4.9mm x 5.7 mm), high tensile cross rods with upset button head welds
<b>MESH OVERLAY</b>	15 – 17 gauge spring temper stainless steel Mesh life can be maximized by supporting the belt with wear strips of 1" (25.4 mm) minimum width
<b>BELT TURNING RADIUS</b>	2.2 x belt width nominal inside turning radius
<b>BELT WIDTH RANGE</b>	30" – 52" (762 mm – 1,321 mm) overall Custom widths available
<b>EFFECTIVE BELT CARRYING SURFACE</b>	2.9" (73.7 mm) less than the overall belt width
<b>WELDING</b>	Double compression welds of link to the rod
<b>SPROCKETS</b>	Uses standard sprockets for 1" pitch Cam-Grid belts
<b>TANGENTIAL TENSION</b>	450 lbs. (204 kg) or more

**CAMBRIDGE ENGINEERED SOLUTIONS**

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# CAMBRIDGE QUICK FACTS

Over 100 years in business

World's largest manufacturer of metal conveyor belts

Manufacturing facilities located in the United States, Mexico, and Brazil

Over 25 engineers and field technicians on staff

24/7/365 customer support

## THE CAMBRIDGE APPROACH

There's a reason why "Engineered Solutions" is part of our name: We aren't just another metal belt manufacturer. We are engineers who are always looking for a better way to solve problems. Nothing gives us more satisfaction than helping our customers run their plants more efficiently and profitably.

## AT YOUR SERVICE

In addition to designing a belt that is specific to your plant and objectives, we can help you with the following services:

Installation • Conveyor Modifications & Retrofits • Conveyor Evaluations  
Conveyor Alignment • Troubleshooting Assistance • Technical Training  
Maintenance Program Planning • Consignment Inventory Programs  
Plant Surveys & Optimization

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