# 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:**

**MAX. TENSION RATING***

| UP TO 250 LBS. CAM-GRID | UP TO 300 LBS. CAM-GRID EXTRA | UP TO 450 LBS. LEADING EDGE PERFORMANCE GRID |
|---|---|---|

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

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

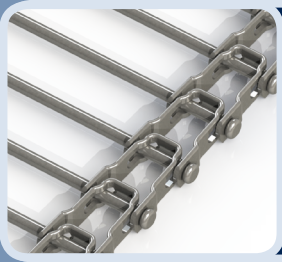
NORMAL STAINLESS STEEL

SPRING TEMPER STAINLESS STEEL

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

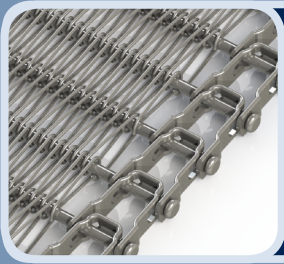
### OBLONG SLOT IN CAM-GRID

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**

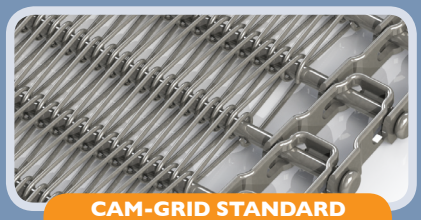
**PROOFING**

## PROVEN RESULTS

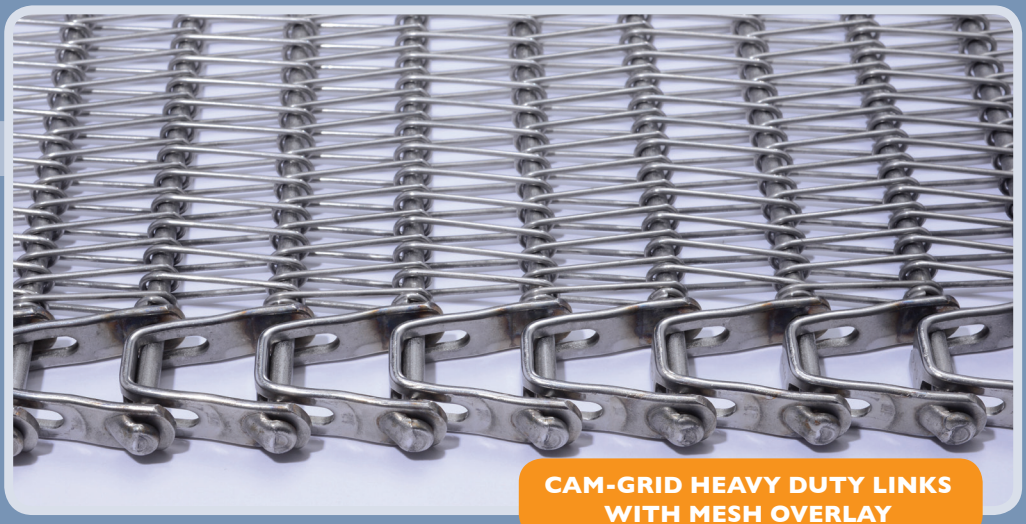
A meat processor was using another company's belting for their spiral freezer, and they experienced broken links and bent rods within just one month of installation. They upgraded the belting to Leading Edge Performance Grid and it continues to run perfectly after one year.

# 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

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

| | | | |
|---|---|---|---|
| **BELT PITCH** | 1" (25.4 mm) nominal | | |
| **LINKS** | 1" pitch standard duty: 7/16" x .080" (11.1 mm x 2.0 mm)<br>1" pitch heavy duty: 1/2" x .105" (12.7 mm x 2.7 mm) | | |
| **BELT TURNING RADIUS** | Nominal inside turning radius is 1.7 x belt width | | |
| **EFFECTIVE BELT CARRYING SURFACE** | Approximately 2.4" (61.0 mm) less than the overall belt width | | |
| **SPECIAL CONSTRUCTION** | Integral side plates/links available for product retention | | |
| **SPROCKETS** | Uses standard sprockets for 1" pitch Cam-Grid belts | | |
| **TENSION LIMITS** | 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 |
| **For 3/4" pitch belts** | | | | | | | | | | |
| **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 |
| **For 1" pitch belts** | | | | | | | | | | |
| **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:*

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

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

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

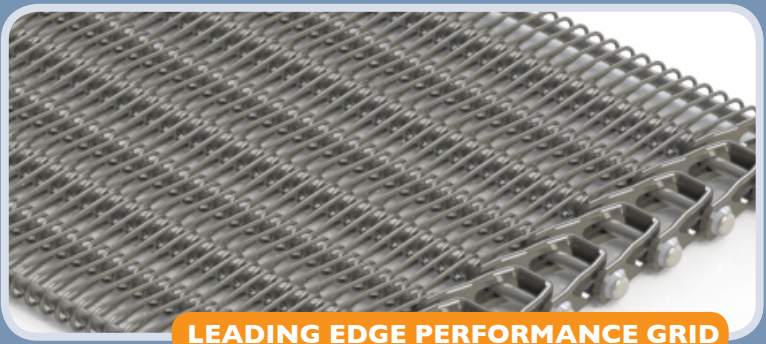
## CAM-GRID EXTRA SPROCKETS

| 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 |
| **13T** | 6.443 | 163.7 | 5.521 | 140.2 | 1 to 4 | 25.4 to 101.6 | 2.0 | 50.8 | 1.6 | 0.73 |
| **18T** | 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:*

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

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