WIRE MESH

HEADQUARTERS 514.886.5270

12985 Rue Brault, Mirabel Quebec, Canada J7J 0W2 UNIKINGCANADA.COM

LOTENSION SPIRAL & TURN-CURVE BELTS

Selection Guide for Spiral & Turn-Curve Belts

Specifications		Units	Omni-Pro 075	Omni-Pro 100	Omni-Pro 120	Omni-Pro 150	Small Radius Omni-Pro	Space Saver Omni-Grid®	ExactaStack™
Material(s)	Link		Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Rod		Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Mesh		Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
Turn Ratio			2.2 to 2.5	1.6 to 2.5	1.7 to 2.8	1.6 to 2.5	1.1 to 2.0	0.7 to 2.2	1.7
Width Limits	Curve	in. (mm)	12.00–40.00 (304.8–1,016.0)	12.00–40.00 (304.8–1,016.0)	12.00–54.00 (304.8–1,371.6)	12.00–54.00 (304.8–1,371.6)	12.00–48.00 (304.8–1,219.2)	12.00–36.00 (304.8–9)	(420.0, 580.0, 640.0, 760.0, 920.0, 1,060.0)
	Straight		12.00–48.00 (304.8–1,219.2)	12.00–48.00 (304.8–1,219.2)	12.00–60.00 (304.8–1,524.0)	12.00–60.00 (304.8–1,524.0)	N/A	N/A	N/A
Pitch			0.75 (19.1)	1.08 (27.4)	1.20 (30.5)	1.50 (38.1)	1.08 (27.4) & 0.75 (19)	1.08 (27.4)	(30.0 to 59.9)
Maximum Tension	Curve*	lb. (kg)	150 (68)	200 (91)	400 (181)	400 (181)	150 (68)	150 (68)	N/A
	Straight*		300 (136)	400 (182)	800 (364)	800 (364)	300 (136)	300 (136)	N/A
Maximum Belt Pull	Curve*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Straight*		N/A	N/A	N/A	N/A	N/A	N/A	N/A
Spiral Applications									
Freezer			◆	◆	◆	◆	◆	◆	◆
Proofer			◆	◆	◆	◆	◆	◆	
Chiller			◆	◆	◆	◆	◆	◆	
Cooker			◆	◆	◆	◆	◆	◆	
Advantages									
Frozen Product Release									
Sanitary Design			◆	◆	◆	◆			
Superior Air Flow			◆	◆	◆	◆	◆	◆	◆
High Load Capacity			◆	◆	◆	◆			
Superior Beam Strength			◆	◆	◆	◆	◆	◆	◆
Small Footprint				◆			◆	◆	◆
Special Features									
Wear Resistant Links			◆	◆	◆	◆	◆	◆	
Fatigue Resistant Pickets									
Integral Guard Edge				◆	◆	◆			
Weldless Construction									
Flippable Design			◆	◆	◆	◆			
Self Stacking									◆

LOTENSION SPIRAL & TURN-CURVE BELTS

Selection Guide for Spiral & Turn-Curve Belts

Specifications		Units	Advantage™ 120	Advantage™ 200	Omni-Flex®	Fatigue Resistant Omni-Flex®	Small Radius Omni-Flex®
Material(s)	Link		Acetal	Acetal	Stainless Steel	Stainless Steel	Stainless Steel
	Rod		Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel	Stainless Steel
	Mesh		Acetal	Acetal	Stainless Steel	Stainless Steel	Stainless Steel
Turn Ratio			1.5 to 2.8	1.5 to 2.8	1.8 to 4.0	1.8 to 4.0	1.0 to 2.0
Width Limits	Curve	in. (mm)	8.00–40.00 (203.2–1,016.0)	10.00–48.00 (254.0–1,219.2)	6.00–48.00 (152.4–1,219.2)	6.00–48.00 (152.4–1,219.2)	14.00–54.00 (355.6–1,371.6)
	Straight		8.00–60.00 (203.2–1,524.0)	10.00–60.00 (254.0–1,524.0)	6.00–48.00 (152.4–1,219.2)	6.00–48.00 (152.4–1,219.2)	N/A
Pitch			1.20 (30.5)	2.00 (50.8)	1.084 (27.53)	1.084 (27.53)	Inside Pickets: 1.084 (27.53) Outside Pickets: 1.5 (38.1)
Maximum Tension	Curve*	lb. (kg)	200 (91)	300 (136)	300 (136)	400 (181)	300 (136)
	Straight*		400 (182)	600 (273)	600 (273)	800 (362)	600 (273)
Maximum Belt Pull	Curve*		500 (226)	750 (340)	N/A	N/A	N/A
	Straight*		1000 (453)	1500 (680)	N/A	N/A	N/A
Spiral Applications							
Freezer			◆	◆	◆	◆	◆
Proofer			◆	◆			
Chiller			◆	◆	◆	◆	◆
Cooker							
Advantages							
Frozen Product Release			◆	◆			
Sanitary Design			◆	◆			
Superior Air Flow			◆	◆	◆	◆	◆
High Load Capacity			◆	◆	◆	◆	◆
Superior Beam Strength			◆	◆	◆	◆	◆
Small Footprint			◆	◆			◆
Special Features							
Wear Resistant Links							
Fatigue Resistant Pickets					◆	◆	◆
Integral Guard Edge			◆	◆			
Weldless Construction			◆	◆			
Flippable Design			◆	◆	◆	◆	
Self Stacking							

Ashworth

LOTENSION SPIRAL & TURN-CURVE BELTS

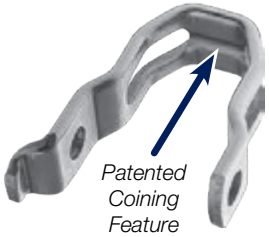
Omni-Pro® Metal Spiral Belts

Omni-Pro® Metal Spiral Belts

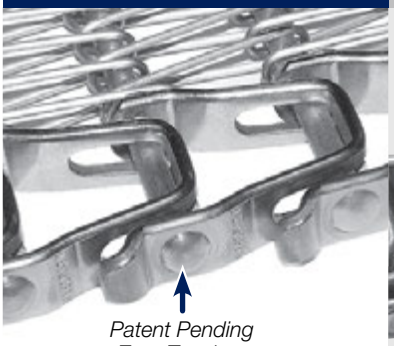
Evolutionary Steel Belts That Run Smoother, Stronger, Longer

Features & Benefits

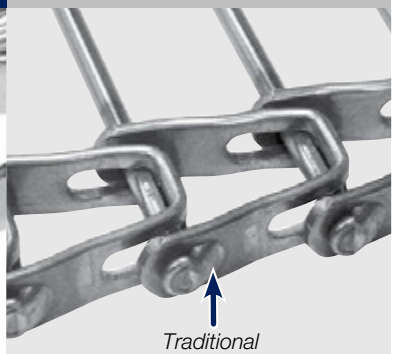
- **Proven Reliability—**All Ashworth belts are rated for 100,000 cycles versus competition ratings of only 50,000 cycles
- **Reduced Wear—**Patented "protrusion leg" design enables the belt to run smoother with less system wear
- **Added Strength & Easy to Clean—**Patent pending zero-tension, 360° buttonless welds increase load bearing capacity and are easier to clean versus traditional bridge welds
- **Increased Belt Life—**Patented coining feature reduces run-in wear and increases belt life



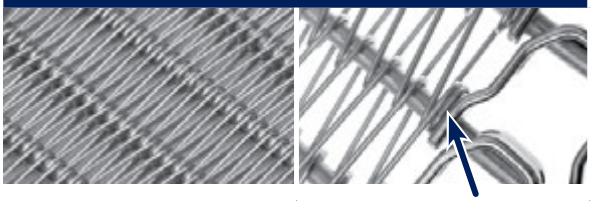
OMNI-PRO® LINK



COMPETITOR LINK



Omni-Pro® Standard Features



Omni-Tough® Mesh Overlay
2½ times stronger than conventional overlays and is resistant to product sticking in freezer applications

Patented Pigtail Spirals
Reduces wire breakage

Omni-Pro® Options

Integral Guard Edges
Available for 100/120/150, are more durable and easier to clean than modular guard edges

Patented Special Mesh Spirals
A cost effective solution for adding lane dividers or flights

UNIKING "UNITING THE STRONGEST LINKS"

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LOTENSION SPIRAL & TURN-CURVE BELTS

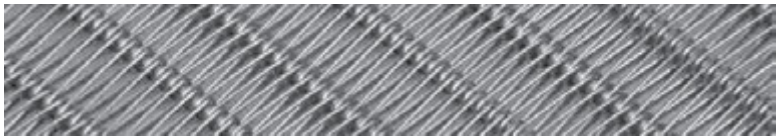
Omni-Pro® 075 - ¾-Inch Pitch

¾-Inch Pitch
▶▶ Omni-Pro® 075

Technical Specifications		Units	
Turn Ratio			2.2 to 2.5
Pitch		in. (mm)	0.75 (19.1)
Available Widths: Curve/Spiral			12.00–40.00 (304.8–1016.0)
Available Widths: Straight Run			12.00–48.00 (304.8–1219.2)
Link Height			0.44 (11.1)
Link & Optional Mesh Overlay Material			Heavy duty, extended leg, stainless steel
Rod Diameter/Material			0.192 (4.9) stainless steel
Conveying Surface			2.13 (54.1) less than nominal width
Weight			See belt weight calculation
Allowable Tension	Curve/Spiral	lb. (kg)	150 (68) at 100,000 cycles
	Straight Run		250 (114) at 100,000 cycles
Turn Direction			Bi-directional (left & right)
Mode of Turning			Inside edge collapses in turn
Method of Drive			Sprocket driven on links

Available Options

Omni-Tough® Mesh Overlay



Omni-Tough® is a stainless steel, spring wire, spiral overlay available in 16 and 17 wire gauges. It is 2-1/2 times stronger and more damage-resistant than conventional wire overlays. Omni-Tough® provides a flatter surface than standard overlays and is also more resistant to product sticking in freezer applications.

Designation **B / U X – Y – Z**

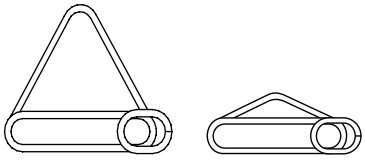
- B = Balanced Weave
- U = Unilateral Weave
- X = No. of Loops/Foot of Width
- Y = No. of Spirals/Foot of Length
- Z = Wire Gauge of Overlay

Examples:
B30-16-16
U42-16-17

Variable Loop Count Overlay (Patented)
Overlay which has varied loop spacing across the width of the belt allows the loops to get progressively closer together as the spiral goes from the inside of the belt to the outside of the belt (inside and outside in respect to a turn).

Special Spirals (Patented)

- Available in Omni-Tough® overlay only
- One or more spirals on conveying surface are raised
- Used as lane dividers or flights
- Maximum height is equal to belt pitch
- Available options: height, spacing, location, shape, and number of lanes in belt

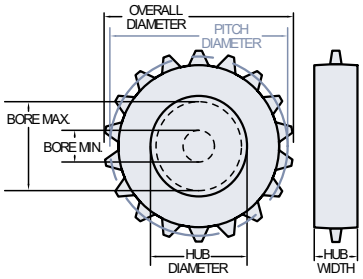


Equilateral Triangle *Isosceles Triangle*

LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Pro® 075 - ¾-Inch Pitch

UHMWPE Sprockets



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#3	12	2.90 (73.7)	2.25 (57.2)	1.00 (25.4)	1.44 (36.6)

Sprockets available in Stainless Steel, Plain Steel, and UHMWPE.
UHMWPE material type components have a 150°F (66°C) maximum operating temperature.
Maximum bore sizes listed for UHMWPE material is based on 1/2 inch (12.7 mm) of material above keyway.
* Maximum bores provide adequate material thickness for standard keyway. Specify special sizes to be used when necessary.

Supports

Supports are required at a maximum of 18" apart on load side and 24" maximum on return side. Rollers may also be used. For light loads, support rails may be placed further apart: Consult Ashworth Engineering for assistance.

Belt Weight Calculation

Weight of Base Belt + Weight of Overlay

Steps of calculation:

- Determine weight of base belt
- Calculate conveying surface and convert to units of feet or meters
- Calculate square feet (square meter) of mesh/foot (meter) of belt length
- Use the conveying surface and mesh type to determine weight of mesh
- Add the weight of the base belt to weight of mesh overlay
- Multiply calculated value by belt length for total belt weight

Base Belt Weight

OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)
12 (305)	2.20 (3.3)	32 (813)	4.79 (7.1)
14 (356)	2.45 (3.6)	34 (864)	5.05 (7.5)
16 (406)	2.71 (4.0)	36 (914)	5.31 (7.9)
18 (457)	2.97 (4.4)	38 (965)	5.56 (8.3)
20 (508)	3.23 (4.8)	40 (1016)	5.82 (8.7)
22 (559)	3.49 (5.2)	42** (1067)	6.08 (9.0)
24 (610)	3.75 (5.6)	44** (1118)	6.34 (9.4)
26 (660)	4.01 (6.0)	46** (1168)	6.60 (9.8)
28 (711)	4.27 (6.4)	48** (1219)	6.86 (10.2)
30 (762)	4.53 (6.7)		

**Recommended for Straight run only.

Open Surface Area % for OP75

Mesh	Straight	2.2 Turn
none	74.4	69.7
18-16-16	65.1	58.6
18-16-17	66.3	60.1
24-16-16	62.0	55.0
24-16-17	63.6	56.9
30-16-16	58.7	51.1
30-16-17	60.9	53.7
36-16-16	55.8	47.6
36-16-17	58.2	50.5
42-16-16	52.7	43.9
42-16-17	55.5	47.3
48-16-16	49.6	40.3
48-16-17	52.8	44.1
54-16-16	46.5	36.6
54-16-17	50.1	40.9

Omni-Tough® Overlay Weight

Mesh	16 ga. (1.6 mm) lb/ft² (kg/m²)	17 ga. (1.4 mm) lb/ft² (kg/m²)
18	0.65 (3.2)	N/A
24	0.84 (4.1)	N/A
30	1.04 (5.1)	N/A
36	1.24 (6.1)	0.91 (4.4)
42	1.44 (7.0)	1.06 (5.2)
48	1.64 (8.0)	1.21 (5.9)
54	1.84 (9.0)	1.36 (6.6)

LOTENSION SPIRAL & TURN-CURVE BELTS

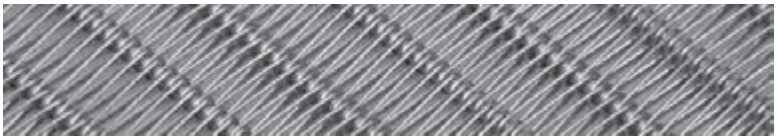
Omni-Pro® 100 - 1-Inch Pitch

1-Inch Pitch
▶▶ Omni-Pro® 100

Technical Specifications		Units	
Turn Ratio			1.6 to 2.5
Pitch		in. (mm)	1.08 (27.4)
Available Widths: Curve/Spiral			12.00–40.00 (304.8–1016)
Available Widths: Straight Run			12.00–48.00 (304.8–1219.2)
Link Height			0.50 (12.7)
Link & Optional Mesh Overlay Material			Heavy duty, extended leg, stainless steel
Rod Diameter/Material			0.192 (4.9) stainless steel
Conveying Surface			2.75 (69.9) less than nominal width
Weight			See belt weight calculation
Allowable Tension	Curve/Spiral	lb. (kg)	200 (91) at 100,000 cycles
	Straight Run		400 (182) at 100,000 cycles
Turn Direction			Bi-directional (left & right)
Mode of Turning			Inside edge collapses in turn
Method of Drive			Sprocket driven on links

Available Options

Omni-Tough® Mesh Overlay



Omni-Tough® is a stainless steel, spring wire, spiral overlay available in 16 and 17 wire gauges. It is 2-1/2 times stronger and more damage-resistant than conventional wire overlays. Omni-Tough® provides a flatter surface than standard overlays and is also more resistant to product sticking in freezer applications.

Designation **B / U X – Y – Z**

- B / U: Balanced Weave / Unilateral Weave
- X: No. of Loops/Foot of Width
- Y: No. of Spirals/Foot of Length
- Z: Wire Gauge of Overlay

Examples:
B30-12-16
U42-12-17

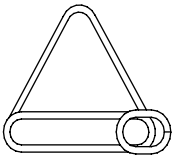
Integral Guard Edges

Integral Guard Edges are available for Omni-Pro® 100/120/150 and are more durable and easier to clean than modular guard edges

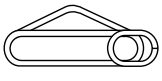
Variable Loop Count Overlay (Patented)
Overlay which has varied loop spacing across the width of the belt allows the loops to get progressively closer together as the spiral goes from the inside of the belt to the outside of the belt (inside and outside in respect to a turn).

Special Spirals (Patented)

- Available in Omni-Tough® overlay only
- One or more spirals on conveying surface are raised
- Used as lane dividers or flights
- Maximum height is equal to belt pitch
- Available options: height, spacing, location, shape, and number of lanes in belt



Equilateral Triangle

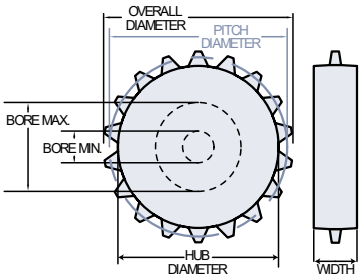


Isosceles Triangle

LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Pro® 100 - 1-Inch Pitch

UHMWPE Sprockets



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#4	13	4.53 (115.1)	3.90 (99.1)	1.00 (25.4)	2.19 (55.6)
#6	18	6.24 (158.5)	5.65 (143.5)	1.00 (25.4)	3.75 (95.3)
#8	23	7.96 (202.2)	7.39 (187.7)	1.00 (25.4)	4.00 (101.6)

UHMWPE material type components have a 150°F (66°C) maximum operating temperature.
*Maximum bore sizes listed for UHMWPE material is based on 1/2 inch (12.7 mm) of material above keyway.

Supports

Supports are required at a maximum of 18" apart on load side and 24" maximum on return side. Rollers may also be used. For light loads, support rails may be placed further apart: Consult Ashworth Engineering for assistance.

Belt Weight Calculation

Weight of Base Belt + Weight of Overlay

Steps of calculation:

- Determine weight of base belt
- Calculate conveying surface and convert to units of feet or meters
- Calculate square feet (square meter) of mesh/foot (meter) of belt length
- Use the conveying surface and mesh type to determine weight of mesh
- Add the weight of the base belt to weight of mesh overlay
- Multiply calculated value by belt length for total belt weight

Base Belt Weight

OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)
12 (305)	1.86 (2.8)	32 (813)	3.66 (5.4)
14 (356)	2.04 (3.0)	34 (864)	3.84 (5.7)
16 (406)	2.22 (3.3)	36 (914)	4.02 (6.0)
18 (457)	2.40 (3.6)	38 (965)	4.20 (6.3)
20 (508)	2.58 (3.8)	40 (1016)	4.38 (6.5)
22 (559)	2.76 (4.1)	42** (1067)	4.56 (6.8)
24 (610)	2.94 (4.4)	44** (1118)	4.74 (7.1)
26 (660)	3.12 (4.6)	46** (1168)	4.92 (7.3)
28 (711)	3.30 (4.9)	48** (1219)	5.10 (7.6)
30 (762)	3.48 (5.2)		

**Recommended for Straight run only.

Open Surface Area % for Omni-Pro® 100

mesh	straight	1.6 turn	1.7 turn	2.2 turn
none	82.2	78.0	78.2	78.9
18-12-16	72.9	66.4	66.7	67.9
18-12-17	74.1	68.3	68.6	69.7
24-12-16	69.8	62.6	62.9	64.2
24-12-17	71.4	64.6	64.9	65.9
30-12-16	66.7	58.8	59.1	60.5
30-12-17	68.7	61.2	61.6	62.9
36-12-16	63.6	54.9	55.3	56.9
36-12-17	66.0	57.9	58.6	59.7
42-12-16	60.5	51.1	51.5	53.2
42-12-17	63.3	54.6	55.0	56.5
48-12-16	57.4	47.3	47.7	49.5
48-12-17	60.6	51.2	54.5	53.3
54-12-16	54.3	43.4	43.9	45.8
54-12-17	57.9	47.9	48.3	50.1

Omni-Tough® Overlay Weight

Mesh	16 ga. (1.6 mm) lb/ft² (kg/m²)	17 ga. (1.4 mm) lb/ft² (kg/m²)
18	0.55 (2.7)	N/A
24	0.74 (3.6)	N/A
30	0.93 (4.5)	N/A
36	1.08 (5.3)	0.82 (4.0)
42	1.26 (6.2)	0.95 (4.6)
48	1.44 (7.0)	1.08 (5.3)
54	1.62 (7.9)	1.22 (6.0)

LOTENSION SPIRAL & TURN-CURVE BELTS

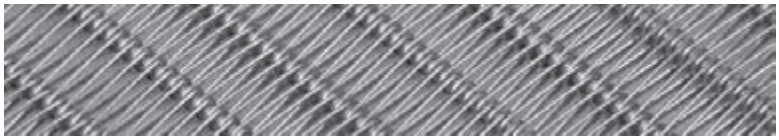
Omni-Pro® 120 - 1.2-Inch Pitch

1.2-Inch Pitch
▶▶ Omni-Pro® 120

Technical Specifications		Units	
Turn Ratio			1.7 to 2.5
Pitch		in. (mm)	1.20 (30.5)
Available Widths: Curve/Spiral			12.00–54 (304.8–1371.6)
Available Widths: Straight Run			12.00–60 (304.8–1524.0)
Link Height			0.59 (15.0)
Link & Optional Mesh Overlay Material			Heavy duty, extended leg, stainless steel
Rod Diameter/Material			0.236 (5.9) stainless steel
Conveying Surface			3.13 (79.5) less than nominal width
Weight			See belt weight calculation
Allowable Tension	Curve/Spiral	lb. (kg)	400 (182) at 100,000 cycles
	Straight Run		800 (364) at 100,000 cycles
Turn Direction			Bi-directional (left & right)
Mode of Turning			Inside edge collapses in turn
Method of Drive			Sprocket driven on links

Available Options

Omni-Tough® Mesh Overlay



Omni-Tough® is a stainless steel, spring wire, spiral overlay available in 16 and 17 wire gauges. It is 2-1/2 times stronger and more damage-resistant than conventional wire overlays. Omni-Tough® provides a flatter surface than standard overlays and is also more resistant to product sticking in freezer applications.

Designation **B / U X – Y – Z**

- B / U — Balanced Weave / Unilateral Weave
- X — No. of Loops/Foot of Width
- Y — No. of Spirals/Foot of Length
- Z — Wire Gauge of Overlay

Examples:
B30-10-16
U42-10-17

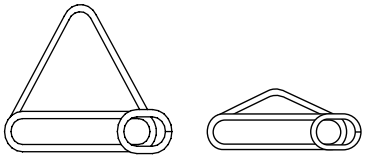
Integral Guard Edges

Integral Guard Edges are available for Omni-Pro® 100/120/150 and are more durable and easier to clean than modular guard edges

Variable Loop Count Overlay (Patented)
Overlay which has varied loop spacing across the width of the belt allows the loops to get progressively closer together as the spiral goes from the inside of the belt to the outside of the belt (inside and outside in respect to a turn).

Special Spirals (Patented)

- Available in Omni-Tough® overlay only
- One or more spirals on conveying surface are raised
- Used as lane dividers or flights
- Maximum height is equal to belt pitch
- Available options: height, spacing, location, shape, and number of lanes in belt

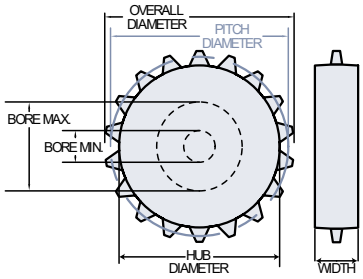


Equilateral Triangle *Isosceles Triangle*

LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Pro® 120 - 1.2-Inch Pitch

Steel Drive Sprockets



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#6	16	6.11 (155.2)	5.47 (138.9)	0.75 (19.1)	3.00 (76.2)
#8	21	8.05 (204.5)	7.38 (187.5)	0.75 (19.1)	4.00 (101.6)

#8-21 tooth sprockets recommended with 7-11/16 in. (195 mm) diameter filler rolls.
#6-16 tooth available with 5-3/4 in. (146 mm) diameter filler rolls for retrofitted systems only.
* Maximum bores provide adequate material thickness for standard keyway.
Specify special sizes to be used when necessary.

Supports

Supports are required at a maximum of 18" apart on load side and 24" maximum on return side. Rollers may also be used. For light loads, support rails may be placed further apart: Consult Ashworth Engineering for assistance.

Belt Weight Calculation

Weight of Base Belt + Weight of Overlay

Steps of calculation:

- Determine weight of base belt
- Calculate conveying surface and convert to units of feet or meters
- Calculate square feet (square meter) of mesh/foot (meter) of belt length
- Use the conveying surface and mesh type to determine weight of mesh
- Add the weight of the base belt to weight of mesh overlay
- Multiply calculated value by belt length for total belt weight

Base Belt Weight

OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)
12 (305)	2.60 (3.9)	30 (762)	4.80 (7.1)	48 (1219)	7.01 (10.4)
14 (356)	2.84 (4.2)	32 (813)	5.05 (7.5)	50 (1270)	7.25 (10.8)
16 (406)	3.09 (4.6)	34 (864)	5.29 (7.9)	52 (1321)	7.50 (11.2)
18 (457)	3.33 (5.0)	36 (914)	5.54 (8.2)	54 (1372)	7.74 (11.5)
20 (508)	3.58 (5.3)	38 (965)	5.78 (8.6)	56 (1422)	7.99 (11.9)
22 (559)	3.82 (5.7)	40 (1016)	6.03 (9.0)	58 (1473)	8.23 (12.2)
24 (610)	4.07 (6.1)	42 (1067)	6.27 (9.3)	60 (1524)	8.48 (12.6)
26 (660)	4.31 (6.4)	44 (1118)	6.52 (9.7)		
28 (711)	4.56 (6.8)	46 (1168)	6.76 (10.1)		

Open Surface Area % for Omni-Pro® 120

Mesh	Straight	1.7 Turn	2.2 Turn
none	80.3	75.8	76.7
18-10-16	71.0	64.4	65.6
18-10-17	72.2	65.9	67.1
24-10-16	67.9	60.6	62.0
24-10-17	69.5	62.6	63.9
30-10-16	64.8	56.8	58.3
30-10-17	66.8	59.3	60.7
36-10-16	61.7	53.0	54.6
36-10-17	64.1	55.9	57.6
42-10-16	58.6	49.2	50.9
42-10-17	61.4	52.6	54.3
48-10-16	55.5	45.4	47.3
48-10-17	58.7	49.3	51.1
54-10-16	52.4	41.6	43.6
54-10-17	56.0	46.0	47.9

Omni-Tough® Overlay Weight

Mesh	16 ga. (1.6 mm) lb/ft² (kg/m²)	17 ga. (1.4 mm) lb/ft² (kg/m²)
18	0.53 (2.6)	N/A
24	0.69 (3.4)	N/A
30	0.86 (4.2)	N/A
36	1.03 (5.0)	0.78 (3.8)
42	1.20 (5.9)	0.91 (4.4)
48	1.37 (6.7)	1.03 (5.0)
54	1.54 (7.5)	1.16 (5.7)

LOTENSION SPIRAL & TURN-CURVE BELTS

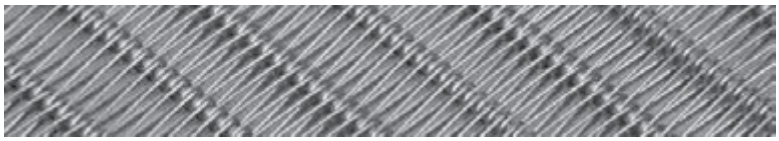
Omni-Pro® 150 - 1½-Inch Pitch

1½-Inch Pitch
▶▶ Omni-Pro® 150

Technical Specifications		Units	
Turn Ratio			1.6 to 2.5
Pitch		in. (mm)	1.50 (38.1)
Available Widths: Curve/Spiral			12.00–54 (304.8–1371.6)
Available Widths: Straight Run			12.00–60 (304.8–1524.0)
Link Height			0.59 (15.0)
Link & Optional Mesh Overlay Material			Heavy duty, extended leg, stainless steel
Rod Diameter/Material			0.236 (6.0) stainless steel
Conveying Surface			3.13 (79.5) less than nominal width
Weight			See belt weight calculation
Allowable Tension	Curve/Spiral	lb. (kg)	400 (182) at 100,000 cycles
	Straight Run		800 (364) at 100,000 cycles
Turn Direction			Bi-directional (left & right)
Mode of Turning			Inside edge collapses in turn
Method of Drive			Sprocket driven on links

Available Options

Omni-Tough® Mesh Overlay



Omni-Tough® is a stainless steel, spring wire, spiral overlay available in 16 and 17 wire gauges. It is 2-1/2 times stronger and more damage-resistant than conventional wire overlays. Omni-Tough® provides a flatter surface than standard overlays and is also more resistant to product sticking in freezer applications.

Designation **B / U X – Y – Z**

- B / U: Balanced Weave / Unilateral Weave
- X: No. of Loops/Foot of Width
- Y: No. of Spirals/Foot of Length
- Z: Wire Gauge of Overlay

Examples:
B30-8-16
U42-8-17

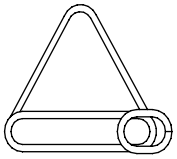
Integral Guard Edges

Integral Guard Edges are available for Omni-Pro® 100/120/150 and are more durable and easier to clean than modular guard edges

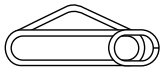
Variable Loop Count Overlay (Patented)
Overlay which has varied loop spacing across the width of the belt allows the loops to get progressively closer together as the spiral goes from the inside of the belt to the outside of the belt (inside and outside in respect to a turn).

Special Spirals (Patented)

- Available in Omni-Tough® overlay only
- One or more spirals on conveying surface are raised
- Used as lane dividers or flights
- Maximum height is equal to belt pitch
- Available options: height, spacing, location, shape, and number of lanes in belt



Equilateral Triangle

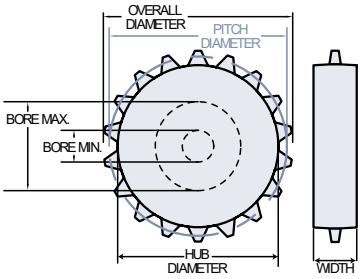


Isosceles Triangle

LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Pro® 150 - 1½-Inch Pitch

UHMWPE Sprockets



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#8	17	8.16 (207.3)	7.43 (188.7)	0.75 (19.1)	3 (76.2)

UHMWPE material type components have a 150°F (66°C) maximum operating temperature.
*Maximum bore sizes listed for UHMWPE material is based on 1/2 inch (12.7 mm) of material above keyway.

Supports

Supports are required at a maximum of 18" apart on load side and 24" maximum on return side. Rollers may also be used. For light loads, support rails may be placed further apart: Consult Ashworth Engineering for assistance.

Belt Weight Calculation

Weight of Base Belt + Weight of Overlay

Steps of calculation:

- Determine weight of base belt
- Calculate conveying surface and convert to units of feet or meters
- Calculate square feet (square meter) of mesh/foot (meter) of belt length
- Use the conveying surface and mesh type to determine weight of mesh
- Add the weight of the base belt to weight of mesh overlay
- Multiply calculated value by belt length for total belt weight

Base Belt Weight

OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)
12 (305)	2.30 (3.4)	30 (762)	4.06 (6.0)	48 (1219)	5.82 (8.7)
14 (356)	2.49 (3.7)	32 (813)	4.26 (6.3)	50 (1270)	6.02 (9.0)
16 (406)	2.69 (4.0)	34 (864)	4.45 (6.6)	52 (1321)	6.22 (9.3)
18 (457)	2.88 (4.3)	36 (914)	4.65 (6.9)	54 (1372)	6.41 (9.5)
20 (508)	3.08 (4.6)	38 (965)	4.84 (7.2)	56 (1422)	6.61 (9.8)
22 (559)	3.28 (4.9)	40 (1016)	5.04 (7.5)	58 (1473)	6.80 (10.1)
24 (610)	3.47 (5.2)	42 (1067)	5.24 (7.8)	60 (1524)	7.00 (10.4)
26 (660)	3.67 (5.5)	44 (1118)	5.43 (8.1)		
28 (711)	3.86 (5.7)	46 (1168)	5.63 (8.4)		

Open Surface Area % for Omni-Pro® 150

Mesh	Straight	1.6 Turn	2.2 Turn
none	84.2	81.4	81.3
18-10-16	75.0	69.0	70.4
18-8-17	76.2	70.5	71.8
24-8-16	71.9	65.2	66.7
24-8-17	73.5	67.2	68.6
30-8-16	68.8	61.4	63.0
30-8-17	70.8	63.8	65.4
36-8-16	65.7	57.5	59.3
36-8-17	68.1	60.5	62.2
42-8-16	62.6	53.7	55.1
42-8-17	65.4	57.2	59.0
48-8-16	59.5	49.9	52.0
48-8-17	62.7	53.8	55.8
54-8-16	56.4	46.0	48.3
54-8-17	60.0	50.5	52.6

Omni-Tough® Overlay Weight

Mesh	16 ga. (1.6 mm) lb/ft² (kg/m²)	17 ga. (1.4 mm) lb/ft² (kg/m²)
18	0.53 (2.6)	N/A
24	0.69 (3.4)	N/A
30	0.86 (4.2)	N/A
36	1.03 (5.0)	0.78 (3.8)
42	1.20 (5.9)	0.91 (4.4)
48	1.37 (6.7)	1.03 (5.0)
54	1.54 (7.5)	1.16 (5.7)

LOTENSION SPIRAL & TURN-CURVE BELTS

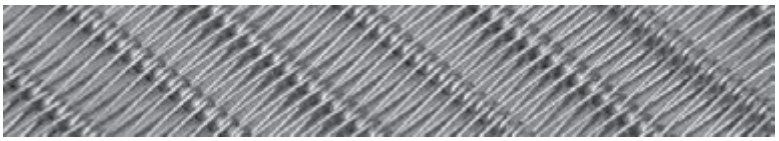
Small Radius Omni-Pro® - ¾-Inch Pitch

¾-Inch Pitch
▶▶ Small Radius Omni-Pro®

Technical Specifications		Units	
Turn Ratio			1.0 to 2.0
Pitch		in. (mm)	0.75 (19.1)
Available Widths			12.00–48.00 (304.8–1219.2)
Link Type/Material: Inside Edge			Standard collapsing stainless steel
Link Type/Material: Center			Heavy duty non-collapsing links stainless steel
Link Type/Material: Outside Edge			Heavy duty collapsing stainless steel
Link Height			0.438 (11.1)
Rod Diameter/Material			0.192 (4.9) stainless steel
Conveying Surface			Inside: Distance to center link minus 1.621 (41.2) Outside: Overall width minus the distance to the center link, minus 1.873 (47.6)
Weight			See belt weight calculation
Allowable Tension	Curve/Spiral	lb (kg)	150 (68) at 100,000 cycles
	Straight Run		300 (136) at 100,000 cycles
Turn Direction			Uni-directional (left or right—must specify direction)
Mode of Turning			Inside edge collapses in turn
Method of Drive			Sprocket driven on inside and center links only
Optional Mesh Overlay Material			Stainless steel

Available Options

Omni-Tough® Mesh Overlay



Omni-Tough® is a stainless steel, spring wire, spiral overlay for all Omni-Grid® conveyor belt constructions, available in both 16 and 17 wire gauges. It is 2-1/2 times stronger and more damage-resistant than conventional wire overlays without adding weight. Omni-Tough® provides a flatter surface than standard overlays and is also resistant to product sticking in freezer applications. Available in both straight and tapered spiral designs.

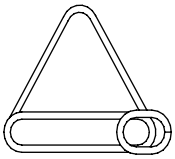
Designation **B / U X – Y – Z**

- B: Balanced Weave
- U: Unilateral Weave
- X: No. of Loops/Foot of Width
- Y: No. of Spirals/Foot of Length
- Z: Wire Gauge of Overlay

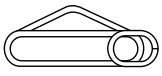
Designation Examples:
B30-12/16-16
U42-12/16-17

Variable Loop Count Overlay (Patented)
Overlay which has varied loop spacing across the width of the belt allows the loops to get progressively closer together as the spiral goes from the inside of the belt to the outside of the belt (inside and outside in respect to a turn).

Special Spirals (Patented)
- Available in Omni-Tough® overlay only
- One or more spirals on conveying surface are raised
- Used as lane dividers or flights
- Maximum height is equal to belt pitch
- Available options: height, spacing, location, shape, and number of lanes in belt



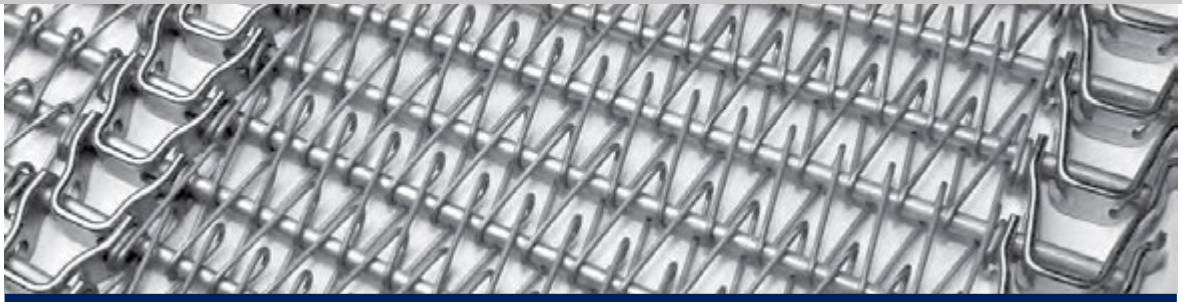
Equilateral Triangle



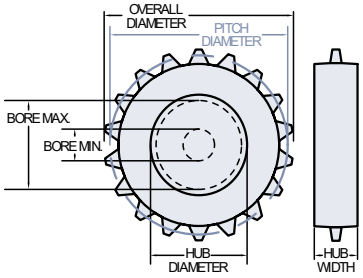
Isosceles Triangle

LOTENSION SPIRAL & TURN-CURVE BELTS

Small Radius Omni-Pro® - ¾-Inch Pitch



Steel Sprockets *



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.** in. (mm)
#3	12	2.90 (73.7)	2.36 (59.9)	1.00 (25.4)	1.44 (36.6)

#3-12 tooth sprockets are available in T303 stainless steel and C1141 hardened steel.
3/4" pitch Omni-Pro® can use #60 roller chain sprockets modified as follows:
1. Face off sprocket such that the overall tooth width is 5/16 (7.94)
2. Chamfer corners of the newly machined teeth
*Stock Sprocket. More available upon request.
** Maximum bores provide adequate material thickness for standard keyway. Specify special sizes.

UHMWPE Drive Sprockets*

Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.** in. (mm)
#3	12	2.9 (73.7)	2.36 (59.9)	1 (25.4)	1.44 (36.6)

*Stock Sprocket. More available upon request.
** Maximum bores provide adequate material thickness for standard keyway. Specify special sizes.

Belt Weight Calculation

Weight of Base Belt + Weight of Overlay

Steps of calculation:

- Determine weight of base belt
- Calculate conveying surface and convert to units of feet or meters
- Calculate square feet (square meter) of mesh/foot (meter) of belt length
- Use the conveying surface and mesh type to determine weight of mesh
- Add the weight of the base belt to weight of mesh overlay
- Multiply calculated value by belt length for total belt weight

Open Surface Area % for ¾" Small Radius Omni-Pro®

Mesh	Straight	1.1 Turn
none	74.4	75.9
18-12/16-16	60.1	63.3
18-12/16-17	61.9	64.2
24-12/16-16	55.6	58.3
24-12/16-17	58.0	60.6
30-12/16-16	51.1	54.1
30-12/16-17	54.1	56.9
36-12/16-16	46.6	49.8
36-12/16-17	50.2	53.2
42-12/16-16	42.1	45.6
42-12/16-17	46.3	49.5
48-12/16-16	37.6	41.3
48-12/16-17	42.3	45.8
54-12/16-16	33.0	37.0
54-12/16-17	38.3	42.0

Base Belt Weight

OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)
12 (305)	2.76 (4.1)	26 (660)	4.65 (6.9)	40 (1016)	6.54 (9.7)
14 (356)	3.03 (4.5)	28 (711)	4.92 (7.3)	42 (1067)	6.81 (10.1)
16 (406)	3.30 (4.9)	30 (762)	5.19 (7.7)	44 (1118)	7.08 (10.5)
18 (457)	3.57 (5.3)	32 (813)	5.46 (8.1)	46 (1168)	7.35 (10.9)
20 (508)	3.84 (5.7)	34 (864)	5.73 (8.5)	48 (1219)	7.62 (11.3)
22 (559)	4.11 (6.1)	36 (914)	6.00 (8.9)		
24 (610)	4.38 (6.5)	38 (965)	6.27 (9.3)		

Omni-Tough® Overlay Weight

Mesh	16 ga. (1.6 mm) Inside Mesh lb/ft² (kg/m²)	16 ga. (1.6 mm) Outside Mesh lb/ft² (kg/m²)	17 ga. (1.4 mm) Inside Mesh lb/ft² (kg/m²)	17 ga. (1.4 mm) Outside Mesh lb/ft² (kg/m²)
12	0.44 (2.1)	0.57 (2.8)	0.38 (1.9)	0.43 (2.1)
18	0.63 (3.1)	0.84 (4.1)	0.48 (2.3)	0.63 (3.1)
24	0.83 (4.1)	1.00 (4.9)	0.62 (3.0)	0.84 (4.1)
30	1.03 (5.0)	1.27 (6.2)	0.77 (3.8)	0.94 (4.6)
36	1.23 (6.0)	1.51 (7.4)	0.92 (4.5)	1.12 (5.5)
42	1.43 (7.0)	1.77 (8.6)	1.07 (5.2)	1.31 (6.4)
48	1.63 (8.0)	2.02 (9.9)	1.22 (6.0)	1.66 (8.1)
60	2.03 (9.9)	2.44 (11.9)	1.53 (7.5)	2.07 (10.1)

Note: 14 and 18 gauge mesh is available for certain applications.

LOTENSION SPIRAL & TURN-CURVE BELTS

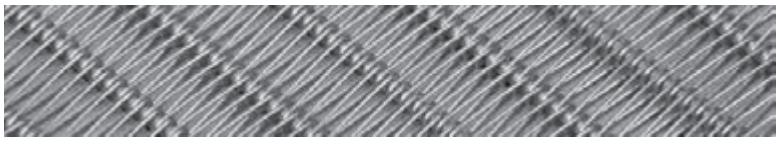
Space Saver Omni-Pro® - 1-Inch Pitch

1-Inch Pitch
Space Saver Omni-Grid®

Technical Specifications		Units	
Turn Ratio			1.7 to 2.2
Pitch		in. (mm)	1.08 (27.4)
Available Widths			12–36 (304.8–914.4)
Link Height			0.50 (12.7)
Link Material			Stainless steel
Optional Mesh Overlay Material			Stainless steel
Rod Diameter/Material			0.192 (4.9) stainless steel
Conveying Surface			3.59 (91.2) less than nominal width
Weight			See belt weight calculation
Allowable Tension	Curve/Spiral	lb. (kg)	150 (68) at 100,000 cycles
	Straight Run		300 (136) at 100,000 cycles
Turn Direction			Uni-directional (left or right—must specify direction)
Mode of Turning			Outside edge expands in turn
Method of Drive			Sprocket driven on inside set of links only; special dual tooth sprocket required

Available Options

Omni-Tough® Mesh Overlay



Omni-Tough® is a stainless steel, spring wire, spiral overlay for all Omni-Grid® conveyor belt constructions, available in both 16 and 17 wire gauges. It is 2-1/2 times stronger and more damage-resistant than conventional wire overlays without adding weight. Omni-Tough® provides a flatter surface than standard overlays and is also resistant to product sticking in freezer applications. Available in both straight and tapered spiral designs.

Designation **B / U X – Y – Z**

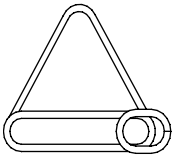
- B / U — Balanced Weave / Unilateral Weave
- X — No. of Loops/Foot of Width
- Y — No. of Spirals/Foot of Length (12 for 1.08" pitch)
- Z — Wire Gauge of Overlay

Designation Examples:
B30-12-16
U42-12-17

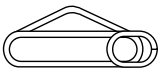
Variable Loop Count Overlay (Patented)
Overlay which has varied loop spacing across the width of the belt allows the loops to get progressively closer together as the spiral goes from the inside of the belt to the outside of the belt (inside and outside in respect to a turn).

Special Spirals (Patented)

- Available in Omni-Tough® overlay only
- One or more spirals on conveying surface are raised
- Used as lane dividers or flights
- Maximum height is equal to belt pitch
- Available options: height, spacing, location, shape, and number of lanes in belt



Equilateral Triangle

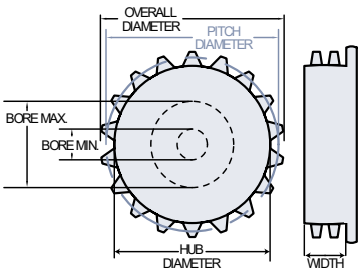


Isosceles Triangle

LOTENSION SPIRAL & TURN-CURVE BELTS

Space Saver Omni-Pro® - 1-Inch Pitch

UHMWPE Drive Sprockets



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
*6	19	6.56 (166.6)	6.03 (153.2)	0.88 (22.4)	4.00 (101.6)

* Maximum bores provide adequate material thickness for standard keyway. Specify special sizes to be used when necessary.

Belt Weight Calculation

Weight of Base Belt + Weight of Overlay

Steps of calculation:

- Determine weight of base belt
- Calculate conveying surface and convert to units of feet or meters
- Calculate square feet (square meter) of mesh/foot (meter) of belt length
- Use the conveying surface and mesh type to determine weight of mesh
- Add the weight of the base belt to weight of mesh overlay
- Multiply calculated value by belt length for total belt weight

Base Belt Weight

OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)	OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)
12 (305)	2.54 (3.8)	26 (660)	3.85 (5.7)
14 (356)	2.73 (4.1)	28 (711)	4.04 (6.0)
16 (406)	2.92 (4.3)	30 (762)	4.23 (6.3)
18 (457)	3.10 (4.6)	32 (813)	4.41 (6.6)
20 (508)	3.29 (4.9)	34 (864)	4.60 (6.8)
22 (559)	3.48 (5.2)	36 (914)	4.79 (7.1)
24 (610)	3.66 (5.4)		

Open Surface Area % for Space Saver Omni-Grid®

Mesh	Straight	1.7 Turn
none	82.2	85.1
18-12-16	69.2	74.1
18-12-17	70.8	75.5
24-12-16	65.0	70.6
24-12-17	67.2	72.5
30-12-16	60.8	67.1
30-12-17	63.6	69.4
36-12-16	56.6	63.6
36-12-17	59.9	66.4
42-12-16	52.4	60.6
42-12-17	56.2	63.3
48-12-16	48.1	56.5
48-12-17	52.5	60.6
54-12-16	43.9	52.9
54-12-17	48.8	57.1

Omni-Tough® Overlay Weight

Mesh	16 ga. (1.6 mm) lb/ft² (kg/m²)	17 ga. (1.4 mm) lb/ft² (kg/m²)
12	0.38 (1.9)	0.29 (1.4)
18	0.55 (2.7)	0.42 (2.1)
24	0.74 (3.6)	0.56 (2.7)
30	0.93 (4.5)	0.68 (3.3)
36	1.08 (5.3)	0.82 (4.0)
42	1.26 (6.2)	0.95 (4.6)
48	1.44 (7.0)	1.08 (5.3)
54	1.62 (7.9)	1.21 (5.9)
60	1.80 (8.8)	1.35 (6.6)

Note: 14 and 18 gauge mesh is available for certain applications.

LOTENSION SPIRAL & TURN-CURVE BELTS

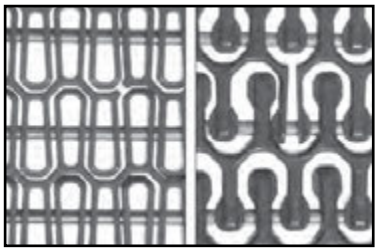
Advantage™ Plastic Spiral Belts

Advantage™ Plastic Spiral Belts

Tested. Certified. Safer.

Advantage™ 120 & 200

- **Easy to Clean—The ONLY USDA Accepted spiral belt** for meat & poultry, as well as NSF Certified & BISSC 3rd Party Verified
- **Greatest Airflow for Shortest Dwell Times—**With the greatest open area, Advantage™ has been ETL proven to have up to 370% less back pressure when compared to all competitors' plastic spiral belts
- **Quick No-Weld Repairs—**Patented rod locking design allows quick, easy assembly using only a screwdriver
- **Strongest Plastic Belt—**Stainless steel rods handles 2.5 times the tension than the competition's all-plastic belts in spiral applications
- **Guaranteed Not to Sag—**Stainless steel rods provide superior beam strength eliminating the need for additional support rails, which reduces friction, tension and energy consumption
- **Guaranteed No Black Speck—**Acetal links prevent stainless steels parts from rubbing each other, the cause of black specks



Compare the rod exposure and 67% open area of Advantage™ 200 (left) to the all-plastic belt competition (right).

Assembly and disassembly are quick and easy, requiring only a screwdriver.

The Advantage™ 120 and 200 feature unique fully slotted rod openings, allowing for more open area and belt strength.

HEADQUARTERS 514.886.5270

12985 Rue Brault, Mirabel Quebec, Canada J7J 0W2 UNIKINGCANADA.COM

LOTENSION SPIRAL & TURN-CURVE BELTS

Advantage™ 120 - 1.2-Inch Pitch

1.2-Inch Pitch
▶▶ Advantage™ 120

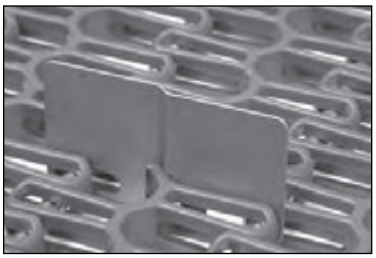
Technical Specifications		Units	
Turn Ratio			1.6–2.8
Pitch		in. (mm)	1.20 (30.5)
Available Widths: Curve/Spiral			8–40 (203–1016) in 1 (25.4) increments
Available Widths: Straight Run			8–60 (203–1524) in 1 (25.4) increments
Conveying Surface			Full belt width (subtract 1.0 (25.4) from side with guard edges)
Rod Diameter/Material			0.192 (4.9) stainless steel
Link Height			0.56 (14.2)
Weight			See belt weight chart
Maximum Temperature		°F (°C)	180 (82)
Minimum Temperature			-50 (-45)
Open Area			67% expanded / 61% average in turn
Average Air Pressure Drop		inH2O (Pa)	0.061 (15.2) in a turn at 550 FPM
Maximum Belt Pull	Curve/Spiral	lb. (kg)	500 (226)
	Straight Run		1000 (453)
Maximum Allowable Tension	Curve/Spiral		200 (91) at 100,000 cycles
	Straight Run		400 (182) at 100,000 cycles
Link & Module Material			Blue acetal (POM)
Turn Direction			Bi-directional (left & right)
Mode of Turning			Inside edge collapses in turn
Method of Drive			Sprocket driven on links
Patent Number			7,073,662 (And other foreign, domestic, and pending patents)

Available Options

Integrated Guard Edges

Optional integrated guard edges are molded into the link and can be installed on one or both belt edges. Available in 1/2" and 1" (12.7 and 25.4 mm) heights.

Lane Dividers



Optional rod-anchored stainless steel lane dividers can be installed at customer specified locations within the surface module section of the belt. Available in 1/2" and 1" (12.7 and 25.4 mm) heights.

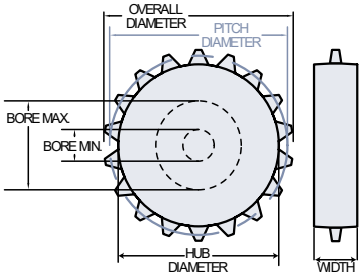
Friction Top (FDA Approved)

Optional friction top modules are available for Advantage™ belts. Gray in color, friction top modules are placed within the surface module section of the belt.

LOTENSION SPIRAL & TURN-CURVE BELTS

Advantage™ 120 - 1.2-Inch Pitch

UHMWPE Drive Sprockets



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#4	11	4.19 (106.4)	3.46 (87.9)	0.75 (19.1)	1.75 (44.5)
#5	13	4.90 (124.5)	4.23 (107.4)	0.75 (19.1)	2.25 (57.1)
#6	16	6.05 (153.7)	5.38 (136.7)	0.75 (19.1)	3.00 (76.2)
#8	21	7.88 (200.2)	7.27 (184.7)	0.75 (19.1)	4.00 (101.6)

*Maximum bores provide adequate material thickness for standard keyway.
Specify special sizes to be used when necessary.

Belt Weight by Width

Belt Width in. (mm)	Belt Weight lb/ft. (kg/m)	Belt Width in. (mm)	Belt Weight lb/ft. (kg/m)	Belt Width in. (mm)	Belt Weight lb/ft. (kg/m)
8 (203)	1.3 (1.9)	26 (660)	4.0 (6.0)	44 (1118)	6.7 (10.0)
10 (254)	1.7 (2.5)	28 (711)	4.3 (6.4)	46 (1168)	6.9 (10.3)
12 (305)	2.0 (3.0)	30 (762)	4.7 (7.0)	48 (1219)	7.2 (10.7)
14 (356)	2.3 (3.4)	32 (813)	4.9 (7.3)	50 (1270)	7.5 (11.2)
16 (406)	2.6 (3.9)	34 (864)	5.2 (7.7)	52 (1321)	7.8 (11.6)
18 (457)	2.9 (4.3)	36 (914)	5.5 (8.2)	54 (1372)	8.1 (12.1)
20 (508)	3.2 (4.8)	38 (965)	5.8 (8.6)	56 (1422)	8.4 (12.5)
22 (559)	3.5 (5.2)	40 (1016)	6.1 (9.1)	58 (1473)	8.7 (12.9)
24 (610)	3.7 (5.5)	42 (1067)	6.4 (9.5)	60 (1524)	9.0 (13.4)

NSF Certification

The Advantage™ 120 is NSF Certified to NSF/3-A/ANSI 14159-3 hygiene requirements for the design of mechanical belt conveyors used in meat and poultry processing.

Ashworth

LOTENSION SPIRAL & TURN-CURVE BELTS

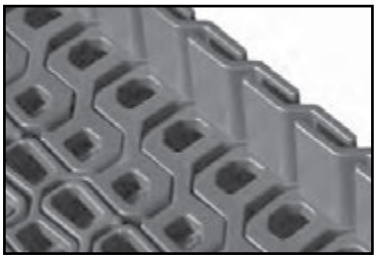
Advantage™ 200 - 2-Inch Pitch

2-Inch Pitch
▶▶ Advantage™ 200

Technical Specifications		Units	
Turn Ratio			1.5 to 2.8
Pitch		in. (mm)	2.00 (50.8)
Available Widths: Curve/Spiral			10–48 (254–1219) in 1.0 (25.4) increments
Available Widths: Straight Run			10–60 (254–1524 in 1.0 (25.4) increments
Conveying Surface			Full belt width (subtract 1.25 (31.8) from side with guard edges)
Rod Diameter/Material			0.236 (6.0) stainless steel
Link Height			0.56 (14.2)
Weight			See belt weight chart
Maximum Temperature		°F (°C)	180 (82)
Minimum Temperature			-50 (-45)
Open Area			67% expanded / 61% average in turn
Average Air Pressure Drop		inH2O (Pa)	0.042 (10.5) in a turn at 550 FPM
Maximum Belt Pull	Curve/Spiral	lb. (kg)	750 (340)
	Straight Run		1500 (680)
Maximum Allow-able Tension	Curve/Spiral		300 (136) at 100,000 cycles
	Straight Run		600 (273) at 100,000 cycles
Link & Module Material			Blue acetal (POM)
Turn Direction			Bi-directional (left & right)
Mode of Turning			Inside edge collapses in turn
Method of Drive			Sprocket driven on links
Patent Number			7,073,662 (And other foreign, domestic, and pending patents)

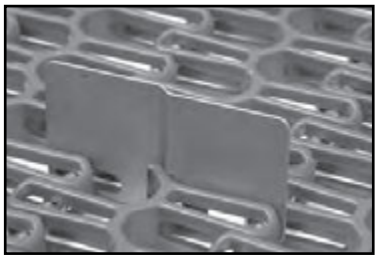
Available Options

Integrated Guard Edges



Optional integrated guard edges are molded into the link and can be installed on one or both belt edges. Available in 1/2" and 1" (12.7 and 25.4 mm) heights.

Lane Dividers



Optional rod-anchored stainless steel lane dividers can be installed at customer specified locations within the surface module section of the belt. Available in 1/2" and 1" (12.7 and 25.4 mm) heights.

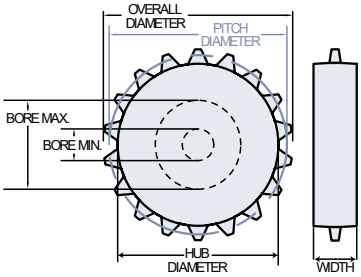
Friction Top (FDA Approved)

Optional friction top modules are available for Advantage™ belts. Gray in color, friction top modules are placed within the surface module section of the belt.

LOTENSION SPIRAL & TURN-CURVE BELTS

Advantage™ 200 - 2-Inch Pitch

UHMWPE Drive Sprockets



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#6	10	6.47 (164.3)	5.59 (142.0)	0.75 (19.1)	3.25 (82.6)
#8	13	8.36 (212.3)	7.55 (191.8)	0.75 (19.1)	4.00 (101.6)

*Maximum bores provide adequate material thickness for standard keyway.
Specify special sizes to be used when necessary.

Belt Weight by Width

Belt Width in. (mm)	Belt Weight lb/ft. (kg/m)	Belt Width in. (mm)	Belt Weight lb/ft. (kg/m)	Belt Width in. (mm)	Belt Weight lb/ft. (kg/m)
10 (254)	1.5 (2.2)	28 (711)	3.9 (5.8)	46 (1168)	6.2 (9.2)
12 (305)	1.8 (2.7)	30 (762)	4.2 (6.3)	48 (1219)	6.5 (9.7)
14 (356)	2.1 (3.1)	32 (813)	4.4 (6.5)	50 (1270)	6.8 (10.1)
16 (406)	2.3 (3.4)	34 (864)	4.7 (7.0)	52 (1321)	7.0 (10.4)
18 (457)	2.6 (3.9)	36 (914)	6.0 (8.9)	54 (1372)	7.3 (10.9)
20 (508)	2.9 (4.3)	38 (965)	5.2 (7.7)	56 (1422)	7.6 (11.3)
22 (559)	3.2 (4.8)	40 (1016)	5.5 (8.2)	58 (1473)	7.8 (11.6)
24 (610)	3.4 (5.1)	42 (1067)	5.8 (8.6)	60 (1524)	8.1 (12.1)
26 (660)	3.6 (5.4)	44 (1118)	6.0 (8.9)		

NSF Certification

The Advantage™ 200 is NSF Certified to NSF/3-A/ANSI 14159-3 hygiene requirements for the design of mechanical belt conveyors used in meat and poultry processing.

Ashworth

LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Flex® - Rugged Metal Spiral Belts

Omni-Flex® Rugged Metal Spiral Belts

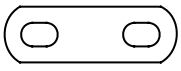
Superior Strength & Load Capacity for High Speed, High Tension Spiral and Turn-Curve Applications

Ashworth Omni-Flex® belts are the original turn-curve conveyor belts and have been delivering reliable performance since 1959. These flat wire belts are constructed with heavy duty, precision formed rod ends for extended cage life and buttonheads for maximum strength and reduced wear. Unlike straight-running flat wire belts, Omni-Flex® belts are constructed with slots instead of holes. The slotted design allows the belt to collapse on either side, for both left-hand and right-hand turns.

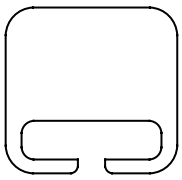
Stainless Steel, Heavy Duty Construction
All Omni-Flex® components are precision crafted from premium quality stainless steel to exacting standards. The finish is smooth and burr-free for easy clean-up and excellent sanitary properties. Two rows of reinforcing bar links are standard to provide strength.

Broad Range of Sizes & Accessories
Available flat wire mesh dimensions for Omni-Flex® belts include 1" x 1", 1/2" x 1" and 1/3" x 1". Ashworth patented fatigue-resistant pickets are available on most Omni-Flex® belts and increase belt service life by about 30%. Other accessories such as guard edges, reinforcing bar links, and lane dividers are available for special needs.

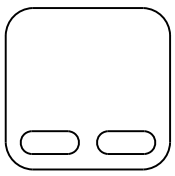
Standard Bar Link



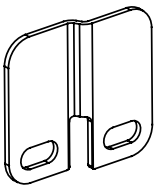
Short Slotted Bar Link



Detachable Lane Divider



Guard Edge Plate



Non-Detachable Lane Divider

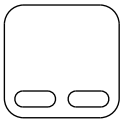
LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Flex® E1 & E2 - 1-Inch Pitch

1-Inch Pitch
▶▶ Omni-Flex® E1 & E2

Technical Specifications	Units	
Turn Ratio		1.8 (without bar links)
Pitch	in. (mm)	1.084 (27.5)
Available Widths		6.00–48.00 (152.4–1219.2)
Picket Dimension/Material: E1 & E2		0.500 x .062 (12.7 x 1.6) stainless steel flat wire
Nominal Picket (Mesh) Shape: E1		1.00 x 1.00 (25.4 x 25.4)
Nominal Picket (Mesh) Shape: E2		0.50 x 1.00 (12.7 x 25.4)
Rod Diameter/Material		0.192 (4.9) / stainless steel
Bar Links		Double, heavy duty, collapsing 0.090 (2.3) thick, on inside and outside belt edges
Conveying Surface: Standard Links		0.25 (6.4) less than nominal belt width
Thickness		0.50 (12.7)
Weight		See belt weight chart
Allowable Tension	lb. (kg)	300 (136) at 100,000 cycles
Turn Direction		Bi-directional (left & right)
Mode of Turning		Inside edge collapses in turn
Method of Drive	in. (mm)	Positive drive with matching sprockets spaced a max. of 6 (152.4) apart or Friction drive with a minimum 12 (304.8) diameter flat faced drum

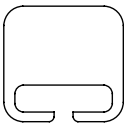
Available Options



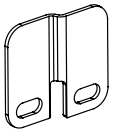
Guard Edge

Guard Edges
Plates assembled onto belt edges to prevent product from falling off. Guard edges serve to replace bar links on a one-to-one basis. Available heights (above the conveying surface) are: 0.50" (12.7 mm), 0.75" (19.1 mm), 1" (25.4 mm), 1.5" (38.1 mm), and 2" (50.8 mm).

Lane Dividers



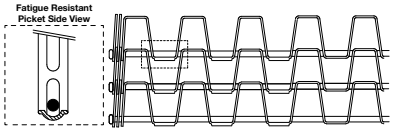
Detachable Lane Divider



Non-Detachable Lane Divider

Detachable or non-detachable plates assembled into the belt's surface to locate product. Available heights (above the conveying surface) are: 0.50" (12.7 mm), 0.75" (19.1 mm), 1" (25.4 mm), 1.5" (38.1 mm), and 2" (50.8 mm). The maximum number of lane dividers = Belt Width / 9" (228.6 mm).

Fatigue Resistant Pickets (Patented)

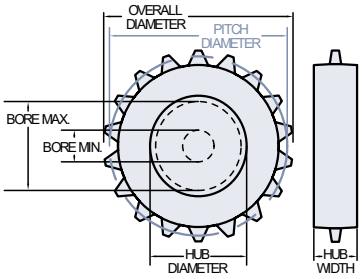


These special pickets, which are manufactured with an outward facing radius centered on the trailing face of the picket, are designed to extend the service life of the belt by approximately 30%. This radius serves to lengthen the belt pitch in selected openings near the outside edge of the belt. This causes the bar links to bear the full load of the belt in a turn, relieving stress on the picket, which increases the belt's service life.

LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Flex® E1 & E2 - 1-Inch Pitch

Steel Sprockets



Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#4	13	4.53 (115.1)	3.90 (99.1)	1.00 (25.4)	2.63 (66.8)
#6	18	6.24 (158.5)	5.65 (143.5)	1.00 (25.4)	3.50 (88.9)
#8	23	7.96 (202.2)	7.39 (187.7)	1.00 (25.4)	4.50 (114.3)

UHMWPE Drive Sprockets

Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#4	13	4.53 (115.1)	3.90 (99.1)	1.00 (25.4)	2.19 (55.6)
#6	18	6.24 (158.5)	5.65 (143.5)	1.00 (25.4)	3.75 (95.3)
#8	23	7.96 (202.2)	7.39 (187.7)	1.00 (25.4)	4.00 (101.6)

* Maximum bores provide adequate material thickness for standard keyway. Specify special sizes.

Open Surface Area % for Omni-Flex® E1

Mesh	Straight	2.0 Turn
1 x 1	70.4	64.5

Open Surface Area % for Omni-Flex® E2

Mesh	Straight	2.0 Turn
½ x 1	64.0	52.0

Base Belt Weight

Belt Width in. (mm)	E1–Weight per Unit of Length lb/ft (kg/m)	E2–Weight per Unit of Length lb/ft (kg/m)
6 (152)	1.94 (2.9)	2.04 (3.0)
8 (203)	2.46 (3.7)	2.60 (3.9)
10 (254)	2.97 (4.4)	3.16 (4.7)
12 (305)	3.49 (5.2)	3.72 (5.5)
14 (356)	4.01 (6.0)	4.28 (6.4)
16 (406)	4.52 (6.7)	4.84 (7.2)
18 (457)	5.04 (7.5)	5.39 (8.0)
20 (508)	5.56 (8.3)	5.95 (8.9)
22 (559)	6.07 (9.0)	6.51 (9.7)
24 (610)	6.59 (9.8)	7.07 (10.5)
26 (660)	7.11 (10.6)	7.63 (11.4)
28 (711)	7.62 (11.3)	8.19 (12.2)
30 (762)	8.14 (12.1)	8.74 (13.0)
32 (813)	8.66 (12.9)	9.30 (13.8)
34 (864)	9.17 (13.6)	9.86 (14.7)
36 (914)	9.69 (14.4)	10.42 (15.5)
38 (965)	10.21 (15.2)	10.98 (16.3)
40 (1016)	10.72 (16.0)	11.54 (17.2)
42 (1067)	11.24 (16.7)	12.09 (18.0)
44 (1118)	11.76 (17.5)	12.65 (18.8)
46 (1168)	12.27 (18.3)	13.21 (19.7)
48 (1219)	12.79 (19.0)	13.77 (20.5)

Note: Weights listed apply to standard construction Omni-Flex® with double bar links on both edges of the belt. Consult Ashworth Engineering for weights of non-standard configured belts.

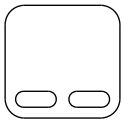
LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Flex® E3 - 1-Inch Pitch

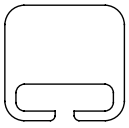
1-Inch Pitch
▶▶ Omni-Flex® E3

Technical Specifications	Units	
Turn Ratio		2.0 and above (with bar links)
Pitch	in. (mm)	1.084 (27.5)
Available Widths		6–48 (152.4–1219.2)
Picket Dimension/Material		0.50 x .05 (12.7 x 1.3) stainless steel flat wire
Nominal Picket (Mesh) Shape		0.33 x 1.00 (8.4 x 25.4)
Rod Diameter/Material		0.192 (4.9) / stainless steel
Bar Links		Double, heavy duty, 0.09 (2.3) thick, on inside and outside belt edges
Conveying Surface: Standard Links		0.25 (6.4) less than nominal belt width
Thickness		0.5 (12.7)
Weight		See belt weight chart
Allowable Tension	lb. (kg)	300 (136) at 100,000 cycles
Turn Direction		Bi-directional (left & right)
Mode of Turning		Inside edge collapses in turn
Method of Drive	in. (mm)	Positive drive with matching sprockets spaced a max. of 6 (152.4) apart or Friction drive with a minimum 12 (304.8) diameter flat faced drum

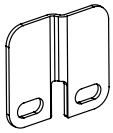
Available Options



Guard Edge



Detachable Lane Divider



Non-Detachable Lane Divider

Guard Edges

Plates assembled onto belt edges to prevent product from falling off. Guard edges serve to replace bar links on a one-to-one basis. Available heights (above the conveying surface) are: 0.50" (12.7 mm), 0.75" (19.1 mm), 1" (25.4 mm), 1.5" (38.1 mm), and 2" (50.8 mm).

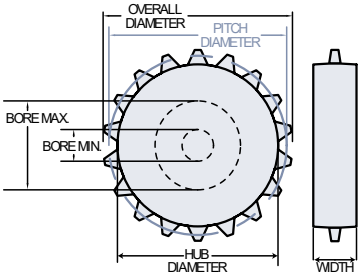
Lane Dividers

Detachable or non-detachable plates assembled onto the belt's surface to locate product. Available heights (above the conveying surface) are: 0.50" (12.7 mm), 0.75" (19.1 mm), 1" (25.4 mm), 1.5" (38.1 mm), and 2" (50.8 mm). The maximum number of lane dividers = Belt Width / 9" (228.6 mm).

LOTENSION SPIRAL & TURN-CURVE BELTS

Omni-Flex® E3 - 1-Inch Pitch

Steel Sprockets



Nom. Size	Teeth	Overall Diameter in. (mm)	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Hub Width in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#4	13	5.03 (127.8)	4.53 (115.1)	3.90 (99.1)	1.50 (38.1)	1.00 (25.4)	2.63 (66.8)
#6	18	6.65 (168.9)	6.24 (158.5)	5.65 (143.5)	1.50 (38.1)	1.00 (25.4)	3.50 (88.9)
#8	23	8.39 (213.1)	7.96 (202.2)	7.39 (187.7)	1.50 (38.1)	1.00 (25.4)	4.50 (114.3)

*Maximum bores provide adequate material thickness for standard keyway. Specify special sizes.

UHMWPE Drive Sprockets

Nom. Size	Teeth	Overall Diameter in. (mm)	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Hub Width in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#4	13	4.90 (124.5)	4.53 (115.1)	3.90 (99.1)	2.00 (50.8)	1.00 (25.4)	2.19 (55.6)
#6	18	6.65 (168.9)	6.24 (158.5)	5.65 (143.5)	2.00 (50.8)	1.00 (25.4)	3.75 (95.3)
#8	23	8.39 (213.1)	7.96 (202.2)	7.39 (187.7)	2.00 (50.8)	1.00 (25.4)	4.00 (101.6)

* Maximum bores provide adequate material thickness for standard keyway. Specify special sizes.

Open Surface Area % for Omni-Flex® E3

Mesh	Straight	2.0 Turn
1⁄3 x 1	57.7	49.2

Base Belt Weight

OA Belt Width in. (mm)	Base Belt Weight lb/ft (kg/m)
6 (152)	2.03 (3.0)
8 (203)	2.58 (3.8)
10 (254)	3.14 (4.7)
12 (305)	3.69 (5.5)
14 (356)	4.24 (6.3)
16 (406)	4.80 (7.1)
18 (457)	5.35 (8.0)
20 (508)	5.90 (8.8)
22 (559)	6.46 (9.6)
24 (610)	7.01 (10.4)
26 (660)	7.56 (11.3)
28 (711)	8.12 (12.1)
30 (762)	8.67 (12.9)
32 (813)	9.22 (13.7)
34 (864)	9.78 (14.6)
36 (914)	10.33 (15.4)
38 (965)	10.88 (16.2)
40 (1016)	11.44 (17.0)
42 (1067)	11.99 (17.8)
44 (1118)	12.54 (18.7)
46 (1168)	13.10 (19.5)
48 (1219)	13.65 (20.3)

Note: Weights listed apply to standard construction Omni-Flex® E3 with double bar links on both edges of the belt. Consult Ashworth Engineering for weights of non-standard configured belts.

LOTENSION SPIRAL & TURN-CURVE BELTS

Small Radius Omni-Flex® G1 & G3 - 1-Inch Pitch

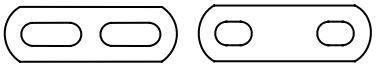
Ashworth

1-Inch Pitch
▶▶ Small Radius Omni-Flex® G1 & G3

Technical Specifications	Units	
Turn Ratio		1.0 and greater
Pitch: Inside Pickets	in. (mm)	1.084 (27.5)
Pitch: Outside Pickets		1.50 (38.1)
Available Widths: G1		14.00–54.00 (355.6–1371.6)
Available Widths: G3		12–54 (304.8–1371.6)
Picket Dimension/Material: Inside		0.50 x 0.06 (12.7 x 1.5) stainless steel flat wire
Picket Dimension/Material: Outside		0.50 x 0.05 (12.7 x 1.3) stainless steel flat wire
Nom. Picket (Mesh) Shape: G1 Inside		1.00 x 1.00 (25.4 x 25.4)
Nom. Picket (Mesh) Shape: G1 Outside		1.00 x 1.50 (25.4 x 38.1)
Nom. Picket (Mesh Shape: G3 Inside		0.50 x 1.00 (12.7 x 25.4)
Nom. Picket (Mesh) Shape: G3 Outside		0.50 x 1.50 (12.7 x 38.1)
Rod Diameter/Material		0.192 (4.9) / stainless steel
Bar Links		Double, heavy duty, 0.09 (2.3) thick, assembled in the center of the belt
Conveying Surface: Standard Links		0.25 (6.4) less than nominal belt width
Thickness		0.50 (12.7)
Weight		See belt weight chart
Allowable Tension	lb. (kg)	300 (136) at 100,000 cycles
Turn Direction		Uni-directional (left or right—must specify direction)
Mode of Turning		Inside edge collapses in turn
Method of Drive		Positive drive with matching sprockets, toothless idlers support outside pickets

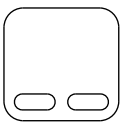
Available Options

Bar Links on Inside Edge



Standard Bar Link *Short Slotted Bar Link*

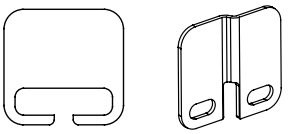
One double row of bar links at the center of the belt is standard on all Omni-Flex® belts in order to carry belt tension. A double row of bar links configured at the inside edge of the belt is optional.



Guard Edge

Guard Edges
Plates assembled onto belt edges to prevent product from falling off. Guard edges serve to replace bar links on a one-to-one basis. Available heights (above the conveying surface) are: 0.50" (12.7 mm), 0.75" (19.1 mm), 1" (25.4 mm), 1.5" (38.1 mm), and 2" (50.8 mm).

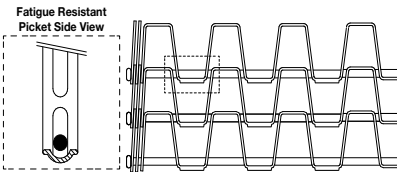
Lane Dividers



Detachable Lane Divider *Non-Detachable Lane Divider*

Detachable or non-detachable plates assembled onto the belt's surface to locate product. Available heights (above the conveying surface) are: 0.50" (12.7 mm), 0.75" (19.1 mm), 1" (25.4 mm), 1.5" (38.1 mm), and 2" (50.8 mm). The maximum number of lane dividers = Belt Width / 9" (228.6 mm).

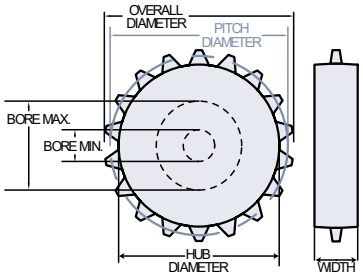
Fatigue Resistant Pickets (Patented)



These special pickets, which are manufactured with an outward facing radius centered on the trailing face of the picket, are designed to extend the service life of the belt by approximately 30%. This radius serves to lengthen the belt pitch in selected openings near the outside edge of the belt. This causes the bar links to bear the full load of the belt in a turn, relieving stress on the picket, which increases the belt's service life.

LOTENSION SPIRAL & TURN-CURVE BELTS

Small Radius Omni-Flex® G1 & G3 - 1-Inch Pitch



UHMWPE Drive Sprockets

Nom. Size	Teeth	Pitch Diameter in. (mm)	Hub Diameter in. (mm)	Bore Min. in. (mm)	Bore Max.* in. (mm)
#4	13	4.53 (115.1)	3.90 (99.1)	1.00 (25.4)	2.19 (55.6)
#6	18	6.24 (158.5)	5.65 (143.5)	1.00 (25.4)	3.75 (95.3)
#8	23	7.96 (202.2)	7.39 (187.7)	1.00 (25.4)	4.00 (101.6)

* Maximum bores provide adequate material thickness for standard keyway. Specify special sizes.

Open Surface Area % for Omni-Flex® G1

Mesh	Straight	1.0 Turn
1x1-1x1½	65.8	66.6

Open Surface Area % for Omni-Flex® G3

Mesh	Straight	1.0 Turn
½x1-½x1½	62.6	63.5

Base Belt Weight

Belt Width in. (mm)	G1 Weight per Unit of Length lb/ft (kg/m)	G3 Weight per Unit of Length lb/ft (kg/m)
12 (305)	N/A N/A	3.49 (5.2)
14 (356)	3.61 (5.4)	4.01 (6.0)
16 (406)	4.07 (6.1)	4.54 (6.8)
18 (457)	4.54 (6.8)	5.06 (7.5)
20 (508)	5.01 (7.5)	5.59 (8.3)
22 (559)	5.47 (8.1)	6.11 (9.1)
24 (610)	5.94 (8.8)	6.64 (9.9)
26 (660)	6.41 (9.5)	7.16 (10.7)
28 (711)	6.87 (10.2)	7.69 (11.4)
30 (762)	7.34 (10.9)	8.21 (12.2)
32 (813)	7.81 (11.6)	8.74 (13.0)
34 (864)	8.27 (12.3)	9.26 (13.8)
36 (914)	8.74 (13.0)	9.79 (14.6)
38 (965)	9.21 (13.7)	10.31 (15.3)
40 (1016)	9.67 (14.4)	10.84 (16.1)
42 (1067)	10.14 (15.1)	11.36 (16.9)
44 (1118)	10.61 (15.8)	11.89 (17.7)
46 (1168)	11.07 (16.5)	12.41 (18.5)
48 (1219)	11.54 (17.2)	12.94 (19.3)
50 (1270)	12.01 (17.9)	13.46 (20.0)
52 (1321)	12.47 (18.6)	13.99 (20.8)
54 (1372)	12.94 (19.3)	14.51 (21.6)

Note: Weights listed apply to standard construction Small Radius Omni-Flex® with double bar links assembled in the center of the belt and with no bar links along the edges. Consult Ashworth Engineering for weights of non-standard configured belts.

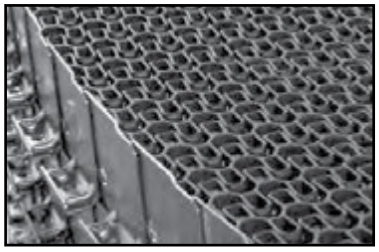
LOTENSION SPIRAL & TURN-CURVE BELTS

ExactaStack™

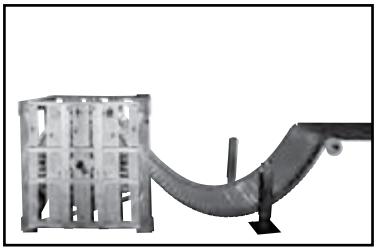
ExactaStack™
Drop-in Replacement Belt for Self Stacking Spirals

ExactaStack™ & ExactaStack™ WD

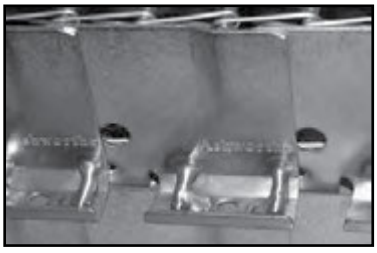
- **Drop-in Replacement—**Available in all widths, tier heights, and mesh configurations for both spliced-in sections and complete belt replacements, no system drive modifications required.
- **USDA Plastic Overlay—**The only stacker belt available with a plastic module overlay that is both USDA Accepted for meat and poultry and proven by ETL to have the greatest open area, perfect for a stacker's vertical airflow.
- **Turn-Key—**Expert technical support and full turn-key installation from the belting experts who invented spirals.
- **Made in the USA—**For fast deliveries and competitive pricing.
- **ExactaStack's "Rack & Roll®" Crating System—**For space-saving storage and quick roll-out/roll-in belt replacements.



ExactaStack™ with the patented Advantage™ plastic module overlay



ExactaStack™ is shipped in the Rack & Roll® crating system for easy installation.



ExactaStack™ is available in all widths, tier heights, and mesh configurations for either sectional or complete replacement.

ExactaStack™ Turn-Key Belt Replacement

- **Turn-Key and Stress Free—**Skilled Ashworth Factory Service technicians will install your new ExactaStack™ belt, inspect the drive system, make the necessary adjustments for optimal performance, and then provide a detailed system report certified by our spiral belt experts.
- **What's included?**
  - A completely new ExactaStack™ belt that will meet your production needs
  - The services of an Ashworth Factory Service Representative to recommend the belt that is right for you
  - The services of an Ashworth Factory Service technician to install your optimized belt
  - Adjustment of the drive system to match the new belt and a system inspection report

Ashworth

LOTENSION SPIRAL & TURN-CURVE BELTS

ExactaStack™ Standard Belt

ExactaStack™ Standard Belt

Technical Specifications	Units	
Turn Ratio		Approximately 1.7 (designed to fit existing systems)
Pitch	mm	60 is the longitudinal pitch per link; 30 is the intermediate rod spacing.
Available Widths		420, 580, 640, 760
Conveying Surface		45 less than belt width
Tier Height		60, 80, 100, 120, 150, 180, 220
Rod Diameter		5.0
Weight		See belt weight chart
Material		Stainless steel links, rods, and mesh
Turn Direction		Clockwise or counterclockwise
Allowable Tension		Belts will carry the maximum load specified by the system manufacturer for an equivalent belt
Mode of Turning		Inside edge collapses in turn

Available Options

Wire Mesh Overlays

Mesh is specified using the standard designation for existing systems, X-Y-Z, as shown below.

X = Belt Width	Y = Pitch	Z = Wire Dia.
42 = 420 mm	6 mm	1.6 mm
58 = 580 mm	9 mm	1.8 mm
64 = 640 mm	13 mm	
76 = 760 mm	20 mm	

Standard mesh overlay for ExactaStack™ is a right-hand wind, unilateral weave (see illustration) comprised of two mating spirals. The first terminates with round pigtails on the leading side of the spiral. The second terminates with oval pigtails on the trailing side of the spiral and has one less loop across the width of the belt such that the oval pigtails are nested within the round pigtails on the adjacent spiral. The pigtails of both spirals are installed on the connecting rod joining the links. A washer is installed between the link and the spirals on the collapsing side only.

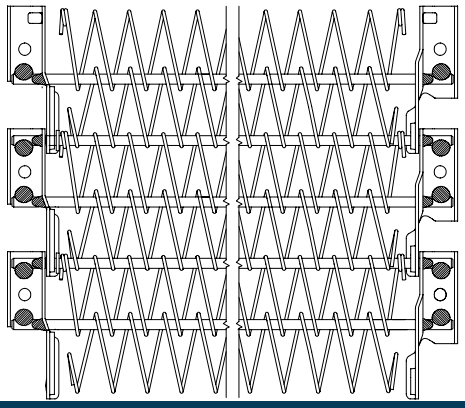
Special Wire Mesh Overlays

Typically, special mesh configurations can be made to match existing belts with non-standard mesh overlay. Please consult Ashworth engineering.

Special Plastic Overlay

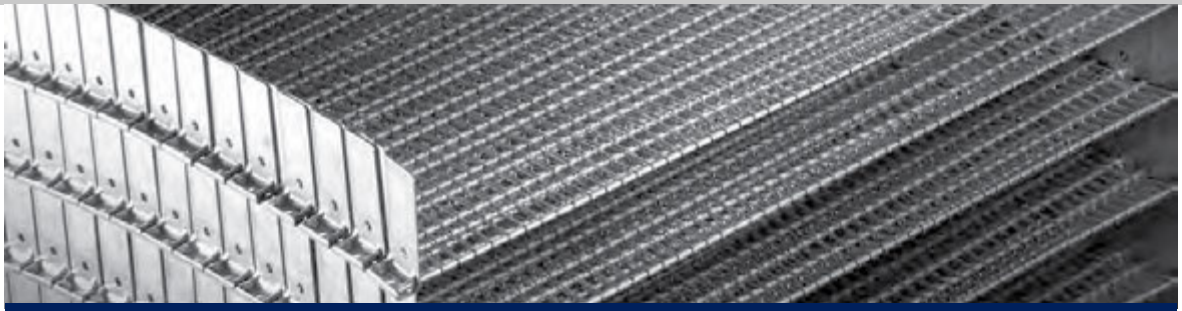
Plastic mesh with nominal 13 mm (0.5") openings is available. Maximum operating temperature is 180°F. Plastic mesh is not suitable for applications where caustic cleaners are used. Please consult Ashworth engineering.

Open Surface Area % for ExactaStack™		
Mesh	Straight	1.7 turn
M6-1.6	57.2	47.5
M9-1.6	65.9	58.2
M13-1.6	71.3	64.8
M20-1.6	75.6	70.1



LOTENSION SPIRAL & TURN-CURVE BELTS

ExactaStack™



Belt Weight (lb/ft)							
Belt Width	**Link Height**	Mesh Pitch→	6 mm	9 mm	13 mm	20 mm	Plastic
420 mm	60 mm		4.64	4.06	3.68	3.39	4.25
	80 mm		5.03	4.45	4.06	3.78	4.64
	100 mm		5.41	4.83	4.45	4.16	5.03
	120 mm		5.80	5.22	4.83	4.55	5.41
	150 mm		6.38	5.80	5.41	5.13	5.99
	180 mm		6.96	6.38	5.99	5.71	6.57
	220 mm		7.73	7.15	6.76	6.48	7.34
580 mm	60 mm		5.97	5.12	4.59	4.19	5.37
	80 mm		6.36	5.50	4.98	4.58	5.75
	100 mm		6.74	5.89	5.36	4.96	6.14
	120 mm		7.13	6.27	5.75	5.35	6.52
	150 mm		7.71	6.85	6.33	5.93	7.10
	180 mm		8.29	7.43	6.91	6.51	7.68
	220 mm		9.06	8.20	7.68	7.28	8.45
640 mm	60 mm		6.47	5.53	4.95	4.49	5.78
	80 mm		6.86	5.92	5.33	4.88	6.17
	100 mm		7.25	6.30	5.72	5.26	6.55
	120 mm		7.63	6.69	6.11	5.65	6.94
	150 mm		8.21	7.27	6.68	6.23	7.52
	180 mm		8.79	7.85	7.26	6.81	8.10
	220 mm		9.56	8.62	8.04	7.58	8.87
760 mm	60 mm		7.48	6.33	5.64	5.09	6.61
	80 mm		7.87	6.72	6.02	5.47	7.00
	100 mm		8.25	7.10	6.41	5.86	7.39
	120 mm		8.64	7.49	6.80	6.25	7.77
	150 mm		9.22	8.07	7.38	6.83	8.35
	180 mm		9.80	8.65	7.95	7.40	8.93
	220 mm		10.57	9.42	8.73	8.18	9.70

Note: Multiply lb/ft x 1.49 to convert to kg/m

Ashworth

LOTENSION SPIRAL & TURN-CURVE BELTS

ExactaStack™ WD

ExactaStack™ WD

Technical Specifications	Units	
Turn Ratio		Approximately 1.92 (7 mm rods) / 1.75 (6 mm rods) (designed to fit existing systems)
Pitch	mm	60 is the longitudinal pitch per link; 30 is the intermediate rod spacing
Available Widths		760, 920, 1060
Conveying Surface		42 less than belt width
Tier Height		Nominal tier heights of 80, 100, 120, 150, 180, 220
Rod Diameter		6.0 or 7.0 depending on belt width
Weight		See belt weight chart
Material		Stainless steel links, rods, and mesh
Turn Direction		Clockwise or counterclockwise
Allowable Tension		Belts will carry the maximum load specified by the system manufacturer for an equivalent belt
Mode of Turning		Inside edge collapses in turn

Available Options

Wire Mesh Overlays

Mesh is specified using the standard designation for existing systems, X-Y-Z, as shown below.

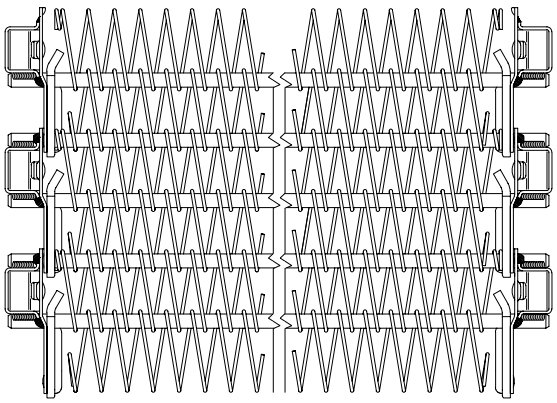
X = Belt Width	Y = Pitch	Z = Wire Dia.
76 = 760 mm	6 mm	1.6 mm
92 = 920 mm	9 mm	1.8 mm
106 = 1060 mm	13 mm	
	20 mm	

Standard mesh overlay for ExactaStack™ WD is a right-hand wind, unilateral weave (see illustration) comprised of two mating spirals. The first terminates with round pigtails on the leading side of the spiral. The second terminates with oval pigtails on the trailing side of the spiral and has one less loop across the width of the belt such that the oval pigtails are nested within the round pigtails on the adjacent spiral. The pigtails of both spirals are installed on the connecting rod joining the links. Tension links are installed between the links and spirals on both sides of the belt.

Special Wire Mesh Overlays

Typically, special mesh configurations can be made to match existing belts with non-standard mesh overlay. Please consult Ashworth engineering

Open Surface Area % for ExactaStack™ WD		
Mesh	Straight	1.7 turn
M6-1.6	50.4	39.1
M9-1.6	59.2	49.9
M13-1.6	64.5	56.4
M20-1.6	68.8	61.7



LOTENSION SPIRAL & TURN-CURVE BELTS

ExactaStack™ WD

Belt Weight (lb/ft)										
Belt Width	Link Height	Mesh Pitch→	6 mm		9 mm		13 mm		20 mm	
		Wire→	1.6 mm	1.8 mm	1.6 mm	1.8 mm	1.6 mm	1.8 mm	1.6 mm	1.8 mm
760 mm	80 mm		9.57	10.52	8.40	9.04	7.68	8.12	7.10	7.40
	100 mm		9.96	10.91	8.79	9.43	8.06	8.51	7.49	7.78
	120 mm		10.34	11.29	9.17	9.81	8.45	8.90	7.87	8.17
	150 mm		10.92	11.87	9.75	10.39	9.03	9.48	8.45	8.75
	180 mm		11.50	12.45	10.30	10.97	9.61	10.05	9.03	9.33
	220 mm		12.27	13.22	11.10	11.74	10.38	10.83	9.80	10.10
920 mm	80 mm		13.00	14.21	11.50	12.31	10.57	11.13	9.86	10.23
	100 mm		13.38	14.59	11.89	12.70	10.95	11.52	10.24	10.62
	120 mm		13.77	14.98	12.27	13.09	11.34	11.90	10.63	11.01
	150 mm		14.35	15.56	12.85	13.67	11.92	12.48	11.21	11.58
	180 mm		14.93	16.14	13.43	14.24	12.50	13.06	11.79	12.16
	220 mm		15.70	16.91	14.20	15.02	13.27	13.83	12.56	12.94
1060 mm	80 mm		14.71	16.12	12.93	13.87	11.87	12.53	11.05	11.48
	100 mm		15.10	16.51	13.32	14.25	12.26	12.91	11.43	11.87
	120 mm		15.48	16.89	13.70	14.64	12.64	13.30	11.82	12.26
	150 mm		16.06	17.47	14.28	15.22	13.22	13.88	12.40	12.84
	180 mm		16.64	18.05	14.86	15.80	13.80	14.46	12.98	13.41
	220 mm		17.41	18.82	15.63	16.57	14.57	15.23	13.75	14.19

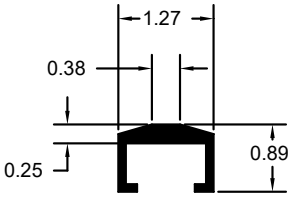
Note: Multiply lb/ft x 1.49 to convert to kg/m

Ashworth

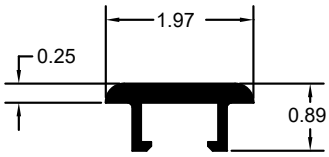
LOTENSION SPIRAL & TURN-CURVE BELTS

UHMWPE Cage Bar Cap Profiles

UHMWPE Cage Bar Cap Profiles



LSA0005
(FITS 1/2" X 1" BAR)



LSA0026
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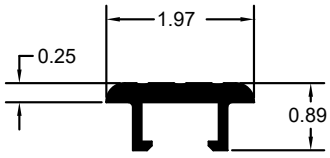
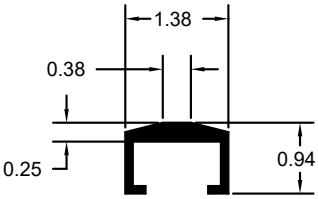
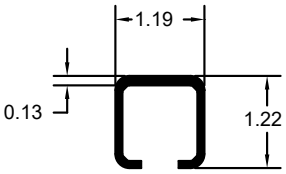


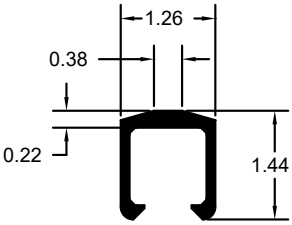
LSA0032
(FITS 1/2" X 1" BAR)



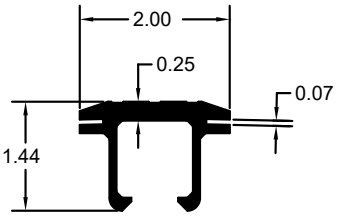
LSA0011
(FITS 9/16" x 1-1/8" BAR SIZE CHANNEL)



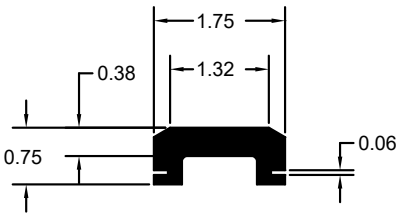
LSA0006
(FITS 1" x 1" TUBE)



LSA0024
(FITS 1" x 1" TUBE)



LSA0013
(FITS 1" x 1" TUBE)



LSA0028
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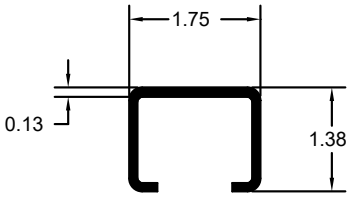
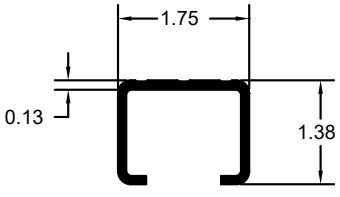
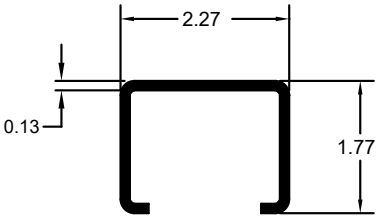


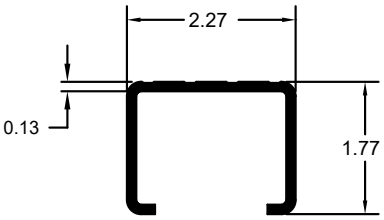
LSA0029
(FITS 1" X 1-1/2" TUBE)



LSA0030
(FITS 1" X 1-1/2" TUBE)



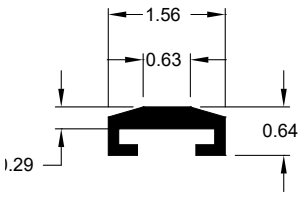
LSA0007
(FITS 1-1/2" x 2" TUBE)



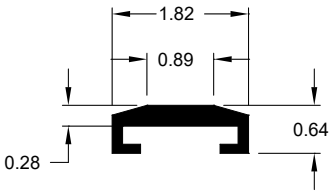
LSA0010
(FITS 1-1/2" x 2" TUBE)

LOTENSION SPIRAL & TURN-CURVE BELTS

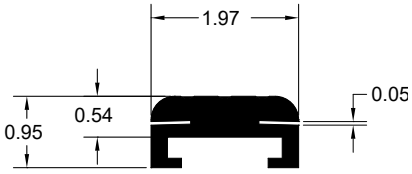
Lotension Engineering



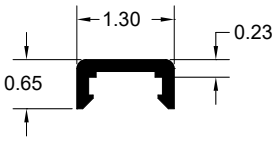
LSA0033
(FITS 3/16" X 1-1/4" BAR)



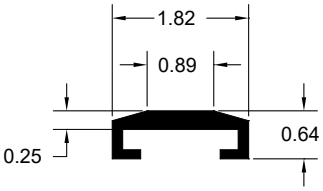
LSA0025
(FITS 3/16" X 1-1/2" Bar)



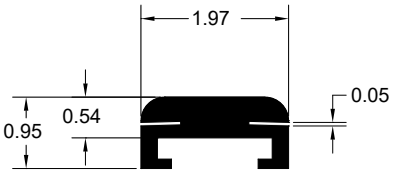
LSA0012
(FITS 1-1/2" x 1-1/2" x 1/4" TEE)



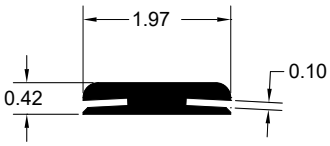
LSA0018
(FITS 1/4" X 1" BAR)



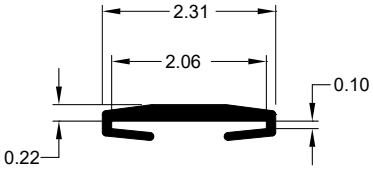
LSA0034
(FITS 1-1/2" x 1-1/2" x 1/4" TEE)



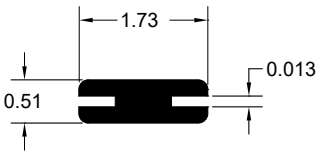
LSA0021
(FITS 1-1/2" x 1-1/2" x 1/4" TEE)



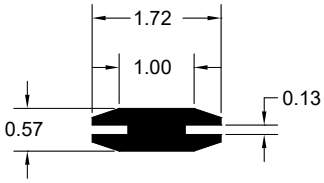
LSA0015
(FITS SHEET METAL CAGE)



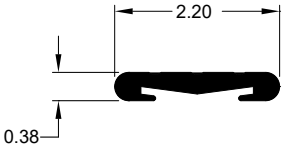
LSA0020
(FITS SHEET METAL CAGE)



LSA0022
(FITS SHEET METAL CAGE)



LSA0023
(FITS SHEET METAL CAGE)



LSA0031
(FITS SHEET METAL CAGE)

FLAT FLEX CONVEYOR BELTS

HEADQUARTERS 514.886.5270
12985 Rue Brault, Mirabel Quebec, Canada J7J 0W2 UNIKINGCANADA.COM

FLAT FLEX CONVEYOR BELTS

Standard 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, please ask our customer service team or Technical Sales Engineers if you do not see the specification you require.

Flat-Flex® Imperial Reference Chart:										
Nominal Strands Per Foot, Wire Diameter	Actual Pitch	Strands Per Foot	Opening between Wires	Standard Edge Loop Size (+/-.0156)	Weight	Min Transfer Dia. (grooved)	Typical Open Area (%)	Edge Availability		
								Single Loop Edge (SLE)	Double Loop Edge (DLE)	C-Cure Edge (SLE CC)
72 x .035″	.167″	72	.132″	0.188″	0.26lbs/ sq.ft	0.375″	77	•	•	
72 x .050″	.167″	72	.117″	0.188″	0.53lbs/ sq.ft	0.438″	67.5	•		
54 x .035″	.222″	54	.187″	0.188″	0.2lbs/sq.ft	0.500″	82.5	•	•	
48 x .050″	.250″	48	.200″	0.313″	0.37lbs/ sq.ft	0.625″	77.5	•	•	
42 x .050″	.289″	41.5	.239″	0.281″	0.33lbs/ sq.ft	0.625″	80	•	•	•
42 x .062″	.289″	41.5	.230″	0.281″	0.52lbs/ sq.ft	0.750″	75	•		•
32 x .072″	.375″	32	.303″	0.313″	0.58 lbs/ sq.ft	1.000″	79	•		•
32 x .082″	.375″	32	.293″	0.313″	0.72lbs/ sq.ft	0.875″	75	•		•
27 x .050″	.453″	26.5	.403″	0.25″	0.24lbs/ sq.ft	1.000″	86	•	•	
24 x .072″	.500″	24	.428″	0.281″	0.44lbs/ sq.ft	1.125″	82	•		•
24 x .092″	.500″	24	.408″	0.5″	0.73lbs/ sq.ft	1.250″	78	•		•
15 x .092″	.774″	15	.682″	0.313″	0.52lbs/ sq.ft	1.500″	85	•		•
Flat-Flex® Metric Reference Chart:										
6mm x 1.27 (50.8)	6mm	-	4.72mm	6.35mm	1.90kg/ sq.mts	7.94mm	76	•	•	
9mm x 1.57 (33.9)	9mm	-	7.42mm	12.70mm	2.14kg/ sq.mts	12.70mm	79	•		
12mm x 1.83 (25.4)	12mm	-	10.16mm	7.14mm	2.25kg/sq. mts	15.88mm	81	•		

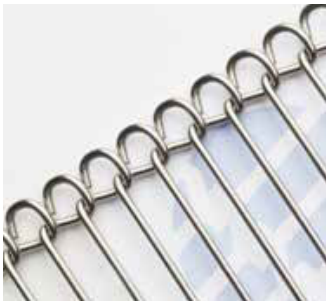
FLAT FLEX CONVEYOR BELTS

Flat-Flex® Conveyor Belts

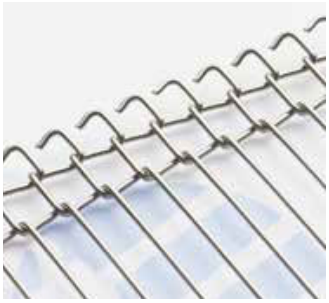
Materials available

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.

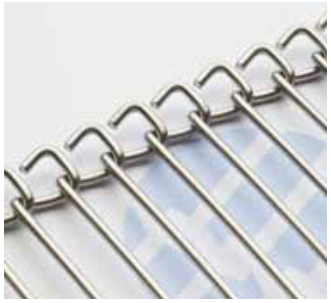
Edge loop types:



C-Cure-Edge™



Double Loop Edges



Single Loop Edges

Check the reference chart on page 6 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.
- **Single Loop Edges** are the most common belt edge finish and are a default standard.

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

FLAT FLEX CONVEYOR BELTS

Standard Flat-Flex® Drive Components

Standard Flat-Flex® 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 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® 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® 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.

FLAT FLEX CONVEYOR BELTS

Clean-Sweep™ Sprockets

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 -4°F to +176°F, and is also FDA approved for food processing applications.

PEEK (PolyEtherEther-Ketone) - high performance engineering thermoplastic that can operate at high temperatures, up to 464°F, and is less abrasive on your stainless steel belts than metal drive components.

FLAT FLEX CONVEYOR BELTS

PEEK 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 on your stainless steel belts than metal drive components. PEEK can be used continuously to 464°F 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 464°F
- 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	psi	14,500
Heat deflection temperature @ 264 psi	°F	306
Maximum continuous service temperature in air	°F	464
Minimum continuous service temperature in air	°F	-58
Melting point	°F	649

FLAT FLEX CONVEYOR BELTS

Flat-Flex® Accessories

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.

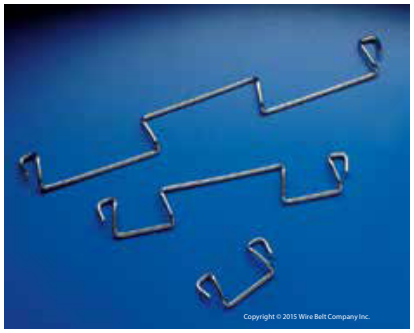
EZ-Splice ® joining strands are available for these pitch and wire sizes for Flat-Flex ® belts:

Strands Per Foot	Wire Diameter
42	.050″
42	.062″
24	.072″
32	.072″
32	.082″
15	.092″
24	.092″

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 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.

ROD LINK

HEADQUARTERS 514.886.5270
12985 Rue Brault, Mirabel Quebec, Canada J7J 0W2 UNIKINGCANADA.COM

ROD LINK

Rod Link Belting

Rod Link belting is available for straight-line conveyors and for conveyors with 90˚ or 180˚ turns.

ROD LINK STRAIGHT LINE BELTING

- Open construction promotes optimal airflow, drainage, and cleaning
- Sanitation and maintenance are easy thanks to the rod link simple construction. Buildup of debris and bacteria are minimized.

POSITIVE DRIVE

Rod Link's positive drive system and smooth edge finish allow for easy travel around curves.

APPLICATIONS

STRAIGHT-RUNNING OR TURN/SPIRAL:

COOLING

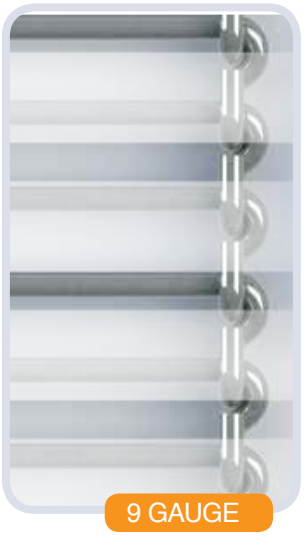
FREEZING

PROOFING

ROD LINK WIRE GAUGES - ACTUAL SIZE

5 GAUGE

7 GAUGE



9 GAUGE

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ROD LINK

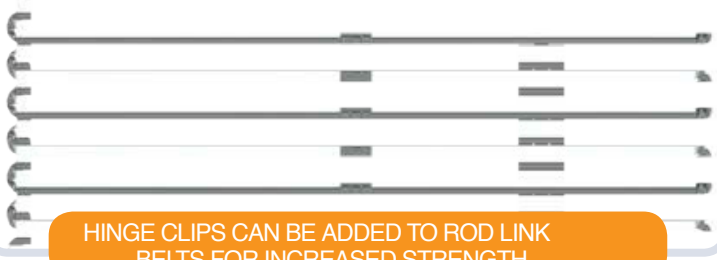
Technical Specifications

ROD LINK BELT WEIGHTS – STRAIGHT-LINE CONVEYORS

OVERALL WIDTH	5 GAUGE		7 GAUGE		9 GAUGE	
	Lbs./ Lin. Ft	Kg/ Lin. M	Lbs./ Lin. Ft	Kg/ Lin. M	Lbs./ Lin. Ft	Kg/ Lin. M
12	2.34	3.48	1.98	2.95	1.68	2.50
15	2.79	4.15	2.38	3.54	2.03	3.02
18	3.25	4.84	2.78	4.14	2.38	3.54
20	3.55	5.28	3.07	4.57	-	-
24	4.16	6.19	3.59	5.34	3.01	4.48
30	5.07	7.54	4.39	6.53	3.71	5.52
36	5.98	8.90	5.19	7.72	-	-

ROD LINK STRAIGHT-LINE TECHNICAL SPECIFICATIONS

WIRE GA.	WIRE SIZE		PITCH		CLEAR OPENING	
	IN	MM	IN	MM	IN	MM
5 Ga.	.207	5.26	3/4	19.05	.543	13.79
7 Ga.	.177	4.50	5/8	15.88	.448	11.38
9 Ga.	.148	3.76	1/2	12.70	.352	8.94



HINGE CLIPS CAN BE ADDED TO ROD LINK BELTS FOR INCREASED STRENGTH.

Rod Link Sprockets for Straight Line Applications

ROD LINK SPROCKETS FOR STRAIGHT-LI

WIRE GAUGE	SPROCKET NUMBER	NO. OF TEETH	WEIGHT (METAL)		WEIGHT (PLASTIC)		PITCH DIAMETER		OUTSIDE DIAMETER	
			LBS.	KG	LBS.	KG	IN.	MM	IN.	MM
5 Ga.	5-12	12	1.68	0.762	-	-	2.899	73.63	3.159	80.24
7 Ga.	7-11	11	0.97	0.440	-	-	2.218	56.34	2.500	63.50
	7-13	13	1.22	0.553	-	-	2.612	66.34	2.875	73.03
	7-15	15	1.60	0.726	0.28	0.127	3.006	76.35	3.250	82.55
9 Ga.	9-11*	11	0.57	0.259	-	-	1.775	45.09	1.938	49.23
	9-14	14	0.90	0.408	-	-	2.247	57.07	2.500	63.50
	9-16	16	1.22	0.553	0.23	0.104	2.546	64.67	2.750	69.85
	9-19	19	1.82	0.826	-	-	3.038	77.17	3.250	82.55
	9-25	25	3.41	1.547	-	-	3.989	101.32	4.250	107.95

Metal Sprocket Details	• Available in steel or stainless steel • Available with 3/4" bore with 3/16" keyway or– 1" bore with 1/4" keyway, 1 set screw (*9-11 sprocket available only with 3/4" bore and 3/16" keyway)
Plastic Sprocket details	• Material is rigid urethane • Keyways are double the depth of standard metal sprockets • Minimum temperatures: -40˚F (-40˚C) • Maximum dry temperatures: 250˚F (121˚C) continuous; 300˚F (149˚C) intermittent • Maximum wet temperature: 120˚F (49˚C) continuous; 200˚F (93˚C) intermittent

NOTE: ALL SANI-GRID SPROCKETS ARE FURNISHED IN PAIRS

ROD LINK

Technical Specifications

ROD LINK CONSTANT RADIUS TURN CONVEYOR TECHNICAL SPECIFICATIONS	
AVAILABLE WIRE GAUGES	5 gauge (.207" or 5.26 mm) 7 gauge (.177" or 4.50 mm) 9 gauge (.148" or 3.76 mm)
INSIDE RADIUS	30" (762 mm)
INSIDE PITCH	5 gauge – .750" (19.05 mm) 7 gauge – .625" (15.88 mm) 9 gauge – .500" (12.70 mm)
AVAILABLE TURNS	Right or left hand turns

ROD LINK BELT WEIGHTS – CONSTANT RADIUS TURN CONVEYORS

OVERALL WIDTH	5 GAUGE				7 GAUGE				9 GAUGE			
	90˚ Turn		180˚ Turn		90˚ Turn		180˚ Turn		90˚ Turn		180˚ Turn	
	Lbs.	Kg	Lbs.	Kg	Lbs.	Kg	Lbs.	Kg	Lbs.	Kg	Lbs.	Kg
12	20.00	9.07	39.00	17.69	17.40	7.89	33.40	15.15	14.36	6.51	27.87	12.6
15	24.00	10.89	46.50	21.09	20.95	9.50	40.22	18.24	17.42	7.90	33.79	15.3
18	28.00	12.70	54.00	24.49	24.50	11.11	47.04	21.34	20.41	9.26	39.60	17.9
24	36.00	16.33	69.00	31.30	31.60	14.33	60.68	27.52	26.50	12.02	51.40	23.3
30	44.00	19.96	84.00	38.10	38.41	17.42	73.76	33.46	32.54	14.76	63.14	28.6
36	52.00	23.59	99.00	44.91	45.23	20.52	88.85	40.30	-	-	-	-

ROD LINK
CONSTANT RADIUS

ROD LINK

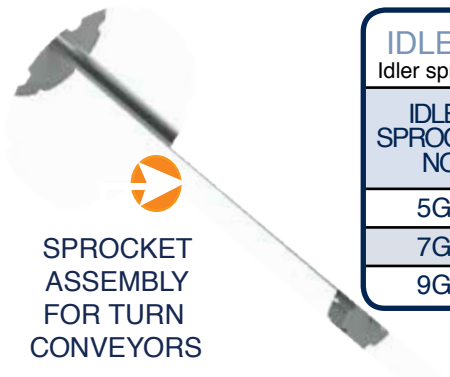
Sprockets for Rod Link Turn Conveyors

ROD LINK SPROCKETS FOR CONSTANT RADIUS TURN CONVEYORS

Note: Each Rod Link constant radius belt width requires a different outside sprocket.
Please specify wire gauge, sprocket number, and sprocket bore when ordering.

WIRE GAUGE	SPROCKET NUMBER	NO. OF TEETH	BELT WIDTH	WEIGHT (EACH)		PITCH DIAMETER		OUTSIDE DIAMETER	
				LBS.	KG	IN.	MM	IN.	MM
INSIDE SPROCKETS									
5 Ga.	5-TC-I	9	12” to 36” (305 to 914 mm)	1.11	0.503	2.210	56.13	2.471	62.76
7 Ga.	7-TC-I	11	12” to 36” (305 to 914 mm)	1.18	0.535	2.218	56.34	2.584	65.63
9 Ga.	9-TC-I	11	12” to 30” (305 to 762 mm)	0.52	0.236	1.780	45.21	2.068	52.53
INSIDE SPROCKETS									
5 Ga.	5-TC12	9	12” (305 mm)	1.82	0.826	2.986	75.84	3.247	82.47
	5-TC15	9	15” (381 mm)	2.05	0.930	3.202	81.33	3.463	87.96
	5-TC18	9	18” (457 mm)	2.30	1.043	3.419	86.84	3.680	93.47
	5-TC24	9	24” (610 mm)	2.86	1.297	3.852	97.84	4.113	104.47
	5-TC30	9	30” (762 mm)	3.48	1.579	4.284	108.81	4.545	115.44
	5-TC36	9	36” (914 mm)	4.00	1.814	4.718	119.84	4.979	126.47
7 Ga.	7-TC12	11	12” (305 mm)	2.35	1.066	3.031	76.99	3.324	84.43
	7-TC15	11	15” (381 mm)	2.79	1.266	3.250	82.55	3.543	89.99
	7-TC18	11	18” (457 mm)	3.27	1.483	3.472	88.19	3.765	95.63
	7-TC24	11	24” (610 mm)	4.14	1.878	3.908	99.26	4.201	106.71
	7-TC30	11	30” (762 mm)	5.13	2.327	4.348	110.44	4.641	117.88
	7-TC36	11	36” (914 mm)	6.20	2.812	4.785	121.54	5.078	128.98
9 Ga.	9-TC12	11	12” (305 mm)	1.05	0.476	2.435	61.85	2.677	68.00
	9-TC15	11	15” (381 mm)	1.28	0.581	2.609	66.27	2.851	72.42
	9-TC18	11	18” (457 mm)	1.48	0.671	2.785	70.74	3.027	76.89
	9-TC24	11	24” (610 mm)	1.87	0.848	3.136	79.65	3.378	85.80
	9-TC30	11	30” (762 mm)	2.53	1.148	3.487	88.57	3.729	94.72
MATERIALS			Available in steel or stainless steel						
BORE & KEYWAY CONFIGURATION			3/4” bore with 3/16” keyway– or – 1” bore with 1/4” keyway, 1 set screw						

NOTE: ALL ROD LINK SPROCKETS ARE FURNISHED IN PAIRS



SPROCKET ASSEMBLY FOR TURN CONVEYORS

IDLER SPROCKETS FOR ROD LINK TURN CONVEYORS

Idler sprockets reduce friction, eliminate belt wear on the inside radius, and improve service life.

IDLER SPROCKET NO.	WEIGHT (EACH)		BUSHED BORE		OUTSIDE DIAMETER		BELT EDGE TO BORE CENTER	
	LBS.	KG	IN.	MM	IN.	MM	IN.	MM
5G-I	4.00	1.814	0.750	19.05	4.938	125.43	2.382	60.50
7G-I	2.26	1.025	0.500	12.70	4.125	104.78	1.988	50.50
9G-I	1.24	0.562	0.500	12.70	3.375	85.73	1.578	40.08

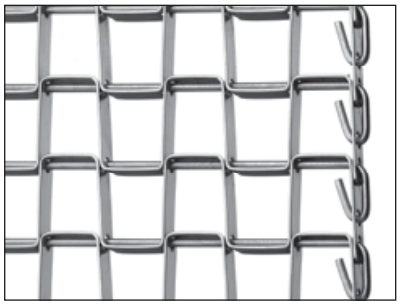
FLAT WIRE

HEADQUARTERS 514.886.5270
12985 Rue Brault, Mirabel Quebec, Canada J7J 0W2 UNIKINGCANADA.COM

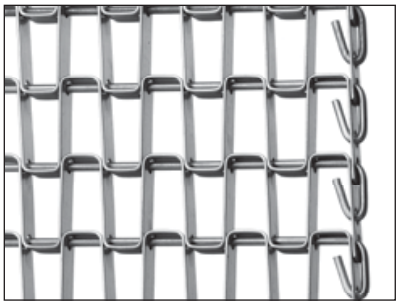
FLAT WIRE

Standard Duty Clinched Selvage Belting

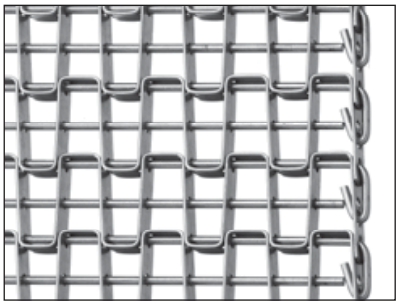
Standard duty clinched selvage flat wire belts are suitable for most general conveying applications.



S1 - 1” x 1” Mesh, Clinched Selvage



S3 - 1/2” x 1” Mesh, Clinched Selvage



S7 - 1/2” x 1” Mesh, Clinched Selvage

▶ CLINCHED SELVAGE BELT SPECIFICATIONS

DESIGN	MESH	WIDTH MIN	WIDTH MAX	MAX. TENSION (LBS. / FT. OF WIDTH)[1]	APPROX. WGT. (LBS./SQ. FT.)
S1	1” X 1”	4.5”	240”	480	1.85
S3	½” X 1”	4.125”	240”	660	2.20
S7	½” X 1 Modified	4.125”	240”	660	2.50
S8	¾” x 1”	4.5”	240”	550	2.00

STANDARD DUTY BELT DIMENSIONS:

- **Flat strip = 3/8” wide x .046” thick, round edge**
- **Connector rod = 11 gauge (.120” diameter)**
- **12 gauge (.105” diameter) rods are available for S1, S3 and S7 designations.**
- **S8 belting is stocked in 20” and 30” widths, galvanized only. Other widths and materials available by special order.**

(1) Maximum working tension per foot of belt width given for drum driven applications only.
See page 9 for sprocket drive information.

▶ MATERIALS AVAILABLE

- Low carbon galvanized steel
- C1050 high carbon steel
- T-304 stainless steel
- T-316 stainless steel

▶ FEATURES

- Mesh available in four (4) different sizes.
- Widths available ranging from 4.125” to 240”.
- Strong edge that reduces chances of snagging or catching on conveyor protrusions.
- Better edge wear on misaligned conveyor systems.
- Mechanically prevents belt from narrowing under heavy loads.

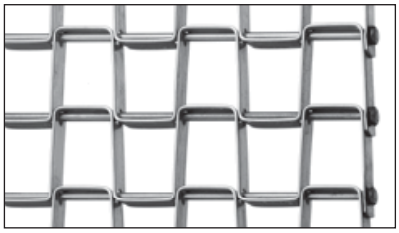
▶ SPROCKETS

- May only be placed in the outside drive openings for the 1” x 1” mesh. There is not enough clearance in the outside openings of a ½” x 1” mesh to be able to position a sprocket in those spaces.

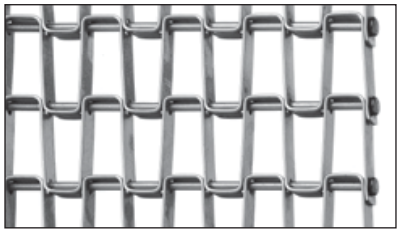
FLAT WIRE

Standard Duty Clinched Selvage Belting

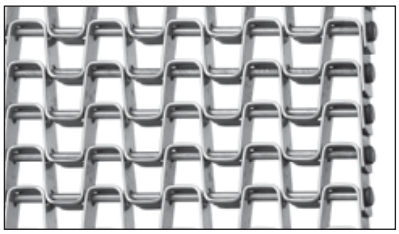
Welded selvage belts provide more flexibility than clinched selvage.



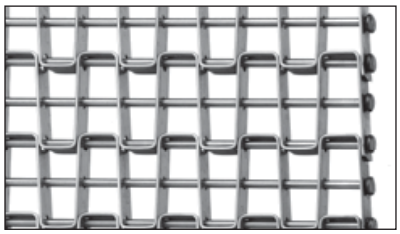
S2 - 1" x 1" Mesh, Welded Selvage



S4 - 1/2" x 1" Mesh, Welded Selvage



S5 - True 1/2" x 1/2" Mesh, Welded Selvage



S6 - 1/2" x 1" Modified Mesh, Welded Selvage

WELDED SELVAGE BELT SPECIFICATIONS

DESIGN	MESH	WIDTH MIN	WIDTH MAX	MAX. TENSION (LBS. / FT. OF WIDTH)[1]	APPROX. WGT. (LBS./SQ. FT.)
S2	1" X 1"	3"	240"	480	1.85
S4	½" X 1"	3.25"	240"	660	2.20
S5	TRUE ½" X ½"	3"	240"	750	3.25
S6	½" x 1" MODIFIED	3.25"	240"	660	2.50

STANDARD DUTY BELT DIMENSIONS:

- **Flat strip = 3/8" wide x .046" thick, round edge**
- **Connector rod = 11 gauge (.120" diameter)**
- **12 gauge (.105" diameter) rods are available for all designations.**

(1) Maximum working tension per foot of belt width given for drum driven applications only.

See page 9 for sprocket drive information.

FEATURES

- Mesh available in four (4) different sizes.
- Widths available ranging from 3" to 240".
- **True** ½" x ½" (S5) belts with slotted holes approved for meat and poultry processing available.
- Belts wider than 24" feature internal welds to prevent belt narrowing under heavy loads.
  See page 10 for internal welds information.

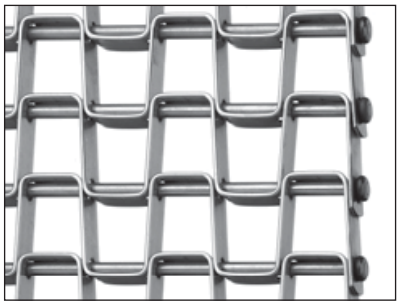
SPROCKETS

- May be placed in the first opening on either side of the belt.

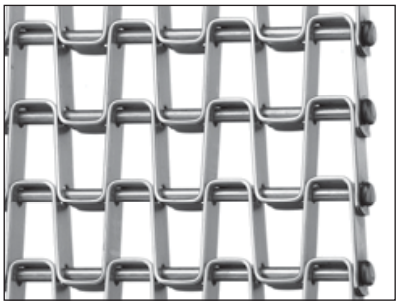
FLAT WIRE

Heavy Duty Welded Selvage Belting

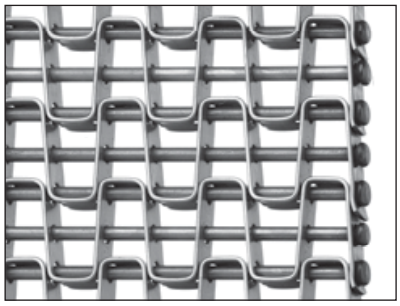
Heavy duty belts are approximately 2.5 times stronger than standard duty belts.



H1 - 1” x 1” Mesh, Welded Selvage



H2 - 1/2” x 1” Mesh, Welded Selvage



H3 - 1/2” x 1” Modified Mesh, Welded Selvage

WELDED SELVAGE BELT SPECIFICATIONS

DESIGN	MESH	WIDTH MIN	WIDTH MAX	MAX. TENSION (LBS. / FT. OF WIDTH)[1]	APPROX. WGT. (LBS./SQ. FT.)
H1	1” X 1”	3”	192”	1350	3.50
H2	½” X 1”	4”	192”	1750	3.90
H3	½” X 1 Modified	6”	192”	1750	4.85
NNH3	½” X 1 Modified	6”	192”	2000	5.00

HEAVY DUTY BELT DIMENSIONS:

· Flat strip = 1/2” wide x .062” thick, round edge **· Connector rod = 6 gauge (.192” diameter), high tensile strength**

(1) Maximum working tension per foot of belt width given for drum driven applications only.
See page 9 for sprocket drive information.

MATERIALS AVAILABLE

- Low carbon galvanized steel
- C1050 high carbon steel
- T-304 stainless steel
- T-316 stainless steel
- T-201 stainless steel

FEATURES

- Mesh available in three (3) different sizes.
- Widths available ranging from 3” to 192”.
- Fabricated using a round edge flat strip.
- Belts wider than 24” are supplied with internal welds.
- Belts 24” and under can be supplied with internal welds by request at no additional cost.

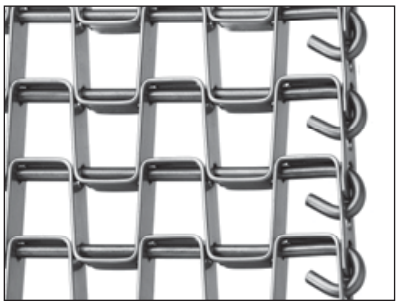
SPROCKETS

- May be placed in the first opening on either side of the belt.

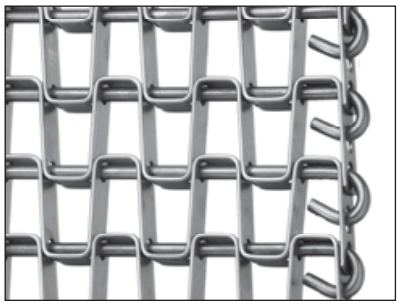
FLAT WIRE

Heavy Duty Welded Selvage Belting

Heavy duty clinched selvage belts feature a better wearing edge surface for misaligned conveyor systems.



H4 - 1” x 1” Mesh, Clinched Selvage



H5 - 1/2” x 1” Mesh, Clinched Selvage

CLINCHED SELVAGE BELT SPECIFICATIONS

DESIGN	MESH	WIDTH MIN	WIDTH MAX	MAX. TENSION (LBS. / FT. OF WIDTH)[1]	APPROX. WGT. (LBS./SQ. FT.)
H4	1” X 1”	10”	192”	1350	3.55
H5	½” X 1”	10”	192”	1750	3.95

HEAVY DUTY BELT DIMENSIONS:

· Flat strip = 1/2” wide x .062” thick, round edge **· Connector rod = 6 gauge (.192” diameter), high tensile strength**

(1) Maximum working tension per foot of belt width given for drum driven applications only.
See page 9 for sprocket drive information.

FEATURES

- Mesh available in two (2) different sizes.
- Widths available ranging from 10” to 192”.
- Mechanically prevents belt from narrowing under heavy loads.
- Just as flexible as welded selvage belts.

SPROCKETS

- Cannot be placed in the first drive opening on either edge of the belt at either mesh size.

FLAT WIRE

Sprockets

T-SERIES

S-SERIES

H-SERIES

▶ T-SERIES MACHINED SPROCKETS - for TRUE ½" x ½" BELTS

Used with True 1/2" x 1/2" Belts, T-Series sprockets feature two full rows of precision machined teeth for uniform tooth engagement on every pitch of the belt. Compared with unmachined, skip tooth, or single row sprockets, T-Series sprockets will provide longer belt and sprocket life.

CAST IRON / STEEL SPROCKETS

NOMINAL DIAMETER	NUMBER OF TEETH	SPROCKET NUMBER	MATERIAL	PITCH DIA.(IN)[1]	FLANGE WIDTH(IN)	OVERALL WIDTH(IN)	HUB DIA.(IN)	STOCK BORE[2]	BORE (IN) MIN	BORE (IN) MAX	APPROX. WT. (LBS)
2	12 x 2	12T	Steel	2.062	2	2	None	MPB	0.5	1.25	1.25
2	12 x 2	12TP	Plastic	2.062	2	2	None	MPB	0.5	1	0.20
2	12 x 2	12TS	Stainless	2.062	2	2	None	MPB	0.5	1.25	1.25
4	22 x 2	22T	Steel	3.78	2	2	None	MPB	0.75	2.25	5.00
4	22 x 2	22TP	Plastic	3.78	2	2	None	MPB	0.75	2.25	0.60
4	22 x 2	22TS	Stainless	3.78	2	2	None	MPB	0.75	2.25	5.00
6	38 x 2	38T	Cast Iron	6.53	2	2	3 1/2	MPB	0.75	2.9375	12.75
6	38 x 2	38TP	Plastic	6.53	2	2	None	MPB	0.75	3.75	2.00
6	38 x 2	38TS	Stainless	6.53	2	2	None	MPB	1	3.75	17.00
8	46 x 2	46T	Cast Iron	7.91	2	2	4 1/4	MPB	1	3.5	16.50
8	46 x 2	46TP	Plastic	7.91	2	2	None	MPB	1	4.5	3.00
10	62 x 2	62T	Cast Iron	10.68	2	2	4 1/2	MPB	1.1875	3.5	20.00

[1]*Add 0.375 inches to the Pitch Diameter to get the Overall sprocket Diameter. Subtract 0.375 inches from the Pitch Diameter to get the Flange Diameter.*
[2]*Stock Bore Notations: NB = No Bore, CB = Core Bore, MPB = Minimum Plain Bore.*

▶ S-SERIES SPROCKETS - for STANDARD DUTY BELTS

NOMINAL DIAMETER	NUMBER OF TEETH	SPROCKET NUMBER	MATERIAL	PITCH DIA.(IN)[1]	FLANGE WIDTH(IN)	OVERALL WIDTH(IN)	HUB DIA.(IN)	STOCK BORE[2]	BORE (IN) MIN	BORE (IN) MAX	APPROX. WT. (LBS)
4	13	13S	Cast Iron	4.35	1 1/2	2 1/8	2 1/2	NB	0.75	2	5.00
4	13	13SP	Plastic	4.35	1 3/4	1 3/4	None	MPB	0.75	2.5	0.75
4	13	13SMT	Steel	4.35	1 3/4	1 3/4	None	MPB	0.75	2.5	6.50
4	13	13SS	Stainless	4.35	1 3/4	1 3/4	MPB	MPB	0.75	2.5	6.50
6	18	18S	Cast Iron	6.16	1 1/2	2 1/4	3 1/2	NB	0.75	3.5 [3]	10.50
6	18	18SP	Plastic	6.16	2	2	None	MBP	0.75	3.5	1.75
6	18	18S-FL	Steel	6.16	3/8	1 7/8	4 1/4	MPB	1	3.5 [3]	9.50
6	18	18SMT	Steel	6.16	1 3/4	1 3/4	None	MPB	1	4	12.50
6	18	18SS	Stainless	6.16	1 3/4	1 3/4	None	MPB	1	4	12.50
8	23	23S	Cast Iron	7.87	1 1/2	2 3/16	4	NB	0.75	4.5	13.50
8	23	23SP	Plastic	7.87	1 3/8	2	5	MPB	0.75	3	2.50
8	23	23S-FL	Steel	7.87	3/8	1 7/8	4 1/4	MPB	1	4.5 [3]	11.50
8	24	23SS	Stainless	7.87	1 1/2	2 1/8	4	NB	0.75	3.5	14.00
10	31	31S	Cast Iron	10.65	1 1/2	2 1/4	4 1/2	CB	1.25	3	18.50
10	31	31SP	Plastic	10.65	1 3/8	2	6	MPB	0.75	4.5	4.25
10	31	31S-FL	Steel	10.65	3/8	1 7/8	4 1/4	MPB	1	4.5 [3]	15.50
12	37	37S	Cast Iron	12.68	1 1/2	2 1/4	5	CB	1.4375	4.5 [3]	24.50

[1]*Add 0.375 inches to the Pitch Diameter to get the Overall sprocket Diameter. Subtract 0.375 inches from the Pitch Diameter to get the Flange Diameter.*
[2]*Stock Bore Notations: NB = No Bore, CB = Core Bore, MPB = Minimum Plain Bore.* [3]*Will require large hub version for large bores.*
Teeth can be machined on most sprockets to fit modified mesh belts.

FLAT WIRE

Sprockets

▶ H-SERIES SPROCKETS - for HEAVY DUTY BELTS

CAST IRON SPROCKETS

NOMINAL DIAMETER	NUMBER OF TEETH	SPROCKET NUMBER	MATERIAL	PITCH DIA.(IN)[1]	FLANGE WIDTH(IN)	OVERALL WIDTH(IN)	HUB DIA.(IN)	STOCK BORE[2]	BORE (IN) MIN	BORE (IN) MAX	APPROX. WT. (LBS)
4	13	13HDA	Cast Iron	4.35	1 15/16	1 15/16	None	NB	0.75	2.5	6.00
4	13	13HP	Plastic	4.35	1 3/4	1 3/4	None	MPB	0.75	2.5	0.75
4	13	13HDMT	Steel	4.35	1 3/4	1 3/4	None	MPB	0.75	2.5	6.25
4	13	13HDS	Stainless	4.35	1 3/4	1 3/4	None	MPB	0.75	2.5	6.25
6	18	18HD	Cast Iron	6.19	1 1/2	2 1/4	3 1/2	NB	0.75	3.5 [3]	10.50
6	18	18HP	Plastic	6.19	2	2	None	MPB	0.75	3.5	1.75
6	18	18HD-FL	Steel	6.19	3/8	1 7/8	4 1/4	MPB	1	3.5 [3]	9.50
6	18	18HDMT	Steel	6.19	1 3/4	1 3/4	None	MPB	1	4	12.50
6	18	18HDS	Stainless	6.19	1 3/4	1 3/4	None	MPB	1	4	12.50
8	23	23HD	Cast Iron	7.91	1 1/2	2 1/4	3 1/2	NB	0.75	4.5 [3]	11.75
8	23	23HP	Plastic	7.91	1 3/8	2	5	MPB	0.75	3	2.50
8	23	23HD-FL	Steel	7.91	3/8	1 7/8	4 1/4	MPB	1	4.5 [3]	11.25
8	23	23HDS	Stainless	7.91	1 1/2	2	3 1/2	NB	1	3	12.50
10	31	31HD	Cast Iron	10.68	1 1/2	2 1/4	5 1/2	NB/CB	1	4	24.00
10	31	31HP	Plastic	10.68	1 3/8	2	6	MPB	1	4	4.33
10	31	31HD-FL	Steel	10.68	3/8	1 7/8	4 1/4	MPB	1.25	4.5 [3]	15.25
12	37	37HD	Cast Iron	12.72	1 1/2	2 1/4	5 1/2	CB	1.5	3.75	28.50
12	37	37HD-FL	Steel	12.72	3/8	1 7/8	4 1/4	MPB	1.4375	4.5 [3]	19.50

[1]Add 0.500 inches to the Pitch Diameter to get the Overall sprocket Diameter. Subtract 0.500 inches from the Pitch Diameter to get the Flange Diameter.
[2]Stock Bore Notations: NB = No Bore, CB = Core Bore, MPB = Minimum Plain Bore. *[3]Will require large hub version for large bores.*
Teeth can be machined on most sprockets to fit modified mesh belts.

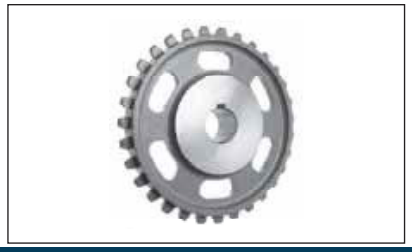
▶ SPROCKET MATERIAL

- **Cast Iron Sprockets**
  Cast Iron is the most common and economical material for flat wire belt sprockets, they are accurately cast from high grade iron. Other diameters can be provided on special order

- **Plastic Sprockets**
  All plastic sprockets are fully machined and meet USDA and FDA guidelines for food contact.
  - UHMW Polyethylene can withstand continuous temperatures up to 180 degrees F. Stock sprockets are UHMW.
  - High Temp UHMW Polyethylene can withstand continuous temperatures up to 220 degrees F.
  - Nylon sprockets provide 2-3 times the strength of UHMW and can withstand higher temperatures.

- **Steel Sprockets**
  - FL sprockets have no flange and a hub sticking out one side to allow debris to fall through the belt.
  - MT sprockets are made either from a solid piece of steel or have a flange welded at the base of the teeth, for belt support. Flangeless and -MT sprockets have their teeth hardened to a Rockwell 50-55 on the C Scale. All other steel sprockets can have their teeth hardened on request.

- **Stainless Steel Sprockets**
  Stainless sprockets are either investment cast from 18-8 stainless or fully machined from T-303 SS or T-316 SS. Fully machined flangeless (-FL) or machined tooth (-MT) sprockets made from various stainless steels are also available.


EYELINK

Eye Link Belts

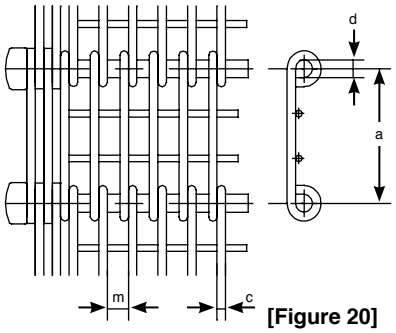
Technical Specifications	Units	
Available Materials		304 & 316 stainless steel, carbon, other materials available upon request
Longitudinal Pitch Lengths	in. (mm)	1.00 (25.4), 1.18 (30.0), 1.97 (50.0), 2.00 (50.8), 2.95 (75.0)
Eye Link Wire Diameters		0.08 (2.0), 0.10 (2.5), 0.12 (3.0), 0.14 (3.5)
Cross Rod Diameters		0.16 (4.0), 0.20 (5.0), 0.28 (7.0), 0.32 (8.0)
Available Widths		2.0–244.0 (50.8–6197.6)
Conveying Surface		Full belt width minus 0.32 (8.1)
Weight		Dependent upon construction—contact Ashworth Engineering
Maximum Allowable Tension		Dependent upon construction—contact Ashworth Engineering
Maximum Temperature (Material Dependent)	°F (°C)	Up to 752 (400)
Method of Drive		Positively driven

Mesh Designations

Mesh configurations for Eye-Link belts are designated as in the following example (Figure 20):

a x m/c–d
50 x 10/2.5–5

Where:
50 = Belt's longitudinal pitch in mm
10 = Distance between eye links in mm
2.5 = Eye link wire diameter in mm
5 = Cross rod diameter in mm



[Figure 20]

Pitch (a)	Belt Description (m = Mesh Gap)	Eye Link Dim. (c) mm (in.)	Rod Dia. (d) mm (in.)
25.4 (1.0)	25.4 x m / 2.0–5	2.0 (0.080)	5 (0.196)
30 (1.18)	30 x m / 2.0–4	2.0 (0.080)	4 (0.158)
50 (1.97)	50 x m / 2.0–5	2.0 (0.080)	5 (0.196)
	50 x m / 2.5–5	2.5 (0.098)	5 (0.196)
	50 x m / 2.0–7	2.0 (0.080)	7 (0.276)
	50 x m / 2.5–7	2.5 (0.098)	7 (0.276)
	50 x m / 3.0–7	3.0 (0.120)	7 (0.276)
	50 x m / 3.5–7	3.5 (0.135)	7 (0.276)
	50 x m / 2.5–8	2.5 (0.098)	8 (0.307)
50.8 (2.0)	50.8 x m / 2.0–8	2.0 (0.080)	8 (0.307)
	50.8 x m / 2.5–8	2.5 (0.098)	8 (0.307)
	50.8 x m / 3.0–8	3.0 (0.120)	8 (0.307)
75 (2.95)	75 x m / 2.5–5	2.5 (0.098)	5 (0.196)
	75 x m / 2.5–7	2.5 (0.098)	7 (0.276)

Mesh Gaps

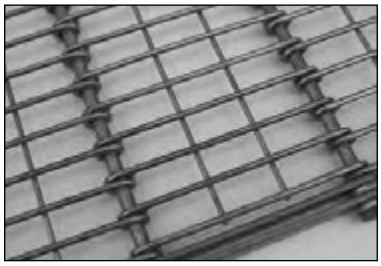
Wire Diameter	Min. Mesh Gap	Max. Recommended Mesh Gap
2.0 mm (0.08 in)	2.3 mm (0.10 in)	26 mm (1.02 in)
2.5 mm (0.10 in)	2.8 mm (0.11 in)	26 mm (1.02 in)
3.0 mm (0.12 in)	3.3 mm (0.13 in)	26 mm (1.02 in)
3.5 mm (0.14 in)	3.8 mm (0.15 in)	26 mm (1.02 in)

EYELINK

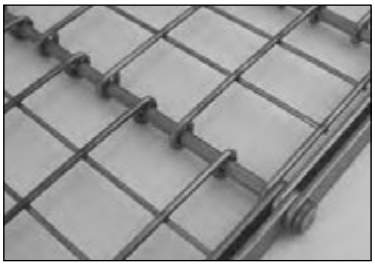
Straight Running Belts: Positive Drive

Available Options

Designs
Eye-Link belts are available in either EU (standard) or US designs, the construction of which is based on the placement of the eye links throughout the belt. In the US design, the eye-link ends are equally spaced apart; whereas in the EU design, the eye links are placed so the ends are in direct contact with one another. EU design belts display a more closed grid pattern, while the US design is more open, as in the following photographs.

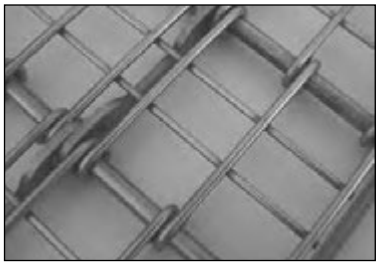


Eye-Link EU design

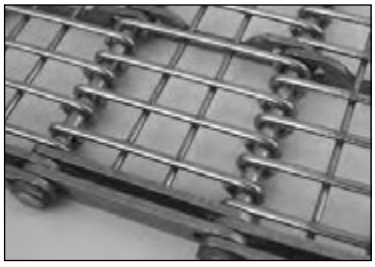


Eye-Link US design

Eye-Link Plus
Eye-Link Plus belts are constructed with specially designed internal bar links that have slotted holes and are cut to allow the belt's cross wires to pass unimpeded across the width of the module. This design adds strength to the belt while enabling excellent cleanability. Eye-Link Plus belts are only available in 50 mm pitch, but can be manufactured in either EU or US eye link patterns as shown in the accompanying photographs.



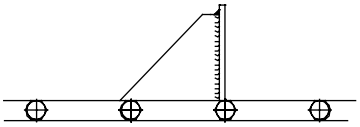
Eye-Link EU-Plus design



Eye-Link US-Plus design

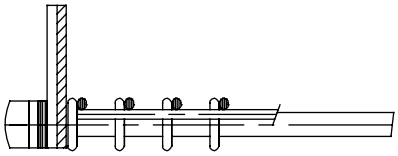
Loose Chain & Chain Edges
All Eye-Link belts can be fitted with either loose chain made from bar links or with chain edges to suit customer specifications.

Cross Flights
Cross flights (Figure 21) prevent product from sliding or rolling down the belt when operated on an incline/decline. Typical construction includes a support plate along each belt edge, with a flat bar welded onto the edge of the plate, almost extending across the full width of the belt.



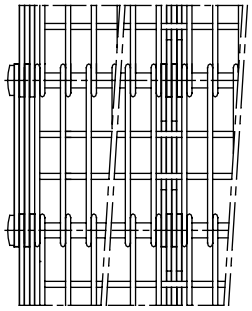
[Figure 21]

Side Plates
Side plates (Figure 22) prevent product from falling off the edges of the belt. Standard construction is a plate extending 41 mm (1.61"), 51 mm (2.01"), or 61 mm (2.4") above the belt's surface. Non-standard side plates are possible from 10 mm (0.39") up to 200 mm (7.87") and are manufactured per order. Side plates replace one bar link at the belt edge.



[Figure 22]

Bar Links
Bar links (Figure 23) provide tension carrying capacity. They also prevent excessive cross rod and module deflection. Additional bar links may be added to strengthen the belt. The belt should be supported under the bar links only. For Eye-Link Plus, the inner bar links are cut out in the middle to provide room for a continuous module. All bar links are fitted with slotted holes for easy cleaning.



[Figure 23]

EYELINK

Eye Link Belts - Sprockets

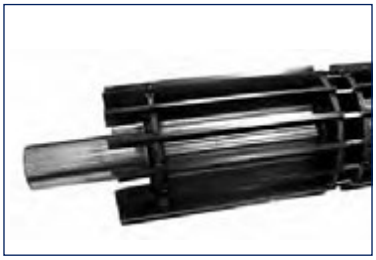
Sprockets

Eye-Link belts are positively driven with sprockets situated across the width of the belt. Sprockets should be positioned at a 15 mm (0.59") offset next to the bar link rows at both sides. For all Eye-Link belts, 8 or 12 tooth sprockets are standard. Sprockets can be produced from carbon steel, stainless steel and UHMWPE. The number of teeth can vary from 8 to 30 teeth.

For wide belts, the use of sprocketed drums or pulleys is recommended based on the maximum allowable deflection of the drum. For use of Eye-Link belts in environments where formation of ice is possible, a special ice-free sprocket is available to prevent ice build-up. For wide belts in an ice-containing environment, a cage drum is typically used.

Pitch	No. of Teeth	Pitch Dia.
25.4 mm	8	65.33 mm (2.57 inch)
	12	97.09 mm (3.82 inch)
30 mm	8	78.39 mm (3.09 inch)
	12	115.91 mm (4.56 inch)
50 mm	8	130.66 mm (5.14 inch)
	12	193.19 mm (7.61 inch)
50.8 mm	8	132.75 mm (5.23 inch)
	12	196.28 mm (7.73 inch)
75 mm	8	195.98 mm (7.72 inch)
	12	289.78 mm (11.41 inch)

Laser Cut Disk Pulley



Cage Drums

Tube Drum

Wear Strip Material & Placement

The recommended belt supports for Eye-Link belts operated at temperatures from -40°F (-40°C) to 140°F (60°C) are UHMWPE strips placed underneath the bar links. The strips should be at least 0.59" (15 mm) wider than the total width of one bar link packet.

For temperatures over 140°F (60°C), the recommended material is Inoxyda (glide bronze) for non-food applications and stainless steel for food applications.

System Requirements

- Eye-Link belts do not normally need a tension unit. Preferably, there is a catenary sag over the return rollers.
- Reverse bends should be avoided, as this will damage the eye links.
- Heavy products must not fall on the belt as this could damage the eye links and cross wires.
- The drive and return drum should be placed 0.08" (2 mm) higher then the support strips.
- All drums and rollers must be parallel to each other.
- The support bed must be horizontal to ensure correct tracking of the belt.
- The maximum recommended belt speed is 60 ft/min. (20 m/min) depending on belt width, load, and system layout.

BALANCED WEAVE

HEADQUARTERS 514.886.5270
12985 Rue Brault, Mirabel Quebec, Canada J7J 0W2 UNIKINGCANADA.COM

BALANCED WEAVE

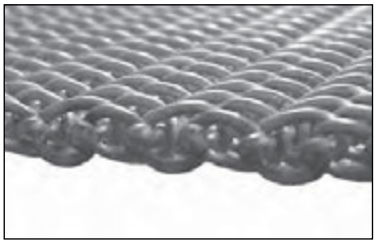
Cleatrac® Belt & Sprocket System

Cleatrac® Belt & Sprocket System

Technical Specifications	Units	
Available Materials		Stainless steel, carbon and galvanized steels, high temperature alloys
Available Widths	in. (mm)	1.50–168.00 (38.1–4267.2)
Conveying Surface		Full belt width
Thickness (Mesh Dependent)		0.16–0.35 (4.1–8.9)
Lateral Pitch (Mesh Dependent)		0.20–0.67 (5.1–17.0)
Weight (Mesh Dependent)	lb/ft² (kg/m²)	0.67–1.58 (3.3–7.7)
Open Area (Mesh Dependent)		34–74%
Working Strength per Unit of Width	lb/ft (kg/m)	Up to 1100 (1640)
Maximum Temperature	°F (°C)	400 (204)
Minimum Temperature		-40 (-40)
Construction		Balanced Weave
Method of Drive		Positively driven by a matching minimum diameter drive system consisting of sprockets, filler rolls and support bearings

Features

Welded Edge



Cleatrac® comes standard with welded edges (as shown above).

Fatigue Resistant Cleatrac

Fatigue Resistant Cleatrac (CTBFR) is Ashworth's newest offering in the Cleatrac Belt & Sprocket System family. Fatigue Resistant Cleatrac has up to 2.5 times the working strength of our normal Cleatrac belts, and can be used in applications requiring longer conveyor lengths and increased belt strength. Fatigue Resistant Cleatrac can improve belt life by reducing belt stretch and failure. Its suited for both freezer tunnel and fryer applications. Fatigue Resistant Cleatrac is only available in stainless steel.

Nose Roll Sizing

The minimum recommended nose roll diameter for the Cleatrac® belts is 0.63" (15.9 mm) for the CTB 30, 42, 48, and 60 mesh belts. Generally, use of nose rolls is not recommended with CTB 18 mesh belts.

Exception: If the application has a conveyor end-to-end distance of 10' (3 m) or less and the belt fits loosely around the conveyor, the minimum nose roll diameter may be decreased as follows:

Mesh	Minimum Diameter
CTB 18-16	1.00" (25.4 mm)
CTB 30-24	0.50" (12.7 mm)
CTB 42-36	0.38" (9.5 mm)
CTB 48-48	0.25" (6.4 mm)
CTB 60-48	0.25" (6.4 mm)
CTB 60-60	0.20" (5.1 mm)

BALANCED WEAVE

Straight Running Belts: Positive Driven

Cleatrac® Meshes

Mesh*	Thickness in. (mm)		Lateral Pitch in. (mm)		Weight lb/ft² (kg/m²)		Opening Size (approx.) in. (mm)		Working Strength per Unit of Belt lb/ft (kg/m)	
CTB 18-16-16	0.30	(7.6)	0.67	(17.0)	0.67	(3.3)	0.60 x 0.69	(15.2 x 17.5)	100	(149)
CTBFR 18-16-16	0.30	(7.6)	0.67	(17.0)	0.67	(3.3)	0.60 x 0.69	(15.2 x 17.5)	250	(370)
CTB 18-16-14	0.35	(8.9)	0.67	(17.0)	1.13	(5.5)	0.59 x 0.67	(15.0 x 17.0)	250	(372)
CTB 30-24-17	0.29	(7.4)	0.40	(10.2)	0.88	(4.3)	0.35 x 0.45	(8.9 x 11.4)	200	(298)
CTBFR 30-24-17	0.29	(7.4)	0.40	(10.2)	0.88	(4.3)	0.35 x 0.45	(8.9 x 11.4)	500	(745)
CTB 30-24-16	0.26	(6.6)	0.40	(10.2)	1.19	(5.8)	0.34 x 0.44	(8.6 x 11.2)	300	(446)
CTBFR 30-24-16	0.26	(6.6)	0.40	(10.2)	1.19	(5.8)	0.34 x 0.44	(8.6 x 11.2)	750	(1100)
CTB 42-36-17	0.24	(6.1)	0.29	(7.4)	1.35	(6.6)	0.23 x 0.28	(5.8 x 7.1)	325	(484)
CTBFR 42-36-17	0.24	(6.1)	0.29	(7.4)	1.35	(6.6)	0.23 x 0.28	(5.8 x 7.1)	810	(1200)
CTB 42-36-18	0.24	(6.1)	0.29	(7.4)	1.03	(5.0)	0.24 x 0.29	(6.1 x 7.4)	240	(357)
CTBFR 42-36-16	0.25	(6.2)	0.29	(7.4)	1.79	(8.8)	0.24 x 0.29	(6.1 x 7.4)	930	(1400)
CTB 48-48-17	0.24	(6.1)	0.25	(6.4)	1.57	(7.7)	0.20 x 0.20	(5.1 x 5.1)	450	(670)
CTBFR 48-48-17	0.24	(6.1)	0.25	(6.4)	1.57	(7.7)	0.20 x 0.20	(5.1 x 5.1)	1100	(1640)
CTB 60-48-1820	0.16	(4.1)	0.20	(5.1)	0.93	(4.5)	0.16 x 0.21	(4.1 x 5.3)	120	(179)
CTB 60-48-18	0.21	(5.3)	0.20	(5.1)	1.54	(7.5)	0.15 x 0.20	(3.8 x 5.1)	350	(521)
CTB 60-60-18	0.22	(5.6)	0.20	(5.1)	1.58	(7.7)	0.15 x 0.15	(3.8 x 3.8)	350	(521)

Stock belt length is 25 ft (7.62 m), widths vary per mesh. Contact Ashworth for details.

System Requirements

Application Notes

- UHMWPE material type components have a 150° F (66°C) maximum operating temperature.
- Molded Acetal material type components have a 180° F (82°C) maximum operating temperature.

Tunnel Freezers

Use with caution as ice and snow accumulates in mesh openings or on the drive components, prohibiting sprocket teeth engagement. Install a rotary brush, or similar cleaning method, near sprocket locations to minimize debris.

Soft Dough Products

Use with caution as debris may accumulate in mesh openings or on the drive components, prohibiting sprocket teeth engagement. Install a rotary brush, or similar cleaning method, near sprocket locations to minimize debris.

Elevated Temperatures

Thermal expansion of the belt width may adversely affect sprocket engagement with the belt openings. If this is evident when belt reaches application temperature, lock only the middle third of the sprockets onto the shaft so the outer sprockets can "float" along the shaft, allowing for thermal expansion and contraction of the belt. Keep in mind that the shaft will have to be kept clean to allow sprockets to "float." For flour-based products in elevated temperatures, arrange the drive configuration such that a shield prevents debris from accumulating on the shaft and drive components.

Multiple Belts Driven by Common Drive Shaft

When two or more belts are driven on a common drive shaft and product alignment is critical, Ashworth Bros., Inc., must be notified at time the purchase order is generated so that the belts will be matched. Slight differences in belt pitch can affect the alignment of product over longer conveyor runs (typically 10ft (3m) or greater). Replacement belts for these applications require that the order reference previous purchase orders.

BALANCED WEAVE

Cleatrac® Belt & Sprocket System

Cleatrac® Belt & Sprocket System

Cleatrac® Sprockets

Sprocket No.	No. of Rows of Teeth	Flat-to-Flat in. (mm)	Sprocket Width in. (mm)	Min. Bore in. (mm)	Max. Bore in. (mm)	Stock Bore (UHMWPE) in. (mm)	Note
CTS 18-8	8	1.51 (38.4)	2.00 (50.8)	0.50 (12.7)	1.00 (25.4)	0.75 (19.1)	U
CTS 18-12	12	2.50 (63.5)	2.00 (50.8)	0.63 (16.0)	1.75 (44.5)	1.00 (25.4)	U
CTS 18-14	14	2.95 (74.9)	2.00 (50.8)	0.50 (12.7)	1.94 (49.3)	N/S	U/S
CTS 18-18	18	3.95 (100.3)	2.00 (50.8)	0.50 (12.7)	2.75 (69.9)	N/S	U/S
CTS 30-8*	8	0.94 (23.9)	1.20 (30.5)	0.50 (12.7)	0.50 (12.7)	N/S	U/S
CTS 30-12 ▲	12	1.60 (40.6)	1.20 (30.5)	0.75 (19.1)	1.00 (25.4)	0.75 (19.1)	U/S
CTS 30-14	14	1.91 (48.5)	1.50 (38.1)	0.50 (12.7)	1.25 (31.8)	N/S	U/S
CTS 30-16	16	2.23 (56.6)	1.20 (30.5)	0.50 (12.7)	1.38 (35.1)	N/S	U/S
CTS 30-18	18	2.58 (65.5)	1.20 (30.5)	0.50 (12.7)	1.69 (42.9)	N/S	U/S
CTS 30-20 ▲	20	2.89 (73.4)	1.20 (30.5)	0.75 (19.1)	1.88 (47.8)	1.00 (25.4)	S
CTS 30-24	24	3.52 (89.4)	1.20 (30.5)	0.50 (12.7)	2.25 (57.2)	N/S	U/S
CTS 30-26 ▲	26	3.84 (97.5)	1.20 (30.5)	0.75 (19.1)	2.50 (63.5)	N/S	S
CTS 42-12*	12	1.01 (25.7)	1.14 (29.0)	0.50 (12.7)	0.50 (12.7)	0.50 (12.7)	U
CTS 42-20	20	1.88 (47.8)	1.14 (29.0)	0.75 (19.1)	1.25 (31.8)	0.75 (19.1)	U
CTS 42-24 ▲	24	2.30 (58.4)	1.14 (29.0)	0.63 (16.0)	1.50 (38.1)	0.75 (19.1)	U/S
CTS 42-30	30	2.93 (74.4)	1.14 (29.0)	0.50 (12.7)	1.88 (47.8)	N/S	U/S
CTS 42-32	32	3.15 (80.0)	1.14 (29.0)	0.50 (12.7)	2.13 (54.1)	1.00 (25.4)	U
CTS 42-40	40	4.00 (101.6)	1.14 (29.0)	0.50 (12.7)	2.50 (63.5)	N/S	U/S
CTS 42-56	56	5.70 (144.8)	1.14 (29.0)	0.50 (12.7)	4.00 (101.6)	N/S	U/S
CTS 48-20	20	1.34 (34.0)	1.50 (38.1)	0.50 (12.7)	0.63 (16.0)	N/S	U/S
CTS 48-24	24	1.66 (42.2)	1.50 (38.1)	0.75 (19.1)	1.00 (25.4)	N/S	U/S
CTS 48-32 ▲	32	2.31 (58.7)	1.50 (38.1)	0.94 (23.9)	1.50 (38.1)	0.75 (19.1)	U/S
CTS 60-8**	8	0.43 (10.9)	1.00 (25.4)	0.20 (5.1)	0.25 (6.4)	0.20 (5.1)	U
CTS 60-12	12	0.77 (19.6)	1.00 (25.4)	0.50 (12.7)	0.50 (12.7)	0.50 (12.7)	U
CTS 60-24 ▲	24	1.74 (44.2)	1.00 (25.4)	0.75 (19.1)	1.00 (25.4)	0.75 (19.1)	U/S
CTS 60-42 ▲	42	3.16 (80.3)	1.00 (25.4)	1.00 (25.4)	2.13 (54.1)	1.00 (25.4)	U/S
CTS 60-54 ▲	54	4.09 (103.9)	1.00 (25.4)	1.00 (25.4)	2.75 (69.9)	1.00 (25.4)	U
CTS 60-82	82	6.32 (160.5)	1.00 (25.4)	1.00 (25.4)	4.50 (114.3)	N/S	U
CTS 6060-28 ▲	28	1.57 (39.9)	1.00 (25.4)	0.50 (12.7)	0.75 (19.1)	0.75 (19.1)	U/S
CTS 6060-40 ▲	40	2.34 (59.4)	1.40 (35.6)	0.75 (19.1)	1.63 (41.4)	1.00 (25.4)	U/S
CTS 6060-92	92	5.64 (143.3)	1.40 (35.6)	0.50 (12.7)	4.00 (101.6)	N/S	U/S

* Non-Standard keyway (1/8 in² [3 mm²]) used on 30-8, 42-12 sprockets with 5/8 in. (15.88 mm) bore.
** This is a non-driving component and is not available with a keyway.
N/S denotes sprockets that are not kept in stock.
U denotes UHMWPE.
S denotes stainless steel.
▲ Available in cast T303 stainless steel with a 11/16 in. dia. pilot bore.

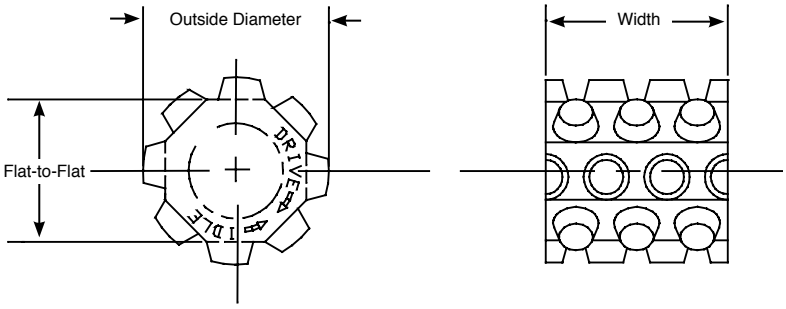
BALANCED WEAVE

Straight Running Belts: Positive Driven

Sprockets

Cleatrac® Sprockets (CTS)
Minimum diameter sprockets are designed to positively drive mesh. Positive drive provides true belt travel, and minimum terminal diameters allow close transfer of product onto and off the belt.

- All sprockets can be manufactured in UHMWPE and machined T303 stainless. Sprockets marked with a ▲ are available in cast T303 stainless steel.
- Molded acetal sprockets are available as CTS18-12, minimum bore diameter 15/16" and maximum bore of 1-1/8" and CTS60-24, minimum bore diameter of 3/4" and maximum bore of 1".
- American Standard keyways provided unless otherwise specified by the customer. Metric sizes are available.
- Maximum bore sizes listed are with keyway. For sprockets without keyway, add American Standard keyway depth to listed values.
- Plastic Cleatrac® sprockets are bored oversized to allow lateral movement on the shaft compensating for changes in belt width due to temperature. If tight bore tolerances are required, they must be specified at time of order.
- Set Screws are available upon request.



Number of Sprockets

The minimum number of sprockets per shaft (X) can be calculated based on the following formula:

X = Belt Width / (A + B)

Where:
A= Maximum allowable spacing between sprockets
B= Overall Sprocket Width

Fractional values should be rounded up to the next whole number.

Mesh	A = Max. Spacing Between Sprockets in. (mm)	Minimum Spacing in. mm
CTB 18	5.00 (127.0)	0.67 (17.0)
CTB 30	3.25 (82.6)	0.40 (10.2)
CTB 42	3.50 (88.9)	0.28 (7.1)
CTB 48	3.25 (82.6)	0.25 (6.4)
CTB 60	3.00 (76.2)	0.20 (5.1)
CTB 6060	3.00 (76.2)	0.20 (5.1)

BALANCED WEAVE

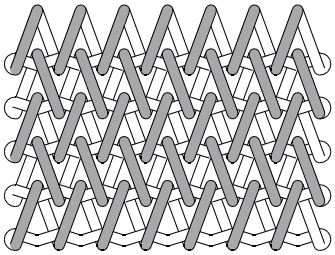
Straight Running Belts: Friction Driven

Balanced Weave Conveyor Belts

Technical Specifications	Units	
Material		Stainless, carbon, and galvanized steels, high temperature alloys
Minimum Width		Dependent on lateral pitch of mesh—see table below
Maximum Width	in. (mm)	216.00 (5486.4)
Weight		Dependent on mesh count and wire gauge
Allowable Tension		Dependent on mesh count and wire gauge
Conveying Surface		Full belt width
Opening Size (Based on mesh count)		Maximum recommended opening is 75% of minimum product size
Method of Drive		Friction driven on flat-faced drums or terminal rolls; minimum drum diameter is 180 divided by the second count/CB number, if applicable
Maximum Temperature	°F (°C)	Carbon steel: 1000 (538) Stainless steel: 2050 (1121) Inconel® 601: 2200 (1204)

Available Options

Balanced Weave belts are composed of right and left-hand spirals joined by a single crimped connector per spiral row. Edges of the belt are welded. Mesh choice is nearly unlimited and is dependent upon requirements of the application, including product weight and support requirements, as well as process temperature. These belts are less dense than Compound Balanced weave belts.

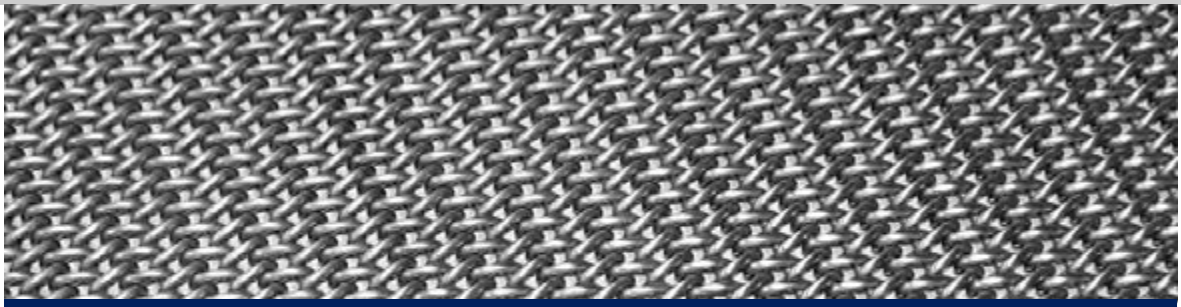


Minimum Belt Widths

Lateral Pitch of Mesh	Minimum Belt Width in. (mm)
12	3.00 (76.2)
18	2.00 (50.8)
24	1.50 (38.1)
30	1.20 (30.5)
36	1.00 (25.4)
42	0.88 (22.4)
48	0.75 (19.1)
60	0.60 (15.2)
66	0.55 (14.0)
72	0.50 (12.7)
84	0.43 (10.9)
96	0.38 (9.7)
102	0.35 (8.9)
144	0.25 (6.4)

BALANCED WEAVE

Balanced Weave Conveyor Belts



Balanced Weave Mesh—Possible Combinations

The following table represents standard mesh combination possibilities that can be used to construct balanced weave belts. Additional combinations of spirals and connectors are also possible. Contact Ashworth Engineering for design assistance with Balanced Weave belts.

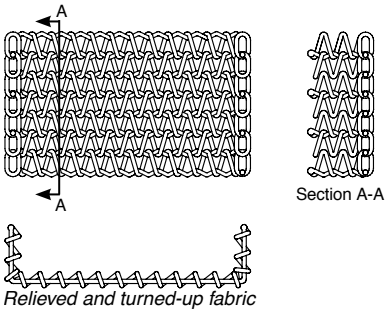
First Count No. of Spirals per 12" of Belt	Spiral Wire Gauge Options	Second Count No. of Connectors per 12" of Belt	Connector Wire Gauge Options
12	4 to 14	7 to 12	4 to 14
18	10 to 14	12 to 17	10 to 14
24	12 to 17	12 to 27	12 to 16
30	10 to 18	14 to 30	10 to 18
36	10 to 20	10 to 38	8 to 19
42	12 to 20	12 to 41	10 to 18
48	12 to 18	24 to 57	8 to 18
60	12 to 20	20 to 62	14 to 20
66	18	48	17
72	16 to 20	24 to 75	13 to 20
84	16 to 24	20 to 84	14 to 24
96	18 to 20	73 to 96	18 to 20
102	18 to 20	24 to 78	14 to 18
144	22	96 to 105	20

Guard Edges

Guard edges can be fabricated for balanced weave belts via two primary methods: relieved and turned-up mesh or relieved and reinforced turned-up fabric.

Relieved & Turned-Up

With relieved and turned-up mesh(Figure 28), the guard edge is formed by turning up the belt edges from the carrying surface and omitting connectors at prescribed spacing to provide flexibility.

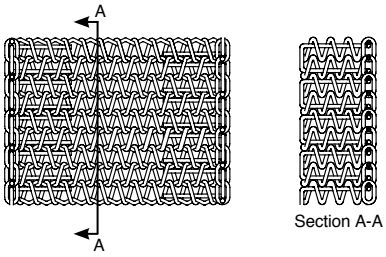


Relieved and turned-up fabric

[Figure 28]

Relieved & Reinforced Turned-Up

Guard edges produced via relieved and reinforced turned-up mesh (Figure 29) are similar to relieved and turned-up edge, but with the addition of hairpin reinforcements that are inserted into the disconnected spirals.



Relieved and reinforced turned-up fabric

[Figure 29]

Controls

Ashworth recommends use of either Ashworth Model #1 or Model #2 Control Systems with most balanced weave belts to prevent the belt from coming in contact with the conveyor or oven framework and to keep the belt centered on the terminal drums.

BALANCED WEAVE

Straight Running Belts: Friction Driven

Balance Weave Specifications			
Mesh Designation	Weight lb/ft² (kg/m²)	Wire Diameter in. (mm)	Approximate Opening Area in. (mm)
B 12-8-¼	7.25 (35.40)	0.250 (6.35)	0.75x1.25 (19.05x31.75)
B 12-7-4	5.87 (28.66)	0.225 (5.72)	0.78x1.49 (19.81x37.85)
B 12-8-4	6.25 (30.52)	0.225 (5.72)	0.78x1.28 (19.81x32.51)
B 12-8-6	4.34 (21.19)	0.192 (4.88)	0.81x1.31 (20.57x33.27)
B 12-11-6	5.05 (24.66)	0.192 (4.88)	0.81x0.90 (20.57x22.86)
B 12-12-6	5.34 (26.07)	0.192 (4.88)	0.81x0.81 (20.57x20.57)
B 12-6-8	2.65 (12.94)	0.162 (4.11)	0.84x1.84 (21.34x46.74)
B 12-8-68	3.25 (15.87)	0.192/0.162 (4.88/4.12)	0.84x1.31 (21.34x33.27)
B 12-10-8	3.29 (16.06)	0.162 (4.11)	0.84x1.04 (21.34x26.42)
B 12-11-68	3.87 (18.89)	0.192/162 (4.88/4.12)	0.84x0.90 (21.34x22.86)
B 12-10-9	2.57 (12.55)	0.148 (3.76)	0.85x1.05 (21.59x26.67)
B 12-11-9	2.72 (13.28)	0.148 (3.76)	0.85x0.94 (21.59x23.88)
B 12-11-69	3.29 (16.06)	0.192/0.148 (4.88/3.76)	0.85x0.90 (21.59x22.86)
B 12-12-9	2.95 (14.40)	0.148 (3.76)	0.85x0.85 (21.59x21.59)
B 12-13-9	3.01 (14.70)	0.148 (3.76)	0.85x0.77 (21.59x19.56)
B-12-8-610	2.50 (12.21)	0.192/0.135 (4.88/.343)	0.87x1.31 (22.10x33.27)
B 12-9 ½-10	2.13 (10.40)	0.135 (3.43)	0.87x1.13 (22.10x28.70)
B 12-10-810	2.45 (11.96)	0.162/0.135 (4.12/.343)	0.87x1.04 (22.10x26.42)
B 12-12-10	2.40 (11.72)	0.135 (3.43)	0.87x0.87 (22.10x22.10)
B 12-10-11	1.69 (8.25)	0.120 (3.05)	0.88x1.08 (22.35x27.43)
B 12-9½-12	1.19 (5.81)	0.105 (2.67)	0.89x1.16 (22.61x29.46)
B 12-10-12	1.24 (6.05)	0.105 (2.67)	0.89x1.09 (22.61x27.69)
B 12-15-12	1.55 (7.57)	0.105 (2.67)	0.89x0.69 (22.61x17.53)
B 12-10-1214	0.85 (4.15)	0.105/0.080 (2.67/2.03)	0.92x1.09 (23.37x27.69)
B 12-11-14	0.73 (3.56)	0.080 (2.03)	0.92x1.01 (23.37x25.65)
B 12-15-1214	1.07 (5.22)	0.105/0.080 (2.67/2.03)	0.92x0.69 (23.37x17.53)
B 12-12-16	0.45 (2.20)	0.062 (1.57)	0.94x0.94 (23.88x23.88)
B 18-10-4	8.73 (42.62)	0.225 (5.72)	0.44x0.97 (11.18x24.64)
B 18-11-46	6.82 (33.30)	0.225/0.192 (5.72/4.88)	0.48x0.87 (12.19x22.10)

BALANCED WEAVE

Balanced Weave Conveyor Belts

Balance Weave Specifications (cont.)			
Mesh Designation	Weight lb/ft² (kg/m²)	Wire Diameter in. (mm)	Approximate Opening Area in. (mm)
B 18-11-6	6.45 (31.49)	0.192 (4.88)	0.48x0.90 (12.19x22.86)
B 18-12-8	4.41 (21.53)	0.162 (4.11)	0.51x0.84 (12.95x21.34)
B 18-18-8	5.53 (27)	0.162 (4.11)	0.51x0.51 (12.95x12.95)
B 18-10-9	3.44 (16.8)	0.148 (3.76)	0.52x1.05 (13.21x26.67)
B 18-18-9	4.39 (21.43)	0.148 (3.76)	0.52x0.52 (13.21x13.21)
B 18-9-810	3.10 (15.14)	0.162/0.135 (4.12/.343)	0.53x1.17 (13.46x29.72)
B 18-10-10	2.85 (13.91)	0.135 (3.43)	0.53x1.07 (13.46x27.18)
B 18-12-610	3.60 (17.58)	0.192/0.135 (4.88/.343)	0.53x0.81 (13.46x20.57)
B 18-16-10	3.39 (16.55)	0.135 (3.43)	0.53x0.62 (13.46x15.75)
B 18-17-810	3.96 (19.33)	0.162/0.135 (4.12/.343)	0.53x0.54 (13.46x13.72)
B 18-17-10	3.50 (17.09)	0.135 (3.43)	0.53x0.57 (13.46x14.48)
B 18-10-11	2.30 (11.23)	0.120 (3.05)	0.55x1.08 (13.97x27.43)
B 18-18-11	3.01 (14.7)	0.120 (3.05)	0.55x0.55 (13.97x13.97)
B 18-10-12	1.70 (8.3)	0.105 (2.67)	0.56x1.09 (14.22x27.69)
B 18-12-1012	2.18 (10.64)	0.135/0.105 (3.43/2.67)	0.56x0.87 (14.22x22.10)
B 36-10-10	5.75 (28.07)	0.135 (3.43)	0.20x1.07 (5.08x27.18)
B 36-20¼-10	10.44 (50.97)	0.250/0.135 (6.35/.343)	0.20x0.35 (5.08x8.89)
B 36-20-810	6.42 (31.35)	0.162/0.135 (4.12/.343)	0.20x0.44 (5.08x11.18)
B 36-20-10	6.15 (30.03)	0.135 (3.43)	0.20x0.47 (5.08x11.94)
B 36-20-11	5.13 (25.05)	0.120 (3.05)	0.21x0.48 (5.33x12.19)
B 36-8-912	3.13 (15.28)	0.148/0.105 (3.76/2.67)	0.23x1.35 (5.84x34.29)
B 36-15-1012	3.73 (18.21)	0.135/0.105 (3.43/2.67)	0.23x0.67 (5.84x17.02)
B 36-18-1012	4.06 (19.82)	0.135/0.105 (3.43/2.67)	0.23x0.53 (5.84x13.46)
B 36-20-1012	4.25 (20.75)	0.135/0.105 (3.43/2.67)	0.23x0.47 (5.84x11.94)
B 36-20-1112	4.10 (20.02)	0.120/0.105 (3.05/2.67)	0.23x0.48 (5.84x12.19)
B 36-20-12	3.80 (18.55)	0.105 (2.67)	0.23x0.49 (5.84x12.45)
B 36-28-12	5.17 (25.24)	0.105 (2.67)	0.23x0.32 (5.84x8.13)
B 36-30-1113	3.98 (19.43)	0.120/0.092 (3.05/2.34)	0.24x0.28 (6.10x7.11)
B 36-20-1214	2.15 (10.5)	0.105/0.080 (2.67/2.03)	0.25x0.49 (6.35x12.45)

BALANCED WEAVE

Straight Runnin Belts: Friction Driven

Balance Weave Specifications			
Mesh Designation	Weight lb/ft² (kg/m²)	Wire Diameter in. (mm)	Approximate Opening Area in. (mm)
B 36-24-14	2.25 (10.99)	0.080 (2.03)	0.25x0.42 (6.35x10.67)
B 36-30-1214	2.76 (13.48)	0.105/0.080 (2.67/2.03)	0.25x0.30 (6.35x7.62)
B 36-34-14	2.58 (12.60)	0.080 (2.03)	0.25x0.27 (6.35x6.86)
B 36-38-14	2.95 (14.40)	0.080 (2.03)	0.25x0.24 (6.35x6.10)
B 36-41-14	3.00 (14.65)	0.080 (2.03)	0.25x0.21 (6.35x5.33)
B 36-51-14	3.38 (16.50)	0.080 (2.03)	0.25x0.16 (6.35x4.06)
B 36-24-15	1.71 (8.35)	0.072 (1.83)	0.26x0.43 (6.60x10.92)
B 36-34-15	2.15 (10.50)	0.072 (1.83)	0.26x0.28 (6.60x7.11)
B 36-30-16	1.44 (7.03)	0.062 (1.57)	0.27x0.33 (6.86x8.38)
B 36-32-16	1.50 (7.32)	0.062 (1.57)	0.27x0.31 (6.86x7.87)
B 36-34-1416	1.80 (8.79)	0.080/0.062 (2.03/1.57)	0.27x0.27 (6.86x6.86)
B 36-35-16	1.44 (7.03)	0.062 (1.57)	0.27x0.28 (6.86x7.11)
B 36-38-16	1.60 (7.81)	0.062 (1.57)	0.27x0.25 (6.86x6.35)
B 36-31-17	1.09 (5.32)	0.054 (1.37)	0.28x0.33 (7.11x8.38)
B 36-30-18	0.82 (4.00)	0.048 (1.22)	0.29x0.35 (7.37x8.89)
B 36-32-1618	1.00 (4.88)	0.062/0.048 (1.57/1.22)	0.29x0.31 (7.37x7.87)
B 36-36-18	0.89 (4.35)	0.048 (1.22)	0.29x0.29 (7.37x7.37)
B 36-32-19	0.64 (3.12)	0.041 (1.04)	0.29x0.33 (7.37x8.38)
B 36-32-20	0.46 (2.25)	0.035 (0.89)	0.31x0.34 (7.87x8.64)
B 42-18-1011	5.68 (27.73)	0.135/0.120 (3.43/3.05)	0.17x0.53 (4.32x13.46)
B 42-16-1012	4.45 (21.73)	0.135/0.105 (3.43/2.67)	0.18x0.62 (4.57x15.75)
B 42-18-1012	4.63 (22.61)	0.135/0.105 (3.43/2.67)	0.18x0.53 (4.57x13.46)
B 42-18-12	4.35 (21.24)	0.105 (2.67)	0.18x0.56 (4.57x14.22)
B 42-20-1012	5.10 (24.90)	0.135/0.105 (3.43/2.67)	0.18x0.47 (4.57x11.94)
B 42-24-12	4.74 (23.14)	0.105 (2.67)	0.18x0.40 (4.57x10.16)
B 42-30-1012	5.92 (28.90)	0.135/0.105 (3.43/2.67)	0.18x0.27 (4.57x6.86)
B 42-30-12	4.97 (24.27)	0.105 (2.67)	0.18x0.30 (4.57x7.62)
B 42-18-14	2.25 (10.99)	0.080 (2.03)	0.21x0.59 (5.33x14.99)
B 42-24-14	2.63 (12.84)	0.080 (2.03)	0.21x0.42 (5.33x10.67)

BALANCED WEAVE

Balanced Weave Conveyor Belts

Balance Weave Specifications (cont.)			
Mesh Designation	Weight lb/ft² (kg/m²)	Wire Diameter in. (mm)	Approximate Opening Area in. (mm)
B 42-27-1214	3.29 (16.06)	0.105/0.080 (2.67/2.03)	0.21x0.34 (5.33x8.64)
B 42-27-14	2.65 (12.94)	0.080 (2.03)	0.21x0.36 (5.33x9.14)
B 42-35-14	3.13 (15.28)	0.080 (2.03)	0.21x0.26 (5.33x6.60)
B 42-41-14	3.23 (15.77)	0.080 (2.03)	0.21x0.22 (5.33x5.59)
B 42-27-15	2.00 (9.76)	0.072 (1.83)	0.22x0.37 (5.59x9.40)
B 42-36-1415	2.59 (12.65)	0.080/0.072 (2.03/1.83)	0.22x0.25 (5.59x6.35)
B 42-41-15	2.68 (13.08)	0.072 (1.83)	0.22x0.22 (5.59x5.59)
B 42-24-16	1.55 (7.57)	0.062 (1.57)	0.22x0.44 (5.59x11.18)
B 42-27-1416	1.94 (9.47)	0.080/0.062 (2.03/1.57)	0.22x0.36 (5.59x9.14)
B 42-27-16	1.68 (8.20)	0.062 (1.57)	0.22x0.38 (5.59x9.65)
B 42-36-16	1.81 (8.84)	0.062 (1.57)	0.22x0.27 (5.59x6.86)
B 42-38-16	1.90 (9.28)	0.062 (1.57)	0.22x0.25 (5.59x6.35)
B 42-40-1416	2.25 (10.99)	0.080/0.062 (2.03/1.57)	0.22x0.22 (5.59x5.59)
B 42-43-16	1.94 (9.47)	0.062 (1.57)	0.22x0.22 (5.59x5.59)
B 42-38-17	1.37 (6.69)	0.054 (1.37)	0.23x0.26 (5.84x6.60)
B 42-37-18	1.03 (5.03)	0.048 (1.22)	0.24x0.27 (6.10x6.86)
B 48-26-14	3.18 (15.53)	0.080 (2.03)	0.17x0.38 (4.32x9.65)
B 48-38-14	3.46 (16.89)	0.080 (2.03)	0.17x0.24 (4.32x6.10)
B 48-41-14	3.52 (17.19)	0.080 (2.03)	0.17x0.22 (4.32x5.59)
B 48-47-14	4.25 (20.75)	0.080 (2.03)	0.17x0.18 (4.32x4.57)
B 48-26-15	2.25 (10.99)	0.072 (1.83)	0.18x0.39 (4.57x9.91)
B 48-38-15	2.84 (13.87)	0.072 (1.83)	0.18x0.24 (4.57x6.10)
B 48-32-16	1.75 (8.54)	0.062 (1.57)	0.19x0.31 (4.83x7.87)
B 48-36-16	1.83 (8.93)	0.062 (1.57)	0.19x0.27 (4.83x6.86)
B 48-48-16	2.45 (11.96)	0.062 (1.57)	0.19x0.19 (4.83x4.83)
B 48-51-16	2.50 (12.21)	0.062 (1.57)	0.19x0.17 (4.83x4.32)
B 48-55-16	2.56 (12.5)	0.062 (1.57)	0.19x0.16 (4.83x4.06)
B 48-48-17	1.65 (8.06)	0.054 (1.37)	0.20x0.20 (5.08x5.08)
B 48-53-17	1.83 (8.93)	0.054 (1.37)	0.20x0.17 (5.08x4.32)

BALANCED WEAVE

Straight Running Belts: Friction Driven

Balance Weave Specifications (cont.)			
Mesh Designation	Weight lb/ft² (kg/m²)	Wire Diameter in. (mm)	Approximate Opening Area in. (mm)
B 48-24-18	0.91 (4.44)	0.048 (1.22)	0.20x0.45 (5.08x11.43)
B 48-36-18	1.03 (5.03)	0.048 (1.22)	0.20x0.29 (5.08x7.37)
B 48-49-18	1.21 (5.91)	0.048 (1.22)	0.20x0.20 (5.08x5.08)
B 48-52-18	1.26 (6.15)	0.048 (1.22)	0.20x0.18 (5.08x4.57)
B 48-50-19	0.94 (4.59)	0.041 (1.04)	0.21x0.20 (5.33x5.08)
B 48-44-20	0.56 (2.73)	0.035 (0.89)	0.22x0.24 (5.59x6.10)
B 48-48-20	0.61 (2.98)	0.035 (0.89)	0.22x0.22 (5.59x5.59)
B 48-51-1820	0.92 (4.49)	0.048/0.035 (1.22/0.89)	0.22x0.20 (5.59x5.08)
B 48-55-20	0.66 (3.22)	0.035 (0.89)	0.22x0.19 (5.59x4.83)
B 48-44-21	0.48 (2.34)	0.032 (0.81)	0.22x0.24 (5.59x6.10)
B 48-44-22	0.38 (1.86)	0.029 (0.74)	0.22x0.24 (5.59x6.10)
B 58-21-1214	3.64 (17.77)	0.105/0.080 (2.67/2.03)	0.13x0.47 (3.3x11.94)
B 60-22-14	3.25 (15.87)	0.080 (2.03)	0.12x0.47 (3.05x11.94)
B 60-24-1214	3.72 (18.16)	0.105/0.080 (2.67/2.03)	0.12x0.40 (3.05x10.16)
B 60-38-1214	5.21 (25.44)	0.105/0.080 (2.67/2.03)	0.12x0.21 (3.05x5.33)
B 60-38-14	4.10 (20.02)	0.080 (2.03)	0.12x0.24 (3.05x6.10)
B 60-40-1214	4.57 (22.31)	0.105/0.080 (2.67/2.03)	0.12x0.19 (3.05x4.83)
B 60-48-14	4.31 (21.04)	0.080 (2.03)	0.12x0.17 (3.05x4.32)
B 60-60-14	5.12 (25.00)	0.080 (2.03)	0.12x0.12 (3.05x3.05)
B 60-38-15	3.18 (15.53)	0.072 (1.83)	0.13x0.24 (3.3x6.10)
B 60-42-15	3.29 (16.06)	0.072 (1.83)	0.13x0.22 (3.3x5.59)
B 60-46-15	3.55 (17.33)	0.072 (1.83)	0.13x0.19 (3.3x4.83)
B 60-26-1416	2.13 (10.40)	0.080/0.062 (2.03/1.57)	0.14x0.63 (3.56x16)
B 60-36-16	2.12 (10.35)	0.062 (1.57)	0.14x0.27 (3.56x6.86)
B 60-38-16	2.28 (11.13)	0.062 (1.57)	0.14x0.24 (3.56x6.10)
B 60-42-16	2.49 (12.16)	0.062 (1.57)	0.14x0.22 (3.56x5.59)
B 60-46-1416	3.04 (14.84)	0.080/0.062 (2.03/1.57)	0.14x0.18 (3.56x4.57)
B 60-48-1316	3.43 (16.75)	0.092/0.062 (2.34/1.57)	0.14x0.16 (3.56x4.06)
B 60-48-16	2.68 (13.08)	0.062 (1.57)	0.14x0.19 (3.56x4.83)

BALANCED WEAVE

Balanced Weave Conveyor Belts

Balance Weave Specifications (cont.)			
Mesh Designation	Weight lb/ft² (kg/m²)	Wire Diameter in. (mm)	Approximate Opening Area in. (mm)
B 60-52-16	2.75 (13.43)	0.062 (1.57)	0.14x0.17 (3.56x4.32)
B 60-55-1416	3.22 (15.72)	0.080/0.062 (2.03/1.57)	0.14x0.14 (3.56x3.56)
B 60-55-16	2.82 (13.77)	0.062 (1.57)	0.14x0.16 (3.56x4.06)
B 60-37-18	1.30 (6.35)	0.048 (1.22)	0.15x0.27 (3.81x6.86)
B 60-52-18	1.50 (7.32)	0.048 (1.22)	0.15x0.18 (3.81x4.57)
B 60-60-18	1.60 (7.81)	0.048 (1.22)	0.15x0.15 (3.81x3.81)
B 60-62-18	1.65 (8.06)	0.048 (1.22)	0.15x0.15 (3.81x3.81)
B 60-60-19	1.13 (5.52)	0.041 (1.04)	0.16x0.16 (4.06x4.06)
B 60-55-22	0.47 (2.29)	0.029 (0.74)	0.17x0.19 (4.32x4.83)
B 60-54-23	0.37 (1.81)	0.026 (0.66)	0.18x0.2 (4.57x5.08)
B 72-60-15	4.68 (22.85)	0.072 (1.83)	0.09x0.13 (2.29x3.3)
B 72-24-16	2.35 (11.47)	0.062 (1.57)	0.1x0.44 (2.54x11.18)
B 72-48-16	2.83 (13.82)	0.062 (1.57)	0.1x0.19 (2.54x4.83)
B 72-55-16	3.32 (16.21)	0.062 (1.57)	0.1x0.16 (2.54x4.06)
B 72-56-16	3.40 (16.6)	0.062 (1.57)	0.1x0.15 (2.54x3.81)
B 72-57-1516	3.58 (17.48)	0.072/0.062 (1.83/1.57)	0.1x0.15 (2.54x3.81)
B 72-60-16	3.52 (17.19)	0.062 (1.57)	0.1x0.14 (2.54x3.56)
B 72-62-1416	4.38 (21.39)	0.080/0.062 (2.03/1.57)	0.1x0.11 (2.54x2.79)
B 72-64-1416	4.43 (21.63)	0.080/0.062 (2.03/1.57)	0.1x0.11 (2.54x2.79)
B 72-68-16	3.76 (18.36)	0.620 (15.75)	0.1x0.11 (2.54x2.79)
B 72-70-1316	4.77 (23.29)	0.092/0.062 (2.34/1.57)	0.1x0.08 (2.54x2.03)
B 72-72-16	3.80 (18.55)	0.062 (1.57)	0.1x0.1 (2.54x2.54)
B 72-52-17	2.37 (11.57)	0.054 (1.37)	0.11x0.18 (2.79x4.57)
B 72-60-17	2.50 (12.21)	0.054 (1.37)	0.11x0.15 (2.79x3.81)
B 72-80-17	2.84 (13.87)	0.054 (1.37)	0.11x0.1 (2.79x2.54)
B 72-57-18	1.78 (8.69)	0.048 (1.22)	0.12x0.16 (3.05x4.06)
B 72-68-18	1.83 (8.93)	0.048 (1.22)	0.12x0.13 (3.05x3.3)
B 72-72-18	2.01 (9.81)	0.048 (1.22)	0.12x0.12 (3.05x3.05)
B 72-75-18	2.03 (9.91)	0.048 (1.22)	0.12x0.11 (3.05x2.79)

BALANCED WEAVE

Straight Running Belts: Friction Driven

Balance Weave Specifications (cont.)			
Mesh Designation	Weight lb/ft² (kg/m²)	Wire Diameter in. (mm)	Approximate Opening Area in. (mm)
B 72-72-19	1.51 (7.37)	0.041 (1.04)	0.13x0.13 (3.30x3.30)
B 72-62-20	0.84 (4.10)	0.035 (0.89)	0.13x0.16 (3.30x4.06)
B 72-68-20	0.93 (4.54)	0.035 (0.89)	0.13x0.14 (3.30x3.56)
B 72-72-20	1.00 (4.88)	0.035 (0.89)	0.13x0.13 (3.30x3.30)
B 72-68-21	0.86 (4.20)	0.032 (0.81)	0.13x0.15 (3.30x3.81)
B 72-48-22	0.49 (2.39)	0.029 (0.74)	0.14x0.22 (3.56x5.59)
B 72-62-2022	0.69 (3.37)	0.029 (0.74)	0.14x0.16 (3.56x4.06)
B 72-70-22	0.57 (2.78)	0.029 (0.74)	0.14x0.14 (3.56x3.56)
B 84-84-17	3.42 (16.70)	0.054 (1.37)	0.09x0.09 (2.29x2.29)
B 84-60-18	1.95 (9.52)	0.048 (1.22)	0.10x0.15 (2.54x3.81)
B 84-84-18	2.47 (12.06)	0.048 (1.22)	0.10x0.10 (2.54x2.54)
B 84-84-19	1.67 (8.15)	0.041 (1.04)	0.10x0.10 (2.54x2.54)
B 84-60-20	0.94 (4.59)	0.035 (0.89)	0.11x0.17 (2.79x4.32)
B 84-84-20	1.20 (5.86)	0.035 (0.89)	0.11x0.11 (2.79x2.79)
B 84-78-2021	1.06 (5.18)	0.032 (0.81)	0.11x0.12 (2.79x3.05)
B 84-84-21	0.93 (4.54)	0.032 (0.81)	0.11x0.11 (2.79x2.79)
B 84-81-22	0.74 (3.61)	0.029 (0.74)	0.11x0.12 (2.79x3.05)
B 84-84-22	0.76 (3.71)	0.029 (0.74)	0.11x0.11 (2.79x2.79)
B 96-84-20	1.24 (6.05)	0.035 (0.89)	0.09x0.11 (2.29x2.79)
B 96-84-21	1.09 (5.32)	0.032 (0.81)	0.09x0.11 (2.29x2.79)
B 96-48-22	0.76 (3.71)	0.029 (0.74)	0.10x0.22 (2.54x5.59)
B 96-84-22	0.91 (4.44)	0.029 (0.74)	0.10x0.11 (2.54x2.79)
B 100-156-22	1.23 (6.01)	0.029 (0.74)	0.09x0.05 (2.29x1.27)
B 144-89-2022	1.15 (5.61)	0.035/0.029 (0.89/0.74)	0.05x0.10 (1.27x2.54)
B 144-96-2022	1.27 (6.20)	0.035/0.029 (0.89/0.75)	0.05x0.09 (1.27x2.29)
B 144-105-2022	1.55 (7.57)	0.035/0.029 (0.89/0.76)	0.05x0.08 (1.27x2.03)

BALANCED WEAVE

Straight Running Belts: Positive Driven

Mesh

A PDCE belt's mesh can be of any balanced weave, compound balanced weave, or conventional weave variety. However, the second count (SC) number is a function of cross support spacing, unless a special spiral* is used or the cross support is attached to the underside of the mesh. (for more information see the section on "Mesh Designation for Woven Wire Belts."

Meshes on PDCE belts can be manufactured in one of three ways:

- Thicker than normal mesh is woven to accommodate the cross supports, which are inserted through the spirals. The spirals are all of uniform size throughout the belt.
- Mesh is of standard thickness but is interspersed with special spirals* to accommodate large cross supports or when a very dense mesh is specified.
- Mesh is of standard thickness and is attached to the top of the cross supports (flat bars channels or angles).

** A special spiral is larger than a standard spiral and can be manufactured in various shapes such as oval, diamond, square, etc.*

Cross Supports

Rods

Rods are frequently used as cross supports. Their length is generally the same as the overall width of the belt. Rod edges are either welded, washer welded, brazed, washer brazed, or drilled and cottered as specified. Winged rods are used to hold the chain sideplates in place when pin-size rods are used with either riveted hollow pins or cottered chains, and are located on every chain pitch. When used as cross supports and engage the chain as pins, the standard size of the rods is as follows:

ANSI Number	Rod Diameter
RC35 and RC41	0.135" (3.4 mm)
RC40, C2040 & C2042	0.152" (3.9 mm)
RC50, C2050 & C2052	0.196" (5.0 mm)
RC60, C2060H & C2062H	0.230" (5.8 mm)
RC80, C2080H & C2082H	0.307" (7.8 mm)

Pipe/Rod

Rods can be inserted through any pipe or tubing which is commercially available and the combination is then inserted through the mesh. The pipe/tubing length is typically the same width as the mesh.

Turned-Down Rod

When the rod diameter is oversized for the chain according to the previous chart, the ends of the rods can be turned down to the standard pin diameter to engage the chain.

Channel or Angle

Any commercially-made or manufactured channel or angle available may be used as cross supports. These are normally plug-welded or brazed to the underside of mesh. In general, channel or angle cross supports are bolted to a chain attachment, but in some cases are welded to the chain sideplate.

Flat Bar

Any commercially made or manufactured flat bar available may be used as cross supports. The flat bar's length is determined by type of chain used and its attachment. The flat bar may be inserted through the mesh or attached to the underside of mesh as specified. When attached to the underside, the flat bar is plug-welded or brazed to the mesh through slots or holes in the flat bar. In general, the flat bar is bolted to the chain, but in some cases it is welded to the chain sideplate.

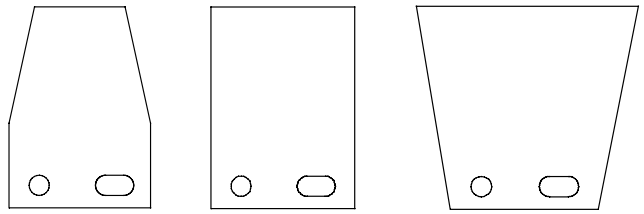
Positive Drive Chain Edge (PDCE)

Available Options

Guard Edges
Guard edges are located on the inside of the chain. Height above the belt surface and material is customer specified. Guard edges are usually used with round cross supports (rods, turned down rods, or pipe/rod) which are inserted through holes in the guard edge.

Guard edges are generally plates that may be offset, of interlocking design, or flat plates that are assembled in either a shingled or staggered arrangement. Plates can be square or rectangular and either flared or notched as required (Figure 18). Plates with double tabs may be used. The bottom tabs may be inserted through the mesh or the tabs may straddle the mesh and are welded or brazed to it. Whenever guard edges are specified, the inside guard edge (IGE) dimension should be specified by the customer.

Guard Edge Shapes:



Notched—Used to allow reverse bends

Standard

Flared—Used to prevent gaps when traversing sprockets

[Figure 18]

Flights (Lifts or Cleats)
Generally, flights are attached to the belt by welding or brazing them to the mesh and/or the guard edges (if applicable). The style, material, height, and spacing above the belt surface is customer specified. The length of the flight is usually the same as the mesh width but can be narrower if specified.

Usually, flights are produced from formed angle stock, although commercially available flat bar, keystock, cut sheet metal, or other customer specified shapes may be used. Angle types usually have slots or holes punched in the bottom to facilitate plug-welding to the mesh. It should be noted that flights are not meant to carry product up inclines but are just to prevent product slippage.

Wipers
Wiper attachments, typically fabricated from wire mesh, hang from the bottom surface of the belt to wipe debris from drip pans, trays, bins, etc. These attachments are typically attached to belt mesh with a straight or crimped connector rod. Mesh designation (if applicable), material, length below belt surface, width of wiper, and spacing are customer specified.

Belt Tension Calculations

$$T = (wLf_r + WLf_r + WH) \times C$$

Where:

T = Belt tension in lb. (Newtons) (Total Chain Pull)

w = Weight of belt in pounds per linear foot (kg per linear meter)

W = Belt weight + Product Weight in pounds per linear foot (kg per linear meter)

L = Length of Conveyor measured center to center of pulleys in feet (meters).

f_r = Friction factor between belt chain and belt supports (track) dimensionless.

H = Rise of incline conveyor in feet (meters),

(Positive if conveyor inclines, negative if it declines)

C = Force conversion factor

1.0 if Imperial

9.8 if Metric

Note: The reduction of chain pull due to weight of the conveyor belt going downhill on the return side usually can be neglected and is omitted from the inclined conveyor formula.

Friction Factor for Chains
f = 0.35 for drag chain, non-rotating rollers, or sliding on side plates on metal
f = 0.20 for drag chain, non-rotating rollers, or sliding on side plates on UHMWPE
f = 0.10 for chains moving on rollers

Increase above values by 50% when poorly lubricated.

BALANCED WEAVE

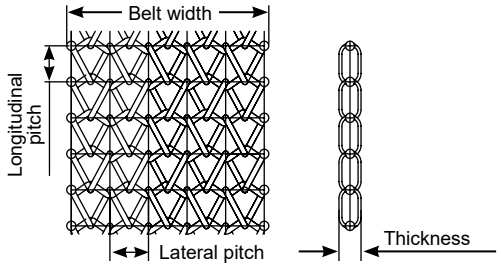
WG Woven Wire

WG Woven Wire

WG Balanced Weave	Units	
Material		Stainless steel, carbon, and galvanized steels, high temperature steel alloys
Minimum Width	mm (in)	40.6 (1.60)
Maximum Width		5486.4 (216.00)
Edge Treatment		Welded edges
Weight		Dependent on mesh count and wire gauge—see table
Maximum Allowable Tension		Dependent on mesh count and wire gauge—see table
Conveying Surface		Full belt width (1/2 of one lateral pitch + 3 spiral diameters)
Opening Size		40–70% depending on mesh count and wire size
Method of Drive		Friction driven on flat-faced drums or terminal rolls
Maximum Temperature	°C (°F)	Up to 1100 (2012) dependent upon material

Available Options

WG Balanced Weave belts are composed of right and left-hand spirals joined by a connector rod. Edges are welded. The mesh choice for WG belts is nearly unlimited and is dependent upon requirements of the application, including product weight and support requirements, as well as process temperature.



Mesh Designation

Due to their European heritage, WG belts are designated differently than woven wire belts manufactured by Ashworth in the US. Meshes for WG belts are designated as in the following example:

WG 4.4/5 – 1.4 x 0.7 – 1.2

Where:

W = Woven wire
G = Welded edges
4.4 = Nominal longitudinal pitch of the belt in mm
5 = Lateral pitch of the belt in mm
1.4 x 0.7 = Size of the spiral wire diameter in mm; in this case the wire is flattened, so two dimensions are used
1.2 = Cross wire diameter in mm

Driving/Return Drum Diameters

Driving drums should be of sufficient diameter so as not to bend the belt's mesh, a situation that could result in irregular elongation of the belt's pitch. This can cause belt driving and control problems and irreparably damage the belt.

Drums should be sized according to the following guidelines:

Driving Drum:

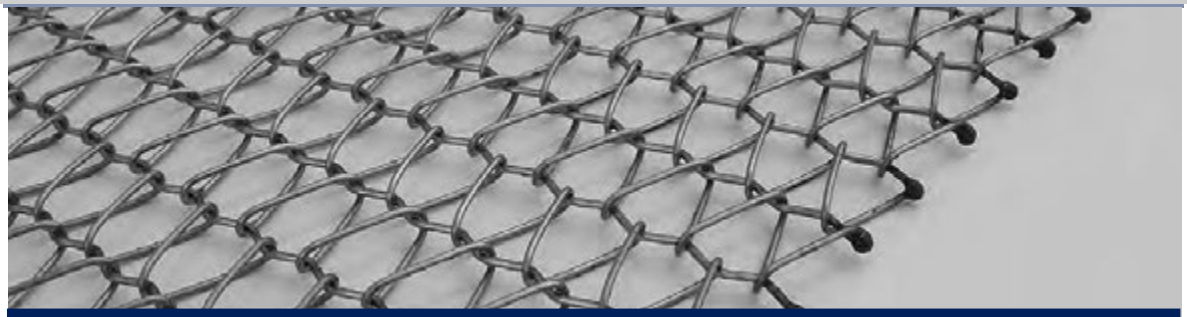
Diameter = Minimum of 20 times the belt's longitudinal pitch

Return Drum:

Diameter = Minimum of 10 times the belt's longitudinal pitch

BALANCED WEAVE

WG Woven Wire

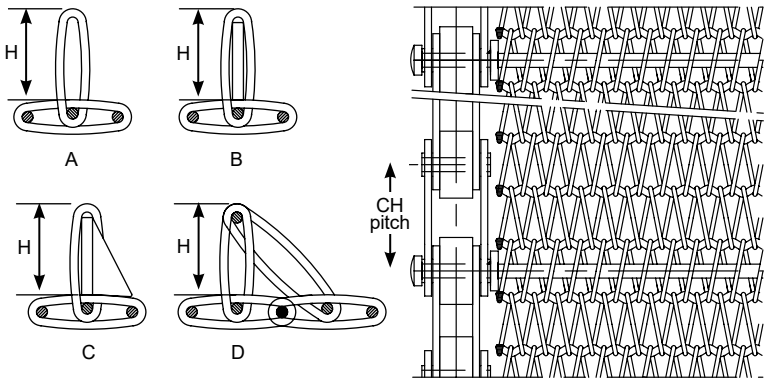


Standard Balance Weave Meshes

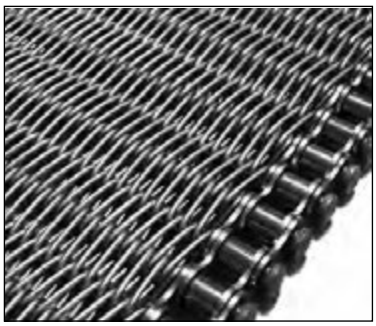
Mesh Type	Nom. Long. Pitch mm (in.)	Nom. Lat. Pitch mm (in.)	Nom. Belt (Spiral) Thickness mm (in.)	Belt Weight kg/m² (lb/ft²)	Allowable Tension per Belt Width kN/m (lb/ft)
WG 4.4/4.4–1.4 x 0.7–1.2	5.4 (0.21)	4.4 (0.17)	4.1 (0.16)	10.2 (2.09)	22.0 (1507.48)
WG 4.4/4.4–1.4–1.4	5.2 (0.20)	4.4 (0.17)	5.9 (0.23)	17.0 (3.48)	35.0 (2398.26)
WG 4.5/3.1–1–1.2	4.1 (0.16)	3.0 (0.12)	4.6 (0.18)	10.9 (2.23)	25.0 (1713.04)
WG 5.1/4.2–1.6–1.6	4.9 (0.19)	4.2 (0.17)	6.4 (0.25)	22.5 (4.61)	48.0 (3289.04)
WG 6.0/6.2–1.2–1.6	6.4 (0.25)	6.2 (0.24)	5.7 (0.22)	8.9 (1.82)	18.0 (1233.39)
WG 8.5/6.4–1.6–1.6	9.1 (0.36)	6.4 (0.25)	7.3 (0.29)	11.5 (2.36)	31.0 (2124.17)
WG 10.0/6.5–1.2–2.0	9.9 (0.39)	6.5 (0.26)	6.2 (0.24)	7.4 (1.52)	17.0 (1164.87)
WG 10.0/6.5–1.4 x 1–2.0	9.9 (0.39)	6.5 (0.26)	5.7 (0.22)	8.7 (1.78)	22.0 (1507.48)
WG 10.0/10–2–2.5	12.2 (0.48)	10.0 (0.39)	8.9 (0.35)	14.4 (2.95)	31.0 (2124.17)
WG 12.0/12–3 x 2–3.0	14.8 (0.58)	12.0 (0.47)	10.3 (0.41)	22.0 (4.51)	50.0 (3426.09)
WG 13.5/8.4–2–2.5	14.0 (0.55)	8.4 (0.33)	10.8 (0.43)	13.7 (2.81)	37.0 (2535.31)
WG 13.5/8.4–3 x 1.5–3.1	12.9 (0.51)	8.4 (0.33)	8.6 (0.34)	21.5 (4.40)	54.0 (3700.18)
WG 15.0/15–2.5–2.8	16.7 (0.66)	15.0 (0.59)	10.8 (0.43)	12.9 (2.64)	33.0 (2261.22)
WG 16.0/6.35–1.2–1.6	15.3 (0.60)	6.4 (0.25)	6.3 (0.25)	5.0 (1.02)	18.0 (1233.39)
WG 16.8/8.4–2.6–3.1	15.9 (0.63)	8.4 (0.33)	11.8 (0.46)	22.0 (4.51)	63.0 (4316.87)
WG 19.1/9.5–1.1–1.4	19.2 (0.76)	9.5 (0.37)	6.8 (0.27)	2.7 (0.55)	10.0 (685.22)
WG 20.0/15–2.5–3.5	18.3 (0.72)	15.0 (0.59)	12.2 (0.48)	12.8 (2.62)	33.0 (2261.22)

Available Options

WG belts can be manufactured with flights (Figure 30) (dimensions available upon request) or as positive drive chain edge belts (Figure 31). Standard chains are hollow pin, in 0.5″ (12.7 mm), 0.63″ (15.9 mm) or 1″ (25.4 mm) pitch.



[Figure 30]



[Figure 31]

BALANCED WEAVE

Baking Bands

Baking Bands

Technical Specifications	Units	
Available Materials (Mesh and Connector Rods)		Stainless steel, carbon steels
Minimum Width		3 lateral pitches + 4 spiral wire diameters
Maximum Width	in. (mm)	144.00 (3657.6)
Conveying Surface		Full belt width
Thickness (Mesh Dependent)		See mesh designation table
Weight (Mesh Dependent)		See mesh designation table
Lateral Pitch (Mesh Dependent)		See mesh designation table
Opening Size (Mesh Dependent)		See mesh designation table
Maximum Temperature	°F (°C)	Carbon steel—Up to 1000 (538)
Method of Drive		Friction driven on flat-faced drums or terminal rolls

Mesh Designation

Mesh choice depends on the baking requirements of the product. Your selection should consider product support, heat exposure, and the belt strength required for the oven design.

Terminal Rolls / Drum Diameter

For baking bands utilizing compound balance weave construction, the diameter of the terminal rolls or drum is determined by making the following calculations: divide the second number by the CB number; 180 is then divided by this result to arrive at the correct minimum drum diameter.

For example, considering mesh type CB5-27-84-1416F (CB5 Baking Band®), first divide 84 by 5, arriving at 16.8. Then divide 180 by 16.8, which equates to 10.71" (272.14 mm) This is the minimal driving drum diameter calculated in inches (or mm).

Controls

Ashworth recommends use of Ashworth Model #1 or Model #2 Control Systems to prevent the belt from contacting oven framework and to keep the belt centered on the terminal drums.

Wire Options

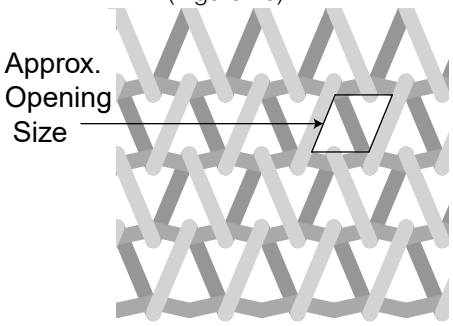
Baking bands are typically manufactured from annealed high carbon steel round wire in standard gauge sizes. Stainless steel and other steel alloys can be used if required.

Flattened Wire (F) can be specified for the conveying surface if needed. Additionally, Precision Ground Light Weight (PGLW) can also be specified. This process results in the flattest baking surface and is attained by precision grinding of the surface after the baking band has been manufactured. This option is limited to carbon steel bands 54" (1370 mm) or less in width.

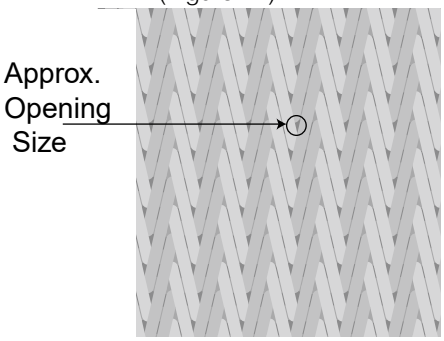
BALANCED WEAVE

Baking Bands

Woven Baking Band
(Figure 26)



Compound Balance Weave Baking Band
(Figure 27)



Woven Baking Bands (Crimped)

Mesh Designation	Wire Diameter in. (mm)	Approximate Opening Size in. (mm) **Figure 26**	Weight lb/ft² (kg/m²)
B48-38-15	0.072 (1.83)	0.18 x 0.24 (4.6 x 6.1)	2.80 (13.7)
B48-48-16	0.062 (1.57)	0.18 x 0.19 (4.7 x 4.8)	2.30 (11.2)
B60-36-14 PGLW	0.080 (2.03)	0.12 x 0.25 (3.0 x 6.4)	3.54 (17.3)
B60-36-16 PGLW	0.062 (1.57)	0.14 x 0.27 (3.6 x 6.9)	2.12 (10.3)
B72-72-18	0.047 (1.19)	0.12 x 0.12 (2.9 x 2.9)	2.05 (10.0)
B84-20-1416	0.080/0.066 (2.03-1.67)*	0.08 x 0.52 (2.0 x 13.2)	2.80 (13.7)
B102-24-1418	0.080/0.047 (2.03-1.19)*	0.07 x 0.42 (1.8 x 10.7)	2.20 (10.7)
U66-48-1718 PGLW	0.054/0.047 (1.37/1.19)*	0.13 x 0.20 (3.3 x 5.1)	1.69 (8.3)
B66-48-1718F	0.054/0.047 (1.37/1.19)*	0.13X0.20 (3.3 x 5.1)	1.69 (8.3)

Compound Balance Weave Baking Bands

Mesh Designation	Type of Connector	Wire Diameter in. (mm)	Approximate Opening Size in. (mm) **Figure 27**	Weight lb/ft² (kg/m²)
CB3-22-58-12	Straight	0.105 (2.7)	0.08 (2.0)	7.95 (38.9)
CB3-30-72-14	Crimped	0.080 (2.0)	0.062 (1.6)	6.00 (29.6)
CB3-36-76-14	Crimped	0.080 (2.0)	0.054 (1.4)	3.76 (18.4)
CB3-42-72-1416	Crimped	0.080/.062 (2.0-1.6)*	0.052 (1.3)	4.85 (23.7)
CB3-56-120-18	Straight	0.047 (1.2)	0.041 (1.0)	3.90 (19.1)
CB3-58-140-19	Straight	0.041 (1.0)	0.032 (0.8)	3.45 (16.9)
CB3-60-139-19F**	Crimped	0.041/0.041x0.035* (1.0-1.0x0.9)	0.028 (0.7)	2.85 (13.9)
CB3-84-176-2022	Crimped	0.035/.028 (0.9/0.7)*	0.018 (0.5)	2.40 (11.7)
CB3-84-200-22	Crimped	0.028 (0.7)	0.018 (0.5)	2.40 (11.7)
CB5-27-84-1416F**	Crimped	0.080/0.063x0.047* (2.0/1.6x1.2)	0.050 (1.3)	4.20 (20.6)
MCB5-27-84-1516F**	Crimped	0.072/0.063x0.047* (1.8-1.6x1.2)	0.058 (1.5)	3.35 (16.4)
CB5-36-120-18	Crimped	0.035 (0.9)	0.017 (0.4)	3.82 (18.7)

BALANCED WEAVE

CB5 Baking Band®

CB5 Baking Band®

Technical Specifications	Units	
Material	in. (mm)	14 and 16 gauge (0.080 or 0.062 [2.0 or 1.6]) stainless or high carbon steel wire
Minimum Width		1.58 (40.1)
Maximum Width		144.00 (3657.6)
Longitudinal Pitch		0.14 (3.6)
Belt Strength	lb/ft (kg/m)	3100 (4600) of belt width, based on high carbon steel at 70°F (21°C)
Conveying Surface		Overall Belt Width(0.5 one lateral pitch + 3 spiral wire diameters)
Mesh Type		Compound balance weave with 5 connectors per spiral
Mesh Designation		CB5-27-84-1416F (standard)
Open Area		Minimal
Edge Treatment		Welded
Method of Drive		Friction driven on flat faced terminal rolls
Minimum Terminal Roll Diameter	in. (mm)	10.75 (273.1)
Maximum Temperature	°F (°C)	Carbon steel: Up to 1000 (538) Stainless steel: Up to 2050 (1121)

Available Options

Wire
Baking bands are typically manufactured from annealed high carbon steel round wire in standard gauge sizes. Stainless steel and other steel alloys can be used if required.

Flattened Wire (F) can be specified for the conveying surface if needed. Additionally, Precision Ground Light Weight (PGLW) can also be specified. This process results in the flattest baking surface and is attained by precision grinding of the surface after the baking band has been manufacturer. This option is limited to carbon steel bands 54" (1370 mm) or less in width.

Controls
Ashworth recommends use of Ashworth Model #1 or Model #2 Control System to prevent the belt from contacting oven framework and to keep the belt centered on the terminal drums.

MCB5 27-84-1516F
This is a lighter weight version of the original CB5 Baking Band®. By using a higher gauge crimp connector, the band's weight is reduced by approximately 20% compared to the standard CB5-27-84-1416F. This band is known as the CB5 Metric, where "Metric" is designated by the "M" in the mesh designation.

BALANCED WEAVE

CB3 Tortilla Band®

CB3 Tortilla Band®

Technical Specifications	Units	
Material	in. (mm)	14 gauge (0.080 [2.0]) stainless or high carbon steel wire
Minimum Width		1.28 (32.5)
Maximum Width		144 (3658)
Longitudinal Pitch		0.17 (4.2)
Belt Strength	lb/ft (kg/m)	3500 (5200) of belt width, based on high carbon steel at 70 (21)
Conveying Surface		Overall belt width (0.5 one lateral pitch + 3 spiral wire diameters)
Mesh Type		Compound balance weave with 3 connectors per spiral
Open Area		Minimal
Edge Treatment		Welded
Method of Drive		Friction driven on flat faced terminal rolls
Minimum Terminal Roll Diameter	in. (mm)	6.0 (152.4)
Maximum Temperature	°F (°C)	Carbon steel—Up to 1000 (538) Stainless steel—Up to 2050 (1121)

Notes

The CB3 baking band is a flexible baking band that can easily traverse 6" terminal rolls most commonly used in tortilla ovens.

Available Options

Wire

Baking bands are typically manufactured from annealed high carbon steel round wire in standard gauge sizes. Stainless steel and other steel alloys can be used if required.

Flattened Wire (F) can be specified for the conveying surface if needed. Additionally, Precision Ground Light Weight (PGLW) can also be specified. This process results in the flattest baking surface and is attained by precision grinding of the surface after the baking band has been manufacturer. This option is limited to carbon steel bands 54" (1370 mm) or less in width.

Controls

Ashworth recommends use of Ashworth Model #1 or Model #2 Control System to prevent the belt from contacting oven framework and to keep the belt centered on the terminal drums.

FLEX LINK

HEADQUARTERS 514.886.5270
12985 Rue Brault, Mirabel Quebec, Canada J7J 0W2 UNIKINGCANADA.COM

FLEX LINK

Flex Link Belts

Flex Link belts are our most application-adaptable product for spiral systems. We offer a complete series of Flex Link products for spiral systems at various tension ratings:

MAX. TENSION RATING*

UP TO 250 LBS. FLEX LINK	UP TO 300 LBS. FLEX LINK EXTRA	UP TO 450 LBS. LEADING EDGE PERFORMANCE GRID

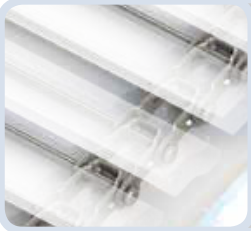
*Flex Link belts are also available for straight running applications.

ALL FLEX LINK BELTS PROVIDE INDUSTRY-LEADING BENEFITS:

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

OBLONG SLOT IN FLEX LINK

Fully collapsible c… …ctio… …ng: each outer link has an oblong … …sh allows better access for sanitatio… …ia 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.

FLEX LINK

Flex Link Specifications - Standard Radius Belts

FLEX LINK RODS ONLY

FLEX LINK STANDARD DUTY WITH MESH OVERLAY

FLEX LINK HEAVY DUTY LINKS WITH MESH OVERLAY

FLEX LINK 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)		
	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		
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 Custom mesh specifications available for unique applications		
BELT TURNING RADIUS	Nominal inside turning radius is 2.2 x belt width 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 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 Custom widths available		
MATERIALS	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		
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 Integral side plates/links available for 1” pitch Other special constructions and attachments are available for unique applications		
SPROCKETS	See standard sprockets for 3/4” and 1” pitch Flex Link 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.		

FLEX LINK

Flex Link Specifications - Standard 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

FLEX LINK SPECIFICATIONS: REDUCED RADIUS BELTS

Specifications for Flex Link Reduced Radius belts are the same as Flex Link 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) 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 Flex Link 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

FLEX LINK SPROCKETS

FLEX LINK 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 tch belts										
898	73.6	2.430	61.7	3/4 or 1	1.9 or 25.4	1.0	25.4	1.3	0.60
.938	150.8	5.500	139.7	1 to 4	25.4 to 101.6	1.5	38.1	2.0	0.91
28	79.5	2.625	66.7	3/4 or 1	1.9 or 25.4	1.0	25.4	1.3	0.60
50	110.5	3.850	97.8	1 to 3	25.4 to 76.2	2.0	50.8	0.7	0.32
17	155.4	5.617	142.7	1 to 4	25.4 to 101.6	2.0	50.8	1.6	0.73
68	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

FLEX LINK

Flex Link 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

FLEX LINK SPECIFICATIONS: STANDARD DUTY TIGHT RADIUS BELTS

Specifications for Flex Link Tight Radius belts are the same as Flex Link 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) 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)
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" Flex Link belts 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

FLEX LINK SPECIFICATIONS: HEAVY DUTY TIGHT RADIUS BELTS

Specifications for Flex Link Tight Radius belts are the same as Flex Link 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) 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)
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 Flex Link belts (18E and 23E only) 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

FLEX LINK

Flex Link Extra

FLEX LINK EXTRA

- Tougher, stronger, and faster than traditional Flex Link 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

FLEX LINK EXTRA SPECIFICATIONS

Specifications for Flex Link Extra belts are the same as Flex Link 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 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) 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 Heavy Duty: double compression		
STRENGTH RATINGS	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)		
TENSION LIMITS	Super Heavy Duty Link	600 lbs. (272 kg) straight run	300 lbs. (136 kg) turn or spiral

FLEX LINK 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

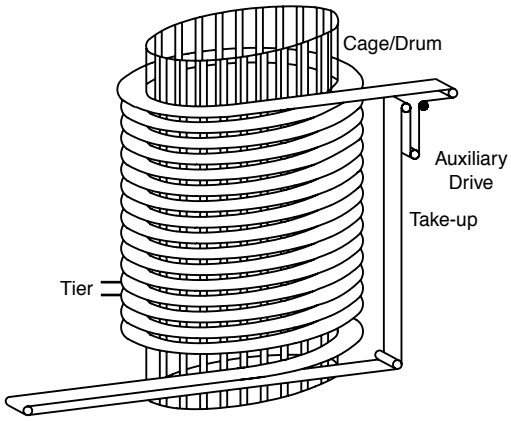
Materials: Stainless Steel, Steel, UHMW

TECHNICAL INFORMATION

Installation of Spiral Belts

Preparation

Before installing a new spiral belt, the wear strips should be examined for excessive deterioration. These are located on the belt support rails and usually made from Ultra High Molecular Weight Polyethylene (UHMWPE). They should be clean, smooth, and free from embedded debris. Worn or contaminated wear strips should be replaced. Wear strips should also be examined to see that they are firmly seated on the rails and that their leading ends are firmly attached to the leading ends of the rails. The leading edge of all rails should be relieved or bent down to prevent catching of the belt as it comes onto the rails.



Tier Pitch = Change in elevation over one revolution

UHMWPE cage bar caps on the spiral cage should also be inspected. If the cage bar caps are heavily grooved or worn, they should be replaced. Make sure they are firmly attached to the cage bars. They should be clean and free from grease or oils that could reduce the driving friction of the drum. The cage bar caps should also have rounded or beveled edges where they meet the belt. This prevents the belt edge from catching on the corner of a cage bar cap and temporarily eliminating all overdrive.

An Advantage™ belt may be installed on cage bar systems with or without cage bar caps. Bare, stainless steel cage bars will typically increase the driving force against an Advantage™ belt's inside edge. Take care to eliminate any sharp corners or rough surfaces that might gouge or prematurely wear the belt. The cage bar surface finish should be smooth to the touch.

An Advantage™ belt can similarly be installed directly on steel support rails, without UHMWPE wear strips. When implementing this alternative, the spiral operator should insure that support rails are smooth and sharp corners eliminated. The spiral operator should also be aware that the friction coefficient for steel is higher than for UHMWPE, so total belt tension (radius weight) increases with this installation alternative. See the "Spiral Belt Selection & Engineering Calculations" section for more information on friction coefficients and radius weight calculations.

Next, check motor rotation in new systems and make sure the proper number of sprockets are on the take-up drive shaft. A short piece of belting can be used as a template to properly space these sprockets on the shaft (refer to belt assembly instructions for proper locations). This is also a good time to clean all construction and repair debris from the system enclosure. This will help prevent the possibility of the belt dragging metal filings and other sharp debris into the system during installation.

Finally, take a few minutes to plan the actual installation. Determine placement of the rolls of new belt, where you will feed them into the system, and how you will gather up the old belt (if you are removing it at the same time). Each spiral system is unique, so no standard plan will suffice; however, some general installation guidelines are provided in the next section.

Conveyor belting can be heavy and awkward to handle, elevating safety concerns during its installation. Safety is, therefore, the number one priority during installation of a new belt, so it is important to make sure all safety procedures are observed, including proper lockout and tagout procedures. Special care should be taken to know where everyone is prior to starting any machine.

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Installation of Spiral Belts

Installation of a New Belt (Not a Replacement)

Always follow proper lockout / tagout procedures to ensure worker safety.

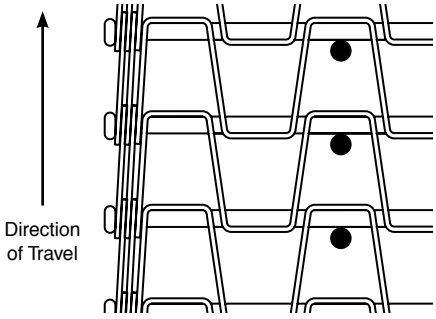
The new belt should be fed into the spiral system in the correct direction of travel. In an Omni-Flex® belt (Figure 10), the formed flat strip (picket) leads the rod. In Omni-Grid® (Figure 11) and Omni-Pro® belts (Figure 12), the link leads the rod with the link opening opposite the direction of travel. With these belts, the drive sprocket teeth come in direct contact with the rod, not the flat strip or link.

For Advantage™ belts (Figure 13), the rod leads the link with the link opening (the "legs" of the link) facing the direction of travel. This appears backward as compared to steel "Grid" belts; however, directional arrows molded into the Advantage™ links provide the correct visual orientation. On Advantage™ belts, drive sprocket teeth directly contact the link which is compressed solidly against the rod

● = drive sprocket location

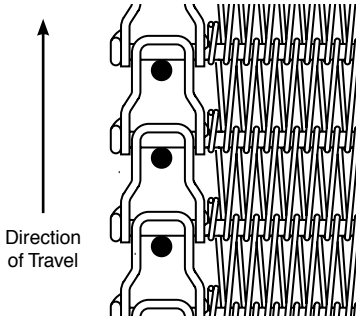
[Figure 10]

Omni-Flex®

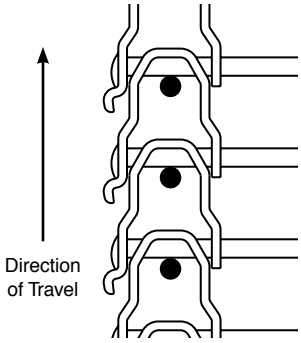


[Figure 11]

Omni-Grid®

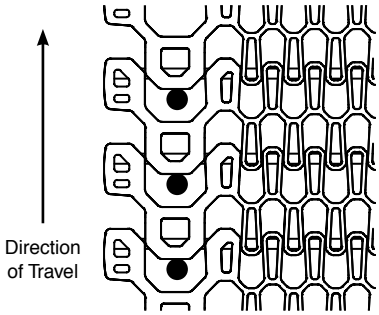


Omni-Pro®



[Figure 12]

Advantage™ Series*



[Figure 13]

** Includes Advantage™ 120 & Advantage™ 200*

TECHNICAL INFORMATION

Installation of Spiral Belts

Installation of Spiral Belts

New belts are most often installed by pulling the belt onto the support rails at the system in-feed. Once the belt is wrapped around the cage several times, the system can be energized and the drum used to help pull the belt through the system, providing the belt is held tightly against it. This can be accomplished by fastening a section of rope to the leading inside edge of the belt and pulling it tightly against the drum. Additionally, the take-up drive can sometimes be used to unwind the heavy rolls of new belt so they can be more easily fed into the system. The ability to utilize the take-up drive will be determined by the system layout and space for the rolls of new belt.

As the end of a belt roll approaches the feed-in point, the system is de-energized so the next new roll of belt may be spliced onto the succeeding roll (for splicing instructions, see the appropriate Technical Bulletin on belt assembly). Because the belt will continue running through the system for several feet after the system is stopped, it is advisable to know how much the drive will coast after the power is turned off. Otherwise, the end of the belt could run too far and delay installation.

Splicing During Installation

For an Omni-Flex® type belt, splices should always be made with the preformed buttonhead at the inside edge of the belt. The nut goes on the outside edge of the belt. Any excess thread should be trimmed off the rod and the rod and nut should be welded together. However, Omni-Grid® type belts require that both the buttonhead and nut be welded to the link. The rod also needs to be welded to the inside of the link at both edges of the belt. This prevents the possibility of one of the links (usually at the inside edge) from “tenting up.” At this point, it is a good idea to file or grind these splices and welds smooth to prevent cutting of the cage bars.

An Advantage™ belt is easier to splice than a steel belt, as no welding is required. Follow the assembly instructions, making sure that the stainless steel rod is fully seated in the link by pushing it in at a slight angle with a screwdriver or assembly tool. When correctly seated, the end of the steel rod cannot be seen from the side of the link.

As the installation progresses, make sure the belt is not catching on any framework, baffles, or doors. On tall systems, ladders or other means of observing and guiding the belt must be employed as it gets higher and higher off the floor. Never stand on the support rails or the belt as this can damage the rail and/or belt, and it is unsafe. Be sure that the leading edge of the belt does not catch on the ends of wear strip sections as these can be pulled loose. Keep in mind that the leading edge of the new belt may turn up or down, and is far more likely to hang up than other areas of the belt.

Once the belt is completely pulled into the system, the leading edge is spliced to the trailing edge to make it endless. Prior to splicing, the leading edge should be checked for damage that may have occurred during installation. If there is any doubt about the condition of the leading edge, it is best to remove a few pitches. New belts normally lengthen out during the first few weeks of operation. On initial installation, adjust belt length so as to position the take-up weight just above center in the take-up tower.

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Installation of Spiral Belts

Installation of a Replacement Belt

If a newly purchased belt is to serve as a replacement in an existing system and it has been determined that the wear strips on the cage bars and support rails do not require replacement, then the installation of the replacement belt is potentially less involved than installation on a completely new system or one requiring cage bar or support rail cover replacement. When only the belt is replaced, the new belt can be spliced to the old belt (assuming that the new belt is the same specification as the old) at a point just after the sprocket drive. The system can then be energized and stopped to remove the old and to pull on new sections of belt, continuing until the old belt is completely removed and final splice of the new belt is in place.

After Installation

Once the new belt is installed, there are several items that should be examined before the belt is cleaned and used for production. First, check the system carefully for catch points, especially along the outside edge of the belt. The in-feed and outrun are particularly vulnerable, as the belt will typically swing wide in these areas. Also check any flanges on enclosure doors for the potential to catch on the belt when the doors are closed. While inspecting the system, make sure that the flip-up detectors or product height detectors are not going to impinge on the belt. If there are any hold-down rails on the system, be sure there is 1/4" to 3/8" clearance between the belt and the rails. Next, check the location of the drive and idler sprockets. Be sure that they are centered in the belt or link opening and are locked down to the shaft. Any filler rolls should also be checked to ensure they are set in place and are the proper size to work with the sprockets.

After the system has been thoroughly checked for proper clearances, it should be energized to confirm it is running correctly. Start the system out at slow speed and continue to monitor the sprocket placement. Listen and observe for any indication of belt impingement on the framework or other parts of the system. Note the position of the take-up drive at start-up and watch whether it rises or falls as the system operates. A take-up roll that rises indicates reduction of belt tension. A take-up roll that falls indicates that belt tension is rising. The position of the take-up should quickly stabilize to a mid-position. Once the system has operated for a few complete turns, check the overdrive by following the procedure outlined in the Ashworth Technical Bulletin on this subject. Adjust the overdrive, if necessary, to achieve the lowest possible belt tension with the belt operating smoothly.

If possible, the system should be operated for up to 200 hours before final cleaning and product loading. This is particularly important for new systems utilizing a steel belt, as this will help the belt components polish each other and reduce the chances of excessive internal wear. See the “Cleaning & Lubricating” section for further information.

Cleaning & Lubricating

Ashworth Conveyor Belts are to be cleaned and sanitized using the following 7-Step Process.

Step 1: Dry Wipedown

Clean the conveyor belt and related equipment by removing large pieces of soil and food from the belt's surfaces. Also make sure compacted debris is removed from the sprockets, idler wheels and support rails (heretofore referred to as the belt's support system).

When cleaning the conveyor belt, work in a top-down, inside-edge-of-belt to outside-edge-of-belt pattern. All subsequent cleaning and sanitizing steps of this procedure are to be completed using this same pattern.

Step 2: Pre-Rinse

Pre-rinse the belt and support system with hot water heated to a temperature of 125°–130°F (52–54°C) and at a pressure of 150–300 psi (10–20 bar). Care is to be taken that floor drains are kept clear of debris to avoid pooling of water.

Step 3: Apply Detergent

Apply an appropriate foaming detergent mixture to the belt and support system at 150 psi (10 bar). The detergent foam can be allowed to remain on the belt for 10–15 minutes, but should not be allowed to dry, as dried chemical is often more difficult to completely remove and may support the growth of biofilms.

Step 4: Rinse & Inspect

Flood rinse the belt and support system with 40–60 psi (2.8–4.1 bar) water at 125°–130°F (52°–54°C). After the rinse, inspect the belt and support system components to ensure it is free of soils, water beads, hazes, films, and other residue. This inspection should be conducted using sight, touch, and smell.

Step 5: Pre-Op the Belt

Verify that all cleaning chemical is removed from the conveyor belt, sprockets, idlers, and support rails. It's recommended that pH testing be used as an aid in determining that the belt is free of the detergent. Run the conveyor belt slowly to help dry it and its supports, and remove any pooled water from the floor.

Step 6: Inspect & Release for Sanitizing

Re-inspect the belt and support system using sensory analysis to detect the presence of bacteria. Ashworth recommends adenosine triphosphate (ATP) testing be used to verify absence of bacteria. ATP is present in all animal, vegetable, yeast, and mold cells. Detection of ATP indicates contamination by at least one of these sources. Correct any noted deficiencies detected by ATP testing and re-lubricate the belt and support rails as directed by Ashworth. Release the belt for sanitizing.

Step 7: Sanitize the Belt

Apply the appropriate sanitizers at "no rinse" concentrations, following the manufacturer's recommendations. Run the belt as the sanitizer is applied in order to ensure that all parts of the belt and support system have been completely exposed to the chemical. Squeegee any sanitizer that has pooled on the floor into floor drains.

Important Cautionary Notes

1. Ashworth recommends that water pressure not exceed 300 psi (20.7 bar) at any stage of the cleaning process to avoid contamination resulting from overspray of water and chemicals.
2. A caustic wash may be necessary due to health or other safety requirements. We recommend that

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Cleaning & Lubricating

caustic solutions not be left on the belt or used in any stronger concentrations than necessary to meet local regulations. Use of these products must strictly follow the manufacturer's directions.

Of special concern is the use of caustic or harsh chemicals on plastic belts, support rails, and cage bar caps. These chemicals can soften plastic materials which can lead to damage or failure of the belt and other components. Food processors should likewise be aware that chlorine-based cleaning products can also affect stainless steel and rubber components that are common to food processing equipment.

3. Conveyors and equipment that operate Ashworth conveyor belts can be large and often have exposed moving parts. When working around operating conveying equipment, workers must be aware of possible safety hazards and work within their company's safety guidelines to prevent personal injury.
4. It is sound practice to alternate appropriate sanitizers to prevent development of bacteria resistance to any one sanitizing agent and to prevent overgrowth by certain bacteria strains.

Clean the Support Rails

Cleaning support rails is important for two reasons: First, food debris and other soil do become entrapped between the closed contact area of the conveyor belt and the support rails. Second, cleaning the support rails reduces friction between the rails and the belt and, therefore, reduces system tension.

Because the support rails are not adequately cleaned by typical Clean-In-Place (CIP) methodology and because complete removal of the belt from the rails is usually not part of routine CIP procedures, alternative methods must sometimes be employed.

One such method is to attach clean, non-abrasive cleaning pads to the underside of the belt and then energize the system to pull the pads along the entire length of the support rails. Pads should be visually checked and replaced when they become ineffective at cleaning. Remove the pads before they reach drive sprockets. It should be noted that this method may not work in every application, and that it is not a substitute for removing the belt and thoroughly cleaning and sanitizing the support rails using the methodology presented in the previous section.

Lubricate the Belt

Stainless Steel Belts:

A light application of silicon or other food grade lubricant should be applied to the belt. This allows the belt to polish the wear surfaces and prevent galling. The lubricant also acts as a film to separate metal contact surfaces and minimize wear. On spiral systems, never lubricate the inside belt edge (where it contacts the cage) in order to maintain proper friction and drive.

Advantage™ Belts:

Lubrication is not required under normal operating conditions. However, lubrication will enhance belt performance, particularly at higher belt speeds or when conveying heavy product loads. Make sure any lubricant used is compatible with the belt material and the product. On spiral systems, never lubricate the inside belt edge (where it contacts the cage) in order to maintain proper friction and drive.

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Cleaning & Lubricating

Suggested lubricants for both stainless steel and plastic belts:

- General Electric GE-SF-18-350
- Dow Corning 200 Fluid
- CLEARCO-SFG-350 Silicon Concentrate

All are acceptable to -60°F (-51°C) and are FDA compliant.

Application Method:

- The lubricant is generally fed from a drip reservoir onto a brush which contacts the belt's underside in the return path.
- Install and activate the lubricator for either a predetermined application interval or when the drive motor's current consumption indicates excessive belt tension.

Run-in the Belt

Steel Belts:

Just like a new car's engine that requires a break-in period to allow moving metallic parts to "wear-in," new steel conveyor belts also require a break-in period. During this process, microscopic peaks and valleys of the new belt's wear surfaces are gently abraded and filed to form a smooth, polished surface. A by-product of this process is the formation of small black particles, so-called "black specks," that look like household pepper. These can collect on the belt or conveyor surfaces and can fall on transported product.

For most steel belts, the optimal run-in period is 150–200 hours which varies somewhat based on belt type and its application. Typically, Omni-Flex® belts require a slightly longer run-in period and Omni-Grid® and Omni-Pro® belts require slightly less. During run-in, wash new belts with a mild dishwashing mixture and re-lubricate every 48 hours. After a successful run-in, the possibility of black speck generation is negligible.

Advantage™ Belts:

A run-in period is not normally required for Advantage™ belts. However, a thorough cleaning is recommended prior to beginning production.

The following measures will aid in the removal of any debris that is created during run-in:

- Install strong bar magnets at the terminal rolls or at the take-up. The addition of an air knife will assist in blowing the debris off the belt and onto the magnets.
- Ensure the belt is electrically grounded. The belt will carry a small static electrical charge generated from the friction between the belt and wear strips. This is particularly true for Advantage™ belts. If this charge is not dissipated, it will tend to hold the debris to the belt surface.
- Periodically wash the walls, floor and ceiling and other surrounding equipment to help eliminate the possibility of air born contamination of the belt and associated surfaces.
- Periodically measure and adjust belt tension to specified levels. Excess tension accelerates belt wear and increases the amount of contaminants on the belt and support rails, increasing friction. System tension may be reduced by increasing overdrive or by cleaning and lubricating the support rails (never lubricate the cage or the inside edge of the belt).

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Troubleshooting Spiral Belts

Troubleshooting Spiral Belts

High Tension

High tension occurs when the coefficient of friction between belt and support rails is higher than coefficient of friction between belt and cage. The estimated system tension is also called the “Radius Weight” of the system.

The formula for this calculation is:

Radius Weight = Radius x Weight x [f(rail) / f(cage)]

Where:

f = friction

Unequal friction conditions can dramatically alter the system’s tensions.

Example:

Assuming a radius to the tension link of 10 ft (3.05 m), and a combined weight of the belt plus load equal to 10 lb/ft (14.9 kg/m), with the rail and cage friction both at 0.2, the radius weight or tension equals 100 lb. (445 Newton’s).

The table below indicates changes in tension when coefficients of friction are altered.

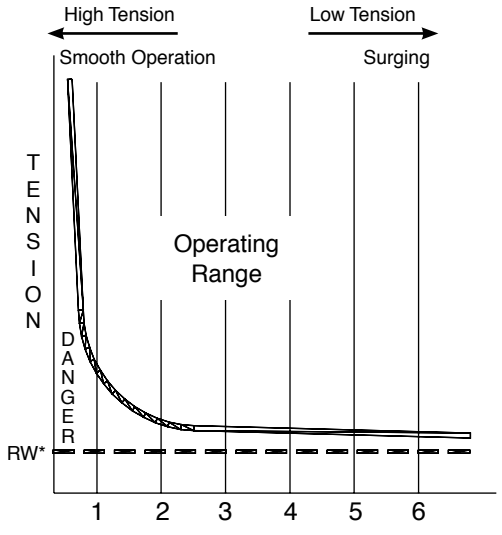
RAILS	CAGE	fr	fc	fr/fc	RW
Normal	Normal	0.2	0.2	1.0	100 (445 N)
Dirty	Normal	0.3	0.2	1.5	150 (667 N)
Normal	Oily	0.2	0.1	2.0	200 (890 N)
Dirty	Oily	0.3	0.1	3.0	300 (1334 N)
Oily	Oily	0.1	0.1	1.0	100 (445 N)
Oily	Normal	0.1	0.2	0.5	50 (222 N)

Changes in the frictional relationships, caused by oil and dirt, can have a beneficial or destructive influence on the belt and its chances for a long useful life.

Another common cause of high system tension is a lack of overdrive. Spiral operators, in an attempt to make the belt operate smoothly, will sometimes reduce the overdrive in the system. By doing so, they also create high belt tension. Often, a compromise between high tension and smoother operation of the system, and greater overdrive with its accompanying looping or surging, is required. In the case of severe or unacceptable surging, system overdrive should be reduced to the point where the belt surging just stops.

Figure 15 shows the effect of overdrive on tension.

By examining the surface of the cage bars, a good



[Figure 15]

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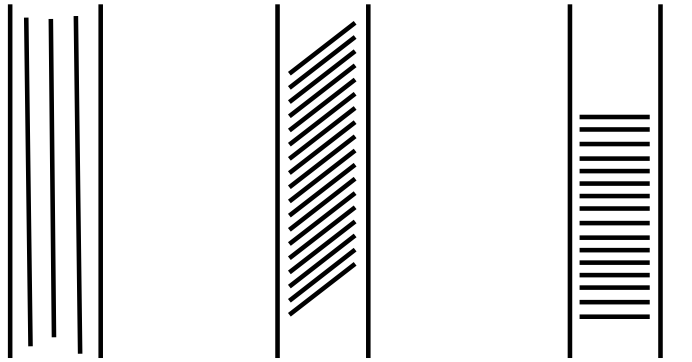
Troubleshooting Spiral Belts

estimation of the overdrive can be made. If the wear marks on the cage bar wear strips are nearly vertical, the system has been operating with little or no overdrive, indicating high tension within the system. The marks are made when the same buttonhead remains on the same cage bar for a long period of time as it rises up or drops down the cage surface.

Wear marks that are 30°–45° to horizontal will indicate an overdrive in the range of 2 to 4 tier heights. In this case, the system is operating with the proper amount of tension.

Finally, nearly horizontal wear marks indicate a very high amount of overdrive. High overdrive is indicative of low tension in the system and is not harmful to the belt, even if it causes some surging. If this is not objectionable to the application, the overdrive should not be re-adjusted.

Figure 16 illustrates these markings.



Vertical
Wear Marks
(No Overdrive,
High Tension)

30°–45°
Wear Marks
(Good Overdrive,
Proper Tension)

Horizontal
Wear Marks
(High Overdrive,
Low Tension)

[Figure 16]

Other possible causes of high tension within the system include:

- Hold-downs pinching the belt against the support rails
- Belt edge impinging on the conveyor structure
- Hard turning or frozen bearings on a terminal or in the take-up tower area
- Narrow area of the support structure squeezing the belt
- A twisted or crushed cage that has a smaller diameter at the mid-section of its height
- Cage diameter too small to allow continuous contact with the inside belt edge
- Damage to the belt that restricts its ability to collapse correctly around the drum or cage, inhibiting proper belt-to-cage contact and the drum's ability to efficiently drive the belt
- Damage to the belt that restricts its ability to flex on the terminals
- Missing cage bar caps, or wear strips missing from the belt supports
- Rods protruding inward and catching on the cage bars
- Loss of overdrive due to belt pitch elongation, causing higher belt speed with no increase in cage speed; this occurs when overdrive was at lower range of acceptability before stretch

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Troubleshooting Spiral Belts

Jerky Operation

Jerky operation can be caused by a number of potential problems, including:

- Surging caused by high overdrive
- Rod ends protruding in and hanging up on cage bars
- Stick-slip frictions caused by dirty or otherwise high friction wear surfaces
- Chordal action on the small sprocket at the cage drive
- Drive motor surging or pulsing

Dirty Systems

Process dirt and belt wear debris may contaminate product and reduce the useful life of the belt if the user does not practice proper cleaning. Cleaning practices and schedules are application specific. Reference Technical Bulletin TB-TC-002 for detailed discussion and recommendations.

Ice Build-Up and Damaged Overlays

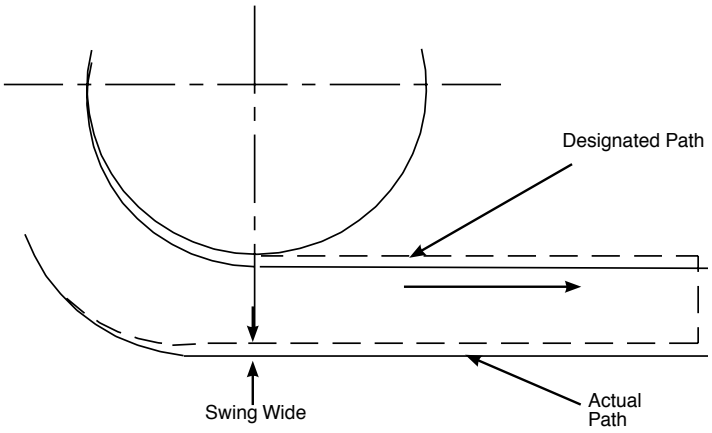
Ice build-up on terminals and support structures is a fairly evident problem but often hard to solve. The apparent solution is to defrost more often to reduce the formation of ice.

Tenting

Tenting is a symptom of too high tension within a lotension system. The solution is to reduce tension and/or to add hold down brackets.

Swing Wide

It is normal for a spiral belt to "swing wide" (Figure 17) as it exits the spiral cage, following a path that is offset but parallel to the normal tangent line to the cage. Ideally, the spiral and its out-feed should be designed to incorporate this effect. However, if the spiral design does not allow for the natural tendency of the belt to swing wide, the belt edge may come in contact with the spiral framework. In this case, the usual reaction of the spiral operator is to restrict the path of the belt from swinging wide, typically by use of rollers or shoe guides. This is not recommended as restraining the belt can have several adverse effects on its service life:



[Figure 17]

- The belt can wear through a shoe guide, allowing the edge to snag. This will eventually cause an increase in belt tension and damage the belt edge.
- Outside edge restraints can push individual rods inward. The rods can be held in this inward position by belt tension. There is then a potential for the projecting rods to catch on the vertical cage bar capping, causing damage to the belt, damage to the cage bar capping, and high belt tension.
- If the belt is pushed into a straight tangent path, the tension carried in the outside edge of the belt is shifted to the inside edge of the belt, resulting in a pronounced tendency for one edge of the belt to lead the other.