

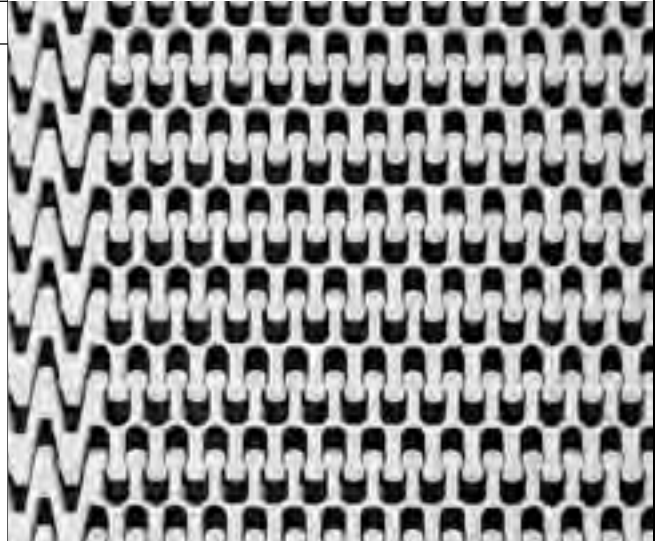
**Tight Turning Radius Flush Grid (1.7)**

	in.	mm
Pitch	1.00	25.4
Minimum Width	7	178
Width Increments	0.50	12.7
Opening Size (approximate)	0.35 × 0.30	8.9 × 7.6
Open Area	42%	
Product Contact Area	23%	
Hinge Style	Open	
Drive Method	Hinge-driven	



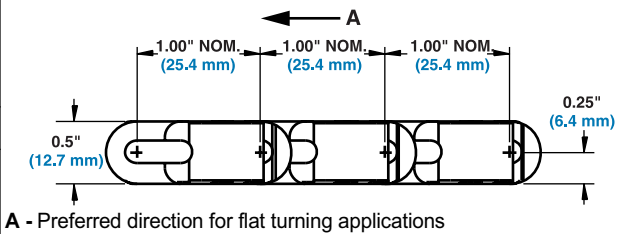
**Product Notes**

- Always check with Customer Service for precise belt width measurement and stock status before designing a conveyor or ordering a belt.
- Designed for radius applications with a minimum turning radius of 1.7 times the belt width (measured from inside edge). Maximizes plant floor space.
- Polyethylene material and tab edge belt are not recommended for low-tension capstan drive spiral applications.
- The Intralox Engineering Program will help predict the strength requirements of most radius applications, insuring that the belt is strong enough for the application.
- Belt openings pass straight through belt, making it easy to clean.
- Sprocket drive system is designed to minimize wear and requires very low return side tension.
- Available with tight turning modules built into one side or both sides of the belt. Radius belt wearstrips are available.
- Looking in the direction of flat turning travel, the minimum sprocket indent from the right side belt edge with tight turning modules is 2.875 in. (73 mm). Minimum sprocket indent from the left side belt edge with tight turning modules is 2.625 in. (66.7 mm).
- Belts can be ordered with 1.7 modules on the inside and 2.2 modules on the outside for improved strength.
- Contact sales engineering before using a belt width greater than 18 in. (457 mm) in spiral and flat turning applications.
- Belts over 18 in. (457 mm) will have a turn radius of 2.2 times the belt width (measured from inside edge).



**Additional Information**

- See "Belt selection process" (page 5)
- See "Standard belt materials" (page 18)
- See "Friction factors" (page 31)



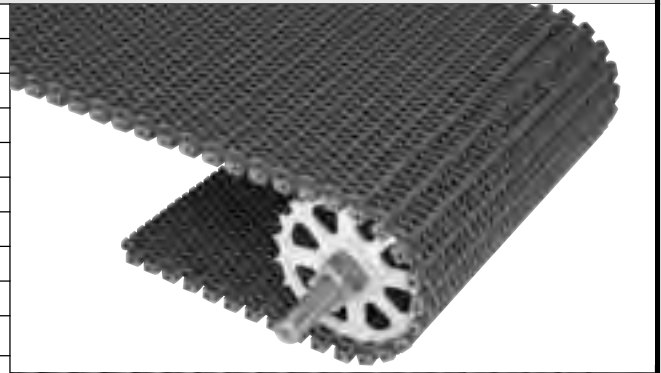
**Belt Data**

Belt Material	Standard Rod Material Ø 0.18 in. (4.57 mm)	BS	Curved Belt Strength <sup>a</sup> lb (kg)						Temperature Range (continuous) <sup>b</sup>		W Belt Weight	Agency Acceptability <sup>c</sup> 1=White, 2=Blue, 3=Natural, 4=Grey				
			Belt Widths						°F	°C		lb/ft <sup>2</sup>	kg/m <sup>2</sup>	FDA (USA)	J <sup>d</sup>	EU MC <sup>e</sup>
			12 in.	305 mm	18 in.	457 mm	24 in.	610 mm								
Polypropylene	Acetal	600	892.8	122	55	140	64	157	71	34 to 200	1 to 93	1.20	5.86	•	3	•
Acetal	Nylon	600	892.8	162	73	179	81	195	88	-50 to 200	-46 to 93	1.73	8.44	•	3	•
Polypropylene	Polypropylene <sup>f</sup>	600	892.8	80	36	91	41	102	46	34 to 220	1 to 104	1.12	5.47	•	3	•

a. The Curved Belt Strength is different for each belt width. Contact Intralox Sales Engineering for assistance with analysis.  
 b. Sideflexing applications should not exceed 180 °F (82 °C).  
 c. Prior to Intralox's development of Series 2400, USDA-FSIS Meat and Poultry discontinued publishing a list of acceptable new products designed for food contact. As of the printing of the manual, third party approvals are being investigated, but are not yet sanctioned by the USDA-FSIS.  
 d. Japan Ministry of Health, Labour, and Welfare  
 e. European Migration Certificate providing approval for food contact according to EU Directive 2002/72/EC and all its amendments to date.  
 f. Polypropylene rods can be installed in polypropylene belts when extra chemical resistance is required. Please note lower belt strength.

### Turning Radius Flush Grid (2.2)

	in.	mm
Pitch	1.00	25.4
Minimum Width	4	102
Width Increments	0.50	12.7
Opening Size (approximate)	0.35 × 0.30	8.9 × 7.6
Open Area	42%	
Product Contact Area	23%	
Hinge Style	Open	
Drive Method	Hinge-driven	



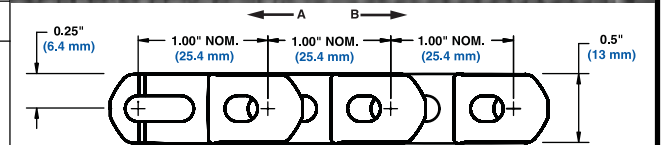
#### Product Notes

- Always check with Customer Service for precise belt width measurement and stock status before designing a conveyor or ordering a belt.
- Designed for radius and low-tension capstan drive spiral applications with a minimum turning radius of 2.2 times the belt width (measured from inside edge).
- Available with hold down guide, see page 261 for details.
- The minimum nosebar diameter is 1.5 in. (38.1 mm) with hold down guides and 1.375 in. (34.9 mm) without hold down guides.
- The Intralox Engineering Program will help predict the strength requirements of most radius and low-tension capstan drive spiral applications, insuring that the belt is strong enough for the application.
- Belt openings pass straight through belt, making it easy to clean.
- Sprocket drive system is designed to minimize wear and requires very low return side tension.
- Radius belt wearstrips are available.
- Contact Sales Engineering before using a belt width greater than 36 in. (914 mm) in a flat turning or spiral applications.



#### Additional Information

- See "Belt selection process" (page 5)
- See "Standard belt materials" (page 18)
- See "Special application belt materials" (page 18)
- See "Friction factors" (page 31)



- A - Preferred direction for flat turning applications
- B - Preferred direction for high speed applications

### Belt Data

Belt Material	Standard Rod Material Ø 0.18 in. (4.57 mm)	BS	Curved Belt Strength <sup>a</sup> lb (kg)						Temperature Range (continuous) <sup>b</sup>		W	Agency Acceptability <sup>c</sup>						
			Belt Widths									Belt Weight		1=White, 2=Blue, 3=Natural, 4=Grey				
			12 in.	305 mm	18 in.	457 mm	24 in.	610 mm	°F	°C		lb/ft <sup>2</sup>	kg/m <sup>2</sup>	FDA (USA)	USDA Dairy <sup>d</sup>	A <sup>e</sup>	J <sup>f</sup>	EU MC <sup>g</sup>
Polypropylene	Acetal	1200	1785	175	80	200	91	225	102	34 to 200	1 to 93	1.10	5.40	•	•	•	3	•
Acetal	Nylon	1700	2528	250	114	280	127	300	136	-50 to 200	-46 to 93	1.63	7.86	•	•	•	3	•
Polypropylene	Polypropylene <sup>h</sup>	1000	1487	114	52	130	59	146	67	34 to 220	1 to 104	1.04	5.11	•	•	•	3	•

- The Curved Belt Strength is different for each belt width. Contact Intralox Sales Engineering for assistance with analysis.
- Sideflexing applications should not exceed 180 °F (82 °C).
- Prior to Intralox's development of Series 2400, USDA-FSIS Meat and Poultry discontinued publishing a list of acceptable new products designed for food contact. As of the printing of the manual, third party approvals are being investigated, but are not yet sanctioned by the USDA-FSIS.
- USDA Dairy acceptance requires the use of a clean-in-place system.
- Australian Quarantine Inspection Service
- Japan Ministry of Health, Labour, and Welfare
- European Migration Certificate providing approval for food contact according to EU Directive 2002/72/EC and all its amendments to date.
- Polypropylene rods can be installed in polypropylene belts when extra chemical resistance is required. Please note lower belt strength.

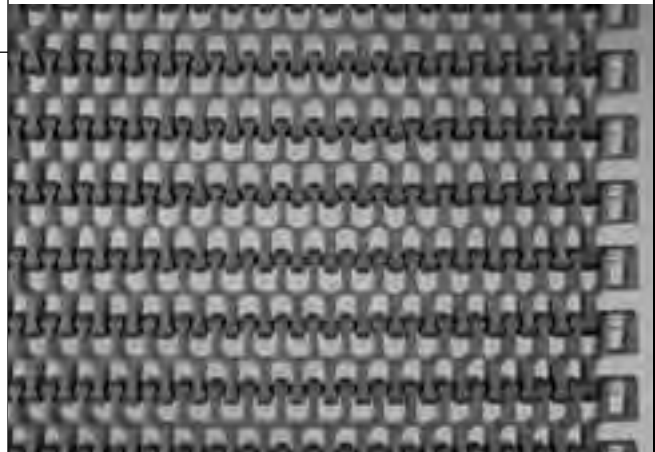
**Flush Grid High Deck**

	in.	mm
Pitch	1.00	25.4
Minimum Width	4	102
Width Increments	0.50	12.7
Opening Size (approximate)	0.35 × 0.30	8.9 × 7.6
Open Area	42%	
Product Contact Area	23%	
Hinge Style	Open	
Drive Method	Hinge-driven	



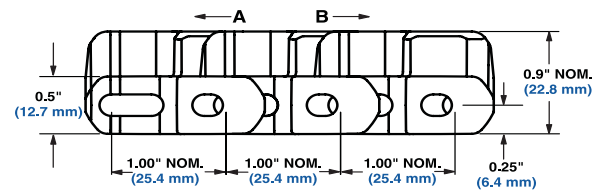
**Product Notes**

- Always check with Customer Service for precise belt width measurement and stock status before designing a conveyor or ordering a belt.
- Flush Grid High Deck is 0.4 in. (10 mm) higher than the standard Series 2400 belt.
- Makes turns with an inside radius of 2.2 times the belt width.
- Flush Grid High Deck has more beam strength than the standard Series 2400 belt, which can reduce retrofit costs in spirals.
- Works with standard Series 2400 wearstrips.
- Standard indent for Flush Grid High Deck is 0.875 in. (22 mm).



**Additional Information**

- See "Belt selection process" (page 5)
- See "Standard belt materials" (page 18)
- See "Special application belt materials" (page 18)
- See "Friction factors" (page 31)



**A** -Preferred direction for flat turning applications  
**B** -Preferred direction for high speed applications

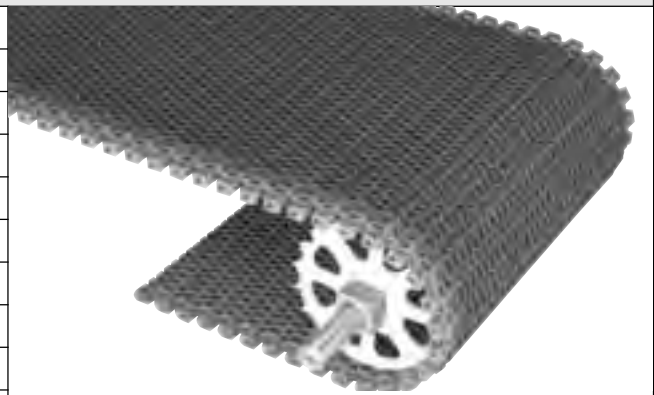
**Belt Data**

Belt Material	Standard Rod Material Ø 0.18 in. (4.57 mm)	<b>BS</b> Straight Belt Strength	Curved Belt Strength <sup>a</sup> lb (kg)						Temperature Range (continuous) <sup>b</sup>		<b>W</b> Belt Weight	Agency Acceptability <sup>c</sup> 1=White, 2=Blue, 3=Natural, 4=Grey						
			Belt Widths						°F	°C		lb/ft <sup>2</sup>	kg/m <sup>2</sup>	FDA (USA)	USDA Dairy <sup>d</sup>	A <sup>e</sup>	J <sup>f</sup>	EU MC <sup>g</sup>
			12 in.	305 mm	18 in.	457 mm	24 in.	610 mm										
		lb/ft	kg/m	lb	kg	lb	kg	lb	kg									
Polypropylene	Acetal	1200	1786	175	80	200	91	225	102	34 to 200	1 to 93	1.90	9.28	•	•	•	3	•
Acetal	Acetal	1700	2530	250	114	280	127	300	136	-50 to 200	-46 to 93	3.04	14.84	•	•	•	3	•

a. The Curved Belt Strength is different for each belt width. Contact Intralox Sales Engineering for assistance with analysis.  
b. Sideflexing applications should not exceed 180 °F (82 °C).  
c. Prior to Intralox's development of Series 2400, USDA-FSIS Meat and Poultry discontinued publishing a list of acceptable new products designed for food contact. As of the printing of the manual, third party approvals are being investigated, but are not yet sanctioned by the USDA-FSIS.  
d. USDA Dairy acceptance requires the use of a clean-in-place system.  
e. Australian Quarantine Inspection Service  
f. Japan Ministry of Health, Labour, and Welfare  
g. European Migration Certificate providing approval for food contact according to EU Directive 2002/72/EC and all its amendments to date.

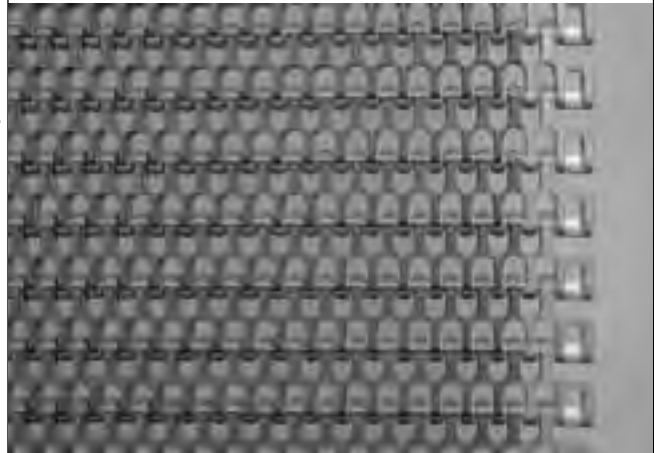
**Turning Radius Friction Top (2.2)**

	in.	mm
Pitch	1.00	25.4
Minimum Width	4	102
Width Increments	0.50	12.7
Opening Size (approximate)	0.35 × 0.30	8.9 × 7.6
Open Area	42%	
Product Contact Area	23%	
Hinge Style	Open	
Drive Method	Hinge-driven	



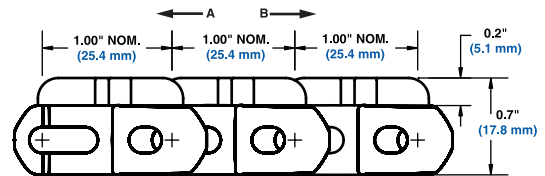
**Product Notes**

- Always check with Customer Service for precise belt width measurement and stock status before designing a conveyor or ordering a belt.
- Available with hold down guide, see page 261 for details.
- The minimum nosebar diameter is 1.5 in. (38.1 mm) with hold down guides and 1.375 in. (34.9 mm) without hold down guides.
- Radius belt wearstrips are available.
- Grey rubber has a hardness of 64 Shore A.
- White rubber has a hardness of 55 Shore A.
- Contact Sales Engineering before using a belt width greater than 36 in. (914 mm) in a flat turning or spiral applications.
- Indent for friction surface is molded at 1.125" (28.6mm).
- Temperature, environmental conditions and product characteristics affect the effective maximum degree of incline. Take these items into consideration when designing conveyor systems utilizing these belts.



**Additional Information**

- See "Belt selection process" (page 5)
- See "Standard belt materials" (page 18)
- See "Special application belt materials" (page 18)
- See "Friction factors" (page 31)



**A** -Preferred direction for flat turning applications  
**B** -Preferred direction for high speed applications

SECTION 2

2400

**Belt Data**

Belt Material	Standard Rod Material Ø 0.18 in. (4.57 mm)	BS	Curved Belt Strength <sup>a</sup> lb (kg)						Temperature Range (continuous)		W	Agency Acceptability <sup>b</sup>				
			Belt Widths									Belt Weight				
			Straight Belt Strength		12 in.	305 mm	18 in.	457 mm	24 in.	610 mm		°F	°C	lb/ft <sup>2</sup>	kg/m <sup>2</sup>	FDA (USA)
Polypropylene	Acetal	1200	1785	175	80	200	91	225	102	34 to 150	1 to 66	1.35	6.59	1		
Polypropylene	Polypropylene <sup>e</sup>	1000	1487	114	52	130	59	146	67	34 to 150	1 to 66	1.29	6.30	1		

a. The Curved Belt Strength is different for each belt width. Contact Intralox Sales Engineering for assistance with analysis.  
 b. Prior to Intralox's development of Series 2400, USDA-FSIS Meat and Poultry discontinued publishing a list of acceptable new products designed for food contact. As of the printing of the manual, third party approvals are being investigated, but are not yet sanctioned by the USDA-FSIS.  
 c. Japan Ministry of Health, Labour, and Welfare  
 d. European Migration Certificate providing approval for food contact according to EU Directive 2002/72/EC and all its amendments to date.  
 e. Polypropylene rods can be installed in polypropylene belts when extra chemical resistance is required. Please note lower belt strength.

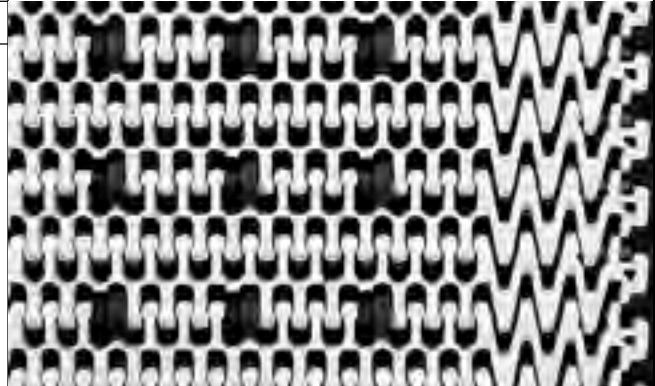
**Tight Turning Radius Flush Grid (2.4) with Insert Rollers**

	in.	mm
Pitch	1.00	25.4
Minimum Width	9	229
Width Increments	1.00	25.4
Opening Size (approximate)	0.35 × 0.30	8.9 × 7.6
Open Area	42%	
Product Contact Area	23%	
Hinge Style	Open	
Drive Method	Hinge-driven	



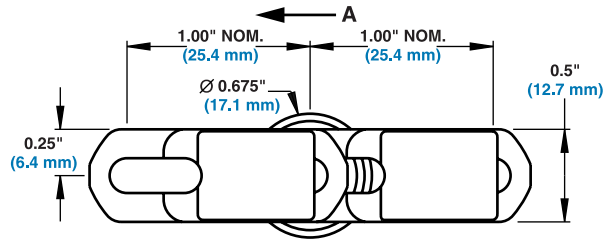
**Product Notes**

- Always check with Customer Service for precise belt width measurement and stock status before designing a conveyor or ordering a belt.
- For radius applications requiring low back pressure accumulation with minimum radius of 2.4 times belt width (measured from inside edge).
- Standard Roller Width Spacings: 2 in. (51 mm), 3 in. (76 mm) or 4 in. (102 mm).
- Standard Roller Row Spacings: 2 in. (51 mm) or 4 in. (102 mm).
- Roller Indents: 3.5 in. (89 mm) or 4 in. (102 mm) based on roller width spacing selected.
- Sprockets must NOT be placed in line with rollers.
- For low back pressure applications, place wearstrip between rollers. For driven applications, place wearstrip directly under rollers.
- Contact Sales Engineering before using a belt width greater than 24 in. (610 mm) in a flat turning or spiral applications.
- Belts 12 in. (305 mm) wide and less have a turn ratio of 1.7.



**Additional Information**

- See "Belt selection process" (page 5)
- See "Standard belt materials" (page 18)
- See "Special application belt materials" (page 18)
- See "Friction factors" (page 31)



A - Preferred direction for flat turning applications

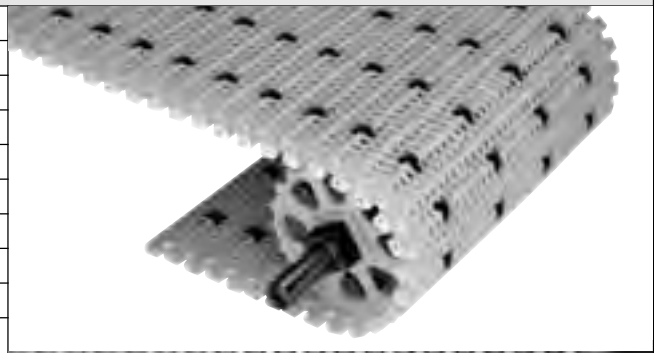
**Belt Data**

Belt Material	Standard Rod Material Ø 0.18 in. (4.57 mm)	BS		Curved Belt Strength <sup>a</sup> lb (kg)								Temperature Range (continuous) <sup>b</sup>		W Belt Weight		Agency Acceptability <sup>c</sup> 1=White, 2=Blue, 3=Natural, 4=Grey		
				Straight Belt Strength		Roller Indents		Belt Widths										
		lb/ft	kg/m	in.	mm	12 in.	305 mm	18 in.	457 mm	24 in.	610 mm	°F	°C	lb/ft <sup>2</sup>	kg/m <sup>2</sup>	FDA (USA)	J <sup>d</sup>	EU MC <sup>e</sup>
Polypropylene	Acetal	500	744	3.5 or 4.0	89 or 102	122	55	140	64	157	71	34 to 200	1 to 93	1.20	5.86	•	3	•
Acetal	Nylon	500	744	3.5 or 4.0	89 or 102	162	73	179	81	195	88	-50 to 200	-46 to 93	1.73	8.44	•	3	•
Polypropylene	Polypropylene	500	744	3.5 or 4.0	89 or 102	80	36	91	41	102	46	34 to 220	1 to 104	1.12	5.47	•	3	•

a. The Curved Belt Strength is different for each belt width. Contact Intralox Sales Engineering for assistance with analysis.  
 b. Sideflexing applications should not exceed 180 °F (82 °C).  
 c. Prior to Intralox's development of Series 2400, USDA-FSIS Meat and Poultry discontinued publishing a list of acceptable new products designed for food contact. As of the printing of the manual, third party approvals are being investigated, but are not yet sanctioned by the USDA-FSIS.  
 d. Japan Ministry of Health, Labour, and Welfare  
 e. European Migration Certificate providing approval for food contact according to EU Directive 2002/72/EC and all its amendments to date.

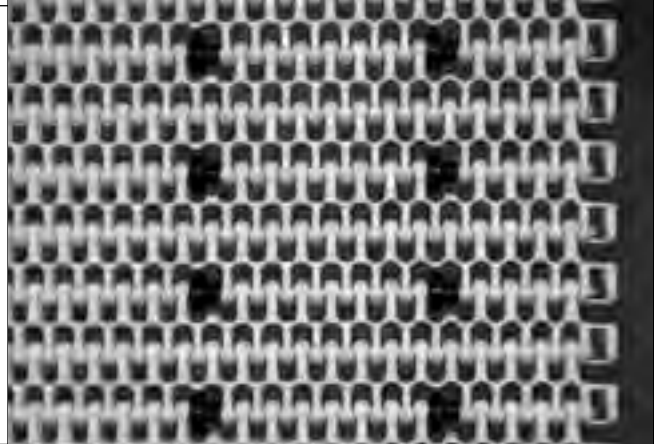
### Turning Radius Flush Grid (2.8) with Insert Rollers

	in.	mm
Pitch	1.00	25.4
Minimum Width	6	152
Width Increments	1.00	25.4
Opening Size (approximate)	0.35 × 0.30	8.9 × 7.6
Open Area	42%	
Product Contact Area	23%	
Hinge Style	Open	
Drive Method	Hinge-driven	



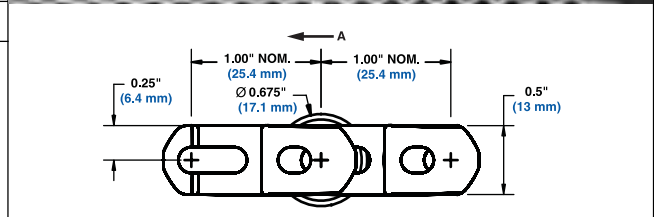
#### Product Notes

- Always check with Customer Service for precise belt width measurement and stock status before designing a conveyor or ordering a belt.
- This belt uses the Series 2400 2.2 Turning Radius Flush Grid as its base.
- Due to roller placement, the turning radius increases to 2.8.
- For radius applications requiring low back pressure accumulation with minimum radius of 2.8 times belt width (measured from inside edge).
- Standard Roller Width Spacings: 2 in. (51 mm), 3 in. (76 mm) or 4 in. (102 mm).
- Standard Roller Row Spacings: 2 in. (51 mm) or 4 in. (102 mm).
- Roller Indents: 2 in. (51 mm), 2.5 in. (63 mm), 3 in. (76 mm) or 3.5 in. (89 mm) based on roller width spacing selected.
- Minimum width with Hold Down Guides is 8 in. (203 mm).
- Minimum roller indent with Hold Down Guides is 3 in. (76 mm).
- Sprockets must NOT be placed in line with rollers.
- For low back pressure applications, place wearstrip between rollers. For driven applications, place wearstrip directly under rollers.
- Contact Sales Engineering before using a belt width greater than 24 in. (610 mm) in a flat turning or spiral applications.



#### Additional Information

- See "Belt selection process" (page 5)
- See "Standard belt materials" (page 18)
- See "Special application belt materials" (page 18)
- See "Friction factors" (page 31)




A - Preferred direction for flat turning applications

### Belt Data

Belt Material	Standard Rod Material Ø 0.18 in. (4.57 mm)	BS Straight Belt Strength						Roller Indents		Curved Belt Strength <sup>a</sup> lb (kg)						Temperature Range (continuous) <sup>b</sup>		W Belt Weight		Agency Acceptability <sup>c</sup> 1=White, 2=Blue, 3=Natural, 4=Grey		
		Roller Width Spacing								Belt Widths												
		2 in.	51 mm	3 in.	76 mm	4 in.	102 mm			12 in.	305 mm	18 in.	457 mm	24 in.	610 mm							
lb/ft	kg/m	lb/ft	kg/m	lb/ft	kg/m	in.	mm	lb	kg	lb	kg	lb	kg	°F	°C	lb/ft <sup>2</sup>	kg/m <sup>2</sup>	FDA (USA)	J <sup>d</sup>	EU MC <sup>e</sup>		
Polypropylene	Acetal	700	1040	800	1190	900	1340	2	51	130	60	150	65	165	75	34 to 200	1 to 93	1.21	1.21	•	3	•
								2.5 to 3.5	64 to 89	175	80	200	91	225	102							
Acetal	Nylon	1000	1490	1200	1780	1300	1940	2	51	185	85	210	95	225	100	-50 to 200	-46 to 93	1.61	7.68	•	3	•
								2.5 to 3.5	64 to 89	250	114	280	127	300	136							
Polypropylene	Polypropylene	600	890	700	1040	800	1190	2	51	85	35	95	40	105	50	34 to 220	1 to 104	1.04	5.11	•	3	•
								2.5 to 3.5	64 to 89	114	52	130	59	146	67							

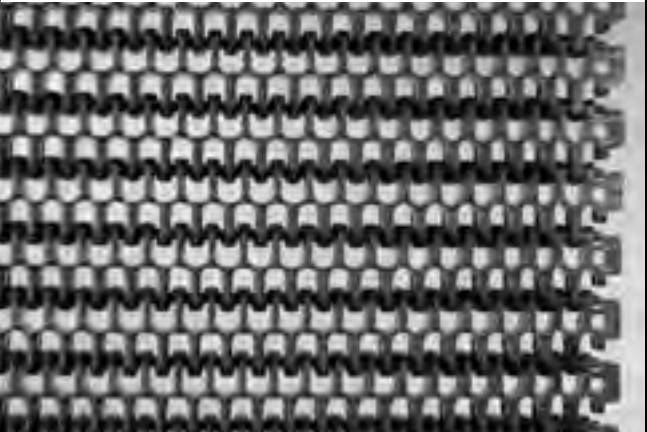
a. The Curved Belt Strength is different for each belt width. Contact Intralox Sales Engineering for assistance with analysis.  
 b. Sideflexing applications should not exceed 180 °F (82 °C).  
 c. Prior to Intralox's development of Series 2400, USDA-FSIS Meat and Poultry discontinued publishing a list of acceptable new products designed for food contact. As of the printing of the manual, third party approvals are being investigated, but are not yet sanctioned by the USDA-FSIS.  
 d. Japan Ministry of Health, Labour, and Welfare  
 e. European Migration Certificate providing approval for food contact according to EU Directive 2002/72/EC and all its amendments to date.

<b>Raised Rib</b>		
	in.	mm
Pitch	1.00	25.4
Minimum Width	4	102
Width Increments	0.50	12.7
Opening Size (approximate)	0.35 × 0.30	8.9 × 7.6
Open Area	42%	
Product Contact Area	18%	
Hinge Style	Open	
Drive Method	Hinge-driven	



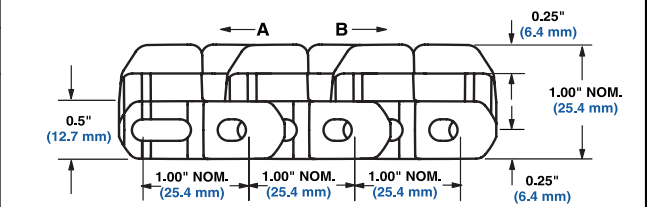
**Product Notes**

- Always check with Customer Service for precise belt width measurement and stock status before designing a conveyor or ordering a belt.
- Raised Rib belt deck is 0.5 inch (12.7 mm) higher than the standard Series 2400 belt.
- Makes turns with an inside turning radius of 2.2 times the belt width.
- Facilitates smooth transfers of small packages with the addition of transfer plates.
- Raised Rib style permits ample airflow through the belt for cooling in food processing applications.
- Raised Rib deck has more beam strength than the standard Series 2400 belt, which can reduce retrofit costs in spirals.
- Works with standard Series 2400 wearstrips.
- Standard indent for Raised Rib belt deck is 1.12 inches (28.6 mm).



**Additional Information**

- See "Belt selection process" (page 5)
- See "Standard belt materials" (page 18)
- See "Special application belt materials" (page 18)
- See "Friction factors" (page 31)





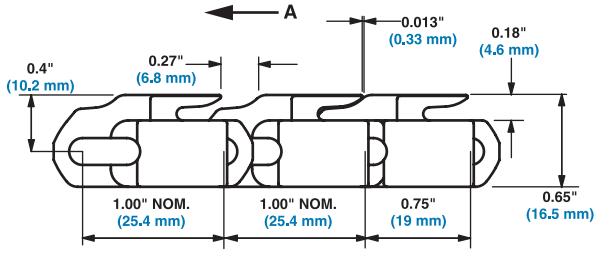
**A** -Preferred direction for flat turning applications  
**B** -Preferred direction for high speed applications

<b>Belt Data</b>																
Belt Material	Standard Rod Material Ø 0.18 in. (4.57 mm)	<b>BS</b> Straight Belt Strength	Curved Belt Strength <sup>a</sup> lb (kg)						Temperature Range (continuous) <sup>b</sup>		<b>W</b> Belt Weight	Agency Acceptability <sup>c</sup> 1=White, 2=Blue, 3=Natural, 4=Grey				
			Belt Widths													
			12 in.	305 mm	18 in.	457 mm	24 in.	610 mm	°F	°C		lb/ft <sup>2</sup>	kg/m <sup>2</sup>	FDA (USA)	J <sup>d</sup>	EU MC <sup>e</sup>
Polypropylene	Acetal	1200	1785	175	80	200	91	225	102	34 to 200	1 to 93	1.98	9.68	•	3	•
Acetal	Nylon	1700	2528	250	114	280	127	300	136	-50 to 200	-46 to 93	3.00	14.67	•	3	•
Polypropylene	Polypropylene <sup>f</sup>	1000	1487	114	52	130	59	146	67	34 to 220	1 to 104	1.92	9.39	•	3	•

a. The Curved Belt Strength is different for each belt width. Contact Intralox Sales Engineering for assistance with analysis.  
b. Sideflexing applications should not exceed 180 °F (82 °C).  
c. Prior to Intralox's development of Series 2400, USDA-FSIS Meat and Poultry discontinued publishing a list of acceptable new products designed for food contact. As of the printing of the manual, third party approvals are being investigated, but are not yet sanctioned by the USDA-FSIS.  
d. Japan Ministry of Health, Labour, and Welfare  
e. European Migration Certificate providing approval for food contact according to EU Directive 2002/72/EC and all its amendments to date.  
f. Polypropylene rods can be installed in polypropylene belts when extra chemical resistance is required. Please note lower belt strength.

Radius Flat Top		
	in.	mm
Pitch	1.00	25.4
Minimum Width	6	152
Width Increments	0.50	12.7
Open Area	0%	
Product Contact Area	66%	
Hinge Style	Open	
Drive Method	Hinge-driven	
Product Notes		
<ul style="list-style-type: none"> <li>• <b>Always check with Customer Service for precise belt width measurement and stock status before designing a conveyor or ordering a belt.</b></li> <li>• Minimum nosebar diameter is 1.375 in. (34.9 mm).</li> <li>• The Intralox Engineering Program will help predict strength requirements of most radius applications, ensuring the belt is strong enough for the application.</li> <li>• Sprocket drive system is designed to minimize wear and requires very low returnside tension.</li> <li>• Radius belt wearstrips are available.</li> <li>• Contact Sales Engineering before using a belt width greater than 36 in. (914 mm).</li> <li>• Patented belt design provides more support for sensitive products in a flat turning application.</li> <li>• Flat, closed surface successfully conveys small products that would fall through belts with open area.</li> <li>• Makes turns with an inside turning radius of 2.2 times the belt width.</li> </ul>		
Additional Information		
<ul style="list-style-type: none"> <li>• See "Belt selection process" (page 5)</li> <li>• See "Standard belt materials" (page 18)</li> <li>• See "Special application belt materials" (page 18)</li> <li>• See "Friction factors" (page 31)</li> </ul>		



**A** -Preferred direction for flat turning applications

Belt Data																	
Belt Material	Standard Rod Material Ø 0.18 in. (4.57 mm)	<b>BS</b>	Curved Belt Strength <sup>a</sup> lb (kg)							Temperature Range (continuous) <sup>b</sup>		<b>W</b>	Agency Acceptability <sup>c</sup>				
			Belt Widths										Belt Weight		1=White, 2=Blue, 3=Natural, 4=Grey		
			Straight Belt Strength		12 in.	305 mm	18 in.	457 mm	24 in.	610 mm	°F				°C	lb/ft <sup>2</sup>	kg/m <sup>2</sup>
Acetal	Nylon	1700	2528	250	114	280	127	300	136	-50 to 200	-46 to 93	2.24	11.00	•	3	•	

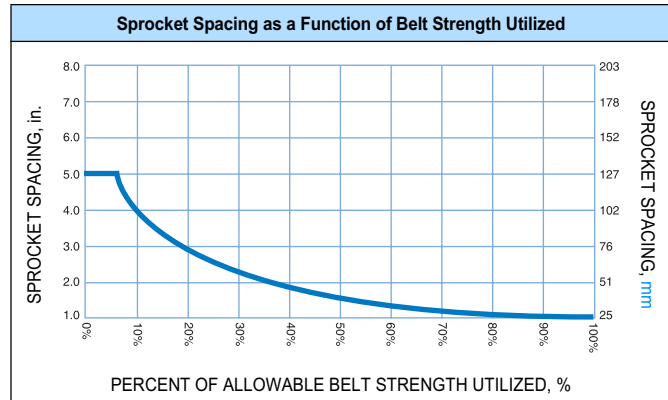
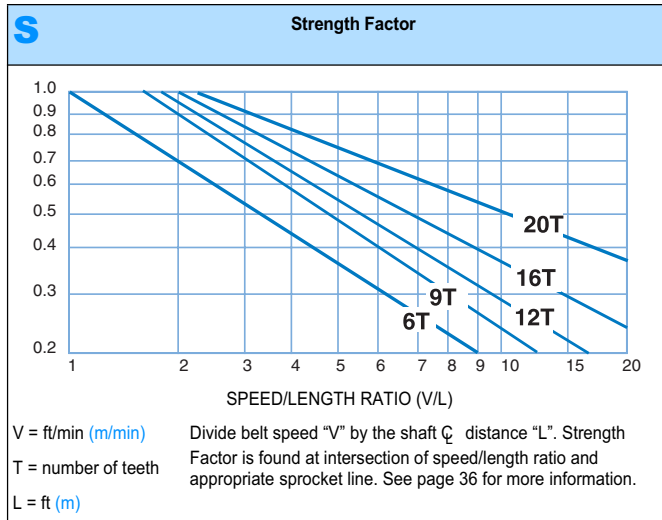
a. The Curved Belt Strength is different for each belt width. Contact Intralox Sales Engineering for assistance with analysis.  
 b. Sideflexing applications should not exceed 180 °F (82 °C).  
 c. Prior to Intralox's development of Series 2400, USDA-FSIS Meat and Poultry discontinued publishing a list of acceptable new products designed for food contact. As of the printing of the manual, third party approvals are being investigated, but are not yet sanctioned by the USDA-FSIS.  
 d. Japan Ministry of Health, Labour, and Welfare  
 e. European Migration Certificate providing approval for food contact according to EU Directive 2002/72/EC and all its amendments to date.



**Sprocket and Support Quantity Reference<sup>a</sup>**

Belt Width Range <sup>b</sup>		Minimum Number of Sprockets Per Shaft <sup>c</sup>	Wearstrips <sup>d</sup>	
in.	mm		Carryway	Returnway
4	102	1	2	2
5	127	2	2	2
6	152	2	2	2
7	178	2	2	2
8	203	2	2	2
10	254	2	3	2
12	305	3	3	2
14	356	3	3	3
15	381	5	3	3
16	406	5	3	3
18	457	5	3	3
20	508	5	4	3
24	610	5	4	3
30	762	7	5	4
32	813	7	5	4
36	914	7	5	4
42	1067	9	6	5
48	1219	11	7	5
For Other Widths, Use Odd Number of Sprockets at Maximum 6 in. (152 mm) $\varnothing$ Spacing			Maximum 9 in. (229 mm) $\varnothing$ Spacing	Maximum 12 in. (305 mm) $\varnothing$ Spacing

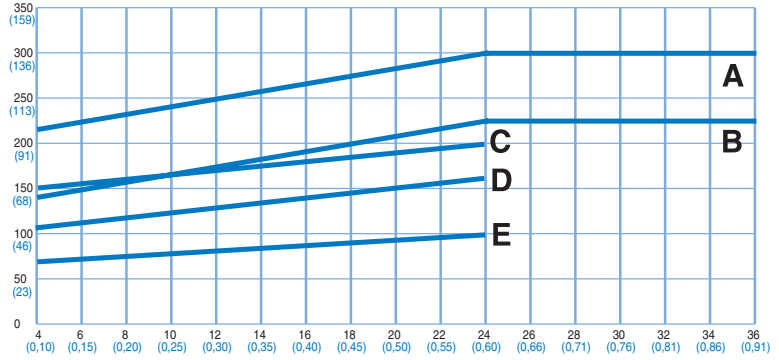
- a. For low-tension capstan drive spirals contact Technical Support Group for suggested carryway support recommendations.
- b. If your belt width exceeds a number listed in the table, please refer to the sprocket and support material minimums for the next larger width range listed. Belts are available in 0.50 in. (12.7 mm) increments beginning with minimum width of 4 in. (102 mm). **If the actual width is critical, consult Customer Service.**
- c. These are the minimum number of sprockets. Additional sprockets may be required for heavily loaded applications. See Retainer Rings/Center Sprocket Offset chart on page 304 for lock down location.
- d. The number of wearstrips given does not include the hold down wearstrip.



## Curved Belt Strength

Horizontal Scale = Belt Width, in. (mm)  
 Vertical Scale = Curved Belt Strength, lb (kg)

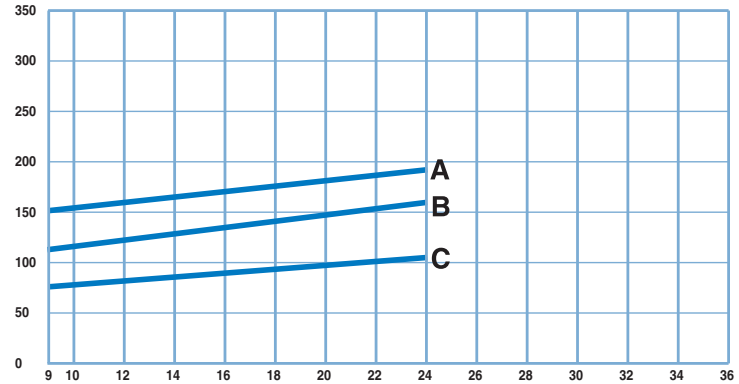
- A** - 2.2 AC BELT MATERIAL WITH STANDARD RODS
- B** - 2.2 PP BELT MATERIAL WITH STANDARD RODS
- C** - 1.7 AC BELT MATERIAL WITH NYLON RODS
- D** - 1.7 PP BELT MATERIAL WITH ACETAL RODS
- E** - 1.7 PP BELT MATERIAL WITH PP RODS



### 2.4 TIGHT TURNING RADIUS WITH INSERT ROLLERS

Horizontal Scale = Belt Width, in.  
 Vertical Scale = Curved Belt Strength, lb

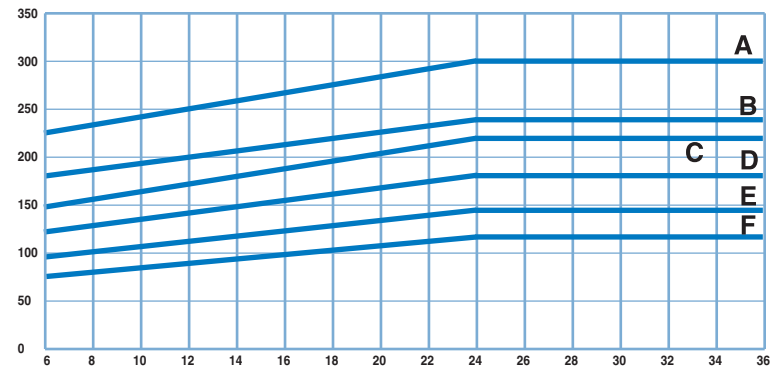
- A** - AC BELT MATERIAL WITH NYLON RODS
- B** - PP BELT MATERIAL WITH ACETAL RODS
- C** - PP BELT MATERIAL WITH PP RODS



### 2.8 TURNING RADIUS WITH INSERT ROLLERS

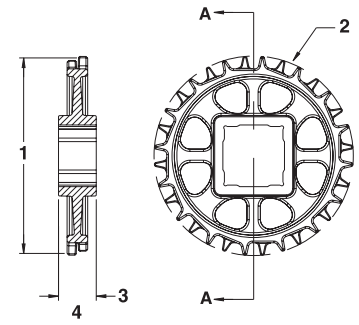
Horizontal Scale = Belt Width, in.  
 Vertical Scale = Curved Belt Strength, lb

- A** - AC BELT / NYLON ROD - 2.5" TO 3.5" INDENT
- B** - AC BELT / NYLON ROD - 2.0" INDENT
- C** - PP BELT / ACETALROD - 2.5" TO 3.5" INDENT
- D** - PP BELT / ACETALROD - 2.0" INDENT
- E** - PP BELT / PP ROD - 2.5" TO 3.5" INDENT
- F** - PP BELT / PP ROD - 2.0" INDENT



**Sprocket Data<sup>a</sup>**

No. of Teeth (Chordal Action)	Nom. Pitch Dia. in.	Nom. Pitch Dia. mm	Nom. Outer Dia. in.	Nom. Outer Dia. mm	Nom. Hub Width in.	Nom. Hub Width mm	Available Bore Sizes			
							U.S. Sizes		Metric Sizes	
							Round in. <sup>b</sup>	Square in.	Round mm <sup>b</sup>	Square mm
<b>6<sup>c</sup></b> (13.40%)	2.0	51	2.0	51	.54	14	3/4		20	
<b>9<sup>c</sup></b> (6.03%)	2.9	74	2.9	74	1.0	25	1	1	25	25
<b>12</b> (3.41%)	3.9	99	4.0	102	1.0	25	1 to 1-1/2	1.5	25 to 40	40
<b>16</b> (1.92%)	5.1	130	5.2	132	1.0	25	1 to 1-1/2	1.5	25 to 40	40
<b>20</b> (1.23%)	6.4	163	6.4	163	1.0	25	1 to 1-1/2	1.5	25 to 40	40



- 1 - Pitch diameter
- 2 - Outer diameter
- 3 - Hub width
- 4 - Section A - A

- a. Contact Customer Service for lead times. When using Polyurethane sprockets, the Belt Strength for belts rated over 750 lb/ft (1120 kg/m) will be de-rated to 750 lb/ft (1120 kg/m) and all other belts will maintain their published rating. The temperature range for Polyurethane sprockets is 0 °F (-18 °C) to 120 °F (49 °C). Contact Customer Service for availability of Polyurethane sprockets.
- b. Imperial key sizes on round bore sprockets conform to ANSI standard B17.1-1967 (R1989) and metric key sizes conform to DIN standard 6885.
- c. The 2.0 in. (51 mm) Pitch Diameter 6 tooth sprocket and the 2.9 in. (74 mm) Pitch Diameter 9 tooth sprocket have a recommended belt pull of 60 lb/sprocket (27 kg/sprocket). Do not use this sprocket with Hold Down Guides.

**Ultra Abrasion Resistant Polyurethane Split Sprockets<sup>a</sup>**

No. of Teeth (Chordal Action)	Nom. Pitch Dia. in.	Nom. Pitch Dia. mm	Nom. Outer Dia. in.	Nom. Outer Dia. mm	Nom. Hub Width in.	Nom. Hub Width mm	Available Bore Sizes			
							U.S. Sizes		Metric Sizes	
							Round in.	Square in.	Round mm	Square mm
<b>16</b> (1.92%)	5.1	130	5.2	132	1.0	25		1.5 <sup>b</sup>		40 <sup>b</sup>
<b>20</b> (1.23%)	6.4	163	6.4	163	1.0	25		1.5		40



- a. Contact Customer Service for lead times. When using Polyurethane sprockets, the Belt Strength for belts rated over 750 lb/ft (1120 kg/m) will be de-rated to 750 lb/ft (1120 kg/m) and all other belts will maintain their published rating. The temperature range for Polyurethane sprockets is 0 °F (-18 °C) to 120 °F (49 °C). Contact Customer Service for availability of Polyurethane sprockets.
- b. FDA approved sprockets are available.

**Finger Transfer Plates**

Available Widths		Number of Fingers	Available Materials
in.	mm		
4	102	16	Acetal

**Note:** Designed to be used with Series 2400 Raised Rib belts to eliminate product transfer and tipping problems.

**Note:** The fingers extend between the belt's ribs allowing a smooth continuation of the product flow as the belt engages its sprockets.

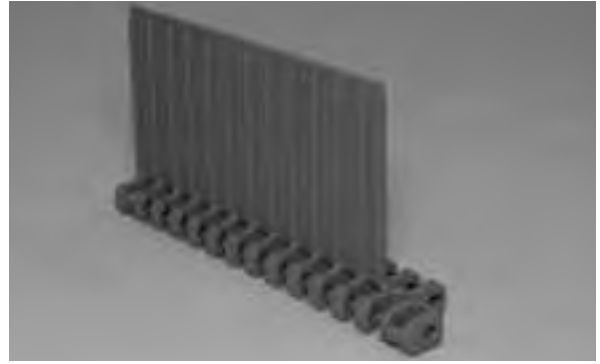
**Note:** Finger Transfer Plates are installed easily on the conveyor frame with conventional fasteners.



### No-Cling Flights

Available Flight Height		Available Materials
in.	mm	
3.0	76	Polypropylene, Polyethylene, Acetal

**Note:** Minimum indent is 1.125 in. (29 mm).  
**Note:** Series 2400 flights do not have bottom hold down guides, but can be used with the bottom hold down belt style, with a minimum flight spacing of 4 in. (102 mm).



### Universal Sideguards

Available Sideguard Height		Available Materials
in.	mm	
1.0	25	Polypropylene, Acetal
3.0	76	

**Note:** Similar in design and function to other standard, overlapping Intralox sideguards. It is an integral part of the belt, fastened by hinge rods. It adds versatility to the Series 2400 belt when used in multiple rows for separating product.  
**Note:** It is easily cleanable and is suitable for food applications (FDA accepted).  
**Note:** A minimum 1.5 inch (38 mm) indent is required for the 2.2 turn ratio and a 3.0 inch (76 mm) indent for the 1.7 turn ratio with this style sideguard.



### High Speed Intralon™ Radius Edge

- High speed edge is composed of a nylon-based blend of materials. Edges are available in black or FDA approved bone white.
- Optimal for applications with high speed curves of 300 feet per minute (90 meters per minute) or faster. Contact Customer Service Sales Engineering for application review.
- High speed edge is located on the inside edge of one-directional turning applications only.
- Edges require a stainless steel wear strip to withstand high temperatures. Intralox recommends implementing heat shields where temperatures exceed 120° F (49° C).
- Edges can be used in acetal or polypropylene belts.
- Edges are available with Flush Grid, Flush Grid High Deck, Raised Rib, and Friction Top belts styles. Refer to belt data pages for information on preferred run direction. Contact Customer Service for indent of friction surface.
- Nylon rods are recommended for high speed applications.
- Edges are not compatible with Clip-On Sideguards

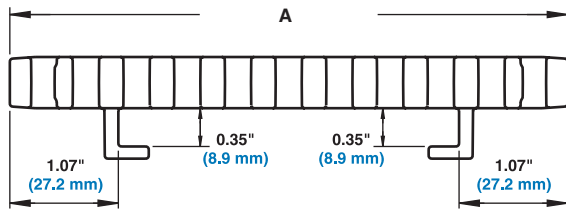


**Hold Down Guides (2.2 Only)**

- Hold down guides are on the bottom of the belt for use when the belt edges need to be clear. Also available on friction top modules.
- Hold down guides provide the ability to run two belts next to each other without a large gap in between.
- The belt edge is smooth for reduced friction, and is relatively thick to provide wear resistance and protection for the rod retention.
- The minimum nose bar diameter is 1.5 in.
- 2 in., 2.9 in. and 3.9 in. PD Sprocket can not be used with Hold Down Guides (the smallest sprocket that can be used with S2400 FG belt with Hold Down Guides is 5.1 in. PD).
- Other sprocket PDs with large bores may not produce enough clearance between the hold down guide and shaft. Subtracting bore size from the PD easily identifies these sprockets. If the number is less than 2.0 in. (51 mm), this sprocket can not be used with hold down guides.

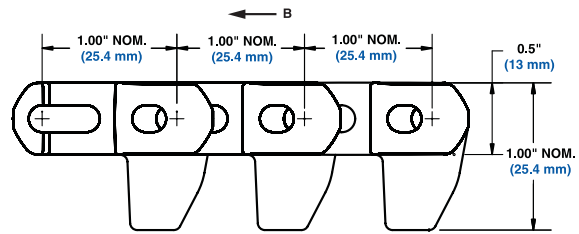


**Front view**



**A** - Belt width

**Side view**



**B** - Preferred direction for flat turning applications

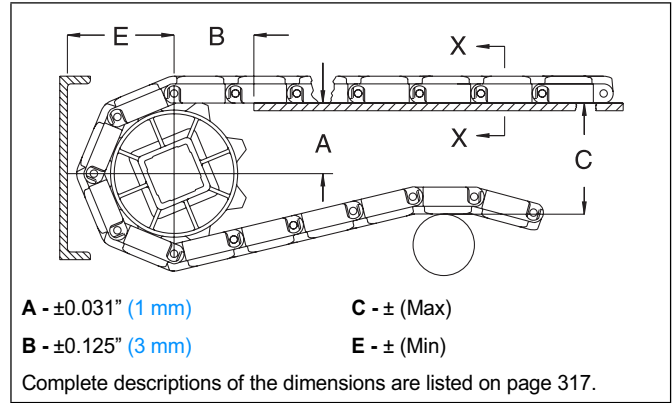
**Note:** Hold down guides are not recommended for low-tension capstan drive spiral applications.

*Fig. 2-3 SERIES 2400 HOLD DOWN GUIDES FOR FLAT TURNS*

## Conveyor Frame Dimensions

Regardless of type or configuration, all conveyors using Intralox belts have some basic dimensional requirements. Specifically, dimensions "A", "B", "C" and "E" listed below should be implemented in any design.

For general applications and applications where end transfer of tip-sensitive product is not critical, use the "A" dimension at the bottom of the range.



Sprocket Description			A		B		C		E	
Pitch Diameter		No. Teeth	Range (Bottom to Top)		in.	mm	in.	mm	in.	mm
in.	mm		in.	mm						
<b>SERIES 2400 FLUSH GRID - STRAIGHT EDGE, HOLD DOWN GUIDES &amp; TIGHT TURNING</b>										
2.0 <sup>a</sup>	51 <sup>a</sup>	6	0.62-0.75	16-19	1.22	31	2.00	51	1.31	33
2.9 <sup>a</sup>	74 <sup>a</sup>	9	1.12-1.21	28-31	1.51	38	2.92	74	1.77	45
3.9	99	12	1.62-1.68	41-43	1.86	47	3.86	98	2.24	57
5.1	130	16	2.26-2.31	57-59	2.11	54	5.13	130	2.88	73
6.4	163	20	2.91-2.95	74-75	2.31	59	6.39	162	3.51	89
<b>SERIES 2400 FLUSH GRID HIGH DECK</b>										
2.0 <sup>a</sup>	51 <sup>a</sup>	6	0.62-0.75	16-19	1.22	31	2.40	61	1.71	43
2.9 <sup>a</sup>	74 <sup>a</sup>	9	1.12-1.21	28-31	1.51	38	3.32	84	2.17	55
3.9	99	12	1.62-1.68	41-43	1.86	47	4.26	108	2.64	67
5.1	130	16	2.26-2.31	57-59	2.11	54	5.53	140	3.28	83
6.4	163	20	2.91-2.95	74-75	2.31	59	6.79	172	3.91	99
<b>SERIES 2400 FRICTION TOP - WITH OR WITHOUT HOLD DOWN GUIDES</b>										
2.0 <sup>a</sup>	51 <sup>a</sup>	6	0.62-0.75	16-19	1.22	31	2.20	56	1.51	38
2.9 <sup>a</sup>	74 <sup>a</sup>	9	1.12-1.21	28-31	1.51	38	3.12	79	1.97	50
3.9	99	12	1.62-1.68	41-43	1.86	47	4.06	103	2.44	62
5.1	130	16	2.26-2.31	57-59	2.11	54	5.33	135	3.08	78
6.4	163	20	2.91-2.95	74-75	2.31	59	6.59	167	3.71	94
<b>SERIES 2400 RADIUS WITH INSERT ROLLERS (ALL STYLES) - FREE FLOATING ROLLERS</b>										
2.0 <sup>a</sup>	51 <sup>a</sup>	6	0.62-0.75	16-19	1.22	31	2.09	53	1.40	36
2.9 <sup>a</sup>	74 <sup>a</sup>	9	1.12-1.21	28-31	1.53	39	3.01	76	1.86	47
3.9	99	12	1.62-1.68	41-43	1.78	45	3.95	100	2.33	59
5.1	130	16	2.26-2.31	57-59	2.06	52	5.21	132	2.96	75
6.4	163	20	2.91-2.95	74-75	2.31	59	6.48	165	3.60	91
<b>SERIES 2400 RADIUS WITH INSERT ROLLERS (ALL STYLES) - DRIVEN ROLLERS</b>										
2.0 <sup>a</sup>	51 <sup>a</sup>	6	0.53-0.66	13-17	1.24	31	2.09	53	1.40	36
2.9 <sup>a</sup>	74 <sup>a</sup>	9	1.04-1.12	26-31	1.57	40	3.01	76	1.86	47

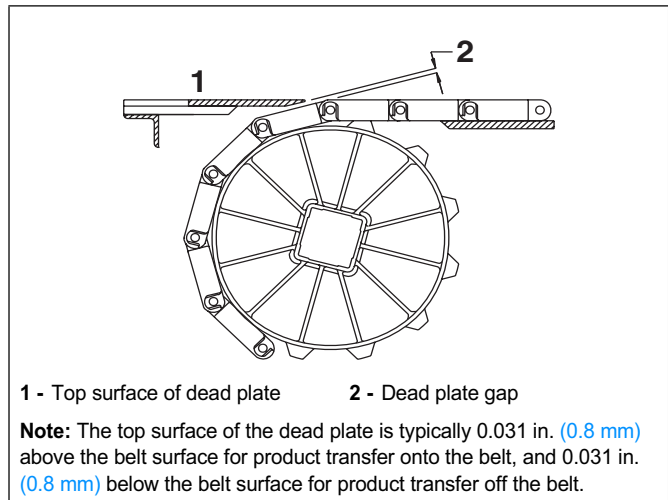
Sprocket Description		A		B		C		E		
Pitch Diameter		No. Teeth	Range (Bottom to Top)		in.	mm	in.	mm	in.	mm
in.	mm		in.	mm						
3.9	99	12	1.53-1.59	39-40	1.92	49	3.95	100	2.33	59
5.1	130	16	2.18-2.23	55-57	2.19	56	5.21	132	2.96	75
6.4	163	20	2.82-2.86	72-73	2.41	61	6.48	165	3.60	91
<b>SERIES 2400 RAISED RIB</b>										
2.0	51	6	0.62-0.75	16-19	1.22	31	2.50	64	1.81	46
2.9	74	9	1.12-1.21	28-31	1.51	38	3.42	87	2.27	58
3.9	99	12	1.62-1.68	41-43	1.86	47	4.36	111	2.74	70
5.1	130	16	2.26-2.31	57-59	2.11	54	5.63	143	3.38	86
6.4	163	20	2.91-2.95	74-75	2.31	59	6.89	175	4.01	102
<b>SERIES 2400 RADIUS FLAT TOP</b>										
2.0	51	6	0.62-0.75	16-19	1.22	31	2.15	55	1.46	37
2.9	74	9	1.12-1.21	28-31	1.51	38	3.07	78	1.92	49
3.9	99	12	1.62-1.68	41-43	1.86	47	4.01	102	2.39	61
5.1	130	16	2.26-2.31	57-59	2.11	54	5.28	134	3.03	77
6.4	163	20	2.91-2.95	74-75	2.31	59	6.54	166	3.66	93

a. Can not be used with Hold Down Guides.

### Dead Plate Gap

Where there is a transfer point from a belt without finger transfer plates to a dead plate, there should be a gap between the surfaces to allow for the chordal action of the belt. As the belt engages its sprockets, chordal action causes the modules to move past a *fixed* point (the tip of the dead plate) with *varying* clearances. The table below shows the minimum amount of gap which occurs at the “low point” of the modules if the tip of the dead plate just comes in contact with the “high point” as the modules pass.

In some installations it may be desirable to keep the tip of the dead plate in contact with the belt, rather than allow a gap to occur. This can be done by hinging the mounting bracket for the dead plate. This allows the dead plate to move as the modules pass, but results in a small oscillating motion which may present tippage problems for sensitive containers or products.



Sprocket Description			Gap	
Pitch Diameter		No. Teeth	in.	mm
in.	mm			
2.0	51	6	0.134	3.4
2.9	74	9	0.088	2.2
3.9	99	12	0.065	1.7
5.1	130	16	0.050	1.3
6.4	163	20	0.039	1.0

## HOLD DOWN RAILS AND WEARSTRIPS

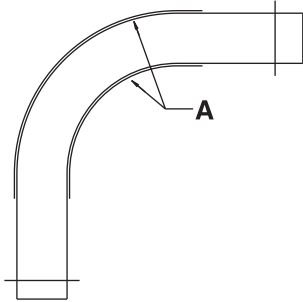
Intralox recommends using continuous hold down rails through an entire turn, starting at a distance of 1X the belt width before the turn and ending 1X the belt width after the turn. This applies to both carryway and returnway. The use of

hold down rails along both side of the belt over the full carryway is recommended but not mandatory.

The hold down guide design allows the belt to be held down without the wearstrip interfering with the carryway surface (for design guidelines regarding Series 2400 with hold down guides, contact Technical Support Group). See “*Custom wearstrips*” (page 310).

### STANDARD BELTS

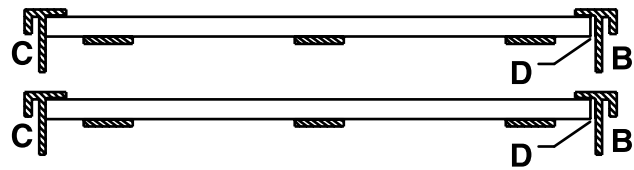
#### FLUSH EDGE WITH WEARSTRIP



- A - HOLD DOWN RAIL PLACEMENT
- B - OUTSIDE HOLD DOWN RAIL

#### CROSS SECTION VIEW THROUGH CURVE

##### CARRYWAY DESIGN



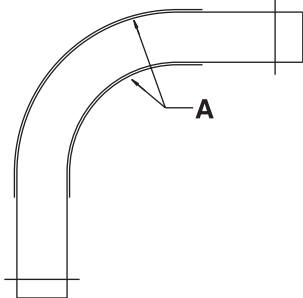
##### RETURNWAY DESIGN

- C - INSIDE HOLD DOWN RAIL
- D - CLEARANCE

Fig. 2-4 HOLD DOWN RAILS AND WEARSTRIPS FOR SERIES 2400 FLAT-TURNS - STANDARD BELTS

### HIGH DECK AND RAISED RIB BELTS

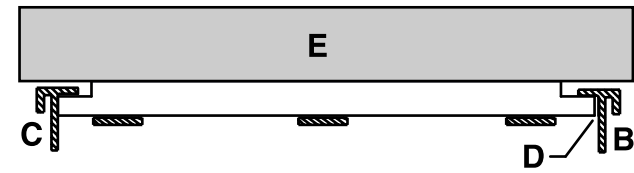
#### FLUSH EDGE WITH WEARSTRIP



- A - HOLD DOWN RAIL PLACEMENT
- B - OUTSIDE HOLD DOWN RAIL
- C - INSIDE HOLD DOWN RAIL

#### CROSS SECTION VIEW THROUGH CURVE

##### CARRYWAY DESIGN



##### RETURNWAY DESIGN

- D - CLEARANCE
- E - PRODUCT

Fig. 2-5 HOLD DOWN RAILS AND WEARSTRIPS FOR SERIES 2400 FLAT-TURNS - HIGH DECK AND RAISED RIB BELTS

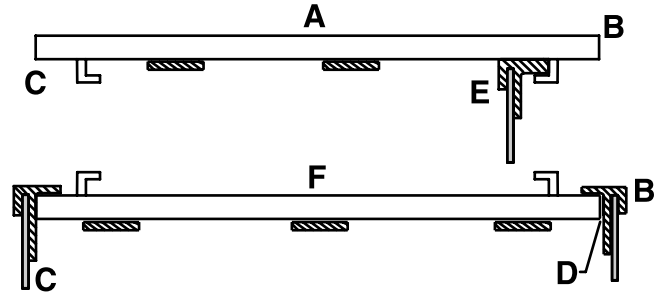
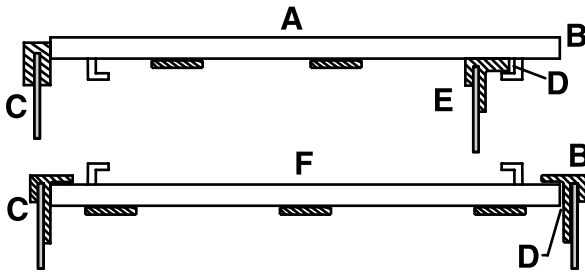


**BELTS WITH HOLD DOWN GUIDES**

Special wearstrip guidelines for lightly loaded belts with Hold Down Guides.  
 Requirements: Maximum belt pull <20% allowable; belt speed <50 FPM

**CROSS SECTION VIEW THROUGH CURVE - WITH INNER BUMP RAIL**

**CROSS SECTION VIEW THROUGH CURVE - NO BUMP RAIL**



- A - CARRYWAY DESIGN
- B - OUTSIDE EDGE
- C - INSIDE EDGE

- D - CLEARANCE
- E - HOLD DOWN GUIDE WEARSTRIP
- F - RETURNWAY DESIGN

**WARNING** -Hold down Guides should never be used to guide the belt through the turn in heavily loaded or high speed applications. Rapid wear to the Hold Down Guides and/or wearstrip will occur in applications with high loads or speeds. Contact Technical Support Group for a belt pull analysis.

*Fig. 2-6 HOLD DOWN RAILS AND WEARSTRIPS FOR SERIES 2400 FLAT-TURNS - BELTS WITH HOLD DOWN GUIDES*

**BELT SELECTION INSTRUCTIONS**

**ENGINEERING PROGRAM ANALYSIS FOR SERIES 2400**

Intralox Customer Service Technical Support Group can calculate the estimated belt pull for radius applications using **Series 2400**. The following information is required (refer to "Radius belt data sheet" (page 361)):

- Any environmental conditions which may affect the friction coefficient (for dirty or abrasive conditions, use higher friction coefficients than normal)
- Belt width
- Length of each straight run
- Turning angle of each turn

- Turn direction of each turn
- Inside turning radius of each turn
- Carryway/hold down rail material
- Product loading lb/ft<sup>2</sup> (kg/m<sup>2</sup>)
- Product back-up conditions
- Belt speed
- Elevation changes on each section
- Operating temperatures.

**For assistance with radius belt and low-tension capstan drive spiral selections, contact Intralox Customer Service Technical Support Group. The Engineering Program should be run to insure that the belt is strong enough for the radius application in question.**

## SERIES 2400 DESIGN GUIDE SUMMARY

For more information, see the *Installation, Maintenance and Troubleshooting manual* available from Intralox.

- A** - The minimum turning radius for **Series 2400** is 2.2 times the belt width, measured from the inside edge for the standard edge or 1.7 times the belt width for the tight turning style.
- B** - The minimum straight run required between turns of opposing direction is 2.0 times the belt width. Shorter straight sections will lead to high wear on the edge guide rail and high pull stresses in the belt.
- C** - There is no minimum straight run required between turns that are in the same direction.
- D** - The minimum length for the final straight run (leading into the drive shaft) is 1.5 times the belt width. Shorter lengths may lead to sprocket wear or tracking problems. For narrow belts, a weighted take-up may be required since proper catenary cannot be achieved therefore, a 5 ft. (1.50 m) minimum final straight run is recommended. See "Special Take-Up Arrangements" (page 324).
- E** - The minimum length of the first straight run (immediately after the idle shaft) is 1.5 times the belt width. When shorter lengths are required (down to 1.0 times the width), an idle roller may be used in place of sprockets.
- F** - IDLE SHAFT
- G** - 1ST TURN
- H** - BELT WIDTH
- I** - BELT TRAVEL
- J** - 2ND TURN
- K** - DRIVE MOTOR
- L** - DRIVE SHAFT

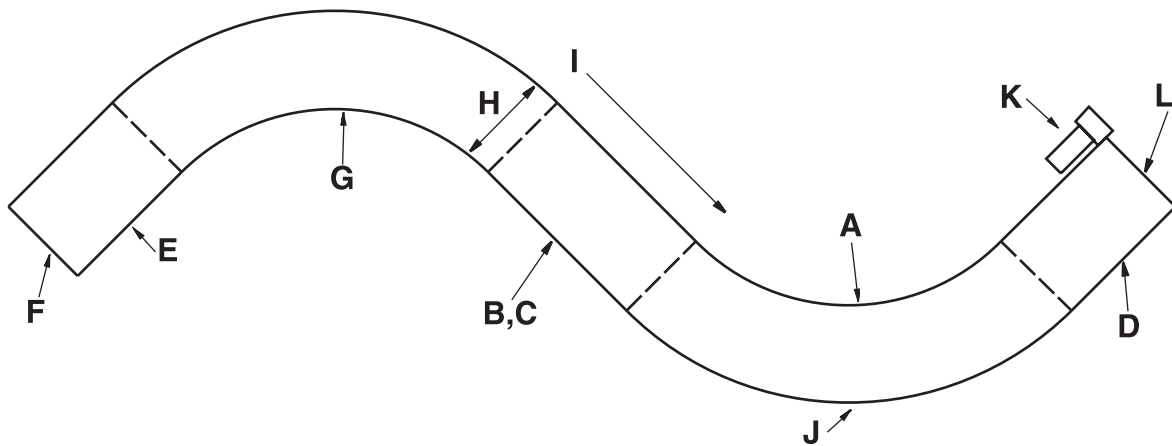


Fig. 2-7 TYPICAL 2-TURN RADIUS LAYOUT