

The Low Insertion Fir Tree or LIFT™ family of cable ties, offer an ergonomically advanced solution that provides a low insertion force while maintaining high retention characteristics. The unique LIFT flute geometry is designed specifically to meet automotive wire harnessing requirements. LIFT cable ties help minimize line worker fatigue. By combining our low insertion fir tree technology with high extraction force characteristics, LIFT ties outperform alternative fir tree and arrow style fasteners.

Features:

- Ergonomically friendly
- Low insertion force (<10 lbf/44 N)
- High retention force (>40 lbf/178 N)
- Fit a nominal hole range from 6.2mm to 13.0mm, including M6 and M8 threaded holes
- Available in straight 15mm offset and 25mm offset tie styles
- Available with foam gasket

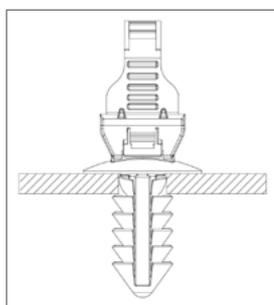
Benefits:

- Effective in a range of panel thicknesses for round, oval, threaded and hex holes
- Fit small wire bundles while maintaining antislip and rotation requirements
- Reduce line worker fatigue
- Proven reliability in the field
- More durable, cleaner alternative to offset tape-on fasteners



Technical Information

Part Number	Color	Strap Length (inches/mm)	Typical Mount Size	Panel Thickness	Bundle Diameter		Typical (6.6mm hole / 0.7mm thick panel)	
					Min. (inches/mm)	Max (inches/mm)	Insertion Force (lbf/N)	Retention/ Extraction Force (lbf/N)
Straight Fir - Curve Ties								
20185-0	Black	6.30" / 160mm	Oval Slotted Hole Sizes: 6.2 x 12.2mm, 6.5 x 12.5mm 6.5 x 13.0mm, 7.0 x 12.0mm	Max. 7.0mm	0.06" (1.6mm)	1.50" (38.1mm)	6/27	45/200
20171-0	Black	4.75" / 120mm	6.35mm Hole / M8 Threaded Hole	Max. 7.0mm	0.06" (1.6mm)	1.18" (30.0mm)	5/22	60/267
20154-0	Black	5.5" / 140mm	M6 Threaded Hole	Max. 7.0mm	0.06" (1.6mm)	1.5" (38.1mm)	8 / 36	65 / 289
20120-0	Black	5.5" / 140mm	6.6mm Hole / 6.35 Hex	Max. 3.0mm	0.06" (1.6mm)	1.5" (38.1mm)	6 / 27	65 / 289
20140-0	Black	5.5" / 140mm	6.6mm Hole / 6.35 Hex	Max. 7.0mm	0.06" (1.6mm)	1.5" (38.1mm)	7 / 31	75 / 334
20098-0	Black	7.5" / 190mm	6.6mm Hole / 6.35 Hex	Max. 7.0mm	0.06" (1.6mm)	1.75" (44.5mm)	7 / 31	75 / 334
20105-0	Gray	7.5" / 190mm	6.6mm Hole / 6.35 Hex	Max. 7.0mm	0.06" (1.6mm)	1.75" (44.5mm)	7 / 31	75 / 334
20110-0	Black	7.5" / 190mm	11.5mm Hole	Max. 8.5mm	0.06" (1.6mm)	1.75" (44.5mm)	6 / 27	60 / 267
15mm Offset Ties								
20129-0	Gray	7.5" / 190mm	6.6mm Hole / 6.35 Hex	Max. 7.0 mm	0.06" (1.6mm)	1.75" (44.5mm)	6 / 27	60 / 267
20135-0	Black	7.5" / 190mm	6.6mm Hole / 6.35 Hex	Max. 7.0 mm	0.06" (1.6mm)	1.75" (44.5mm)	6 / 27	60 / 267
20161-0	Gray	5.5" / 140mm	6.6mm Hole / 6.35 Hex	Max. 7.0 mm	0.06" (1.6mm)	1.5" (38.1mm)	6 / 27	60 / 267
20159-0	Black	5.5" / 140mm	6.6mm Hole / 6.35 Hex	Max. 7.0 mm	0.06" (1.6mm)	1.5" (38.1mm)	6 / 27	60 / 267
25mm Offset Ties								
20132-0	Black	7.5" / 190mm	6.6mm Hole / 6.35 Hex	Max. 7.0 mm	0.06" (1.6mm)	1.175" (44.5mm)	6 / 27	60 / 267
20133-0	Gray	7.5" / 190mm	6.6mm Hole / 6.35 Hex	Max. 7.0 mm	0.06" (1.6mm)	1.75" (44.5mm)	6 / 27	60 / 267
20160-0	Black	5.5" / 140mm	6.6mm Hole / 6.35 Hex	Max. 7.0 mm	0.06" (1.6mm)	1.5" (38.1mm)	6 / 27	60 / 267
20162-0	Gray	5.5" / 140mm	6.6mm Hole / 6.35 Hex	Max. 7.0 mm	0.06" (1.6mm)	1.5" (38.1mm)	6 / 27	60 / 267



Assembled View

Minimum Loop Tensile Strength is 50 lbf (222 N) for all LIFT ties
Maximum Insertion Force for all LIFT ties is 10 lbf (44 N)
Minimum Extraction Force for all LIFT ties is 40 lbf (178 N)

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USA & CANADA

224 Industrial Road
Fitchburg, MA 01420
Tel +978 345 8100 (direct)
Tel +888 255 8802
Fax +800 848 2169

LATIN AMERICA

Aristóteles #123
Parque Industrial Kalos
Apodaca, Nuevo León
66600 México
Tel +52 (81) 8864 4100
Fax +52 (81) 8864 4101

ASIA

No. 7 Chun Ying Street
Tseung Kwan O
Industrial Estate
New Territories, Hong Kong
Tel +852 2372 4411
Fax +852 2873 6436

EUROPE, MIDDLE EAST & AFRICA

1 Thomas Road
Wooburn Green
Bucks HP10 0PE
Tel +(44) 1628 859500
Fax +(44) 1628 859567

fastener.averydennison.com

fastener@averydennison.com 