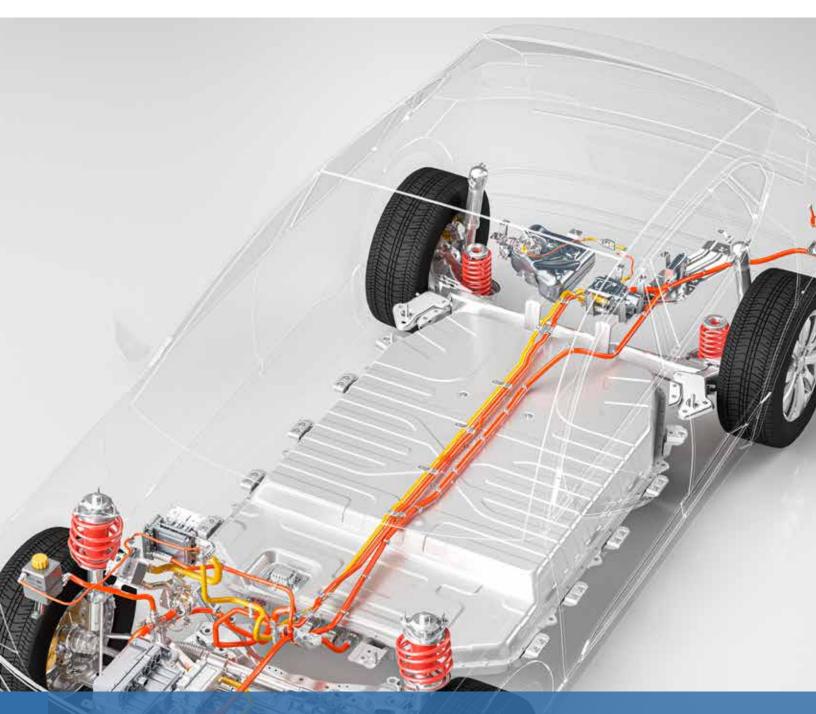
HellermannTyton



Electrification Solutions

Advanced Routing for High-Voltage EV Applications

MADE FOR REAL[®]

Cable Ties

Standard Cable Ties

T30 - T120 Series Cable Ties

HellermannTyton offers one of the largest collections of cable ties to secure any application from small to large. They are the go-to standard for bundling cables, wires and harnesses or securing convoluted tubing in normal to the harshest conditions. The head design guarantees high tensile strength and a low insertion force.

Features and Benefits

- Impact modified, heat and UV stabilized cable ties are designed for a wide temperature range under high vibration and loading conditions.
- PA46 material option allows for use in high-heat applications.
- V-0 material options for flammability.
- High-visibility orange color helps indicate high-voltage cables.
- Inside serrations provide strong grip on cables and wire bundles.
- Easy application either manually or with a tensioning tool.
- Bent tail ensures quick and easy installation.





PART NO.	ТҮРЕ	Min. Tensile Strength N	Length (L) mm	Max. Bundle Diameter mm	Width (W) mm	Material	Color
T30R0HIRM4*		135.0	148.0	35.0	3.6	PA66HIRHSUV	Black
111-03087*	- T30R	135.0	148.0	35.0	3.5	PA66HIRHS	Orange, High Voltage
111-03088	ISUN	135.0	148.0	35.0	3.5	PA666V0	Black
T30R1STNLM5		135.0	148.0	35.0	3.6	PA46	Brown
111-00931*		225.0	202.0	50.0	4.6	PA66HIRHSUV	Black
111-04936*	- T50R	225.0	202.0	50.0	4.6	PA66HIRHS	Orange, High Voltage
T50R9VOM4*	ISUK	225.0	202.0	50.0	4.6	PA66V0	Natural
T50R0STNLM4AU		225.0	202.0	50.0	4.6	PA46	Black
111-02054*		535.0	387.0	105.0	7.6	PA66HIRHSUV	Black
111-12075*	T120R	535.0	387.0	100.0	7.6	PA66HIRHS	Orange, High Voltage
111-02383]	535.0	387.0	105.0	7.6	PA46	Gray

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

*This product meets UL standards. Please go to hellermanntyton.us for specific file numbers.



Fir Tree Mount Cable Ties

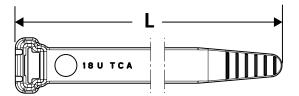
Wide Strap Fir Tree Mount Cable Ties

Two-piece bundling and mounting solution features a wider and thinner strap design, which increases flexibility and minimizes pinching and abrasion of soft hoses, convoluted tubing and high-voltage cables. Fir tree provides low insertion effort yet demonstrates high extraction resistance. Disc feature prevents rattling in high-vibration applications and protects against debris ingress. Friction tab inside fir tree allows tie to remain in mount without falling out prior to installation.

Features and Benefits

- Impact modified, heat and UV stabilized cable ties are designed for a wide temperature range under high vibration and loading conditions.
- PA46 material option allows use in high-heat applications.
- High-visibility orange color indicates high-voltage cables.
- Inside serrations provide strong grip on cables and wire bundles.
- Easy application either manually or with a tensioning tool.
- Bent tail ensures quick installation.





PART NO.	ТҮРЕ	Mounting Hole Dia. mm	Length (L) mm	Min. Tensile Strength N	Max. Bundle Diameter mm	Panel Thickness mm	Material	Color	Drawing
156-02461	WSSDFTM8	6.1 - 7.0, M8 Threaded	231.1	533.0	57.2	0.6 - 6.0	PA66HIRHS	Black	
156-02434	WSSDSET	6.1 - 7.0, M8 Threaded	231.1	533.0	57.2	0.6 - 6.0	PA46	Brown	<u> </u>
156-04035	WSIDFTM8 WSSDSET	6.1 - 7.0, M8 Threaded	307.0	533.0	82.6	0.6 - 6.0	PA66HIRHS, PA66HIRHSUV	Orange, High Voltage, Black	
156-04036	WSIDFTM10 WSSDSET	7.6 - 8.4, M10 Threaded	307.0	533.0	82.6	0.6 - 6.0	PA66HIRHS, PA66HIRHSUV	Orange, High Voltage, Black	
156-02462	WSSDFTM10	7.6 - 8.4, M10 Threaded	231.1	533.0	57.2	0.6 - 6.0	PA66HIRHSUV	Black	
156-02435	WSSDSET	7.6 - 8.4, M10 Threaded	231.1	533.0	57.2	0.6 - 6.0	PA46	Brown	a a

Fir Tree Mount Cable Ties

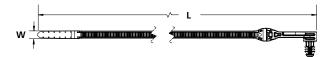
1-Piece Fir Tree Mount Cable Ties

HellermannTyton's one-piece fir tree mount cable ties combine design versatility with high performance. One-piece part offers a complete solution by both bundling and mounting wires, cables and tubes. The proprietary fir tree is engineered to require low insertion effort yet deliver high extraction resistance, meeting requirements of SAE/USCAR-2 or USCAR44.

Features and Benefits

- Multiple material choices address wide temperature requirements as well as tolerance for high vibration and loading conditions.
- Oval firs tree option prevents rotation once inserted, ensuring intended routing direction of wires and hoses.
- Disc feature prevents rattling in high-vibration applications and protects against debris ingress.
- Friction tab inside fir tree allows tie to remain in mount without falling out prior to installation.





PART NO.	ТҮРЕ	Mounting Hole Dia. mm	Length (L) mm	Min. Tensile Strength N	Max. Bundle Diameter mm	Panel Thickness mm	Material	Color	Drawing
157-00296	T50SOSFT6.5LG-E4	6.4 (hexagonal), 6.5	167.9	225.0	35.0	0.6 - 8.3	PA66HIRHS	Black	
157-00142	T50ROSFTOVALU	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	219.0	225.0	50.0	0.6 - 6.8	PA66HIRHS	Black	
157-00157		6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	218.4	225.0	50.0	0.6 - 6.8	PA46	Brown	
157-04075	T120SOSFTOVAL12.5A	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	246.5	535.0	50.0	0.6 - 4.0	PA66HIRHSUV	Black	

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Fir Tree Mount Cable Ties

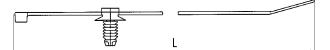
2-Piece Fir Tree Mount Cable Tie Assemblies

The innovative design of this fir tree establishes a 360-degree interface with the panel hole, ensuring a more secure fit. HellermannTyton fir trees provide low insertion effort yet demonstrate high extraction resistance, accommodating a wide range of panel thicknesses. The oval shape prevents rotation once inserted, ensuring proper routing of wires and hoses. The disc feature prevents rattling in high-vibration applications and protects against debris ingress. Orange parts available for high-voltage indication. Friction tab inside the fir tree allows the tie to remain in mount without falling out prior to installation.

Features and Benefits

- Impact modified, heat and UV stabilized cable ties are designed for a wide temperature range under high vibration and loading conditions.
- PA46 material option allows use in high-heat applications.
- Inside serrations provide strong grip on cables and wire bundles.
- Easy application either manually or with a tensioning tool.
- Bent tail ensures quick installation.
- Parts are USCAR44 compliant, where applicable.





PART NO.	ТҮРЕ	Mounting Hole Dia. mm	Length (L) mm	Min. Tensile Strength N	Max. Bundle Diameter mm	Panel Thickness mm	Material Cable Tie	Material Fir Tree	Color	Drawing
156-04028	T50RFT6ASET	6.1 - 7.1	203.2	225.0	50.0	0.6 - 3.5	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	
156-02613		6.1 - 7.1	203.2	225.0	50.0	0.6 - 3.5	PA46	PA46	Gray	
156-02517		6.1 - 7.1	203.2	225.0	50.0	0.6 - 3.5	PA66HIRHSUV	PA66HIRHSUV	Black	
156-00329		6.2 - 7.2	202.0	225.0	50.0	0.8 - 7.0	PA66HS	PA66HIRHS	Black	
156-04029	T50RFT7HD	6.2 - 7.2	202.0	225.0	50.0	0.8 - 7.0	PA66HIRHS	PA66HIRHS	Orange, High Voltage, Black	
156-00457		6.2 - 7.2	202.0	225.0	50.0	0.8 - 7.0	PA46	PA46	Brown	
156-00376		7.7 - 8.0	202.0	225.0	50.0	0.8 - 6.0	PA66HS	PA66HS	Black	
156-04030	T50RFT8	7.7 - 8.0	202.0	225.0	50.0	0.8 - 6.0	PA66HIRHS	PA66HS	Orange, High Voltage, Black	
156-00091		9.7 - 10.0	202.0	225.0	50.0	0.8 - 5.0	PA66HS	PA66HS	Black	
156-04032	T50RFT10	9.7 - 10.0	202.0	225.0	50.0	0.8 - 5.0	PA66HIRHS	PA66	Orange, High Voltage, Black	
156-01561	T120RO SFT9CLG	8.8 - 9.3	385.0	535.0	105.0	1.0 - 12.7	PA66HS	PA66HIRHSUV	Black	

Stud Mount Cable Ties

1-Piece Solution with Integrated Stud Mount

One-piece stud mount ties feature HellermannTyton's high-performance four-pawl, three-tooth stud mount design for exceptional pull-off resistance, plus an integrated high-strength tie. Low-profile heads fit any bolt length and allow the stacking of multiple routings on one bolt. Offset options avoid obstructions and sources of abrasion.

Features and Benefits

- Low-profile head allows mounts to stack, providing more mounting versatility from a single stud.
- PA46 material option allows use in high-heat applications.





PART NO.	ТҮРЕ	Stud Dia. mm	Min. Tensile Strength N	Length (L) mm	Max. Bundle Diameter mm	Width (W) mm	Material	Color	Drawing
157-00460		5.0, 6.0	355.0	208.3	50.0	14.2	PA66HIRHSUV	Black	
157-04015	T80ROSLPSB5-6U	5.0, 6.0	355.0	208.3	50.0	14.2	PA66HIRHS	Orange, High Voltage	
157-00340	T80ROSLPSB8U	8.0	355.0	212.0	50.0	17.8	PA66HIRHSUV	Black	
157-00341	TOURUSLFSDOU	8.0	355.0	212.0	50.0	17.8	PA46	Brown	
157-00342	T80ROSLPSB10U	10.0	355.0	215.9	50.0	20.8	PA66HIRHSUV	Black	
157-00343	TOURUSLESDIUU	10.0	355.0	215.9	50.0	20.8	PA46	Brown	
157-00344	T80ROSLPSB12U	12.0	355.0	218.0	50.0	23.8	PA66HIRHSUV	Black	
157-00345	180KUSLPSB120	12.0	355.0	218.0	50.0	23.8	PA46	Brown	
157-00325	T50ROSM6SMSO25	5.0, 6.0	222.0	223.5	50.0	14.2	PA66HIRHSUV	Black	
157-00326		5.0, 6.0	225.0	223.5	50.0	14.2	PA46	Brown	
157-00335	TEADOCIDMCCMCO2E	5.0, 6.0	225.0	223.5	50.0	14.2	PA66HIRHSUV	Black	
157-00338	50ROSLPM6SMSO25	5.0, 6.0	225.0	223.5	50.0	14.2	PA46	Brown	
157-00362	TEADOCI DMACMCOOF	8.0	223.0	226.1	50.0	17.8	PA66HIRHSUV	Black	
157-00361	T50ROSLPM8SMSO25	8.0	223.0	226.1	50.0	17.8	PA46	Brown]

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

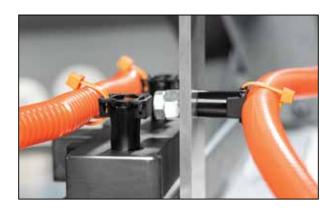
Stud Mount Cable Ties

Two-Piece Stud Mount Ties

The flexibility of the two-piece stud mount allows cables to route parallel to, perpendicular to or right over a stud. The three-saddle design on these single stud mounts can also accomodate up to three routings. Parts listed below are for the single routing but additional ties can be used to route more than one bundle on the mount.

Features and Benefits

- Versatile design allows cable routing above, perpendicular to or parallel to stud.
- Can mount up to three bundles simultaneously, making efficient use of a single mounting point.
- Four-pawl, three-tooth design delivers outstanding stud retention to keep bundles secure.





PART NO.	ТҮРЕ	Stud Dia. mm	Min. Tensile Strength N	Length (L) mm	Max. Bundle Diameter mm	Width (W) mm	Material Cable Tie	Material Stud Mount	Color	Drawing
156-01547		5.0, 6.0	222.0	202.0	50.0	4.6	PA66HS	PA66HIRHS	Black	
156-04041	T50R0SBS5-6U-SET	5.0, 6.0	222.0	202.0	50.0	4.6	PA66HS	PA66HIRHS	Orange, High Voltage, Black	
156-01429	T50RSB8SET	8.0	225.0	202.0	50.0	4.6	PA66HS	PA66HIRHSUV	Black	9-9. Þ
156-04042	T50ROSB8SET	8.0	225.0	202.0	50.0	4.6	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	

Self-Affixing Cable Ties

Stud Mount Cable Ties

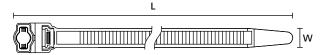
Wide Strap Heavy Duty Stud Mount Cable Ties

Wide strap stud mount ties secure heavy bundles while minimizing pinching on softer cable insulation. The ties feature a low-profile head to provide compact bundling and stacking options on a single bolt. With their low insertion force and high extraction performance, these mounts offer outstanding stud retention.

Features and Benefits

- Mount provides low insertion and high extraction forces, for easy installation and reliable performance.
- Tie utilizes a strong hinge between the stud mount and strap head for superior holding ability.
- Clamping rails increase grip on round bundles.
- Thinner strap provides increased flexibility for improved ergonomics.





PART NO.	ТҮРЕ	Stud Dia. mm	Min. Tensile Strength N	Length (L) mm	Max. Bundle Diameter mm	Width (W) in. (mm)	Material	Color	Drawing
157-00400	WSS250	M6	535.0	246.4	57.1	12.7	PA66HIRHSUV	Black	ð D
157-00034	WSS8MM	M8	535.0	246.4	57.1	12.7	PA66HIRHSUV	Black	And And
157-00403	WSS380	M10	535.0	246.4	57.1	12.7	PA66HIRHSUV	Black	A Constant

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Tape-On Clips

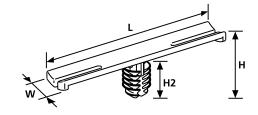
Standard Bundling Clips

Bundling clips provide a secure method to fasten cables to a vehicle. They can also offer support on either side of the fastener to help guide and maintain position. They are most appropriate for cables under 16 mm in diameter. HellermannTyton offers hundreds of options including I-beam style bundling clips for heavier cables, long fir tree options for securing in frames as well as panels, and offset options to guide the cables around obstructions.

Features and Benefits

- The simplest and most economical solution for bar clip applications.
- Multiple mounting options available for a custom-like fit.
- Oval fir tree prevents rotation to keep routing in position.





PART NO.	ТҮРЕ	Tape Bar Length (L) mm	Panel Thickness mm	Mounting Hole Dia. mm	Material	Color	Drawing
151-00651	TC6FT6LG	38.10	0.70 - 18.00	6.20 - 6.80	PA66HIRHS	Natural	
155-30802	TC2FT6LG	55.00	0.60 - 5.10	6.30 - 7.00	PA66HIRHS	Black	
151-01239	BCFTOVAL	58.00	0.60 - 6.00	6.20 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	PA66HIRHS	Natural	

Bundling Clips

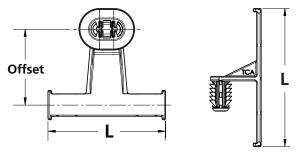
Offset Bundling Clips

Bundling clips secure cables to a vehicle. They can also offer support on either side of the fastener to help guide and maintain position. HellermannTyton offers hundreds of options including I-beam style bundling clips for heavier cables, long fir tree options for securing in frames as well as panels, and offset options to guide the cables around obstructions.

Features and Benefits

- Offset bar guides the cables around obstructions or sources of abrasion.
- Diaphragm provides cushion to minimize unwanted noise from vibration.
- Many offset designs available to suit most applications with a custom-like fit.





PART NO.	ТҮРЕ	Tape Bar Length (L) mm	Panel Thickness mm	Mounting Hole Dia. mm	Offset Length mm	Material	Color	Drawing
151-01238	SOC12FTOVAL	50.00	0.60 - 6.75	6.20 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	32.00	PA66HIRHS	Natural	
151-00932	SOC11FTOVAL	50.00	0.60 - 6.75	6.20 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	20.00	PA66HIRHS	Natural	
151-00650	SOC8FT6	61.00	0.70 - 5.75	6.20 - 6.80	15.90	PA66HIRHS	Natural	
151-02432	SOC8FT8	61.00	0.60 - 5.50	8.00	15.90	PA66HIRHS	Natural	Summer Statement State

Self-Affixing Clips

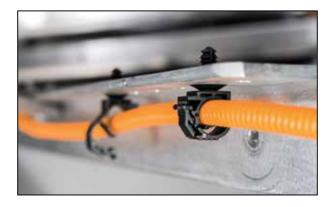
Locking Clamps

Single Bundle Locking Clamps

Locking clamp is ideal for fastening wire and cable bundles to panels. The locking clamp mechanism dynamically fits various bundle sizes. It is manufactured of an impact-modified polyamide 6.6 material for increased flexibility and heat resistance for years of dependable performance. It is easy to install and operate with a single hand and does not require tools, saving time and labor costs.

Features and Benefits

- The 360-degree enclosure ensures the entire bundle is secure when being routed.
- Locking tab on this clip is small enough to not interfere with any other portion of the wire routing, but is significant enough to allow for manual disengagement if service is needed.
- Disc around the fir tree eliminates potential debris and water ingress through panel hole.
- Available in high-visibility orange for high-voltage identification.



PART NO.	ТҮРЕ	Min. Bundle Diameter mm	Max. Bundle Diameter mm	Mounting Hole Dia. mm	Material	Color	
151-01017	LOC5-9FT6LG	5.0	9.0	6.4 (hexagonal), 6.1 - 6.9	PA66HIRHSUV	Black	
151-01166	LOC10-14FT6LG	10.0	14.0	6.4 (hexagonal), 6.1 - 6.9	PA66HIRHSUV	Black	
151-01022	LOC15-19FT6LG	15.0	19.0	6.4 (hexagonal), 6.1 - 6.9	PA66HIRHSUV	Black	
151-01371	LOC20-25FT6.5LG	20.0	25.0	6.4 (hexagonal), 6.1 - 6.9	PA66HIRHSUV	Black	
151-01306		5.0	9.0	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	PA66HIRHSUV	Black	
151-03458	LOC5-9FTOVAL	5.0	9.0	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	PA66HIRHS	Orange, High Voltage (HV)	
151-02552		10.0	14.0	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	PA66HIRHSUV	Black	
151-03459	LOC10-14FTOVAL	10.0	14.0	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	PA66HIRHS	Orange, High Voltage (HV)	
151-01049	LOC15-19FTOVAL	15.0	19.0	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	PA66HIRHSUV	Black	
151-02536	LOC20-25FTOVAL	20.0	25.0	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	PA66HIRHSUV	Black	

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Self-Affixing Cable Ties

Mounts Secured with Mechanical Fasteners - Single Bundle

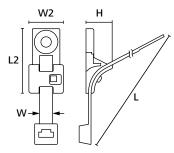
2-Piece Screw Mount Cable Ties

These cable tie mounts attach with a screw or bolt to an existing hole, or secure to a stud with a nut. They provide an attachment point for securing and routing a single bundle. These mounts provide the highest level of fastening for critical cable security.

Features and Benefits

- Two-piece cable tie and mount allows for a wide range of bundle sizes.
- A suitable alternative for metal clamps.
- Robust design withstands vibration and displacement forces.
- Metal bushing allows for high tightening torque.





PART NO.	ТҮРЕ	Max. Bundle Diameter mm	Min. Tensile Strength N	Material	Mount Material	Color
156-01121	T50RCPCM6	50.0	225.0	PA66HS, PA66HIRHS	PA66HIRHS	Black
156-02688	T50RCPCM6BSET	50.0	225.0	PPS	PPS	Silver
156-02687	T50RCPCM8BSET	50.0	225.0	PPS	PPS	Silver
156-03055	T120RCPCM6-SET	105.0	535.0	PA66HIRHS	PA66HIRHS	Black
156-04045	T IZURCPCIVIO-SET	105.0	535.0	PA66HIRHS	PA66HIRHS	Orange, High Voltage, Black
156-04081	T120RHDM6	105.0	535.0	PA66HIRHS	PA66HIRHS	Orange, High Voltage, Black
156-00408	T120RHDM8	105.0	535.0	PA66HIRHS	PA66HIRHS	Black
156-04046		105.0	535.0	PA66HIRHS	PA66HIRHS	Orange, High Voltage, Black

Edge Clip Cable Ties

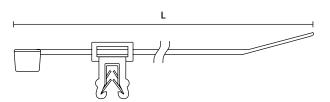
2-Piece Cable Tie/Edge Clips

HellermannTyton's Two-Piece Edge Clip with Cable Tie assemblies are designed specifically to route bundles by securing them to the edge of a plastic or metal sheet without the need for a mounting hole. The clip is easy to secure, and the extraction force is high due to the integrated metal clamp that holds the edge clip in place.

Features and Benefits

- Edge clip applies easily to plastic and metal sheets without the need for a mounting hole.
- Low insertion force and high extraction force are ideal for assembly environments.
- Two-piece option allows for routing directly over the edge clip.





PART NO.	ТҮРЕ	Panel Thickness mm	Min. Tensile Strength N	Length (L) mm	Max. Bundle Diameter mm	Material Cable Tie	Material Edge Clip	Color	Drawing
156-00860	T50ROSEC4A	1.0 - 3.0	225.0	203.2	50.0	PA66HS	PA66HIRHS	Black	
156-04050	T50REC4A	1.0 - 3.0	225.0	203.2	50.0	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	
156-00861	T50ROSEC4B	1.0 - 3.0	225.0	203.2	50.0	PA66HS	PA66HIRHS	Black	
156-04051	T50REC4B	1.0 - 3.0	225.0	203.2	50.0	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	
156-00864	T50ROSEC5A	1.0 - 3.0	225.0	203.2	50.0	PA66HS	PA66HIRHS	Black	
156-04052	T50REC5A	1.0 - 3.0	225.0	203.2	50.0	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	
156-00862	T50ROSEC5B	1.0 - 3.0	225.0	203.2	50.0	PA66HS	PA66HIRHS	Black	
156-04053	T50REC5B	1.0 - 3.0	225.0	203.2	50.0	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	
156-00877	T50ROSEC23	3.0 - 6.0	225.0	200.0	50.0	PA66HS	PA66HIRHS	Black	
156-04054	T50REC23	3.0 - 6.0	225.0	200.0	50.0	PA66HIRHS	PA66HIRHS	Orange, High Voltage, Black	

Ratchet P-Clamps

Bundle Sizes A - D

The Ratchet P-Clamp family offers versatility when managing wires, cables and hoses. The robust design and durable materials make it ideal for heavy duty applications, both indoors and out. The one-piece adjustable clamp can be closed by hand to the desired diameter. The release feature provides easy and nondestructive removal of cables simply by using a flat-head screwdriver. This nondestructive release allows the clamp to be reused without removing or replacing any bolts or screws.

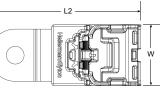
Features and Benefits

- One-piece ratchet closure allows for easy installation during pre- or final assembly.
- Easy release feature simplifies quick adjustments and maintenance.
- Impact modified, heat and UV stabilized PA66 provides long-term durability, indoors and out.
- Zinc-plated steel mounting plate tolerates high torque and is treated to resist chemicals and salt spray.
- Angled mounting plates are ideal for stacking RPCs or for avoiding obstructions or heat sources.



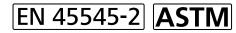
MATERIAL	Polyamide 6.6/6, V0 (PA666V0), Steel (ST), Zinc plated (ZN)
Operating Temperature	-40°F to +248°F (-40°C to +120°C)
Color	Black (BK)





PART NO.	ТҮРЕ	Angle/ Length Variant	Max. Bundle Diameter in. (mm)	Length (L2) in. (mm)	Width (W) in. (mm)	Min. Tensile Strength Ibs. (N)	Mounting Hole Centers in. (mm)	Mounting Hole Dia. (FH) in. (mm)	Pkg. Qty.	
151-03012	RCA180SM8	180 ° Short	0.54 (13.7)	3.3 (83.1)	1.4 (34.9)	100.0 (445.0)	2.0 (50.5)	0.33 (8.4)	300	
151-03013	RCB180SM8	180 ° Short	0.77 (19.5)	3.3 (83.1)	1.4 (34.9)	100.0 (445.0)	2.1 (52.8)	0.33 (8.4)	280	
151-03014	RCC180SM8	180 ° Short	1.42 (36.0)	4.1 (103.0)	1.4 (34.9)	100.0 (445.0)	2.5 (62.3)	0.33 (8.4)	160	
151-03015	RCD180SM8	180 ° Short	2.0 (51.0)	4.6 (115.5)	1.4 (34.9)	100.0 (445.0)	2.8 (70.0)	0.33 (8.4)	160	
151-02877	RCD90SM8	90 ° Short	2.0 (51.0)	4.0 (101.2)	1.4 (34.9)	100.0 (445.0)	2.6 (66.5)	0.33 (8.4)	160	
151-02878	RCD90LM8	90 ° Long	2.0 (51.0)	5.1 (129.2)	1.4 (34.9)	100.0 (445.0)	3.7 (94.5)	0.33 (8.4)	140	

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.



Please note - not all products listed on this page may have this approval. Please see www.Hellermann.Tyton.com for the latest approvals.

Non-Adhesive 2-to-1 Shrink Ratio

Heat Shrink Tubing - TF21

TF21 is highly flexible, thin-wall, heat-shrink tubing with a 2-to-1 shrink ratio and excellent flame retardant properties. In addition to providing insulation and abrasion protection for wires and cables, the polyolefin material also offers resistance to oils, solvents and chemicals. TF21 is UL Recognized with a UL 224 VW-1 flame rating.

Features and Benefits

D

- Quick and easy shrinking TF21 tubing is widely used for insulating, mechanical protection, strain relief, marking and bundling.
- The excellent balance of electrical, mechanical and chemical properties meets and exceeds industrial standards.
- TF21 is UL 224 Recognized and available in a wide range of sizes and colors.



MATERIAL	Polyolefin, cross-linked (PO-X)
Shrink Ratio	2:1
Longitudinal Change After Shrinkage	+/-5%
Min. Shrink Temperature	+194 °F (+90 °C)
Operating Temperature	-67°F to +275°F (-55°C to +135°C)
Flammability	ASTM D876



PART NO.	ТҮРЕ	Supplied Ø (D) mm	Recovered Ø (D) mm	Wall Thickness mm	Color
309-20483	TF21-4.8/2.4	4.8	2.4	0.5	Orange, High Voltage
309-20953	TF21-9.5/4.8	9.5	4.8	0.6	Orange, High Voltage
309-21273	TF21-12.7/6.4	12.7	6.4	0.6	Orange, High Voltage
309-21903	TF21-19.1/9.5	19.1	9.5	0.8	Orange, High Voltage

+ WT

∏d



Cable Ties

Parallel Routing Cable Ties DH-Series Cable Ties

The double-head cable tie is an ideal solution to bundle and separate ca bles. The tie features a dual-locking design to secure two bundles at once while separating the bundles.

Features and Benefits

- Head design can provide spacing between parallel bundles.
- Bent tail allows for quick insertion into head.



PART NO.	ТҮРЕ	Min. Tensile Strength N	Length (L) mm	Width (W) mm	Max. Bundle Diameter 1st Loop mm	Max. Bundle Diameter 2nd Loop mm	Color	Material
T50RDH0HSM4*	T50RDH	225.0	210.8	4.7	44.4	19.0	Black	PA66HS
117-00015		535.0	398.0	7.6	101.6	50.8	Black	PA66HS
117-00028	T120RDH	535.0	398.0	7.6	101.6	50.8	Orange, High Voltage	PA66HIRHS

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

*This product meets UL standards. Please go to hellermanntyton.us for specific file numbers.

Mounts Secured with Mechanical Fasteners Bolt-Down Mounts

HellermannTyton's saddle mount can be installed between two bundles (such as wires, cables, hoses, tubing, conduit, etc.) to separate them and prevent chafing and wear. Wide strap cable ties up to 1/2 " wide are used to secure the bundles. Cable ties sold separately.

Features and Benefits

- High tensile strength delivers reliable performance for heavy duty applications.
- Wide strap is designed to minimize pinching of soft coverings and convoluted tubing.
- Low-profile designs allow for mount to be placed in areas where space is limited.



PART NO.	ТҮРЕ	Cable Tie Series	Mounting Screw Type	Length (L) mm	Width (W) mm	Height (H) mm	Material	Color	Drawing
MSBT1200HIRHSH1	MSBT120	BT130, BT105	-	48.3	16.5	20.6	PA66HIRHS	Black	
S2HM250HIRHSH1	S2HM25	T50 - T250	1/4" (M6) Screw	45.0	30.0	23.0	PA66HIRHSUV	Black	
151-01122	LDMADE	T50 - T250	1/4" (M6) Screw	45.1	24.9	16.7	PA66HIRHSUV	Black	
151-03101	LPM25	T50 - T250	1/4" (M6) Screw	45.1	24.9	16.7	PA666V0	Black	
151-02104	HDM375BDM4W-R	T50 - T250	3/8" (M10) Screw	89.0	34.1	25.2	PA66HIRHSUV	Black	

Bundle Separators

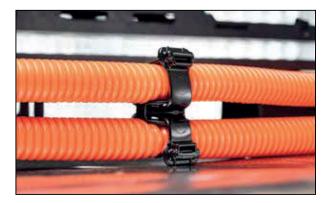
Parallel Routing Cable Ties

Disc Couplers

Low-profile design allows for bundling and separating in tight areas. Design can allow for swivel or stationary routing depending on the tension applied to the tie. Coupler assemblies can come with black or orange ties for high visibility. Available in three tie ratings: 50 lb, 120 lb and wide strap 120 lb.

Features and Benefits

- Two-piece tie and coupler come pre-assembled for convenience.
- Ability to add cables after assembly allows for easy maintenance.
- For parallel routing of bundles, can be rotated 90° even after installation.



PART NO.	ТҮРЕ	Min. Bundle Diameter mm	Max. Bundle Diameter mm	Length (L) mm	Width (W) mm	Height (H) mm	Material	Color
156-03367		2.0	47.0	202.0	4.6	8.3	PA66HIRHS, PA66HIR(S)	Black
156-04005		2.0	47.0	202.0	4.6	8.3	PA46	Gray
156-04062	T50RCOUPLER	2.0	47.0	202.0	4.6	8.3	PA66HIRHS, PA66HIRHSUV	Orange, High Voltage, Black
156-03366		10.0	105.0	390.0	7.6	14.9	PA66HIRHS	Black
156-04004	T120RCOUPLER	10.0	105.0	390.0	7.6	14.9	PA46	Gray
156-04063	TIZORCOOFEER	10.0	105.0	390.0	7.6	14.9	PA66HIRHS, PA66HIRHSUV	Orange, High Voltage, Black
156-03014	DUALWSRASSY	15.0	98.0	383.0	12.7	10.86	PA66HIRHSUV	Black
156-03013	DUALWSSASSY	15.0	51.0	231.0	12.7	10.86	PA46	Brown

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Mounts Secured with Mechanical Fasteners - Wide Strap

High Torque Mounts

These heavy duty mounts attach with a screw or bolt to an existing hole, or secure to a stud with a nut. They provide an attachment point for securing and routing a single bundle. Used with wide strap ties, they are the ultimate solution for heavy duty applications. Options are available to secure the bundle perpendicular or parallel to the bolt. Each mount has over-molded bushings for high torque applications. Ties sold separately.

Features and Benefits

 Mounts use a wide strap cable tie that has a wider and thinner strap design, which increases flexibility, provides low insertion and minimizes pinching of bundles.



• A suitable alternative for metal clamps.

PART NO.	ТҮРЕ	Max. Cable Tie Width mm	Mounting Screw Type	Max. Torque lbf-ft.	Length (L) in. (mm)	Width (W) in. (mm)	Material	Color
151-02094	HDM320	12.7	5/16" (M8) Screw	114.0	47.0	25.0	PA66HIRHSUV	Black
151-01224	HDM400	12.7	3/8" (M10) Screw	114.0	47.0	25.0	PA66HIRHSUV	Black
151-02099	SAM320B-R	12.7	5/16" (M8) Screw	114.0	29.9	25.0	PA66HIRHSUV	Black
151-02102	SAM400B-R	12.7	3/8" (M10) Screw	114.0	29.9	25.0	PA66HIRHSUV	Black

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Heavy Duty Cable Tie Mounts

Parallel Routing Cable Ties Dual Swivel Bundle Separators

The dual swivel bundle separator's coupler design allows for independent movement between two bundles (such as wires, cables, hoses, tubing, conduit, etc.), particularly useful where paths may diverge or in high-vi - bration areas. Designed to be used with wide strap 120 lb ties, the dual swivel bundle separator offers the ideal solution for critical routings under the harshest conditions. HellermannTyton's recommended wide strap tie is sold separately.

Features and Benefits

- H-profile of the saddle allows for broad surface contact with the bundle, which minimizes pinching and crushing.
- Swivels in 360-degree motion to accommodate any area.
- Accommodates T50 to T250 ties to handle both light- and heavy duty applications.



PART NO.	ТҮРЕ	Cable Tie Series	Min. Bundle Diameter mm	Max. Bundle Diameter mm	Min. Extraction Force N	Length (L) mm	Width (W) mm	Height (H) mm	Material	Color
DSWS50HSH1	DSWS5	T50 - T250	16.0	152.0	1112	40.6	25.4	23.6	PA66HS, PA46	Black
151-06500	DSWS4	T50 - T250	6.0	76.0	445	23.6	20.3	18.0	PA66HS, POM	Black

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Bundle Separation Clamps HDCM2 Series

HDCM2 Clamps separate multiple bundles and secure them to brackets or frame rails. Each mount has two pawls for easy pre-installation on a threaded fastener prior to securing with a mechanical fastener. Clamps have ribs that make them ideal for convoluted tubing, but they can also be used to separate bundles that aren't protected with convoluted tubing.

Features and Benefits

- Separates and secures bundles, avoiding abrasion.
- Designed to handle both convoluted tubing and bundles not covered in convoluted tubing.
- Available in a variety of sizes and colors to be easily identified.



PART NO.	ТҮРЕ	Max. Bundle Diameter 1st Hole mm	Max. Bundle Diameter 2nd Hole mm	Length (L) mm	Width (W) mm	Height (H) mm	Material	Color
151-03253	HDCM2A	23.7	23.7	69.1	28.5	34	PA66GF15	Black
151-03254	HDCM2B	17.2	17.2	69.1	28.5	34	PA66GF15	Green

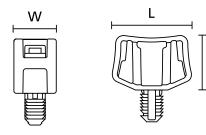
Fir Tree Mount Cable Ties

Multi-Bundle Fir Tree Mount Cable Ties

HellermannTyton's fir tree mounts provide a secure grip in a mounting hole. The mount can slide along the cable tie to adjust orientation as needed. Fir tree mounts are designed to provide a low insertion force and high extraction force. This mount is sold as an assembly with the cable tie.

Features and Benefits

- Robust fir tree design provides low insertion effort yet delivers exceptional retention strength, for ease of use and reliable performance.
- Standoff feature raises the bundles 14.8mm above mounting hole to protect bundles from rubbing, heat or obstructions.
- Friction tab inside the fir tree allows the tie to sit in mount without falling out prior to installation.





MATERIAL	Polyamide 6.6, high impact modified, heat stabilized (PA66HIRHS), Polyamide 6.6 high impact modified, heat and UV stabilized (PA66HIRHSUV)
Operating Temperature	-40°F to +221°F (-40°C to +105°C)
Flammability	UL 94 HB



PART NO.	ТҮРЕ	Mounting Hole Dia. mm	Length (L) mm	Min. Tensile Strength N	Max. Bundle Diameter mm	Panel Thickness mm	Material Cable Tie	Material Fir Tree	Color	Drawing
Assembled	Sets									
156-04083		6.1 - 7.0	203.2	225.0	50.0	0.6 - 6.0	PA66HIRHSUV	PA66HIRHSUV	Black	W/
156-04065	T50RX2DUAL SDFT6.5A	6.1 - 7.0	203.2	225.0	50.0	0.6 - 6.0	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	
156-03110	T50RX2DUAL	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	203.2	225.0	50.0	0.6 - 6.8	PA66HIRHSUV	PA66HIRHSUV	Black	
156-04067	SDFTOVAL	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	203.2	225.0	50.0	0.6 - 6.8	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	AL CONTRACTOR
156-04082	T50RX2DUAL	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	203.2		50.0	0.6 - 6.8	PA66HIRHSUV	PA66HIRHSUV	Black	
156-04068	SDFTOCCA	6.2 x 12.2, 6.5 x 12.5, 6.5 x 13.0, 7.0 x 12.0	203.2	225.0	50.0	0.6 - 6.8	PA66HIRHS	PA66HIRHSUV	Orange, High Voltage, Black	di e S

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Heavy Duty Cable Tie Mounts

Mounts Secured with Mechanical Fasteners DHDM Series

Multi-piece heavy duty dual clamp ties provide parallel separation between high-voltage cables to protect them from abrasion. A variety of mounting hole options are available for securing bundles along the chassis or body of today's electric vehicles.

Features and Benefits

- High tensile strength delivers reliable performance for heavy duty applications.
- Low-profile design allows for mount to be placed in areas where space is limited.
- A suitable alternative for metal clamps.
- Robust design withstands vibration and displacement forces.
- Metal bushing provides high tightening torque.
- Preassembled ties help speed utilization.



MATERIAL	Polyamide 6.6, high impact modified, heat stabilized (PA66HIRHS), Polyamide 6.6 UV-resistant (PA66UV)
Flammability	UL 94 HB



PART NO.	ТҮРЕ	Mounting Screw Type	Length (L) mm	Width (W) mm	Height (H) mm	Material	Color
156-01096	X120RDHDM6	M6 Screw	369.0	7.7	15.5	PA66HIRHS, PA66UV	Black

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes.

Dual Clamp Ties DCT Series

Dual-clamp ties provide parallel separation between bundles (such as wires, cables, hoses, tubing, conduit, etc.) to protect them from abrasion. These ties have an optional mounting hole for securing bundles along the chassis of trucks, trailers and heavy duty equipment. Unique one-piece design features the dual head centered on the strap.

Features and Benefits

- Provides dual separation between bundles to prevent chafing and abrasion.
- 150 lb tensile strength ensures enough strength for heavy duty appli cations.



PART NO.	ТҮРЕ	Stud Dia. mm	Min. Tensile Strength N	Length (L) mm	Max. Bundle Diameter mm	Width (W) mm	Material	Color
DCT90HIRK2	DCT9	M6	667.0	331.0	33.0	12.8	PA66HIRHSUV	Black
115-00176	DCT11	M6	667.0	489.0	58.0	12.8	PA66HIRHS	Orange, High Voltage
115-00145*	DCT11SLVH1	6.35	667.0	489.0	58.0	12.8	PA66HIRHSUV	Black

Dimensions are approximate and subject to technical changes. Use Part No. for ordering and Type for specification purposes. *Includes Neoprene sleeving.

Bundle Separators

Stud Mount Bundle Separators

These dual cable tie options mount to a variety of weld stud sizes. They excel at routing parallel high-voltage cables in areas with a weld stud attachment point. Four-pawl, three-tooth design delivers outstanding stud retention to keep bundles secure.

Features and Benefits

- Dual cable tie secures multiple bundles away from the stud.
- Single- and multi-piece designs meet varying high-voltage routing needs.
- A variety of options fit all major weld stud sizes.
- Wide strap option minimizes pinching of soft hoses and convoluted tubing.







PART NO.	ТҮРЕ	Stud Dia. mm	Min. Tensile Strength N	Length (L) mm	Max. Bundle Diameter mm	Width (W) mm	Material	Color	Drawing
117-00012	SDCTR312	M8	445.0	510.5	58.4	12.7	PA66HIRHSUV	Black	
157-00060	SDCTL	M8	445.0	663.0	86.4	12.7	PA66HIRHSUV	Black	
151-00813	HM6	15.9	-	50.0	-	26.0	PA66HIRHSUV	Black	
156-04238	T50ROSX2SBS5-6U	M5, M6	200.0	202.0	50.0	4.6	PA66HS, PA66HIRHSUV	Black	

Routing, Protection and Insulation

Convoluted Tubing and Accessories

Convoluted Tubing

Flame-Retardant Slit Tubing with UV Inhibitor (PP+V2+UV)

HellermannTyton's Orange Flame-Retardant Polypropylene with UV Inhibitor Convoluted Slit Tubing provides high visibility, is selfextinguishing and offers elevated protection against UV radiation for longterm outdoor use. Convoluted tubing efficiently protects wire harness assemblies, hoses and cables against vibration wear, water, snow, ice and the effects of heat, cold and sunlight on cables and wires while reducing the chance of installation damage. Its unique blend of flame-retardant polypropylene is suitable for applications requiring self-extinguishing materials and complies with UL 94 V-2 standards.

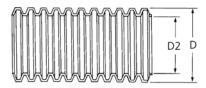
Features and Benefits

- Excellent flame-resistant properties with higher operating temperature ranges for a wider range of application environments.
- High-visibility orange color offers safe identification of high-voltage cabling.
- Lateral slit allows for fast and easy insertion, inspection and future access to cabling.
- The UV additive prevents damage and discoloration caused by long-term exposure to sunlight.



MATERIAL	Polypropylene, flame retardant, UV-stabilised (PPFRUV)
Operating Temperature	-40°F to +257°F (-40°C to +125°C)
Flammability	UL 94 V-2





PART NO.	ТҮРЕ	Nominal Diameter in. (mm)	Outside Diameter (D) in. (mm)	Inner Diameter (D2) in. (mm)	Wall Thickness in. (mm)	Color	Pkg. Qty. Feet
Slit							
169-60132	CTPPFRUV380STD	3/8 (9.7)	0.526 (13.4)	0.380 (9.7)	0.005 (0.1)	Orange, High Voltage	1800
169-60130	CTPPFRUV120	1/2 (12.7)	0.70 (17.8)	0.516 (13.1)	0.005 (0.1)	Orange, High Voltage	1100
169-60133	CTPPFRUV580STD	5/8 (16.0)	0.837 (21.3)	0.639 (16.2)	0.005 (0.1)	Orange, High Voltage	750
169-60131	CTPPFRUV340STD	3/4 (19.1)	0.989 (25.1)	0.759 (19.3)	0.005 (0.1)	Orange, High Voltage	500
169-60129	CTPPFRUV10	1 (25.4)	1.304 (33.1)	1.069 (27.2)	0.006 (0.2)	Orange, High Voltage	300

Routing, Protection and Insulation Braided Sleeving

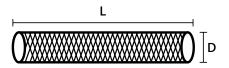
Braided Sleeving - General Purpose

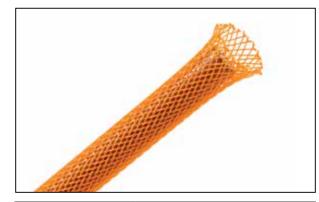
General Purpose Expandable Braided Sleeving - Orange

Orange PET braided sleeving is an extremely flexible, general-purpose option for bundling and protecting wires and cables in abrasive applications. Its color makes it ideal for systematic color coding of complex wiring installations.

Features and Benefits

- Unique color provides easy visual and safety identification of critical wiring components.
- PET material offers high tensile strength while maintaining extreme flexibility.
- Expands up to 150% of flat diameter for easy wire installation.
- Breathable construction does not trap heat or humidity.
- Installs quickly and accommodates expansions and varying cable assembly shapes, reducing installation costs.





MATERIAL	Polyester (PET)
Operating Temperature	-94°F to +257°F (-70°C to +125°C)
Flammability	UL 94 V-0, FMVSS 302, FAR 25
Melting Point	+482 °F (+250 °C)
Abrasion Resistance	Medium



PART NO.	ТҮРЕ	Nominal Dia. (D) in. (mm)	Min. Bundle Diameter in. (mm)	Max. Bundle Diameter in. (mm)	Color	Reel Length (L) ft. (m)
170-03076	BSP143B	0.25 (6.4)	0.1 (3.2)	0.4 (11.1)	Orange, High Voltage	1000.0 (304.8)
170-03077	BSP123B	0.5 (12.7)	0.3 (6.4)	0.8 (19.1)	Orange, High Voltage	500.0 (152.4)
170-03078	BSP343B	0.75 (19.1)	0.5 (12.7)	1.3 (31.8)	Orange, High Voltage	250.0 (76.2)
170-03079	BSP103B	1 (25.4)	0.6 (15.9)	1.6 (41.3)	Orange, High Voltage	250.0 (76.2)
170-03080	BSP1143B	1.25 (31.8)	0.8 (19.1)	1.8 (44.5)	Orange, High Voltage	250.0 (76.2)
170-03081	BSP1123B	1.5 (38.1)	1.5 (38.1)	3.5 (88.9)	Orange, High Voltage	200.0 (61.0)



Braided Sleeving for Electromagnetic Protection

Helagaine HEGEMIP-HY

Special braided sleeving protects sensitive electronics from electromagnetic interference in hybrid and electric-powered vehicles. It won't rupture or kink, even when flexed at sharp angles. The sleeving has a 3:1 expansion ratio.

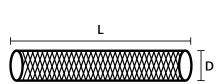
Features and Benefits

- Unique blend of polyester (protection yarns) and tinned copper (shielding yarns) offers excellent flexibility and EMI protection.
- Extremely flexible, expandable and easy to apply, making this product particularly well-suited for applications with space restrictions.
- Special copper alloy for enhanced protection against salt spray.
- Excellent flame resistance properties, including UL 94 V-2 and FMVSS 302 certifications.



MATERIAL	Polyester (PET), Tin-plated copper (SNCU)
Operating Temperature	-40°F to +302°F (-40°C to +150°C)
Flammability	UL 94 V-2, FMVSS 302

HF



RoHS

PART NO.	ТҮРЕ	Nominal Dia. (D) in. (mm)	Min. Bundle Diameter in. (mm)	Max. Bundle Diameter in. (mm)	Color	Reel Length (L) ft. (m)
173-02001	HEGEMIP-HY20	0.8 (20.0)	0.7 (19.0)	1.1 (27.0)	Silver, Orange	164.0 (50.0)
173-03000	HEGEMIP-HY30	1.2 (30.0)	0.9 (25.0)	1.4 (35.0)	Silver, Orange	164.0 (50.0)
173-03501	HEGEMIP-HY35	1.4 (35.0)	1.2 (30.0)	1.6 (40.0)	Silver, Orange	164.0 (50.0)
173-04000	HEGEMIP-HY40	1.6 (40.0)	1.2 (30.0)	1.9 (50.0)	Silver, Orange	164.0 (50.0)
173-05000	HEGEMIP-HY50	1.9 (50.0)	1.6 (40.0)	2.4 (60.0)	Silver, Orange	164.0 (50.0)