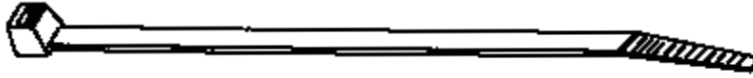


Standard Cable Ties



U.S. Patent Numbers 3,127,648 – 3,486,201

HellermannTyton Part No.	Gov. Designation	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T18S9C2* T18S9M4*	MS3367-4	18	5/8" (15.9)	3-3/8" (85.7)	.08" (2.0)	100 1000	TWT1, MK3P, MK7, MK7P
T18R9C2* T18R9M4*	MS3367-4	18	3/4" (19.0)	4" (101.6)	.10" (2.5)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
T18I9C2** T18I9M4**	MS3367-4	18	1-1/4" (31.8)	5-2/3" (143.9)	.10" (2.5)	100 1000	
T18L9C2** T18L9M4**	MS3367-4	18	2" (50.8)	8" (203.2)	.10" (2.5)	100 1000	
T30R9C2* T30R9M4*	MS3367-5	30	1-1/4" (31.8)	6" (152.4)	.14" (3.6)	100 1000	
T30M9C2 T30M9M4		30	2" (50.8)	8" (203.2)	.14" (3.6)	100 1000	
T30I9C2 T30I9M4		30	3" (76.2)	11-3/4" (298.5)	.15" (3.8)	100 1000	
T30L9C2 T30L9M4		30	4" (101.6)	14-1/4" (362)	.14" (3.6)	100 1000	
T40R9C2* T40R9M4*		40	2" (50.8)	8-1/2" (215.9)	.15" (3.8)	100 1000	
T40I9C2* T40I9M4*		40	3" (76.2)	11-1/2" (292.1)	.15" (3.8)	100 1000	
T40L9C2* T40L9M4*		40	4" (101.6)	14-1/2" (368.3)	.15" (3.8)	100 1000	
T50S9C2 T50S9M4		50	1-1/4" (31.8)	6-1/2" (165.1)	.18" (4.6)	100 1000	TWT1, MK3P, MK6PN, MK7, MK7P, MK9
T50R9C2* T50R9M4*	MS3367-1	50	1-3/4" (44.5)	8" (203.2)	.18" (4.6)	100 100	
T50I9C2* T50I9M4*	MS3367-7	50	3" (76.2)	11-3/4" (298.5)	.18" (4.6)	100 100	
T50L9C2* T50L9M4*	MS3367-2	50	4" (101.6)	15-1/2" (393.7)	.18" (4.6)	100 1000	

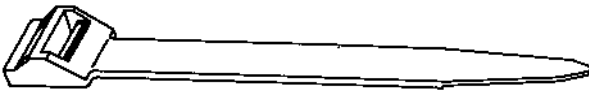
Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Example: T50ROC2 is a black T50R cable tie in a 100 pack. Other colors may be available. Colored cable ties may be subject to minimums, custom terms, and lead times. * AS23190E (formerly MIL-S-23190E) (Type I Class 1) **HellermannTyton QPL23190 listed as exceeding the tensile strength or length and meeting MS3367 (Type I Class 2)

Heavy Duty Lashing Ties



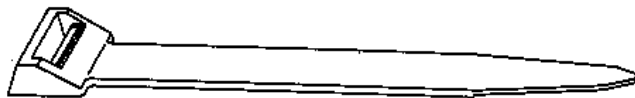
HellermannTyton Part No.	Gov. Designation	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T120S9K2 T120S9H4		120	2" (50.8)	8-7/8" (225.4)	.30" (7.6)	50 500	TWT2, MK6PN, MK9
T120I9K2 T120I9H4		120	3" (76.2)	11-7/8" (301.6)	.30" (7.6)	50 500	
T120R9K2* T120R9H4*	MS3367-3	120	4" (101.6)	15-1/4" (387.4)	.30" (7.6)	50 500	
T120L9K2*	MS3367-6	120	8-3/4" (222.3)	29-3/4" (755.7)	.30" (7.6)	50	
T150R9X2**	MS3367-3	175	4" (101.6)	15" (381.0)	.35" (8.9)	25	TWT2, T150, T250, MK6PN, MK9
T150M9X2**	MS3367-3	175	6" (152.4)	21" (533.4)	.35" (8.9)	25	
T150L9X2**	MS3367-6	175	9" (228.6)	32" (812.8)	.35" (8.9)	25	
T150LL9X2		175	11" (279.4)	36" (914.4)	.35" (8.9)	25	
T150XL9X2		175	13" (330.2)	43" (1092.2)	.35" (8.9)	25	
T150XL9X2		175	16" (405)	52" (1320.8)	.35" (8.9)	25	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Other colors may be available. T150 Series available as releasable ties. When ordering, use HellermannTyton Part No. RT150. *AS23190E (formerly MIL-S-23190E) (Type I Class 1)
**HellermannTyton QPL23190 listed as exceeding the tensile strength or length and meeting MS3367 (Type I Class 2)



HellermannTyton Part No.*	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T250S9X2	250	2" (50.8)	9" (228.6)	.50" (12.7)	25	MK9, T250
T250R9X2	250	5" (127.0)	20" (508.0)	.50" (12.7)	25	
T250M9X2	250	6" (152.4)	23" (584.2)	.50" (12.7)	25	
T250I9X2	250	8" (203.2)	29" (736.6)	.50" (12.7)	25	
T250L9X2	250	10" (254.0)	35" (889.0)	.50" (12.7)	25	
T250XL9X2	250	12" (304.8)	40" (1016.0)	.50" (12.7)	25	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Other colors may be available. *T250 Series available as releasable ties. When ordering, use HellermannTyton Part No. RT250.



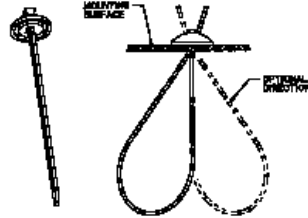
HellermannTyton's T255 series heavy duty cable ties are the perfect tie for use with the Heavy Duty Mounts (see page 6). Available in both releasable and standard versions, this adjustable tie can eliminate the need for various sizes of metal P-clamps when used with the Heavy Duty Mounts. Standard material is black high impact nylon 6/6, ideal for high vibration applications. T255 ties are similar to the T250 series, but with the buckle mount feature eliminated.

HellermannTyton Part No.	Minimum Tensile Strength (lbs.)	Max. Bundle Dia. In. (mm)	Approx. Length In. (mm)	Approx. Width In. (mm)	Pkg. Qty.	HellermannTyton Installation Tools
T255SOHIRX2	250	2" (50.8)	8.747" (222.17)	.492" (12.50)	25	MK9, T250
T255ROHIRX2	250	5" (127.0)	20.030" (508.77)	.492" (12.50)	25	
T255MOHIRX2	250	6" (152.4)	22.114" (561.70)	.492" (12.50)	25	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Other colors may be available. T255 Series available as releasable ties. When ordering, use HellermannTyton Part No. RT255.

Button Head Ties

Manufactured from black, high impact nylon 6/6, the button head tie is a two piece tie providing for parallel entry and exit through the head. The strap contains serrations on both sides and the head has two opposed pawls covered by a spherical dome top. This design allows the strap to be directed clockwise or counter-clockwise prior to insertion into the head, enabling bi-directional looping.

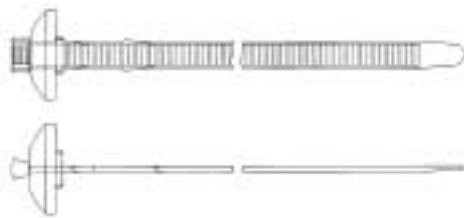


U.S. Patent Number 4,557,023

HellermannTyton Part No.	Material/Color	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
BT1000HIRK2	High Impact, Nylon 6/6, Black	100	2-5/8" (66.67)	9.625" (244.47)	.22" (5.58)	100	TWT2, T150, MK6PN, MK9
BT100L0HIRK2		100	4-5/16" (109.53)	15" (381.0)	.22" (5.58)	50	
BT120R0HIRK2		120	2-29/32" (73.66)	10.5" (266.0)	.30" (7.62)	50	

Button Head Ties with Retainers

Similar to standard button head ties, these ties feature retainer arrows for use with HellermannTyton's MSBT120 saddle mounts (see page 5). However, these ties can also be used independently of the mounts. These button head ties are manufactured with a pilot bushing which, when used with the saddle mounts, prevents chafing of the tie. The saddle mount is snapped onto the tie, and the mount and tie assembly can be pre-installed onto a frame or panel.



HellermannTyton Part No.	Material/Color	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
BT120LD0HIRK2	High Impact, Nylon 6/6, Black	120	4-5/16" (110.5)	15" (381.0)	.30" (7.6)	50	TWT2, T150, MK6PN, MK9
BT120LLD0HIRK2		120	5-7/8" (146.9)	20" (508.0)	.30" (7.6)	50	

Dual Clamp Ties

HellermannTyton's dual clamp ties are designed to provide parallel spacing between hoses, wires, cables and tubing, protecting them from abrasion. These ties have an optional mounting hole for securing bundles along the chassis of trucks, trailers, and automobiles. The unique, one-piece design features the dual head centered on the strap.

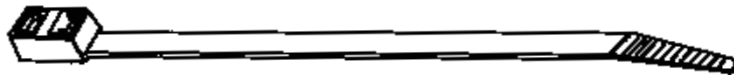


U.S. Patent Number 5,966,781

HellermannTyton Part No.	Material/Color	Recommended Stud Size In. (mm.)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
DCT90HIRK2 DCT90HIRC2	Nylon 6/6, High Impact, Black	1/4" (6.35)	150	1.3" each side (33.02)	12.9" (327.66)	.50" (12.7)	50 100	MK9 or T250
DCT110HIRK2 DCT110HIRC2		1/4" (6.35)	150	2.3" each side (58.42)	19.2" (487.68)	.50" (12.7)	50 100	

Double Head Ties

Designed to harness two cables simultaneously. The second loop may also serve as a positioning device for a single cable.



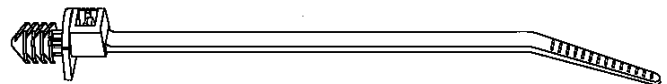
U.S. Patent Numbers 3,127,648 - 3,486,201

HellermannTyton Part No.	Min. Tensile Strength (lbs.)	Maximum Bundle Diameter In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
T50RDH9C2 T50RDH9M4	50 lbs. 1st loop 40 lbs. 2nd loop	Two loops up to 3/4" (19.0) diameter each	8.25" (209.5)	.18" (4.6)	100 1000	TWT1, MK3P, MK6PN, MK7, MK7P, MK9
T50IDH9C2 T50IDH9M4	50 lbs. 1st loop 40 lbs. 2nd loop	Two loops up to 1-1/2" (38.1) diameter each	12" (304.8)	.18" (4.6)	100 1000	
T50LDH9C2 T50LDH9M4	50 lbs. 1st loop 40 lbs. 2nd loop	Two loops up to 2" (50.8) diameter each	15.5" (393.7)	.18" (4.6)	100 1000	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Example: T50R0C2 is a black T50R cable tie in a 100 pack. Other colors may be available. Colored cable ties may be subject to minimums, custom terms, and lead times.

Fir Tree Push Mount Ties

Fir tree design grips to the inside of a hole. Can be used on sheet metal, wood, and cast iron.



HellermannTyton Part No.	Material/Color	Mounting Hole Diameter In. (mm.)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
T50RTM250HSM4	Nylon 6/6, Heat Stabilized, Black	.246" (6.25) min. to .276" (7.0) max.	50	2" (50.8)	8.39" (213.1)	.18" (4.6)	1000	TWT1, MK3P, MK6PN, MK7, MK7P, MK9

Wing Push Mount Ties



HellermannTyton Part No.	Mounting Hole Dia. In. (mm.)	Panel Thickness In. (mm.)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
T18RWPM9C2 T18RWPM9M4	.187" (4.76) min. to .220" (5.56) max.	.060" (1.5) to .125" (3.2)	18	.875" (22.2)	4.5" (111.5)	.098" (2.5)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
111-85469	.240" (6.1) min. to .256" (6.5) max.	.032" (.8) to .098" (2.5)	50	1.34" (34)	6.5" (165)	.181" (4.6)	1000	
T50SL7.NN6P	.240" (6.1) min. to .256" (6.5) max.	.032" (.8) to .118" (3.0)	50	1.97" (50)	8.03" (204)	.181" (4.6)	1000	

Ties listed above are natural. Black colored cable ties are also available in nearly every size. Insert a "0" instead of "9" in the part number. Other colors may be available.

Domed Fir Tree Mount Ties

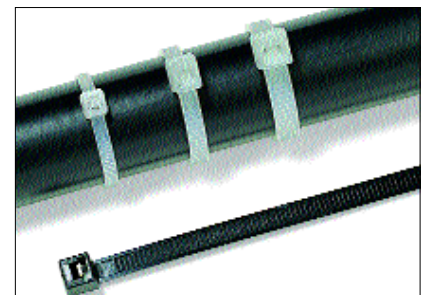
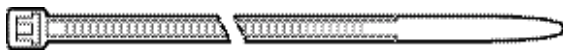
Domed head tie provides a tight, rattle-free installation. The dome also acts as a seal to keep out dust and liquid.



HellermannTyton Part No.	Material/Color	Mounting Hole Dia. In. (mm.)	Max Panel Thickness In. (mm.)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
T50SDP6.HB6P	Nylon 6/6, Heat Stabilized, Black	1/4" (6.35)	.260" (6.5) min. to .276" (7.0) max.	50	1-1/4" (31)	6.5" (165)	.20" (5.0)	500	TWT1, MK3P, MK6PN, MK7, MK7P, MK9

Outside Serrated Ties

Developed for specific applications where thin walled or soft insulation is used (such as in aircraft, trains etc.) and for applications that are very sensitive to the amount of force applied to the cable (telecommunications etc.). The outside serrated cable ties offer a wide variety of tensile strength options.



Hellermann Tyton Part No.*	Material/Color	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	Hellermann Tyton Installation Tools
LK0X.HG7P	Heat Stabilized, Nylon 6/6, Black	18	5/8" (16)	4" (100)	.09" (2.3)	200	TWT1, MK3P, MK7, MK7P, MK9
LKOBHS		30	1-3/4" (45)	7.875" (200)	.14" (3.5)	100	
LK2C.HB3P		50	2" (50)	7.875" (200)	.18" (4.6)	100	
LK2M.HB3P		50	2" (50)	10.25" (260)	.18" (4.6)	100	
LK4HS		120	4-1/4" (108)	15.75" (390)	.30" (7.6)	100	TWT2, MK6PN, MK9

* Other colors available. Subject to minimums, custom terms, and lead times. Contact HellermannTyton for more information.

Domed Push Mount Ties

Domed head tie provides a tight, rattle-free installation.



HellermannTyton Part No.	Material/Color	Mounting Hole Dia. In. (mm.)	Max Panel Thickness In. (mm.)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
T50SDP6.HB6P	Nylon 6/6, Heat Stabilized, Black	.25" (6.3) to .30" (7.5)	.070" (1.8)	50	1-1/4" (31)	6.25" (160)	.20" (5.0)	500	TWT1, MK3P, MK7, MK7P, MK9

Flexible Head Stud Mount Ties

Flexible head wraps around cable bundle for easy installation. Tie mounts onto #10-24" (5mm) stud.



HellermannTyton Part No.	Material/Color	Recommended Stud Size In. (mm.)	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
T50RS5.NB3P	Nylon 6/6, Black	#10-24" (5.0)	50	1-1/2" (40)	7.5" (190)	.18" (4.6)	100	N/A

Stud Mount Ties

The stud mount tie is a one-piece cable tie, made from black, high impact nylon 6/6. Bundling and mounting are accomplished with one unit. The stud mount tie is designed for use on the 1/4" -20 UNC thread of a stud or the exposed threads of a machine screw.



HellermannTyton Part No.	Material/Color	Recommended Stud Size	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tools
T120RSM0HIRK2	Nylon 6/6, High Impact, Black	1/4" - 20 UNC	120	4" (101.6)	16" (406.4)	.30" (7.6)	50	TWT2, MK6PN, MK9

Clamp Ties

The clamp tie has triangular shaped tabs extending beneath the head, allowing for optimal surface contact and complete circumferential compression to 360 degrees. The clamps are recommended for soft rubber hose applications, as well as for fuel, water, and air vacuum lines. Clamp ties are manufactured in natural and heat stabilized, high impact, black nylon 6/6.

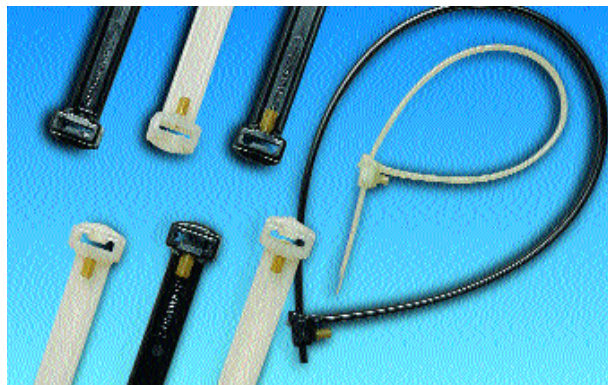


Hellermann Tyton Part No.	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	Hellermann Tyton Installation Tools
CTT20R9C2 CTT20R9M4	20	7/8" (22.2)	4" (101.6)	.09" (2.2)	100 1000	TWT1, MK3P, MK7, MK7P, MK9
CTT60R9C2 CTT60R9M4	60	1-3/4" (44.4)	8" (203.2)	.18" (4.6)	100 1000	TWT1, MK3P, MK6PN, MK7, MK7P, MK9

Ties listed above are natural. Contact HellermannTyton for heat stabilized, high impact, black nylon 6/6 information.

Kabelrap Bundling System

- Very high bundling strength
- Particularly resistant to salt water, oils, greases, and hydraulic fluids
- Material - Weather resistant, nylon 6/6, black
- Special, **required** hand tool shown upper right Part No. 121-00680



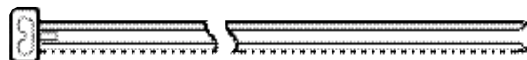
Black is standard color. Natural is available based upon minimums, custom terms, and lead times.



Required Tool –
121-00680



Kabelrap
Application



HellermannTyton Part No.	Material/ Color	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Approx. Width In. (mm.)	Pkg. Qty.	Required Installation Tool
121-61860	Weather Resistant, Nylon 6/6, Black	110	1-1/2" (39)	7.25" (183)	.24" (6.0)	50	121-00680
121-63560		110	3-3/4" (93)	14" (356)	.25" (6.4)	50	
121-82160		175	1-3/4" (47)	8.25" (210)	.31" (8.0)	50	
121-83360		175	3-3/8" (86)	13.25" (337)	.31" (8.0)	50	

Stainless Steel Ties

HellermannTyton's stainless steel ties are designed to secure hoses, cables, poles, pipes, and more when harsh environmental conditions may adversely affect the bundling application. Used where corrosion, vibration, weathering, radiation, and temperature extremes are a concern, HellermannTyton's stainless steel ties can be used in virtually any indoor, outdoor, and underground application.

Stainless Steel Tie Features

- Smooth, rounded edges help ensure safe, efficient handling.
- Low profile enclosed bearing head with fully adjustable strap accommodates many bundle diameters per size.
- Available in 10 sizes in 304 steel and 11 sizes in 316 steel.
- Sizes feature tensile unlocking strengths of 100 lbs. and 250 lbs. for 304 steel and 150 lbs. and 250 lbs. for 316 steel.
- Ergonomically designed installation tool consistently tensions and cuts off ties leaving flush edges.
- Temperature range for materials 304 and 316: -112°F (-80°C) to 1000°F (538°C). Can be used in environments that are subjected to extremes of temperature.
- Flame retardant and non-toxic for applications where safety from fire is critical.
- A complete stainless steel marking system is also available.



(304 Material)

Grade 304 material is commonly used for stainless steel bundling applications and suits most general purpose requirements. It features the ability to withstand most environmental conditions, particularly in applications where vibration, general weathering, radiation and temperature extremes are a concern.

(316 Material)

Grade 316 material is highly resistant to corrosion and widely used in marine environments where chemicals, salts, acids, and temperature extremes may affect the bundling application.

MBT Coated Stainless Steel Cable Ties

MBT stainless steel ties in 316 steel material are available with a nylon II protective coating. This coating creates a barrier and protectant from chemical reactions of dissimilar metals.

HellermannTyton Part No.	Cross Reference to Former HellermannTyton Part No.	Material	Min. Tensile Strength (lbs.)	Maximum Bundle Dia. In. (mm.)	Approx. Length In. (mm.)	Head Width In. (mm.)	Strap Width In. (mm.)	Pkg. Qty.	HellermannTyton Installation Tool
MBT5S-S	None	304 Steel	150	1" (25.4)	5.0" (127)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT5S	None	316 Steel							
MBT8S-S	SST100S-304C2	304 Steel	150	2" (50.8)	7.9" (201)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT8S	None	316 Steel							
MBT14S-S	SST100R-304C2	304 Steel	150	4" (102)	14.3" (363)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT14S	None	316 Steel							
MBT20S-S	SST100M-304C2	304 Steel	150	6" (152)	20.5" (521)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT20S	None	316 Steel							
MBT27S-S	SST100L-304C2	304 Steel	150	8" (203)	26.8" (681)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT27S	None	316 Steel							
MBT33S-S	None	304 Steel	150	10" (254)	33.0" (201)	.18" (4.6)	.26" (6.5)	100	MK9SST
MBT33S	None	316 Steel							
MBT8H-S	SST250S-304K2	304 Steel	250	2" (50.8)	7.9" (201)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT8H	None	316 Steel							
MBT14H-S	SST250R-304K2	304 Steel	250	4" (102)	14.3" (362)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT14H	None	316 Steel							
MBT20H-S	SST250M-304K2	304 Steel	250	6" (152)	20.5" (521)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT20H	None	316 Steel							
MBT27H-S	SST250I-304K2	304 Steel	250	8" (203)	26.8" (681)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT27H	None	316 Steel							
MBT33H-S	SST250L-304K2	304 Steel	250	10" (254)	33" (838)	.31" (7.9)	.39" (9.8)	50	MK9SST
MBT33H	None	316 Steel							

HellermannTyton's stainless steel ties and materials should be tested thoroughly under end use conditions to determine suitability for the application.