



Cable Ties inside serrated

• T-Series

Features and Benefits

Available in a wide range of materials, these cable ties all feature internal serrations allowing for a positive hold onto cable, hose and pipe bundles. The design of the head guarantees a high tensile strength whilst allowing a very low insertion force, this, combined with the bent tail design of many of the ties, ensures a simple and quick installation. Whilst easily installed by hand, manual and pneumatic (for high volume applications) tensioning tools are available to ensure a consistent and safe installation.

Application

For the routing, bundling and securing of cables, pipes and hoses.



T Series for bundling and securing of cables for a wide range of applications, available in various colours and materials.

	Material	Page Number	Material	Page Number
	Polyamide 6.6 (PA66) Polyamide 6.6 Heat Stabilised (PA66HS) Polyamide 6.6 High Imp. Mod. scan black (PA66HIR(S))	70 73 74	Polyamide 6.6 UV Resistant (PA66W) Polypropylene (PP)	69 76
	Polyamide 6.6 (PA66) Polyamide 4.6 (PA46)	68 75	Polyamide 6.6 Heat Stabilised (PA66HS) Polypropylene (PP)	72 76
	Polyamide 6.6 (PA66)	71	Ethylenterafluorineethylen - E/TFE (Tefzel®)	76
	Polyamide 6.6 V0 (PA66V0)	75		
	Polyamide 4.6 (PA46)	75		

Tefzel® is a registered trademark of DuPont. General linguistic usage for cable ties made from raw material E/TFE is Tefzel-Tie. In addition to Tefzel from DuPont HellermannTyton is also using equivalent E/TFE raw material from other suppliers.



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Cable Ties Polyamide 6.6 standard

• T-Series in PA66 natural

Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 (PA66)								
111-02809	T18S	83	2.3	16.0	80	PA66	Natural (NA)	1-3, 5
111-01919	T18R	100	2.5	22	80	PA66	Natural (NA)	1-3, 5
111-02319	T18I	145	2.5	35.0	80	PA66	Natural (NA)	1-3, 5
111-02119	T18L	205	2.5	55	80	PA66	Natural (NA)	1-3, 5
111-02519	T25L	240	2.8	65.0	110	PA66	Natural (NA)	1-3, 5
111-02619	T25LL	330	2.8	95.0	110	PA66	Natural (NA)	1-3, 5
111-03219	T30R	150	3.5	35	135	PA66	Natural (NA)	1-3, 5
111-03419	T30L	198	3.5	50	135	PA66	Natural (NA)	1-3, 5
111-03549	T30LL	290	3.5	80.0	135	PA66	Natural (NA)	1-3, 5
111-03819	T40R	175	4.0	40.0	180	PA66	Natural (NA)	1-5
111-05819	T50S	150.0	4.6	35.0	225	PA66	Natural (NA)	1-10
111-05013	T50R	200	4.6	50.0	225	PA66	Natural (NA)	1-10
111-06201	T50M	245	4.6	65.0	225	PA66	Natural (NA)	1-10
111-05219	T50I	300	4.6	85.0	225	PA66	Natural (NA)	1-10
111-05409	T50L	390	4.6	110	225	PA66	Natural (NA)	1-10
111-05019	T80R	210	4.7	55	355	PA66	Natural (NA)	1-10
111-08229	T80I	300	4.7	85	355	PA66	Natural (NA)	1-10
111-05419	T80L	390	4.7	110	355	PA66	Natural (NA)	1-10
111-12829	T120S	225.0	7.6	55.0	535	PA66	Natural (NA)	6-10
111-12219	T120I	300	7.6	80.0	535	PA66	Natural (NA)	6-10
111-12019	T120R(E)	387	7.6	100	535	PA66	Natural (NA)	6-10
111-12619	T120M	460	7.6	130	535	PA66	Natural (NA)	6-10
111-12704	T120XM	600	7.6	175	535	PA66	Natural (NA)	6-10
111-12429	T120L	760	7.6	225	535	PA66	Natural (NA)	6-10
111-14819	T150R	365	7.6	100	670	PA66	Natural (NA)	6-10
111-15619	T150M	525	8.9	150	780	PA66	Natural (NA)	6-9
111-15419	T150L	820	8.9	245	780	PA66	Natural (NA)	6-9
111-15519	T150XL	1095	8.9	330	780	PA66	Natural (NA)	6-9
111-15304	T150XLL	1325	8.9	405	780	PA66	Natural (NA)	6-9
111-24705	T250S	225	12.5	55.0	1115	PA66	Natural (NA)	7-9
111-25103	T250X	370	12.5	100	1115	PA66	Natural (NA)	7-9
111-24803	T250R	520	12.5	145	1115	PA66	Natural (NA)	7-9
111-25002	T250M	565	12.5	150	1115	PA66	Natural (NA)	7-9
111-25219	T250I	725	12.5	203	1115	PA66	Natural (NA)	7-9
111-00466	T250XL	1030	12.5	305	1115	PA66	Natural (NA)	7-9

All dimensions in mm. Subject to technical changes.

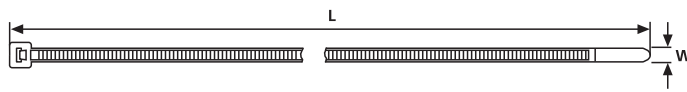


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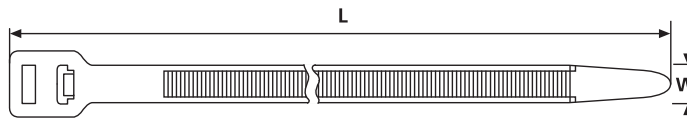


Cable Ties for outdoor use (UV-resistant)

• T-Series in PA66W black



T18S – T255M



T250-Series

Material Data	
Material	Polyamide 6.6 UV Resistant (PA66W)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 UV Stabilised								
111-01960	T18R	100	2.5	22	80	PA66W	Black (BK)	1–3, 5
111-02360	T18I	145	2.5	35.0	80	PA66W	Black (BK)	1–3, 5
111-02160	T18L	205	2.5	55	80	PA66W	Black (BK)	1–3, 5
111-02660	T25LL	330	2.8	95.0	110	PA66W	Black (BK)	1–3, 5
111-03260	T30R	150	3.5	35	135	PA66W	Black (BK)	1–3, 5
111-03460	T30L	198	3.5	50	135	PA66W	Black (BK)	1–3, 5
111-03580	T30LL	290	3.5	80.0	135	PA66W	Black (BK)	1–3, 5
111-03860	T40R	175	4.0	40.0	180	PA66W	Black (BK)	1–5
111-05860	T50S	150	4.6	35.0	225	PA66W	Black (BK)	1–10
111-04889	T50R	200	4.6	50.0	225	PA66W	Black (BK)	1–10
111-06206	T50M	245	4.6	65.0	225	PA66W	Black (BK)	1–10
111-05260	T50I	300	4.6	85.0	225	PA66W	Black (BK)	1–10
111-05440	T50L	390	4.6	110	225	PA66W	Black (BK)	1–10
111-06000	T50LL	445	4.6	130	225	PA66W	Black (BK)	1–10
111-05060	T80R	210	4.7	55	355	PA66W	Black (BK)	1–10
111-08290	T80I	300	4.7	85	355	PA66W	Black (BK)	1–10
111-05460	T80L	390	4.7	110	355	PA66W	Black (BK)	1–10
111-12830	T120S	225	7.6	55.0	535	PA66W	Black (BK)	6–10
111-12230	T120I	300	7.6	80.0	535	PA66W	Black (BK)	6–10
111-12060	T120R(E)	387	7.6	100	535	PA66W	Black (BK)	6–10
111-12660	T120M	460	7.6	130	535	PA66W	Black (BK)	6–10
111-12430	T120L	760	7.6	225	535	PA66W	Black (BK)	6–10
111-14860	T150R(H)	365	7.6	100	670	PA66W	Black (BK)	6–10
111-15660	T150M	525	8.9	150	780	PA66W	Black (BK)	6–9
111-15460	T150L	820	8.8	245	780	PA66W	Black (BK)	6–9
111-15502	T150XL	1095	8.9	330	780	PA66W	Black (BK)	6–9
111-15305	T150XLL	1325	8.9	405	780	PA66W	Black (BK)	6–9
111-25100	T250X	370	12.5	100	1115	PA66W	Black (BK)	7–9
111-24805	T250R	520	12.5	145	1115	PA66W	Black (BK)	7–9

All dimensions in mm. Subject to technical changes.

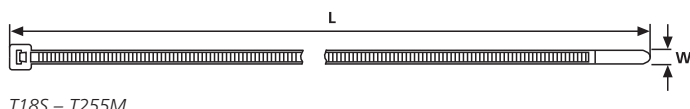


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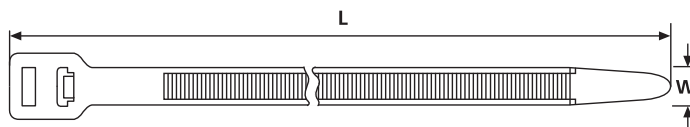


Cable Ties Polyamide 6.6 standard

• T-Series in PA66 black



T18S – T255M



T250-Series

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 (PA66)								
111-01910	T18R	100	2.5	22.0	80	PA66	Black (BK)	1–3, 5
111-02370	T18I	145	2.5	35.0	80	PA66	Black (BK)	1–3, 5
111-02110	T18L	205	2.5	55.0	80	PA66	Black (BK)	1–3, 5
111-02500	T25L	240	2.8	65.0	110	PA66	Black (BK)	1–3, 5
111-03210	T30R	150	3.5	35.0	135	PA66	Black (BK)	1–3, 5
111-03410	T30L	198	3.5	50.0	135	PA66	Black (BK)	1–3, 5
111-03500	T30LL	290.0	3.5	80.0	135	PA66	Black (BK)	1–3, 5
111-05810	T50S	150.0	4.6	35.0	225	PA66	Black (BK)	1–10
111-05000	T50R	200	4.6	50.0	225	PA66	Black (BK)	1–10
111-06200	T50M	245.0	4.6	65.0	225	PA66	Black (BK)	1–10
111-05210	T50I	300	4.6	85.0	225	PA66	Black (BK)	1–10
111-05400	T50L	390.0	4.6	110	225	PA66	Black (BK)	1–10
111-06002	T50LL	445	4.6	130	225	PA66	Black (BK)	1–10
111-08010	T80R	210	4.7	55.0	355	PA66	Black (BK)	1–10
111-08210	T80I	300	4.7	85.0	355	PA66	Black (BK)	1–10
111-05410	T80L	390	4.7	110	355	PA66	Black (BK)	1–10
111-12210	T120I	300	7.6	80.0	535	PA66	Black (BK)	6–10
111-12010	T120R(E)	387	7.6	100	535	PA66	Black (BK)	6–10
111-12610	T120M	460	7.6	130	535	PA66	Black (BK)	6–10
111-12701	T120XM	600	7.6	175	535	PA66	Black (BK)	6–10
111-12403	T120L	760	7.6	225	535	PA66	Black (BK)	6–10
111-14810	T150R	365	7.6	100	670	PA66	Black (BK)	6–10
111-00124	T150M	525	8.9	150	780	PA66	Black (BK)	6–9
111-15405	T150L	820	8.9	245	780	PA66	Black (BK)	6–9
111-15500	T150XL	1095	8.9	330	780	PA66	Black (BK)	6–9
111-15300	T150XLL	1325	8.9	405	780	PA66	Black (BK)	6–9
111-25102	T250X	370	12.5	100	1115	PA66	Black (BK)	7–9
111-25001	T250M	565	12.5	150	1115	PA66	Black (BK)	7–9
111-24601	T250L	880	12.5	254	1115	PA66	Black (BK)	7–9
111-25200	T250XL	1030	12.5	305	1115	PA66	Black (BK)	7–9

All dimensions in mm. Subject to technical changes.



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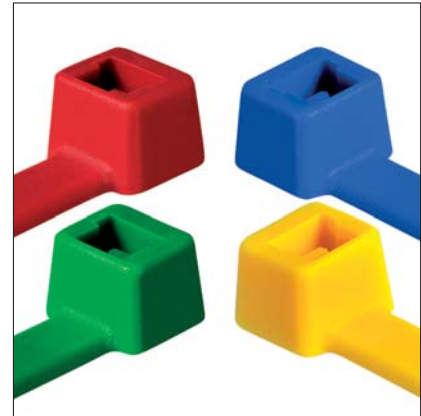


Cable Ties Polyamide 6.6 standard

• T-Series in PA66 coloured

Material Data

Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 Colours								
116-01816	T18R	100	2.5	22.0	80	PA66	Blue (BU)	1–3, 5
111-03008	T30R	150	3.5	35.0	135	PA66	Blue (BU)	1–3, 5
111-04800	T50R	200	4.6	50.0	225	PA66	Blue (BU)	1–10
111-05404	T50L	390	4.6	110	225	PA66	Blue (BU)	1–10
116-08016	T80R	210	4.7	55.0	355	PA66	Blue (BU)	1–10
116-05416	T80L	390	4.7	110	355	PA66	Blue (BU)	1–10
116-01815	T18R	100	2.5	22.0	80	PA66	Green (GN)	1–3, 5
111-03014	T30R	150	3.5	35.0	135	PA66	Green (GN)	1–3, 5
111-05402	T50L	390	4.6	110	225	PA66	Green (GN)	1–10
116-08015	T80R	210	4.7	55.0	355	PA66	Green (GN)	1–10
116-05415	T80L	390	4.7	110	355	PA66	Green (GN)	1–10
111-12001	T120R(E)	387	7.6	100	535	PA66	Green (GN)	6–10
116-01812	T18R	100	2.5	22.0	80	PA66	Red (RD)	1–3, 5
111-03004	T30R	150	3.5	35.0	135	PA66	Red (RD)	1–3, 5
111-04804	T50R	200	4.6	50.0	225	PA66	Red (RD)	1–10
111-05406	T50L	390	4.6	110	225	PA66	Red (RD)	1–10
116-08012	T80R	210	4.7	55.0	355	PA66	Red (RD)	1–10
116-05412	T80L	390	4.7	110	355	PA66	Red (RD)	1–10
111-12002	T120R(E)	387	7.6	100	535	PA66	Red (RD)	6–10
116-01814	T18R	100	2.5	22.0	80	PA66	Yellow (YE)	1–3, 5
111-03006	T30R	150	3.5	35.0	135	PA66	Yellow (YE)	1–3, 5
111-04805	T50R	200	4.6	50.0	225	PA66	Yellow (YE)	1–10
111-05428	T50L	390	4.6	110	225	PA66	Yellow (YE)	1–10
116-08014	T80R	210	4.7	55.0	355	PA66	Yellow (YE)	1–10
116-05414	T80L	390	4.7	110	355	PA66	Yellow (YE)	1–10
116-15014	T150R(H)	365	7.6	100	670	PA66	Yellow (YE)	6–10

All dimensions in mm. Subject to technical changes.

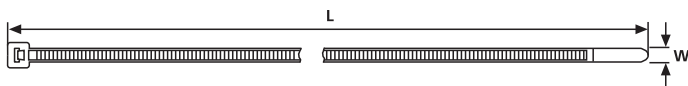


Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Cable Ties for temperatures up to + 105°C (heat stabilised)

• T-Series in PA66HS natural



T18S – T255M

Material Data	
Material	Polyamide 6.6 Heat Stabilised (PA66HS)
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 Heat Stabilised								
111-01959	T18R	100	2.5	22.0	80	PA66HS	Natural (NA)	1–3, 5
111-02359	T18I	145	2.5	35.0	80	PA66HS	Natural (NA)	1–3, 5
111-02159	T18L	205	2.5	55.0	80	PA66HS	Natural (NA)	1–3, 5
111-03259	T30R	150	3.5	35.0	135	PA66HS	Natural (NA)	1–3, 5
111-03459	T30L	190.0	3.5	50.0	135	PA66HS	Natural (NA)	1–3, 5
111-03569	T30LL	290	3.5	80.0	135	PA66HS	Natural (NA)	1–3, 5
111-03859	T40R	175	4.0	40.0	180	PA66HS	Natural (NA)	1–5
111-05859	T50S	150	4.6	35.0	225	PA66HS	Natural (NA)	1–10
111-04882	T50R	200	4.6	50.0	225	PA66HS	Natural (NA)	1–10
111-05259	T50I	300	4.6	85.0	225	PA66HS	Natural (NA)	1–10
111-05436	T50L	390	4.6	110	225	PA66HS	Natural (NA)	1–10
111-05059	T80R	210	4.7	55.0	355	PA66HS	Natural (NA)	1–10
111-08259	T80I	300	4.7	85.0	355	PA66HS	Natural (NA)	1–10
111-05459	T80L	390	4.7	110	355	PA66HS	Natural (NA)	1–10
111-12824	T120S	225	7.6	55.0	535	PA66HS	Natural (NA)	6–10
111-12249	T120I	300	7.6	80.0	535	PA66HS	Natural (NA)	6–10
111-12059	T120R(E)	387	7.6	100	535	PA66HS	Natural (NA)	6–10
111-12719	T120XM	600	7.6	175	535	PA66HS	Natural (NA)	6–10
111-12449	T120L	760	7.6	225	535	PA66HS	Natural (NA)	6–10
111-15069	T150R(H)	365	7.6	100	670	PA66HS	Natural (NA)	6–10

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Cable Ties for temperatures up to + 105°C (heat stabilised)

• T-Series in PA66HS black

Material Data

Material	Polyamide 6.6 Heat Stabilised (PA66HS)
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 Heat Stabilised								
111-01950	T18R	100	2.5	22.0	80	PA66HS	Black (BK)	1–3, 5
111-02358	T18I	145	2.5	35.0	80	PA66HS	Black (BK)	1–3, 5
111-02049	T18L	205	2.5	55.0	80	PA66HS	Black (BK)	1–3, 5
111-03050	T30R	150.0	3.5	35.0	135	PA66HS	Black (BK)	1–3, 5
111-03450	T30L	190.0	3.5	50.0	135	PA66HS	Black (BK)	1–3, 5
111-03640	T30LL	290	3.5	80.0	135	PA66HS	Black (BK)	1–3, 5
111-03970	T40R	175	4.0	40.0	180	PA66HS	Black (BK)	1–5
111-05850	T50S	150.0	4.6	35.0	225	PA66HS	Black (BK)	1–10
111-04940	T50R	200.0	4.6	50.0	225	PA66HS	Black (BK)	1–10
117-05250	T50I	300	4.6	85.0	225	PA66HS	Black (BK)	1–10
111-05450	T50L	390	4.6	110	225	PA66HS	Black (BK)	1–10
117-08070	T80R	210.0	4.7	55.0	355	PA66HS	Black (BK)	1–10
111-08250	T80I	300	4.7	85.0	355	PA66HS	Black (BK)	1–10
111-00388	T80L	390	4.7	110	355	PA66HS	Black (BK)	1–10
111-12850	T120S	225	7.6	55.0	535	PA66HS	Black (BK)	6–10
111-12240	T120I	300	7.6	80.0	535	PA66HS	Black (BK)	6–10
111-12050	T120R(E)	387	7.6	100	535	PA66HS	Black (BK)	6–10
111-00153	T120M	460	7.6	130	535	PA66HS	Black (BK)	6–10
111-12700	T120XM	600	7.6	175	535	PA66HS	Black (BK)	6–10
111-12440	T120L	760	7.6	225	535	PA66HS	Black (BK)	6–10
111-15050	T150R(H)	365	7.6	100	670	PA66HS	Black (BK)	6–10
111-15609	T150M	525	8.9	150	780	PA66HS	Black (BK)	6–9
111-15410	T150L	820	8.8	245	780	PA66HS	Black (BK)	6–9
111-15510	T150XL	1095	8.9	330	780	PA66HS	Black (BK)	6–9

All dimensions in mm. Subject to technical changes.

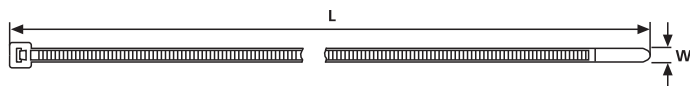


Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Cable Ties for higher impact resistant Polyamide 6.6 ScanBlack

• T-Series in PA66HIR(S)



T18S – T255M

Material Data

Material	kPolyamide 6.6 High Imp. Mod. scan black (PA66HIR(S))
Operating Temperature	-40 °C to +80 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 HB



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 High Imp. Mod. scan black (PA66HIR(S))								
111-04890	T50R	200	4.6	50.0	225	PA66HIR(S)	Black (BK)	1–10
111-00222	T50I	300	4.6	85.0	225	PA66HIR(S)	Black (BK)	1–10
111-05441	T50L	390	4.6	110	225	PA66HIR(S)	Black (BK)	1–10
111-12203	T120I	300	7.6	80.0	535	PA66HIR(S)	Black (BK)	6–10
111-00168	T120R(E)	387	7.6	100	535	PA66HIR(S)	Black (BK)	6–10
111-12402	T120L	760	7.6	225	535	PA66HIR(S)	Black (BK)	6–10

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Cable Ties for higher fire-protection

• T-Series in PA66V0

Material Data	
Material	Polyamide 6.6 V0 (PA66V0)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V0



Technical Table

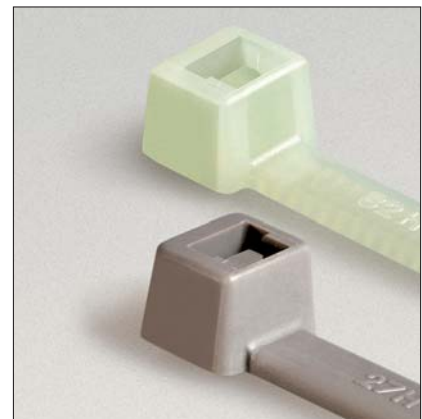
Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 V0 rated								
111-91819	T18R	100	2.5	22.0	80	PA66V0	White (WH)	1–3, 5
111-02043	T18L	205	2.5	55.0	80	PA66V0	White (WH)	1–3, 5
111-93019	T30R	150	3.5	35.0	135	PA66V0	White (WH)	1–3, 5
111-00317	T50I	300	4.6	85.0	225	PA66V0	White (WH)	1–10
111-95019	T50R	200	4.6	50.0	225	PA66V0	White (WH)	1–10
111-91210	T120R(E)	387	7.6	100	535	PA66V0	White (WH)	6–10

All dimensions in mm. Subject to technical changes.

Cable Ties for temperatures up to + 150°C in Polyamide 4.6

• T-Series in PA46

Material Data	
Material	Polyamide 4.6 (PA46)
Operating Temperature	-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 4.6 High Temp.								
114-01879	T18R	100	2.5	22.0	80	PA46	Natural (NA)	1–3, 5
114-03079	T30R	150	3.5	35.0	135	PA46	Natural (NA)	1–3, 5
111-00264	T30R	150	3.5	35.0	135	PA46	Grey (GY)	1–3, 5
111-00525	T50R	200	4.6	50.0	225	PA46	Natural (NA)	1–10
111-00824	T50R	200	4.6	50.0	225	PA46	Grey (GY)	1–10
111-05220	T50I	300	4.6	85.0	225	PA46	Natural (NA)	1–10
111-00526	T50L	390	4.6	110	225	PA46	Natural (NA)	1–10
114-12179	T120R(E)	387	7.6	100	535	PA46	Natural (NA)	6–10

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Cable Ties for higher chemical resistance for temperatures up to +150°C in Ethylentetrafluorineethylene

- T-Series in E/TFE



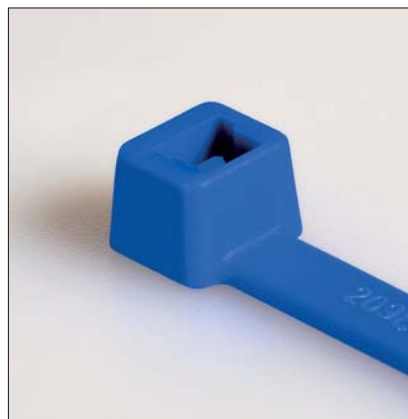
For more information on E/TFE sockets please refer to KR-Series on page 169.

Material Data

Material	Ethylentetrafluorineethylen - E/TFE (Tefzel®)
Operating Temperature	-80 °C to +150 °C continuous
Flammability	UL94 V0



Tefzel® is a registered trademark of DuPont.
General linguistic usage for cable ties made from raw material E/TFE is Tefzel-Tie. In addition to Tefzel from DuPont HellermannTyton is also using equivalent E/TFE raw material from other suppliers.



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
E/TFE (Tefzel®)								
111-00659	T18R	100	2.5	22.0	80	E/TFE	Blue (BU)	1–3, 5
111-00698	T30R	150	3.5	36.0	133.3	E/TFE	Blue (BU)	1–3, 5
111-00732	T50R	201	4.7	50.0	222.3	E/TFE	Blue (BU)	1–10
111-00718	T50L	382	4.7	105	222.3	E/TFE	Blue (BU)	1–10
111-01125	T120R	387	7.4	105	535	E/TFE	Blue (BU)	6–10

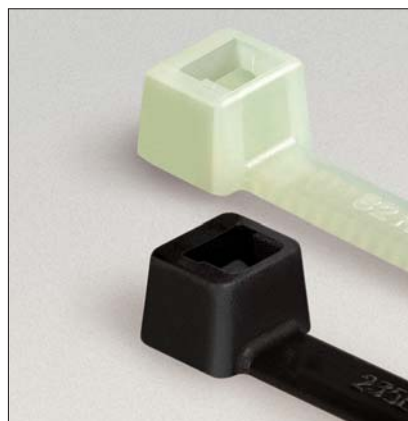
All dimensions in mm. Subject to technical changes.

Cable Ties for higher chemical resistance for temperatures up to +85°C in Polypropylene

- T-Series in PP

Material Data

Material	Polypropylene (PP)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 HB



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polypropylene (PP)								
111-01917	T18R	100	2.5	19.0	49	PP	Black (BK)	1–3, 5
111-01922	T18R	100	2.5	19.0	49	PP	Natural (NA)	1–3, 5
111-03017	T30R	148	3.6	32.0	89	PP	Natural (NA)	1–3, 5
111-04928	T50R	200	4.6	50.0	110	PP	Black (BK)	1–10
111-04931	T50R	200	4.6	50.0	110	PP	Natural (NA)	1–10
111-12827	T120S	225	7.6	55.0	267	PP	Black (BK)	6–10
111-12066	T120R	387	7.6	100	267	PP	Black (BK)	6–10

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Cable Ties for food industry, detectable

• MCT-Series

HACCP (Hazard Analysis of Critical Control Points) is a directive of the EU, developed by the Codex Alimentarius of the World Health Organisation. This demands that effective food safety systems are established through the application of systematic approaches to hazard and risk analysis.

Features and Benefits

The MCT ties have metal content dispersed throughout the head and strap of the cable tie. These ties can be used as part of the HACCP process. The 'unique' blue colour assists in the visual detection and greatly reduces the risk of contamination.

Application

The Metal Content Tie is a cable tie specifically designed for use in the food & pharmaceutical processing industries. A unique manufacturing process, involving the inclusion of a metallic pigment, enables even small 'cut-off' sections of the tie to be detected by standard metal detecting equipment. Ideally suited for the installation of cabling in and around the manufacturing process.

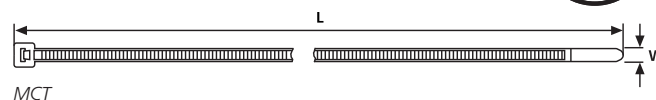


The MCT with metal content.



A safe and contamination free production process with MCT.

Material Data	
Material	Polyamide 6.6 with metal particles (PA66MP)
Colour	Blue (BU)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 HB



MCT

Technical Table						
Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Application Tool
111-01225	MCT18R	100	2.5	22	80	1–3, 5
111-00829	MCT30R	150	3.5	35	135	1–10
111-00830	MCT50R	200	4.6	50	225	1–10
111-00831	MCT50L	390	4.7	110	225	1–10
111-01136	MCT120R	380	7.6	100	535	6–10
Releasable						
111-00937	MCTRELK2M	250	4.6	65	225	1–10

All dimensions in mm. Subject to technical changes.

*HACCP = Hazard Analysis Critical Control Points HACCP stands for Hazard Analysis Critical Control Points. It is a method of identifying and eliminating potential hazards in food production. Those hazards that cannot be eliminated are controlled in such a way that the consumer is protected. These controls are known as Critical Control Points (CCPs). They are CRITICAL because if they fail or are not carried out, the risk of the product harming the customer, increases.



Cable Ties in-between size to T-Series

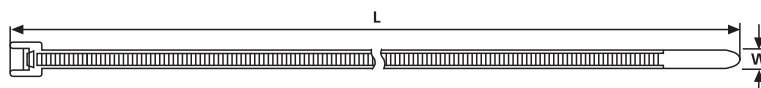
• LK-Series

Features and Benefits

Available in a wide range of materials, these cable ties all feature internal serrations allowing for a positive hold onto cable, hose and pipe bundles. The design of the head guarantees a high tensile strength whilst allowing a very low insertion force, this, combined with the bent tail design of many of the ties ensures a simple and quick installation. Whilst easily installed by hand manual, and pneumatic (for high volume applications) tensioning tools are available to ensure a consistent and safe installation.

Application

For routing, bundling and securing of cables, pipes and hoses.



LK Series Industrial Ties

Material Data		
Material	Polyamide 6.6 UV Resistant (PA66W)	
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)	
Flammability	UL94 V2	



Material Data		
Material	Polyamide 6.6 Heat Stabilised (PA66HS)	
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)	
Flammability	UL94 V2	



Material Data		
Material	Polyamide 6.6 High Imp. Mod. scan black (PA66HIR(S))	
Operating Temperature	-40 °C to +80 °C Continuous, (+105 °C for 500 h)	
Flammability	UL94 HB	



Material Data		
Material	Polyamide 6.6 (PA66)	
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)	
Flammability	UL94 V2	



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
LK2								
111-60219	LK2	120	4.8	28.0	135	PA66	Natural (NA)	1-10
111-60210	LK2	120	4.8	28.0	135	PA66	Black (BK)	1-10
LK2A								
111-60119	LK2A	270	4.6	73.0	225	PA66	Natural (NA)	1-10
111-60110	LK2A	270.0	4.6	73.0	225	PA66	Black (BK)	1-10
111-60160	LK2A	270	4.6	73.0	225	PA66W	Black (BK)	1-10
111-60159	LK2A	270	4.6	73.0	225	PA66HS	Natural (NA)	1-10
111-60150	LK2A	270.0	4.6	73.0	225	PA66HS	Black (BK)	1-10
111-00127	LK2A	270	4.6	73.0	225	PA66HIR(S)	Black (BK)	1-10
LK5								
111-60519	LK5	535	13.2	150	1115	PA66	Natural (NA)	8, 9
111-60510	LK5	535	13.2	150	1115	PA66	Black (BK)	8, 9
111-60560	LK5	535	13.2	150	1115	PA66W	Black (BK)	8, 9
111-60559	LK5	535	13.2	150	1115	PA66HS	Natural (NA)	8, 9
111-60501	LK5	535	13.2	150	1115	PA66HIR(S)	Black (BK)	8, 9

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval.

For product specific approvals please refer to the Appendix.

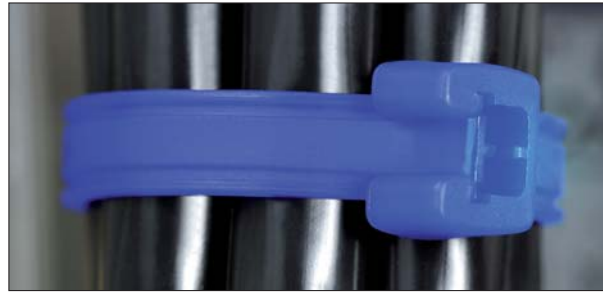


Q-tie Cable Tie

Innovative – Effective – Safe!

The new Q-tie has not only an innovative but also a revolutionary design. The open head of the cable tie enables a simple and quick installation. Just insert the ergonomically bent tail into the open side of the head and tighten the cable tie.

With Q-ties you can save time and money!



The head design makes the difference.

Easy application for every situation!

Q-tie is the perfect product solution for applications under difficult working conditions. It is designed for use in applications where working with gloves is necessary or for blind applications with a limited view of the work.

The new Q-tie allows a quick and simple installation even with work gloves and restricted view.

Features for quick and easy application:

- Curved and large ribbed tail
- Open head with easy detectable slot

This saves time and trouble!



Even under difficult circumstances the Q-ties are very fast and easy to apply.

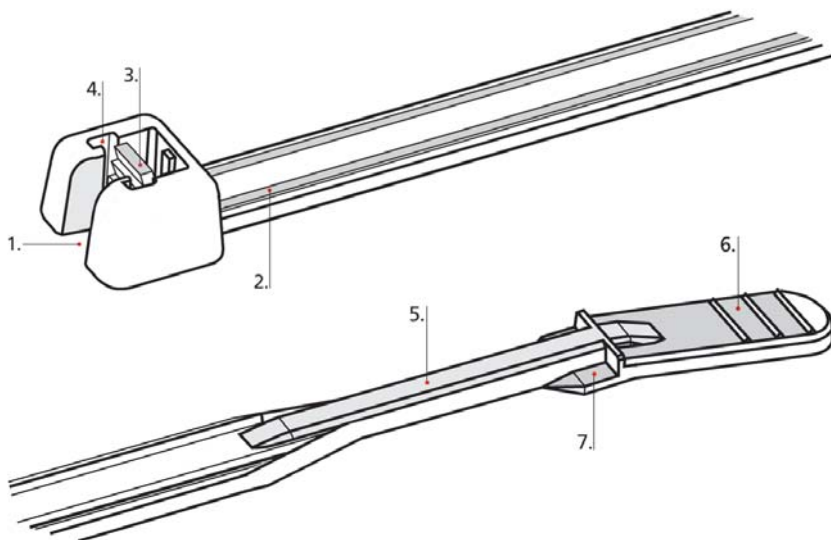
Integrated Pre-Locking Functionality!

Due to several simultaneous working processes, it is not always possible to install all cables and conduits in one single step. Thus, working with standard cable ties means either destroying the cable tie of the first installation or applying additional cable ties. The integrated pre-locking function of the Q-tie offers the ability of a temporary and final cable fastening solution.

This saves material and time!



Without additional effort only Q-ties can be used for temporary and final cable bundling.

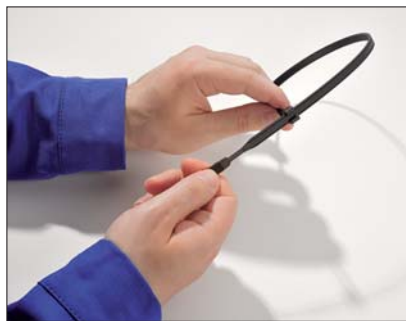


1. Open lock head for quick and easy insertion.
2. Two rails on the strap ensure a perfect guidance for the tracks in the head.
3. The locking device interacts safely with the serration of the cable tie.
4. The tracks prevent a deformation of the head under load.
5. The thin part of the cable tie can be simply placed into the open lock head.
6. The large ribbed tail allows a safe and ergonomic installation.
7. Integrated pre locking feature (starts with type Q30).

Application Method:



1. Insert the thin part of the cable tie into the open lock head.



2. Pull the tie through the head until the bundle is fixed.
3. Cut off the remaining part of the tie with an application tool.

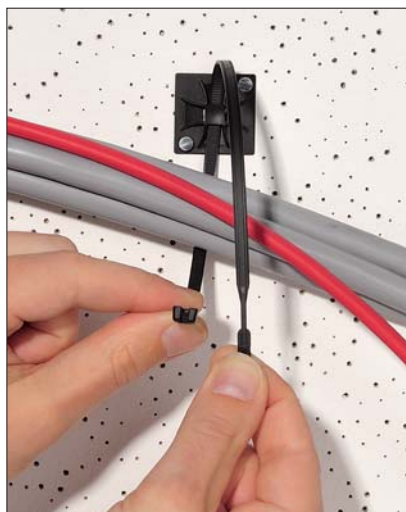


Please find more Q-Series products for your system solution on page 166 and 508.

Pre-locking Function of the Q-tie:



1. Insert tail into lock head and push tail partly in the head.



2. To release the tie push tail end slightly out of head.



3. If installation is finished, Q-tie can be tightened and cut off - either manually or with an application tool.



Cable ties with open head

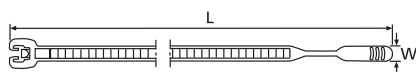
- Q-ties, Polyamide 6.6 (PA66), natural and black

Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.



Q-tie cable ties: choose from a wide product range in different materials.



Q-tie cable tie

Material Data	
Material	Polyamide 6.6 (PA66)
Colour	Natural (NA), Black (BK)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 (PA66)								
109-00001	Q18R	105	2.6	24.0	80	PA66	Natural (NA)	1-5
109-00004	Q18I	155	2.6	40.0	80	PA66	Natural (NA)	1-5
109-00007	Q18L	195	2.6	50.0	80	PA66	Natural (NA)	1-5
109-00010	Q30R	160	3.6	38.0	130	PA66	Natural (NA)	1-5
109-00012	Q30L	200	3.6	50.0	130	PA66	Natural (NA)	1-5
109-00014	Q30LR	250	3.6	65.0	130	PA66	Natural (NA)	1-5
109-00018	Q50R	210	4.7	50.0	220	PA66	Natural (NA)	1-10
109-00020	Q50I	290	4.7	75.0	220	PA66	Natural (NA)	1-10
109-00022	Q50L	410	4.7	110.0	220	PA66	Natural (NA)	1-10
109-00024	Q120I	300	7.7	70.0	530	PA66	Natural (NA)	6-10
109-00026	Q120R	420	7.7	110.0	530	PA66	Natural (NA)	6-10
109-00028	Q120M	520	7.7	145.0	530	PA66	Natural (NA)	6-10
109-00030	Q18R	105	2.6	24.0	80	PA66	Black (BK)	1-5
109-00033	Q18I	155	2.6	40.0	80	PA66	Black (BK)	1-5
109-00036	Q18L	195	2.6	50.0	80	PA66	Black (BK)	1-5
109-00039	Q30R	160	3.6	38.0	130	PA66	Black (BK)	1-5
109-00041	Q30L	200	3.6	50.0	130	PA66	Black (BK)	1-5
109-00043	Q30LR	250	3.6	65.0	130	PA66	Black (BK)	1-5
109-00047	Q50R	210	4.7	50.0	220	PA66	Black (BK)	1-10
109-00049	Q50I	290	4.7	75.0	220	PA66	Black (BK)	1-10
109-00051	Q50L	410	4.7	110.0	220	PA66	Black (BK)	1-10
109-00053	Q120I	300	7.7	70.0	530	PA66	Black (BK)	6-10
109-00055	Q120R	420	7.7	110.0	530	PA66	Black (BK)	6-10
109-00057	Q120M	520	7.7	145.0	530	PA66	Black (BK)	6-10

All dimensions in mm. Subject to technical changes.



Cable ties with open head

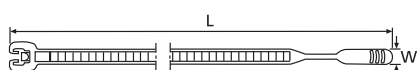
- Q-ties, Polyamide 6.6 UV-resistant (PA66W), black

Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.



Q-tie cable ties: choose from a wide product range in different materials.



Q-tie cable tie

Material Data	
Material	Polyamide 6.6 UV Resistant (PA66W)
Colour	Black (BK)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 UV Stabilised								
109-00059	Q18R	105	2.6	24.0	80	PA66W	Black (BK)	1-5
109-00062	Q18I	155	2.6	40.0	80	PA66W	Black (BK)	1-5
109-00065	Q18L	195	2.6	50.0	80	PA66W	Black (BK)	1-5
109-00068	Q30R	160	3.6	38.0	130	PA66W	Black (BK)	1-5
109-00070	Q30L	200	3.6	50.0	130	PA66W	Black (BK)	1-5
109-00072	Q30LR	250	3.6	65.0	130	PA66W	Black (BK)	1-5
109-00076	Q50R	210	4.7	50.0	220	PA66W	Black (BK)	1-10
109-00078	Q50I	290	4.7	75.0	220	PA66W	Black (BK)	1-10
109-00080	Q50L	410	4.7	110.0	220	PA66W	Black (BK)	1-10
109-00082	Q120I	300	7.7	70.0	530	PA66W	Black (BK)	6-10
109-00084	Q120R	420	7.7	110.0	530	PA66W	Black (BK)	6-10
109-00086	Q120M	520	7.7	145.0	530	PA66W	Black (BK)	6-10

All dimensions in mm. Subject to technical changes.



Please find more Q-Series products for your system solution on page 166 and 508.



Cable ties with open head

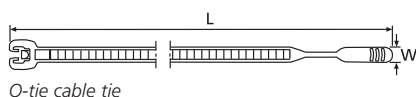
- Q-ties, Polyamide 6.6 heat stabilised (PA66HS), natural and black

Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.



Q-tie cable ties: choose from a wide product range in different materials.



Q-tie cable tie

Material Data	
Material	Polyamide 6.6 Heat Stabilised (PA66HS)
Colour	Natural (NA), Black (BK)
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 Heat Stabilised								
109-00088	Q18R	105	2.6	24.0	80	PA66HS	Black (BK)	1-5
109-00091	Q18I	155	2.6	40.0	80	PA66HS	Black (BK)	1-5
109-00094	Q18L	195	2.6	50.0	80	PA66HS	Black (BK)	1-5
109-00097	Q30R	160	3.6	38.0	130	PA66HS	Black (BK)	1-5
109-00099	Q30L	200	3.6	50.0	130	PA66HS	Black (BK)	1-5
109-00101	Q30LR	250	3.6	65.0	130	PA66HS	Black (BK)	1-5
109-00105	Q50R	210	4.7	50.0	220	PA66HS	Black (BK)	1-10
109-00107	Q50I	290	4.7	75.0	220	PA66HS	Black (BK)	1-10
109-00109	Q50L	410	4.7	110.0	220	PA66HS	Black (BK)	1-10
109-00111	Q120I	300	7.7	70.0	530	PA66HS	Black (BK)	6-10
109-00113	Q120R	420	7.7	110.0	530	PA66HS	Black (BK)	6-10
109-00115	Q120M	520	7.7	145.0	530	PA66HS	Black (BK)	6-10
109-00117	Q18R	105	2.6	24.0	80	PA66HS	Natural (NA)	1-5
109-00120	Q18I	155	2.6	40.0	80	PA66HS	Natural (NA)	1-5
109-00123	Q18L	195	2.6	50.0	80	PA66HS	Natural (NA)	1-5
109-00126	Q30R	160	3.6	38.0	130	PA66HS	Natural (NA)	1-5
109-00128	Q30L	200	3.6	50.0	130	PA66HS	Natural (NA)	1-5
109-00130	Q30LR	250	3.6	65.0	130	PA66HS	Natural (NA)	1-5
109-00134	Q50R	210	4.7	50.0	220	PA66HS	Natural (NA)	1-10
109-00136	Q50I	290	4.7	75.0	220	PA66HS	Natural (NA)	1-10
109-00138	Q50L	410	4.7	110.0	220	PA66HS	Natural (NA)	1-10
109-00140	Q120I	300	7.7	70.0	530	PA66HS	Natural (NA)	6-10
109-00142	Q120R	420	7.7	110.0	530	PA66HS	Natural (NA)	6-10
109-00144	Q120M	520	7.7	145.0	530	PA66HS	Natural (NA)	6-10

All dimensions in mm. Subject to technical changes.

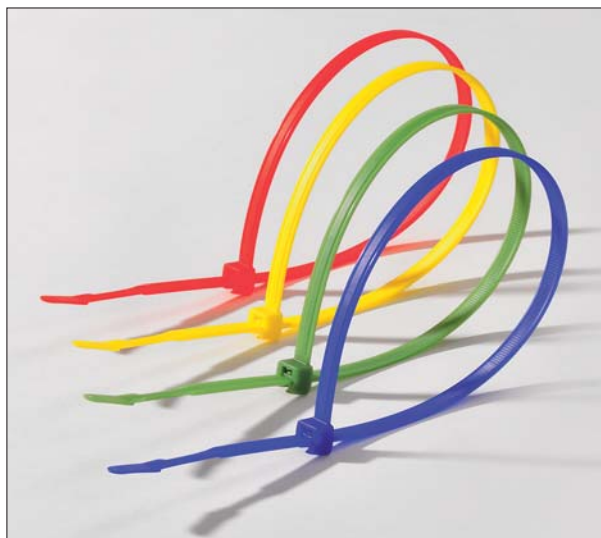


Cable ties with open head

- Q-ties, Polyamide 6.6 (PA66), coloured

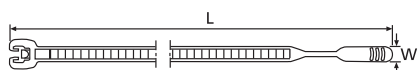
Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.



Q-ties in different colours are ideal for marking and bundling in one step.

Please find more Q-Series products for your system solution on page 166 and 508.



Q-tie cable tie

Material Data	
Material	Polyamide 6.6 (PA66)
Colour	Brown (BN), Blue (BU), Green (GN), Red (RD), Yellow (YE)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 Colours								
109-00146	Q18R	105	2.6	24.0	80	PA66	Brown (BN)	1-5
109-00147	Q18R	105	2.6	24.0	80	PA66	Blue (BU)	1-5
109-00148	Q18R	105	2.6	24.0	80	PA66	Green (GN)	1-5
109-00149	Q18R	105	2.6	24.0	80	PA66	Red (RD)	1-5
109-00150	Q18R	105	2.6	24.0	80	PA66	Yellow (YE)	1-5
109-00151	Q18I	155	2.6	40.0	80	PA66	Brown (BN)	1-5
109-00152	Q18I	155	2.6	40.0	80	PA66	Blue (BU)	1-5
109-00153	Q18I	155	2.6	40.0	80	PA66	Green (GN)	1-5
109-00154	Q18I	155	2.6	40.0	80	PA66	Red (RD)	1-5
109-00155	Q18I	155	2.6	40.0	80	PA66	Yellow (YE)	1-5
109-00156	Q18L	195	2.6	50.0	80	PA66	Brown (BN)	1-5
109-00157	Q18L	195	2.6	50.0	80	PA66	Blue (BU)	1-5
109-00158	Q18L	195	2.6	50.0	80	PA66	Green (GN)	1-5
109-00159	Q18L	195	2.6	50.0	80	PA66	Red (RD)	1-5
109-00160	Q18L	195	2.6	50.0	80	PA66	Yellow (YE)	1-5
109-00161	Q30R	160	3.6	38.0	130	PA66	Brown (BN)	1-5
109-00162	Q30R	160	3.6	38.0	130	PA66	Blue (BU)	1-5
109-00163	Q30R	160	3.6	38.0	130	PA66	Green (GN)	1-5
109-00164	Q30R	160	3.6	38.0	130	PA66	Red (RD)	1-5
109-00165	Q30R	160	3.6	38.0	130	PA66	Yellow (YE)	1-5
109-00166	Q30L	200	3.6	50.0	130	PA66	Brown (BN)	1-5
109-00167	Q30L	200	3.6	50.0	130	PA66	Blue (BU)	1-5
109-00168	Q30L	200	3.6	50.0	130	PA66	Green (GN)	1-5
109-00169	Q30L	200	3.6	50.0	130	PA66	Red (RD)	1-5
109-00170	Q30L	200	3.6	50.0	130	PA66	Yellow (YE)	1-5

All dimensions in mm. Subject to technical changes.

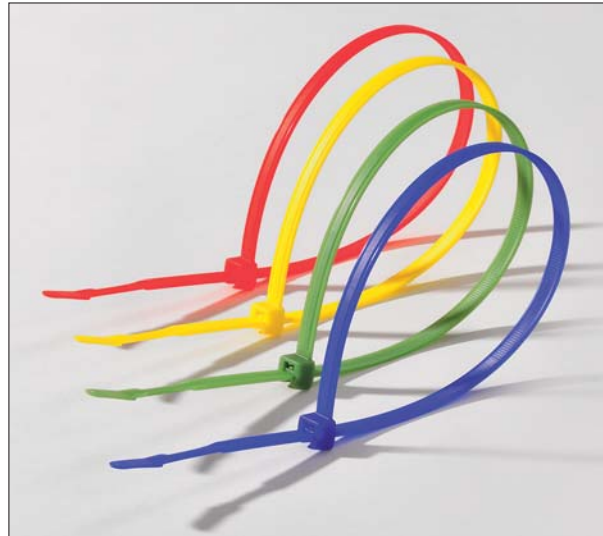


Cable ties with open head

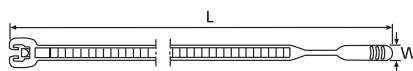
- Q-ties, Polyamide 6.6 (PA66), coloured

Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.



Q-ties in different colours are ideal for marking and bundling in one step.



Q-tie cable tie

Material Data	
Material	Polyamide 6.6 (PA66)
Colour	Brown (BN), Blue (BU), Green (GN), Red (RD), Yellow (YE)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 Colours								
109-00171	Q30LR	250	3.6	65.0	130	PA66	Brown (BN)	1-5
109-00172	Q30LR	250	3.6	65.0	130	PA66	Blue (BU)	1-5
109-00173	Q30LR	250	3.6	65.0	130	PA66	Green (GN)	1-5
109-00174	Q30LR	250	3.6	65.0	130	PA66	Red (RD)	1-5
109-00175	Q30LR	250	3.6	65.0	130	PA66	Yellow (YE)	1-5
109-00181	Q50R	210	4.7	50.0	220	PA66	Brown (BN)	1-10
109-00182	Q50R	210	4.7	50.0	220	PA66	Blue (BU)	1-10
109-00183	Q50R	210	4.7	50.0	220	PA66	Green (GN)	1-10
109-00184	Q50R	210	4.7	50.0	220	PA66	Red (RD)	1-10
109-00185	Q50R	210	4.7	50.0	220	PA66	Yellow (YE)	1-10
109-00186	Q50I	290	4.7	75.0	220	PA66	Brown (BN)	1-10
109-00187	Q50I	290	4.7	75.0	220	PA66	Blue (BU)	1-10
109-00188	Q50I	290	4.7	75.0	220	PA66	Green (GN)	1-10
109-00189	Q50I	290	4.7	75.0	220	PA66	Red (RD)	1-10
109-00190	Q50I	290	4.7	75.0	220	PA66	Yellow (YE)	1-10
109-00191	Q50L	410	4.7	110.0	220	PA66	Brown (BN)	1-10
109-00192	Q50L	410	4.7	110.0	220	PA66	Blue (BU)	1-10
109-00193	Q50L	410	4.7	110.0	220	PA66	Green (GN)	1-10
109-00194	Q50L	410	4.7	110.0	220	PA66	Red (RD)	1-10
109-00195	Q50L	410	4.7	110.0	220	PA66	Yellow (YE)	1-10

All dimensions in mm. Subject to technical changes.

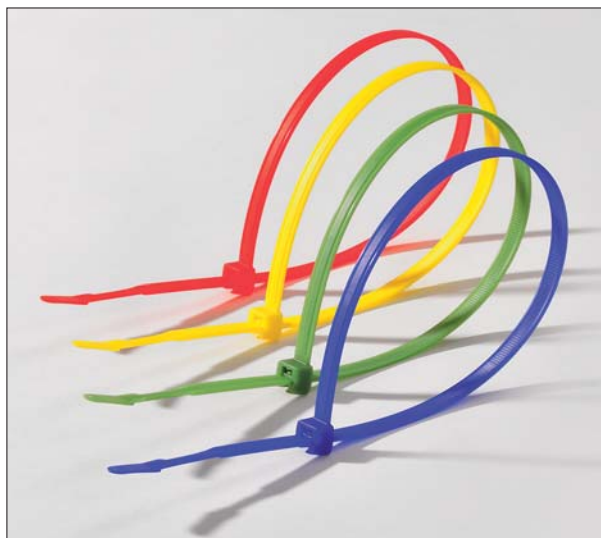


Cable ties with open head

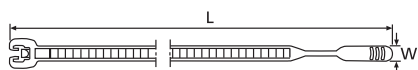
- Q-ties, Polyamide 6.6 (PA66), coloured

Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.



Q-ties in different colours are ideal for marking and bundling in one step.



Q-tie cable tie

Material Data	
Material	Polyamide 6.6 (PA66)
Colour	Brown (BN), Blue (BU), Green (GN), Red (RD), Yellow (YE)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
Polyamide 6.6 Colours								
109-00196	Q120I	300	7.7	70.0	530	PA66	Brown (BN)	6-10
109-00197	Q120I	300	7.7	70.0	530	PA66	Blue (BU)	6-10
109-00198	Q120I	300	7.7	70.0	530	PA66	Green (GN)	6-10
109-00199	Q120I	300	7.7	70.0	530	PA66	Red (RD)	6-10
109-00200	Q120I	300	7.7	70.0	530	PA66	Yellow (YE)	6-10
109-00201	Q120R	420	7.7	110.0	530	PA66	Brown (BN)	6-10
109-00202	Q120R	420	7.7	110.0	530	PA66	Blue (BU)	6-10
109-00203	Q120R	420	7.7	110.0	530	PA66	Green (GN)	6-10
109-00204	Q120R	420	7.7	110.0	530	PA66	Red (RD)	6-10
109-00205	Q120R	420	7.7	110.0	530	PA66	Yellow (YE)	6-10
109-00206	Q120M	520	7.7	145.0	530	PA66	Brown (BN)	6-10
109-00207	Q120M	520	7.7	145.0	530	PA66	Blue (BU)	6-10
109-00208	Q120M	520	7.7	145.0	530	PA66	Green (GN)	6-10
109-00209	Q120M	520	7.7	145.0	530	PA66	Red (RD)	6-10
109-00210	Q120M	520	7.7	145.0	530	PA66	Yellow (YE)	6-10

All dimensions in mm. Subject to technical changes.



Please find more Q-Series products for your system solution on page 166 and 508.



Cable Ties for heavy duty application

• Wide Strap Cable Ties

Features and Benefits

The wide strap cable tie minimizes pinching on soft bundles and features a low profile head to provide compact bundling. A thinner strap provides increased flexibility for improved ergonomics.

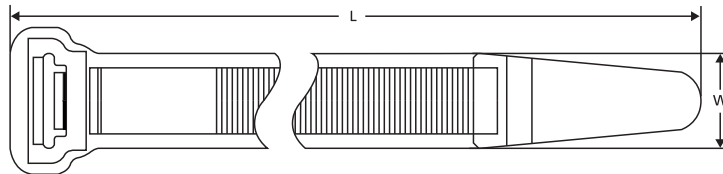
- Wide strap is designed to minimize pinching of soft hoses and convoluted tubing.
- Low profile head.
- Clamping rails on the bottom of head to increase grip on round bundles.
- Accommodates a large range of bundle diameters: 9.5mm - 104mm.
- Flexible strap.



The wide strap cable tie accommodates a large range of bundle diameters: 9.5mm - 104mm.

Application

The very flexible wide strap is used in heavy-duty application where limited room is offered for the application. It is therefore a valued product in all areas of the mass transit and construction industry.



Wide Strap Heavy Duty Cable Ties

Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.

These cable ties can also be used with the new heavy duty mounts (up from page 175).

Material Data	
Material	Polyamide 6.6 High Imp. Mod., Heat Stab. (PA66HIRHS)
Operating Temperature	-40 °C to +110 °C continuous
Flammability	UL94 HB



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
111-12300	WSS	230	12.7	55.0	534	PA66HIRHS	Black (BK)	7-9
111-12301	WSI	305	12.7	80.0	534	PA66HIRHS	Black (BK)	7-9
111-12302	WSR	380	12.7	100	534	PA66HIRHS	Black (BK)	7-9

All dimensions in mm. Subject to technical changes.



Cable Ties for hose and gaiter

- CTT-Series up to 265 N loop tensile strength
- HT-Series up to 535 N loop tensile strength

Features and Benefits

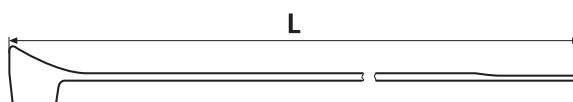
The curved design of the head ensures a seal around the full circumference of the hose/gaiter giving excellent protection against the ingress of water or dirt. For optimum sealing performance it is recommended that the correct HellermannTyton application tool is used. Both hand operated and pneumatic tools are available.

Application

Designed to secure pipes, hoses and gaiters, where low pressures are being secured. These ties can be used in many industries, including: automotive, white goods manufacturers and construction.

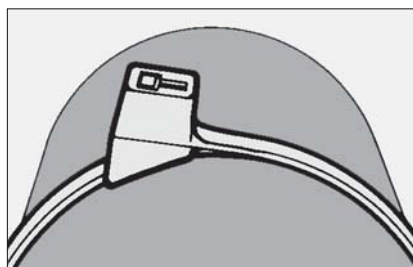


CTT ties installed on flexible gaiters.



CTT Hose Ties

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



For secure fixing of round and solid shapes.

Material Data	
Material	Polyamide 6.6 Heat and UV Stabilised (PA66HSW)
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Material Data	
Material	Polyamide 6.6 Heat Stabilised (PA66HS)
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Technical Table

Article-No.	Type	Length (L)	Width (W)	Bundle Ø max.	Min. Tensile Strength (N)	Material	Colour	Application Tool
CTT20R								
112-51919	CTT20R	100	2.5	13.0	90	PA66	Natural (NA)	1-3, 5
112-51960	CTT20R	100	2.5	13.0	90	PA66HS	Black (BK)	1-3, 5
CTT60R								
112-56019	CTT60R	205	4.7	45.0	265	PA66	Natural (NA)	1-10
112-56060	CTT60R	205	4.7	45.0	265	PA66HSW	Black (BK)	1-10
HT120R								
112-00100	HT120R	340	7.6	90.0	535	PA66HS	Black (BK)	6-10

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval. For product specific approvals please refer to the Appendix.



Cable Ties for parallel routing

• DH-Series

Features and Benefits

Designed with two heads, these ties can be assembled into a 'figure 8' for securing two cables. Its flexible adjustment means that the bundles can be of different sizes.

Application

Ideal for running two cables in parallel, that need to be separated. These ties allow for installation of a second cable run without the need for additional cable ties.

The DH ties are also widely used within the packaging industry - the first loop closes and secures the bag, whilst the second loop can be made into a carrying handle (subject to weight).



Bundling two cable runs using the DH ties.

Material Data	
Material	Polyamide 6.6 (PA66)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Material Data	
Material	Polyamide 6.6 UV Resistant (PA66W)
Operating Temperature	-40 °C to +85 °C Continuous, (+105 °C for 500 h)
Flammability	UL94 V2



Material Data	
Material	Polyamide 6.6 Heat Stabilised (PA66HS)
Operating Temperature	-40 °C to +105 °C Continuous, (+145 °C for 500 h)
Flammability	UL94 V2



Material Data	
Material	Polyamide 4.6 (PA46)
Operating Temperature	-40 °C to +150 °C for 5000 h, (+195 °C for 500 h)
Flammability	UL94 V2



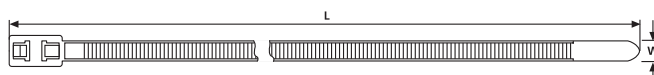


Cable Ties for parallel routing

• DH-Series

Application Tool	Registration Numbers
MK3SP	1
MK3PNSP2, MK7P	2
MK7	3
MK7HT	4
MK20	5
MK6	6
MK9P	7
MK9	8
MK9HT	9
MK21	10

For detailed information on Application Tools please refer to page 561.



DH Series

Technical Table

Article-No.	Type	Length (L)	Width (W)	Ø per loop max.	Min. Tensile Strength (N)	Min. Tensile Strength (N) 2nd loop	Material	Colour	Application Tool
117-05002	T50RDH	210	4.7	19	225	180	PA66	Natural (NA)	1-10
117-05000	T50RDH	210	4.7	19	225	180	PA66	Black (BK)	1-10
117-05060	T50RDH	210	4.7	19	225	180	PA66W	Black (BK)	1-10
117-05050	T50RDH	210	4.7	19	225	180	PA66HS	Black (BK)	1-10
117-05168	T50RDH	210	4.7	19	225	180	PA46	Grey (GY)	1-10
117-05303	T50IDH	305	4.7	38.1	225	180	PA66	Natural (NA)	1-10
117-05360	T50IDH	305	4.7	38	225	180	PA66W	Black (BK)	1-10
117-05350	T50IDH	305	4.7	38	225	180	PA66HS	Black (BK)	1-10
117-05461	T50LDH	395	4.7	50.8	225	180	PA66	Natural (NA)	1-10
117-00008	T50LDH	395	4.7	50	225	180	PA66HS	Black (BK)	1-10

All dimensions in mm. Subject to technical changes.



Please note! Not all products listed on this page may have this approval.
For product specific approvals please refer to the Appendix.