Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – Natural

Characteristics
- Standard version (Polyamide 6.6), to cover most indoor applications
- Several lengths and 6 typical widths with a tensile strength up to 780N, to cover the most demanding applications
- Packaging: OEM bulk quantities in recyclable polythene bags
- Also available in small bags with Euroslot (see page 12) and in workbench boxes (see page 14)

Technical Information
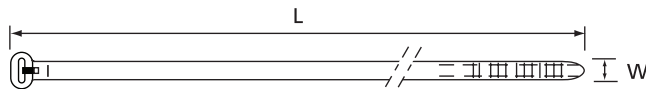|	
Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +85°C
Min. Installation Temp.	-20°C
Colour	Natural
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	MIL Spec.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY23M	MS-3367-4	92	2.3	1.0	1.5 - 22	80	1000	ERG50
TYB2315M	–	178	2.3	1.0	1.5 - 32	80	1000	
TY232M	–	203	2.3	1.0	1.5 - 51	80	1000	
TY234M	–	356	2.3	1.0	1.5 - 102	80	1000	
TY24M	MS-3367-5	140	3.6	1.1	2 - 35	178	1000	
TY242M	–	208	3.6	1.1	2 - 51	180	1000	
TY26M	–	284	3.6	1.1	2 - 76	130	1000	
TY244M	–	368	3.6	1.1	2 - 102	134	1000	
TY25M	MS-3367-1	186	4.8	1.1	3 - 48	222	1000	ERG50 ERG120
TY253M	MS-3367-7	290	4.8	1.3	3 - 78	222	1000	
TY28M	MS-3367-2	361	4.8	1.3	3 - 102	222	1000	
TY271M	–	150	7.0	1.6	6 - 31	540	500	ERG120 L-500-EU
TY272M	–	223	6.9	1.6	6 - 51	534	500	
TY27M	MS-3367-3	340	7.0	1.6	6 - 102	540	500	
TY275M	–	457	7.0	1.6	6 - 127	540	500	
TY277M	–	617	7.0	1.6	6 - 177	540	500	
TY29M	MS-3367-6	771	6.9	1.5	6 - 229	540	500	
TY53510M	–	889	8.2	1.7	to 254	780	50	WT3D L-500-EU
TY54513M	–	1143	8.2	1.7	to 330	780	50	

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

E49405

* Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations

ABB I Fastening Solutions – 9

Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – UV-resistant black

Characteristics
- UV-resistant version, especially recommended for outdoor applications
- Black version (2% carbon for military specifications)
- Also available in heat stabilised + UV-resistant version (contains 2% carbon according to military application), for outdoor applications that also require a resistance to high temperature (+105 °C). See page 19 (TY...MX-A series)
- Several lengths and 6 typical widths with a tensile strength up to 780N, to cover the most demanding applications
- Packaging: OEM bulk quantities in recyclable polythene bags
- Also available in small bags with Euroslot (see page 12) and in workbench boxes (see page 14)

Technical Information

|	
Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +105°C
Min. Installation Temp.	-30°C
Colour	Black
Flammability rating	UL 94 V-2
Other properties	UV-resistant, Halogen free, Silicone free

Product Ref.	MIL Spec.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY23MX	MS-3367-4	92	2.3	1.0	1.5 - 22	80	1000	ERG50
TYB2315MX	–	178	2.3	1.0	1.5 - 32	80	1000	
TY232MX	–	203	2.3	1.0	1.5 - 51	80	1000	
TY234MX	–	356	2.3	1.0	1.5 - 102	80	1000	
TY24MX	MS-3367-5	140	3.6	1.1	2 - 35	180	1000	
TY242MX	–	208	3.6	1.1	2 - 51	180	1000	
TY26MX	–	284	3.6	1.1	2 - 76	130	1000	
TY244MX	–	368	3.6	1.1	2 - 102	130	1000	
TY25MX	MS-3367-1	186	4.8	1.1	3 - 48	220	1000	ERG50 ERG120
TY253MX	MS-3367-7	290	4.8	1.3	3 - 78	222	1000	
TY28MX	MS-3367-2	361	4.8	1.3	3 - 102	222	1000	
TY271MX	–	150	7.0	1.6	6 - 31	540	500	ERG120 L-500-EU
TY272MX*	–	223	6.9	1.6	6 - 51	540	500	
TY27MX*	MS-3367-3	340	7.0	1.6	6 - 102	540	500	
TY275MX *	–	457	7.0	1.6	6 - 127	540	500	
TY277MX*	–	617	7.0	1.6	6 - 177	540	500	
TY29MX*	MS-3367-6	771	6.9	1.5	6 - 229	540	500	
TY53510MX	–	889	8.2	1.7	to 254	780	50	WT3D L-500-EU
TY54513MX	–	1143	8.2	1.7	to 330	780	50	

* Min. installation temp : -40°C

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

UL E49405 **

Lloyd's Register TYPE APPROVED **

CSA **

ABS TYPE APPROVED PRODUCTS **
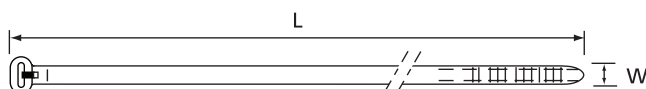
* Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations

Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – Coloured

Characteristics

Ty-Rap® ties in Polyamide 6.6 are available in 10 different colours and pre-printed ties in any of the standard colours can be supplied on demand.
- Several lengths and 6 typical widths with a tensile strength up to 780 N, to cover the most demanding applications
- Standard packaging is 1.000 / 500 pieces but smaller packaging (100 pieces) can also be supplied on request
- Please contact your Sales Office for product availability and Minimium Order Quantity

Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +85°C
Min. Installation Temp.	-20°C
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	MIL Spec.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity ** [pieces]	Tooling
TY23M-*	MS-3367-4	92	2.3	1.0	1.5 - 22	80	1000	ERG50
TY232M-*	–	203	2.3	1.0	1.5 - 51	80	1000	
TY234M-*	–	356	2.3	1.0	1.5 - 102	80	1000	
TY24M -*	MS-3367-5	140	3.6	1.1	2 - 35	180	1000	
TY242M-*	–	208	3.6	1.1	2 - 51	180	1000	
TY26M-*	–	284	3.6	1.1	2 - 76	130	1000	
TY244M-*	–	368	3.6	1.1	2 - 102	134	1000	
TY25M-*	MS-3367-1	186	4.8	1.1	3 - 48	222	1000	ERG50 ERG120
TY253M-*	MS-3367-7	290	4.8	1.3	3 - 78	222	1000	
TY28M-*	MS-3367-2	361	4.8	1.3	3 - 102	222	1000	
TY271M-*	–	150	7.0	1.6	6 - 31	540	500	ERG120 L-500-EU
TY272M-*	–	223	6.9	1.6	6 - 51	540	500	
TY27M-*	MS-3367-3	340	7.0	1.6	6 - 102	540	500	
TY275M-*	–	457	7.0	1.6	6 - 127	540	500	
TY277M-*	–	617	7.0	1.6	6 - 177	540	500	
TY29M-*	MS-3367-6	771	6.9	1.5	6 - 229	540	500	
TY53510M-*	–	889	8.2	1.7	to 254	780	50	WT3D L-500-EU
TY54513M-*	–	1143	8.2	1.7	to 330	780	50	

For cable ties in a specific colour, replace * in the Product Reference by the colour code:

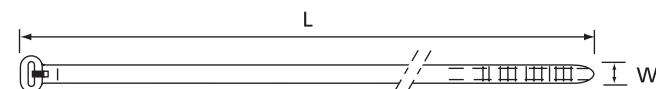0 = black, 1 = brown, 2 = red, 3 =orange, 4 = yellow, 5 = green, 6 = blue, 7 = purple, 8 = grey and 9 = white

For example: TY23M-1 defines a brown TY23M cable tie. Contact your Sales Office for product availability.

** For smaller quantities, the figure "5" needs to be added to the part number immediately after "TY" - exemple: TY523M-2 is the same as TY23M-2 but in bags of 100

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

*** Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations

E49405

ABB I Fastening Solutions – 11

Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – Natural – Euroslot packaging

Characteristics

The main characteristics of the Ty-Rap® cable ties are shown on pages 6 and 7.
- Standard version (Polyamide 6.6), to cover most indoor applications
- Packaging in small polythene bags with Euroslot, ideal for display and point-of-sales promotion (rack)
- Several lengths and 5 typical widths with a tensile strength up to 540N, to cover the most demanding applications
- Very convenient for small series production: 100 pieces (for cable ties from 2.3 mm to 4.8 mm width) or 50 pieces (for cable ties 6.9 mm width and above)

Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +85°C
Min. Installation Temp.	-20°C
Colour	Natural
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	MIL Spec.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY523MR	MS-3367-4	92	2.3	1.0	1.5 - 22	80	100	ERG50
TY5232MR	–	203	2.3	1.0	1.5 - 51	80	100	
TY5234M	–	356	2.3	1.0	1.5 - 102	80	100	
TY524MR	MS-3367-5	140	3.6	1.1	2 - 35	178	100	
TY5242MR	–	208	3.6	1.1	2 - 51	180	100	
TY526MR	–	284	3.6	1.1	2 - 76	130	100	
TY5244MR	–	368	3.6	1.1	2 - 102	134	100	
TY525MR	MS-3367-1	186	4.8	1.1	3 - 48	222	100	ERG50 ERG120
TY5253MR	MS-3367-7	290	4.8	1.3	3 - 78	222	100	
TY528MR	MS-3367-2	361	4.8	1.3	3 - 102	222	100	
TY5271MR	–	150	7.0	1.6	6 - 31	540	50	ERG120 L-500-EU
TY5272MR	–	223	6.9	1.6	6 - 51	534	50	
TY527MR	MS-3367-3	340	7.0	1.6	6 - 102	540	50	
TY5275M	–	457	7.0	1.6	6 - 127	540	50	
TY5277M	–	617	7.0	1.6	6 - 177	540	50	
TY529M	MS-3367-6	771	6.9	1.5	6 - 229	540	50	

Product References TY5234M, TY5275M, TY5277M and TY529M have no Euroslot

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143
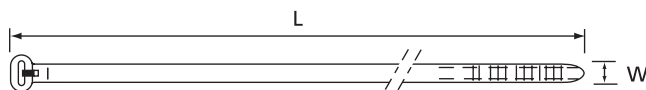
E49405

* Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations

Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – UV-resistant black – Euroslot packaging

Characteristics
The main characteristics of the Ty-Rap® cable ties are shown on pages 6 and 7.
- UV-resistant version, especially recommended for outdoor applications
- Black version (2% carbon for military specifications)
- Packaging in small polythene bags with Euroslot, ideal for display and point-of-sales promotion (rack)
- Several lengths and 5 typical widths with a tensile strength up to 540N, to cover the most demanding applications
- Very convenient for small series production: 100 pieces (for cable ties from 2.3 mm to 4.8 mm width) or 50 pieces (for cable ties 6.9 mm width and above)

Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +105°C
Min. Installation Temp.	-30°C
Colour	Black (other colours see page 15)
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

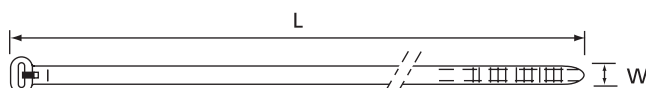| Product Ref.	MIL Spec.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY523MXR	MS-3367-4	92	2.3	1.0	1.5 - 22	80	100	
TY5232MXR	–	203	2.3	1.0	1.5 - 51	80	100	
TY5234MX*	–	356	2.3	1.0	1.5 - 102	80	100	
TY524MXR	MS-3367-5	140	3.6	1.1	2 - 35	180	100	ERG50
TY5242MXR	–	208	3.6	1.1	2 - 51	180	100	
TY526MXR	–	284	3.6	1.1	2 - 76	130	100	
TY5244MXR	–	368	3.6	1.1	2 - 102	130	100	
TY525MXR	MS-3367-1	186	4.8	1.1	3 - 48	220	100	
TY5253MXR	MS-3367-7	290	4.8	1.3	3 - 78	222	100	ERG50 ERG120
TY528MXR	MS-3367-2	361	4.8	1.3	3 - 102	222	100	
TY5271MXR	–	150	6.9	1.6	6 - 31	540	50	
TY5272MXR*	–	223	6.9	1.6	6 - 51	540	50	
TY527MXR*	MS-3367-3	340	7.0	1.6	6 - 102	540	50	ERG120 L-500-EU
TY5275MX*	–	457	7.0	1.6	6 - 127	540	50	
TY5277MX*	–	617	6.9	1.6	6 - 177	540	50	
TY529MX*	MS-3367-6	771	6.9	1.6	6 - 229	540	50	

* Min. installation temp : -40°C
Product References TY5234MX, TY5275MX, TY5277MX and TY529MX have no Euroslot

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

** Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations

ABB I Fastening Solutions – 13

Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – Workbench boxes

Characteristics
- An attractive packaging option for high volume manual assembly: 1000 pieces in a workbench box - easy to reach, hence timesaving
- This user-friendly packaging allows fast working without problems or losses

Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +85°C (natural)
	-60°C to +105°C (black)
Min. Installation Temp.	-20°C (natural)
	-30°C (black)
Colour	Natural or UV-resistant black (other colours see page 15)
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free, UV-resistant (black)

Product Ref.	MIL Spec.	Colour	Length L [mm]	Width W [mm]	Thick- ness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TYB23M	MS-3367-4	natural	92	2.3	1.0	1.5 - 22	80	1000	
TYB23MX	MS-3367-4	UV-resistant black	92	2.3	1.0	1.5 - 22	80	1000	
TYB232M	–	natural	203	2.3	1.0	1.5 - 51	80	1000	
TYB232MX	–	UV-resistant black	203	2.3	1.0	1.5 - 51	80	1000	ERG50
TYB24M	MS-3367-5	natural	140	3.6	1.1	2 - 35	178	1000	
TYB24MX	MS-3367-5	UV-resistant black	140	3.6	1.1	2 - 35	180	1000	
TYB25M	MS-3367-1	natural	186	4.8	1.3	3 - 48	222	1000	ERG50
TYB25MX	MS-3367-1	UV-resistant black	186	4.8	1.3	3 - 48	220	1000	ERG120

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143
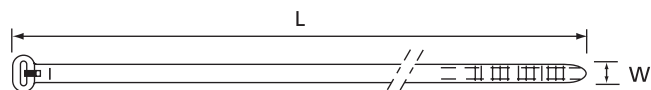
* Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations

Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – Multi-coloured

Characteristics
- Multi-coloured TY25M cable ties in a single, convenient package
- Supplied in bags of 100 ties containing ten ties of each of the 10 standard colours
  (TY25M-0 to TY25M-9)
- Ideal for applications which require a colour coding or which have an aesthetic sensitivity
 (to match the colour of the cable or of the support), especially in cable bundling in telecom,
  datacom, cable and satellite TV

Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +85°C
Min. Installation Temp.	-20°C
Colour	Black, brown, red, orange, yellow, green, blue, purple, grey, white (10 ties of each colour)
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY525M-CLRS	186	4.8	1.1	3 - 48	222	100	ERG50, ERG120

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143
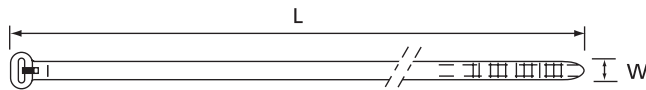
Ty-Rap® High Performance Cable Ties
Printed cable ties

ABB extends its highly respected existing capabilities in cable tie manufacture with its in-house printing equipment in order to respond flexibly to customer requirements and to allow rapid delivery. This service is offered for ties having a width of minimum 4.6 mm (batches of minimum 5,000 ties approximately)

According to the requirements, following printing processes are proposed:
Hot foil transfer
- The print is highly durable
- The basic character set is in accordance with DIN1451 - (3 mm character height)
- Text colours: Red, Orange, Yellow, Bright-Yellow, Green, Blue, Brown, Dark-Brown, Black, White

Laser printing
- The print is highly durable
- The standard printing colour is black
- The print is wear and weather resistant

Please contact your Sales Office for other character sets and special stamping designs.

ABB I Fastening Solutions – 15

Ty-Rap® High Performance Cable Ties
Ty-Rap® professional kit

Product Ref.: TYRAP PROF KIT

Characteristics
A handy kit containing a professional selection of Ty-Rap® fastening products in one convenient box

- One ergonomic fastening tool ERG50 with exclusive features for quick set-up and fast installation
- 500 Ty-Rap® cable ties TY525MR
- 500 UV-resistant Ty-Rap® cable ties TY525MXR
- Includes a handy, light weight re-usable dispenser (Ty-Tote-25)

Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – Flame retardant

Characteristics
- Flame retardant version. Ideal for use when low flammability and low smoke are necessary such as public transport, tunnels, etc.

### Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +65°C
Min. Installation Temp.	-0°C
Colour	White
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY23MFR	92	2.4	1.0	1.5 - 22	80	1000	
TY232MFR	203	2.4	1.0	1.5 - 51	80	1000	ERG 50
TY24MFR	140	3.6	1.1	2 - 35	134	1000	
TY25MFR	186	4.6	1.1	3 - 48	220	1000	ERG50
TY28MFR	360	4.6	1.1	3 - 102	177	500	ERG120
TY27MFR	335	7.6	1.6	6 - 95	540	500	ERG120
TY272MFR	223	7.0	1.6	4.8- 51	540	500	L-500-EU

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

E49405

ABB I Fastening Solutions – 17
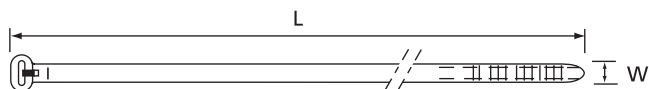
Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – Heat stabilised

Characteristics
- Heat stabilised version, for applications up to 105°C.
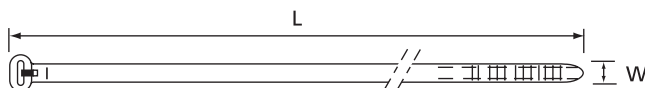
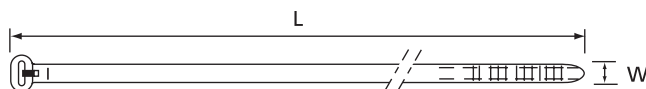### Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +105°C
Min. Installation Temp.	-30°C
Colour	Natural (may have a greenish tint)
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TYH23M / TYHB23M	92	2.4	1.0	1.5 - 22	80	1000	ERG50
TYH232M	203	2.4	1.0	1.5 - 51	80	1000	
TYH24M	140	3.6	1.1	2 - 35	180	1000	
TYH242M*	208	3.6	1.1	2 - 51	180	1000	
TYH26M	284	3.6	1.1	2 - 76	130	1000	
TYH25M	186	4.7	1.3	3 - 48	220	1000	ERG50 ERG120
TYH253M*	290	4.8	1.2	3 - 76	220	1000	
TYH28M	360	4.8	1.3	3 - 102	220	1000	
TYH272M*	222	7.6	1.6	4.8 - 51	540	500	L-500-EU ERG120
TYH27M	340	7.0	1.6	4.8 - 102	540	500	
TYH29M*	771	6.9	1.5	4.8 - 229	540	500	

* Not UL recognised
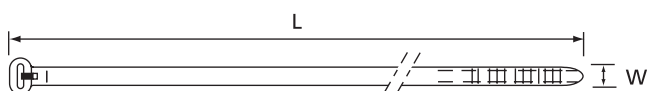
E49405

Ty-Rap® High Performance Cable Ties
Polyamide 6.6 cable ties – Heat stabilised + UV-resistant

Characteristics
- Heat stabilised + UV-resistant version, for outdoor applications that also require a resistance to high temperature (+105°C)
- For OEM and MRO applications like: transportation, lawn (garden / farm), construction equipment, recreational vehicles

Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +105°C
Min. Installation Temp.	-40°C
Colour	Black
Flammability rating	UL 94 V-2
Other properties	UV-resistant, heat stabilised, Halogen free, Silicone free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY23MX-A	92	2.3	0.9	4.8 - 22	80	1000	ERG50 ERG120*
TY24MX-A	140	3.6	1.1	5.2 - 35	133	1000	
TY25MX-A	186	4.8	1.2	6.2 - 48	220	1000	
TY27MX-A	340	6.9	1.6	8 - 95	540	500	ERG120, L-500-EU

* ERG120 can not be used with TY23MX-A and TY24MX-A

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

E49405

ABB I Fastening Solutions – 19

Ty-Rap® High Performance Cable Ties
Polyamide 4.6 cable ties – Extra high temperature

Characteristics
- Extreme continuous temperature rating: -40°C to +150°C (in air)
- For high temperature environments in industrial, OEM, MRO and commercial construction
  applications such as: metal processing, paper mills, lighting, automotive

Technical Information

|	
Material - Moulding	Polyamide 4.6
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +150°C
Min. Installation Temp.	-18°C
Colour	Light green
Flammability rating	UL 94 V-2
Other properties	Extra high temperature resistant, Halogen free, Silicon free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TYHT23M	95	2.3	0.91	2 - 20	80	1000	ERG120* ERG50 WT199
TYHT24M	143	3.6	1.07	2 - 29	178	1000	
TYHT25M	192	4.8	1.22	5 - 45	220	1000	
TYHT28M	367	4.8	1.27	5 - 102	220	1000	
TYHT27M	349	6.9	1.60	5 - 89	534	500	ERG120 L-500-EU
TYHT277M	617	7.0	1.60	6 - 177	540	500	

* ERG120 can not be used with TYHT23M and TYHT24M

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

E49405

Ty-Rap® High Performance Cable Ties
Polyamide 12 cable ties – UV-resistant

Characteristics
- Polyamide 12 UV-resistant version, remains flexible in cold & dry environments.
- Ages better and has a better chemical resistance than Polyamide 6.6

Technical Information
Material - Moulding	Polyamide 12
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	Black
Flammability rating	UL 94 V-2
Other properties	UV-resistant, Halogen free, Silicone free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TYC25MX	186	4.70	1.17	3.5 - 45	155	1000	ERG50 ERG120
TYC525MX	186	4.70	1.17	3.5 - 45	155	100	
TYC28MX	360	4.70	1.20	3.5 - 102	155	1000	
TYC272MX	222	7.60	1.60	6 - 51	380	500	
TYC27MX	343	7.62	1.50	6 - 89	380	500	ERG120 L-500-EU
TYC527MX	343	7.62	1.50	6 - 89	380	50	
TYC29MX	771	7.60	1.60	6 - 229	380	500	

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

ABB I Fastening Solutions – 21
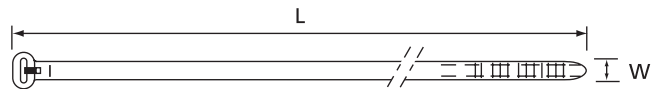
Ty-Rap® High Performance Cable Ties
Polypropylene cable ties – Weatherable

Characteristics
- Polypropylene weatherable version, for increased resistance to chemicals
- Resistant against inorganic acids, polyhydric alcohols, neutral and basic salts

Technical Information
Material - Moulding	Polypropylene
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	Black
Flammability rating	UL 94 HB
Other properties	UV-resistant, Halogen free, Silicone free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TYP23MX	92	2.4	1.0	2 - 16	50	1000	
TYP25MX	186	4.8	1.1	3.5 - 45	130	1000	ERG50
TYP28MX	360	4.8	1.1	3.5 - 102	130	1000	
TYP27MX	340	7.0	1.6	6 - 90	270	500	ERG120, L-500-EU

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143
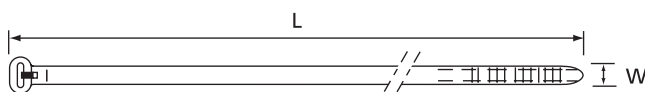
Ty-Rap® High Performance Cable Ties
Detectable cable ties

Characteristics

The Ty-Rap® Detectable Cable Ties from ABB incor-porate a unique compound (patent pending) that can be detected by X-Ray equipment, metal detectors and visual inspection equipment.

Particularly recommended for applications in food, pharmaceutical and other contamination-sensitive industries using detection systems, where cable tie installation residuals (cut tails) are not allowed in the finished product.

- Detectable by metal detectors set at minimum 1.5 mm diameter ferrous sphere
- Detectable by X-Ray equipment
- Bright blue colour for an easy visual detection
- Help achieve the HACCP EU-Directive
- Available in standard Polyamide 6.6 or in Polypropylene version for liquid-processing applications
- Available in 5 different sizes in convenient small bags with Euroslot: 5 NDT, 4PDT

Technical Information

Material - Moulding	Polyamide 6.6 or Polypropylene
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	Bright blue
Flammability rating	UL 94 V-2 (Polyamide 6.6)
	UL 94 HB (Polypropylene)
Other properties	Halogen free, silicone free

Product Ref.	Material	Length L [mm]	Width W [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
DETECTABLE POLYAMIDE 6.6							
TY523M-NDT	Polyamide 6.6	92	2.4	2 - 16	80	100	ERG50
TY524M-NDT	Polyamide 6.6	140	3.6	2 - 29	134	100	ERG50
TY525M-NDT	Polyamide 6.6	186	4.8	3.5 - 45	180	100	ERG50 ERG120
TY528M-NDT	Polyamide 6.6	360	4.8	3.5 - 102	220	100	ERG50 ERG120
TY527M-NDT	Polyamide 6.6	340	7.0	6 - 90	540	50	ERG120, L-500-EU
DETECTABLE POLYPROPYLENE							
TY523M-PDT	Polypropylene	92	2.4	2 - 16	50	100	ERG50
TY525M-PDT	Polypropylene	186	4.8	3.5 - 45	130	100	ERG50 ERG120
TY528M-PDT	Polypropylene	360	4.8	3.5 - 102	130	100	ERG50 ERG120
TY527M-PDT	Polypropylene	340	7.0	6 - 90	270	50	ERG120, L-500-EU

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

UL E49405   CSA   CE

ABB I Fastening Solutions – 23
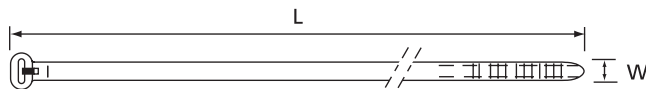
Ty-Rap® High Performance Cable Ties
Fluoropolymer cable ties – ECTFE

Characteristics
- Outstanding characteristic: lower smoke density when burnt
- Recommended for applications where smoke generation is aconcern, such as plenum areas

Technical Information

Material - Moulding	Fluoropolymer ECTFE
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +160°C
Min. Installation Temp.	-60°C
Colour	Maroon
Flammability rating	UL 94 V-0
Other properties	low smoke

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TYV23M	92	2.3	1.15	1.5 - 22	80	1000	ERG50
TYV523M	92	2.3	1.15	1.5 - 22	80	100	
TYV25M	186	4.7	1.30	3.0 - 48	220	1000	ERG50
TYV525M	186	4.7	1.30	3.0 - 48	220	100	ERG120

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143
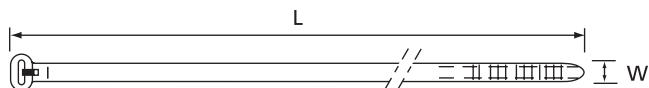
Ty-Rap® High Performance Cable Ties
Fluoropolymer cable ties – ETFE

Characteristics
- ETFE Fluoropolymer version, resistant to chemicals and to radiation
- Non-outgassing properties for zero gravity applications
- The best all around plastic material for cable ties
- Typical applications include: nuclear, power plants, space industry, etc.

Technical Information
Material - Moulding	Fluoropolymer ETFE
Material - Locking barb	316 grade stainless steel
Temperature range	-60°C to +170°C
Min. Installation Temp.	-60°C
Colour	Aquamarine
Flammability rating	UL 94 V-0
Other properties	Silicone free, inert to most solvents and chemicals, hydrolytically stable, radiation resistant. Non-outgassing properties for zero gravity applications.

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TYZ23M*	92	2.3	1.10	1.5 - 22	80	1000	
TYZ523M*	92	2.3	1.10	1.5 - 22	80	100	
TYZ25M	186	4.3	1.66	3 - 48	220	1000	ERG50
TYZ525M	186	4.3	1.66	3 - 48	220	100	ERG120**
TYZ28M	360	4.4	1.66	3 - 102	220	500	
TYZ528M	360	4.3	1.66	3 - 102	220	100	
TYZ27M***	340	6.8	1.85	6 - 95	540	100	ERG120
TYZ527M***	340	6.8	1.85	6 - 95	540	50	L-500-EU

* Product Ref. TYZ23M and TYZ523M are UL listed (E49405), all other items are UL recognized
** ERG120 not to be used on TYZ23M
*** Not on EC Declaration

ABB I Fastening Solutions – 25
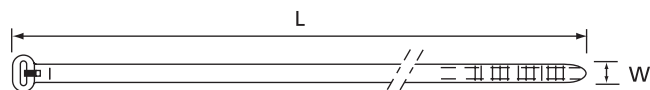
Special ties with steel locking barb
Integrated mounting hole cable ties

Characteristics
- Can be directly mounted onto a support with screws, bolts or rivets
- Mounting and bundling in one maintenance-friendly assembly.
- Typical application: cable harness manufacture and pre- and end- mounting of bundles and parts. Maintenance friendly mounting of cables, tubes and parts in all types and sizes of machines and installations - indoor and outdoor.

Technical Information
Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	Natural or UV-resistant black (see table)
Flammability rating	UL 94 V-2
Other properties	UV-resistant (black), Halogen free, Silicone free

Product Ref.	Colour	Diameter of mounting hole [mm]	Length L [mm]	Width W [mm]	Thick-ness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY33M	natural	3.0	102	2.3	0.9	2 - 16	80	1000	
TY533M	natural	3.0	102	2.3	0.9	2 - 16	80	100	
TY33MX	UV-resistant black	3.0	102	2.3	0.9	2 - 16	80	1000	
TY533MX	UV-resistant black	3.0	102	2.3	0.9	2 - 16	80	100	ERG50
TY34M	natural	4.4	151	3.5	1.0	2 - 29	180	1000	
TY534M	natural	4.4	151	3.5	1.0	2 - 29	180	100	
TY34MX	UV-resistant black	4.4	151	3.5	1.0	2 - 29	180	1000	
TY534MX	UV-resistant black	4.4	151	3.5	1.0	2 - 29	180	100	
TY635M	natural	4.0	198	4.7	1.1	3.5 - 45	220	1000	
TY635MX	UV-resistant black	4.0	198	4.7	1.1	3.5 - 45	220	1000	
TY35M	natural	5.1	199	4.7	1.1	3.5 - 45	220	1000	
TY535M	natural	5.1	199	4.7	1.1	3.5 - 45	220	100	ERG50 ERG120
TY35MX	UV-resistant black	5.1	199	4.7	1.1	3.5 - 45	220	1000	
TY535MX	UV-resistant black	5.1	199	4.7	1.1	3.5 - 45	220	100	
TY1435M	natural	6.7	198	4.7	1.1	3.5 - 45	220	1000	
TY37M	natural	6.7	356	7.7	2.0	6 - 90	540	500	
TY537M	natural	6.7	356	7.7	2.0	6 - 90	540	50	ERG120
TY37MX	UV-resistant black	6.7	356	7.7	2.0	6 - 90	540	500	L-500-EU
TY537MX	UV-resistant black	6.7	356	7.7	2.0	6 - 90	540	50	
TYF35M	natural	4.0	186	4.7	1.2	3.5 - 45	220	1000	ERG50
TYF535M	natural	4.0	186	4.7	1.2	3.5 - 45	220	100	ERG120

TY...M, TY...MX
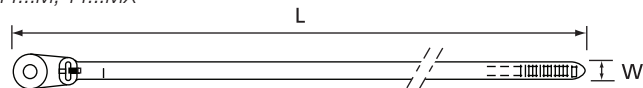
TYF35M, TYF535M
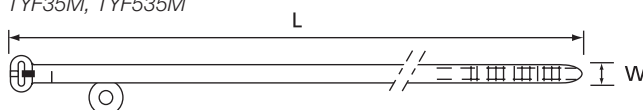
VG * approved

VG95387 part 4, type B

* Some approvals may not be applicable to all the Product References. Contact your Sales Office for approvals limitations

Special ties with steel locking barb
Panel mounting cable ties

Characteristics
- Fastening and clip-mounting in one
- Fast pre- or on-site-assembly for a range of panel thickness up to 4.0 mm
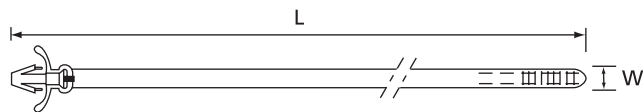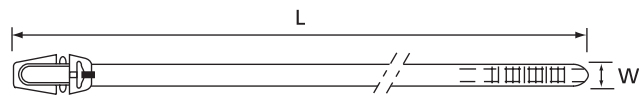- Fast and secure clip-mounting

Technical Information

|	
Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	Natural or UV-resistant black (see table)
Flammability rating	UL 94 V-2
Other properties	UV-resistant (black), Halogen free, Silicone free

Product Ref.	Colour	Diameter of moun-ting hole [mm]	Length L [mm]	Width W [mm]	Thick-ness [mm]	Bundle diameter from ... to [mm]	Minimum tensile strength [N]	Suitable for board/wall thickness from to [mm]	Quantity [pieces]	Tooling
ANCHOR TYPE										
TY54SM	natural	4.5 - 5.2	150	3.5	1.0	2 - 32	130	0.1 - 2.5	1000	ERG50
TY54SMX	UV-resistant black	4.5 - 5.2	150	3.5	1.0	2 - 32	130	0.1 - 2.5	1000	
TY38M	natural	6.4 - 6.7	200	4.7	1.3	3.5 - 44	220	1.0 - 4.0	1000	ERG50 ERG120
TY38MX	UV-resistant black	6.4 - 6.7	200	4.7	1.3	3.5 - 44	220	1.0 - 4.0	1000	
STANDARD TYPE										
696-41836	natural	5.8 - 7.5	197	4.8	1.1	3.5 - 45	220	2.2 - 3.7	1000	ERG50 ERG120

TY...

696-...

ABB I Fastening Solutions – 27

Special ties with steel locking barb
Blind mounting cable ties

Characteristics
- Suitable for hard-to-reach areas
- Fast hidden mounting on walls and vehicle chassis
- Twist off the locking head
- Pull the tie end through the fastening hole
- Place locking head on tie end
- Pull tight and cut off excess
- In the locked state, the locking head neatly covers the mounting hole

Technical Information
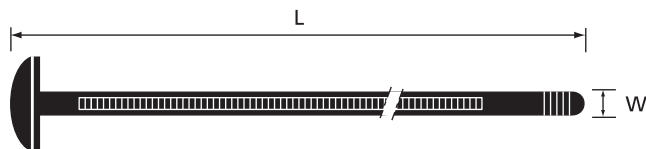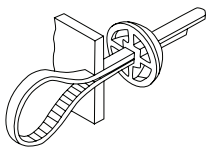|	
Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	Natural or UV-resistant black (see table)
Flammability rating	UL 94 V-2
Other properties	UV-resistant (black), Halogen free, Silicone free

Product Ref.	Colour	Diameter of mounting hole [mm]	Length L [mm]	Width W [mm]	Thick-ness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TYG34M	natural	6.4 - 7.0	160	3.6	1.1	2 - 32	180	1000	ERG50
TYG534M	natural	6.4 - 7.0	160	3.6	1.1	2 - 32	180	100	
TYG34MX	UV-resistant black	6.4 - 7.0	160	3.6	1.1	2 - 32	180	1000	
TYG534MX	UV-resistant black	6.4 - 7.0	160	3.6	1.1	2 - 32	180	100	
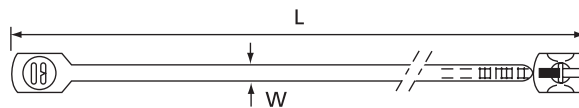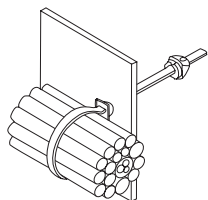
U
E49405

Special ties
Blind mounting cable ties

Characteristics
- Suitable for hard-to-reach areas
- Fast hidden mounting on walls and vehicle chassis
- Ideal for mounting on vehicle chassis. Can still be released before final tensioning
- In the locked state, the locking head neatly covers the mounting hole

Technical Information

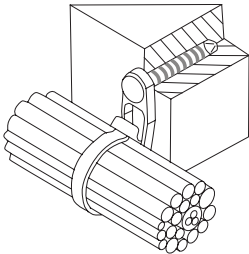|	
Material	Polyamide 6.6
Temperature range	-40°C to +85°C
Colour	UV-resistant black
Flammability rating	UL 94 V-2
Other properties	UV-resistant, Halogen free, Silicone free

| Product Ref.	Diameter of mounting hole [mm]	Length L [mm]	Width W [mm]	Thick-ness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
TY41M	8.1 - 17.3	244	5.7	1.7	5 - 60	300	500	ERG120
TY541M	8.1 - 17.3	244	5.7	1.7	5 - 60	300	50	

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

ABB I Fastening Solutions – 29
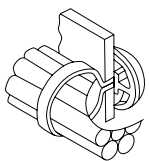
Special ties with steel locking barb
Integrated peg / nail cable ties

Characteristics
- TY545MX, with integrated nail for mounting onto wood or similar materials
- TY544MX, with integrated peg for mounting onto porous concrete or similar materials (masonry)
- Very simple application

Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	UV-resistant black
Flammability rating	UL 94 V-2
Other properties	UV-resistant, Halogen free, Silicone free

Product Ref.	Diameter of mounting hole [mm]	Length L [mm]	Width W [mm]	Thick-ness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Mounting hole depth [mm]	Quantity [pieces]	Tooling
TY544MX	6.4	200	4.6	1.0	3.5 - 45	220	25 min.	50	ERG50
TY545MX	–	200	4.7	1.0	4.7 - 38.1	220	–	50	ERG120

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
For tooling specifications: see pages 130 to 143

TY544MX
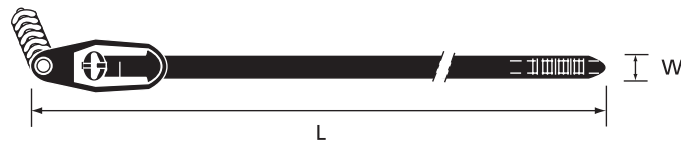
TY545MX
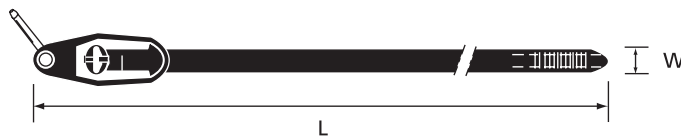
Special ties
Releasable cable ties

Characteristics

- For temporary but strong bundling, especially during control box wiring
- Very simple application
- Available in 2 lengths for different applications
- May be re-used many times
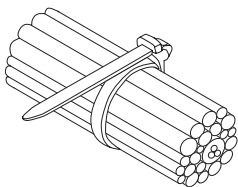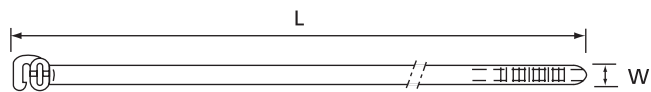- No tooling necessary

Technical Information

Material	Polyamide 6.6
Temperature range	-40°C to +85°C
Colour	Natural
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]
TYR505	190	4.7	1.19	10 - 44	220	100
TYR508	364	4.7	1.19	10 - 102	220	100

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155

Pull end of tie through head. Turn tie end back on itself and insert into side of clip. To open, release tie end from clip and open tie.

ABB I Fastening Solutions – 31

Special ties
Releasable lashing ties with incorporated fastener

Characteristics
- For temporary but strong bundling, especially during control box wiring
- Very simple application
- Available in 2 lengths for different applications
- May be re-used many times
- No tooling necessary

Technical Information

Material	Polyamide 6.6
Temperature range	-40°C to +85°C
Colour	UV-resistant black
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]
TY409	483	12.7	2.0	45 - 121	890	100
TY5409	483	12.7	2.0	45 - 121	890	25

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155
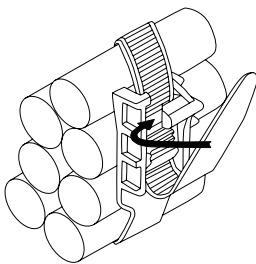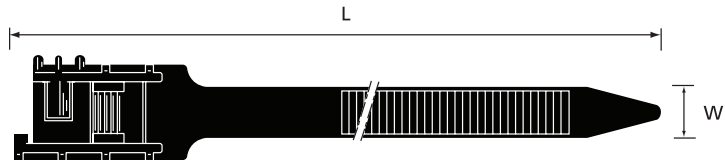
Introduce the cable tie tail into the lower slot in the head. Tighten the tie and pull it back. Slide in the tie under the catch from the side until it snaps into position.

Special ties
Releasable 2-piece lashing ties, pre-assembled version

Characteristics
- Heavy-duty lashing ties, in cut lengths with pre-assembled heads
- Also available on reel with separate heads (see page 34)
- UV-resistant Polypropylene, ideal for applications where chemical resistance is important (heads in weatherable rigid Polyamide 6.6)
- Extremely robust (670N)
- Easily releasable & reusable
- 2 types of head: type A: no mounting hole
                   type B: with mounting hole
- Typical applications: Indoor and outdoor fastening of cables, pipes and other parts in industry, shipbuilding, chemical industry etc

Technical Information
|	
Material - Tie	Weatherable Polypropylene
Material - Head	Polyamide 6.6
Temperature range	Head: -40°C to +85°C
	Tie: -55°C to +110°C
Colour	UV-resistant black
Flammability rating	UL 94 V-2
Other properties	UV-resistant, Halogen free

| Product Ref.	Diameter of mounting hole [mm]	Length L [mm]	Width W [mm]	Thickness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]
TY53418PX	6.9	457	13.2	1.9	45 - 127	670	25
TY5418PX	–	457	13.2	1.8	45 - 127	670	25
TY5424PX	–	610	13.2	1.8	10 - 178	670	25
TY5442PX	–	1067	13.2	1.8	10 - 305	670	10
TY5460PX	–	1524	13.2	1.8	10 - 457	670	10

Description of product reference structure: see page 8
Description of materials and properties: see pages 144 to 155

TY54XXPX

TY53418PX

ABB I Fastening Solutions – 33
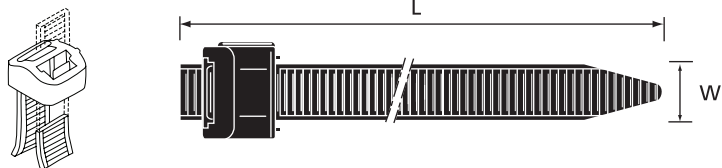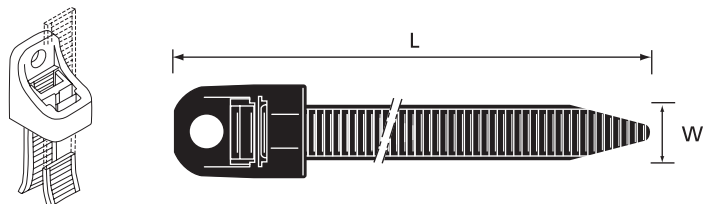
Special ties
Releasable 2-piece lashing ties on reel with separate heads

Characteristics
- Heavy-duty lashing ties on reel with separate heads
- Also available in cut lengths with pre-assembled heads (see page 33)
- UV-resistant Polypropylene, ideal for applications where chemical resistance is important (heads in weatherable rigid Polyamide 6.6)
- Extremely robust (670N)
- Easily releasable and reusable
- 2 types of head: type A: no mounting hole
                         type B: with mounting hole
- Typical applications: Indoor and outdoor fastening of cables, pipes and other parts in industry, shipbuilding, chemical industry etc.
- Product Ref. 696-41563: lashing tie on reel (300 m), in weatherable Polypropylene
- Product Ref. 696-41562: separate head, type A (no mounting hole), weatherable Polyamide 6.6 (200 pieces)
- Product Ref. 696-41614: separate head, type B (with mounting hole), weatherable Polyamide 6.6 (200 pieces) Mounting hole: Ø 6.9 mm
- Product Ref. TY4100PX: kit containing 30 m of lashing tie on reel + 50 separate heads, type A

Technical Information
Material - Tie	Weatherable Polypropylene
Material - Head	Polyamide 6.6
Temperature range	Head: -40°C to +85°C
	Tie: -55°C to +110°C
Colour	UV-resistant black
Flammability rating	UL 94 V-2
Other properties	UV-resistant, Halogen free

Product Ref.	Lashing tie, dimensions			Seperate locking heads		Min. tensile strength of assembly
	Length [mm]	Width [mm]	Thickness [mm]	Quantity [pieces]	Type	[N]
696-41563	300	13.2	1.8	–	–	670
696-41562	–	–	–	200	Type A, no mounting hole	670
696-41614	–	–	–	200	Type B, with mounting hole	670
TY4100PX	30	13.2	1.8	50	Type A, no mounting hole	670

Description of product reference structure: see page 8
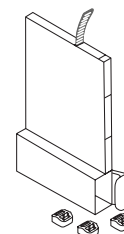Description of materials and properties: see pages 144 to 155
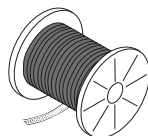
696-41563   *696-41562*   *696-41614*   *TY4100PX*

696-41563

Special ties with steel locking barb
Cable ties with identification tag

Characteristics
- Identification ties with incorporated label for durable marking and tying
- Label forms onto the bundle for types TY512M, TY51M and protrudes for ties TY532M and TY53M
- Series 51M is MIL (MS-3368-5) approved
- Trouble-free installation
- All edges are rounded to make installation easier
- Available in bulk packaging (500/1000 pieces) or in small packaging (100 pieces)

Technical Information

|	
Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	Natural
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	MIL Spec.	Length L [mm]	Width W [mm]	Thick-ness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Label dimensions [mm]	Quantity [pieces]	Tooling
TY51M	MS-3368-5	92	2.4	1.0	10 - 16	80	25.4 x 7.9	500	
TY551M	MS-3368-5	92	2.4	1.0	10 - 16	80	25.4 x 7.9	100	
TY512M	–	210	2.4	1.0	10 - 51	80	25.4 x 7.9	1000	
TY5512M	–	210	2.4	1.0	10 - 51	80	25.4 x 7.9	100	ERG50
TY53M	–	102	2.4	1.0	2 - 16	80	20.6 x 9.3	500	
TY553M	–	102	2.4	1.0	2 - 16	80	20.6 x 9.3	100	
TY532M	–	212	2.4	1.0	2 - 51	80	20.6 x 9.3	1000	
TY5532M	–	212	2.4	1.0	2 - 51	80	20.6 x 9.3	100	

For other materials and colours contact your Sales Office

TY53M, TY553M, TY532M, TY5532M
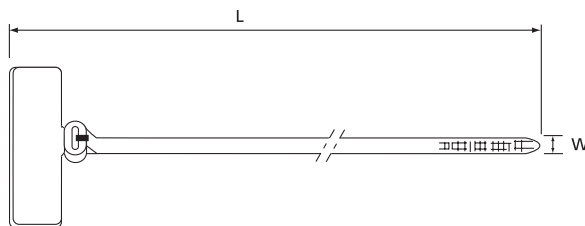
TY51M, TY551M, TY512M, TY5512M
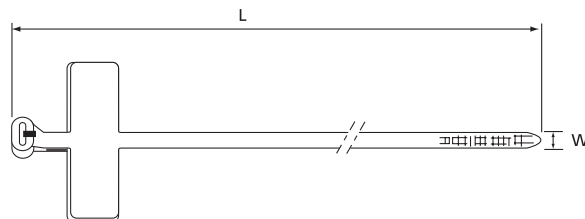
ABB I Fastening Solutions – 35

Special ties with steel locking barb
Cable ties with identification tag

Characteristics
- Identification ties with incorporated label for durable marking and tying
- Label forms onto the bundle
- 5 different versions, up to 4 straps, in bulk and small packaging
- 4 versions (up to 3 straps) are Mil-specified
- Trouble free installation
- Labelling of bundles up to 102 mm diameter
- All edges are rounded and surfaces smoothed to make installation easier

Technical Information

Material - Moulding	Polyamide 6.6
Material - Locking barb	316 grade stainless steel
Temperature range	-40°C to +85°C
Colour	Natural
Approvals	MIL: MS-3368 -1, -2, -3, -4
Flammability rating	UL 94 V-2
Other properties	Halogen free, Silicone free

Product Ref.	MIL Spec.	Length L [mm]	Width W [mm]	Thick-ness [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Label dimensions [mm]	Quantity [pieces]	Tooling
TY48M	MS-3368-2	360	4.8	1.1	19 - 102	220	13.1 x 57.2	1000	
TY548M	MS-3368-2	360	4.8	1.1	19 - 102	220	13.1 x 57.2	100	
TY46M	MS-3368-1	184	4.8	1.1	9.5 - 45	220	13.1 x 27.0	1000	
TY546M	MS-3368-1	184	4.8	1.1	9.5 - 45	220	13.1 x 27.0	100	
TY46MD	MS-3368-3	184	4.8	1.1	9.5 - 45	220 x 2	29.7 x 27.0	500	ERG50
TY546MD	MS-3368-3	184	4.8	1.1	9.5 - 45	220 x 2	29.7 x 27.0	50	ERG120
TY46MT	MS-3368-4	184	4.8	1.1	9.5 - 45	220 x 3	46.0 x 27.0	500	
TY546MT	MS-3368-4	184	4.8	1.1	9.5 - 45	220 x 3	46.0 x 27.0	100	
TY46MF	–	184	4.8	1.1	9.5 - 45	220 x 4	63.1 x 27.0	250	
TY546MF	–	184	4.8	1.1	9.5 - 45	220 x 4	63.1 x 27.0	50	

For other materials and colours contact your Sales Office
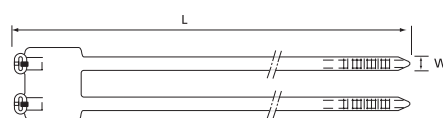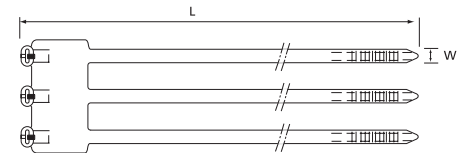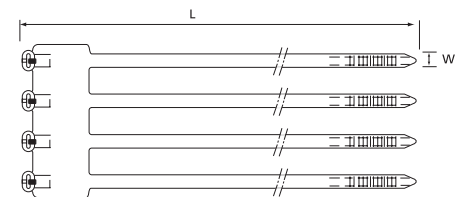
TY48M
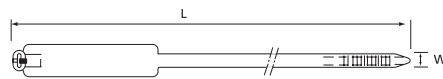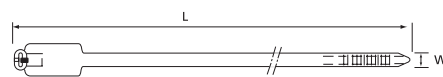
TY46M

TY46MD

TY46MT

TY46MF

Cable support system with metallic locking barb
Pre-assembled Deltec® cable ties

Characteristics
- Provides a strong, long-life and cost saving method of securing communication and overhead cables
- Double locking head with corrosion resistant locking barbs in copper alloy
- Proven years of service: designed to last a minimum of 20 years outdoor
- No sharp edges: operator friendly, cable friendly!
- Easy to install, low installation costs
- Extremely robust ties, with high tensile strength (1110N) after fastening
- Available either in pre-cut and pre-assembled lengths, or on reels with separate heads for total flexibility
- Choice of specific spacers and accessories
- Month and year of manufacture stamped into strap material

Technical Information

Material - Strap & head	Toughened weatherable acetal
Material - Locking barb	Marine grade, corrosion-resistant copper alloy
Temperature range	-65°C to +90°C
Flammability rating	UL 94 HB
Colour	Black
Other properties	UV-resistant, Halogen free, superior resistance to moisture and salt environments

Product Ref.	Length L [mm]	Width W [mm]	Bundle ø from ... to [mm]	Min. tensile strenght [N]	Quantity [pieces]	Tooling
CSS-100	254.0	12.7	60	1110	50	
TYD5135M	342.9	12.7	90	1110	25	WT3D L-500-EU
CSS-160	406.4	12.7	110	1110	50	
TYD5270M	685.8	12.7	200	1110	10	

For tooling specifications: see pages 130 to 143

Note: the recommended maximum continuous static loading for the Deltec® straps is 90 N per strap.
For best results suggested spacing is 35 to 40 cm.
It is the responsibility of the user to determine whether or not their application meets our recommendation.

ABB I Fastening Solutions – 37