

## CABLE TIES

### Overview:

Cable ties are devices used primarily for securing cables and wires in electrical installations and equipment, although there are numerous other uses. (See application below)

Cable ties are manufactured from either plastic (Figure 1) or metal (Figure 2) materials and incorporate a strap and locking mechanism (Figure 3) in one device.



Figure 1. Plastic Ties



Figure 2. Metal Ties

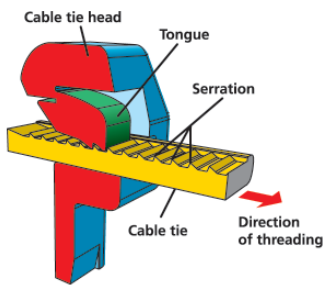


Figure 3. Plastic cable tie

Cable ties are produced in a number of different designs and material types for a wide variety of applications and environmental conditions, and careful consideration must be given to selecting the right product for an application.



### Options:

The main options available are:-

- Material type - PA66 plastic, PP plastic and stainless steel.
- Length of strap - approximately 100mm to 500mm (longer lengths available on request).
- Load handling capacity - approximately 8kg up to 165 kg.
- Locking mechanism - fixed or releasable.
- Tensioning devices - recommended for the optimal tensioning of cable ties.

### Applications:

- Securing of electrical cabling to cable trays and racks in reticulation systems.
- Securing and bundling of wiring in electrical equipment, switchboards and control panels.
- Securing of electrical conduit piping and ducting.
- Security seals.
- Hand restraints (handcuffs).
- Various medical, industrial and DIY applications.

### Selection criteria:

The following criteria must be considered:-

- Diameter of item to be secured.
- Mass of loading to which cable tie will be subjected.
- Prevailing environmental conditions.

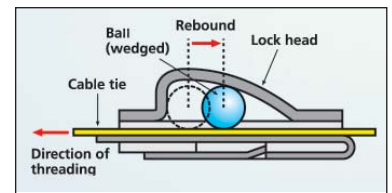
### Features and benefits:

Plastic cable ties are:-

- Manufactured from PA66 (nylon) and recommended for light to medium duty applications in a wide range of indoor/outdoor and environmental conditions.
- Also manufactured from PP (polypropylene) for use where chemical (acidic) fumes and vapours are present.
- Cost effective
- Easy to use
- Recyclable
- Available in UV stabilized black, non-UV stabilized natural and a range of non-UV stabilized colours.

Metal cable ties:-

- Manufactured from stainless steel and recommended for heavy-duty installations and very harsh environmental conditions.
- Available in two grades of stainless steel to suit varying installations conditions.
- Available with polyurethane coating for improved abrasion resistance and to protect the insulation of the cables being secured.
- Available with different locking mechanisms to suit a variety of applications. (Figure 4)
- Secured via purpose designed tools.



### Do's and don'ts:-

- Take care to assess the installation requirements and environment prior to specifying a cable tie.
- Wherever possible use a tensioning tool to ensure correct installation of the cable tie for increased life.
- Design the installations so as to limit the movement of the cables after applying the cable ties.
- Avoid suspending loads directly from the cable tie.
- Never use natural or coloured plastic ties in outdoor applications
- Never use Nylon plastic ties where acids are present either in liquid or vapour form. Use PP cable ties, taking into consideration that this material has only 75% of the load capability of Nylon.

### Standard Cable Tie Parameters:

Part Number S-denotes colour BK=black NT=natural	Length (mm)	Width (mm)	Max bundle diameter (mm)	Max tensile strength (Kg)
T18R\$	104	2.5	18	8
T30R\$	148	3.7	35	14
T50R\$	198	4.6	50	23
T50I\$	305	4.7	73	23
T50L\$	392	4.7	109	23
T120S\$	278	7.8	51	55
T120R\$	388	7.6	108	55
LK5\$	540	13.0	152	165

