



Remora Electrical

Things to know Stainless Steel Cable Ties



Technical Breakdown

Stainless steel cable ties are essentially the heavy duty alternative to plastic, built for environments where nylon would just fail or melt. Most of these ties utilise a ball-locking mechanism. It is a simple design where a small high-grade ball sits inside a tapered header; as you pull the tail through, the ball wedges against the strap and locks it solid. Because there are no teeth like a plastic tie, the adjustment is infinite.

The material is the most important part here. While some resell 304 grade, most common material used is 316 stainless steel because it has added molybdenum. This makes it far more resistant to pitting and corrosion, especially from chlorides or industrial chemicals.

These ties are completely non-flammable and meet the fire safety requirements of BS 7671, specifically regarding the support of wiring systems in escape routes.

You usually find them in two main widths: the 4.6mm which is plenty for standard bundling and the 7.9mm heavy duty version for securing large conduits or thick power cables. Tensile strengths are impressive, with the wider ties often rated to hold over 130kg of force without the locking head slipping.

How to Choose - When selecting a tie, you have to look at the environment first. Since we supply 316 grade, you are covered for almost anything from basic indoor wiring to harsh coastal or offshore installs where salt air eats through lower grades. If you are worried about the metal edges cutting into soft cable sheath, you should go for the coated versions. These have a polyester or epoxy coating that acts as a cushion. For standard pipe or conduit securing, the uncoated ties are fine and offer the best heat resistance.

Always pick a length that gives you at least 50mm of tail after it's tight; this ensures the ball lock has enough surface area to bite properly.

Best Practices - You can pull these tight by hand, but for a professional finish and proper tension, you really need a steel tie tensioning tool, KE922 manual tensioning with cut off lever or CT511 automatic tensioning/cutting. These tools pull the tie to a set pressure and then cut the tail off flush. This is vital because cutting them with standard side cutters leaves a sharp, serrated edge that can cause serious injury to anyone working on the tray later.

Regarding spacing, follow the 18th edition guidelines to prevent cable sag. If you are using them on vertical runs, space them closer together to take the weight of the cable. Also, avoid mixing different metals; if you're fixing to a copper pipe, use a coated tie to prevent any bimetallic reaction that could cause corrosion.

Q Are these ties reusable if I need to add another cable?

A Standard ball-lock ties are permanent. Once they are locked and trimmed, you have to cut them off to remove them. If you need a temporary fix, you'd need to look for specific "releasable" stainless ties which have a different buckle design.

Q Why do you only supply 316 grade instead of the 304?

A 304 grade is ok for basic indoor use, but it eventually rusts in damp or coastal areas. We supply 316 because it's "marine grade," meaning it handles salt, chemicals and moisture without failing. It's a better long term investment for safety.

Q Do I need to use these for all cable installs now

A According to the latest wiring regs, you must use fire-resistant fixings like these to prevent cables from falling down in the event of a fire. This is especially critical in escape routes, so they are now a standard part of most electrical kits.