

1. Description



Dual Ball Stainless Steel Cable Ties are high-performance, self-locking fasteners designed for demanding applications requiring superior strength, reliability, and resistance to harsh environmental conditions. Constructed from industrial-grade stainless steel, these ties feature a unique low-profile locking head containing two internal stainless steel balls. This dual ball mechanism provides a strong, positive lock that engages automatically as the tie is tensioned, preventing slippage and ensuring a secure, permanent fastening. They are available uncoated or with various coatings for added protection.

2. Key Features

- **Self-Locking Dual Ball Mechanism:** Provides a secure, reliable, and non-releasable lock that engages automatically and resists loosening under vibration.
- **High Strength & Durability:** Offers significant tensile strength suitable for heavy-duty bundling and fastening.
- **Low Profile Head:** Reduces snagging and provides a cleaner appearance compared to some other buckle types.
- **Corrosion Resistance:** Manufactured from stainless steel (typically Grade 304 or 316) for excellent resistance to weathering, chemicals, salt spray, and corrosion.
- **Wide Temperature Range:** Suitable for operation in extreme high and low temperatures where plastic ties would degrade or fail.
- **UV Resistance:** Inherently resistant to ultraviolet light damage.
- **Fire Resistance:** Non-flammable material.
- **Fast & Easy Installation:** Simple pull-through design allows for quick installation using appropriate manual or pneumatic tools.
- **Smooth Edges:** Rolled edges enhance safety during handling and installation, reducing the risk of damage to cable insulation or injury to installers.
- **Optional Coatings:** Available with Polyester (PPA, Nylon, etc.) coatings for additional edge protection, insulation between dissimilar metals, or colour coding.

3. Technical Data

- **Material:**
 - Standard: Stainless Steel Type 304 (SS304 / UNS S30400)
 - High Corrosion Resistance Option: Stainless Steel Type 316 (SS316 / UNS S31600) – Recommended for marine, offshore, or highly corrosive chemical environments.
 - Optional Coating: Polyester, PPA, Nylon, Epoxy (Specify colour if applicable, e.g., Black)
- **Locking Mechanism:** Dual Stainless Steel Ball Lock (Internal, Self-Locking)
- **Operating Temperature Range:**
 - Uncoated: Typically -80°C to +538°C (-112°F to +1000°F)
 - Coated: Typically -40°C to +150°C (-40°F to +302°F) (Varies significantly by coating material)
- **Tensile Strength (Minimum Loop):** Varies by width and thickness, 1,800N / 400 lbs for 12mm width ; 2,400N / 530 lbs for 16.0mm width; 3,500N / 770 lbs for 19.0mm width).
- **Available Widths:** 12mm (0.47"), 16mm (0.63"), 19.0mm (0.75").
- **Available Lengths:** 200mm (8") up to 1000mm (39") or longer.
- **Maximum Bundle Diameter:** Dependent on tie length. Equal to (Length-50mm)/3.14.
- **Thickness:** 0.3mm, 0.4mm, 0.5mm.
- **Resistance:** Excellent resistance to UV, chemicals (grade/coating dependent), radiation, weathering, vibration, and flame.

4. Applications

- Ideal for securing cables, hoses, pipes, and components in demanding or hazardous environments:
- **Marine & Offshore:** Shipbuilding, oil rigs, docks (SS316 recommended).
- **Oil & Gas:** Pipelines, refineries, exploration sites, downhole applications.
- **Aerospace & Defense:** Aircraft wiring, military vehicle assembly.
- **Industrial Automation & Manufacturing:** Securing wiring and hoses on machinery.
- **Automotive:** Under-hood applications, exhaust systems, securing lines.
- **Construction:** Securing conduit, temporary structures.
- **Utilities & Power Generation:** Power plants, substations, telecommunications towers, direct burial applications.
- **Solar Installations:** Mounting cables and hardware.
- **Transportation:** Railways, heavy trucking.

5. Material Specifications

- **Stainless Steel Grade 304 (SS304):** Austenitic stainless steel offering good corrosion resistance in various atmospheric and mild chemical environments. Standard choice for many industrial applications.
- **Stainless Steel Grade 316 (SS316):** Austenitic stainless steel containing molybdenum, providing superior corrosion resistance, especially against chlorides, acids, and in marine environments. Recommended for coastal areas, offshore platforms, and chemical plants.
- **Coating:** Provides electrical insulation between dissimilar metals (preventing galvanic corrosion), offers smoother edges, improves chemical resistance in specific scenarios, and allows for colour coding. Common types include:
 - **Polyester:** Good UV resistance, durable, flexible.
 - **Nylon 11/12:** Excellent chemical resistance, low water absorption, abrasion resistant.
 - **PPA (Polyphthalamide):** High-temperature performance, good chemical resistance.
 - **Halogen-Free Options:** Available for specific applications requiring low smoke and zero halogen properties.

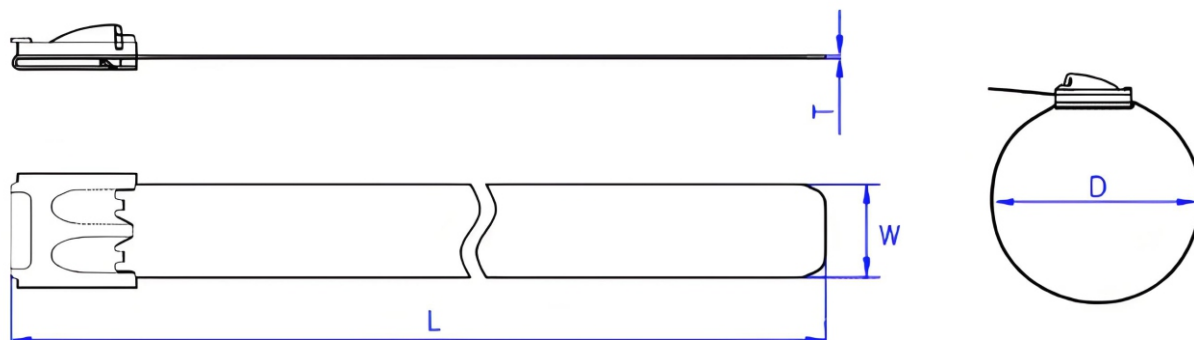
6. Installation Guidance

- **Wrap:** Loop the stainless steel cable tie around the items to be bundled or secured.
- **Insert:** Feed the tail end of the tie through the low-profile locking head. The dual ball mechanism will allow the tail to pass through in one direction only.
- **Tension:** Pull the tail end tight manually to initially secure. For final tensioning and a flush cut-off, use a dedicated stainless steel cable tie installation tool. Engage the tool on the tie tail near the head and operate according to the tool manufacturer's instructions to achieve the desired tension.
- **Cut:** The installation tool will automatically cut the excess tail flush with the head once the preset tension is reached (for automatic tools) or when manually triggered, leaving a safe finish.
- **Safety:** Wear appropriate safety gloves and eye protection during installation, as cut stainless steel edges can be sharp even with a flush cut.

7. Associated Products

Installation Tools: Manual or pneumatic tensioning and cut-off tools specifically designed for stainless steel cable ties are required for proper installation, optimal tension, and a flush cut. Model like Ratchet Banding Tensioner LYBT004.

8. Specifications



Width		Thickness		Length (mm)	Optional Material
inch	mm	inch	mm		
0.50	12.0	0.012	0.30	200 ~2000	SS304 / 316
0.63	16.0	0.015	0.40	300 ~3000	SS304 / 316
0.75	19.0	0.020	0.50	500 ~3000	SS304 / 316

Note: Any lengths from 150 to 3000mm are available for custom.

The Max Bundle Diameter = (Length-50mm)/3.14.



Disclaimer: The information provided in this datasheet is intended as a general guide. Specific performance characteristics can vary based on the application conditions and the specific product variant. Users should evaluate the product suitability for their specific requirements. Manufacturer reserves the right to change specifications without notice.