

Fastener Innovation Alley



Auto-Torq Axle Fastener

Auto-Torq offered by Stemco is designed to streamline wheel end installation by eliminating the need for complex processes and specialty tools. With no need for washers, clips, snap rings, screws, or keepers, Auto-Torq makes installation simple and efficient, the company says. Plus, by applying the optimum clamp load on the bearings every time, bearing wear is minimized, resulting in the longest bearing service life.

Auto-Torq offers an all-in-one solution that is compatible with any industry hub manufacturer.

Japan's First Colored Titanium Blind Rivets

To meet the increasingly diverse and complex needs of the industry, Nissen Rivet in Japan has for the first time achieved 100% localized manufacture of titanium blind rivets using advanced processing technology. In addition to improving efficiency and productivity, the applications of the blind rivets as an environmentally friendly fastening technology are expanding. The company also offers colored titanium blind rivets (using anodized coating).

High Corrosion Resistance

The most important characteristic of titanium is its high corrosion resistance. It is ideal for use in corrosive environments.

Light Weight

The weight is about 60% of stainless steel and iron counterparts. Ideal for weight reduction, e.g. for car and motorcycle silencers and truck bodies.



Environmentally Friendly Material

Titanium hardly ages over time and is highly recyclable. It also has non-toxic and anti-bacterial properties that make it a human-friendly material compared to other metals.



MISTOL High Performance AI Sorting Machine

MISTOL® AI, a high-performance inspection and sorting machine equipped with AI, has been developed by Nitto Seiko to enable inspections similar to human visual inspections and inspections of parts that have been considered difficult in the past. MISTOL® AI streamlines the image setting process, which used to be difficult, and makes it possible to configure settings without being restrained to the skill level of the operator. This product reduces work hours required for setting.



Conventional machines use a “rule-based” method, in which inspections are performed based on rules set by human operators. However, the system was not accurate enough to recognize slight changes in the captured image due to unevenness or micro-defects on the surface of the target. In addition, many quantitative settings had to be made for each inspected item on the captured image, which required time and skill to set up. MISTOL® AI learns and judges captured images on its own, making it possible to handle inspections that have been difficult with conventional methods, with simple settings and operations.

Asfa® WP Waterproof Screw

Nitto Seiko Corporation has released Asfa® WP, a new concept O-ring embedded screw that offers high axial force performance and waterproof performance. Its unique structure factors in product misalignment and stable carrying during the assembly process. This product, which has a different shape from general waterproof screws and offers various advantages in addition to waterproof performance, is patent pending.



Because of the structure that incorporates an O-ring in the lower shaft portion of the screw neck, general waterproof screws require counterboring the fastened object and the contact area with the screw head is small, making it impossible to fasten with high axial force. The most important thing in fastening screws is to secure axial force. The flat washer on the underside of Asfa® WP provides a larger contact area with the fastener than an O-ring does, which reduces surface sinking of the fastener and enables fastening with higher axial force. In addition, since no counterboring is required for the fastener, it contributes to the customer's total cost reduction.

When we use general waterproof screws with embedded O-rings, if fasteners misalign, the O-ring is not compressed, resulting in loss of waterproof performance. With “Asfa® WP,” the O-ring is positioned on the periphery of the head, which allows the O-ring to be compressed evenly and provides stable waterproof performance.

Nitto Seiko began selling this product with a goal of selling 2.5 million units per month to the automotive, electrical and electronic equipment industries.



Tamper-proof Recess Inner®

Recess Inner® rolled out by AzumaNeji from Japan is a tamper-proof part that restrains unauthorized removal of bolts by loading it into the recesses of a bolt. It was developed to improve safety by reducing the risk of tampering or disassembling to machines and systems. In addition, it also prevents dust from entering the hexagonal hole. Three types (BARNACLE, FLAT, and PLASTIC) with different characteristics are available in this lineup. The stainless steel “BARNACLE” and steel (stainless steel color plated) “FLAT” types can be removed with a special tool, while the “PLASTIC” type leaves traces when removed. The “Barnacle” is made of stainless steel and has high corrosion resistance, while the “Flat” is suitable for use where design is prioritized. “PLASTIC” is available in two colors, white and black. The white type is mainly for indoor use or machine tools, while the black type is mainly for outdoor use. It provides safety and security in a variety of locations and applications, including equipment and facilities in places where unspecified numbers of people come and go (park playground equipment, window grids, license plates, etc.), dusty locations in factories and outdoors, and parts of machines and equipment that should not be removed without authorization (mold positioning parts, core parts of precision machines, etc.).



New ICC Insert Nut

Japanese Iwata Bolt headquartered in Tokyo has recently added a new product “ICC Insert Nut” into its wide range of fastener portfolio, which, according to the company, can solve various plating problems.

This new product is currently available from M3 to M8. With improved plating feasibility and silver clearance, it can create a closed end by crimping the lid and eliminate common issues such as plating deposition. It can be applied to transportation, electronics and many other industries.

With the application of this product, the overall length can be trimmed and the corrosion resistance, quality and reliability can be greatly improved. Iwata Bolt under the leadership of President Kiyotaka and Iwata celebrated its 74th anniversary in 2023 and continues to strive for maintaining sustainability and achieving further growth. ■

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Standard Parts: IFI, DIN, ISO, JIS standard,
Drywall screw, Decking screw,
Self-drilling screw, Self-tapping screw,
Machine screw, Tap-tite screw.
Non-Standard Parts: Customized Drawings.



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