



# INNOVATION ALLEY

## Buttonfix Develops the No Compromise Panel Fastener

For the most demanding applications such as fire-sensitive environments, Buttonfix has designed an all-metal version of its award-winning panel fixings. The Type 1 Metal Button-Fix retains all the benefits of the polymer versions – quick and easy installation, accessibility of services, and amazing strength – but is manufactured in materials that are

compliant



Producers of fire-retardant panels have been quick to see the advantages of this new product. With a stainless-steel spring to grip the Button within the Fix, Type 1 Metal Button-Fix is also ideal for marine applications where vibration may be an issue. The reassuring ‘click’ as the Button-fix locks home has been tested over 10,000 times, to ensure reliable performance no matter how many times the panel is removed.

Available from May this year, Type 1 Metal Button-Fix meets the International Maritime Organization (IMO) Standards: Annex 2.1 for non-combustible materials, making it ideal for all types of interior panelling on yachts and ships.

## German Böllhoff Releases New WELTAC Resistance Element Welding

WELTAC® resistance element welding enables the joining of lightweight materials with steel of all qualities.

For the joining of materials in car lightweight design, especially aluminium and steel, Böllhoff has added another technology to its product portfolio: the resistance element welding.

Resistance element welding is a further development of resistance spot welding.

At WELTAC®, a rivet-like resistance element ensures, that materials which are not thermally compatible, or only to a limited extent, are joined. The resistance spot welding systems, existing at the customers' premises, can still be used for modern body construction architectures.



## German Goebel Fasteners Releases New GO-300 Cordless Lithium-Ion Battery Tool for Threaded Inserts



The new GO-300 addition to the GOEBEL cordless tool family offers modern features that provide advantageous benefits to the operator in all job-site applications. It is ergonomically designed for speed, efficiency, and versatility when setting threaded inserts. The cordless battery system allows the user to take the tool to any job-site and have free range of motion.

Performance is what the company strived to provide with this tool therefore it added a pulling force adjustment which the user can set to L = low and H = high. The multi functional switch panel indicates the battery level as well as gives the user the option to adjust the stroke range easily depending on the size and grip range of the threaded insert. The tool set comes complete with battery, charger, interchangeable mandrel & anvils, wrench and operating manual; all stored together in a rugged carrying-case. The easy to identify colored mandrels allows the user to quickly reach for the correct threaded mandrel needed for the application.

## Swiss “invisMX” Invisible Magnetic Screws

Screws are a common component. Fastening screws onto an object will inevitably leave the screw head on the connecting part of the surfaces and undermine visual appearance. In light of this, a Swiss company invented an invisible magnetic screw which leaves no screw marks when used to fasten objects. This screw is named invisMX magnetic invisible screw, and it has a strong bearing capability at a maximum of 400 kilograms.

The screw was invented by Lamello AG Joining Technology from Switzerland. It can stay hidden and fasten the internal part of objects.



It is somewhat similar to the mortise and tenon in Chinese building structures but simpler and more convenient. All that is needed is to punch a small hole on the wood, install the screw into the hole on one end of the wood, and drive in the nut on the other end, utilizing connection of two pieces of wood and a magnetic tool to fasten the screw and nut. This is all done by utilizing unique magnetic attraction repulsion. The removal of the screw is very convenient, and all that takes it is to use related magnetic tools which will remove the screw within seconds. The screw can make wood connection very firm and has a strong grip with the torsion force reaching 160 kilograms. It is currently applied to the process of furniture production.

## 60-Volt Cordless Nutrunner Optimizes High-Torque Fastening Application

STANLEY Assembly Technologies, a brand of STANLEY Engineered Fastening, is extending its B-Series cordless tool line to include the B44L angle-lever cordless nutrunner. Thanks to its 60-volt DEWALT® FLEXVOLT™ battery, the B44L is the most powerful cordless nutrunner available to the assembly market.

For added convenience, the B44L can store data for up to 500 fastening cycles and two trace sequences. It also has a built-in controller with wireless capability. This allows seamless integration with the plant's existing communications system.



The B44L is available in four models with speed ratings from 243 to 573 rpm and maximum torque ranges of 55 to 120 Nm. The ½" drive is also offered in square, double-ended and flush socket configurations.



## MiTek Releases Its New ProSeries™ “WSTS Truss/Stud Screw”

MiTek USA announced that it has released a new ProSeries™ fastener. The new ProSeries™ “WSTS Truss/Stud Screw” provides uplift resistance and lateral load resistance for the following connections: Truss-to-top-plate; rafter-to-top-plate; top-plate-to-stud; stud-to-bottom-plate.

The WSTS Truss/Stud Screw is tested in accordance with ICC-ES AC233 and AC13, and meets 2015 and 2018 IRC and IBC code requirements. The WSTS Truss/Stud Screw offers a “reverse thread angle” on opposite ends of the screw for greater resistance to withdrawal.

The WSTS Truss/Stud Screw is fully threaded along its length for installation flexibility. The head of the screw is designed to countersink when driven, so the screw is taken out of the way of finishing materials like drywall and trim. A Type-17 screw point engages the wood quickly for easier starting and driving of the screw.

The WSTS Truss/Stud Screw package includes an installation angle tool that makes proper installations easier. The installation angle tool is also removable so the bit can be used with or without the device.

The screw comes in two lengths: 4½ inch length for stud-to-bottom plate connections, and 6 inch length for connections through the double top plate.

## New Simpson Strong-Tie® SDWS Timber SS Screw Provides Durability and Efficiency

Simpson Strong-Tie, the leader in engineered structural connectors and building solutions, announced the official launch of the Strong-Drive SDWS Timber SS Type 316 stainless-steel structural screw, a premium solution for construction and repair of coastal piers, boardwalks, docks and other projects that require structural fastening in extreme saltwater environments.

The SDWS Timber SS prototype was specified and successfully field-tested as the primary pier-board fastener for the \$8.7 million modernization of the Pismo Beach Pier. At 1,200 feet long, the Pismo Pier is the 18th longest in California and had several sections that had not been replaced since the pier was constructed in 1928.



To ensure that the Pismo Pier project could meet budget and scheduling requirements while providing the structural durability to last many more decades, Morro Bay, CA-based Shoreline Engineering turned to Simpson Strong-Tie for fasteners that were corrosion resistant and easy to install.

Available in 3", 4", 5", 6", 8", 10" and 12" lengths, the SDWS Timber SS features a patented SawTooth™ point to eliminate the predrilling and counterboring required by lag screws while providing greater load ratings than spikes without nail-pops and their associated tripping hazards.

The SDWS Timber SS 316 stainless-steel structural screw complements the Strong-Drive® family of fasteners and is anticipated to provide a broad range of fastener solutions for coastal pier, boardwalk and ledger applications where a flat, flush washer head is advantageous.

## Chicago Pneumatic Releases New CP7748 Impact Wrench

Chicago Pneumatic has introduced a new powerful ½" impact wrench for vehicle service specialists. Built upon the heritage of the successful previous model, the CP7748 has been designed to offer operators unparalleled levels of power, comfort and durability and is suitable for workshop or roadside assistance tasks such as tire changing.

Weighing in at just 4.4 lbs (2 kg) and delivering 960 ft. lbs (1,300 Nm) of power in reverse, the CP7748 impact wrench provides a high power-to-weight ratio.

At the heart of the design is an innovative forward/reverse and power control set up based on a ring system, which is more ergonomic than controls on the back of the tool. Users can either change direction by pushing buttons easily with one hand, or simply by turning the ring from anywhere around the tool. The CP7748 also offers two different settings in the forward position (40 per cent of maximum power and full power)



setting in reverse. This ring system facilitates the use of the CP7748 in tight places without having to remove the tool to change direction.

The CP7748 can comfortably be used in confined spaces since it is compact. The tool measures only 6.89 inches (175 mm) in length.

Chicago Pneumatic has designed the new impact wrench with durability in mind. Featuring a hard chromium aluminum cylinder that surrounds the motor and twin hammer mechanism, the CP7748 wrench delivers optimum performance in the toughest operating environment. The CP7748 is also available in 2" anvil.



## Japanese LOBTEX Rolls out Non-slipping Hexagonal Wrench Package Suited for Inclined Wrench Insertion

LOBTEX launched sales of BWM9S ball-end hexagonal wrenches that prevent slipping when they are inserted at an inclined angle. Ball-end hexagonal wrenches conveniently allow users to insert at an angle into the hexagonal bolt hole, but in a high-torque application they would easily slip off from the hole. Therefore, LOBTEX increased the area of contact with the bolt hole and came up with a wrench shape that prevents slipping.



Features:

- (1) Special shape design: Preventing slipping for perpendicular, or 20-degree inclined wrench insertion.
- (2) Best suited for fastening bolts in a tight or innermost area.
- (3) The red holder of the wrenches is foldable, allowing convenient fetching and storage.

## Japanese Kamiyama Tekkosho Develops a Test Device Analyzing Self-drilling Screw Performance

Kamiyama Tekkosho developed the self-drilling screw fastening test device called "SCR-19S" with an aim to reduce the required time of fastening self-drilling screws by 50%.

The company is currently using the device for trial tests and it expects to develop a new type of self-drilling screws by 2020. The common way to test self-drilling screws is to improve the drilling tip and then measure the time required for the self-drilling screw to fasten onto test materials. The way that the new device takes is to use sensors to measure the number of rotation of the screw as well as the force applied to the screw's axial and perpendicular direction, and then use the new acquired data to improve drill tip design.

Kamiyama Tekkosho's "Uni-point" construction self-drilling screws drills into iron plates without the need for pre-drilling holes. The new screw design is expected to further improve Uni-point.



## Japanese LINEX Releases TRIBO 3-in-1 Bolt

Tribo Bolt combines multiple patented designs into an original branded product integrating a special head shape, special materials and special threads. It achieves three major functions: lightweighting, high strength and anti-loosening. The head height is 60%-70% of a hexagonal bolt, the head diameter is 80%, and the total volume is 50% of a hexagonal bolt.

- Zero driving angle. Great torque transmission.
- Increases socket durability.
- Makes the socket lighter, thinner, shorter and smaller.
- Special outer shape requiring specified tools. Anti-theft.
- Miniaturized grain structure. Reduced material impurity. Enhanced delayed fracture resistance. High strength.
- MotionTite asymmetrical thread design increasing fatigue strength by 1.2 times. Resisting impact and vibration.



## Nitto Seiko Rolls out "MISTOL® F" for Inspecting and Sorting Parts of Ultra-small Objects

Nitto Seiko launched sales of "MISTOL® F" on June 3 which can inspect the appearance and size of ultra-small screws with diameters from 0.6mm to 3mm. The device can perform an inspection of appearance (damage, color, etc.), size, and mixed materials at a speed of 100 to 500 pieces per minute and can be applied by the automotive parts and household appliances industries. It can check the upper and lower side of an object simultaneously without worrying about clogged objects.





## Japan Lobtex Announces New Angled Tip Long-Nose Pliers

The Japanese well-known hand tool manufacturer, Lobtex Co., Ltd. has recently developed its new J-CRAFT series angled tip long-nose pliers. Thanks to the direction and angle (30°) of the tip, this tool can easily grip target objects even in cramped spaces where conventional pliers cannot be laterally opened.



Gripping



Cutting



## Japanese Tohnichi Developed Mistake-proofing Torque Wrench Preventing Repeated Fastening

The CSPFHW series wireless torque wrench can detect if the user forgets he or she has tightened a fastener and is trying to re-tighten it. This product comes with no torque sensor but instead comes with the unique ability to check for repeated tightening.

- Repeated tightening on an already tightened bolt or nut would be regarded by the wrench as a repetition and the red NG lamp would turn on.
- This wireless wrench operates in conjunction with a signal receptor, configuration box, and multi-port box.
- 7-digit English and numeric characters and a 3-digit ID can be set for the wrench to trace its usage data.
- The battery can sustain through over 150 thousand times of use. In the case of fastening 3600 pieces of fastener per day, the battery can be used for over two months.
- The wrench head can be exchanged for a ratchet head and other head types for compatibility with various fastening operations.

## Japanese Tokyo Electron Device Rolls out New Small Parts Counting Machine

The counting device from Tokyo Electron Device can precisely count the number of small and lightweight parts, and can be used for counting, stock management and subdivision of screws, washers and electronic parts. It can recognize the type and number of parts, preventing human errors such as miscounting and mixing with wrong parts. The company sells it to parts manufacturers and logistics centers.

The device consists of a workbench to which the parts are placed, a counting camera, and a monitor display to show the counting result. The user has to select from the monitor the parts to be counted, and then place the parts onto the workbench for counting. Placing different parts will make the monitor report an error marked in red, thereby preventing the user from taking the wrong parts.

By using this device, parts manufacturers and logistics centers can reduce operating time, facilitate standardized operation and make it easier to record operations. ■

