



TR PRESS PACK PRODUCTS

TR FASTENINGS IS RECOGNISED THROUGHOUT
THE INDUSTRY FOR WORLD CLASS PRODUCTS
& SERVICES

WE MANUFACTURE, STOCK & DISTRIBUTE
A VAST RANGE OF INDUSTRIAL
FASTENERS & COMPONENTS

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TR Press Release

Driving Towards Lightweight Fastening Solutions in the Automotive Industry



2014



As part of an ongoing programme to increase its services and products and, in particular, to assist existing and new customers achieve the weight reduction requirements and high torque demands of the automotive industry, TR Fastenings came to an agreement with Phillips Screw Company in early 2013 whereby it could manufacture, under licence, Phillips' complete range of industrial drive systems.

Established as an industry leader for its engineering and manufacturing capabilities, TR Fastenings already owned the Pozidriv® trademark for the UK, Pozi® in the EU, and also the MATHread® and Torx® licences, and therefore, according to Geoff Budd, Managing Director at TR Fastenings, (pictured left) *"it was a natural progression to manufacture the famous Phillips Drive Systems"*.

Since 1933 the Phillips Screw Company has been the leader in the development of high performance fasteners for the automotive. Beginning with the 1936 Cadillac (the first car to use the original Phillips screw and screw driver in production) today the Phillips Screw Company is still leading the way to greater efficiency with the introduction of a range of new drive systems, including the MORTORQ® Super high strength internal drive. This innovative system provides the lowest head height possible while reducing overall weight. Furthermore, in transmission applications the MORTORQ® Super drive has provided unparalleled tool life, yielding a six-time increase that has resulted in fewer line stoppages for tool changes and greater productivity.

Other new innovations include Phillips' new External MORTORQ® Super bolt, originally designed for the aerospace industry, but which is quickly gaining applications in the automotive market. The reduced head height and weight of the External MORTORQ Super bolt provides superior torque transfer that is optimized in the removal direction to assure ease of service in the aftermarket (the bolt head design is also compatible common hex and bi-hex sockets) and at end of vehicle life recycling.

Benefits & Applications

In addition to manufacturing the Phillips Drive Systems at its factories in the Far East, TR's Application Engineers are working closely with its Automotive Tier 1 customers at their Design and Engineering Centres across Europe, Asia and the USA, providing technical advice and support on their use in numerous automotive applications, including car seats, cockpit modules, PowerTrain, door and instrument panels, steering systems, chassis and transmissions, as well as engines and brakes.

Chris Black, Director of Global Automotive New Business Development at TR Fastenings, comments: *"Phillips' Drive systems appeals to our customers requiring more sophisticated engineered applications. These fasteners have up to 25% less material in the head, giving it the advantage of both weight reduction and less material used - very much a value added product."*

With this broad stable of high-performance systems, Phillips Screw Company and TR Fastenings continue to provide the best solutions to automotive fastening requirements.

TR Press Release

New A4 Sealed Blind Rivet For Offshore Industry



2014



TR Fastenings Norway is uniquely placed both geographically and as part of the TR Group, one of the leading global manufacturers and suppliers of industrial fastenings and fixings, to serve the thriving offshore industry in Europe and Scandinavia.

Having recently undergone a major strategic restructure, the company has made the decision to focus on sourcing and supplying this thriving sector, enabling customers to benefit from both TR Norway's dedicated and technically skilled staff, who have a combined total of over 40 years' experience in the industry, as well as the firm's extensive international resources and manufacturing operations.

'Fasteners Fast' from leading offshore components specialist

TR is able to offer customers in the offshore sector a wide variety of both standard and special fasteners, all from approved vendors, quality assured and comply with the required legislation. TR's newest addition to its portfolio is a stainless steel A4 sealed blind rivet, which is highly corrosive resistant and so ideal for sheet metal work used in offshore industries.

TR Fastenings's range of offshore components are available in a wide range of exotic materials, including super duplex, titanium alloys and cupro nickels, as well as various platings, such as chrome, phosphate, powder coat, nickel and xylan. They are typically used in a number of applications, from cranes and rigs, to drill plugs and subsea applications. Furthermore, TR's convenient local presence enables it to offer a fast delivery, typically next day, the option of Direct Line Feed, plus 24 hour technical support.

TR Fastenings' Norway office spearheads the offshore offering of the TR Group's worldwide, which also includes TR Fastenings in Scotland which supports offshore in the North Shore's UK territories and also TR Southern Fasteners in Ireland, which can serve customers in their region.

Contact the team today - offshore@trfastenings.com

TR Press Release

Organic Black Coating Now Available from TR Fastenings



2014



Ideal for Marine, Audio and Industrial Applications

TR Fastenings is delighted to announce that it is now able to offer a unique superior black organic finish to all its metal fasteners. This UV-resistant coating delivers a high level of corrosion resistance, no hydrogen embrittlement issues and can be applied over most metallic materials as well as over zinc plating/phosphating or mechanical plating to form a black, decorative finish that can withstand up to 240+ hours of salt spray.

Typical applications include hardware, automotive components, springs, clips and rivets –wherever fasteners are on show and need to be both cosmetically outstanding and of the highest quality. Customers who have already requested this finish from TR Fastenings include the luxury marine brand, Sunseeker

2014



Where once it was believed that design would always be predicated on the need to take things apart and repair or recycle them, the fact is that the opposite has increasingly become true. Electronic devices, in particular, have seen a fundamental shift whereby disposability is increasingly considered the norm – even in expensive devices.

Due to their inherent cost, these devices have always been constructed in a way that they could be disassembled for repair should they go wrong. We are familiar with sending these devices to an authorised repairer who would disassemble and replace the faulty component, reassemble, test and return.

According to Dr David Quinn, European R&D director for PennEngineering: “Unbeknown to the consumer, there has been a growing trend over the years that many of the sub-assemblies are being manufactured with a higher propensity for disposal rather than repair. Additionally, the current quality of these components brings increased dependability, making failure during the product’s useful life unlikely.”

One key element in this change has been the elimination of the need for threaded screws to hold things together. Using traditional fasteners in modern plastic or non-ductile materials involves costs for inserts as well as screws. There are also risks of increased production costs through cross threading, over and under tightening, vibration loosening and others.

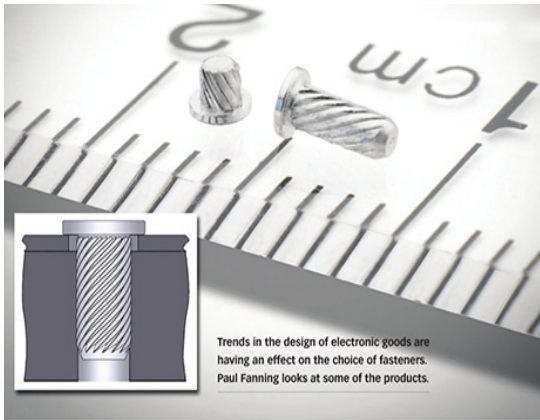
Some manufacturers have considered other approaches, including the use of adhesives or the use of rivets instead of screws. In the case of adhesives, they require time to cure, may be affected by temperature and are only useful when using similar types of material and low loads. In the case of rivets, they share some of the same quality issues as threaded fasteners in relationship to the security of the joint, but also suffer from a negative visual impact on the consumer.

In more recent years, there has been a further shift towards making complete devices with no serviceable parts, in addition to the constant drive for smaller, lighter and thinner devices.

Some examples of the technology that we are seeing come to market are wireless broadband dongles, credit card reader attachments for smartphones or medical infusion devices.

What this has meant is a need for fasteners in the global electronics industries that reflect these trend. Says

2014



Dr Quinn: *"It became apparent that there was a new need in the global electronics industry for a fastener that had the cost-effectiveness and simplicity of a rivet, yet displayed the precision, dependability and quality of a threaded fastener in a product that needed little real-estate or protruded substantially. Because of the nature of material used in electronics, this new type of fastener required the ability to bond different materials – metals, die-cast materials, and non-conductive plastics."*

With these requirements in mind, PennEngineering devised a solution to the problem by developing two ranges of non-threaded fasteners to join the existing microPEM range: the TackPin and the Tacksert.

A Type T microPEM TackPin fastener is installed by first preparing properly sized mounting holes in the sheet to be attached and the base panel. After inserting the fastener into these holes, the fastener is pressed into place. The fastener clinches into the base panel and the fastener's head subsequently holds the top sheet as thin as 0.2mm/0.008" firmly and permanently in place. The base panel can be as hard as HRB 45 or less on the Rockwell "B" scale and should be at least 0.89mm in thickness for blind holes or 0.5mm in thickness for thru holes. Upon installation, loosening due to vibration or other factors is not a concern.

During the process, the fastener's tapered tip assists in location, an interference fit eliminates hole-tolerance issues, and the self-clinching action results in full 360° metal contact. The fasteners can be installed automatically for high-volume applications.

In addition to the TackPin range, TackSert fasteners can be used to attach a top panel of any material as thin as 0.2mm / .008" to a base panel or chassis manufactured from common magnesium die-cast materials such as AZ91D or plastics such as ABS. They have a unique diagonal knurl which effectively holds the top panel to a base panel or chassis by broaching into the base panel/chassis using a simple press-in action, without the use of heat or ultrasonics.

TackSert pins are quick and easy to install using pre-prepared and properly sized mounting holes in the top sheet and base panel. Operatives or machines place the pin through the hole in the top sheet and into the mounting hole of the base panel; sufficient squeezing force is then applied using punch and anvil until the head of the pin contacts the top sheet. During the process, the fastener's tapered tip assists in location and a firm interference fit eliminates hole-tolerance issues.

Designers can specify TackSert fasteners as either a Type TK4 Series stainless steel pin for broaching into castings and similar materials or a Type TKA aluminium pin for broaching into plastic applications.

Also designed for the electronics industry, TR Fastenings' plastic fasteners and fixings range for Printed Circuit Board (PCB) hardware and Cable Management requirements. Plastic fasteners and fixings are set to be a core part of TR's expansive product portfolio, with a comprehensive range available, on demand and competitively priced.

Manufactured in high-performance and incredibly versatile Nylon 6 and Nylon 6/6, TR Fastenings' new PCB range includes circuit board hardware, rivets, screws, Cable Management and Wiring Accessories. Combining functionality and reliability without compromising on quality, these plastic fasteners feature extensive benefits, which can assist in efficiency and productivity of production processes.

TR Press Release

Taiwan environmental clampdown impacting zinc plated fastener supply and prices



2014



Earlier this month a member alerted BAFD to reports from Taiwanese suppliers on this issue. BAFD followed up with the Taiwan Fastener Traders Association and other contacts in Taiwan to obtain the following information.

The Taiwanese government has radically tightened controls over the discharge of waste effluent into water courses following a series of incidences late in 2013. These included discharges of heavy metal contaminants into the Houjin River by a Kaohsiung semiconductor engineering plant, leading to the indictment of several senior executives under environmental laws. In December an electroplating plant was also identified as polluting the same water course at levels 100 times higher than the semiconductor plant. In the north of Taiwan electroplating plants were also prosecuted and it is understood executives from at least ten companies have been charged.

On 14 March an Environment Committee in the Taiwan Legislature agreed to increase maximum fines for illegal discharge more than thirty-fold to about GBP 395,000 and increase potential prison sentences for management from 3 to 7 years. Proposed legislation will also require repayment of financial gains from illegal pollution and introduce a whistleblower clause to encourage reporting.

As a result of the clampdown electroplating plants have closed throughout Taiwan, with some fastener suppliers suggesting 80% of plants are currently unavailable to process fasteners. The inevitable short term result is substantial increases in lead times for plated fasteners - estimates vary between 30 and 60 days currently - and plating costs increased by, reports say, typically 30%.

BAFD has been told that plating companies are urgently effecting upgrades to their pollution control and seeking to reapply for environmental licences but it is likely to be 2-3 months before the issue is settled.



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