

2024

Press Pack

Our fasteners enable innovation today to build a better tomorrow





Developing a sustainable fastener solution - Lighting Cluster

By Glenda Roberts - TR Fastenings



We are experiencing changes in thinking from our customer base around the conventional use of fasteners. The recent legislation “The Right to Repair” is having an impact where designers are having to consider returning to fasteners rather than welding products, or having fixings that are permanent.

Instead, there is an opportunity to use thread forming fasteners with additional head features to ensure that they provide the clamp load required and in vibratory situations. This allows for disassembly and ultimately will ensure fewer domestic appliance end up in landfill and because of this legislation there is a real environmental benefit.

[Watch the Right to Repair Video](#)

Following on from the success we had with the innovative EPW screw for thin sheet metal applications we continue to seek out other products where we can resolve industry application issues. We were proud to be given the Innovation Award for the EPW fastener at the previous Stuttgart Fastener Show. This was originally designed for domestic appliances application but is now morphing into a product used in automotive applications, in particular in Electric Vehicles.

Sealing fastener

Automotive lighting clusters fixings have not changed very much over the years. One problem that persists is ensuring that there is no water

ingress into the assembly requiring a fastener with a neoprene sealing washer. This usually involves the fastener having a neoprene washer placed under the head of the screw and that inevitably deteriorates over time leading to leakage. There can also be clamp load issues.

Working in collaboration with a Tier1 automotive customer, we took on the challenge of developing a one-piece part fastener which should eliminate water ingress and providing the required clamp load. Our Technical Team in TR VIC in Italy took an alternative concept culminating in a screw with a unique under the head feature that has now been patented. This part has subsequently been tested and has been signed off by the customer. This is a unique product and improves conventional sealing technology. So, what were the benefits to both companies.

- It is now a one-piece fastener not two.
- We produce c60million of these a year, eliminating the need for the same number of washers. Neoprene is generally not recyclable when integrated into an assembled product.
- Production is faster as we do not have to assemble the washer.
- And as a result, there is a cost benefit to both parties, and other Customers are keen to pursue this patented design

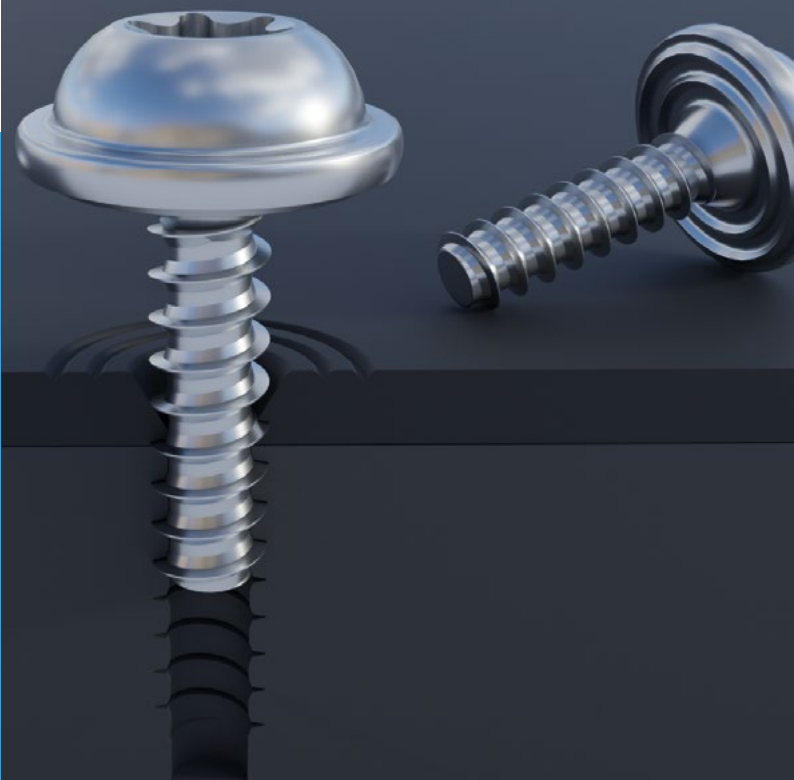
There will be other sectors where this unique sealing screw technology can be applied.





Developing a sustainable fastener solution - Lighting Cluster

By Glenda Robers - TR Fastenings



Together with our application and design engineers we are constantly seeking out areas where we can assist in improving a product suggesting alternatives and having the capability to manufacture prototypes in our own 7 manufacturing sites is a real winning combination. Our hybrid strategy of being both a distributor and a manufacturer enables us to reach a wider customer base and utilise our in-house capabilities.

We are adding new products to our website constantly. In recent months we have added over 3,000 parts to our plastic and cable management range. These include push and drive fastener, screw rivets, panel fasteners and an expanded range of PCB fixings. We will shortly be adding a new range of thread forming screws that meet some of the exacting requirements for robotic and high-volume manufacturing into plastics.

The knowledge base pages on the TR website are used extensively by customers engineers seeking dimensional data and product information. In addition to these, engineers and designers can choose the product that they are interested in and download a dimensioned drawing. In many cases there is a product animation that illustrates how the product performs. This is a great training tool and can be used across disciplines from purchasing and sourcing teams, or to be assist for assemblers.

Sven Brehler - TR Group Engineering Director explains that “We really see our USP as solution providers and actively welcome opportunities to

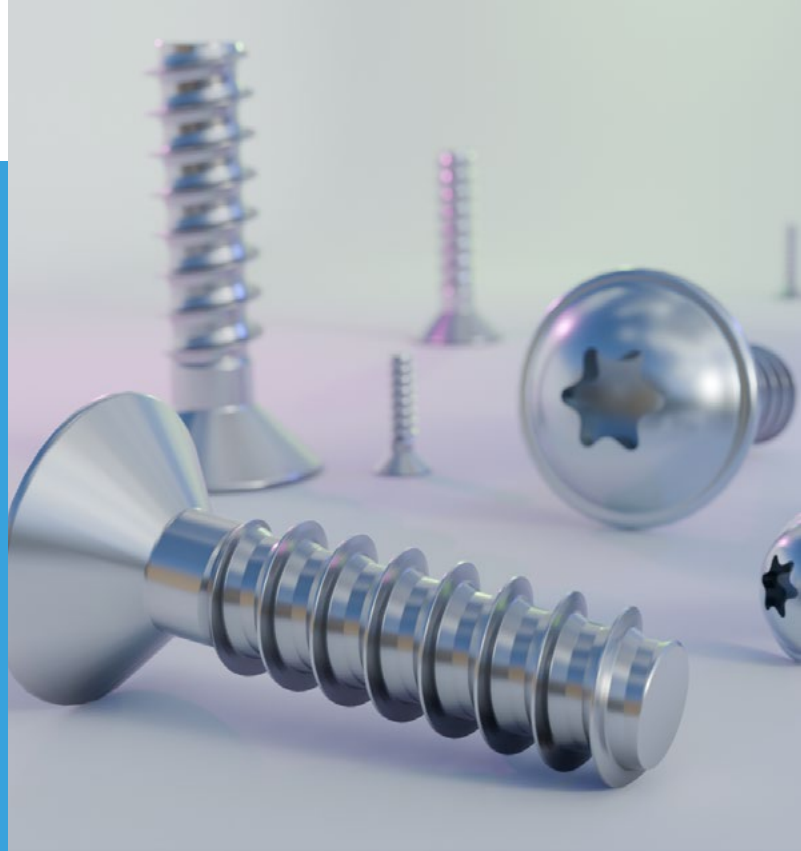
be involved at the inception of product design or in solving technical problems.”





TR Fastenings launch new Plas-Tech 30-20® screws to product range

TR Fastenings



Technological advances have become ever more crucial as manufacturing firms in all sectors of industry strive for commercial success, and key to that success for TR Fastenings is the need for superior performance fastenings. The efficient and effective operations of everything from automotive applications, domestic appliances to industrial machinery will inevitably depend on the need for reliable screws, bolts, washers, clips and more.

TR's latest product launch of the new Plas-Tech 30-20® screws is another indicator of the company's determination to increase its range that is currently available in the market, to give their customers yet more advantages in their production processes.

Manufactured in TR's own facilities, the Plas-Tech 30-20® has been developed by TR's in-house technical engineering teams across global locations to complement the existing Plas-Tech® range. This new product has an optimised thread profile which gives an advanced performance in a wide variety of plastic materials to meet customer requirements.

An important addition to an already successful product range

Plas-Tech 30-20® screws are new to the market, but are part of the company's established and popular [Plas-Tech® range](#), and are available with various protective coatings. They are of particular importance in the automotive, tech & infrastructure and health & home markets.

The Plas-Tech 30-20® has been specially developed to offer several advantages

over conventional thread-forming screws in plastic, such as:

- A 20% finer pitch and lower flank angle to improve axial resistance.
- A reduced thread angle to lessen axial displacement.
- Up to 25% higher thread fill to improve maximum joint strength.
- A smoother installation that heightens resistance to vibration.

Key features of the Plas-Tech 30-20® include:

- **Minimal radial stress:** the faceted thread profile directs material flow to reduce radial stress.
- **Superior vibration resistance:** the full engagement of the self-locking, angled thread design avoids loosening.
- **High torsional strength and tensile strength:** a large core thread profile provides high strength.
- **Optimal thread pitch:** ensuring fastener engagement with a minimum number of rotations, keeping installation times to a minimum.
- **High reusability:** the fastener can be removed and re-installed a number of times.

Various options for the customer to select from

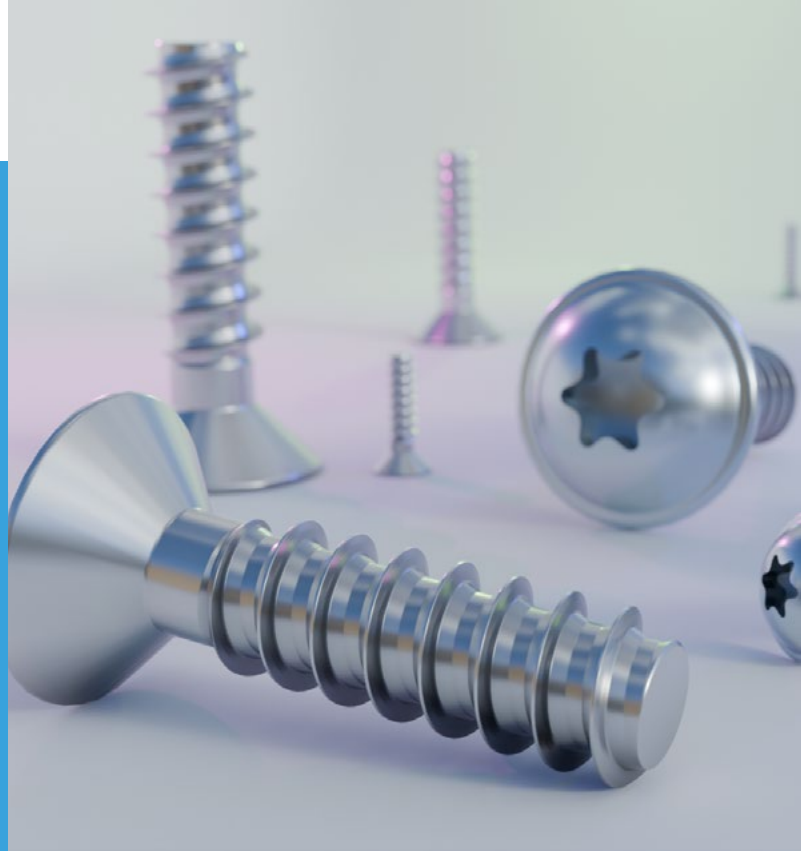
The Plas-Tech 30-20® screw range includes pan head, flange head and countersunk head varieties,





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enabling TR customers to choose the ideal option for each application. Thread diameters are 3mm, 4mm, 5mm and 6mm, and available lengths range from 6mm to 30mm. The innovative design allows for the screw threads to displace the surrounding plastic, in the process strengthening the fix. And as always, TR Fastenings can provide bespoke engineered products and a diverse selection of related components as well.

The screws can be installed with a calibrated pneumatic or electric driver and are particularly suited to robotic assembly processes. With standard drivers, installation is quick and stress-free, and thanks to their sturdy construction, Plas-Tech 30-20® screws can be reused many times over.

TR's technical resources

Product engineers who are keen to find out more about their usage can obtain all the information they need via TR's excellent [Installation guide](#) and [Product Animation](#).





TR Fastenings are exhibiting at Electronics Live

Visit us
on stand
12



TR Fastenings, part of the Trifast group of companies is excited to be taking the opportunity to be exhibiting in this brand new Electronics Live event.

Electronics Live serves as a dedicated platform specifically designed to showcase the latest technology in the electronic components supply chain. This focused approach ensures that both exhibitors, like TR Fastenings, and attendees benefit from the unique opportunity to see all of the market leaders and innovations under one roof.

Come and meet the team at Stand 12 on the 17th January 2024 at the National Conference Centre, Birmingham. Sven Brehler, Director of Engineering, and Liam Cullen, Business Development Manager, will be available to discuss TR Fastenings' latest technology. Visitors can benefit from direct insights, technical expertise, and discussions about the cutting-edge products and solutions that TR Fastenings has to offer in the electronic components supply chain.

We look forward to seeing you on 17th January.

[Electronics Live 2024](#)



Event to open up the EV sector for businesses in North East England

By Horizon Works



Businesses who want to power ahead in the electric vehicle (EV) sector will be attending a special event this month, where they'll be gaining up to the minute insight and guidance from automotive industry experts.

The Vehicle Electrification Opportunity will be hosted by B2B marketing company Horizon Works on January 31 at its headquarters on Northumberland Business Park, near Cramlington, Northumberland.

Delivered in association with the North East Automotive Alliance (NEAA), the UK's largest automotive cluster, the event will shine a spotlight on how North East England's supply chain can support and accelerate the transition to zero emission mobility.

Paul Butler, CEO of the NEAA and Christopher Appleby, Innovation Manager at the NEAA, will be providing the latest insight into the national and local EV landscape, including EV36Zero and off-highway, and will discuss North East EV supply chain needs and future demand.

In addition, delegates will learn what support is available for SMEs who want to diversify into the EV sector.

Christopher Black, Global Director Automotive Business Development and Sven Brehler, Director of Engineering at industrial fastenings specialist TR Fastenings, will also be presenting at the event: they will be sharing TR Fastenings' experiences of working with the EV sector and engaging with OEMs and the supply chain.

TR Fastenings (TR) is part of Trifast plc and is an international specialist in the design,

engineering, manufacture and distribution of industrial fastenings and Category 'C' components, principally to major global assembly industries.

The presentations will be followed by a panel session and Q and A, and the event will also include lunch and networking. It is free to attend for North East England-based engineering and manufacturing companies and is open to both members and non-members of the NEAA.

The Vehicle Electrification Opportunity is the third event in Horizon Works' Opportunities Series, a programme of workshops and seminars for manufacturing and engineering businesses. Run in conjunction with industry partners, the events highlight regional and national opportunities for engineering and manufacturing companies. Previous events held at Horizon Works' event space have featured speakers from Advance Northumberland and Make UK Defence.

Horizon Works has been an NEAA member since its inception and has worked in close partnership with the organisation on a number of workshops and webinars.

Paul Butler, CEO of the NEAA, said: "The North East is the UK's leading region for vehicle electrification. It is home to the Nissan Leaf, one of the world's most successful electric vehicles, Europe's first ever giga factory, and has the full complement of Power Electronics Machines & Drives (PEMD) - one of only a handful of regions globally.

"The recent announcement from Nissan and partners to invest £3 billion and to be 100% electric by 2030 with the commitment to build the next generation Leaf, Juke and Qashqai, as well as a third giga factory, makes the North East a globally significant hub for the automotive sector."





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Samantha Vassallo, Managing Director of Horizon Works, said: “The EV sector is intertwined with the industrial future of North East England, so it is vital that engineering and manufacturing businesses understand the opportunities it offers, and how they can engage with key players.

“We’re therefore delighted that the NEAA and TR Fastenings will be sharing their insight, guidance and expertise at The Vehicle Electrification Opportunity event, and we look forward to welcoming business from across the region to our event space on 31 January.”

Horizon Works, which was founded in 2010, works with ambitious and fast growing innovation and technology led manufacturing and engineering businesses that are creating solutions of worldwide importance. It offers a wide range of integrated marketing services including strategy, PR, design, digital and animation, and supports regional, national and global organisations.

Established in 2015, the NEAA is a not-for-profit, industry-led, automotive cluster and supports the economic sustainable growth and competitiveness of the sector. Today, it is the largest automotive cluster in the UK and provides an unparalleled collaborative network where companies gain from leadership and co-ordination of activities of mutual benefit.

For more information visit [The Vehicle Electrification Event](#).





Vehicle Electrification Opportunity event opens up new horizons

By Horizon Works



Businesses from across the engineering and manufacturing sector gained a deep insight into the electric vehicle landscape, its future and its challenges, at an event in Northumberland last week.

The Vehicle Electrification Opportunity was delivered by B2B marketing company Horizon Works at its Event Space at Northumberland Business Park near Cramlington on January 31, and was run in association with the North East Automotive Alliance (NEAA), the largest automotive cluster in the UK.

By 2030, 80% of new cars and 70% of new vans sold in Great Britain must be zero-emission vehicles, increasing to 100% by 2035, creating a major opportunity for engineering and manufacturing companies to support electric vehicle production and infrastructure.

In addition, with the EU and UK recently signing off extending current battery and electric vehicle rules of origin under the Trade and Cooperation Agreement, major investments in battery production can now progress, and partnerships will be enabled between UK companies and EU manufacturers on new battery technologies.

The Vehicle Electrification Opportunity saw experts and delegates from a range of companies come together to discuss the EV sector, the strength of North East England in vehicle electrification, and how companies in the region can be part of the EV supply chain.

Guest speaker Paul Butler, Chief Executive of the NEAA, highlighted the '£24 billion UK electrification opportunity' and the importance of North East England's position as a leading location as a cluster for zero carbon vehicles in Europe.

Nissan is investing up to £3 billion in the building of three electric car models at its Sunderland factory – the electric Qashqai and Juke models will be built alongside the next generation of the electric Leaf.

In addition, Washington is home to the first battery manufacturing gigafactory in the UK – AESC UK – and the region is home to six OEMs, 21 R&D centres, 34 tier-one companies and more than 200 supply chain companies.

North East England is also the only region in the UK with full Power Electronics, Machines and Drives (PEMD) capabilities – and it is one of only three in the world.

Paul Butler highlighted the strength of support available for vehicle electrification in North East England, through organisations such as the NEAA, EV North - which encourages collaborative R, D & I projects to leverage public and private sector investment - and the North East Battery Alliance.

Paul was joined by Christopher Appleby, Innovation Manager at the NEAA, who focused on the likely EV supply chain opportunities for North East-based businesses – including the manufacture of housings and enclosures to protect battery packs and electric drive components, high precision fastening and mounting systems, cooling systems, connectors and cabling. He urged businesses to push their existing specialities to support the EV industry.

Christopher Black, Global Director Automotive Business Development and Sven Brehler, Director of Engineering at industrial fastenings specialist TR Fastenings, also presented at The Vehicle Electrification Opportunity.





Vehicle Electrification Opportunity event opens up new horizons

By Horizon Works



They revealed how TR Fastenings has evolved to support the EV sector, and providing guidance to suppliers on collaboration, building partnerships and product design processes.

The event's Q and A session discussed issues including the impact of geopolitical shocks on the EV supply chain, the need for additional capacity in the National Grid to support EV charging, emerging battery technologies, skills and EV charging infrastructure.

Paul Butler, Chief Executive of the North East Automotive Alliance, said: "Recent investment totalling over £3 billion has cemented the North East's reputation as being the leading region in the UK, if not Europe, for vehicle electrification.

"I'd like to say a big thank you to Horizon Works for providing this platform to bring North East businesses together to discuss the importance of electrification and its associated supply chain opportunities.

"It was great to be able to collectively discuss what we need to do as a sector to facilitate these opportunities and address the challenges and barriers."

Christopher Black, Global Director Automotive Business Development at TR Fastenings, added: "Networking events such as these are vital for the supply chain in the emerging and developing electric vehicle sector, to establish technical support with the design and supply of fastening solutions to OEMs and their tiers 1 and 2."

Samantha Vassallo, Managing Director of Horizon Works, said: "Technology, investment and innovation around EV is shaping the industrial future of both North East England and the UK as a whole.

"We were therefore delighted that the North East Automotive Alliance and TR Fastenings were able to share their experiences and expertise with delegates at The Vehicle Electrification Opportunity.

"Attendees left the event with both practical advice on working with the EV sector, and a picture of what the future looks like, thanks to the speakers' invaluable insights.

"As a member of the North East Automotive Alliance since its inception, we were proud to run this event with the NEAA team, and look forward to many more Opportunities Series events with industry partners in 2024."

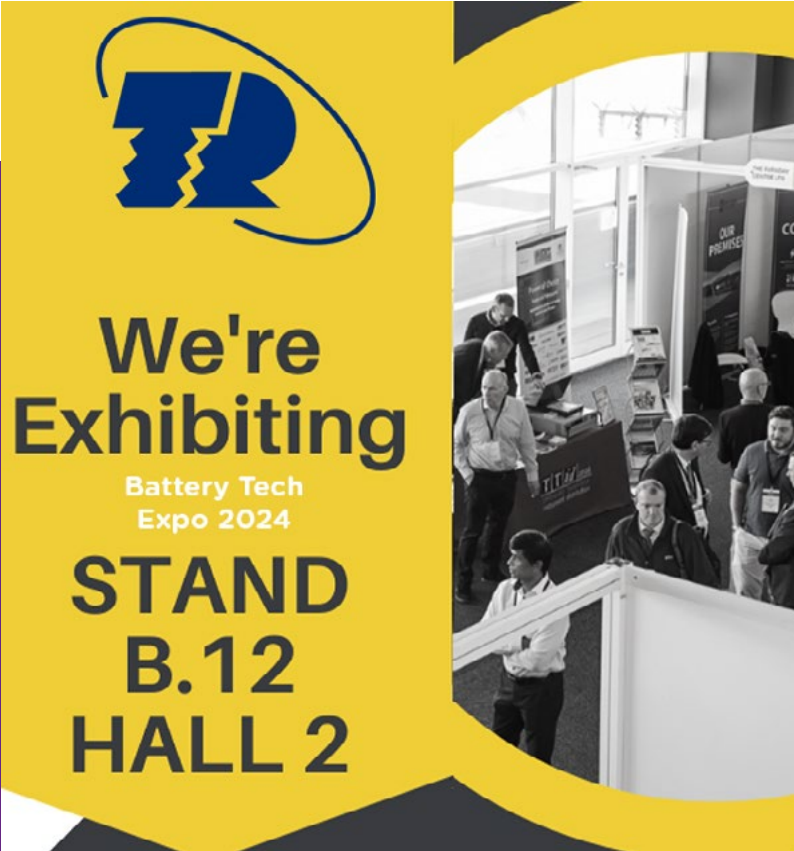
The event was the third in Horizon Works' Opportunities Series events programme.

Through the programme, Horizon Works is collaborating with industry partners to highlight opportunities for engineering and manufacturing businesses, provide fresh insight and help companies to build new relationships. Previous events have included speakers from Make UK Defence and Advance Northumberland.





TR Fastenings to showcase its expertise in the EV market at Battery Tech Expo 2024



TR Fastenings Ltd (TR), part of the Trifast plc group of companies, is exhibiting at Battery Tech Expo – the UK’s largest technical expo dedicated to the battery industry. The event welcomes hundreds of senior decision makers and users from across the power industry who all share a professional interest in advanced battery technology and energy storage.

For the seventh year, the event will once again be held at the world-famous Grand Prix venue, Silverstone, a leading hub of the high-tech engineering sector.

The roles of fasteners and engineered components within Electric Vehicles has increased significantly year on year as the industry advances at pace. It is timely, therefore, that TR Fastenings is able to showcase its expertise and extensive product range designed for the EV and EVCU markets, this includes products such as battery retention bolts, cable management hardware, compression limiters and designed in special components.

Sven Brehler, Director of Engineering, says: “We’ve been supplying key components for the EV market for many years, and have expanded our product range to meet the huge demand from car and battery manufacturers around the world. The sector continues to surge forwards and we’re pleased to be able to support the growth of our customers along the way. This Expo is really great for TR as it gives us the opportunity to meet with so many professionals across the battery technology sector.”

Joining Sven at the event will be Dan Pereira, Engineering Manager UK & Ireland and Liam Cullen, Business Development Manager.





台灣國際扣件展
Fastener Taiwan

JUNE 5-7, 2024

TR Special Fasteners Engineering to exhibit at the Taiwan International Fastener Show 2024

By TR Fastenings

Taiwan International Fastener Show 2024

Booth No. N2228, KEC Kaoshung Exhibition Center, Taiwan, 5-7 June 2024

TR Special Fasteners Engineering (TR SFE), part of the Trifast plc group of companies, will be exhibiting at the Taiwan International Fastener Show in June this year. Attracting 20,000 domestic and foreign visitors across three days, this event is an important trading platform for sourcing and procurement and is Taiwan's only international B2B fastener trade fair. As a respected supplier to global distributors and manufacturers, TR SFE is delighted to be represented at the show.

First established in 2010, the [Taiwan International Fastener Show](#) is organised by the Taiwan External Trade Development Council and is the world's third largest fastener exhibition, providing 300+ exhibitors and 1000+ booths across three key exhibition areas:

- Materials, Moulds & Tools (new area)
- Nuts, Bolts & Screws
- Machinery & Manufacturing

TR SFE has two manufacturing facilities in Taiwan specialising in cold forming (including 6 die multi station) and thread and profile rolling, making and supplying products mainly to the Automotive, Energy, Tech & Infrastructure (ET&I), and General Industrial markets.

At the show, the TR team will be showcasing the newly launched [Plas-Tech 30-20®](#) screws, the latest

addition to the Plas-Tech® range. Manufactured in TR's own facilities, these new products have been developed by TR's in-house technical engineering teams across global locations to complement the existing Plas-Tech® range. They provide an optimised thread profile to perform more effectively with plastic materials, which is increasingly important as we look to the future, and is sure to be a talking point at the Taiwan International Fastener Show this year.