



## TR PRESS PACK Product News

**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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October 2019



The vital role played by enclosure and locking hardware within the rail sector cannot be overemphasised when it comes to the protection and continuity of equipment, signalling and controls, as well as the locking systems used on board trains.

Not only does this hardware ensure that such essential equipment and systems – from trackside cabinets to signalling panels – are kept secure at all times; it also shields them from hazardous environments, corrosion and extreme weather.

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### Rail: the digital revolution

Against this backdrop comes a new era of digitalisation, which is set to transform the rail industry.

With massive investment already made in such projects as the £7 billion Government-sponsored Thames Link and 117-kilometre Crossrail (excessive and extremely costly delays notwithstanding), the challenge the industry faces is that this massive investment must be matched by the hardware supplied to support these initiatives, in terms of their sophistication, reliability and low cost of maintenance.

Digitalisation may well be the proving ground for a new way of interacting with suppliers, aptly exemplified by the first implementation of digital interlocking technology on a UK passenger-carrying line in June this year, which involved new technologies, software systems and working methods being specifically developed, tested and coming together at the same time. The control system covers a short section of line between Fulwell and Strawberry Hill in southwest London and forms the first stage of Network Rail's Feltham area re-signalling project.

Undoubtedly, digital transformation in the railway sector over recent years has been accelerated by the emergence of the Internet of Things (IoT), cloud computing, Big Data Analytics (BDA), automation and robotics, as well as Industry 4, and, more recently, Railway 4.0 and Digital Railway. They have become the gauntlet that digitalisation has thrown down, reflecting the technological advancements fast becoming accessible to the rail sector – the latest embodiment of a long tradition of development and change in the industry.

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### Enclosure hardware: safe and secure

The role played by enclosures in the sector largely remains the same: to house and protect crucial equipment.

However, as the technology changes and the equipment becomes arguable more sophisticated and complex, the need to ensure the enclosures are robust and secure becomes greater.

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In addition, enclosure hardware such as locks, hinges, handles and gaskets can also be used actually on board trains: on door locking systems, secure control panels and on passenger furniture such as tables and seats. Keeping the trains themselves and their passengers safe is as vital as safely housing the equipment and systems which help to keep the trains running.

### Extensive product range

As a recognised specialist in the design, engineering, manufacture and distribution of a wide range of high-quality industrial fastenings and assembly products for the rail sector, our expertise on enclosure and locking hardware – from control and power cabinets to door locking systems and secure panels – has positioned us at the leading edge of global supply.

Certainly, the solutions required for a rapidly modernising, increasingly digitalised rail sector are embedded in our extensive enclosure hardware range, including:

- Secure door locking systems
- Locking systems and hinges on trackside and roadside cabinets and storage units
- Locks and hinges on access panels
- Locks, hinges and gaskets on control panels
- Compression locks for vibration reduction
- Housing for the protection of vital railway equipment
- Infrastructure for rail applications – eg, signalling
- On-board applications.

We are living in a world where real-time tracking and tracing systems for trains and freight cars, along with the use of drones to monitor trains and ensure the safety of cargo, are likely to become the norm. Only those suppliers who move at the same speed in support of a digitalised rail sector will ensure they are not left behind on the platform.

Click [here](#) to learn more about the TR Fastenings enclosure hardware range and how it is used in the transport sector.

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The HVAC industry is a wide-ranging sector, involving a multitude of equipment and operations that vary from tiny components to vast refrigeration units and heat treatment centres. On an industrial level, the need to house and protect all of this hardware and electronics is therefore significant and varied.

Enclosure units must be able to withstand a number of different conditions, settings and environments and provide different levels of security and protection: all vital for the equipment inside.

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### **Hazardous environments**

The electronics and systems at play in this sector are often sensitive and fragile, so careful consideration is needed to determine how they are stored, accessed and maintained.

Many HVAC systems are located in hazardous environments and require specialist enclosure features such as secure locks and robust materials. Conditions such as extreme temperatures, both internal and external, call for specialist measures and protection from corrosive atmospheres and chemicals is, in some cases, essential.

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### **Withstanding the heat**

One such consideration is how to protect components and hardware from extreme heat.

Some electronics and controls are so sensitive to heat that a difference of just 10°C can mean the difference between systems safety and systems failure. For every 10° rise, the lifespan of these components can be cut in half, or worse.

Enclosure hardware becomes a factor to ensure that these units are secure and robust, protecting contents from outside conditions yet providing access where necessary in case of the need for maintenance or repair, for example. Secure locking systems and added features such as inspection windows so contents can be viewed without units being opened can be vital in this industry.

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### Keeping things cool

Of course, HVAC includes cooling as well as heating.

Many HVAC systems are located in hazardous environments and require specialist enclosure features such as secure locks and robust materials. Conditions such as extreme temperatures, both internal and external, call for specialist measures and protection from corrosive atmospheres and chemicals is, in some cases, essential.

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### Full range of solutions

Our Enclosure hardware products are ideal for HVAC settings, due to the variety of components and solutions on offer: ranging from control panel features to two or three point locking systems and secure latches. We understand the difference in requirements across the industry and have a solution fit for every situation.

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Click [here](#) to learn more about the TR Fastenings enclosure hardware range and how it is used in the HVAC sector.

October 2019



The demand for enclosures and data centre racks is on the increase, thanks to rapidly expanding infrastructure around IT and Telecoms systems.

In July, O2 became the UK's last mobile network to announce its forthcoming rollout of 5G technology, which will expand to 50 towns and cities across the country by summer 2020. 5G technology will not only enable faster mobile phones and improved network connections, but will also facilitate and support advanced 'smart' technology in homes, workplaces and public places. Enabling more than one connection at once, 5G will allow devices and networks to talk to each other, supporting the Internet of Things (IoT) and smart systems in all aspects of our lives.

As this sophisticated technology is developed and 5G capabilities become more widely rolled out, there is a need for larger and more complex storage and enclosure solutions to house the equipment and components involved.

As the telecoms systems become more advanced, more data is generated and stored, hence the requirement for more data centres and storage units. Keeping this data and the equipment facilitating it secure is also paramount. Enclosures must not only be robust and large enough to house the systems within, but must be equipped with the right locks, opening mechanisms and precautions to prevent damage, tampering and potential theft.

Using a range of hardware options, such as multiple locking points and sophisticated locking systems is the best way of ensuring that the enclosure's contents are secure. The location of each enclosure also needs to be considered. Many Telecoms units will be stored inside, but roadside and outside cabinets are also widely used, so it's vital that materials and mechanisms are used that can withstand and protect contents from harsh conditions or severe weather.

Telecoms equipment includes a great deal of electronics and fragile components such as cables, switches, modems, routers and wires. These items must be protected from dangerous substances and environments, whether they are located indoors or outdoors, to avoid damage from factors such as:

- Adverse weather conditions such as wind, rain and ice
- Moisture and corrosion
- Dust and particulates
- Electromagnetic Compatibility (EMC)
- High temperatures and fire risk

# TR Press Release

## How the enclosure market is growing thanks to Telecoms and 5G



September 2019



In order to withstand these conditions, Telecoms cabinets are often made from robust materials such as galvanised or powder coated steel and stainless steel components.

As 5G and other industry developments continue to gather pace, it's crucial that enclosure technology keeps up with demand and provides sufficient solutions to cater for this growth. In comparison to the technology itself, cabinets and storage may seem like a small part of the wider puzzle, but the significance of housing and protecting this technology should not be underestimated.

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Click [here](#) to learn more about the TR Fastenings enclosure hardware range and how it is used in the Telecoms sector.

September 2019



Protecting equipment in hazardous environments with high quality enclosure hardware.

The energy industry covers a wide range of specific sectors, from wind and solar power to oil and gas production. Whilst these disciplines differ widely in terms of the energy they produce and the equipment they use, there are also commonalities - the most prominent of which is the fact that they often operate in extreme and even hazardous circumstances.

From off-shore environments to exposure to severe weather conditions, the teams working in these fields and the equipment they employ are consistently in need of protection from the hazards they face on a day to day basis.

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## Valuable assets

As a result of these conditions, stringent safety and process restrictions are required to protect the materials, equipment and technology utilised in these working environments.

From specialised electronics to cables, computer hardware and machinery, this equipment is often bespoke and extremely valuable and could be subject to tampering, theft, damage or even failure if not kept protected.

As a solution, robust and secure enclosure units are always a priority to house equipment on sites in these industries. Location of these enclosures is key; where equipment is stored has a large bearing on the level of protection required to keep it safe. For example, most enclosures used in wind and solar energy applications are located outside and must be able to withstand conditions such as:

- Extreme temperatures
- Excessive humidity or dryness
- Rain and moisture
- Snow and ice
- Heavy winds
- Exposure to chemicals and corrosive substances



September 2019



### Keeping enclosures secure

How an enclosure is designed and the features and hardware used to secure them is vital when considering how to protect the equipment used in these environments. Hardware such as sophisticated locking systems with either quarter or half turn mechanisms can ensure that doors are safe from tampering and forced opening.

For added security, many structures can have two or even three locking points, allowing the locking rod to run all the way from the top to the bottom of the door, thus avoiding the risk of tampering or theft which can be common where only one locking point is present.

Depending on the depth of the door return, the locking rods will need to be set at different distances, for example 20mm or 26mm. In the past, customers needed to purchase individual rod guides to cater for these different measurements.

The new rod guide from TR Fastenings seeks to eliminate this complication and avoid frustration by providing a simple solution which can be adapted for use, simply twisting the guide to adjust the distance accordingly.

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### Designing in safety

Enclosure hardware goes beyond just [locks](#) and [locking systems](#).

From [latches](#) and [hinges](#), to [clamps](#) and [gaskets](#), there are multiple components which can be customised and tailored to suit specific requirements, sizes and designs. Simply changing what side a door opens on or at what height a hinge is fitted can result in added security for the components housed within each unit.

With Oil, Gas and other Energy sector environments, the materials used in the units are of great importance, as they need to be resistant to certain conditions and corrosive substances or chemicals. By adding in the extra assurance of robust and sophisticated locking and opening hardware, these units become even more immune to the dangers faced in these industrial settings, providing even more protection for the valuable equipment they contain.

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[Click here](#) to learn more about the TR Fastenings enclosure hardware range and how it is used in the energy, oil and gas sector.

# TR Press Release

## TR Fastenings showcases specialist range of Enclosure Hardware products



September 2019



TR Fastenings (TR), the global specialist in the design, engineering, manufacture and distribution of high quality industrial fasteners, offers a broad range of enclosure hardware products for use in a number of applications in industries including [Telecoms](#), [Oil & Gas](#), [HVAC](#) and [Transport](#).

As an increasing number of industries use cabinets, secure boxes and other enclosure units to house electronics, wiring and other systems in public places, there is also a need for high quality enclosure hardware and mechanisms to be an integral part of the design.

TR's extensive range features [locks](#), [locking systems](#), [gaskets](#), [hinges](#), [latches](#), [handles](#), [clamps](#) and [terminals](#). Products in detail:

- Locking systems are used on large door spans where one handle operates multiple locking points. These systems are modular, providing flexibility for customising to different door sizes.
- Locks provide a single locking point with a variety of keys to suit the differing inserts available.
- Hinges are commonly used to connect a door to its frame or supporting object, to provide a point upon where it can rotate open and closed.
- Clamps are typically used to connect electrical conductors such as cables or terminals.
- Gaskets can be used as edge protection, or to provide a seal between 2 surfaces (such as a door and a frame), with a wide range of profile types and fixing methods depending upon the application.
- Accessories such as rod guides enable door features and locking systems to be customised and tailored to suit individual sizes, shapes and settings.

These products are used in numerous applications across various industries, including both on board and track / roadside in [rail, bus and other transport solutions](#), in cabinets housing [heating and ventilation \(HVAC\) equipment](#) and in [telecoms enclosures](#). The products can also be used in more hazardous industries and conditions, including on-and off-shore [Oil & Gas sites and Energy plants](#).

### **Additional applications of enclosure hardware include:**

- Medium Voltage Switchgear
- Data Centre & Server Rack Cabinets
- Electricity generation/transmission/transformers
- [EV Charging Units](#)

# TR Press Release

## TR Fastenings showcases specialist range of Enclosure Hardware products



September 2019



Kevin de Stadler, UK & Ireland Sales Director, TR Fastenings, comments:

*"As new technology, equipment and applications are developed throughout different industrial sectors, there is an increasing need to make sure they are kept safe, especially in settings where they may be exposed to dangers such as severe weather, corrosive atmospheres, tampering or theft. Our enclosure hardware products not only increase the safety of the contents inside an enclosure or cabinet but also improve other factors such as ease of installation and access for maintenance teams."*

# TR Press Release

## TR Fastenings showcases range of specially engineered security components



March 2019



Specialist fasteners allow customers to boost safety and security whilst not compromising on aesthetics

International specialist in the design, engineering, manufacture and distribution of high quality industrial and Cat C fasteners, TR Fastenings (TR), is proud to be able to support a wide variety of sectors with its range of specialist security fasteners, engineered to prevent theft, deter vandalism and boost health and safety.

The security fastener range complements TR's wider catalogue of industrial fastenings and can be used alongside or instead of standard parts. The security fasteners have added features to ensure that the products and their enclosed components cannot be tampered with or become loose, causing damage or injury. They also ensure that the components within the enclosed structures cannot be removed, other than by a specially trained technician with bespoke tools.

TR's range of security fasteners includes machine screws, self-tapping screws, wood screws and self-drilling screws, as well as specialist nuts and drivers. A number of different drive options are available, including pin hexagon, triangular, Kinmar®, 6 lobe pin, Sentinel®, Solok™, Scroll™, Nogo™, Tufnut®, Armour Ring™, oval, shear and more. The full range of product types and drive options can be viewed on the dedicated security fastener landing pages on the TR website.

### Design features of security fasteners include:

- Unusual shapes to prevent tampering, requiring non-standard drives such as 2-hole pig-nosed fittings
- Tapered diameters, resistant to gripping devices
- Increased frictional resistance within the bolt, limiting rotation and making it more difficult for the part to be loosened
- Aesthetic features such as shear torques and smooth finishes mean that these fasteners can be ultra-secure whilst also looking good: an important consideration when used in high-end and luxury environments
- The fastenings are used across applications where the components being protected are expensive or function-critical. This could include sophisticated technology, products in high risk environments or public property which needs to be protected from theft and tampering.

### Applications where security products are commonly used include:

- Street furniture such as park benches, traffic lights and road signage
- Transport fixtures including car seats, train carriages and underground barriers
- Public venues such as concert arenas, sports stadiums and their interiors, including seating and stages

# TR Press Release

TR Fastenings showcases range of specially engineered security components



March 2019



Paul Standing, Commercial Products Manager at TR Fastenings, comments:

*"As the world we live in continues to evolve, affecting the way we work, live and communicate, there is an increasing need to protect and secure the objects and infrastructures we create.*

*"Security now plays a vital role all the way through the engineering process, so designing in security fasteners at the beginning of the manufacturing process ensures that products and their enclosures can be protected from risk."*



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