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**SPECIALIST CONSTRUCTION  
ACCESSORY SUPPLIERS**

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# ENGINEERED SOLUTIONS FOR CONSTRUCTION

As one of the UK's leading specialist construction accessory suppliers, RFA-TECH Ltd has built up an enviable reputation for providing a wide product range together with a rapid and efficient service.

RFA-Tech is now recognised as a market leader, supplying major contractors and blue-chip companies; continual development maintains and enhances its prominent position.

Based at a manufacturing facility in Sheffield, the Company carries ISO 9001 and ISO 14001 accreditations and RFA-Tech are proud members of the 'Made in Sheffield' registered trademark group.

RFA-Tech holds Cares Technical Approval on many of its products and is also a member of CONSTRUCT, the concrete structures group.

The Company supplies an extensive range of engineered products and systems for RC frames to the biggest UK frame contractors, with a dedicated team of experienced personnel offering sales and technical support to assist in all types of projects.

As part of its continued growth and development, RFA-Tech enhanced its distribution network in May 2013 by the opening of a new depot based in Reading. This further enhances RFA-

Tech's ability to provide an efficient and reliable service into the Southern market.

It has resulted in a larger and improved warehouse facility, which will continue to make RFA-Tech more competitive.

From this facility, the Company can deliver products on the same day as they are ordered. Standard Startabox units, which are manufactured at the Sheffield facility, are stocked at Reading and are also available on a same day service.

Within RFA-Tech since its inception 30 years ago, Startabox provides a safe and cost effective method that is custom made to utilise an engineer's original reinforced detail.

Startabox consists of specially selected, high yield reinforcing steel, housed in a fully perforated and hot dip galvanised carrier unit.

Units are sealed to prevent concrete ingress, while reinforcement used is CARES Approved and cut to conform to BS8666.





The system is assembled in a BS EN ISO9001 factory environment and the full system carries a CARES Technical Approval.

Units can be used on site by nailing to formwork before a concrete pour, but alternatively they can be wire tied to the main reinforcement concrete so that after concrete is poured and formwork struck, the lid is removed to provide the connection or overlap bars.

Bars are bent out of the case to provide an overlap connection to the main reinforcing steel and next concrete pour.

Most joints in concrete, on many different types of construction site, have the potential to be formed using Startabox, which has been supplied to high rise commercial, water treatment, hospitals, prisons, Energy from Waste facilities, and many more types of site.

Typical joint applications include walls, floor slabs, corbels, stair landings, cantilever slabs, launder channels, brick support nibs, balconies, precast slab interfaces and stairway applications.

Formwork designs can be simplified and complicated construction joint designs reduced, and climbing formwork systems can be used such as Slipform and Jumpform. Formwork systems do not need to be drilled, damaged or

repaired when using the Startabox system, so can be used many times.

Simple formwork designs and larger concrete pours enable faster work and more site productivity.

Now officially compliant with the new EC2 specification, the Startabox system is aligned with the design code for RC frames.

With flat slab construction becoming increasingly popular in the construction of concrete buildings, the Sheartech product is also proving popular.

It increases speed of construction by simplifying the formwork system used and floor heights can be reduced, offering greater space within the building and leading to more floors for a given building height.

Flat slab design brings many benefits, however, localised high shear stresses around column heads can be seen in these designs and if additional measures are not taken, the weight of the slab can result in the column punching through the slab.

In the past, punching shear has been relieved by adding further concrete to the building, such as the use of downstand beams or localised thickening around column heads; however these

measures require complex formwork and significantly reduce the benefits of the flat slab.

Adding further reinforcement in the form of loose shear links around column heads has been used as a measure to resist punching shear, but these links are time consuming and labour-intensive to install and design.

RFA's collaboration with a leading engineering software company has seen the creation of a web-based punching shear reinforcement design application that can be used by structural engineers to perform punching shear designs.

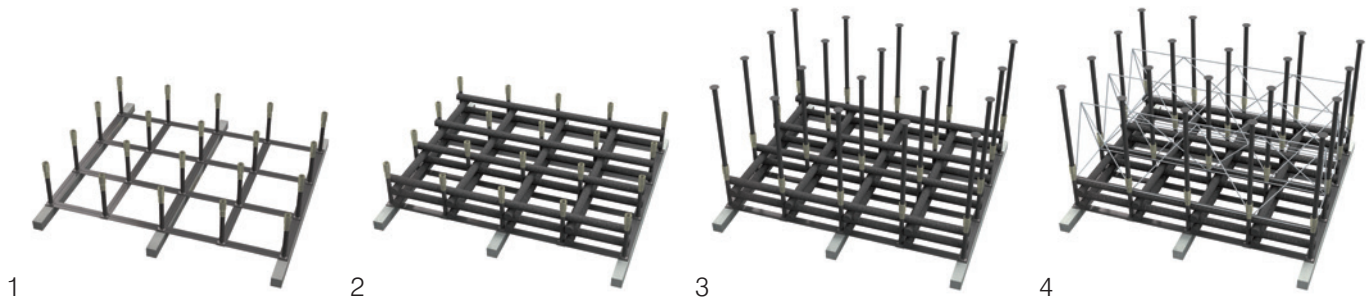
This software is the product of changes in the market where more mainstream contractors are seeing the benefits of using shear rail over traditional shear links.

Rather than an overly technical approach to calculations, RFA-Tech's approach is simple, consisting of a tick box and numbers entry design to give a much more user-friendly interface. This is accessible to anyone involved in a project.

It also means a registered user can access the software from any machine without worrying about installing software.

Sheartech offers a CARES Approved method of providing punching shear reinforcement, is fast to install with all component parts fabricated to allow simple and accurate placement.

The Company has recently secured a partnership with Erico to exclusively manufacture their friction welded Form Saver coupler system.



## SHEARTECH GRID®

Manufactured by RFA-Tech, the Sheartech Grid is designed to replace the traditional shear link reinforcement in deep slabs. The Sheartech Grid is a formation of component shear studs made using B500c reinforcing steel. Formed by hot forging, the shear heads are in line with the requirements of CARES technical approval 5038. Connection of the components is made using one of RFA-Tech's many CARES approved coupler systems. The customer can choose from Parallel or taper threads, both offering a full strength connection. Assembly of the Sheartech Grid is done off site, leaving site to simply screw in the second half of the shear head. Each grid; manufactured to site specification is simply craned into place.

The product has proven itself at 62 Buckingham Gate, London where Getjar Ltd used the product in a 1.5 meter deep Raft slab. Donaldson Associates were also happy to design the Sheartech grid into the new storage tank at Fleetwood WWTW, where the product provided a time saving when compared with fixing standard shear links.

Being manufactured in Sheffield, this system links with Lenton's taper threads, for which RFA-Tech has manufacturing capability.

It means RFA-Tech can produce a full and cost effective CareS Approved coupler system in times of large demand, and bespoke to each engineer's requirement.

This is just a taster of the wide range of products supplied by RFA-Tech, which also encompasses Couplerbox, Sheartech Grid.

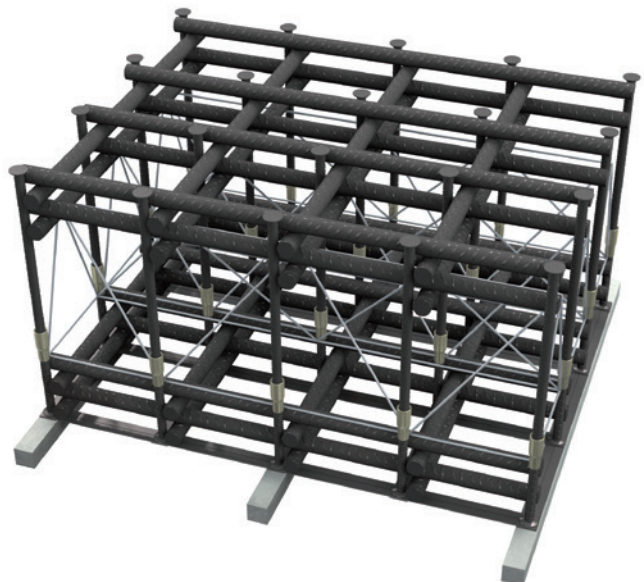
As well as these manufacturing products, RFA-Tech boasts a construction accessories division, which supplies the industry tailor-made and stock items directly from its well stocked regional depots across the UK.

This range includes concrete, plastic and wire spacers, construction chemicals, formwork accessories, geotextiles & gas membranes, couplers and continuity systems as well as many more commonly used accessories.

The Company's precast division is one of the UK's leading supplier of accessories to the precast concrete industry. The range includes Capstan Anchors, utility anchors, spread anchors, magnets, channelling, fixing and lifting inserts, chemicals, and other ancillary precast accessory products.

In addition, RFA-Tech is currently looking at a range of new products for 2015.

Specialising in waterproofing, concrete protection and repair, RFA-Tech offers many solutions in this field too, such as PVC Waterstops that are designed to provide an integral



View from the top of the new Storage tank at Fleetwood WWTW. The grids are clearly visible in their linear formation



sealing system for movement and construction joints in concrete cast in-situ.

They are extruded from a high grade PVC compound that has been formulated to give excellent flexibility and longevity characteristics.

Available internally and externally, these joints typically occur in structures such as reservoirs, water towers and sewage tanks, dams, culverts, canals, spillways, swimming pools, tunnels and subways, roof decks and podium decks.

The precast division was strengthened in August 2013 by the addition of Stuart Jones who joined the team bringing with him a wealth of experience in supplying lifting and fixing systems to the precast industry for over 10 years. Working with the Group's Quality department, RFA-Tech have a full in-house testing facility to ensure a robust system is in place to meet the new requirements of CE marking of all its lifting and fixing products.

All products and the customer base are covered in a new recently published manual and there is now a full technical backup and engineering service, covering anchor design and specification.

With a complete on site test service boasting a load capacity of 40 tonnes, clients can be sure of a first class service for a field in which RFA-Tech harbours great hopes of becoming market leaders in the future.

As well as the publication of a new manual, RFA-Tech has also rewritten its technical and waterproofing brochures so they offer more in-depth technical detail to the information offered.

It is useful to many within the industry, from engineers and designers to buyers and project managers so they can specify, compare and purchase correct products with ease. The accessories brochure is also being rewritten to keep in line with RFA-Tech's growth and rebranding.

This growth can be illustrated by the vast increase in website information.

What once started out as two pages now has more than 100 pages of information regarding products, services and business.

RFA has also brought Ecommerce technology to the industry, which offers a user friendly platform for passing trade and also an accounting system where customers can allow site personnel to purchase goods by setting up a user account with credit limits and budgets.

All work, products, and other systems are undertaken and supplied with health and safety in mind, whose policy it is to ensure the health, safety and welfare of its employees and others who may be affected by its activities.

The Company strives to minimise health and safety risks arising in the workplace through continual improvement in health and safety management and performance at all times.

RFA has supplied some of the highest profile and most prestigious contracts in the UK and worldwide. A selection of these includes the Shard, the Olympic Village, Terminal 2B at Heathrow Airport, and BBC Media City in Salford.

Mark Taylor, Technical Sales Manager at RFA-Tech, is understandably delighted with the progress, which he attributes to the relationships created with customers – something that will guarantee future success.

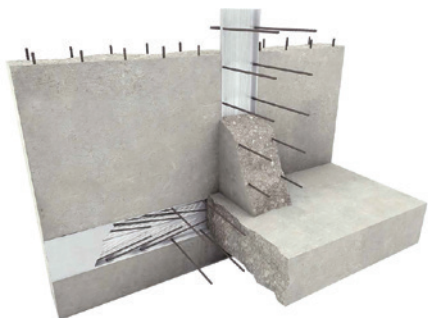
**He said:** "We continue to develop long-term relationships with the best suppliers and contractors both in the UK and overseas.

"This gives our business a great foundation for a strong future and helps push our goals and visions forward of becoming the industry leader."

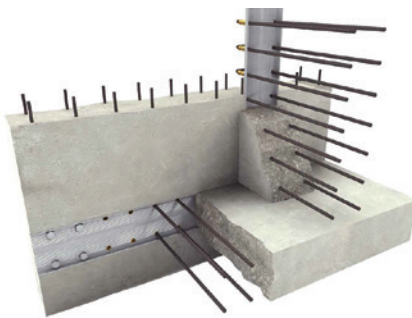
# CONSTRUCTION ACCESSORIES

THE COMPLETE PACKAGE FOR ALL YOUR ACCESSORY NEEDS

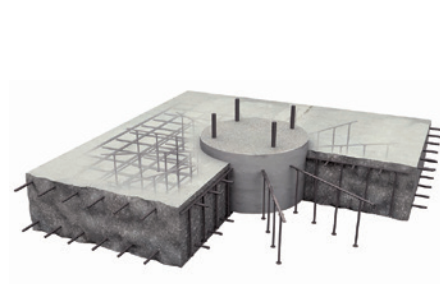
## MANUFACTURED SOLUTIONS



STARTABOX®



COUPLERBOX®



SHEARTECH®

## PRECAST SYSTEMS



CAPSTAN ANCHOR SYSTEM



THREADED SYSTEM



SPREAD ANCHOR SYSTEM



UTILITY ANCHOR

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- Joint Fillers and Sealants

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- Slab Accessories
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- Column Formers
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- Channelling
- Plastic Accessories
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- Geotextiles

ORDER ONLINE AT [WWW.RFA-TECH.CO.UK](http://WWW.RFA-TECH.CO.UK)  
FOR MORE INFORMATION CALL 0870 011 2881

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Following a change to the pour sequence for the reinforced concrete base slab, from vertical full height 2500 mm sections to full plan area horizontal pours, a solution was required to enable the fixing of shear reinforcement around the slab perimeter as the initial detail did not allow for horizontal pours. Due to the timing of the change, a quick solution was required. As designers, I engaged RFA-Tech to discuss their Shear Tech Grid and its application to this project. From an early stage, I could see that the product was going to offer a good solution and one that ensured the design was not affected by the change. The RFA team were very helpful producing and delivering the grids to site on time. The Sheartech Grid exceeded our expectations and provided a time saving when compared with fixing standard shear links. We will be happy to use the product in the future.



Testimonial from Gerard Quigg,  
Donaldson Associates



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