

alker

FIBRE OPTIC
SPECIALISTS

Innovative fibre optic
solutions for the
harshest
environments
on the planet



HIGH QUALITY | HIGH PERFORMANCE | HIGH STANDARDS



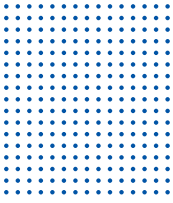
"It is difficult to express my admiration for the level of ability that exists within your organisation to not only restore full optical functionality, but to also manufacture additional parts to actually improve the original design. Well done and thank you for a job perfectly executed."

JES ENGINEERING

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About alker



Meeting the demand for excellence in the global fibre optics space since 1985.

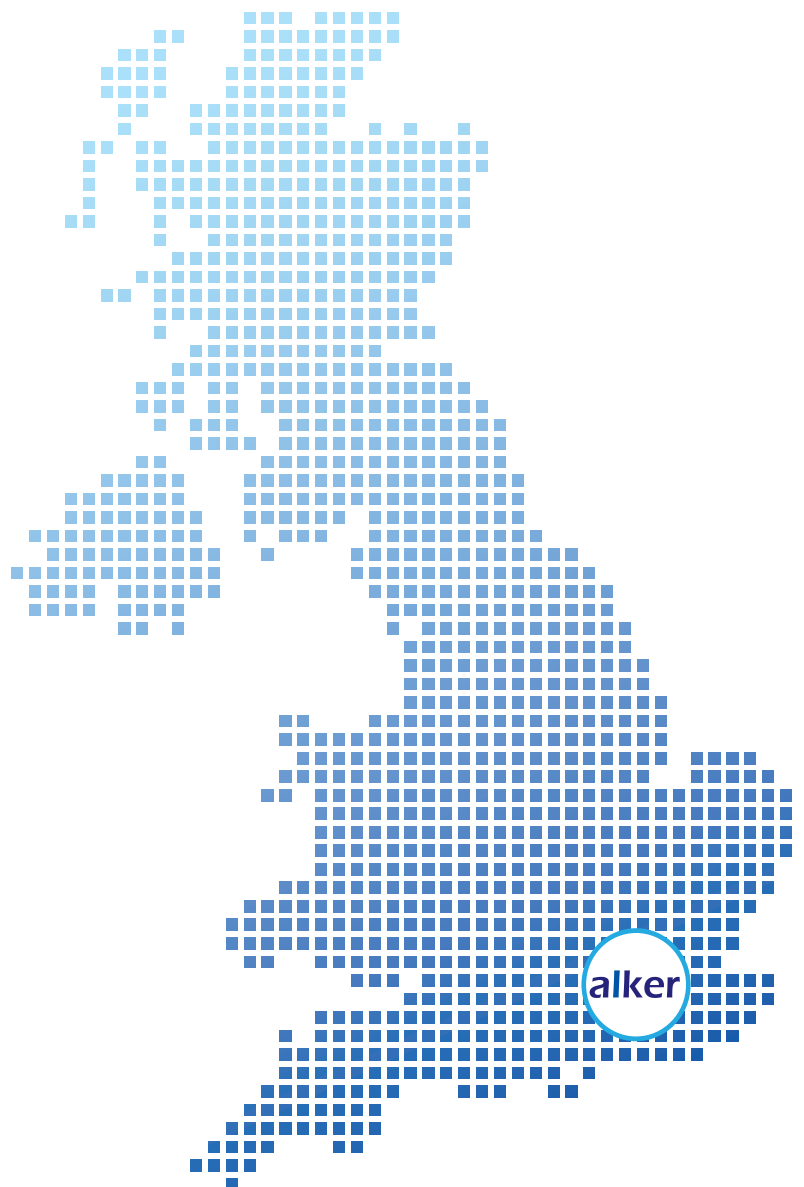
Trusted by market leaders, Alker is proud to be one of the longest standing fibre optic solution providers and fibre optic termination houses in the UK.

Our team will take care of all your fibre optic requirements, providing the design, consultancy, and manufacture of specialist fibre optic assemblies for use in notoriously harsh environments.

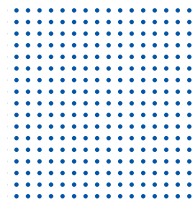
We provide everything you need in one place, with a wealth of knowledge and experience at your fingertips. We also have the agility to adapt quickly to the growing demands of our customers, offering fast turnaround capabilities without compromising on quality.

“Innovation, integrity and excellence are the pillars and values of Alker.”

Richard Alan Kershaw
Company Director



alker history



1985

- Alker was established in Nottingham by award-winning inventor Alan Kershaw
- Provided cables for universities and FC/PC connectors, taking advantage of the growing telecoms market and terminating fibre optic patchcords used by BT (which are still in service today)
- GPT (later GEC) became the first major customer of the business
- Alker became one of only three independent fibre optic termination houses in the UK
- GEC Marconi engaged Alker for R&D on defence projects

1991

- Alan's son, Richard, joined the business
- Alker became the Seiko UK distributor for fibre optics (the third largest Seiko distributor in the world)
- Alker won the contract to provide the fibre optics for communications throughout the Channel Tunnel
- Alker won the contract as the single source manufacturer for all Marconi's equipment manufacturing suppliers

2000

- Following the collapse of the telecoms sector, Alker won a large contract providing attenuators for Cable & Wireless Plc
- The manufacture of telecoms fibre optic cables moved to China, and Alker diversified into a more specialised market

2008

- Alker achieved ISO 9001:2015

2011

- Alker developed a flow management sensing system as part of R&D for Imperial College London

2014

- Alker collaborated with Edinburgh University and NASA on the development of an environmental sensing and monitoring system

2017

- Alker moved to a larger manufacturing facility in Surrey

2020

- Alker continued to provide support to customers throughout the coronavirus pandemic

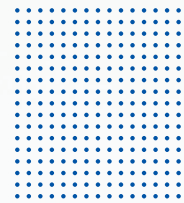
2022

- Alker was awarded an MOD contract as a single source supplier for a new development project

2023

- Patent awarded for splice enclosure design, and patents pending for new development products: fibre optic repolishing tool and hub less drum design, in-field repair kits

Why choose alker?



Innovation. Integrity. Excellence.

These are the cornerstones of our approach.



More reasons to partner with alker...

UK based manufacturing at our site in Lingfield, Surrey

It's also the headquarters for our design, consulting and engineering services.

3D engineering & micro engineering workshop facilities

These assist with the development of bespoke prototypes for our clients.

Diagnostics and repairs

Addressing existing fibre system issues either onsite or in our production facility.

Fast access to expert technical advice

Speak directly to the people who are designing and building your solution.

Rapid, low volume prototypes

Quick prototyping capabilities to accelerate your R&D.

Fast turnarounds

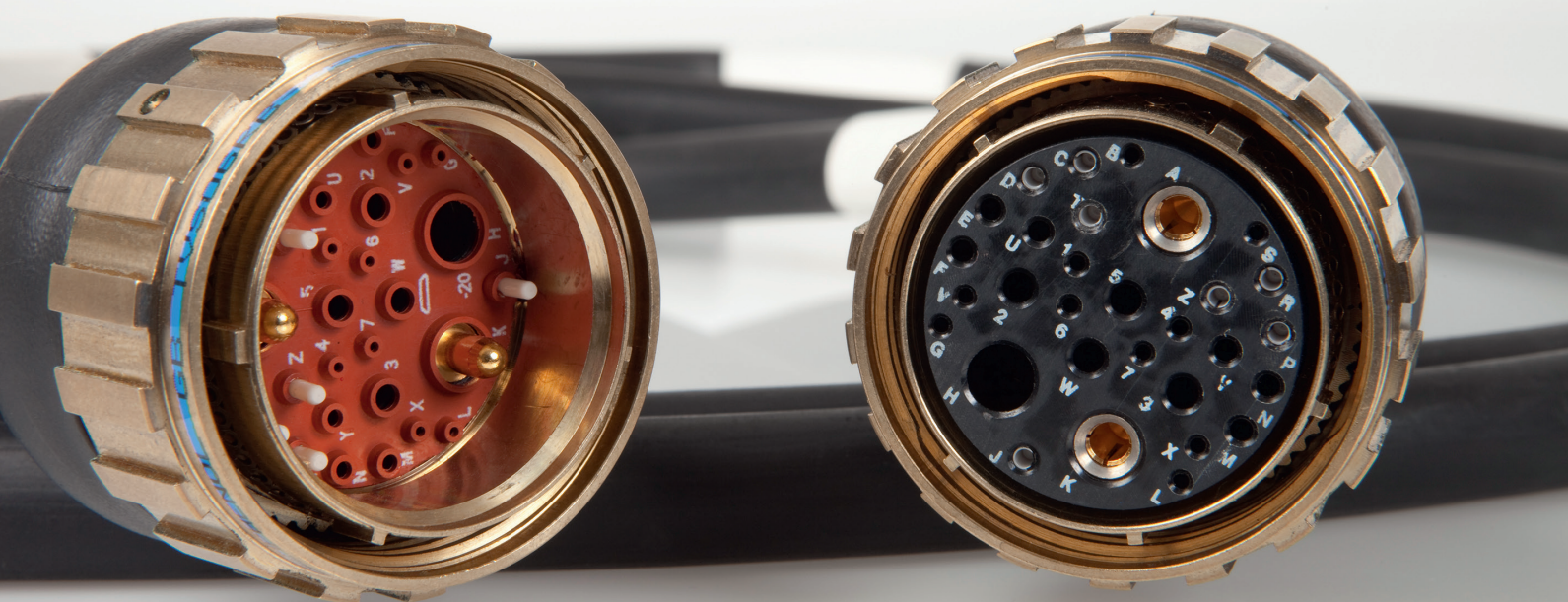
Our 'jump the queue' services can halve lead times (subject to part availability).

Repairs & reverse engineering of obsolete optics

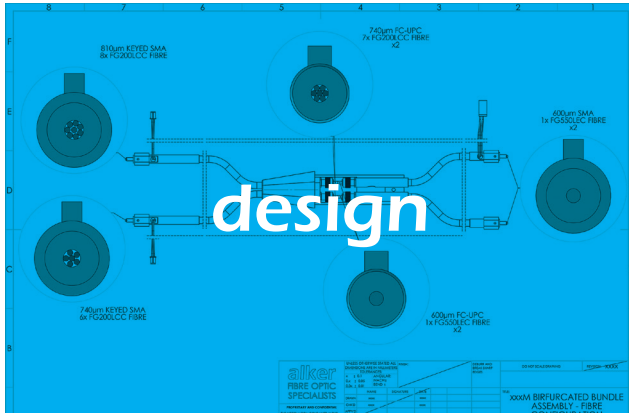
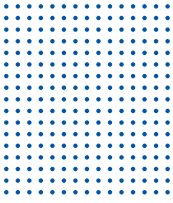
Bespoke designs to replace components that are otherwise difficult to source.

Impressive warranties

Guaranteed fibre optic performance and reliability for the lifetime of the equipment they are within.



Our services



Our legacy and agility mean we can design world-class fibre optic solutions to meet the demands of your project with fast turnaround capabilities.



Consulting is more than providing expert advice. We will engage with your company to understand your requirements, then provide specialised guidance and tailored recommendations.

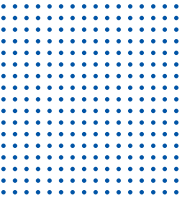


Production is overseen by our talented team with decades of hands-on experience. Every product produced in Alker's facilities is manufactured to ISO 9001 standards.



Our mission is to keep your equipment up and running, minimise costly downtime, and extend the in-service life of your products.

Industries



Our team supports many respected primes across multiple industries.



medical



defence



nuclear



oil/gas



transport



renewables



research



aerospace



space



Alker products are designed and manufactured to be subjected to prolonged service within the most demanding environments.

Our products

Bespoke assemblies

- All fibre optic components are manufactured to your precise specifications
- We can also produce bespoke keyed connectors with aligned fibre optics
- We specialise in bifurcated/ trifurcated and power integrated assemblies
- Bespoke micro armoured fibre optic bundles can be tailored to meet almost any fibre or requirement, from as small as 1.5mm outer diameter. These are ideal for multiple applications, including splitting the light from a source to several outputs or merging light from various sources into a single output



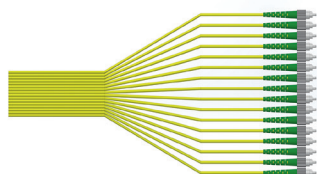
Polarisation maintaining

This is most commonly used for special applications, such as in fibre optic sensing, interferometry and quantum key distribution.



Arrays

We offer 16, 32 and 64-way arrays as standard. We can tailor-make an array to suit almost any fibre or requirement.

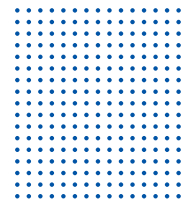


Expanded beam

Ideal for harsh environments, expanded beams use a contactless connection with light passing through two lenses to provide resistance against vibration and mechanical wear whilst constantly transmitting.

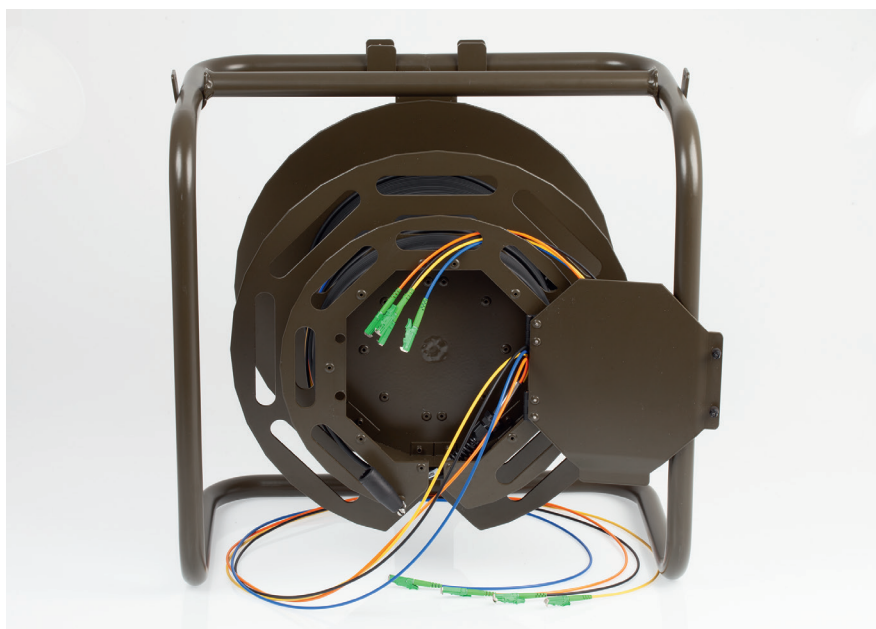


Bespoke armoured assemblies

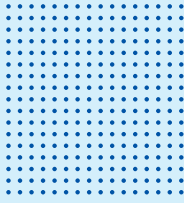


We have advanced capabilities in fibre optic armoured, boasting an ever-evolving array of lightweight armouring solutions that protect the reliability and extend the in-service life of your assets.

In line with our commitment to innovation, a core element of our business focuses on bespoke complex solutions rather than off-the-shelf products.



Armouring



Harsh environments

The benefits of armouring

Armouring provides extra protection for fibre optic cables without sacrificing its flexibility or functionality. It significantly reduces the risk of downtime and damage to your equipment.

Armoured fibre optic cables are much stronger and tougher than common cables, which are designed to withstand crush, pressure, direct burial and other environmental conditions.

They are specifically developed to ensure operational safety, high flexibility and durability when used in harsh environments or limited space. Compared to unarmoured fibre optic cables, armoured cables are manufactured with an outer protective layer that can be tailored to meet the demands of its application.

Armouring samples can be provided on request.

Armouring

All modes of fibres can be armoured, including single mode, multimode and polarization maintaining, to name but a few. We can tailor solutions to support all applications, including those in wet, dry, hot, and cold, or bend insensitive conditions, or subject to excessive vibration or crush loads.

Armouring is available from 1.5mm to 25mm diameter as standard, with other specifications available on request.

Retrofit armour

We offer retrofit armouring options to increase the longevity of existing fibre optic harnesses and installations, protecting what can frequently be the most fragile element of your project. Contact us for more information.



Inspection & cleaning kits

Our bespoke inspection and cleaning kits are designed to meet the demands of your project and accommodate specific connector types.



Features:

- Includes a microscope to inspect termini end faces for debris or damage
- Can be used with both single mode and multimode fibres. Designed for military multiway ferrule connectors
- No need to remove the termini/ferrule from connector, saving time and minimising the risk of damage
- Adds value by extending the in service life of the asset that the fibre optics are within
- Angled cleaning is available for difficult to reach places, designed to clean fibre optic patchcords, pigtails and adapters of all types

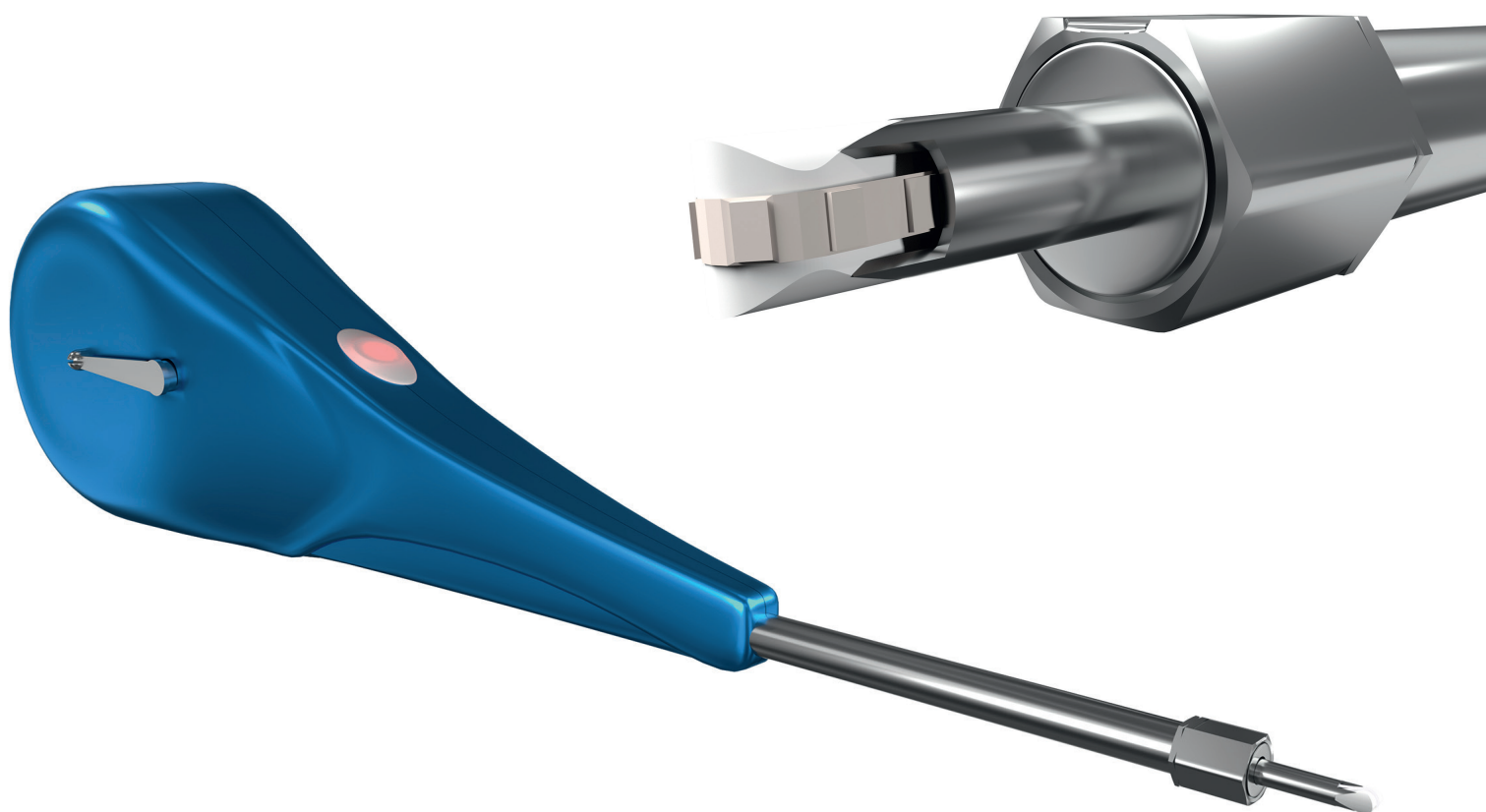


Products in development



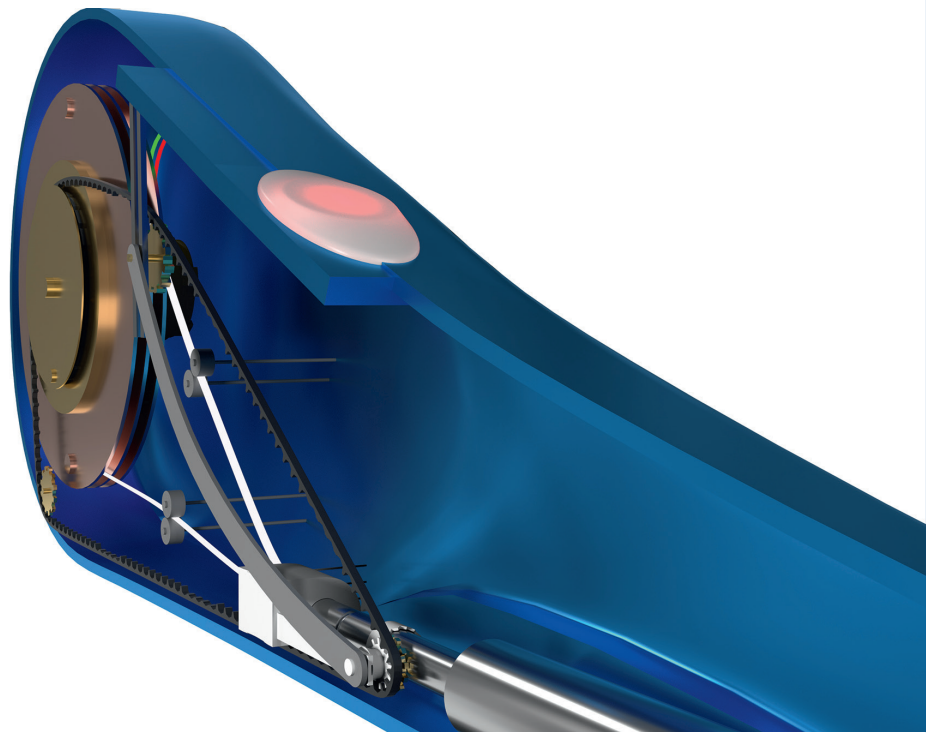
alkerme™ repolishing tool

Introducing alkerme™, the first fibre optic ferrule, pin and socket end face re-polishing tool for damaged military specification multi pin connectors (patent pending).



There are vast amounts of fibre optic connectors in service around the world within high-value assemblies that have a long delivery time. These assemblies are attached to critical and valuable equipment: for example, test equipment, or equipment within a fighter jet, submarine, or other critical applications.

A once-obstructed fibre can now return to transmission, extending the in-service life of your assemblies or equipment and reducing both downtime and significant replacement costs. It is also possible to adapt to fit almost any fibre optic connector.



Key benefits:

- Battery or internal wind-up mechanism (for use in Hazardous Explosive Zones)
- Re-polish both male and female ferrules
- Various grades of polishing paper available
- Depth adjusted for each individual ferrule height
- Regulating pressure

Key features:

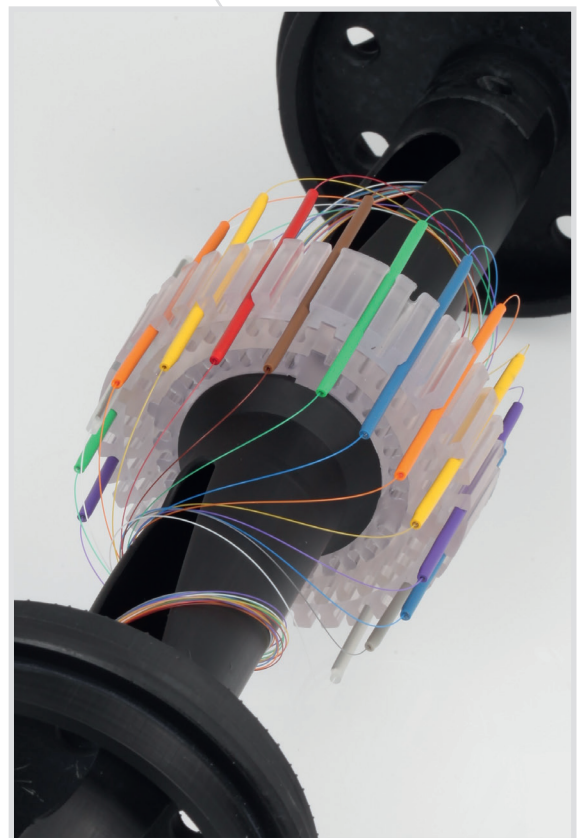
- Can be used with all modes of fibre
- Designed for multiway ferrule connectors
- No need to remove termini/ferrule from connector, saving time and minimising the risk of damage
- Currently available for 2.5mm diameter ferrules and can be developed for almost all connector types

In-line Splice Enclosure



Features:

- A patent approved unique innovative in-line splice enclosure that is quicker, easier and safer than traditional solutions
- Waterproof with sealed entry points
- Unlimited fibre counts
- Available in a range of sizes to suit all applications from as small as 30mm diameter
- Can be tailored to your bespoke requirements
- Available for all modes of fibre with fibre counts from 1 to 48
- Can be used for installation or repair, for both cable or blown fibre optics





Once fibres are spliced, the operator can conveniently wrap them around the inner pipe in a helix until all slack fibre has been used up.

After this is done, the splice protector can be simply pushed into position within the central locating wheel, expanding to additional wheels if required (increasing fibre count). The cover locks and seals the enclosed fibres, securing the splices within.

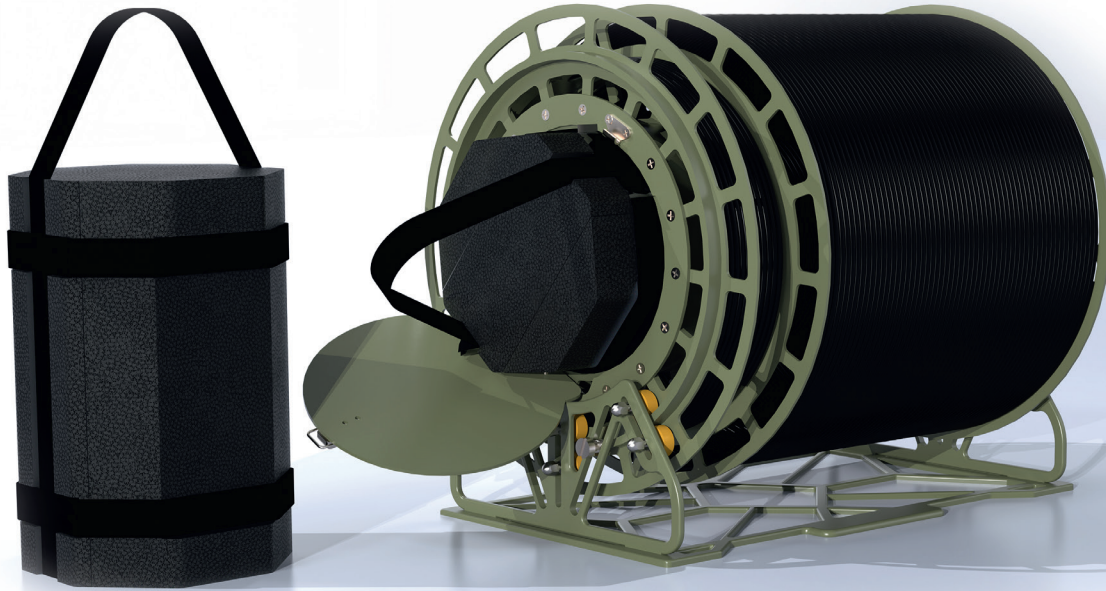


Deployable cable drum & backpack

With integral repair kits:

- Deployable cable reels with repair kits built into the drum for up to 1km of cable (dependant on cable OD). Patent pending
- Stainless steel micro armoured multicore fibre optic cable for harsh environments that's unique to Alker. This is designed to strengthen most fibre optic connectors on the market, including pin and sockets used within Milspec 38999 connectors
- Allows for in-field repair without the need for any power or glue. All repair tools included
- Unique flexible splint design
- Spare pigtail to ensure the repair of both cable and connector issues
- Stackable drum design maximises internal space
- Powder coated paint RAL colours available according to requirements (i.e. NATO, Armed Forces)



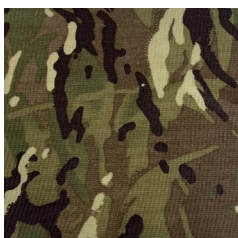


Backpack deployable cable system:

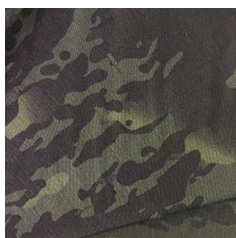
- Interchangeable reels to the backpack support system
- Optional choice of harness fabrics with tailormade harnesses and additional functional webbing solutions available
- Modular based, lightweight deployable fibre optic backpack
- Can be disconnected for floor deploy ability
- Adjustable reel height for a more balanced and comfortable fit
- Reel is closer to your back for better centre of gravity
- Unisex design



Fabric options:



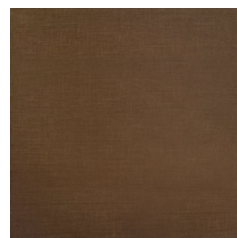
MULTICAM-MTP



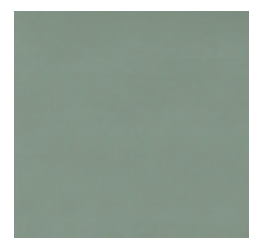
MULTICAM-DARK



DIGICAM GREY-BLACK

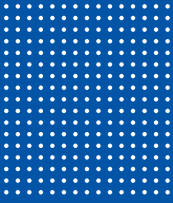


COYOTE



PLAIN - RANGE GREEN

✓ Quality assured, every time



ISO 9001:2015

Alker has remained ISO accredited since 2010, demonstrating our ongoing commitment to consistently providing products and services that meet customer and statutory requirements whilst ensuring quality and consistency across our operations.

JOSCAR

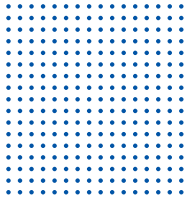
The Joint Supply Chain Accreditation Register (JOSCAR) is the accreditation for the aerospace, defence and security industry. It ensures suppliers have the capability and continuous improvement opportunities to service the customer and ensure compliance is maintained as industry requirements evolve.

Cyber essentials

An essential demonstration of our commitment to cybersecurity, our Cyber Essentials accreditation provides peace of mind to our customers and suppliers that our systems are protected against the most common types of cyberthreats such as phishing, malware and password breaches.



Our values



At Alker, we are dedicated to conducting our business with integrity, social consciousness, and a commitment to building a better future for our employees, customers, community, and the planet.



Innovation

Our emphasis is on ethical conduct. We prioritise honesty and transparency in all our interactions and actively encourage curiosity. With these values in mind, we continue to push boundaries and find more creative ways to solve common problems.



Integrity

We value the well-being of employees, customers, and stakeholders, and seek to promote ethical behaviour, equal opportunities, safe working conditions, and fair wages at every opportunity. Our focus remains on creating a safe and inclusive environment for everyone; a place that inspires and supports professional growth.



Excellence

Quality and service is everything. We make every decision based on how well it serves our customers and people – and this extends to our stance on sustainability.

Social responsibility, sustainability and the environment

Our aim is to reduce our environmental impact by minimising waste, conserving resources, and using eco-friendly materials.

We maintain a responsible supply chain. Selecting suppliers that are aligned with our ethical and sustainability standards and approach to continual improvement is paramount, driven by stakeholder, employee, and customer feedback to ensure we are meeting our ongoing social responsibility targets.

Contact us today to discuss your requirements in greater detail

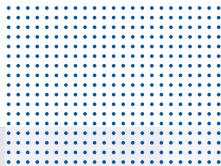
Every project is unique, and we're sure you have plenty of questions for our team.

Get in touch now to explore what's possible with Alker.

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