

COMPANY PROFILE



BELDAM
CROSSLEY

AN INTEGRAL PART OF YOUR SUCCESS

FORWARD THINKING SOLUTIONS WITH A HISTORY OF EXPERTISE

**WITH A SOLID TRACK RECORD OF INNOVATION
THAT SPANS OVER A HUNDRED YEARS,
BELDAM CROSSLEY HAS ACHIEVED AN UNRIVALLED
GLOBAL REPUTATION IN OFFERING ADVANCED
SOLUTIONS IN INDUSTRIAL SEALING TECHNOLOGY.**

Always at the forefront of new developments, we have responded quickly to the constantly changing worldwide demands of specialised sectors as diverse as aerospace, defence, oil and gas, automotive, pharmaceutical, food and marine.

To meet their exactly high standards, all our manufacturing is based in the UK and operates to internationally accepted standards - including BS EN ISO 9001:2008 and BS EN ISO AS 9100:2003 standards for design and manufacture of products for aerospace, and environmental management system standards to BS EN ISO 14001:2004.

WE HAVE EXPERTISE IN THE FOLLOWING SECTORS:



Aerospace



Pharmaceutical



Chemical



Marine



Military



Oil and Gas



Automotive



Food



This means we are able to provide a proven range of products and services, together with expertise and experience, which offer robust and high quality life-protecting installations in applications where failure is not an option.

Today, we are recognised as being at the leading edge of technology. A position gained through our commitment to research and

continued investment in the most sophisticated manufacturing plant and equipment.

With a clear focus on the future, we are committed to being the 'best in class' choice by offering groundbreaking ideas, the ultimate in product reliability, and unbeatable customer support.

A global business, we have an international distributor base that ensures efficient and consistent product supply logistics. Wherever in the world you operate, we can deliver peace of mind and a customised response to suit the most challenging application.



PILOT® COMPRESSION PACKING

The Pilot® brand of high performance compression packings are designed to create a sealing surface between a moving spindle or shaft and the pressurised housing in which it operates. Beldam Crossley utilises the latest production techniques and leading materials to ensure a high integrity seal is achieved in even the most arduous applications.

They are typically used on valve, rotary and reciprocating pump applications and we have one of the most extensive ranges of sizes available today, supplied typically in square section ranging from 3mm to 25mm as a standard profile, with larger sizes available upon request.

In addition, we offer exfoliated graphite die-formed rings in a range of sizes and sections to suit the most demanding industry requirements.

PILOT® LIDPACK 3500

The unique construction and properties of the Pilot® Lidpack 3500 has made it the outstanding tank lid packing worldwide, wherever chemical and solvent cargoes are carried.

Designed primarily for use at sea, where the prevention of water ingress is as equally important as prevention of external spillage, the Pilot® Lidpack 3500 and its two sister products are just as efficient for use with tank hatches on river going barges, road and rail transport.

Pilot® Lidpack 3500 is resistant to acids, alkalis, oils, solvents, chemicals and edible products, and is available in a wide range of sizes, supplied as ready made rings or as spooled lengths.

Pilot® Lidpack is easy to cut and welded into endless rings using equipment and materials supplied by Beldam.

CROSSFLON® AND HIGH PERFORMANCE ENGINEERING PLASTICS

We manufacture and maintain a comprehensive stock of cylindrical PTFE or Crossflon® billets, enabling us to select the most suitable and cost effective size from which to machine the required components.

With over 50 years experience, we have perfected specialist techniques for manufacturing a wide range of products including Diaphragms, Bellows, O-Rings, Bearings and Seals etc.

Our continuous investment programme has ensured that we have the most up to date machinery ranging from presses, lathes, milling and grinding equipment, and complemented by an extensive range of ancillary equipment. From food, cryogenic and to the harshest of chemical applications, we can work with you to deliver the most suitable material to achieve your design criteria.

CROSSFLON® BEARINGS AND PEEK COMPOSITES

We have designed and manufactured bearings using proprietary PTFE based materials for over 50 years. The in-house engineering department works with our customers to design bespoke products that work successfully in the most arduous of conditions.

Crossflon® - Using single/multiple fillers, Crossflon® bearings are used in an extensive range of rotary and linear applications. The product range is capable of overcoming a number of design issues ranging from poor lubrication, excessive heat, wear, corrosion and purity.

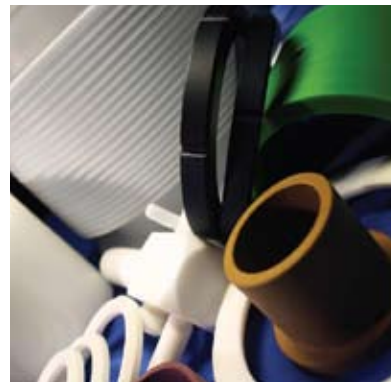
Peek Composite - Peek bearings are now incorporated within the API 610 standards. Used primarily within centrifugal single and multi-stage pumps and compressors, they offer a number of advantages over traditional bearing technologies. Dry start-up, increased efficiency through reduced tolerances and increased wear resistance which increases customers' product life expectancy.

CORD SEAL HIGH TEMPERATURE SEALS

Cord seals (also known as rope seals) offer designers and engineers the ability to increase operating efficiencies when installed to reduce hot gas leakage between components in aircraft engines and hot aero structures. The seals are designed to operate over repeated thermal cycles and the differing thermal expansion between dissimilar components. The standard design is manufactured to locate into an O-Ring type groove - other innovative seals can be designed for use in differing applications.

They are generally used to (1) Reduce hot gas flow between two machined or cast metal surfaces (2) During thermal cycling, reduce hot gas flow between metal surfaces by conforming to the changing profiles (3) Reduce the hot gas flow between dissimilar materials due to thermal expansion (4) Act as a flexible joint for components.

Supporting the need for elevated operating temperatures, the seals have been developed to operate continuously in excess of 1200°C (2220°F).



THERMALLY INSULATED SOLID PIPES

We have developed a unique solution to providing solid pipe insulation which previously could prove difficult and expensive. The process of utilising braided materials makes it easy to apply total insulation directly onto solid pipes even after they have been formed and end fittings attached.

Tubular braids are principally used as reinforcements for metal, rubber or plastic tubing, for protection from mechanical damage or abrasion. They can also provide thermal insulation, and protect tubing from external chemical attack.

The braid is woven on to the client's own tubes, cables etc, or can be supplied separately in tubular or flattened form. A wide range of materials are available ranging from Inconel®, phosphor bronze, copper and stainless steel wire as well as a variety of natural and man-made textile yarns.

ELASTOMERIC O-RINGS

Our encapsulated O-Rings consist of a seamless and uniform FEP encapsulation which completely encloses a core material of either silicone or Viton® elastomers. The dimensions of the FEP encapsulated O-Ring are characterised by the inside diameter and the cross section.

The O-Ring behaves like a highly viscous fluid - any pressure exerted on the seal is transmitted in all directions with virtually no decrease in strength, offering low vapour permeability and minimal water absorption. One of our most successful products, the vulcanised O-Ring is produced from extruded O-Ring cord and 45 degree mould joined (spliced) by a unique in-house process.

We offer this product in our 'Premium Low-Set' quality extruded cord designed for long-term compression sealing. Our special vulcanising process sets us apart.

CROSSFLON® SLIDE BEARINGS AND SKIDWAYS

We offer a specialist service based on over 35 years experience in the design and manufacture of PTFE Slide Bearings and Skidways. Our production facility has the capabilities to formulate, blend, mould, sinter, skive and chemically etch PTFE, along with hot cure bonding, machining and finishing work.

Crossflon® Slide Bearings are used to solve the problems of movement caused by temperature change and differential material thermal expansion, settlement and natural forces encountered by high winds and even seismic activity.

Crossflon® Skidway Plates are used to aid the skidding of topsides, jackets and other heavy fabrications. Structures weighing up to 30000 tonnes have been successfully loaded out on Crossflon® Skidways.

JOINTINGS

Compressed fibre jointing is designed for a wide range of industrial and original equipment applications where sealing performance and specification is essential. A range of grades are available for a wide spectrum of applications.

We offer an extensive range of modified and expanded PTFE sealing products designed for applications where chemical resistance is paramount or where food safety is vital. The Pilotflon brand is the latest generation of filled bi-axially orientated PTFE sealing material combining outstanding chemical resistance with excellent sealing performance.

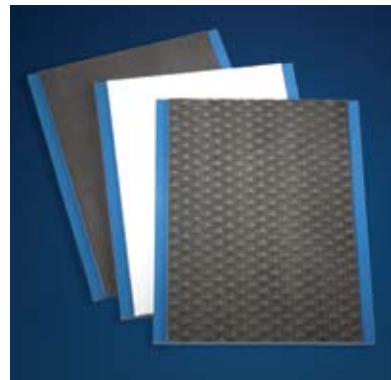
In addition, our exfoliated graphite products are designed for demanding, higher temperature applications for the petrochemical and refining industries. Manufactured from high purity exfoliated graphite, the product is available with a variety of metallic inserts.

RUBBER SHEETING

Beldam Crossley is one of the oldest and most respected suppliers of rubber sheeting in the UK with critical customers including offshore exploration, chemical, food, marine and defence industries.

Products range from commercial grades through to the highest specification rubber sheeting. Materials include natural, nitrile, EPDM, Hypalon®, silicone and fluoroelastomer rubbers.

We stock a large range of standard 'off the shelf' product lines as well as offering specialist products to specific customer requirements. We also offer specialist moulded products, individually made to customer's precise requirements.



GASKETS AND INSULATION COMPONENTS

We have invested in every type of modern cutting equipment to ensure rapid delivery of precision cut quality gaskets including swing arm presses, CNC oscillating knife cutting machine, beam press and hand cutting facility by our skilled craftsmen.

We can produce gaskets from 3mm outside diameter to sizes in excess of 10m. Thickness range is dependent on the material, up to 100mm. We can make gaskets for any standard flange and to any non-standard size or drawing, from a 1 off to 1 million off, on a scheduled basis.

We also provide a complete manufacturing and inspection process, including a specialist non-contact measuring machine to ensure all components are 100% accurate. This can produce components in a wide range of industry approved materials, including legacy materials.

METALLIC GASKETS AND SEMI-METALLIC GASKETS

Semi-Metallic - (Spiral Wound, Kammprofile and Metal Jacketed Gaskets). These are composite gaskets consisting of both metallic and non-metallic materials. The metal provides the strength and the resilience of the gasket and the non-metallic component provides the conformable sealing material. They are suitable for low and high pressure and temperature applications. A wide range of materials is available on request.

Metallic - The ring type joint was initially developed for use in the petroleum industry where high pressure/temperature applications necessitated the need for a high integrity seal. They are mainly used in the oil field on drilling and production equipment. Ring type joints are also commonly used on valves and pipe work assemblies, along with some high integrity pressure vessel joints.

WIRE & TEXTILE YARN OVER BRAID

Over braid provides reinforcement and also protection from mechanical and abrasive damage in addition to external chemical attack to all types of hose and tubing such as rubber, plastic or PTFE. It can also be used for protecting both metal & PTFE bellows. Also, it will increase the hoop strength of the tubing and limit axial movement.

Wire over braid is manufactured either in single or multiple strands of wire to suit the application in terms of coverage, strength, corrosion resistance and electrical shielding etc.

Textile over braid can be manufactured from a wide range of textile yarns which can be supplied in a number of different colours to suit your specific requirements and identification bands can also be incorporated.

The over braid can be directly braided onto the required tubing or be supplied as a sleeve to be slipped over the tubing.

With our various approvals, the over braid can be supplied to meet aerospace or other QA requirements.

PTFE BELLOWS

Beldam Crossley offer a comprehensive design and manufacturing service of PTFE Bellows. They are suitable for all common applications and prove effective in the reduction of vibration, expansion and contraction within pipelines.

Standard type 'M' Bellows offer high strength and pressure resistance and are ideally suited for mechanical seal elements and on glass pipe liners. Standard type 'V' Bellows offer greater flexibility for a given length, used to absorb vibration, to correct misalignment and to protect other components from dirt and splashing. On low-pressure pipelines they absorb expansion and provide a long working life.

Metallic Braiding - On certain applications our over braiding can be incorporated into the design specification to increase the operating pressure.

Custom Made Bellows - A comprehensive range of non-standard type bellows can be supplied, including Plug Bellows for use in process plant valves and stainless steel/PTFE composite bottom outlet bellows units for use in chemical reaction vessels.

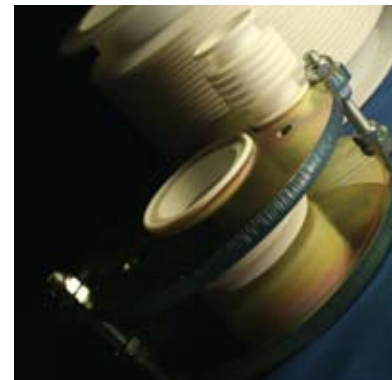
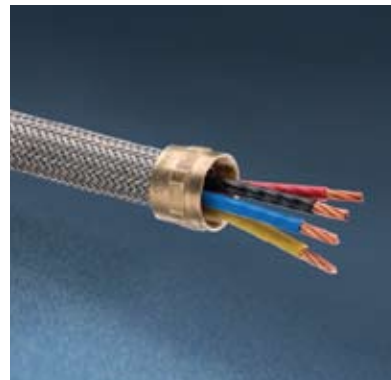
SITE SERVICES LDAR PROGRAMMES

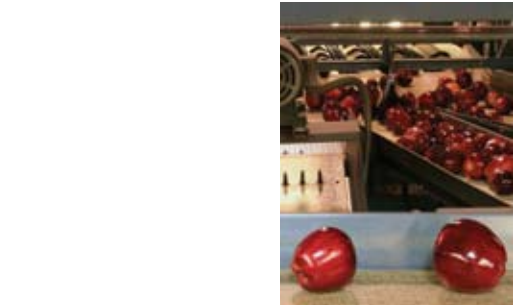
Beldam Crossley offer a range of site services to support our wide range of sealing solutions.

From training programmes on the best installation techniques to a complete package of supply, installation and performance/reliability monitoring that can significantly improve plant performance, our range of site services offers a complete solution to sealing performance. LDAR Leak Detection and Repair programmes are a key part of environmental performance. Beldam Crossley programmes are tailored to support our clients operational and environmental goals.

Utilising the most up to date measurement techniques such as Optical Gas Imaging Systems backed up with tailored software and database programmes, we are able to meet not only the needs of the Oil, Gas and Petrochemical industries, but also the Pharmaceutical, Food and Beverage sectors who can see significant savings by identifying and correcting small leaks of high value process fluids and gasses.

Outstanding solutions, innovation and value characterise our site and LDAR programmes.





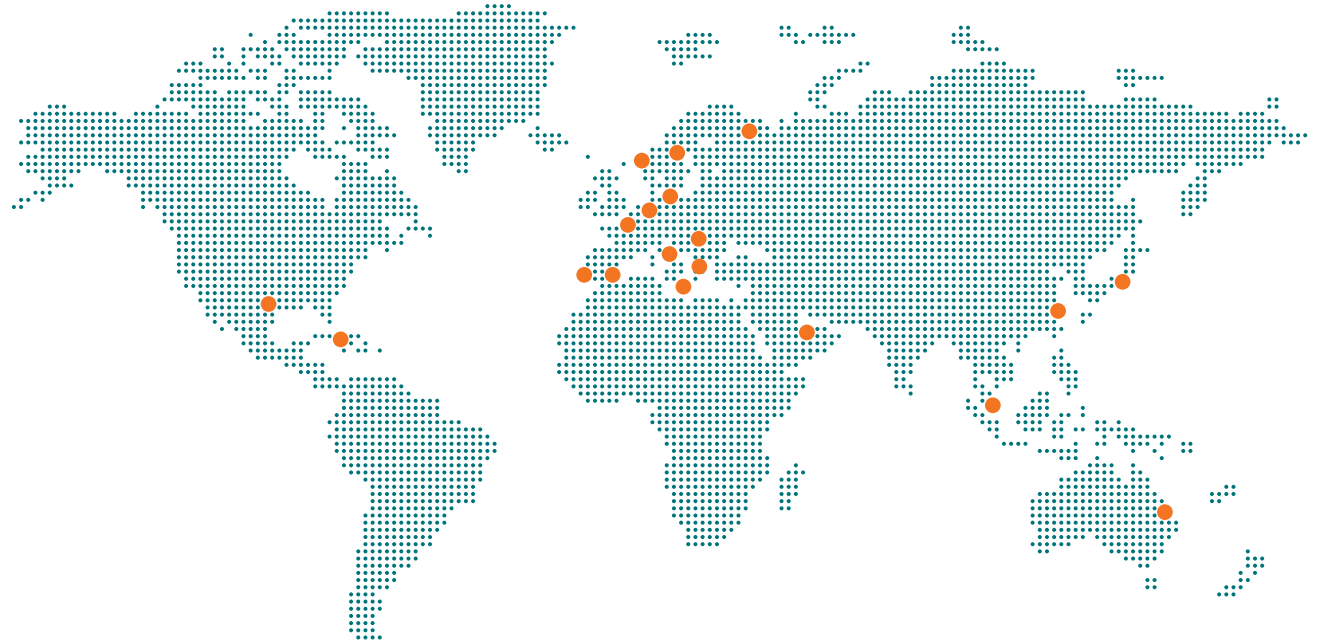
AT BELDAM CROSSLEY, WE HAVE A FORWARD-THINKING PHILOSOPHY THAT IS PERFECTLY ATTUNED TO THE MANY DYNAMIC INDUSTRIES IN WHICH WE OPERATE.



GLOBAL SALES AND DISTRIBUTION

With a highly-equipped manufacturing base in the Northwest of England, Beldam Crossley is perfectly placed to provide an immediate response to match every customer's requirements. This is supported by strategically located distribution partners around the globe who are technically trained to support all our products in the most demanding of applications across all industry sectors.

SALES AND DISTRIBUTION NETWORK WORLDWIDE



BELDAM
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HEAD OFFICE & MANUFACTURING

BELDAM CROSSLEY LTD | P.O. BOX 2141 | BOLTON | LANCASHIRE | BL6 9AS | UK

TEL: +44 (0) 1204 675700 | FAX: +44 (0) 1204 675701 (SALES) | EMAIL: sales@beldamcrossley.co.uk | WEB: www.beldamcrossley.co.uk