



& Products Services



**Creating an effective,
safe and sustainable
environment
exceeding the
needs of industry**

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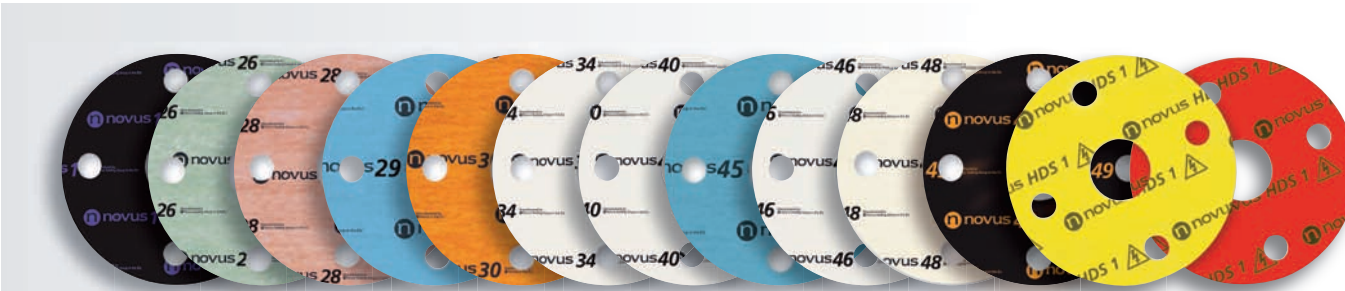
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 Novus Selling Companies
 Distribution network

Quality products

A comprehensive range of fluid sealing materials for industrial and manufacturing applications, fully supported by one of the strongest technical teams in the business.



Novus Compressed Fibre Jointing

The Novus range of **compressed fibre jointing** is designed for a wide range of industrial and original equipment applications where sealing performance and specification is essential. A comprehensive range of grades is available covering a wide spectrum of applications.

In addition, the materials can be supplied in private brand and colour formats to ensure your company or customer is accorded recognition. The jointing can be supplied as sheet or as cut gaskets, either to standard or non-standard dimensions.

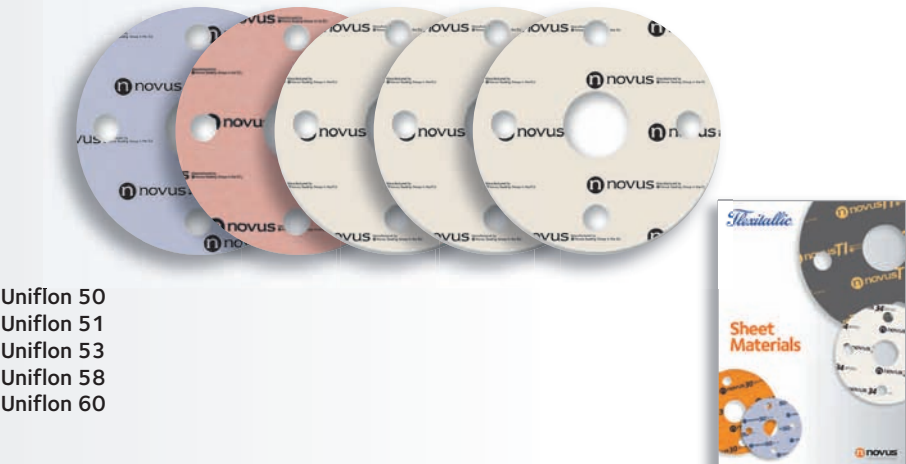
- Novus 10 - 5G
- Novus 26
- Novus 28
- Novus 29
- Novus 30 - 5G
- Novus 34 - 5G
- Novus 40
- Novus 45 - 5G
- Novus 46
- Novus 48 (Acid)
- Novus 49 (Grafftec) - 5G
- Novus HDS-1



To download the brochure visit our website www.novussealing.co.za

Novus Uniflon Products

Novus Uniflon is a comprehensive range of modified PTFE sealing products designed for applications where chemical resistance is paramount or where food safety is a requirement. Our materials represent the latest generation of filled biaxially orientated PTFE sealing materials combining outstanding chemical resistance with excellent sealing performance.



- Uniflon 50
- Uniflon 51
- Uniflon 53
- Uniflon 58
- Uniflon 60

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Exfoliated Graphite Sheet

The Novus range of **exfoliated graphite products** are designed for demanding, higher temperature applications typical of the petrochemical and refining industries. Manufactured from high purity exfoliated graphite, the products are available with a variety of metallic inserts and combinations of thickness. Ultra high purity graphite is available for the nuclear industry, and high pressure grades are also available.



- Novus FI (Foil)
- Novus TI (Tanged)
- Sigraflex Hochdruck

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Novus Hi-Temp

When application temperatures exceed the limits of exfoliated graphite, the end user has a recourse to a number of specialist jointing materials which maintain their integrity at temperatures up to 1000°C. **Novus Hi-Temp** is a specially developed sealing material capable of maintaining a long term seal at temperatures to 1000°C.

It is available in sheet form, reinforced with a stainless steel tanged insert or as a filler for spiral wound gaskets or camprofiles, often in combination with oxidation resistant graphite. *The detail, bottom right, shows special Hi-Temp material facing a metallic camprofile core.*



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Spiral Wound Gaskets

Novus spiral wound gaskets are semi-metallic products designed for high pressure and temperature applications. A variety of forms of the gasket are available and these can be manufactured in various materials or sizes to suit requirements. With over 100,000 standard gaskets in stock and fast track manufacturing for non-standard items we can meet all your service requirements.

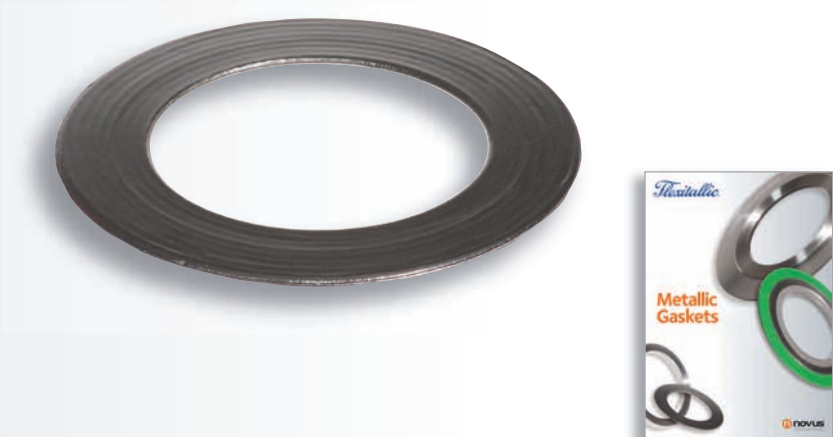
- RF1:** Gasket only
- RF-IR:** Gasket with inner ring
- SG:** Gasket with guide ring to act as compression stop
- SG-IR:** Standard gasket with inner and outer rings
- SG-RTJ:** Special gasket for RTJ flanges
- HX-R:** For large diameter heat exchangers
- HX-RIR:** As HX-R but with inner ring



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Corrugated Metal Gaskets

Corrugated Metal Gaskets consist of a corrugated metal core, normally stainless steel, with a soft facing layer applied to each face. The corrugations provide resilience and reduce the sealing surface area of the gasket while the soft layer ensures outstanding sealing, even at low loads. These gaskets are particularly suited to heat exchanger applications as a replacement to metal jacketed gaskets.


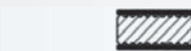






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Camprofile Gaskets

Novus Camprofile gaskets are the ideal product choice for standard pipeline and heat exchanger applications. They provide the highest levels of sealing integrity but with the ability to seal at seating stresses normally associated with sheet materials. Camprofiles are able to cope with fluctuating temperatures and pressures making them the gasket of choice for heat exchanger service. The product can also be used time and again when refurbished.



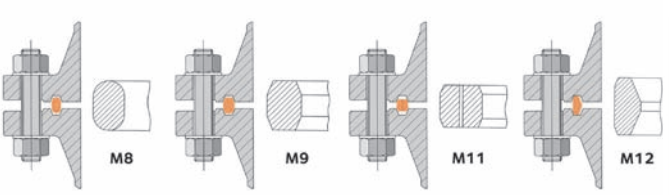
-  **M18L** – Parallel root core with integral centering ring
-  **M20L** – Parallel root core without centering ring for male/ female, tongue/groove and grooved flanges
-  **M21LM** – Parallel root core with floating centering ring attached outside the sealing ring
-  **M38L** – Convex root core with integral centering ring
-  **M40L** – Convex root core without centering ring for male/ female, tongue/groove and grooved flanges
-  **M41LM** – Convex root core with floating centering ring, attached outside the sealing ring



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Ring Type Joints

Ring Type Joints are widely used by the Oil, Gas, Petrochemical and Offshore Industries in applications subject to high pressures. These joints are designed to concentrate the bolt load over a small area thus producing high seating stresses. As the ring type material should always be softer than the mating flanges, the high seating stress causes 'plastic-flow' of the ring joint at the flange faces creating the seal. We hold stocks of soft iron and stainless steel, oval and octagonal. Other exotic material can be manufactured to meet specific customer requirements.

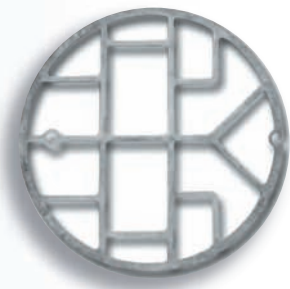


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Metal Jacketed Gaskets

Metal jacketed gaskets consist of a soft filler encapsulated in a metallic material. The filler material provides the gasket with compressibility and resilience while the jacket confers compressive strength and blow out resistance.

Jacketed gaskets can be produced in a variety of configurations making them a good choice for heat exchangers applications. A wide range of jacket and filler materials are available to suit every service condition.

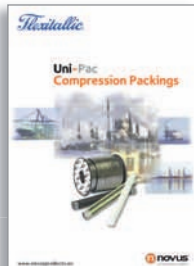


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Compression Packings

We offer a full range of **compression packings** for valve, rotary pump and reciprocating pump applications. Our packings utilise the most advanced production techniques and materials to ensure a high integrity seal in even the most demanding of industrial applications.

Material constructions include PTFE, graphite and carbon fibre and synthetic fibres in a variety of combinations. For high performance valve applications, we manufacture exfoliated graphite die-formed rings in virtually any size, section or density to suit requirements.



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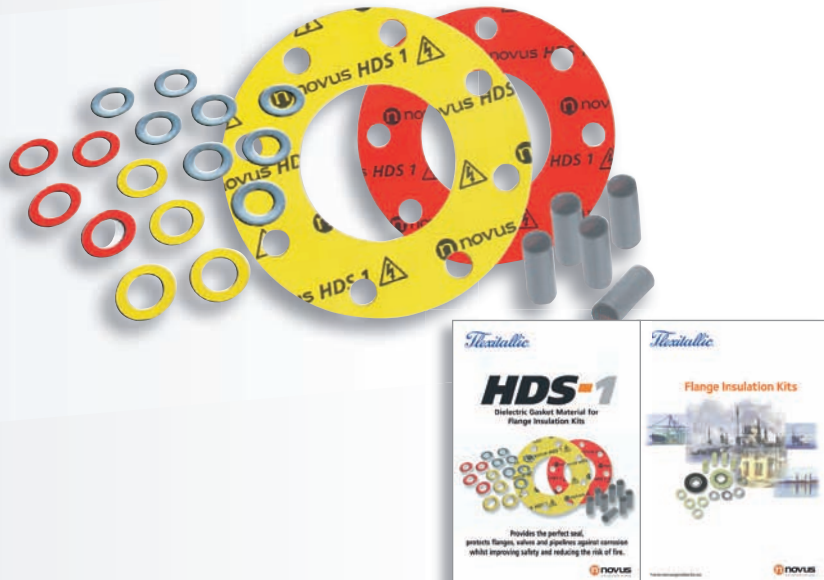
Insulation Kits / HDS-1

We provide a complete range of **flange insulation products** to limit corrosion in pipeline systems. The sets are designed to electrically isolate flanges and bolts in cathodically protected piping systems or wherever dissimilar metals are present.

Insulation Kits also eliminate static charge transfer in discharge and loading operations at quayside and oil storage terminals.

Novus Insulation Kits are available for every type of flange and in a range of materials to suit the application, including our unique electrically insulating material HDS-1.

VCS and PGE Insulation Kits are also available.



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Bolting

A complete range of **stud bolts, threaded bars and fasteners** are available which are manufactured in an extensive range of materials with a wide choice of finishes and treatments. All products are machined to fine tolerances and to high performance specifications to meet the rigorous demands of worldwide industries.

To complement this range we can offer **Novus Bolt-Lube** which is a high quality assembly and anti-seize compound.



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Novatex and Rubber Products

Novatex is a range of expanded PTFE products designed for sealing applications of limited bolt load. Available in both sheet and tape forms and in a range of thicknesses and sizes. We also supply a range of rubber products for low pressure applications including **Neoprene, EPDM** and **Nitrile**.



Heatshields

Novus phenolic heatshields have been recognised by many industries for their performance advantages. Fire protection is paramount for many aspects of safety and operation and is an area where our products have been particularly successful.

Primarily, the Novus range of heatshields is used in passenger protection and safety applications, with performance characteristics that are particularly suitable for transport and automotive industries.



Flange Assembly Products

Poor flange assembly is the most common cause of gasket leakage, yet experience shows that good practice is relatively simple to achieve: Trained technicians working to clear procedures and with the correct equipment will result in a properly assembled flange.

We are able to offer some tools which **complement our training services** in assisting technicians in the making of properly assembled and reliable flanged joints. These tools will ensure that the flange has the correct surface finish, is properly aligned and is assembled correctly.

The range of tools include:
Flange Gap Tool
Flange Surface comparator
Bolt Lubrication

For more information on these products please contact us on the email below.



Novus 'SELECT' Software

We have developed **Novus Select**, a user-friendly software program designed to help with both selection and installation of our products. The program utilises material compatibility data combined with practical know-how to simplify the selection process, helping you make an informed choice about which is the correct gasket for the application.

The program can also be modified by us to accommodate plant specific requirements. The list of gaskets, bolt grade or lubricant type can be refined to include only those which are used on site, making the program ideal for plant based use.



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Centre of Excellence

The Centre of Excellence for cut components is a world class facility for the production of non-metallic and metallic parts.

The centre is uniquely placed within the market; offering manufacturing excellence expected of a cut gasket supplier, with the high quality knowledge and technical support associated with a sheet and PTFE material producer. The centre uses Laser and Atom Flash Cad based cutting to produce a wide range of components including non-metallic gaskets, shims, signs, pattern parts and other precision items.

Lasered parts offer a number of advantages over components manufactured with other cutting techniques; they can be supplied in thicknesses to 0.001" or 0.025mm and have a more consistent and superior edge finish.

Atom Flash cutting allows rapid production of both simple and complex components and automatically nests the parts to achieve the highest material utilisation. Since we are able to manufacture our own sheet and PTFE materials, non-standard materials and thicknesses can be accommodated quickly.

Both services are available 24 hours, seven days a week.



	LASER 1	LASER 2	LASER 3
Power	4.4kw	1.8kw	1.8kw
Make	Bysprint Pro	Bysprint	Bysprint 2512
Flat Bed Size	3048 x 1524mm	3048 x 1524mm	2500 x 1250mm
Gas	Interchangeable – Oxygen & Nitrogen	Oxygen	Interchangeable – Oxygen & Nitrogen
Tolerances	+/-0.1mm	+/-0.2mm	+/-0.1mm
	MAX THICKNESS	MAX THICKNESS	MAX THICKNESS
Stainless Steel	20mm	5mm	8mm
Mild Steel	20mm	5mm	15mm
Aluminium	12mm	2mm	3mm
Titanium	8mm	N/A	8mm
Monel	8mm	N/A	8mm

Training for the future



The Academy of Joint Integrity™

Training Courses

The Academy of Joint Integrity offers Accredited and Awareness Training Courses to all personnel who are actively involved in the assembly and tightening of flanged bolted connections. Mentoring and assessment programmes complement the training provision. All training courses will be delivered by industry professionals with current and relevant experience in the field.

The Academy is a member of the Energy Institute and has contributed to the latest UK Oil and Gas best practice guidelines, specific to Joint Integrity Management. The Academy is also an active member of an ASME sub-committee, developing new initiatives for Pressure Boundary Bolted Flange Joint Assembly.

Academy training courses incorporate Energy Institute, European (EN1591 part 4) and ASME PCC-1-2010 methods and procedures.



Location

The Academy has dedicated facilities in Aberdeen, Teesside, Humberside and West Yorkshire.

Training is also offered within our overseas operations.

Courses

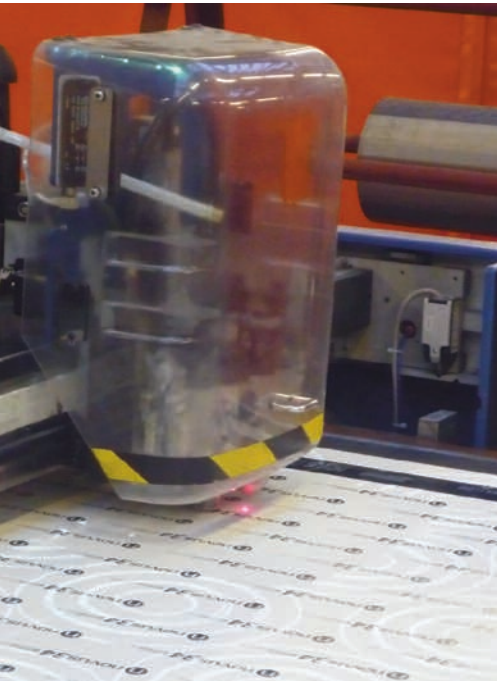
Training can be delivered in a variety of ways:

- At the clients premises, utilising mobile training rigs and equipment
- At the Academy, utilising our purpose built training centres
- Via 'Blended Training' using a web based learning portal with a unique E-Learning programme.

Benefits

- Legislation compliance
- Motivated workforce with best practice skills
- Reduced costs with increased asset integrity
- Access to the latest technical standards and procedures
- Sealing and integrity modules providing greater knowledge
- Alliance and structured support from a world class technical / training team.

For further information on the range of courses available visit www.academyofjointintegrity.com



Petrochemical industry operations and maintenance involve many complex and potentially hazardous activities, and it is imperative that the industry can develop and demonstrate the competence of personnel involved in this work. The focused training and verification provided by The Academy of Joint Integrity courses delivers a reliable and comprehensive solution, allowing operating companies to assure the competence of personnel and supporting the overall integrity management ambition.

Dr Kevin McQuillan
Special Projects Director
SABIC Manufacturing



Technical & testing services

Technical Support

Our product and service offering is underpinned by high quality technical support from a team of engineers acknowledged as one of the most experienced, knowledgeable and customer-focused in our industry.

We are active members of the European Sealing Association and our engineers contribute to international technical committees including ASME and European standards organisations.

The knowledge and experience of our technical team allows us to provide rapid response to customer enquiries as well as provide innovative and practical solutions to even the most problematic sealing applications.

Our engineers are available 24/7 to assist you with:

- **Product recommendations**
- **Joint design and calculations**
- **Installation guidance**
- **On-site support**
- **Innovative software solutions**
- **Failure analysis and solutions**

Testing Service

We have dedicated test facilities for the development of new products, the control of quality and the solving of application problems. The range and breadth of equipment places the company at the forefront of sealing technology.

Our facilities allow us to replicate the conditions under which a flanged joint operates in service. The data gathered can be used to ensure that the most suitable gasket is being employed and that it is properly loaded to withstand the operating conditions. Our testing capability extends across all industries and includes:

- **High temperature and pressure service**
- **Heat exchangers**
- **Compressors**
- **Aerospace engines**
- **Valve and pump testing**



We offer exceptional technical support from a team of engineers acknowledged as one of the most experienced, knowledgeable and customer-focused in our industry.



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