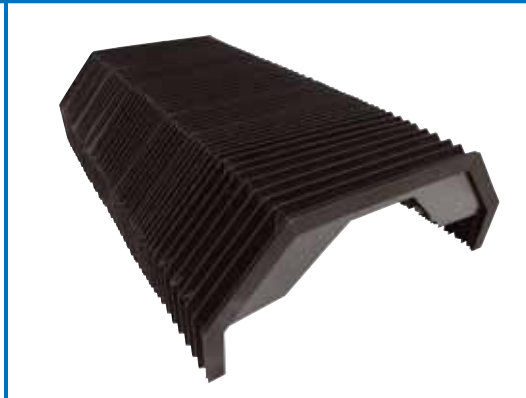
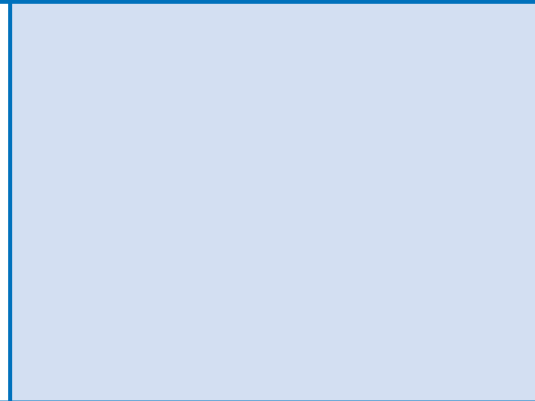


beakbane



bellows products

bespoke products engineered to customers specifications

beakbane

The UK's leading machinery protection specialist.
Established in 1954, we now supply blue chip
companies throughout the world.

In-house design and manufacture

Using both traditional and high-tech
manufacturing skills, we are able to
tailor-make solutions for your individual
machinery protection needs. We can
work in a variety of high-specification
materials, produce bellows in a wide range
of sizes and deliver to the most
demanding deadlines.



Quality matters at Beakbane

Large or small, all our bellows are designed
in-house, manufactured to suit their specific
application and are Quality Assured to BS EN
9001:2000 certification.



Sewn Bellows

Beakbane sewn bellows, noted for their durability, are a cost-effective solution for applications where small or medium batch quantities are required. They are widely used in the protection of pneumatic cylinder precision shafts and mechanisms.



Sewn bellow with a rotating collar



Sewn bellow with a rotating collar at one end fitted to the brake actuator on a railway locomotive

- Cylinder rods
- Screw jacks
- Linear-motion rails
- Ballscrews

Sewn bellows can be manufactured from a range of fabrics to suit specific environments. Temperature resistance from -60°C to +250°C

Split and Re-sealable Bellows

Where it is not possible or practical to dismantle equipment, sewn bellows can be supplied ready for fitting around a shaft. The split is closed after installation using a 'tape and clip' joint.



Bellows fitted to protect satellite dish screw jacks



Sewn Bellows: Compression Ratios - Guideline

Thickness mm	Vee Depth 20mm	Vee Depth 30mm	Vee Depth 50mm
0.5	11:1	17:1	27:1
0.75	8:1	12:1	20:1
1.0	n/a	9:1	14:1

Concertina Covers

Beakbane is an internationally respected manufacturer of covers for the protection of machine slideways. Concertina covers offer complete slideway protection for most applications and are essential for preventing the ingress of abrasive dust, dirt and other contaminants in precision machine parts, thereby minimising the risk of premature wear and loss of vital machine accuracy.

Mk I Concertina Covers

Constructed from a range of fabrics with plastic stiffeners sewn or welded in each fold for normal use.

For weld spatter applications, synthetic rubber-coated fabric is the preferred material:

- Lightweight, stable and easy moving
- For fast or slow-moving machines
- High extension/compression ratios
- Minimum restriction on machine capacity
- Economically priced, suitable for normal applications
- Available in leakproof construction

Mk 2 Concertina Covers

Constructed from a laminated fabric, with plastic bearing guides:

- Strong sectionally-built covers
- Excellent resistance to abrasion, coolants, swarf or fine metal chips in arduous applications
- Tested to one million cycles

Welded Cover



Laminated Cover



Pleated Screens

Pleated screens can be supplied in various coated fabrics up to 1mtr wide and with 'V' depths from 15 to 100mm.

Applications include metrology & inspection equipment.

Folding Bellows

Robust construction, coupled with good looks, ensures these bellows are the first choice for situations where durability and excellent aesthetics are essential.

- Strong, two-part laminated construction
- Extensively used in the medical sector



The bellow shown in the photograph is fitted under the scanning couch of Varian Medical Systems latest acuity simulator. Beakbane designers worked closely with the customer to develop a solution which included a special extension control system and a quick release mechanism to facilitate ease of maintenance

Lift-table Bellows



Where Health and Safety is an issue, Beakbane lift-table bellows provide excellent all-round protection from the hazards of scissor-lift mechanisms. They can be designed to protect 1, 2, 3 or all 4 sides and are available in a range of sizes to suit most lift tables. Other features include.

- UV and ozone resistant materials allow indoor and outdoor use
- Lightweight and durable
- Tested to 2 million cycles
- Can be used for new and existing lifts
- Excellent stroke:compression ratio
- Minimum maintenance
- Manufactured in brightly coloured materials for a vivid visual warning of hazards

The 1.8 x 2.4 metre bellow shown is capable of extending to a height of 2.3 metres and is fitted in BNFL's Sellafield plant

Moulded Rubber Bellows

Beakbane moulded bellows are tailor-made solutions for your individual machinery protection needs. Our bellows require no expensive tooling, making the manufacture of small quantities a viable proposition. A range of materials are available to suit your application.

Rubber Bellows



- Extremely durable including materials developed by our research and development team
- Excellent resistance to abrasion
- Compliant with flameproof tests BS 3120 and BS 6853
- Established track record with the rail, steel and water industries
- Can be supplied split with Velcro or zips for maintenance retrofit
- Available in circular, rectangular or ellipsoidal forms
- Operational temperatures from -20°C to +100°C

Thermo-plastic Bellows



Clear polyurethane bellows are fitted to the manipulators used in nuclear and industrial environments

- Excellent resistance to chemical and hazardous contaminants
- Maximum flexibility
- Frequently used on special-purpose machinery and in the medical and nuclear industries
- Can also be supplied in flame-retardant PVC film
- Operational temperatures from -30°C to +60°C
- Suitable for air conditioning and ductwork connectors
- Available in welded construction for increased extension: compression ratio
- Operational temperatures from -30°C to +60°C



HVAC connector for Turbostar trains



Moulded Silicone Bellows

For high temperature and pressure applications. Silicone rubber with reinforcing layers of Polyester or Aramid



- Temperature range from -55°C to +250°C
- Designs available up to 100 p.s.i. working pressure
- Resistant to a wide range of chemical and environmental conditions including ozone and U.V.
- Meets E.U. food and pharmaceutical requirements
- High electrical resistance typically 10¹⁴ -10¹⁶ ohm-cm

Thermo-plastic Seals and Miniature Bellows

Minimum resistance to movement combines with maximum protection in this vacuum-formed solution for thermo-plastic seals and miniature bellow applications.

- Manufactured from flexible or semi-rigid thermo plastics
- Flaccid materials provide minimum resistance to movement
- Low tooling costs
- Typically used for precision measuring devices and control switches



Miniature polyurethane diaphragms are fitted to the probes of high precision measuring equipment

Hopper-feed Bellows

Typically used in applications such as cement handling, grain loading and food processing, Beakbane hopper-feed bellows can be made to suit your particular needs.

- Ideal for controlling the loading of powder and pellets between hopper and wagon
- Integral steel reinforcement ensures stability
- Operational temperatures between -60°C and +250°C

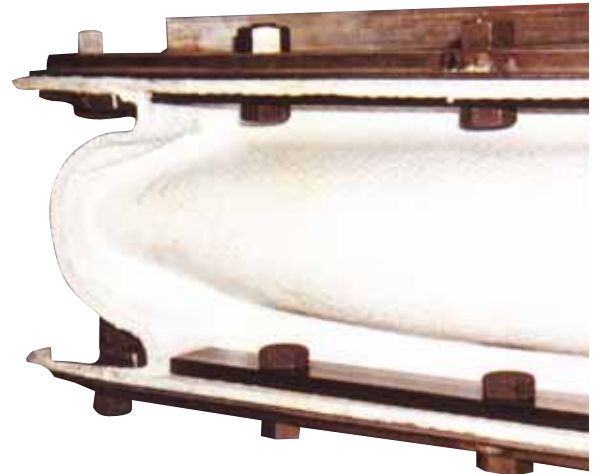


A wire reinforced bellow used to control the flow of powdered cement during loading

Flexible Connectors

Beakbane flexible connectors are specifically designed and built to accommodate movement in metal ductwork caused by misalignment, vibration, thermal expansion or shrinkage.

- Specially developed materials can counteract the high temperatures, pressures and chemical concentrations used in modern industry
- Wide range of designs available for HVAC applications
- Can be designed to suit rectangular or circular cross-sectional shapes



High temperature flexible connector for chemical plants



Flexible Connector for HVAC on Type 45 Royal Navy Ships



Air Cooling duct bellow

beakbane



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