

# **ACCESSORIES**

# **Zippers**

Full length zippers can be incorporated into the bellow, in cases where it will be difficult or too time consum ing to dismantle the equipment for placement of the bellow. Zippers can be provided in metallic or poly-plastic type.

#### Stiffeners

These type of inserts are used where the shape of the bellow needs to be maintained in working conditions. They consist of, internal steel rings or plastic disc inserts.

### Vents for breathing in Sealed Covers

Often it is a prerequisite for the bellows not to build up an positive or negative pressure, in such cases air vents can be used. Sometimes moisture can also be an issue and therefore an air vent will allow for the moisture to evaporate from within the bellow.

### Tie Straps

For long working length bellows it is advisable to use tie straps, this allows the bellow to stretch evenly along the working length.





#### Tie Wires

Can be used to eliminate other fastening methods for the cuff ends. In cases where the bellow is not likely to be over stretched, tie wires can be an effective method of securing the bellow and eliminate the use of hose clamps.

### Internal Shaft Guides / Inserts - for Ball Screws

For long working length bellows, where the application is over an ACME or ball screw application, sagging of the bellow can sometimes cause some operational difficulties, where the bellow or even the ball screw may become damaged. For these instances we suggest the use of internal shaft guides or bush supports.

### **Eyelet Tab Supports**

These supports are used externally and consist of small tabs with an eyelet, placed at the outer perimeter of the bellow.



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# **BELLOWS BOOTS**











Sewn bellows boot used for State Rail Authority

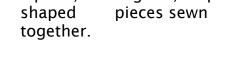
# Why choose Sewn Bellows?

Minimal manufacture time, most shapes and sizes can be manufactured cost effectively.

Can be manufactured with zippers, to eliminate disassembly and downtime.



Sewn Bellows are the most popular, most cost effective and are manufactured from a series of stamped annular square, rectangular, or pear shaped pieces sewn together.



Sewn Bellows are offered in a variety of materials and material thickness with superior abrasive resistance to accommodate most applications.

eliminate machine disassembly and downtime.

Specific 'split' Bellows are available with a zipper closure to

The choice of materials is influenced by the operating conditions, application and the type of construction.

Description	Environment	Application Comments
Neoprene	Internal,	Commercial and
	industrial	industrial
Hypalon Coated	External and	Chemical resistance,
Nylon	outdoor	wash down
Aluminised Kevlar	Higher	High ambient
	temperature	temperature
	environment	









Protective bellows and dust boots can be made to suit a large variety of applications, including linear ball screws, linear rail guides, hydraulic and pneumatic applications plus much more.

Furthermore the installation of protection bellows can reduce maintenance frequency and improve product performance and life by reducing or eliminating contamination.







# Commonly Used Materials

### Vinyl

PVC coated cloth back (black in colour) suitable for inside use, when dust protection only is needed.

### **Neoprene Coated Nylon**

(CR - Chloroprene Polymer) Resistant to moderate chemicals, acids, oils, fats, grease, many solvents and ozone. Attacked by strong oxidising acids, esters, ketones, chlorinated aromatic and nitro hydrocarbons, Neoprene has good weathering properties, it is also fire retarding.

# **Hypalon Coated Nylon**

(CSM - Chlorosulfonated Polyethylene) Similar to Neoprene with improved acid resistance and very high ozone resistance. Attacked by concentrated oxidising acids, esters, ketones, chlorinated aromatic and nitro hydrocarbons, Hypalon ranks as one of the best elast omers for use in environments where corrosive chemicals are encountered. Particularly oxidising agents like sulphuric acid, chromates & hypochlorites.

# Special Material Options

### **Aluminium Coated Fibreglass**

Fibreglass has excellent heat resistance. Fibreglass will not absorb water so will not rot or decay and is resistant to acids, oils, many solvents, weather and corrosive vapours. Fibreglass with an aluminium cover allows the material a 95% reflective heat property that makes it a very good material in high heat use.

### **PTFE Coated Fibreglass**

(PTFE - Polytetrafluoroethylene) Has very good chemical inertness and resistance to a wide range of fluids. There are only a few fluids that will attack Teflon. It has toughness over a range of 37°C to 260°C. Teflon is a DuPont trademark.

### Viton Fiberglass Reinforced

This material has excellent resistance to hot oils, synthetic lubricants, gasoline, JP fuels and commercial dry cleaning fluids. Temperature range - 54°C to 316°C.