

- Boots
- Bellows
- Waycovers
- Protective Covers
- Flexible Connectors
- Air Bladders
- Liquid Reservoirs

Standard and Custom Applications

Boots, Bellows, Waycovers, Air Bladders - Liquid Reservoirs, Flexible Connectors

GAGNE

For over 45 years **GAGNE**, Inc. has developed, manufactured, and marketed a line of high quality, low cost, dependable products for the engineering and industrial field by incorporating their unique manufacturing processes.

Among the list are Bellows, Boots, Waycovers, Air Bladders and Liquid Reservoirs. These high quality **GAGNE** products are tough, durable, and will experience a very high cycle life.

GAGNE, Inc. uses two different manufacturing methods for their bellows. The original Heat Sealed method completely seals out moisture and dust. These bellows are constructed of a specially formulated high quality polyurethane known for its flexibility, abrasion and tear resistance, and very long cycle life. (See material specification data comparison chart). Generally speaking, these are the most economical.

Recently added to the **GAGNE** line are sewn Bellows. This manufacturing process allows for the use of several different materials whose characteristics may be better suited for your particular application. Some examples of this are high heat resistance, applications where acid content is high, or where other agents may be present requiring special resistance characteristics. This process will also allow for the use of thicker materials for heavier duty applications.

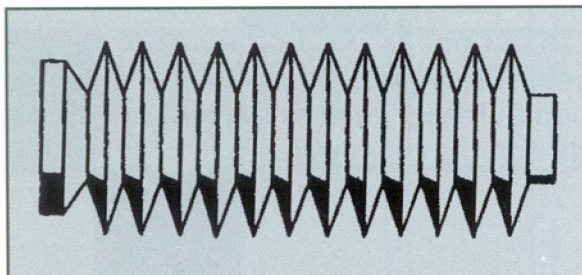
You can be sure of the very highest quality from **GAGNE** - whichever material and manufacturing process is chosen. All of these products are completely made in the U.S.A.

Bellows are used in a wide range of varied applications - wherever the need to exclude dust, dirt, moisture, chips and other environmental contaminants exist. Bellows are used to protect machine operators from pinch points and other dangers from moving parts. They are also used extensively for aesthetic purposes, covering moving and stationary components.

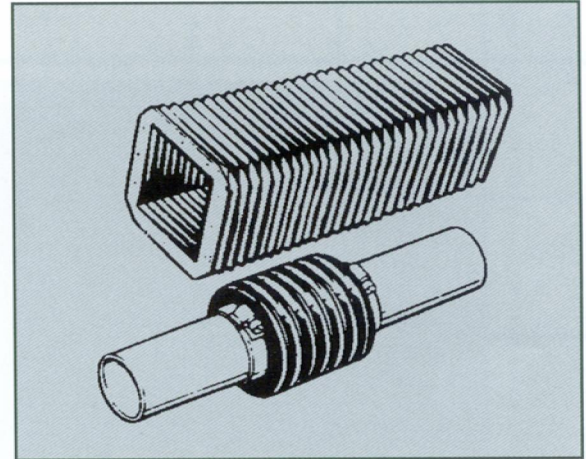
Typical applications for **GAGNE** bellows would include: Cylinder Rods, Linear Ways, Expansion Joints, Traverse Screws, Guide Rods, Air Bladders and Liquid Reservoirs.

Please call our Application Dept. to discuss the particulars of your application. We will recommend the material and manufacturing process that will offer the greatest resistance, the longest cycle life, and the most economical cost for your needs.

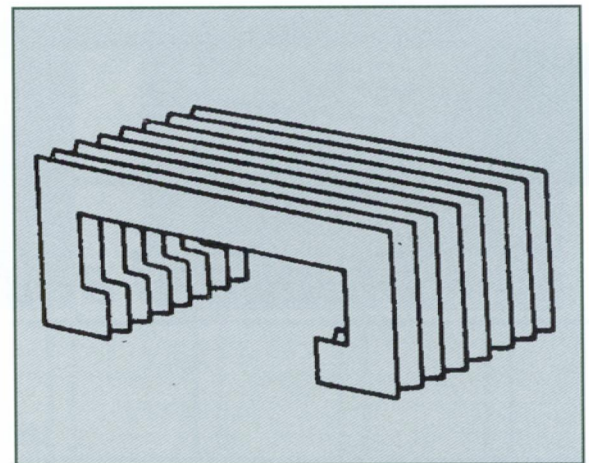
Polyurethane is an excellent material for clean room applications and FDA Food Standards.



Round Bellows



Square & Rectangular Bellows Flexible Connectors



Waycovers

Tooling

Thousands of ID and OD combinations in round, square and rectangular shapes can be made using standard **GAGNE** tooling. Non-standard sizes and shapes can be supplied for nominal costs. We custom manufacture to your specifications.

Heat Sealed Bellows

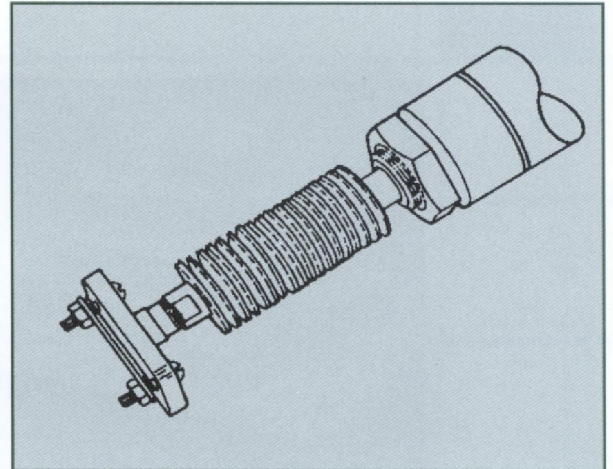
These are completely sealed using RF welding. They can be made in round, square, rectangular, or special shapes to accommodate the requirements of your applications. The materials available in this method are PVC and Polyurethane in a variety of material thickness ranging from .005 to .040 thick. These materials are especially noted for their resistance to ozone, UV light, and are extremely flexible and light in weight.

Tab Corner Sealed Bellows

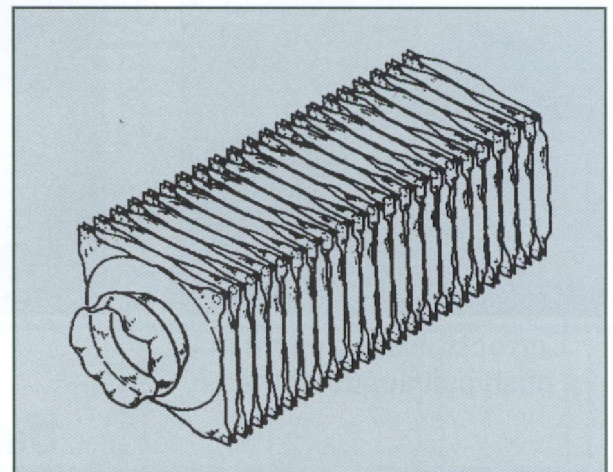
GAGNE has developed and perfected its unique Tab Corner Sealed Bellow. (see drawing) This is especially useful on long vertical applications. The design allows for the more even distribution of convolution expansion where standard round bellows become hyperextended (contorted).

Options

- Foam Breather Vents
- Screen Breather Vents
- Eyelet Grommets
- Ball Screw Guides - Nylon, Metal or Plastic
- Stiffeners - Nylon, Metal or Plastic
- Vinyl Valves, Air Connectors
- Split Bellows
- Notched Bellows
- Flanges (other than OD Diameter)
- Tab Corner Sealed Bellows (see description)
- Special Inspection (Bagging, Tagging, etc.)
- Rubber 'O' Rings / 'Quad' Rings (sealed inside)
- Velcro/Seal Tabs for Joining Split Bellows
- Metal Flange Plates
- Hose Clamps - Nylon or Metal
- Steel, Stainless, Aluminum, PVC Flange Plates
- Zippers



Boot & GAGNE Rod End Coupling on an Air Cylinder



Tab Corner Sealed Bellow

Materials

Polyurethane: Comes in material thickness from .005 to .040. Temp. Range -60F to +225F.

Very resistant to oils, water, ozone, ultraviolet. Very high abrasion resistance and has high tensile strength.

Polyurethane Coated Nylon: Comes in material thickness of .022 in black. Has all the resistance characteristics of Polyurethane with added reinforcement of nylon for additional strength.

PVC: Comes in material thickness from .008 to .020. Temp. Range from +32 to +250F. *Better resistance to acid.*



Air Bladders, Liquid Reservoirs and Specialty Items

GAGNE custom manufactures a wide variety of Air Bladders and Liquid Reservoirs. These would include scientific, industrial, and commercial applications. Because of the requirement that these be completely sealed, they are manufactured using the die cut and heat sealed process.

We also make special products using the Heat Sealed method. Send your drawings to our application dept. to begin application discussions. We will work closely with you from the design phase right through to manufacture and delivery.

Flange Plates

GAGNE will custom manufacture Flange Plates to your specification in a variety of material thickness in Aluminum, Steel, PVC and Stainless Steel. Contact our applications dept. for details.

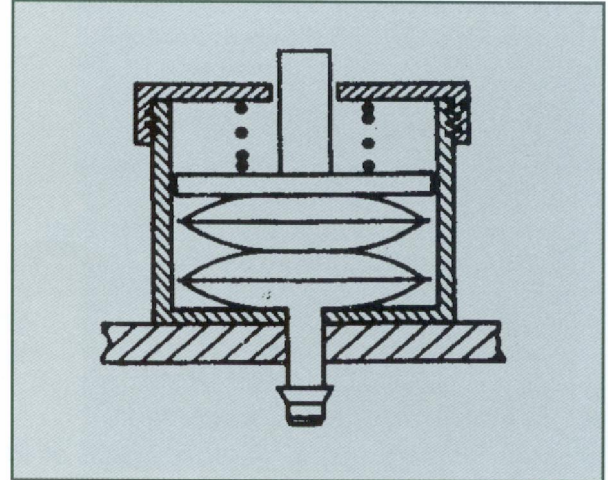
Hose Clamps and Tie Straps

GAGNE stocks a wide range of Stainless Hose Clamps and Nylon Tie Straps. Our application engineers will assist you in selecting what method of attachment will best serve your application.

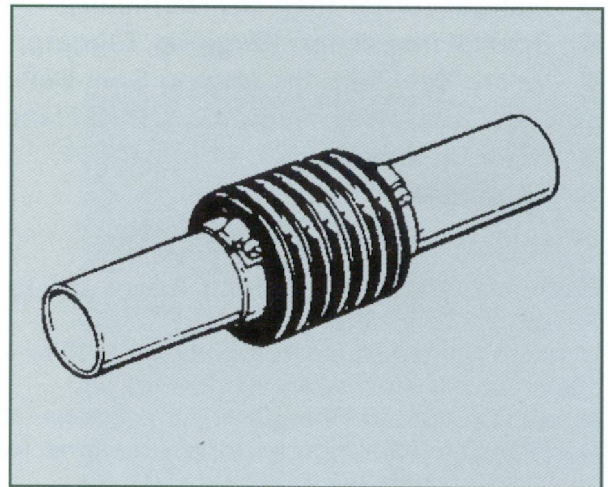
Quotations

To get a Quotation, please complete and fax or mail the appropriate specification sheet or drawing with all dimensional values directly to our applications department. We also have specification sheets on our website for online quote requests www.gagneinc.com. Please also feel free to contact us by phone if you are in need of any assistance.

Whichever style bellows you choose, you can be sure it will be of the highest American Made Quality. We look forward to serving your requirements.



Air Bladders



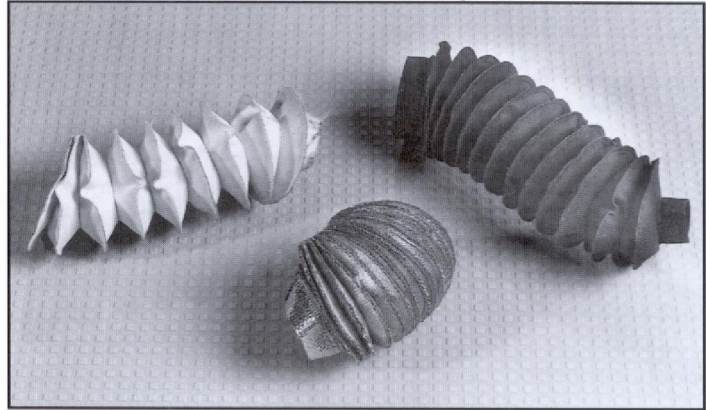
Flexible Connectors

Sewn Bellows

This line of bellows is ideal in the harshest environments where hot chips or a heavy accumulation of chips is present. By the nature of this sewn construction, these bellows are not air/liquid tight. They do have an excellent open to closed ratio. The **GAGNE** Sewn Bellows are ideal for bedway or waycovers as well as circular rod or screw covers.

These are die cut and sewn using Neoprene coated Nylon, Hypalon coated Nylon, Aluminum coated Nomex, Aluminum coated Fiberglass, Teflon coated Fiberglass and Silicone impregnated Fiberglass.

(see materials chart)



Sewn Bellows

Options

- Eyelet Grommets, Screen Vents
- Ball Screw Guides - Nylon, Metal or Plastic
- Stiffeners - Nylon, Metal or Plastic
- Vinyl Valves, Air Connectors
- Split Bellows
- Notched Bellows
- Flanges (other than OD Diameter)
- Special Inspection (Bagging, Tagging, etc.)
- Velcro/Seal Tabs for Joining Split Bellows
- Steel, Stainless, Aluminum, PVC Flange Plates
- Hose Clamps - Nylon or Metal
- Zippers

Materials

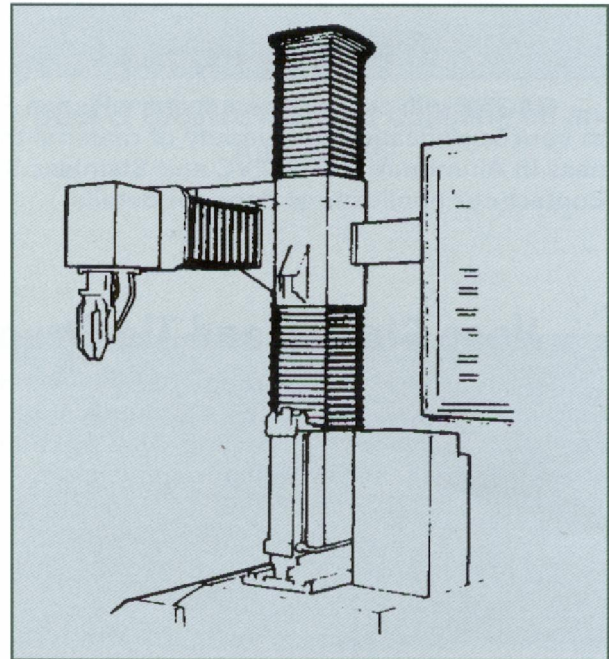
Neoprene Coated Nylon: Temp. Range -60F to +250F.
Resistance to oil and water.

Hypalon Coated Nylon: Temp. Range -60F to +300F.
Resistance to a wide range of chemicals.

Aluminum Coated Fiberglass: Temp. Range -100F to +550F
Resistance to very high temp. applications. (weld splatter/hot chips, etc.)

Teflon Coated Fiberglass: Temp. Range -100F to +500F.
Used in applications where specific chemical attack makes other materials unsuitable.

Silicone Coated Fiberglass: Temp. Range -65F to +500F. Comes in a material thickness of .010 in white. High abrasion resistance and tensile strength.



Robotics

Benefits of GAGNE Bellows

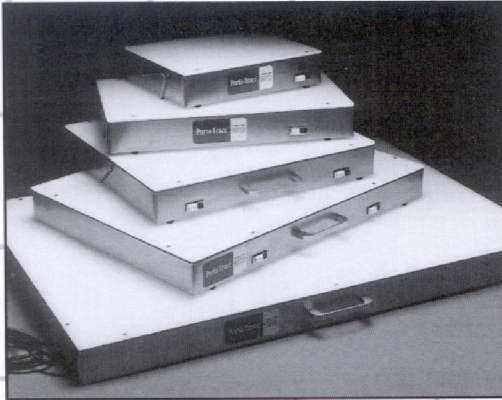
- Prompt Quote Turnaround
- Knowledgeable Application Assistance
- No Minimum Order Quantities
- Made to Your Specification
- Extensive In-House Tooling
- Only the Highest Quality Materials Used
- Increases Life of Rods and Ways
- Increases Performance and Life of lead screws
- Their Use Helps to Prevent Expensive Down Time
- Many Options and Accessories (see chart)
- Very High Quality Customer Service
- Economical
- **Made in the U.S.A.**



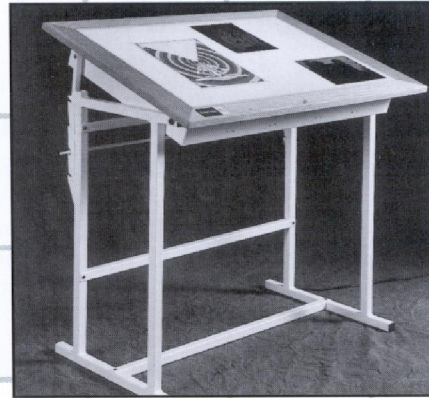
Ask About These Other Fine GAGNE Products

All manufactured in the U.S.A.

Porta-Trace

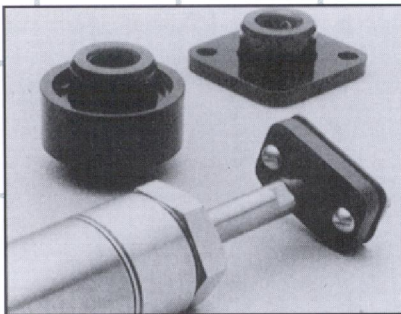


Light Boxes



Light Tables

Rod End Coupling



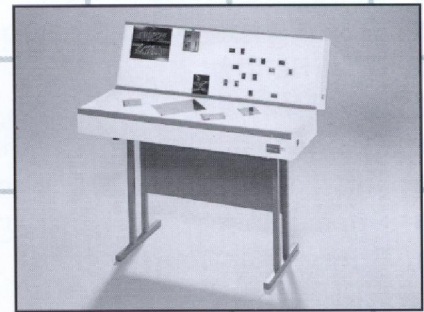
Corrects misalignment in
push pull applications.

Projectors



The Projector

Image Viewing System



Our Pledge to You

We're positive we offer competitive prices
We're positive we'll always be on time with your order
We're positive we have a high quality product
We're positive no order is too big or too small for us to handle
We're positive you'll keep coming back
In fact we're even positive about our competition
(Positive we're better than they are)

GAGNE, INC.

7/00 2.5M CP Printed in USA

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Visit our website at www.gagneinc.com

SPECIFICATION SHEET FOR SQUARE AND RECTANGULAR BELLOWS AND

WAYCOVERS

BELLOWS MATERIALS

NEOPRENE COATED NYLON
BLACK

___ .018 ___ .022 ___ .040

HYPALON COATED NYLON
(BLACK)

___ .022

ALUMINUM COATED FIBERGLASS
___ .020

TEFLON COATED FIBERGLASS
___ .020

SILICONE IMPREGNATED
FIBERGLASS

___ .010 ___ .018

PVC

TRANSLUCENT

___ .008 ___ .012

___ .016 ___ .020

POLYURETHANE

TRANSLUCENT

___ .005 ___ .010

___ .020 (HIGH TEMP)

BLACK

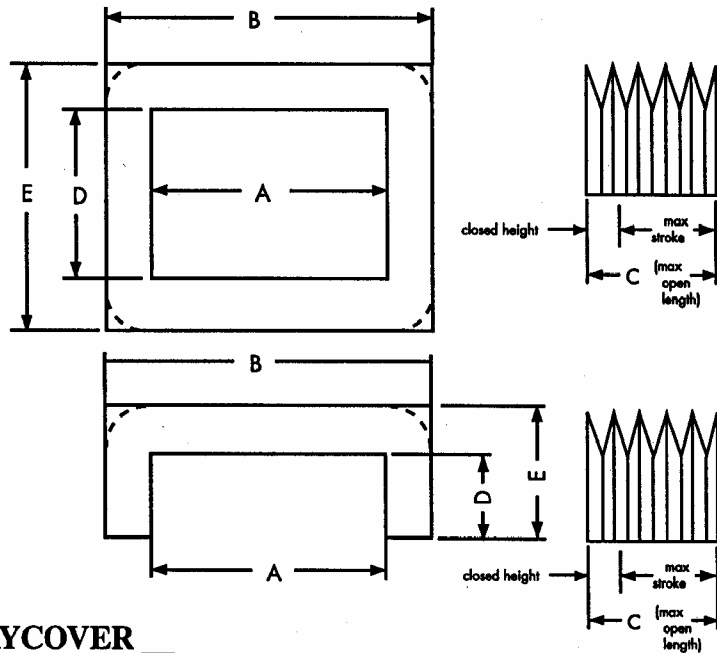
___ .010 ___ .015 ___ .020 ___ .040

___ .010 (HIGH TEMP)

___ .022 (POLY COATED NYLON)

RED

___ .022 (HIGH TEMP)



WAYCOVER ___
BELLOW ___ (Check One)

QTY.(S) OF BELLOWS:

DIMENSIONAL DATA

A _____
B _____
C _____
D _____
E _____
STROKE _____
CLOSED HEIGHT _____

APPLICATION:

HORIZONTAL _____
VERTICAL _____
SMOOTH ROD _____
THREADED ROD _____

SPECIFY POPULAR

OPTIONS:

ZIPPER _____
BREATHER VENTS _____
BALL SCREW GUIDE _____
HOSE CLAMPS _____
STIFFENERS _____
FLANGE PLATES _____
OTHER _____

OPERATING CONDITIONS:

DUST _____ DIRT _____ OIL _____ (WHAT KIND?) _____ WATER _____
CERAMIC DUST OR POWDER _____ CHEMICALS _____ (WHAT KIND?) _____
MUST BELLOWS BE COMPLETELY AIR OR MOISTURE TIGHT? _____ IS VENTING POSSIBLE? _____
#OF STROKES PER MINUTE _____ POSSIBLE MECHANICAL ABUSE? _____
OPERATING TEMP. LIMITS _____ (MAX.)~ _____ (MIN.)
PLEASE LIST ANY SPECIAL CONDITIONS. _____

COMPANY: _____
STREET: _____
CITY _____ STATE. _____ ZIP: _____
CONTACT: _____
TEL: _____
FAX: _____

GAGNE, INC.

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Ph: (800) 800-5954
or visit our website at www.gagneinc.com

(See reverse side)

SPECIFICATION SHEET FOR ROUND BELLOWS

TYPICAL END CONNECTIONS

BELLOWS MATERIALS

NEOPRENE COATED NYLON
(BLACK)

___ .018 ___ .022 ___ .040

HYPALON COATED NYLON
(BLACK)

___ .022

ALUMINUM COATED FIBERGLASS

___ .020

TEFLON COATED FIBERGLASS

___ .20

SILICONE IMPREGNATED FIBERGLASS

___ .010 ___ .018

PVC

TRANSLUCENT

___ .008 ___ .012

___ .016 ___ .020

POLYURETHANE

TRANSLUCENT

___ .005 ___ .010

___ .020 (HIGH TEMP)

BLACK

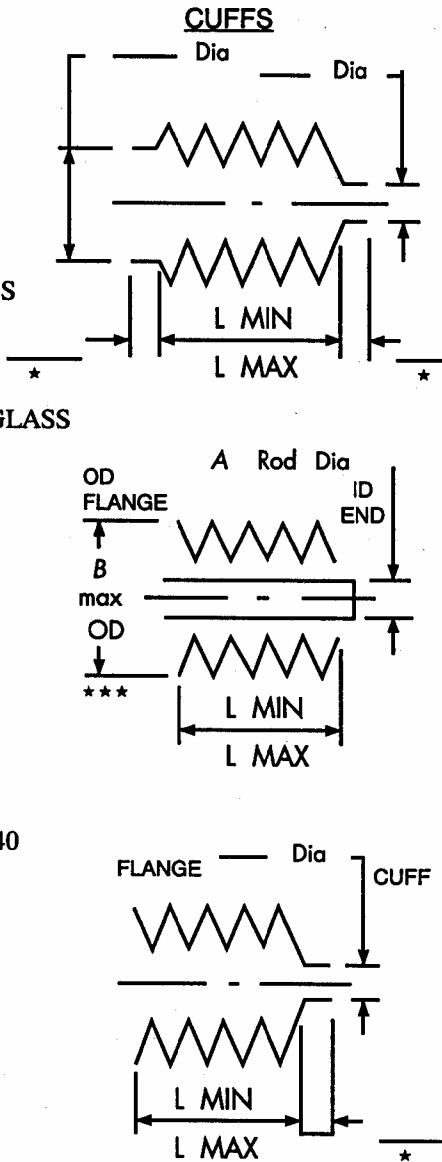
___ .010 ___ .015 ___ .020 ___ .040

___ .010 (HIGH TEMP)

___ .022 (POLY COATED NYLON)

RED

___ .022 (HIGH TEMP)



QTY.(S) OF BELLOWS:

DIMENSIONAL DATA

A. ROD DIA. _____

I.D. _____

B. MAX.* OD _____

LENGTH OPEN _____

LENGTH CLSD. _____

* FOR LOWEST COST SPECIFY
LARGEST POSSIBLE O.D.

PLEASE SPECIFY CUFF OR
FLANGE INFORMATION DIRECTLY
ON DIAGRAMS

APPLICATION:

HORIZONTAL _____

VERTICAL _____

SMOOTH ROD _____

THREADED ROD _____

SPECIFY POPULAR

OPTIONS:

ZIPPER _____

BREATHER VENTS _____

BALL SCREW GUIDE _____

HOSE CLAMPS _____

STIFFENERS _____

FLANGE PLATES _____

OTHER _____

OPERATING CONDITIONS:

DUST _____ DIRT _____ OIL _____ (WHAT KIND?) _____ WATER _____

CERAMIC DUST OR POWDER _____ CHEMICALS _____ (WHAT KIND?) _____

MUST BELLOWS BE COMPLETELY AIR OR MOISTURE TIGHT? _____ IS VENTING POSSIBLE? _____

#OF STROKES PER MINUTE _____ POSSIBLE MECHANICAL ABUSE? _____

OPERATING TEMP. LIMITS _____ (MAX.)~ _____ (MIN.)

PLEASE LIST ANY SPECIAL CONDITIONS. _____

COMPANY: _____

STREET: _____

CITY _____ STATE. _____ ZIP: _____

CONTACT: _____

TEL: _____

FAX: _____

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