

GAGNE, Inc

Protective Covers

Standard and Custom Applications

RF Welded Bellows

Sewn Bellows

Waycovers

CNC Axis Machine Covers

Lift & Table Skirt Covers

Duct Covers

Air Bladders

Liquid Reservoirs

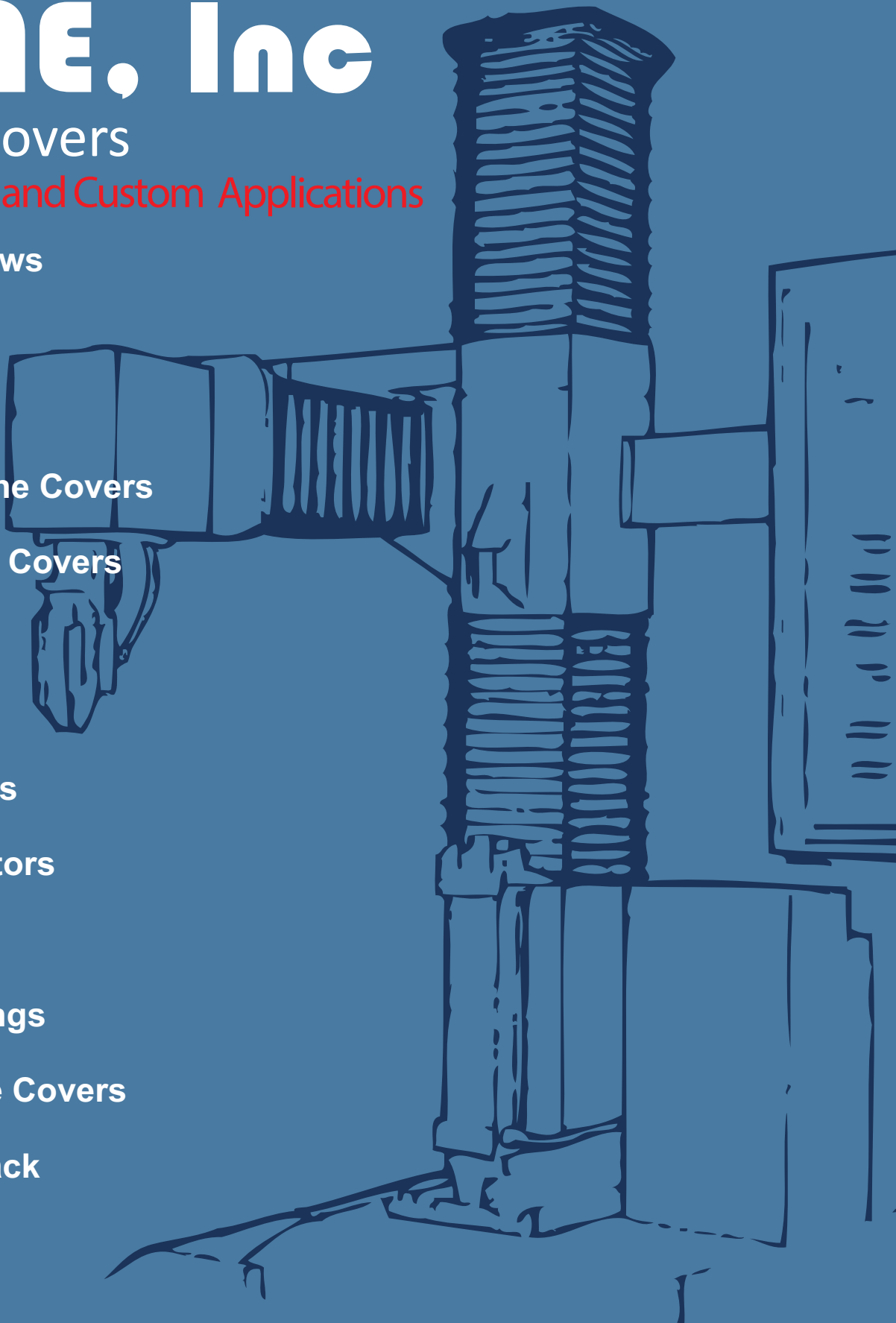
Flexible Connectors

Sleeves

Rod End Couplings

Custom Machine Covers

Chain & Wire Track



Manufacturer / Distributor
of Products for Industry

GAGNE, INC.

41 Commercial Drive Johnson City, NY 13790
800.800.5954 toll free * 607.729.7644 fax

www.gagneinc.com
sales@gagneinc.com

Boots, Bellows, Way covers, Air Bladders, Liquid Reservoirs, Flexible Connectors

For over 65 years, **GAGNE INC** has engineered, manufactured and marketed a line of high quality, dependable protective cover products for the engineering and industrial field by incorporating our unique manufacturing process.

Amongst the list are bellows, boots, way covers, air bladders and liquid reservoirs. The high quality **GAGNE** products are tough and experience a high cycle life.

GAGNE employs two different manufacturing methods for our bellows.

The original Heat Sealed method completely seals out moisture and dust. The bellows are constructed of specially formulated high quality polyurethane known for its flexibility, abrasion and tear resistance and long cycle life.

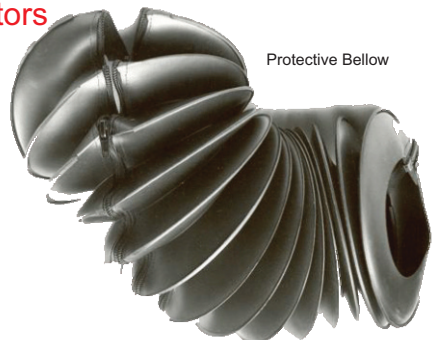
Our second line of bellows is our sewn covers. This manufacturing process allows for the use of various materials who characteristics may be better suited for a particular application. Some examples are high heat resistance, high acid content, or where agents may be present requiring special resistance characteristics. The sewing process also allows 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 made in the USA and sourced from American vendors.

Bellows are used in varied applications when there is a need to exclude dust, dirt, moisture, chips and other environmental contaminants. Bellows are used to protect machine operators from pinch points and moving parts. Bellows are also used for aesthetic purposes, covering moving and stationary components.

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

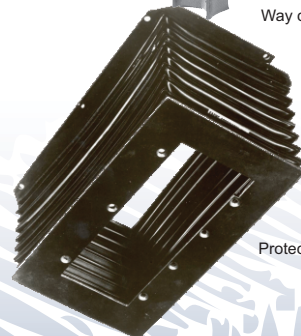
Please our Sales Engineers to discuss the details of your application. We will recommend the appropriate material and manufacturing process that will offer the best solution - highest quality, longest life cycle, at the most economical price.



Protective Bellow



Way cover



Protective Bellow

Vinyl Bellows

GAGNE 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.

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

Heat Sealed Bellows

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



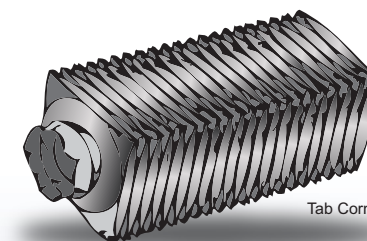
RF Sealed Bellows

Tab Corner Sealed Bellows

GAGNE developed and perfected its unique Tab Corner Sealed Bellows. This is especially useful on long vertical applications. The design allows for the even distribution of convolution expansion where standard round bellows become hyper-extended and contorted.



RF Sealed Bellows with Flange



Tab Corner Sealed Bellows

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 Splits Bellows
- Metal Flange Plates
- Hose Clamps - Nylon or Metal
- Steel, Stainless, Aluminum, PVC Flange Plates
- Zippers

Materials

Polyurethane: Comes in the material thickness from .005 to .040 Temp. Range -60F to +225F Very resistant to oils, water, ozone, ultraviolet. Very high abrasion resistance and high tensile strength.

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

PVC: Come in material thickness from .008 to .020 Temperature range from +32 to +250F Better resistance to acid.

Air Bladders, Liquid Reservoirs & Specialty Items

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

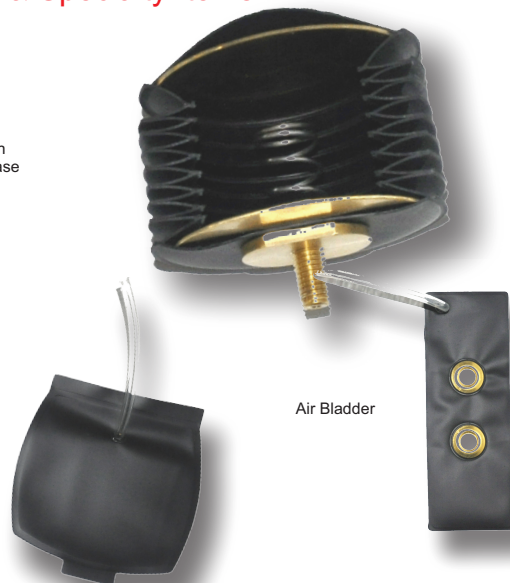
We also make special products using the heat sealed method. Send your drawings to our sales engineers to begin application discussions. We will work closely with you from the design phase through to manufacture and delivery.

Flange Plates

GAGNE will manufacture Flange Plates to your specification in a variety of material thicknesses in aluminum, steel, PVC, and stainless steel. Contact our sales engineers for details.

Hose Clamps and Tie Straps

GAGNE stocks a wide variety of stainless steel hose clamps and nylon tie straps. Our sales engineers will assist you in selecting what method of attachment will best serve your application.



Air Bladder

Sewn Bellows

The **GAGNE** sewn line of bellows is ideal in the harshest environments where hot chips, dust, or other damaging materials may be present. By the nature of this sewn construction, these bellows are not air/liquid tight. They have an excellent open to close ratio. The GAGNE sewn bellows are ideal for bedway or way covers as well as circular rod or screw covers.

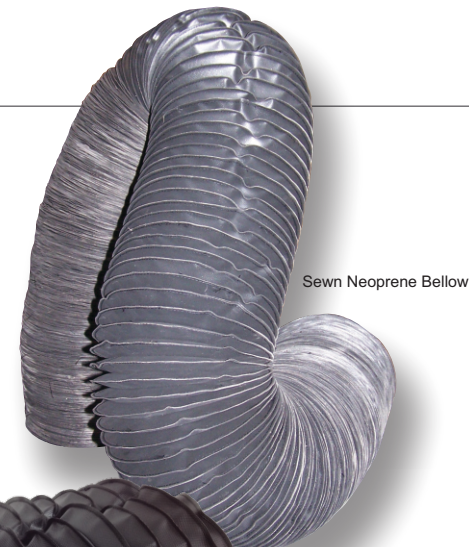
These are die cut and sewn using neoprene coated Nylon, Hypalon coated Nylon, Aluminum coated Nomex, Aluminum coated Fiberglass, Teflon coated Fiberglass and Silicone impregnated Fiberglass.

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

Benefits of **GAGNE** Bellows

- Prompt quote turnaround
- Knowledgeable application assistance
- No minimum order quantities
- Made to your specification
- Extensive in-house tooling
- Highest quality materials used
- Increases life of rods and ways
- Increases performance and life of lead screws
- Helps prevent expensive down time
- Many options and accessories
- Very high quality customer service
- Economical
- Made in USA



Sewn Neoprene Bellows



Sewn White Urethane Bellows

Materials

- **Neoprene Coated Nylon:** Temp range -60F to +250F
Resistance to oil and water
- **Hypalon Coated Nylon:** Temp range -60F to +300F
Resistance to wide range of chemicals
- **Aluminum Coated Fiberglass:** Temp range -10F 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 attacked
makes other materials unsuitable
- **Silicon Impregnated Fiberglass:** Temp range -65F to +500F
Comes in material thickness of .010 in white. High abrasion
and tensile strength

Quotation

To get a quotation, please email the appropriate specification sheet and send drawing with all dimensional values directly to our sales engineering department. We also have specification on our website for online quote requests at www.gagneinc.com.

Also, please feel free to contact us by phone if you are in need of assistance.

Whichever style bellows you choose, you can be sure it will be of the highest American made quality. We look forward to discussing your requirements.

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GAGNE, INC.

Round Bellows

Specification Sheet

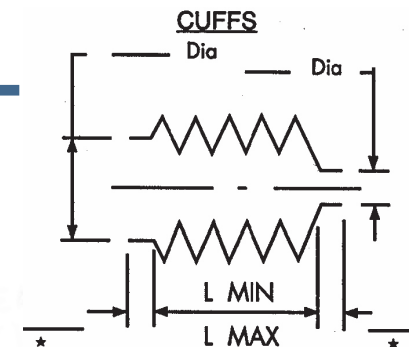
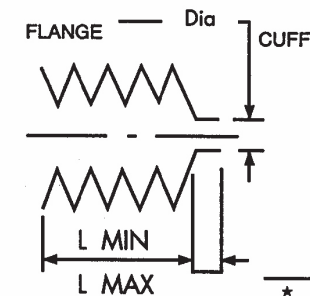
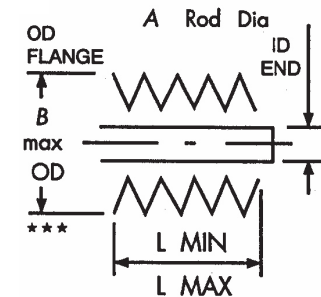
Bellows Material

- Neoprene Coated Nylon (Black):
____.018 _____.022 _____.040
- Hypalon Coated Nylon (Black):
____.022
- Alumnum 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)
- Polyurethane (Black)
____.010 _____.010 (High Temp)
____.015 _____.020 _____.040
____.022 (Poly Coated Nylon)

RF Sealed



Sewn



Operating Conditions:

check available

- ___ Dust
- ___ Dirt
- ___ Oil - what kind _____
- ___ Water
- ___ Ceramic Dust or Powder
- ___ Chemicals - what kind _____

___ Bellows must be completely air or moisture tight

___ Venting is possible

___ # Strokes per minute

___ Possible mechanical abuse

Operating Temp. Limits:

___ Max. ___ Min.

Please list any special conditions:

Qty. (s) of Bellows:

Dimensional Data:

A. Rod Dia. _____

I.D. _____

B. Max. * OD _____

Length Open _____

Length Closed _____

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 _____

Online Spec Sheet

www.gagneinc.com/bellows/online-spec-sheet/

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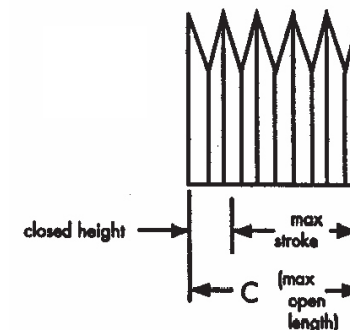
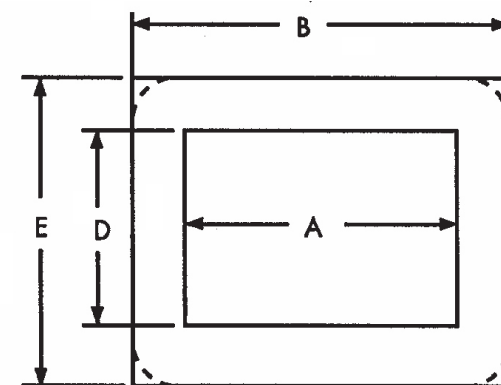
GAGNE, INC.

Rectangular Bellows

Specification Sheet

Bellows Material

■ Neoprene Coated Nylon (Black):	___ .018	___ .022	___ .040
■ Hypalon Coated Nylon (Black):	___ .022		
■ Alumnum 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)
■ Polyurethane (Black)	___ .010	___ .010 (High Temp)	
	___ .015	___ .020	___ .040
	___ .022 (Poly Coated Nylon)		



Operating Conditions:

check available

- ___ Dust
- ___ Dirt
- ___ Oil - what kind _____
- ___ Water
- ___ Ceramic Dust or Powder
- ___ Chemicals - what kind _____

___ Bellows must be completely air or moisture tight

___ Venting is possible

___ # Strokes per minute

___ Possible mechanical abuse

Operating Temp. Limits:

___ Max. ___ Min.

Please list any special conditions:

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 _____

Online Spec Sheet

www.gagneinc.com/bellows/online-spec-sheet/

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Waycovers

Specification Sheet

Review shape in models to the right
and include dimensions
(W, H, A, a, B, C, D, E, F, as applicable)

Operating Conditions:

check available

___ Dust
___ Dirt
___ Oil - what kind _____
___ Water
___ Ceramic Dust or Powder
___ Chemicals - what kind _____

___ # Strokes per minute
___ Possible mechanical abuse

Operating Temp. Limits:

___ Max. ___ Min.

Please list any special conditions:

Qty.(s) of Bellows:

Application

Horizontal _____

Vertical _____

Smooth Rod _____

Threaded Rod _____

Specify Popular Options:

Zipper _____

Breather Vents _____

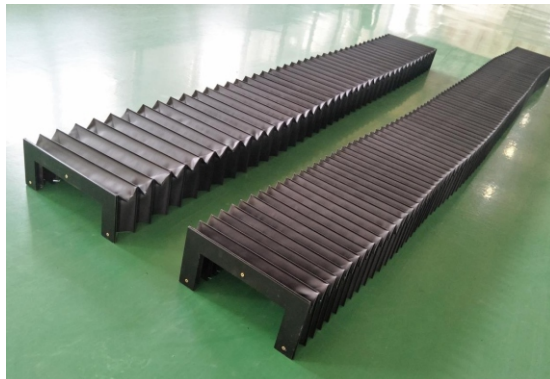
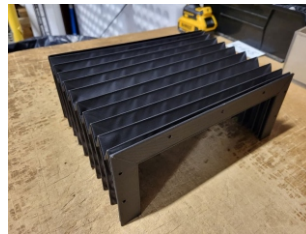
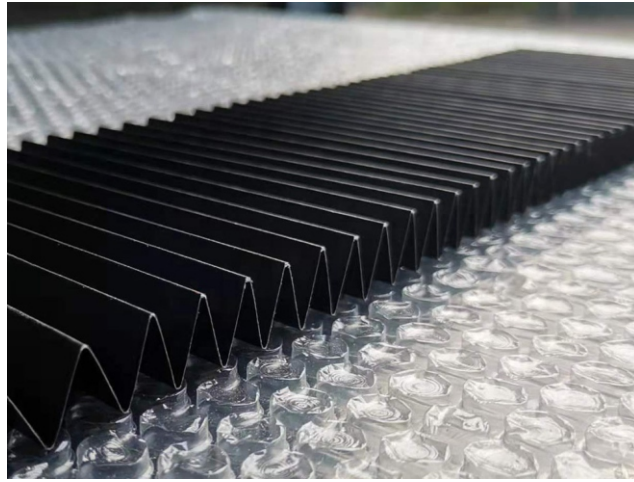
Ball Screw Guide _____

Hose Clamps _____

Stiffeners _____

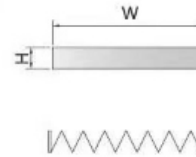
Flange Plates _____

Other _____

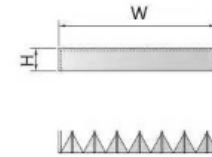


Further customization available. Built to Specification.
Engineering fees may apply if Gagne has to re-engineer, design and draw

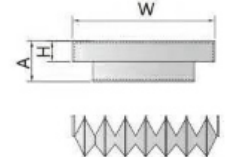
■ 1 ■



■ 2 ■



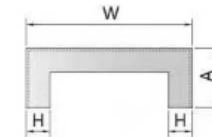
■ 3 ■



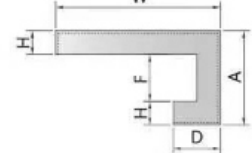
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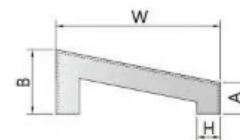
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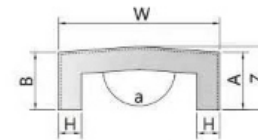
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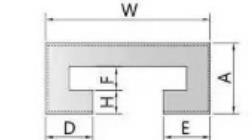
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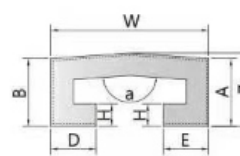
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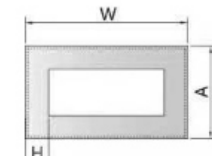
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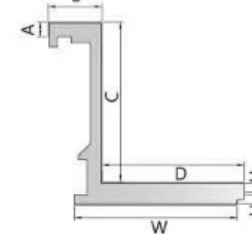
■ 10 ■



■ 11 ■



■ 12 ■



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Lift Skirts

Specification Sheet

Quantity of Units:

Skirting Type:

☐ Lift Skirting

☐ Tilt Skirting

Number of Sides:

***If requesting custom number of sides please call (800) 800-5954

☐ 1

☐ 2

☐ 3

☐ 4

Table Mounting

Top Collar

☐ A

☐ B

Bottom Collar

☐ A

☐ B

If your lift is pit mounted does it have a beveled toe guard

☐ Yes

☐ No

Options

Fold Width

☐ 3.0" (most economical)

☐ 2.5"

☐ 2.0"

☐ 1.5"

Stiffening Wires

☐ Yes

☐ No

Vents

☐ Yes

☐ No

Upper Mounting Hardware

☐ Steel Flatbar

☐ Aluminum Flatbar

☐ None

Lower Mounting Hardware

☐ Steel Flatbar

☐ Aluminum Flatbar

☐ Weighted Rod

☐ None

Extras:

Choose all that apply

☐ Velcro Top

☐ Velcro Bottom

☐ Maintenance Ties

☐ Velcro Corner Separation (for skirting needing wraparound installation)

☐ Flame Retardant Skirting

Colors

Standard Colors

☐ Yellow & Black

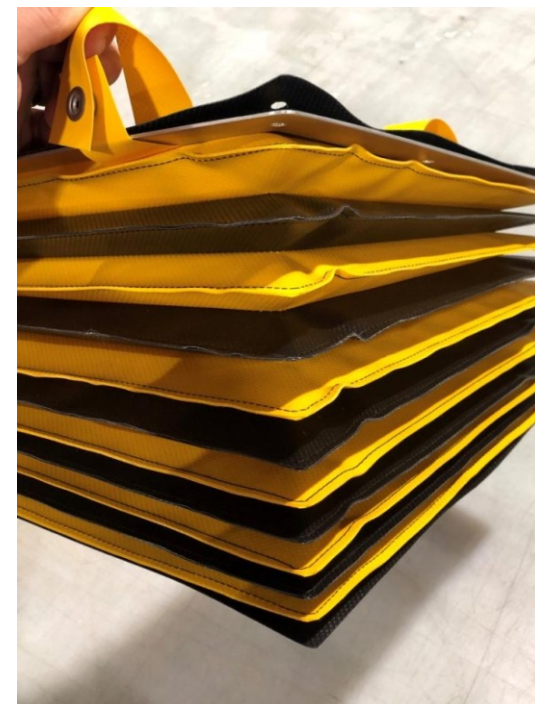
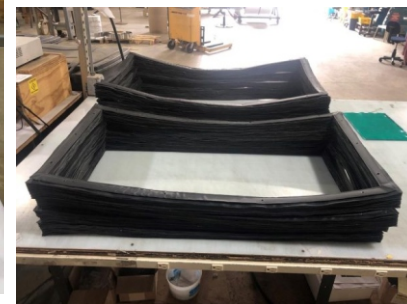
☐ Yellow

☐ Black

Custom Colors

***Increased Cost

Further customization available. Built to Specification.
Engineering fees may apply if Gagne has to re-engineer, design and draw



Online Spec Sheet

www.gagneinc.com/lift-skirts/

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GAGNE, INC.

Duct Covers

Industries Served:

- HVAC
- Mining
- Shipbuilding
- Aerospace
- Furniture manufacturing
- Municipal engineering
- Airport boarding bridges
- Laboratory and underground engineering
- Fire and smoke



Option - Flexible ducts with bag - one-piece construction, convenient for storage after use



Option - Buckle connectors, Hose Clamps or Duct Connector Ring



Option - Velcro and zipper cuffs are available



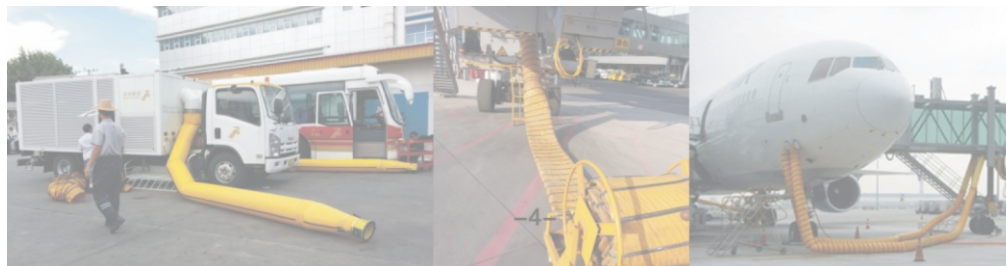
Option - Variable branch design



Option - Various materials -
Example, PVC tube w/ reinforced hose

Project Example

- High Temp Silicon Fiberglass
- Cuffs with buckles for easy tightening
- Interior buckle to cinch down Duct for Storage
- Brand sewn into straps for theft control



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GAGNE INC.
Push-Pull Rod-End Couplings
with free aligning action

for Air Cylinders, Hydraulic Cylinders and Similar Applications



Reduces Maintenance Costs & Downtime



Helps Compensate for Deflections

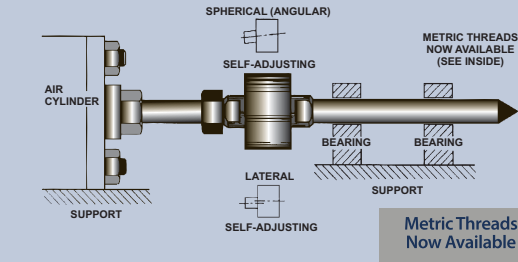


Automatically Adjusts to Four-In-Line Supports

Tested, Low-Cost, Off-the-Shelf Hardware

Standard Sizes to 39,000 lbs. Capacity

Zinc Plate Surface Treatment Minimizes Rust



Function

Where air or hydraulic cylinders are designed to drive a machine slide, this questions should always be asked: if the machine deflects under load, and the installation or maintenance mechanic does a less than perfect job of alignment, what will this do to slide action?

The answer is usually "nothing" for clevis or trunion mounted cylinders but where space mounting requirements or length of stroke rule out the clevis type mount, then trouble can develop. Installation inaccuracy, subsequent wear of slide bearings, or deflection under gravity and operating loads can throw a heavy side load on the cylinder rod as it passes through the gland. Results are likely to be:

1. Binding of rod, with jerky action or stalling under load
2. Excessive wear of glad, causing leaks
3. Excessive downtime

The Gagne Rod-End Coupling is designed to correct this problem at the source by transmitting the push-pull cylinder forces but relieving all side forces (under usual conditions). **Lateral displacement:** the coupling is designed to up accept 1/32 inch in the smaller sizes, more in the larger sizes. **Angular displacement:** the coupling will operate freely even though misaligned as much as 1 degree.

Costs

Many designers recognize this 4-bearing problem during design and provide their own special automatic adjusting device. But costs of the "home-made" product will include some or all of these factors.

- Costs eliminated by purchased couplings:
1. Design and detailed time
 2. High shop costs for a custom machined device
 3. Excessive debugging and maintenance if the designed has bee less than perfect
 4. Reduce downtime

Thrust Capacity

All parts in Gagne Rod-End Couplings are steel, and the couplings will accept in "push" the full shear strength of the cylinder rod thread. The "pull" strength of the Type "A" Flange Coupling is determined by other components, such as the mounting bolts or the cylinder rod thread (normally this is many times the force which the fluid can exert on the piston). The "pull" strength of the Type "B" and "C" Couplings is determined by the shear strength of the heavy-duty snap ring, which is listed in the chart at the right.

Sizes

Thread Sizes are regularly offered to fit all standard air and hydraulic cylinders within the range of ordinary use. Larger sizes or special borings will be quoted on request, including metric and stainless steel couplings.

STYLE "A"

	A	B	D	E	F	G	H	L	N	P	T	T
	Hub Dia	Across Wrench Flats	Flange Width	Bolt Spacing	Flange Overall	Bolt Hole Dia	Flange Thickness	Length Back Coupling	No. Mtg. Holes	Back Plate Thickness	(Standard) Recommended Thread Sizes (NC or NF to suit)	(Metric) Recommended Thread Sizes (State Pitch)
1	Minimum - not regularly available											
2	.480	.437	1.250	1.388	1.625	.792	.312	.750	2	.062	48, #10, 1/4, 5/16, 3/8	M4, M5, M6, M7, M8
3	.670	.562	1.500	1.750	2.375	.912	.312	.875	2	.062	5/16, 3/8, 7/16, 1/2	M6, M7, M8, M10
4	1.125	-	-	1.625	2.500	1.312	.375	1.000	4	.125	7/16, 1/2, 5/8, 3/4, 7/8	M10, M12, M14, M16, M18
5	1.500	-	-	1.937	2.750	1.312	.375	1.125	4	.125	3/4, 7/8, 1	M16, M18, M20, M22, M24
6	1.875	-	-	2.500	3.500	1.732	.500	1.375	4	.125	1-1/4	M22, M24, M26, M30
7	2.375	-	-	2.875	4.000	2.132	.500	1.500	4	.125	1-1/4, 1-1/2, 1-3/4, 1-7/8, 2	M30, M36

Thread sizes given in green not recommended for hydraulic cylinders - use next size coupling.

STYLE "B"

	A	B	C	J	L2	T	T	
	Hub Dia	Across Wrench Flats	Coupling Dia	Length Rod Socket	Length Overall	(Standard) Recommended Thread Sizes (NC or NF to suit)	(Metric) Recommended Thread Sizes (State Pitch)	Rated Max Tensile Load, Lbs.*
1	Minimum - not regularly available							
2	.480	.437	1.000	.750	1.531	48, #10, 1/4, 5/16, 3/8	M4, M5, M6, M7, M8	4,000
3	.670	.562	1.500	.875	1.781	5/16, 3/8, 7/16, 1/2	M7, M8, M10	6,200
4	1.125	-	2.000	1.000	2.031	7/16, 1/2, 5/8, 3/4, 7/8	M10, M12, M14, M16, M18	11,400
5	1.500	-	2.500	1.125	2.281	3/4, 7/8, 1-1/4	M16, M18, M20, M22, M24	18,950
6	1.875	-	3.000	1.375	2.781	1	M22, M24, M26, M30	28,100
7	2.375	-	3.500	1.500	3.031	1-1/4, 1-1/2, 1-3/4, 1-7/8, 2	M30, M36	39,300

* Determined by retaining ring capacity. Allows a safety factor of 4. Thread sizes given in green not recommended for hydraulic cylinders - use next size coupling.

STYLE "C"

	A	B	C	J	L2	T	T	
	Hub Dia	Across Wrench Flats	Coupling Dia	Length Rod Socket	Length Overall	(Standard) Recommended Thread Sizes (NC or NF to suit)	(Metric) Recommended Thread Sizes (State Pitch)	Rated Max Tensile Load, Lbs.*
1	Minimum - not regularly available							
2	.480	.437	1.000	.750	1.531	48, #10, 1/4, 5/16, 3/8	M4, M5, M6, M7, M8	4,000
3	.670	.562	1.500	.875	1.781	5/16, 3/8, 7/16, 1/2	M7, M8, M10	6,200
4	1.125	-	2.000	1.000	2.031	7/16, 1/2, 5/8, 3/4, 7/8	M10, M12, M14, M16, M18	11,400
5	1.500	-	2.500	1.125	2.281	3/4, 7/8, 1-1/4	M16, M18, M20, M22, M24	18,950
6	1.875	-	3.000	1.375	2.781	1	M22, M24, M26, M30	28,100
7	2.375	-	3.500	1.500	3.031	1-1/4, 1-1/2, 1-3/4, 1-7/8, 2	M30, M36	39,300

* Determined by retaining ring capacity. Allows a safety factor of 4. Call factory for studs available in metric sizes. Thread sizes given in green not recommended for hydraulic cylinders - use next size coupling.

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