

# DYNATECT®

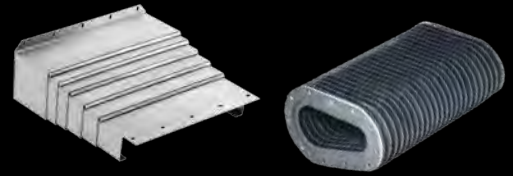
DYNAMIC EQUIPMENT PROTECTION

Global Leaders in Dynamic Protection  
for Equipment and People

## DESIGN GUIDE

### PROTECTIVE COVERS

GORTITE® MACHINE PROTECTION  
GORTITE® ROLL-UP DOORS



### CABLE & HOSE CARRIERS

GORTRAC® NYLATRAC®  
NYLATUBE® GORTUBE®



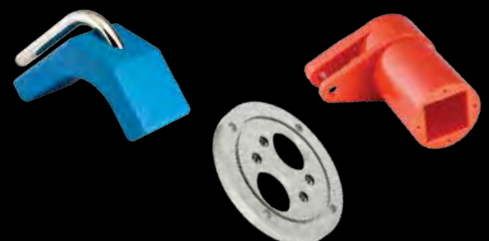
### MECHANICAL MOTION CONTROL

POLYCLUTCH® SLIP CLUTCHES  
LSI PRECISION BALL SCREWS



### ELASTOMER COMPONENTS

RO-LAB CUSTOM MOLDED  
RUBBER & URETHANE





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Machine Tool & Automation, Maintenance, Repair & Operations

# COMPANY INFORMATION

## DYNAMIC PROTECTION = DYNATECT

The name comes from the words 'dynamic' and 'protection' because it is the accumulation of over 70 years of experience producing flexible protection for equipment in motion.

## HOW IT ALL STARTED

Over 70 years ago, when founder Gerald "Doc" O'Rourke saw that neighborhood kids needed footballs and basketballs, he started a basement operation to provide them. After introducing a line of sewn leather industrial bellows, Dynatect (formerly A&A) began designing and manufacturing components used in virtually all types of equipment and machinery, becoming a single-source provider for machine protection, cable/hose management, and compartment roll-up doors. (Slip clutches, ball screws, and molded products were added in the last decade).

Today, Dynatect is a market leader in industrial equipment protection with six production facilities and over 500 employees worldwide. Dynatect provides customer proximity all over the world thanks to its subsidiaries in Europe and Asia.

### BELLOWS: THEN AND NOW



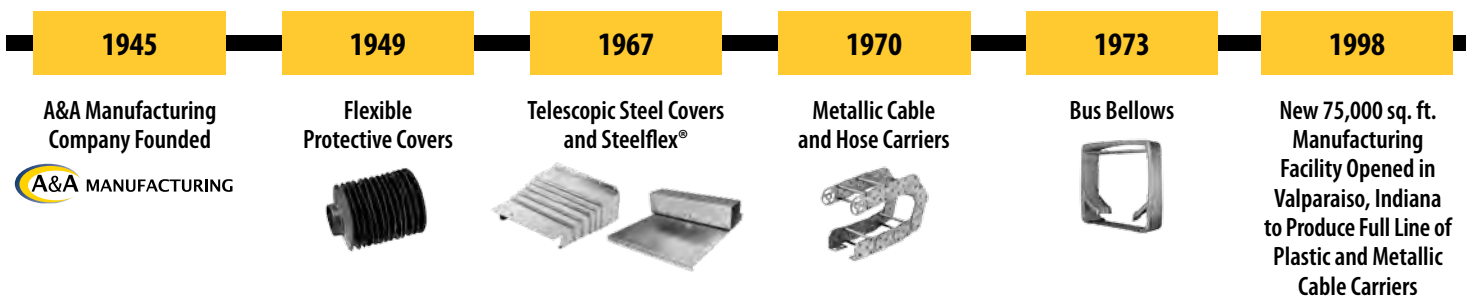
## OUR COMMITMENT TO YOU: LISTEN AND DELIVER A PRACTICAL AND COST-EFFECTIVE SOLUTION

As you browse through this catalog, consider the designs you see here as merely a starting point. We're always ready to innovate and we will customize your design whether you need just one piece or thousands. Our engineers and application specialists are keen listeners, and they understand that knowing the details of your situation is key to coming up with the perfect solution. We can draw from over 500,000 customized solutions to offer you the widest range of flexibility, backed by a unique blend of design ingenuity and support from concept through application.

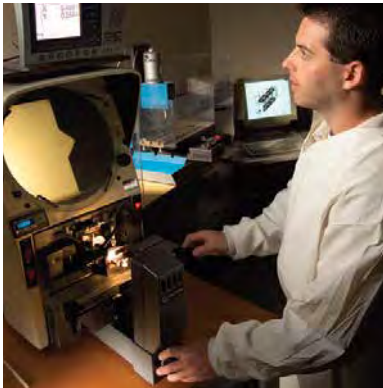
## LOCATIONS AND PRODUCT DIVISIONS

- New Berlin, Wisconsin, USA** ..... Global headquarters and production for Gortite<sup>®</sup> and Polyclutch<sup>®</sup> line  
Manufacturing, Engineering, Customer Service
- Valparaiso, Indiana, USA** ..... Gortrac<sup>®</sup> cable carriers and Gortite roll-up doors  
Manufacturing & Engineering
- Traverse City, Michigan, USA** ..... Dynatect LSI: ball screw products, ball screw repair  
Manufacturing & Engineering
- Tracy, California, USA** ..... Dynatect Ro-Lab, molded rubber, urethane and plastics  
Manufacturing & Engineering
- Schwaig, Germany** ..... Dynatect Europe, Formerly Halltech GmbH  
Europe Sales & Support
- Bielefeld, Germany** ..... Formerly MFB-Technik Schillig  
Manufacturing and Engineering

## DYNATECT TIMELINE







**DYNATECT ADVANTAGES**








- Broad network of 50+ local factory-trained representatives offer onsite support, technical advice and recommendations
- Speak directly to application specialists to receive upfront design assistance
- Fast delivery of customized products, from concept to application
- We will design and manufacture a turnkey engineered assembly (and one-time projects are not a problem!)
- Access to new solutions for your industry, thanks to our active product research and development programs
- Access to a broad range of materials including metal, engineered plastics, elastomers, and over 120 specialty textiles
- The ultimate design flexibility:
  - Dynatect has the largest portfolio of protective covers, and is the only North American manufacturer of both plastic and metallic cable carriers
  - We can meet your needs from standard offerings to custom-engineered products configured around your application
- Regular repeat orders? Dynatect has kanban and JIT programs to ensure reliable delivery with minimal inventory

**DESIGN AND ENGINEERING CAPABILITIES**

- 2D and 3D design from engineering, to approval, to manufacturing
- Automated CAD-to-CAM processes
- R&D, design, and reverse engineering
- Leading-edge testing capabilities
- Free web conferencing service to quickly assemble a design team to facilitate engineered solutions

**MANUFACTURING CAPABILITIES**

- Laser and waterjet cutting
- Horizontal and vertical machining
- Precision grinding
- Precision bending
- Thermoset extruding
- Automotive-grade painting
- Welding (metal and thermoplastics)
- Sewing
- Spring winding
- Assembly and finishing (buffing, painting, plating)
- Custom molding of plastics (injection, compression, transfer, RIM, hot cast)
- Ball screw and metal way cover repair and refurbishment
  - Full inventory of replacement parts to rebuild your assembly
  - Ability to reverse engineer and replace sub-components

2000	2001	2008	2012	2013	2014
Roll-Up Doors 	Protective Covers Line Expanded to Include: Thermic-Weld Bellows, Door Actuators, Safety Roll-Up Curtains  Acquired	Slip Clutches  Acquired	Custom Molding Capabilities and Europe Sales & Support   Acquired	Custom Ball Screws and Dip-Molded Bellows  Acquired	Umbrella Brand Name for All Products 

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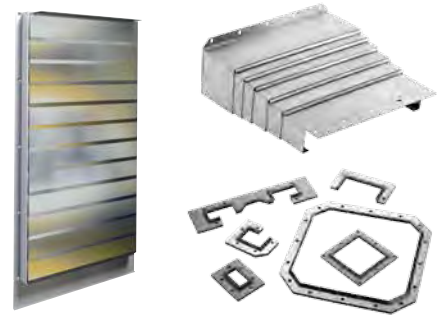
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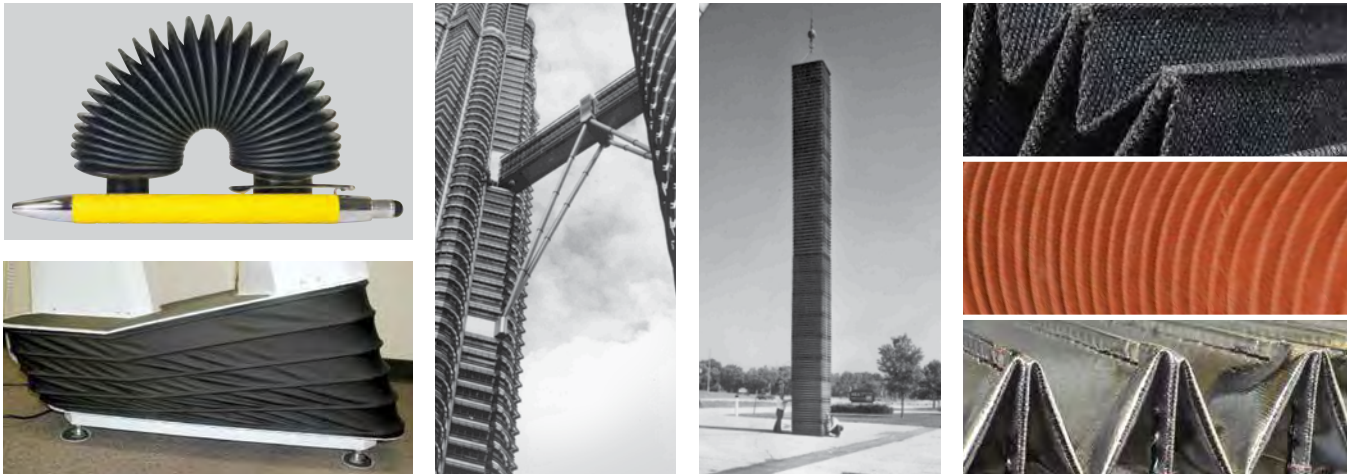
# BELLOWS-TYPE COVERS

## FOR MACHINE PROTECTION, CONTAINMENT, DUCTING & MORE

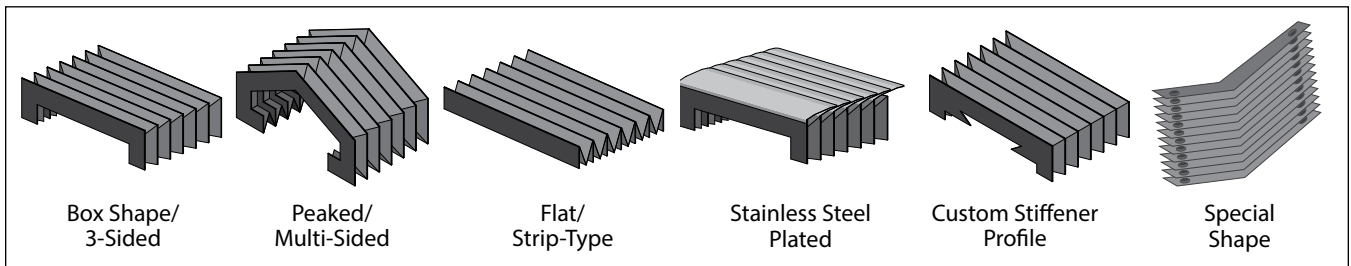
The most common function of a bellows is to extend the life of your valuable equipment by keeping out contaminants, such as abrasive particles and metal chips. Other purposes include:

- Covering pinch points
- Concealment of mechanical part for aesthetic purposes
- Air flow or ducting
- Flexible seal between two joints with relative movement

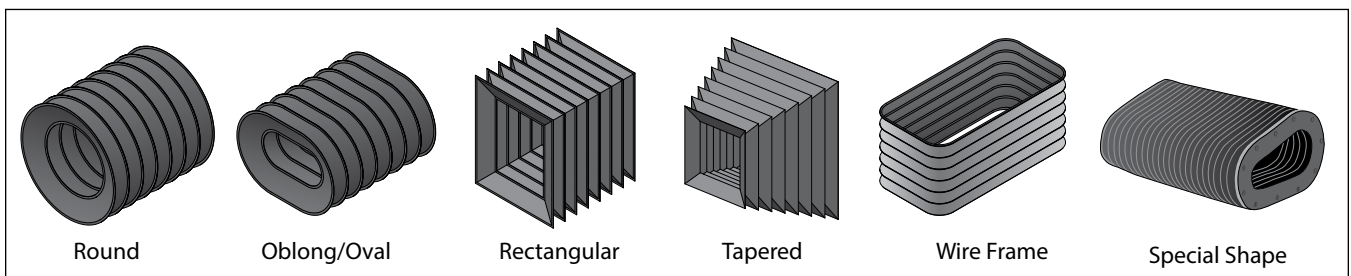
### ANY SIZE, ANY SHAPE • CUSTOM-ENGINEERED BELLOWS SINCE 1960 • WIDE VARIETY OF MATERIALS



### FLAT/BOX STYLE BELLOWS (LINEAR RAILS, WAY PROTECTION, SCREEN-TYPE BARRIERS, ETC.)



### ENCLOSED-SHAPE BELLOWS (SCREW COVERS, BOOTS, SEALS, MECHANICAL LIFT ENCLOSURES, DUCTING, ETC.)



### HOW TO REQUEST A QUOTE

If you are sending in an old bellows to be quoted, please contact Dynatect for a Material Authorization # (RMA).

- For Enclosed-Shapes, see pages 15-16
- For Way Cover Bellows, see pages 17-19
- For Gordillo Bellows, see pages 20-22
- For Flat/Strip Covers, see page 23
- For Lift Covers, see pages 24-25
- For Stock Bellows, see page 32



# BELLOWS APPLICATIONS

## CUSTOM PROTECTION FOR EVERY APPLICATION

Dynatect's line of custom-engineered bellows provides a wide choice of materials and manufacturing methods. Dynatect can recommend a solution tailored to your particular application and requirements. Dynatect has designed bellows for countless applications, including:

- Machine way and ball screw protection
- Laser bellows
- Cameras and imaging equipment
- Tilt or medical lift table
- Lab and metrology equipment
- Shift/joystick boots
- Transportation bellows
- Medical bellows



Weld Spatter or Elevated Temperatures



Light or Indirect Abrasives



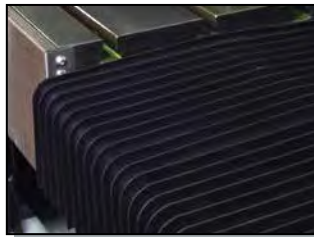
Shear/Tilt/Lateral Movement



Large Size or Long Lengths



Laser Beam Path



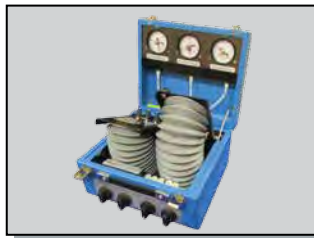
Chemical, Oil or Coolant Resistance



Air Ducting (exhaust, ventilation)



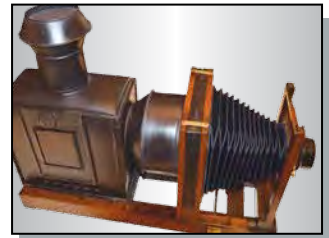
Outdoor Environment (moisture, heat, freezing, UV, ozone, dirt)



Medical Devices



Mechanical or Scissors Lift



Light-Tight Bellows


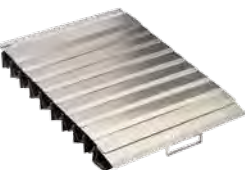


Long Travel (Example: Vertical Machining Center)






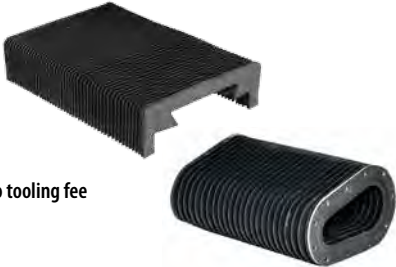
High Speeds/Acceleration (Example: Water Jet CNC Cutting System)

## BELLOWS OVERVIEW

BELLOWS TYPE	DESCRIPTION	KEY ADVANTAGES
<p><b>GORTIFLEX<sup>®</sup> MOLDED BELLOWS</b></p>  <p>No tooling fee for standard shapes</p>	<ul style="list-style-type: none"> <li>Constructed from a tube of elastomer or elastomer-coated fabric formed into a sealed cover</li> </ul>	<ul style="list-style-type: none"> <li>Excellent extended-to-retracted ratio for a molded cover</li> <li>Pressure compensating components can be added to withstand moderate internal or external pressure</li> <li>Resists moisture, liquid or chemical spray, contaminants and dirt</li> <li>Suitable for outdoor environments with exposure to moisture, ice, sand, oil, temperature variations and ultraviolet radiation</li> </ul>
<p><b>SEWN BELLOWS</b></p>  <p>No tooling fee</p>	<p><b>ASK US ABOUT STOCK ROUND BELLOWS</b></p> <ul style="list-style-type: none"> <li>Made from heavy-duty elastomer-coated fabric stitched with nylon or specialty thread</li> </ul>	<ul style="list-style-type: none"> <li>Low cost protection from dust, dirt and other contaminants</li> <li>Flexible process – almost any size and configuration can be sewn</li> <li>Widest material selection available</li> <li>Economical even in low quantities</li> <li>Round, sewn bellows can ship within one business day using our expedited ordering system</li> </ul>
<p><b>HEAT SEALED BELLOWS</b></p>  <p>No tooling fee</p>	<ul style="list-style-type: none"> <li>Manufactured from a single sheet of thermoplastic-coated fabric, which is pleated and then thermally welded to a PVC stiffener at every fold</li> <li>Stiffener profile can be made to match any way or rail geometry</li> </ul>	<ul style="list-style-type: none"> <li>No stitch holes, seams or breaks</li> <li>Cover retains shape throughout travel</li> <li>Attractive, clean, uniform appearance</li> <li>Excellent protection for linear bearings and other precision equipment</li> <li>Ideal for applications requiring very large or rigid covers</li> </ul>
<p><b>GORDILLO<sup>™</sup> STEEL-CLAD BELLOWS</b></p>  <p>No tooling fee</p>	<ul style="list-style-type: none"> <li>A sewn-folded or heat sealed way cover made with stainless steel plates covering each convolution</li> <li>Steel plates shield the bellows from hot chips that quickly damage a conventional bellows</li> </ul>	<ul style="list-style-type: none"> <li>Added protection against hot chip loads and weld spatter</li> <li>Smaller footprint and extended-to-retracted ratio versus telescoping covers</li> </ul>

QUOTE REQUEST FORMS: SEE PAGES 15-27.

## BELLOWS OVERVIEW

BELLOWS TYPE	DESCRIPTION	KEY ADVANTAGES
<p><b>SEWN-FOLDED BELLOWS</b></p>  <p>No tooling fee</p>	<ul style="list-style-type: none"> <li>• Manufactured from a single sheet of thermoplastic-coated or elastomer-coated fabric, which is pleated and then sewn to a PVC stiffener at every fold</li> <li>• Stiffener profile can be made to match any way or rail geometry</li> </ul>	<ul style="list-style-type: none"> <li>• Cover shape is maintained throughout range of motion</li> <li>• Excellent protection for linear bearings and other precision equipment</li> <li>• Ideal for applications requiring very large or rigid covers</li> <li>• Diverse material selection including thermoset elastomer coated materials that cannot be welded</li> </ul>
<p><b>FOLDED BELLOWS</b></p>  <p>No tooling fee</p>	<ul style="list-style-type: none"> <li>• Constructed out of multiple layers of elastomer or thermoplastic materials, folded to the final shape</li> </ul>	<ul style="list-style-type: none"> <li>• Completely sealed from light, air and dirt</li> <li>• Ideal for high-cycle and high-speed operation</li> <li>• Withstands moderate internal or external pressure</li> <li>• Can be tapered, including offset configurations</li> </ul>
<p><b>THERMISEAL BELLOWS</b></p> 	<ul style="list-style-type: none"> <li>• Made from polyurethane films or polyurethane-coated fabrics bonded together by thermic weld process</li> </ul>	<ul style="list-style-type: none"> <li>• Attractive, clean, uniform appearance</li> <li>• Completely sealed cover</li> <li>• Lightweight construction</li> <li>• Excellent extended-to-retracted ratio</li> <li>• Generates minimal airborne particles</li> <li>• Air-, dust- and liquid-tight</li> <li>• Suitable for high cycles and high-speed movement</li> </ul>
<p><b>VULCA-SEAL<sup>®</sup> BELLOWS</b></p>  <p>No tooling fee</p>	<ul style="list-style-type: none"> <li>• Made from separate sections of material joined by vulcanizing alternating seams to form convolutions</li> </ul>	<ul style="list-style-type: none"> <li>• Sealed PTFE options are available for harsh environments</li> <li>• Long life in abrasive environments</li> <li>• Withstands moderate internal or external pressure</li> <li>• Attractive, clean, uniform appearance – no stitch holes, seams or breaks</li> <li>• Custom designed to match any rail or way profile</li> </ul>

QUOTE REQUEST FORMS: SEE PAGES 15-27.

## BELLOWS OVERVIEW

BELLOWS TYPE	DESCRIPTION	KEY ADVANTAGES
<p><b>FORMED BELLOWS</b></p>  <p>Made in Germany</p>	<ul style="list-style-type: none"> <li>• Constructed from a tube of robust, high-temperature material mechanically formed into final shape</li> </ul>	<ul style="list-style-type: none"> <li>• Exceptionally durable, long service life</li> <li>• High tensile strength, cut and tear resistance</li> <li>• High temperature resistance up to 800° C</li> <li>• Resistance to UV, ozone, and acid or basic chemicals</li> <li>• PTFE coatings available for harsh environments</li> </ul>
<p><b>DIP-MOLDED BELLOWS</b></p>  <p>Made in Germany</p>	<ul style="list-style-type: none"> <li>• Made by dipping a low-cost tool into a bath of PVC plastisol</li> <li>• Standard colors: black, grey, white</li> </ul>	<ul style="list-style-type: none"> <li>• Neat, clean appearance</li> <li>• Can be immersed to create sections of varying durometer</li> <li>• Single- or two-color immersion possible</li> <li>• Available in almost any geometry</li> <li>• Low cost protection against water, oil, dust</li> <li>• Excellent UV and ozone resistance</li> <li>• Both small and large production runs</li> </ul>
<p><b>GORFRAME<sup>®</sup> WIREFRAME</b></p> 	<ul style="list-style-type: none"> <li>• Fabricated from a sheet of material attached to a wire frame support structure</li> </ul>	<ul style="list-style-type: none"> <li>• Accommodates difficult motion including lateral/shear movement</li> <li>• Available in any width, length, or vertical travel</li> <li>• Suitable for washdown, air ducting, and clean room applications</li> <li>• Specialty materials to meet UL burn standards or incorporate anti-microbial agents</li> </ul>
<p><b>LIFTGARD<sup>®</sup> LIFT TABLE COVER</b></p> 	<ul style="list-style-type: none"> <li>• Constructed of aluminum extrusions shaped to provide structure and strength to folded PVC/nylon</li> <li>• Standard design includes zipper and corner venting to accommodate rapidly rising and descending lifts</li> </ul>	<ul style="list-style-type: none"> <li>• Quick and easy to install – pre-assembled covers are folded for shipping, then easily unfolded for assembly – no need to insert steel rods</li> <li>• Aluminum frame provides rigid support structure</li> <li>• Improved appearance over stitched skirts (no loose threads, no rusty protruding rods)</li> <li>• Design can be modified for special applications including washdown</li> <li>• Branded options and custom colors available</li> </ul>

QUOTE REQUEST FORMS: SEE PAGES 15-27.

Kevlar<sup>®</sup> is a registered trademark of E.I. du Pont de Nemours and Co.



## BELLOWS OVERVIEW

BELLOWS TYPE	DESCRIPTION	KEY ADVANTAGES
<p><b>FLEXIBLE TRANSPORTATION DUCTING</b></p>  <p>See complete details on page 11.</p>	<ul style="list-style-type: none"> <li>• Constructed with specialized materials and integrated pressure compensating components to help maintain shape and airflow</li> <li>• Specialized designs for traction motor ventilation, cable and HVAC ducting</li> </ul>	<ul style="list-style-type: none"> <li>• Long life and low maintenance</li> <li>• Durable, abrasion-resistant and high-elasticity materials</li> <li>• Material options to meet industry safety standards</li> <li>• Accommodates difficult motion (multi-axial, high-shear)</li> <li>• Maintains shape and airflow</li> <li>• Air-and water-tight constructions</li> </ul>
<p><b>BUS/LIGHT RAIL BELLOWS</b></p>  <p>See complete details on page 12.</p>	<ul style="list-style-type: none"> <li>• Manufactured from a variety of materials including pure elastomers, elastomer coated fabrics, urethane coated fabrics, and PVC coated fabrics</li> </ul>	<ul style="list-style-type: none"> <li>• Materials selected on basis of environmental conditions and regulatory requirements such as flame, smoke and toxicity</li> <li>• Designed to withstand continuous flexing, outdoor weather, and UV</li> <li>• Over 40 years of experience in the transportation sector</li> </ul>
<p><b>MACHINE ROOF COVER BELLOWS</b></p>  <p>See complete details on page 13.</p>	<ul style="list-style-type: none"> <li>• The bellows' folds are made of translucent, high-strength material and attached to lightweight support beams with low-friction glide blocks and precision bearings</li> </ul>	<ul style="list-style-type: none"> <li>• Reduce noise and trap dust from machining of carbon fiber, wood and other materials</li> <li>• Large self-supporting span with minimal deflection</li> <li>• Low friction and energy efficient, bellows glides with machine</li> <li>• Designed to glide on a rail, such as CNC gantry machines</li> <li>• Convenient alternative to dust hoods that may interfere with movement</li> <li>• Great extended to retracted ratio of 10:1 or better</li> </ul>
<p><b>PIPING PENETRATION SEALS</b></p>  <p>See complete details on page 14.</p>	<ul style="list-style-type: none"> <li>• Tapered cone or bellow style boot manufactured of durable, elastomer-coated fabrics with a built-in zipper</li> </ul>	<ul style="list-style-type: none"> <li>• Specially designed for sealing process piping used in power or chemical plants.</li> <li>• Accommodates harsh environmental conditions</li> <li>• Withstands relative movement (lateral/axial) between joints</li> <li>• Fire tested per ASTM E-119-73</li> <li>• Zippered for easy installation</li> <li>• Made to accommodate any size pipe and sleeve size</li> <li>• Excellent UV, ozone and weathering resistance</li> </ul>

**QUOTE REQUEST FORMS: SEE PAGES 15-27.**



## FLEXIBLE DUCTING | TRANSPORTATION

This design is specialized for the ventilation of traction motors on electric locomotives and railcars, serving as an integral part of the cooling air flow as a flexible connecting element between traction motor blower and drive motor. Constructed with seamless tubing in silicone-coated Meta-aramid fabric or other materials, wire reinforcements are fitted inside the convolution peaks. Product solutions for OEM and retrofitting have been optimized for European and North American customers.

### Features/Benefits:

- Longer life and low maintenance – durable, abrasion-resistant and high-elasticity materials
- Meet industry safety standards – materials available to meet regulatory compliance for flame, smoke, and toxicity (NFPA 130, EN45545)
- Optimal design for your application – material and features matched to your specific requirements
- Designed to maintain shape and airflow – integrated pressure compensating components
- Accommodates difficult motion – designs for multi-axial/high-shear movement
- Easy installation – customized mounting features
- Air and water-tight constructions – integrated mounting seals

### Applications:

- Traction Motor Boots – component of the cooling system located between the traction motor blower and drive motor
- Cable Ducting – barrier to protect critical cabling from exposure to liquids, dirt, debris, and UV
- HVAC Ducting – component of the HVAC system ducting used to route airflow



Gorprene with Wires and Hangers



Multi-ply Silicone Nylon with Wires



Silicone Meta-Aramid with PVC Profile

Made in our European manufacturing facility in Bielefeld, Germany.

## BELLOWS FOR ARTICULATED BUSES AND LIGHT RAIL VEHICLES

Since the early 70's, Dynatect has supplied OEM and replacement units to numerous transit authorities and bus manufacturers throughout North America. Dynatect and ATG Autotechnik GmbH provide complete articulation solutions beyond the main bellows, including articulation joint and center hoop components.

Bellows for transportation vehicles are manufactured from a variety of materials including pure elastomers, elastomer coated fabrics, urethane coated fabrics, and PVC coated fabrics. The proper material is selected on the basis of environmental conditions, flame retardant requirements and smoke emission regulations.



Articulated bus bellows



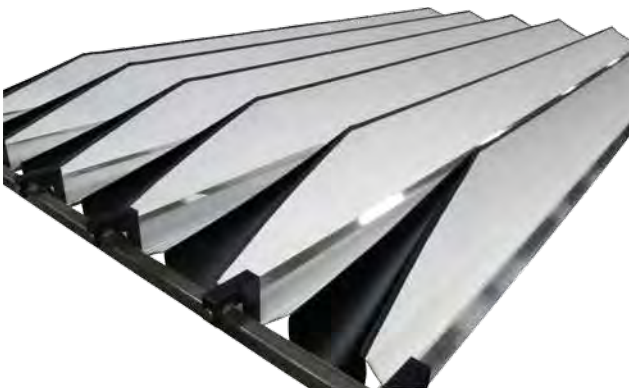
## MACHINE ROOF COVERS | LARGE SCALE BELLOWS SYSTEM

### FOR NOISE ATTENUATION AND CONTAINMENT OF DUST AND PARTICLES

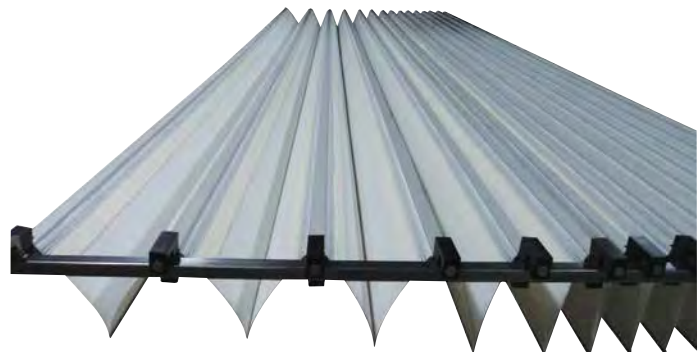
Machine roof covers consists of large, self-supporting bellows equipped to glide on a rail system. Roof covers were first developed for large CNC gantry machines, but have been adapted to other applications requiring a moveable, low-friction cover. The bellows' folds are constructed from translucent, high-strength material and attached to lightweight support beams with low-friction guide blocks and precision bearings.

#### Key Advantages:

- Capable of 1G acceleration; 60 meter/minute velocity
- Capable of over 10:1 extended length to retracted length
- Translucent covers protect environment from dust and provide noise attenuation
- Configurable to almost any rail or way system
- Large self-supporting span up to 30 ft. (9.144m) with minimal deflection
- Individually replaceable folding sections
- Choice of standard or inverted fold direction



**INVERTED FOLD DIRECTION**



**STANDARD FOLD DIRECTION**



**INSIDE VIEW**



**OUTSIDE VIEW**

**QUOTE REQUEST FORMS: SEE PAGES 26-27.**



## PIPING PENETRATION SEAL | BELLOWS/BELLOWS

### DESIGNED FOR POWER PLANTS, REFINERIES AND CHEMICAL PLANTS

Gortiseal™ piping penetration seals are designed to provide a flexible and safe method of sealing process piping. They have been effectively used in nuclear and conventional power plants, refineries, and chemical plants. Manufactured of durable, elastomer-coated fabrics, these seals allow lateral and axial movement of pipes up to several inches. Both bellows type and cone shaped seals have a built-in zipper that permits easy installation after piping has been installed. Zippered units have an air flap seal which overlaps the zipper and may be sealed with silicone for additional sealing. Non-zippered design can be provided upon request.



#### Features/Benefits:

- Fire tested per ASTM E-119-73 in accordance with American Nuclear Insurers (ANI) Standards
- Bellows and cone-type designs to allow lateral and axial movement
- Zippered for easy installation
- Available for any size pipe and sleeve size (made to spec.)
- Excellent UV, ozone and weathering resistance

#### Materials:

- Bellows and cones:
  - Gorlon/Nylon (general temperature range: -40° to 240° F)
  - Silicone/Fiberglass (general temperature range: -100° to 450° F)
- Mounting clamps: stainless steel worm gear type
- Zipper: brass teeth on nylon backing tape

#### Applications:

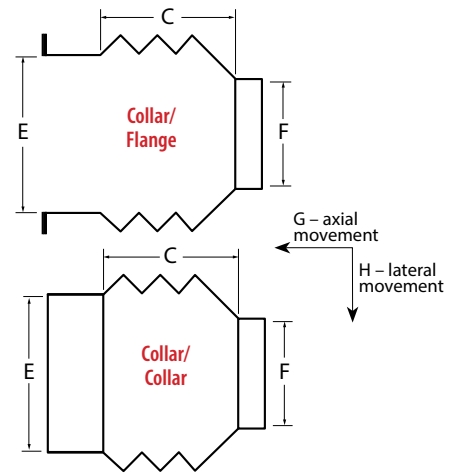
- Maintains pressure differentials between rooms
- Prevents water and air leakage through wall, floor, and roof openings

#### Standard Sizes (lengths):

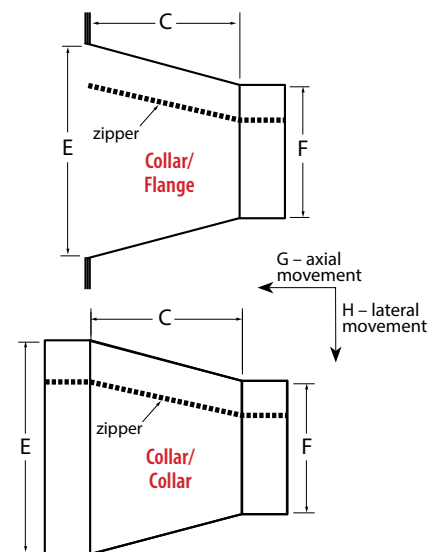
Sizes listed are applicable for both bellows and cone type Gortiseal boots. Other custom sizes are available on request.

- Size S: Designed for 6" installed length up to +/- 2 inches lateral and axial movement
- Size M: Designed for 6" installed length up to +/- 4 inches lateral and axial movement
- Size L: Designed for 6" installed length up to +/- 6 inches lateral and axial movement

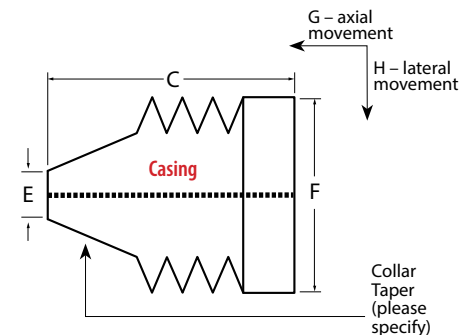
### BELLOWS TYPE SEALS



### CONE TYPE SEALS



### BELLOWS CONE TYPE SEALS



### HOW TO SPECIFY (Please specify in inches)

- C – Installed (typically 6") \_\_\_\_\_  
 E – Sleeve O.D. or Hole Dia. (wall end) \_\_\_\_\_  
 F – Pipe or Insulation O.D. \_\_\_\_\_  
 G – Axial Movement \_\_\_\_\_  
 H – Lateral Movement \_\_\_\_\_

- Type:  Bellows  Cone  Bellows Cone  
 # of Peaks \_\_\_\_\_ # of Peaks \_\_\_\_\_  
 Collar Taper \_\_\_\_\_ to \_\_\_\_\_

Note: Seal dimensions provided by Dynatect based on your inputs.

# ENCLOSED-SHAPE BELLOWS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

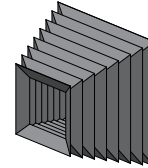
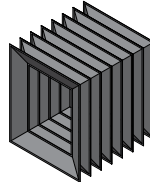
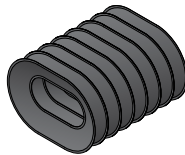
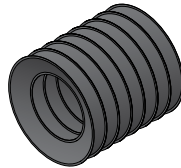
## 1. Application Information

New or Replacement Application:  New Design  Replacement  
 Protection For:  Cylinder rod/ram  Rod with ball bushing  Ball screw  Acme screw  Spline  Rectangular-shaped part  
 Other (describe or send drawing) \_\_\_\_\_

Cover Orientation:  Horizontal  Vertical

Construction Preference:  Dynatect Recommendation  Gortiflex<sup>®</sup>-Molded  Sewn  Vulca-Seal<sup>®</sup>  Thermiseal  Folded

Cover Profile Shape:  Round  Oval\*  Rectangular/Square  Tapered\*  Other/Custom



\*Drawing required; PDF or DWG/DXF file preferred.

## 2. Operation Information

Continuous (ambient) Temperature: \_\_\_\_\_  °F  °C  
 Intermittent Temperature Range: Min. \_\_\_\_\_ Max. \_\_\_\_\_  
 Frequency of Exposure: \_\_\_\_\_  
 Distance from Heat Source (if applicable)\*: \_\_\_\_\_  
 Maximum Travel Speed\*: \_\_\_\_\_ Movements/Day \_\_\_\_\_  
 Acceleration\*: \_\_\_\_\_  
 Pressure \_\_\_\_\_ PSI  Bellows cycles under pressure  
 Vacuum \_\_\_\_\_ PSI  Bellows cycles under pressure

\*Please indicate unit of measurement for each value.

## 3. Environmental Information

Heat Exposure:  Weld Spatter  Hot Chips/Swarf  High Ambient Temperature (specify in "Operation Information")  
 Abrasion Exposure:  Metal Chips/Swarf  Wood Chips/Shavings  Light Particles/Dust  Other \_\_\_\_\_  
 Chemical or Liquid Exposure:  Water  Moisture  Salt or Sea Spray  Petroleum/Hydrocarbons  Oils (non-petroleum)  
 Hydraulic Fluid (petroleum-based)  Hydraulic Fluid (phosphate ester-based)  
 Acid  Coolant  Cutting Fluid  
 Other (specify) \_\_\_\_\_  
 Contaminant Exposure Level:  Minimal  Occasional  Heavy  
 Miscellaneous:  UV/Ozone  Outdoors  Food-Grade/FDA  Laser Beam  Clean Room  Camera/Light-Proof  
 Other (specify) \_\_\_\_\_  
 Regulatory Compliance: Standard \_\_\_\_\_  Bellows must be fire retardant (list standard to the left)  
 Application Notes: \_\_\_\_\_

## ENCLOSED-SHAPE BELLOWS | QUOTE REQUEST FORM

### 4. Cover Dimensions

For round shapes, specify diameter. For rectangular shapes, please specify height and width dimensions.

Dimensions specified in:  in  mm

**Bellows I.D.:**

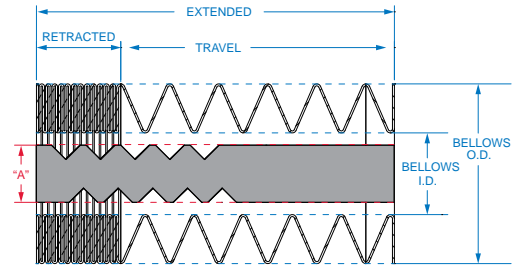
Covered Part Dimensions: Diameter: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_

**Bellows O.D.:**

(must be greater than dimensions(s) listed above; if left blank, we will determine the proper clearance)

Diameter: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_

Maximum Allowable Bellows O.D.: Diameter: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_



O.D. = Outside Diameter (round) or Outside Dimensions (rectangular)

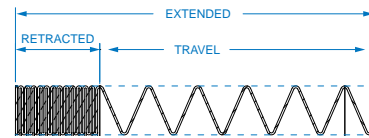
I.D. = Inside Diameter (round) or Inside Dimensions (rectangular)

### 5. Extended/Retracted/Travel Requirements

Specify extended and retracted length requirements, or indicate travel and we will advise retracted length. (Extended length = retracted length + travel)

Dimensions specified in:  in  mm

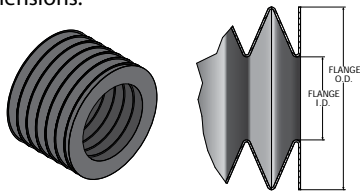
Extended Length: \_\_\_\_\_ Retracted Length: \_\_\_\_\_ Travel Distance: \_\_\_\_\_



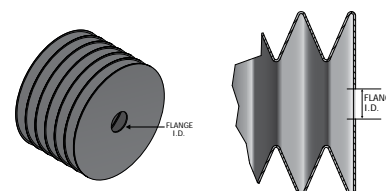
### 6. End Dimensions

Specify a type along with relevant dimensions for each end. For round shapes, specify diameter. For rectangular shapes, please specify height and width dimensions.

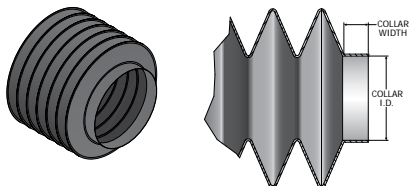
**STANDARD FLANGE**



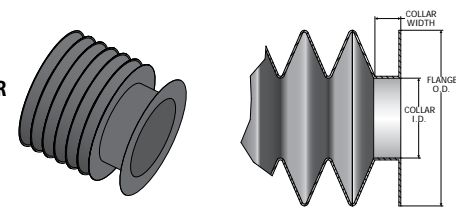
**INSIDE FLANGE**



**COLLAR**



**FLANGE-TYPE COLLAR**



**End 1 Type:**

- Standard Flange
- Inside Flange
- Collar
- Flange-Type Collar

Flange O.D.: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_

Flange I.D.: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_

Collar I.D.: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_

Collar Width: \_\_\_\_\_

**End 2 Type:**

- Standard Flange
- Inside Flange
- Collar
- Flange-Type Collar

Flange O.D.: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_

Flange I.D.: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_

Collar I.D.: \_\_\_\_\_ or 4-sided: \_\_\_\_\_ x \_\_\_\_\_

Collar Width: \_\_\_\_\_

**End 1 Mounting:**

- Mounting Hole Pattern\*
- Mounting Plate\*\*
- Clamp†

**End 2 Mounting:**

- Mounting Hole Pattern\*
- Mounting Plate\*\*
- Clamp†

### 7. Bellows Accessories

- Zipper
- Inside Wires
- Outside Wires
- Tie Strips
- Internal Support Guides‡
- Outer Grommets for Support Rod
- Breather Vents

\*Drawing required. \*\*Shipped blank unless hole pattern specified; drawing required.

†0.5" I.D. minimum. Clamps are stocked in any size required. Clamp band is 0.5" wide. ‡Recommended for screw covers.

# WAY COVER BELLOWS | QUOTE REQUEST FORM

**NEW COVER? (only fill out pages 17 and 18) – OR – REPLACEMENT COVER? (only fill out pages 17 and 19)**

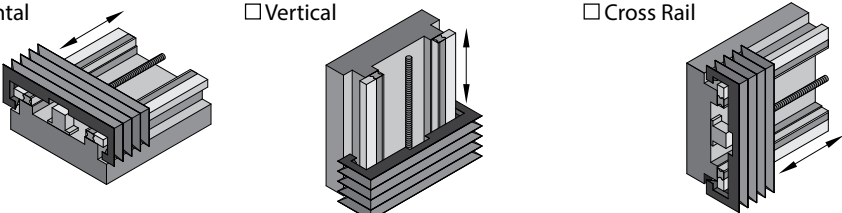
Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

**1. Application Information** (Please supply a sketch/drawing/CAD file (DWG or DXF file format)/photo of your application.)

New Cover  Replacement Cover  
 Describe the type of equipment or part you need to cover: \_\_\_\_\_

Machine Make: \_\_\_\_\_ Machine Model: \_\_\_\_\_

Cover Orientation:  Horizontal  Vertical  Cross Rail



Construction Preference:  Dynatect Recommendation  Heat-Sealed  Sewn  Vulca-Seal<sup>®</sup>  Sewn/Folded

**2. Operation Information**

Continuous (ambient) Temperature: \_\_\_\_\_ °F °C Intermittent Temperature Range: Min. \_\_\_\_\_ Max. \_\_\_\_\_ °F °C  
 Frequency of Exposure: \_\_\_\_\_ Distance from Heat Source (if applicable)\*: \_\_\_\_\_  
 Maximum Travel Speed\*: \_\_\_\_\_ Movements/Day \_\_\_\_\_ Acceleration\*: \_\_\_\_\_

\*Please indicate unit of measurement for each value.

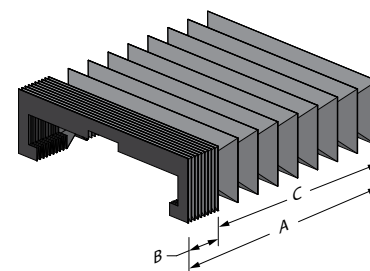
**3. Environmental Information**

Heat Exposure:  Weld Spatter  Hot Chips/Swarf  High Ambient Temperature (specify in "Operation Information")  
 Abrasion Exposure:  Metal Chips/Swarf  Wood Chips/Shavings  Light Particles/Dust  Other \_\_\_\_\_  
 Chemical or Liquid Exposure:  Water  Moisture  Salt or Sea Spray  Petroleum/Hydrocarbons  Oils (non-petroleum)  
 Hydraulic Fluid (petroleum-based)  Hydraulic Fluid (phosphate ester-based)  
 Acid  Coolant  Cutting Fluid  
 Other (specify) \_\_\_\_\_  
 Contaminant Exposure Level:  Minimal  Occasional  Heavy  
 Miscellaneous:  UV/Ozone  Outdoors  Food-Grade/FDA  Laser Beam  Clean Room  Other (specify) \_\_\_\_\_  
 Regulatory Compliance: Standard \_\_\_\_\_  Bellows must be fire retardant (list standard to the left)  
 Application Notes: \_\_\_\_\_

**4. Extended/Retracted/Travel Requirements**

Specify extended and retracted length requirements, or indicate travel and we will advise retracted length. (Extended length = retracted length + travel distance)

Dimensions specified in:  in  mm  
 (A) Extended Length: \_\_\_\_\_  
 (B) Retracted Length: \_\_\_\_\_  
 (C) Travel Distance: \_\_\_\_\_



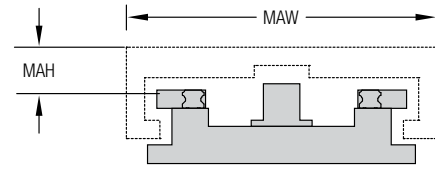
# WAY COVER BELLOWS – NEW DESIGN | QUOTE REQUEST FORM

## 1. Maximum Allowable Cover Width and Height Above Way

Dimensions specified in:  in  mm

MAH (Maximum Allowable Height Above Way) Required: \_\_\_\_\_

MAW (Maximum Allowable Cover Width) Required: \_\_\_\_\_



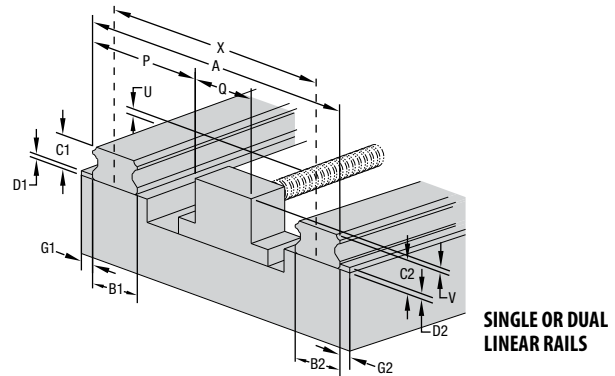
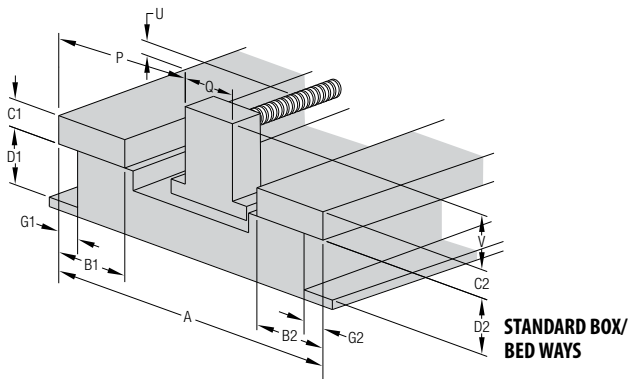
## 2. Way Dimensions

Single or dual linear rails – see left diagram below and specify rail type and model. Standard box/bed ways – see right diagram below. If the way does not resemble the way profiles shown below, please send a sketch/drawing of your actual way dimensions. Be sure to note any space restrictions; reference “Maximum Allowable Cover Width And Height Above Way” above.

Cover Type:  Box/Bed Way  Linear Rail – Dual  Linear Rail – Single (provide dimensions B1, C1 and D1 only)

Rail Type and Model: \_\_\_\_\_

Dimensions: A \_\_\_\_\_ B1 \_\_\_\_\_ B2 \_\_\_\_\_ C1 \_\_\_\_\_ C2 \_\_\_\_\_ D1 \_\_\_\_\_ D2 \_\_\_\_\_ G1 \_\_\_\_\_  
G2 \_\_\_\_\_ P \_\_\_\_\_ Q \_\_\_\_\_ U \_\_\_\_\_ V \_\_\_\_\_ X (distance between center of rails) \_\_\_\_\_



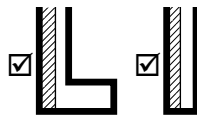
## 3. External Profile Cover Shape – Top (Optional: specify shape preference for the top of the cover)

<input type="checkbox"/> 1 Side, Flat	<input type="checkbox"/> 1 Side, Angled	<input type="checkbox"/> 2 Sides, Center Peak	<input type="checkbox"/> 2 Sides, Offset Peak	<input type="checkbox"/> 2 Sides, Flat and Angled	<input type="checkbox"/> 3 Sides

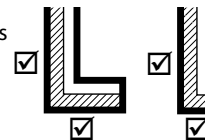
## 4. Legs/Sides Finishing (For covers with stiffeners, legs can optionally be fabric-wrapped on the bottom and sides)

Does Cover Ride on Legs:  Yes  No

Fabric Wrapping on Legs:  Fabric on Sides Only (Standard)



Wrap on Sides and Bottom



Note: Dynatect will design left/right sides (legs) according to cover orientation and way dimensions provided.

## 5. End Mounting

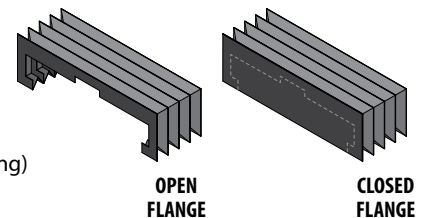
Select mounting style and accessories for each end of the cover. Dynatect can provide custom designed ends with mounting holes as specified per customer drawing. Orders placed without holes specified are shipped blank, without bolt holes.

End 1 Flange End:  Open  Closed

End 1 Mounting Options:  Plate  Hook & Loop Fastener  Other/Special (provide drawing)

End 2 Flange End:  Open  Closed

End 2 Mounting Options:  Plate  Hook & Loop Fastener  Other/Special (provide drawing)

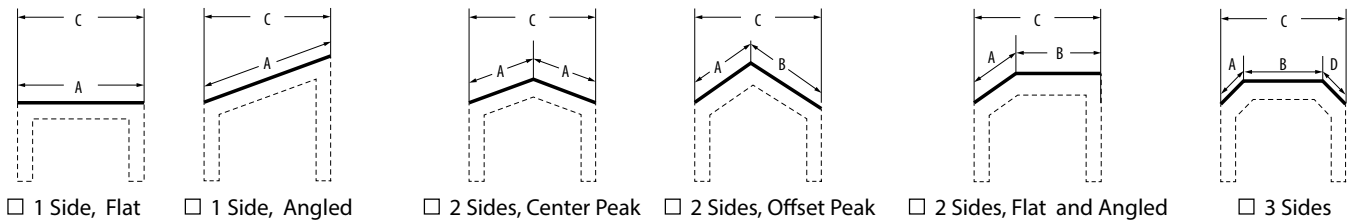




# WAY COVER BELLOWS – REPLACEMENT | QUOTE REQUEST FORM

## 1. External Cover Profile Dimensions – Top

Please specify what the top of your cover looks like, and fill in applicable dimensions. (Specify right/left “legs” under “External Cover Profile Dimensions – Side/Legs” section below.)

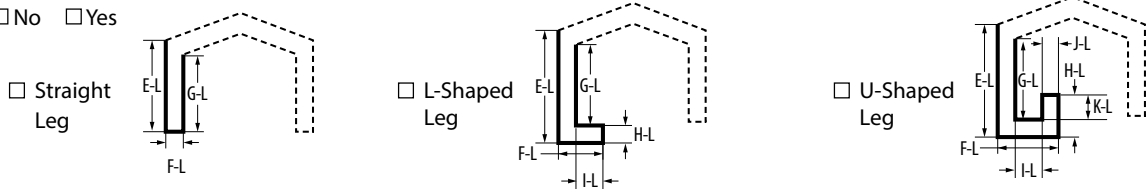


Dimension “A” \_\_\_\_\_ Dimension “B” \_\_\_\_\_ Dimension “C” \_\_\_\_\_ Dimension “D” \_\_\_\_\_

## 2. External Cover Profile Dimensions – Sides/Legs

Please specify what the “legs” of your cover look like for left and right sides of the cover, and fill in applicable dimensions.

**Left Leg:**  No  Yes



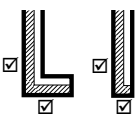
**Does Cover Ride on Leg(s):**  No  Yes

**Left Leg Dimensions:** E-L \_\_\_\_\_ F-L \_\_\_\_\_ G-L \_\_\_\_\_ H-L \_\_\_\_\_ I-L \_\_\_\_\_ J-L \_\_\_\_\_ K-L \_\_\_\_\_

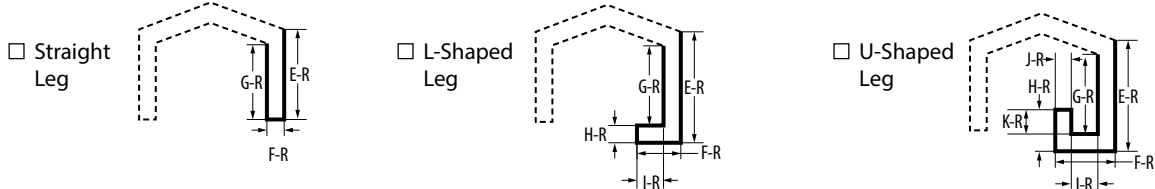
**Finishing/Fabric Warp-Around:**  Sides Only (standard)



Sides and Bottom



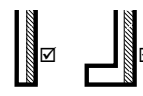
**Right Leg:**  No  Yes



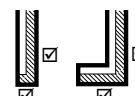
**Does Cover Ride on Leg(s):**  No  Yes

**Right Leg Dimensions:** E-R \_\_\_\_\_ F-R \_\_\_\_\_ G-R \_\_\_\_\_ H-R \_\_\_\_\_ I-R \_\_\_\_\_ J-R \_\_\_\_\_ K-R \_\_\_\_\_

**Finishing/Fabric Warp-Around:**  Sides Only (standard)



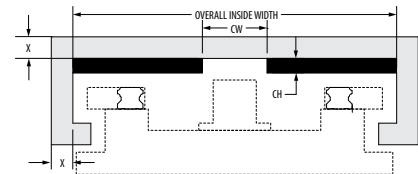
Sides and Bottom



## 4. Internal Cover Profile Dimensions

Please specify fold height, overall inside width and, if applicable, the cutout height and width. For dovetail or other custom profile shape, please send a separate drawing.

Overall Inside Width: \_\_\_\_\_ CH (Cutout Height): \_\_\_\_\_  
 CW (Cutout Width): \_\_\_\_\_ X (Fold Height): \_\_\_\_\_



## 5. End Mounting

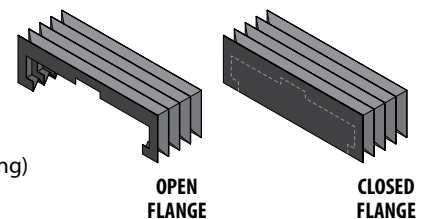
Select mounting style and accessories for each end of the cover. Dynatect can provide custom designed ends with mounting holes as specified per customer drawing. Orders placed without holes specified are shipped blank, without bolt holes.

End 1 Flange End:  Open  Closed

End 1 Mounting Options:  Plate  Hook & Loop Fastener  Other/Special (provide drawing)

End 2 Flange End:  Open  Closed

End 2 Mounting Options:  Plate  Hook & Loop Fastener  Other/Special (provide drawing)



# GORDILLO™ WAY COVER | QUOTE REQUEST FORM

**NEW COVER?** (only fill out pages 20 and 21) – OR – **REPLACEMENT COVER?** (only fill out pages 20 and 22)

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

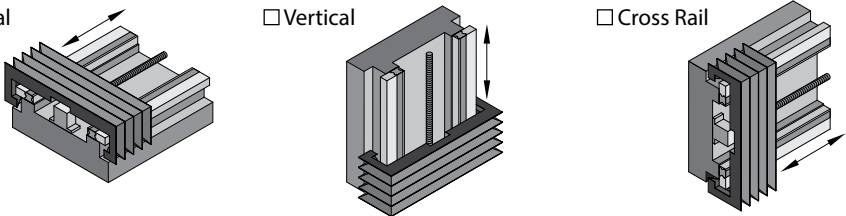
Please use this form to request a quote for a custom Gordillo stainless-steel clad bellows way cover. Fill in as many specification values as possible. If measurement units are different than the options shown, please specify unit of measure.

## 1. Application Information

Describe the type of equipment or part you need to cover: \_\_\_\_\_

Machine Make: \_\_\_\_\_ Machine Model: \_\_\_\_\_

Cover Orientation:  Horizontal  Vertical  Cross Rail



## 2. Operation Information

Continuous (ambient) Temperature: \_\_\_\_\_ °F  °C Intermittent Temperature Range: Min. \_\_\_\_\_ Max. \_\_\_\_\_ °F  °C  
 Frequency of Exposure: \_\_\_\_\_ Distance from Heat Source (if applicable)\*: \_\_\_\_\_  
 Maximum Travel Speed\*: \_\_\_\_\_ Movements/Day \_\_\_\_\_ Acceleration\*: \_\_\_\_\_

\*Please indicate unit of measurement for each value.

## 3. Environmental Information

Heat Exposure:  Weld Spatter  Hot Chips/Swarf  High Ambient Temperature (specify in "Operation Information" above)  
 Abrasion Exposure:  Metal Chips/Swarf  Wood Chips/Shavings  Light Particles/Dust  Other \_\_\_\_\_  
 Chemical or Liquid Exposure:  Water  Moisture  Salt or Sea Spray  Petroleum/Hydrocarbons  Oils (non-petroleum)  
 Hydraulic Fluid (Petroleum-based)  Hydraulic Fluid (phosphate ester-based)  
 Acid  Coolant  Cutting Fluid  Other (specify) \_\_\_\_\_  
 Contaminant Exposure Level:  Minimal  Occasional  Heavy  
 Miscellaneous:  Other (specify) \_\_\_\_\_  
 Regulatory Compliance: Standard \_\_\_\_\_  Bellows must be fire retardant (list standard to the left)  
 Application Notes: \_\_\_\_\_

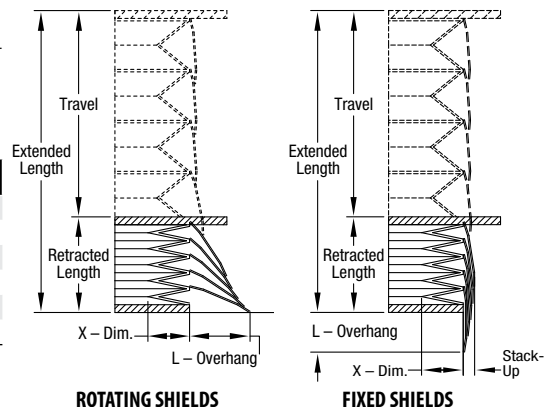
## 4. Extended/Retracted/Travel Requirements

(X) Convolution Height: \_\_\_\_\_ (L) Overhang Available: \_\_\_\_\_  
 Retracted Length (= travel/minimum/maximum factor + .30): \_\_\_\_\_  
 Extended Length (travel + retracted length): \_\_\_\_\_  
 Shields:  Rotating  Fixed

CONVOLUTION HEIGHT	MINIMUM/MAXIMUM FACTOR	OVERHANG
0.75	7:1	1.63 / 2.75*
1	10:1	2 / 3.5*
1.25	12:1	2.38 / 4.25*
1.5	15:1	5
1.75	17:1	3.25
2	20:1	3.5

\*Top plate mounted alternate convolutions.

Note: Stack-Up varied from .375 to 1.00 as number of sections increases. Other convolution heights are available. Contact Dynatect for assistance. Table is for reference only; actual extended/retracted ratios for individual applications will vary.



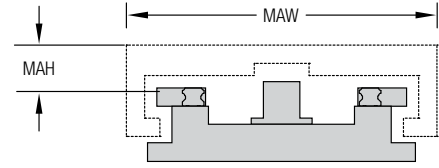
# GORDILLO™ WAY COVER – NEW DESIGN | QUOTE REQUEST FORM

## 1. Maximum Allowable Cover Width and Height Above Way

Dimensions specified in:  in  mm

MAH (Maximum Allowable Height Above Way) Required: \_\_\_\_\_

MAW (Maximum Allowable Cover Width) Required: \_\_\_\_\_



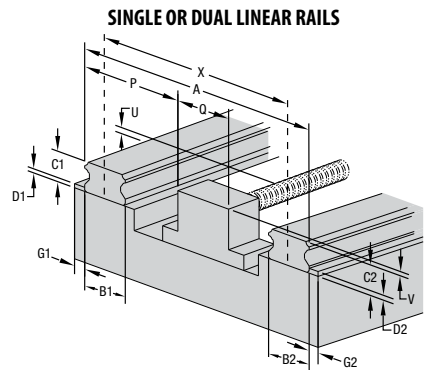
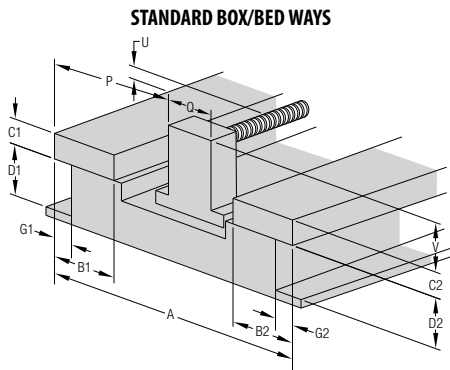
## 2. Way Dimensions

Single or dual linear rails – see left diagram below and specify rail type and model. Standard box/bed ways – see right diagram below. If the way does not resemble the way profiles shown below, please send a sketch/drawing of your actual way dimensions. Be sure to note any space restrictions; reference “Maximum Allowable Cover Width And Height Above Way” above.

Cover Type:  Box/Bed Way  Linear Rail – Dual  Linear Rail – Single (provide dimensions B1, C1 and D1 only)

Rail Type and Model: \_\_\_\_\_

Dimensions: A \_\_\_\_\_ B1 \_\_\_\_\_ B2 \_\_\_\_\_ C1 \_\_\_\_\_ C2 \_\_\_\_\_ D1 \_\_\_\_\_ D2 \_\_\_\_\_ G1 \_\_\_\_\_  
G2 \_\_\_\_\_ P \_\_\_\_\_ Q \_\_\_\_\_ U \_\_\_\_\_ V \_\_\_\_\_ X (distance between center of rails) \_\_\_\_\_



## 3. External Profile Cover Shape – Top (Optional: specify shape preference for the top of the cover)

<input type="checkbox"/> 1 Side, Flat	<input type="checkbox"/> 1 Side, Angled	<input type="checkbox"/> 2 Sides, Center Peak	<input type="checkbox"/> 2 Sides, Offset Peak	<input type="checkbox"/> 2 Sides, Flat and Angled	<input type="checkbox"/> 3 Sides

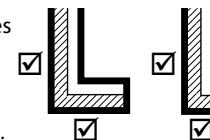
## 4. Legs/Sides Finishing (For covers with stiffeners, legs can optionally be fabric-wrapped on the bottom and sides)

Does Cover Ride on Legs:  Yes  No

Fabric Wrapping on Legs:  Fabric on Sides Only (Standard)



Wrap on Sides and Bottom



Note: Dynatect will design left/right sides (legs) according to cover orientation and way dimensions provided.

## 5. End Mounting

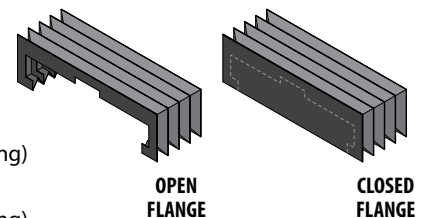
Select mounting style and accessories for each end of the cover. Dynatect can provide custom designed ends with mounting holes as specified per customer drawing. Orders placed without holes specified are shipped blank, without bolt holes.

End 1 Flange End:  Open  Closed

End 1 Mounting Options:  Plate  Hook & Loop Fastener  Other/Special (provide drawing)

End 2 Flange End:  Open  Closed

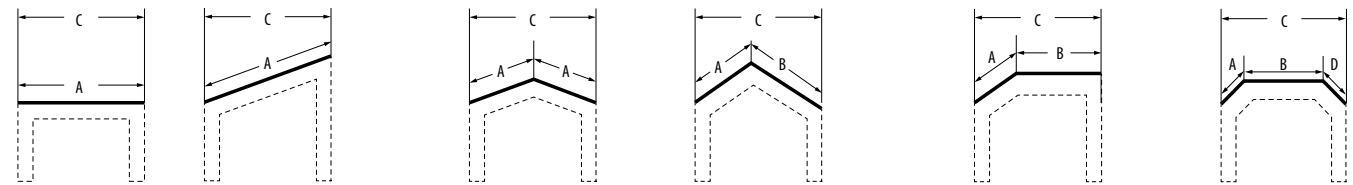
End 2 Mounting Options:  Plate  Hook & Loop Fastener  Other/Special (provide drawing)



# GORDILLO™ WAY COVER – REPLACEMENT | QUOTE REQUEST FORM

## 1. External Cover Profile Dimensions – Top

Please specify what the top of your cover looks like, and fill in applicable dimensions. (Specify right/left “legs” under “External Cover Profile Dimensions – Side/Legs” section below.)



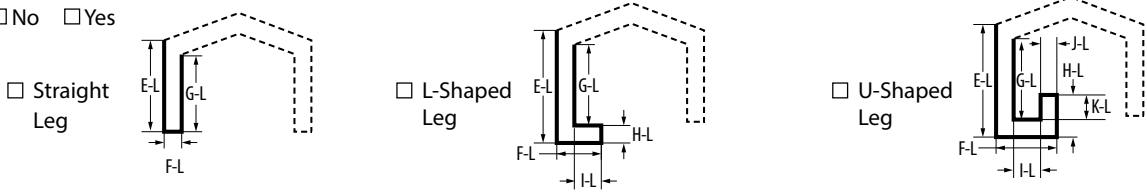
1 Side, Flat   
  1 Side, Angled   
  2 Sides, Center Peak   
  2 Sides, Offset Peak   
  2 Sides, Flat and Angled   
  3 Sides

Dimension “A” \_\_\_\_\_   
 Dimension “B” \_\_\_\_\_   
 Dimension “C” \_\_\_\_\_   
 Dimension “D” \_\_\_\_\_

## 2. External Cover Profile Dimensions – Sides/Legs

Please specify what the “legs” of your cover look like for left and right sides of the cover, and fill in applicable dimensions.

**Left Leg:**  No  Yes



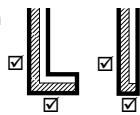
**Does Cover Ride on Leg(s):**  No  Yes

**Left Leg Dimensions:** E-L \_\_\_\_\_ F-L \_\_\_\_\_ G-L \_\_\_\_\_ H-L \_\_\_\_\_ I-L \_\_\_\_\_ J-L \_\_\_\_\_ K-L \_\_\_\_\_

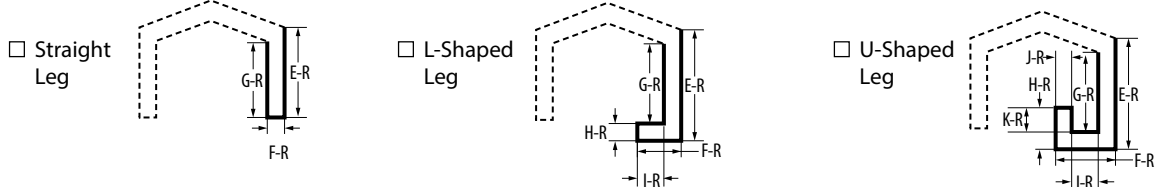
**Finishing/Fabric Warp-Around:**  Sides Only (standard)



Sides and Bottom



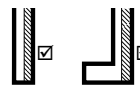
**Right Leg:**  No  Yes



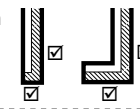
**Does Cover Ride on Leg(s):**  No  Yes

**Right Leg Dimensions:** E-R \_\_\_\_\_ F-R \_\_\_\_\_ G-R \_\_\_\_\_ H-R \_\_\_\_\_ I-R \_\_\_\_\_ J-R \_\_\_\_\_ K-R \_\_\_\_\_

**Finishing/Fabric Warp-Around:**  Sides Only (standard)



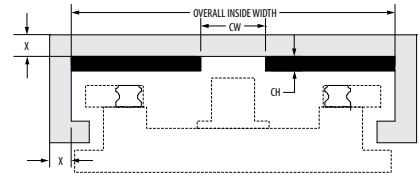
Sides and Bottom



## 3. Internal Cover Profile Dimensions

Please specify fold height, overall inside width and, if applicable, the cutout height and width. For dovetail or other custom profile shape, please send a separate drawing.

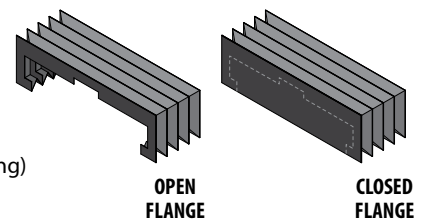
Overall Inside Width: \_\_\_\_\_    CH (Cutout Height): \_\_\_\_\_  
 CW (Cutout Width): \_\_\_\_\_    X (Fold Height): \_\_\_\_\_



## 4. End Mounting

Select mounting style and accessories for each end of the cover. Dynatect can provide custom designed ends with mounting holes as specified per customer drawing. Orders placed without holes specified are shipped blank, without bolt holes.

End 1 Flange End:  Open  Closed  
 End 1 Mounting Options:  Plate  Hook & Loop Fastener  Other/Special (provide drawing)  
 End 2 Flange End:  Open  Closed  
 End 2 Mounting Options:  Plate  Hook & Loop Fastener  Other/Special (provide drawing)



# FLAT/STRIP-TYPE BELLOWS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

Please use this form to request a quote for a custom flat/strip-type bellows. Fill in as many specification values as possible. If measurement units are different than the options shown, please specify unit of measure.

### 1. Application Information

New Design or Replacement Application:  New Design  Replacement  
 Cover Orientation:  Horizontal  Vertical  Cross Rail  
 Construction Preference:  Dynatect Recommendation  Heat-Sealed  Sewn  Sewn/Folded  Vulca-Seal<sup>®</sup>

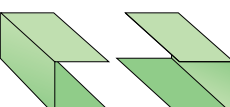
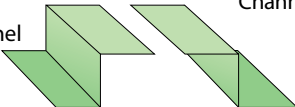
### 2. Operation Information

Continuous (ambient) Temperature: \_\_\_\_\_  °F  °C Intermittent Temperature Range: Min. \_\_\_\_\_ Max. \_\_\_\_\_  °F  °C  
 Frequency of Exposure: \_\_\_\_\_ Distance from Heat Source (if applicable)\*: \_\_\_\_\_  
 Maximum Travel Speed\*: \_\_\_\_\_ Movements/Day \_\_\_\_\_ Acceleration\*: \_\_\_\_\_  
 \*Please indicate unit of measurement for each value.

### 3. Environmental Information

Heat Exposure:  Weld Spatter  Hot Chips/Swarf  High Ambient Temperature (specify in "Operation Information" above)  
 Abrasion Exposure:  Metal Chips/Swarf  Wood Chips/Shavings  Light Particles/Dust  Other \_\_\_\_\_  
 Chemical or Liquid Exposure:  Water  Moisture  Salt or Sea Spray  Petroleum/Hydrocarbons  Oils (non-petroleum)  
 Hydraulic Fluid (petroleum-based)  Hydraulic Fluid (phosphate ester-based)  
 Acid  Coolant  Cutting Fluid  Other (specify) \_\_\_\_\_  
 Contaminant Exposure Level:  Minimal  Occasional  Heavy  
 Miscellaneous:  UV/Ozone  Outdoors  Food-Grade/FDA  Laser Beam  Clean Room  Other (specify) \_\_\_\_\_  
 Regulatory Compliance: Standard \_\_\_\_\_  Bellows must be fire retardant (list standard to the left)  
 Application Notes: \_\_\_\_\_

### 4. Cover Support Channels (Channels can be included upon request. It is recommended to provide a drawing.)

Will the cover operate within an existing channel?  Yes  No\* \*Would you like us to provide channel supports?  Yes  No  
 Support Type:  C-Channel   Z-Channel  Channel Material:  Aluminum  Steel  Stainless Steel

### 5. Cover Dimensions

(X) Bellows Fold Height: \_\_\_\_\_ Cover Width: \_\_\_\_\_  in  mm

### 6. Extended/Retracted/Travel Requirements

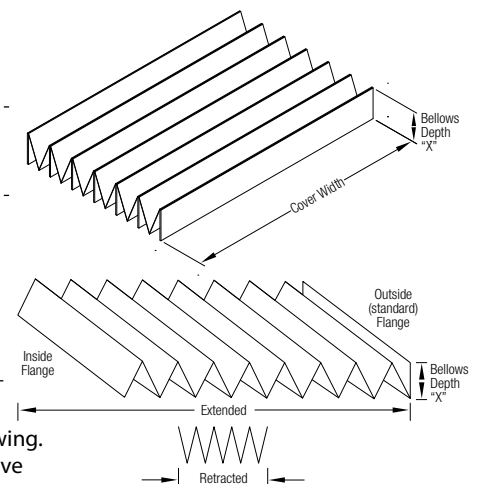
Specify extended and retracted length requirements, or indicate travel and we will advise retracted length. (Extended length = retracted length + travel distance)  
 Retracted Length: \_\_\_\_\_ Travel Distance: \_\_\_\_\_  
 Extended Length: \_\_\_\_\_ Dimensions specified in:  in  mm

### 7. End Style/Mounting

We can provide custom designed ends with mounting holes as specified per customer drawing. Orders placed without holes specified are shipped blank, without bolt holes. Reference above diagram for inside/outside flange.

**End 1:**  Outside Flange (standard)  Inside Flange  
**Options:**  Plate  Hook & Loop Fastener  
 Other/Special (provide drawing)

**End 2:**  Outside Flange (standard)  Inside Flange  
**Options:**  Plate  Hook & Loop Fastener  
 Other/Special (provide drawing)



# LIFT TABLE/SCISSORS MECHANISM COVERS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

## 1. Application Information

Bellows For:  New Cover Design  Replace Existing Cover  
 Environment:  Clean Room\*  Antimicrobial Agents\*  Sparks  Grease  Washdown\*  
 Fire Retardant\*  Dust Cover  Other \_\_\_\_\_  
 Movement:  Lateral (Shear) Movement\* (please send sketch of movement)  Tilt (please specify degree of tilt: \_\_\_\_\_)

\*Gorframe™ is used in applications with lateral shear movement. Gorframe is generally used for washdown, clean room, or where materials must meet specifications, such as fire retardant or antimicrobial.

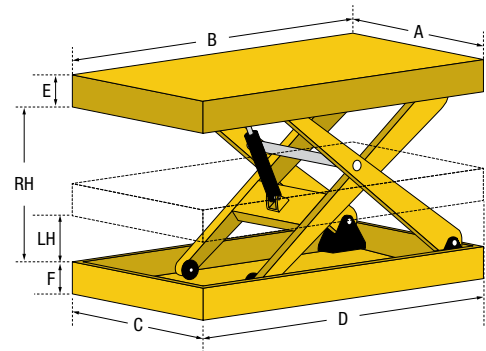
## 2. Cover Construction Type

Cover Type:  Liftgard®  Gorframe™  Sewn  Application-based recommendation

## 3. Lift Table Dimensions

Dimensions specified in:  in  mm

(A) Table Width: \_\_\_\_\_ (E) Table Height: \_\_\_\_\_  
 (B) Table Length: \_\_\_\_\_ (F) Base Height: \_\_\_\_\_  
 (C) Base Width: \_\_\_\_\_ (RH) Raised Height: \_\_\_\_\_  
 (D) Base Length: \_\_\_\_\_ (LH) Lowered Height: \_\_\_\_\_



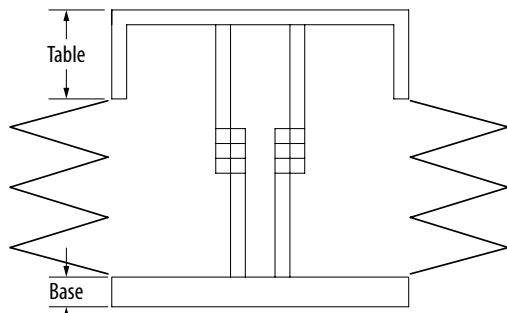
## 4. Cover Venting and Options (Please check options desired)

Venting\* For venting considerations, provide maximum lift speed: \_\_\_\_\_ (inches/second)  
 Maintenance Straps  Zipper (for quick installation – a zipper is standard on Liftgard covers)

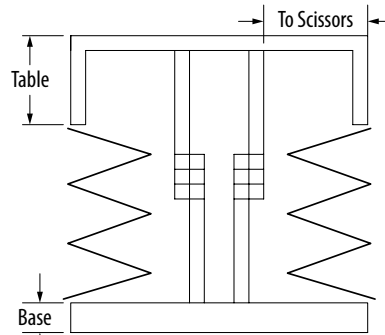
\*Vents are required if base and table mounts do not allow for air exhaust. Liftgard covers already incorporate a venting system. Depending on speed, additional venting may be required.

## 5. Cover Location (Bellows Orientation) (Please select one)

Outside Cover Location (proceed to "Outside Cover Mount" on next page)  Inside Cover Location (proceed to "Inside Cover Mount" on next page)  Other Cover Location (contact Dynatect)



Are there any clearance issues on any side of the lift table?  No  Yes (provide sketch)



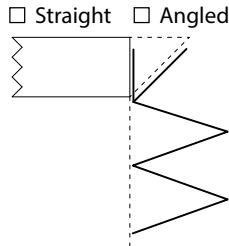
Shortest distance between scissors mechanism and outside edge of table top: \_\_\_\_\_ (required)

# LIFT TABLE/SCISSORS MECHANISM COVERS | QUOTE REQUEST FORM

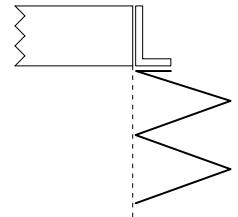
**6. Outside Cover Mount** – Select mounting type (collar or flange), then a mounting option.

– MOUNTING TO TABLE TOP –

- Collar Mount**  
(specify "straight" or "angled")
- Reinforced\* with PVC Strips (default)
- Reinforced\* with Metal Strips  
(specify type) \_\_\_\_\_
- Hook & Loop Fastener
- Other (specify) \_\_\_\_\_

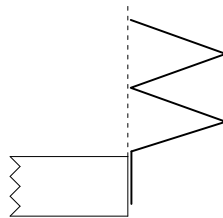


- Flange Mount**
- Reinforced\* with PVC Strips (default)
- Reinforced\* with Metal Strips  
(specify type) \_\_\_\_\_
- Hook & Loop Fastener
- Other (specify) \_\_\_\_\_

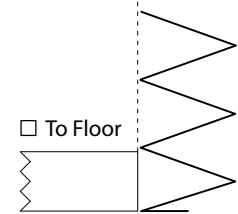
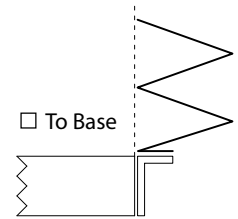


– MOUNTING TO BASE/FLOOR (OPTIONAL) –

- Collar Mount**
- Fabric Pocket/Loop
- Fabric Pocket/Loop with Rod
- Reinforced\* with PVC Strips (default)
- Reinforced\* with Metal Strips  
(specify type) \_\_\_\_\_
- Hook & Loop Fastener



- Flange Mount**  
(specify "to base" or "to floor")
- Fabric Pocket/Loop
- Fabric Pocket/Loop with Rod
- Reinforced\* with PVC Strips (default)
- Reinforced\* with Metal Strips  
(specify type) \_\_\_\_\_
- Hook & Loop Fastener

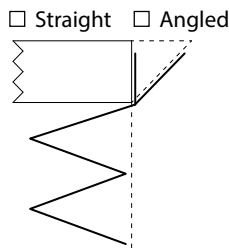


\*Reinforced strips shipped without mounting holes unless dwg. received.

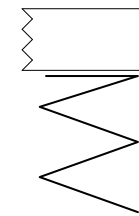
**7. Inside Cover Mount** – Select mounting type (collar or flange), then a mounting option.

– MOUNTING TO TABLE TOP –

- Collar Mount**  
(specify "straight" or "angled")
- Reinforced\* with PVC Strips (default)
- Reinforced\* with Metal Strips  
(specify type) \_\_\_\_\_
- Hook & Loop Fastener
- Other (specify) \_\_\_\_\_

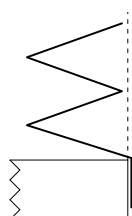


- Flange Mount**
- Reinforced\* with PVC Strips (default)
- Reinforced\* with Metal Strips  
(specify type) \_\_\_\_\_
- Hook & Loop Fastener
- Other (specify) \_\_\_\_\_

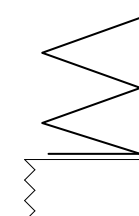


– MOUNTING TO BASE (OPTIONAL) –

- Collar Mount**
- Fabric Pocket/Loop
- Fabric Pocket/Loop with Rod
- Reinforced\* with PVC Strips (default)
- Reinforced\* with Metal Strips  
(specify type) \_\_\_\_\_
- Hook & Loop Fastener



- Flange Mount**
- Fabric Pocket/Loop
- Fabric Pocket/Loop with Rod
- Reinforced\* with PVC Strips (default)
- Reinforced\* with Metal Strips  
(specify type) \_\_\_\_\_
- Hook & Loop Fastener



\*Reinforced strips shipped without mounting holes unless dwg. received.



# MACHINE ROOF COVERS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

## 1. Application/Environment Information

Bellows For:  Dust/Particle Containment (please describe) \_\_\_\_\_  
 Noise Attenuation

Cover Installation:  Existing Rails (please provide dimensions) \_\_\_\_\_  in  mm  
 Dynatect to Supply Rails

Machine Speed: \_\_\_\_\_ Acceleration: \_\_\_\_\_ (Please indicate unit of measurement for each value.)

Application Notes: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

## 2. Extended/Retracted Length/Travel

- Specify cover extended and retracted length requirements or indicate travel and Dynatect will advise closed length.
- Standard covers have 10 to 1 extended-to-retracted ratio, yet modifications can be engineered.

Extended Length: \_\_\_\_\_ Retracted Length: \_\_\_\_\_ Travel Length: \_\_\_\_\_

Dimensions specified in:  in  mm

Note: Single cover shown.

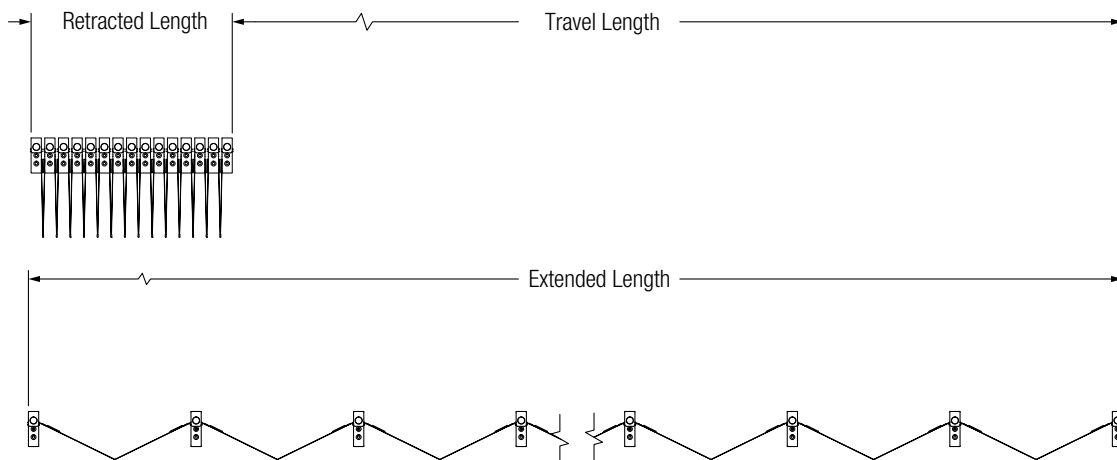


Diagram #1 – Extended/Retracted Travel



# MACHINE ROOF COVERS | QUOTE REQUEST FORM

### 3. Required Dimensions (Refer to Diagrams #2 and #3 below.)

- (A) Machine or Pit Width: \_\_\_\_\_ Standard roof cover assembly "A" + 6.25"
- (D) Rail Dimensions: \_\_\_\_\_  
(If rails already exist; otherwise 1.5" x 1.5" [38mm x 38mm] standard rail size if supplied by Dynatect.)
- (E) Distance – Rail Center to Rail Center: \_\_\_\_\_  
(If rails already exist.)

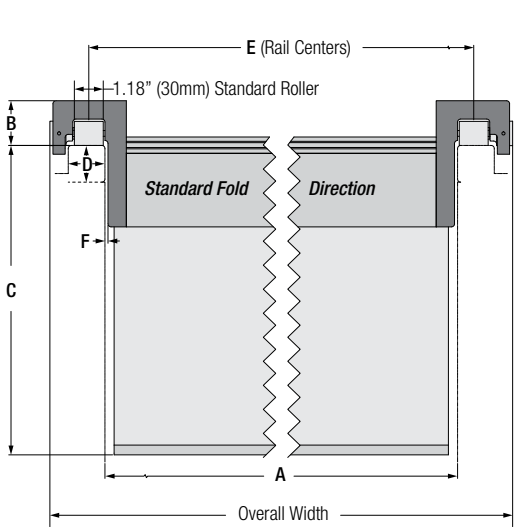


Diagram #2 – Standard Fold Direction

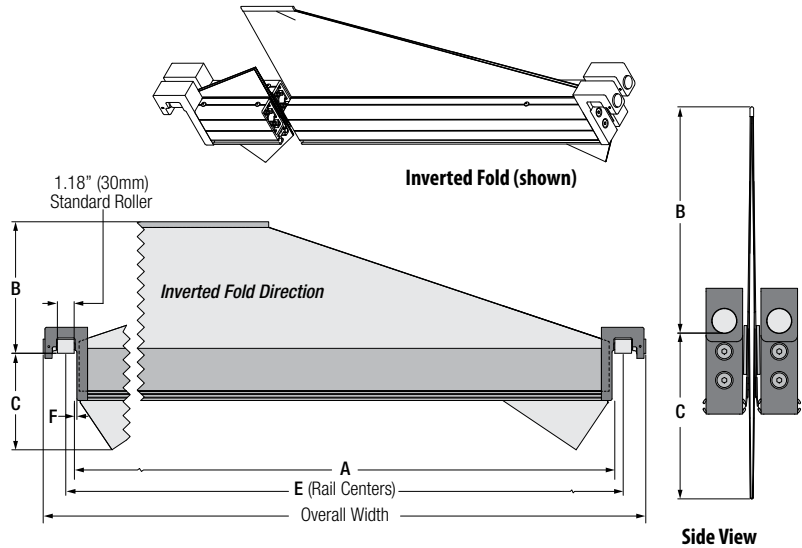


Diagram #3 – Inverted Fold Direction

### 4. Type of Cover by Width (Note: Custom sizes can be made.)

- Light-Duty – <12 ft.
- Heavy-Duty – >12 ft.

### 5. Clearance Requirements

(Standard clearance requirements are listed below. Please provide any space restrictions or provide a sketch of your application.)

- (B) Upper Clearance from Top of Rail: \_\_\_\_\_
  - 1.83" (46 mm) for standard fold direction
  - 9.67" (246 mm) for inverted fold direction
  
- (C) Lower Clearance from Top of Rail: \_\_\_\_\_
  - Light-Duty Cover: 11.65" (296 mm) for standard fold direction  
2.33" (60 mm) for inverted fold direction
  - Heavy-Duty Cover: 12.65" (321 mm) for standard fold direction  
3.33" (85 mm) for inverted fold direction
  
- (F) Standard Gap: \_\_\_\_\_
  - 0.13" (3 mm) depending on surface flatness

## GORTIFLEX<sup>®</sup> DIE SET SHIELDS | STOCK

Gortiflex die set shields are unique molded bellows covers packaged conveniently for easy ordering and fast shipment within 1 or 2 business days. Bellows protect ball bushings or standard die sets to lengthen life and increase operator safety. Die set shields are available in 7 sizes to cover pins from 3/4" to 2-1/2" diameter. Die set shields are manufactured from heavy-duty, oil-resistant, Goralon<sup>®</sup> material. Each set consists of 2 bellows, 2 clamps and 2 back-up plates for quick and easy installation.



### Features/Benefits:

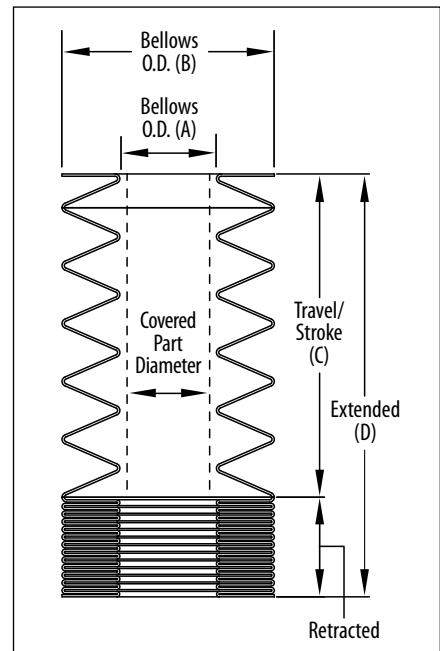
- Durable construction provides long-life operation, even in high-speed die set applications
- Completely seals out damaging dirt, dust, scrap and scale
- Lengthens die set life
- Provides increased operator safety
- Delivered with back up mounting plate and clamp for a complete solution

### STYLES

PIN DIAMETER	STANDARD FRICTION SHOULDER BEARINGS		BALL BUSHING BEARINGS	
	SHOULDER	SLEEVE	SHOULDER	SHOULDER
3/4", 7/8"	DSA	DSA	–	DSA
1", 1-1/8"	DSB	DSA	DSC	DSB
1-1/4"	DSC	DSB	DSD	DSD
1-1/2"	DSD	DSC	DSE	DSE
1-3/4"	DSE	DSD	DSF	DSE
2"	DSF	DSE	DSG	DSF
2-1/2"	DSG	DSF	–	DSG

### DIMENSIONS

DIE SET SHIELD STYLE	A (I.D.)	B (O.D.)	C (MAX. LENGTH)	D (MIN. LENGTH)	E (COLLAR I.D. RANGE)
DSA	1-1/2"	2-1/2"	11"	1-1/2"	1-3/8" to 1-5/8"
DSA-18	1-1/2"	2-1/2"	18"	3"	1-3/8" to 1-5/8"
DSB	1-3/4"	2-3/4"	11"	1-1/2"	1-5/8" to 1-7/8"
DSB-18	1-3/4"	2-3/4"	18"	3"	1-5/8" to 1-7/8"
DSC	2"	3"	11"	1-1/2"	1-7/8" to 2"
DSC-18	2"	3"	18"	3"	1-7/8" to 2"
DSD	2-1/4"	3-1/4"	11"	1-1/2"	2-1/8" to 2-3/8"
DSD-18	2-1/4"	3-1/4"	18"	3"	2-1/8" to 2-3/8"
DSE	2-3/4"	3-3/4"	11"	1-1/2"	2-1/2" to 2-3/4"
DSE-18	2-3/4"	3-3/4"	18"	3"	2-1/2" to 2-3/4"
DSF	3"	4"	11"	1-1/2"	2-7/8" to 3-1/8"
DSF-18	3"	4"	18"	3"	2-7/8" to 3-1/8"
DSG	3-1/2"	4-1/2"	11"	1-1/2"	3-3/8" to 3-5/8"
DSG-18	3-1/2"	4-1/2"	18"	3"	3-3/8" to 3-5/8"



**Please supply the following information to order:**

1. Style number
2. Pin diameter of die set
3. Type of bearing used on die set: standard friction, shoulder, ball bushing or sleeve

## GORTIFLEX<sup>®</sup> CONVOLUTED TUBING | STOCK

Gortiflex convoluted tubing can be used as covers for screws, rods, ball splines. They can also be applied as flexible connections where vibration, movement or misalignment is involved. Available from stock, shipment within 1-2 business days.

### CT STYLE

- For light- to medium-duty environments (oil, dirt, chips and other abrasives)
- Chemical and UV resistance
- Operating temperature range: -30° F to 260° F\*
- Available in 13 stock sizes, from 1 to 10 inch I.D. and 24" extended lengths
- CT units are made from 0.060" thick (+/- 0.010") Goralon<sup>®</sup> elastomer reinforced with outer nylon stocking
- Ends consist of a 1" long collar on each end for mounting with optional clamps (collars can be removed to provide flanges)
- Easy mounting with clamps, stocked in all sizes (clamp band width is ½ inch)



### CTH STYLE

- For light-duty environments (oil and dust)
- Chemical and UV resistance
- Operating temperature range: -30° F to 260° F\*
- Available in 6 stock sizes from 0.75 to 2 inch I.D. and extended lengths of 12" or 24"
- CTH units are made from 0.030" thick (+/- 0.05") Goralon elastomer
- Inside flanges on both ends of the bellows accept a snap-in collar to achieve the desired connecting I.D. Snap-in collars are black polyurethane, ¾ inch long, available in a variety of sizes
- Easy mounting with clamps, stocked in all sizes (clamp band width is ½ inch)



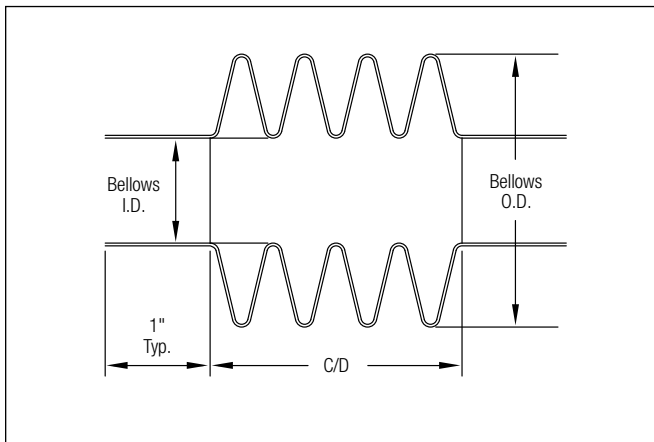
\*Temperatures represent operating ranges for compounds in laboratory tests. Operating temperature range for Goralon in a bellows application may vary dependent on other environmental conditions. Consult Dynatect for assistance in product specification.

# GORTIFLEX<sup>®</sup> CONVOLUTED TUBING | STOCK

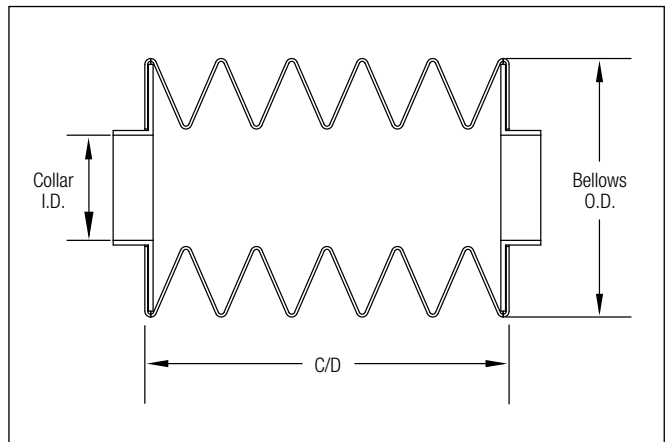
## DIMENSIONS

STYLE NUMBER	BELLOWS I.D.	BELLOWS O.D.	EXTENDED LENGTH	RETRACTED LENGTH	SNAP-IN COLLAR SIZES (I.D.) AVAILABLE
CTH-.75-12	3/4"	1-5/8"	12"	1-7/8"	1/4", 1/2", 3/4", 1"
CTH-.75-24	3/4"	1-5/8"	24"	3-3/4"	1/4", 1/2", 3/4", 1"
CTH-1.375-12	1-3/8"	2-1/2"	12"	1-3/8"	1/2", 3/4", 1", 1-1/4", 1-1/2", 1-3/4"
CTH-1.375-24	1-3/8"	2-1/2"	24"	2-3/4"	1/2", 3/4", 1", 1-1/4", 1-1/2", 1-3/4"
CTH-2-12	2"	3-1/4"	12"	1"	1", 1-1/4", 1-1/2", 1-3/4", 2", 2-1/4"
CTH-2-24	2"	3-1/4"	24"	2"	1", 1-1/4", 1-1/2", 1-3/4", 2", 2-1/4"
CT-1	1"	1-3/4"	24"	5-1/4"	—
CT-1.5	1-1/2"	2-3/8"	24"	4-1/2"	—
CT-2	2"	3"	24"	4"	—
CT-2.5	2-1/2"	3-1/2"	24"	4"	—
CT-3	3"	4-1/4"	24"	3-1/4"	—
CT-3.5	3-1/2"	5"	24"	3"	—
CT-4	4"	5-1/2"	24"	3"	—
CT-4.5	4-1/2"	6"	24"	3"	—
CT-5	5"	6-3/4"	24"	2-1/2"	—
CT-6	6"	8"	24"	2-1/4"	—
CT-7	7"	9"	24"	2-1/4"	—
CT-8	8"	10"	24"	2-1/4"	—
CT-10	10"	12"	24"	2-1/4"	—

### CT STYLE



### CTH STYLE



**Please supply the following information to order:**

1. New design or replacing existing bellows
2. CT/CTH Style number
3. Snap-in collar dimensions I.D. for each end (CTH style only)
4. If optional mounting clamps are desired



Mounting Clamps

## SEWN ROD BOOTS

Gortite<sup>®</sup> sewn bellows provide maximum protection against cylinder rod scoring from chips, abrasive particles and other impinging objects. Units are manufactured of rugged neoprene coated nylon fabric. Gortite sewn cylinder rod bellows are suitable for operating temperature ranges of -40° F to 220° F. Rod boots are available in 12 stock sizes without tooling charges or minimum order quantities. All shipments are made within three working days.

**Features/Benefits:**

- Reduce frequency of shaft seal replacements
- Prevent rod scoring
- Eliminate nicking of shafts and ball screws
- Protect against impinging chips
- Guard against grit abrasion
- Shield from corrosive splatter

**Applications:**

- Cylinder rod boots
- Dust boots

**SPECIFICATIONS**

ROD BOOT STYLE	I.D. (Inside Diameter)	O.D. (Outside Diameter)	RETRACTED LENGTH (every 12" extended)	COLLARS: AVAILABLE I.D. SIZES (must be ordered in 1/8" increments)
SRA-15	3/4"	3"	3/4"	1/2" to 3"
SRB-15	1-1/8"	3-3/8"	3/4"	1/2" to 3-3/8"
SRC-15	1-1/2"	3-3/4"	3/4"	1/2" to 3-3/4"
SRD-15	1-7/8"	4-1/8"	3/4"	1/2" to 4-1/8"
SRE-15	2-3/8"	4-5/8"	3/4"	1/2" to 4-5/8"
SRF-15	2-7/8"	5-1/8"	3/4"	1/2" to 5-1/8"
SRG-25	3-3/8"	7"	1/2"	1/2" to 7"
SRH-25	3-7/8"	7-1/2"	1/2"	1/2" to 7-1/2"
SRJ-25	4-1/2"	8-1/4"	1/2"	1/2" to 8-1/4"
SRK-25	5"	8-3/8"	1/2"	1/2" to 8-3/8"
SRM-25	5-3/8"	9-1/2"	1/2"	1/2" to 9-1/2"
SRO-25	7-1/4"	11"	1/2"	1/2" to 11"

**Mounting Accessories:**

- C205 flange-type back up plates or C208 collar clamps – can be added to your order upon request.



**QUOTE REQUEST FORMS: SEE PAGE 32.**

# SEWN ROD BOOTS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

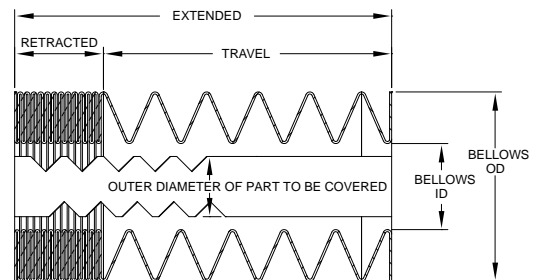
**1. Rod Boot Style**

- SRA-15     SRB-15     SRC-15     SRD-15     SRE-15     SRF-15  
 SRG-25     SRH-25     SRJ-25     SRK-25     SRM-25     SRO-25

ROD BOOT STYLE	I.D. (Inside Diameter)	O.D. (Outside Diameter)	RETRACTED LENGTH (every 12" extended)	COLLARS: AVAILABLE I.D. SIZES (must be ordered in 1/8" increments)
SRA-15	3/4"	3"	3/4"	1/2" to 3"
SRB-15	1-1/8"	3-3/8"	3/4"	1/2" to 3-3/8"
SRC-15	1-1/2"	3-3/4"	3/4"	1/2" to 3-3/4"
SRD-15	1-7/8"	4-1/8"	3/4"	1/2" to 4-1/8"
SRE-15	2-3/8"	4-5/8"	3/4"	1/2" to 4-5/8"
SRF-15	2-7/8"	5-1/8"	3/4"	1/2" to 5-1/8"
SRG-25	3-3/8"	7"	1/2"	1/2" to 7"
SRH-25	3-7/8"	7-1/2"	1/2"	1/2" to 7-1/2"
SRJ-25	4-1/2"	8-1/4"	1/2"	1/2" to 8-1/4"
SRK-25	5"	8-3/8"	1/2"	1/2" to 8-3/8"
SRM-25	5-3/8"	9-1/2"	1/2"	1/2" to 9-1/2"
SRO-25	7-1/4"	11"	1/2"	1/2" to 11"

**2. Rod Boot Dimensions** (please specify in inches)

O.D. (outer diameter) of part to be covered: \_\_\_\_\_  
 Extended length: \_\_\_\_\_ (without ends, in 12" increments)  
 Travel distance: \_\_\_\_\_



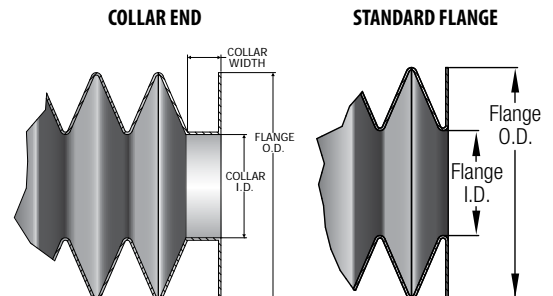
**3. End Dimensions** (choose end type for each end – standard flange or collar)

**One End:**  Standard Flange  
 Outer Diameter: \_\_\_\_\_ Inner Diameter: \_\_\_\_\_

Collar  
 Outer Diameter: \_\_\_\_\_ Width: \_\_\_\_\_

**Other End:**  Standard Flange  
 Outer Diameter: \_\_\_\_\_ Inner Diameter: \_\_\_\_\_

Collar  
 Outer Diameter: \_\_\_\_\_ Width: \_\_\_\_\_



**4. Mounting Accessories** (please check options desired)

- C208 Clamp (0.5" minimum inner diameter) – C208 Clamps are stocked in any size required; clamp band is 0.5" wide  
 C205 Flange-type back-up plate (shipped blank)  
 C205 Flange-type back-up plate with mounting holes (please send sketch indicating bolt hole pattern)



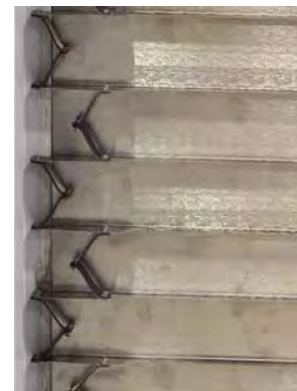
## GORPLATE™ | STEEL COVERS

Gorplate is ideal for protecting linear rails, ways and machine elements from hot chips and weld spatter. These covers have performed to one million cycles at up to 2G's to ensure that they meet high-speed and high-cycle requirements.

Gorplate covers consist of an innovative and cost-effective system of stainless steel plates and hinges that provide uniform expansion. Mild steel side rails and end plates are included.

**Features/Benefits:**

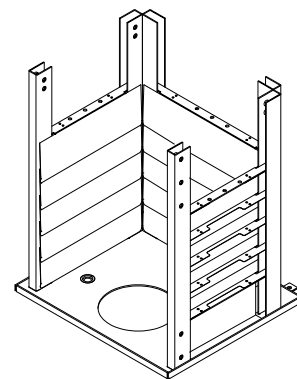
- Resists heavy chip loads and weld spatter
- Tested for long life in high speed and high-cycle operation
- Alternative to sliding plate systems that are prone to locking
- Uniform plate expansion
- Low profile design, approximately 1" depth
- Quiet operation
- Lightweight and economical
- Excellent extended-to-retracted ratio



Back of cover.



Visit our website to see a video of the cover in operation.



Gorplate covers can be combined into multi-sided assemblies

# GORPLATE™ COVERS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

## 1. Application Information

Replacement Cover (if measuring from existing cover, a drawing is required; DWG or DXF file preferred)  New Design (please supply drawing/CAD file in DWG or DXF file format or photo of your application)

Cover Orientation:  Horizontal  Vertical  Cross Rail

## 2. Environmental Information

Chemicals (specify type and %) \_\_\_\_\_ Temperature Range: \_\_\_\_\_  °F  °C

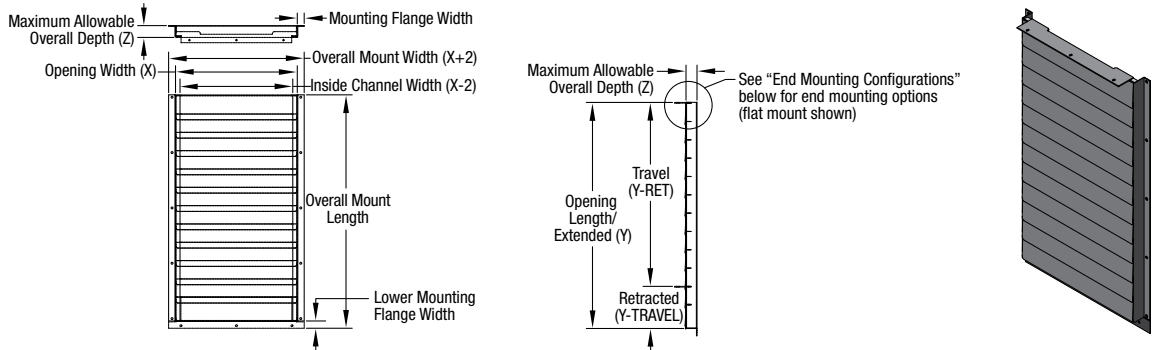
## 3. Operation Information

Maximum Travel Speed\*: \_\_\_\_\_ Movements/Day \_\_\_\_\_ Acceleration\*: \_\_\_\_\_  
 \*Please indicate unit of measurement for each value.

## 4. Cover Dimensions (Specify opening length requirement or indicate travel. Dynatect Manufacturing, Inc. will advise overall length needed for cover.)

(X) Opening Width: \_\_\_\_\_ (Y) Opening Length: \_\_\_\_\_ (Z) Maximum Allowable Overall Depth: \_\_\_\_\_  
 (Y-TRAVEL) Retracted Length: \_\_\_\_\_ (Y-RET) Travel: \_\_\_\_\_ Dimensions specified in:  in  mm

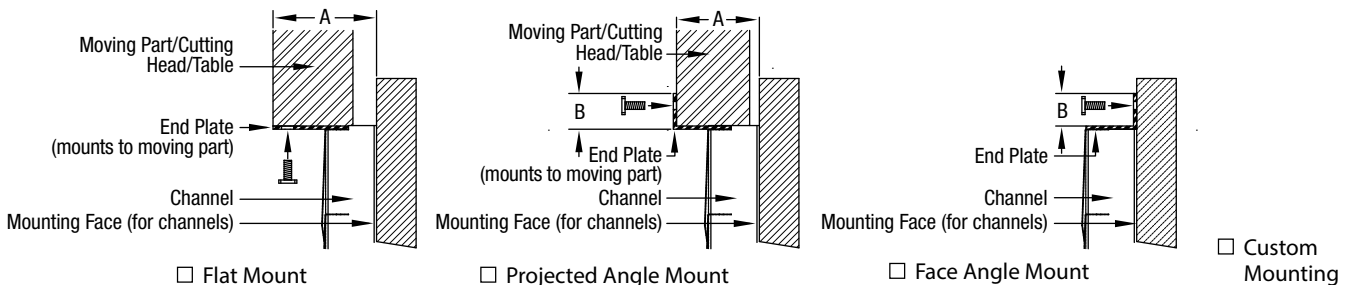
Note: Mounting flange width is 1.00 on standard covers. Please contact a Dynatect Manufacturing, Inc. representative to accommodate your special applications.



## 5. Way Interference (Please describe any interference.)

\_\_\_\_\_

## 6. End Mounting Configurations Dimension A: \_\_\_\_\_ Dimension B: \_\_\_\_\_



Note: All Gorplate Covers/Channels are provided without mounting holes. If a specific mounting hole pattern is required please supply a sketch/drawing. Include drawing for configurations other than the standards shown above.



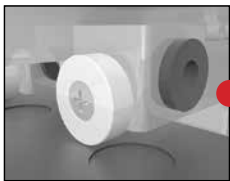
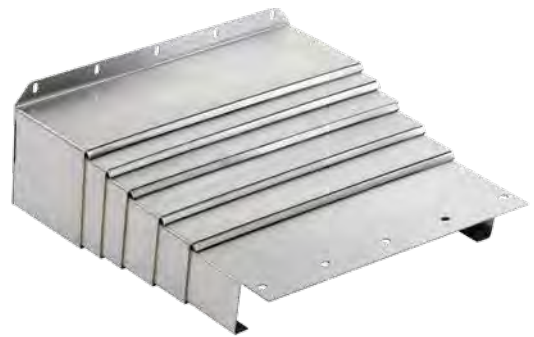
# TELAFLEX<sup>®</sup> | STEEL TELESCOPIC WAY COVERS

## HEAVY-DUTY PROTECTION FOR MACHINE WAYS AND SCREWS

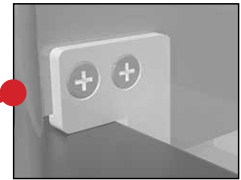
Telaflex covers are ideal for any machine tool application requiring complete protection of machine ways and screws. Telescopic covers provide the ultimate protection against dropped tools, heavy chip loads, cutting oils and coolants. Covers can be designed to move along any machine axis. They are engineered and designed with the utmost precision, in a wide range of shapes, to your specifications. In addition, Dynatect refurbishes all brands of telescopic covers and has a full inventory of replacement wipers and components.

**Features:**

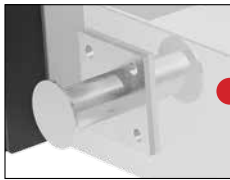
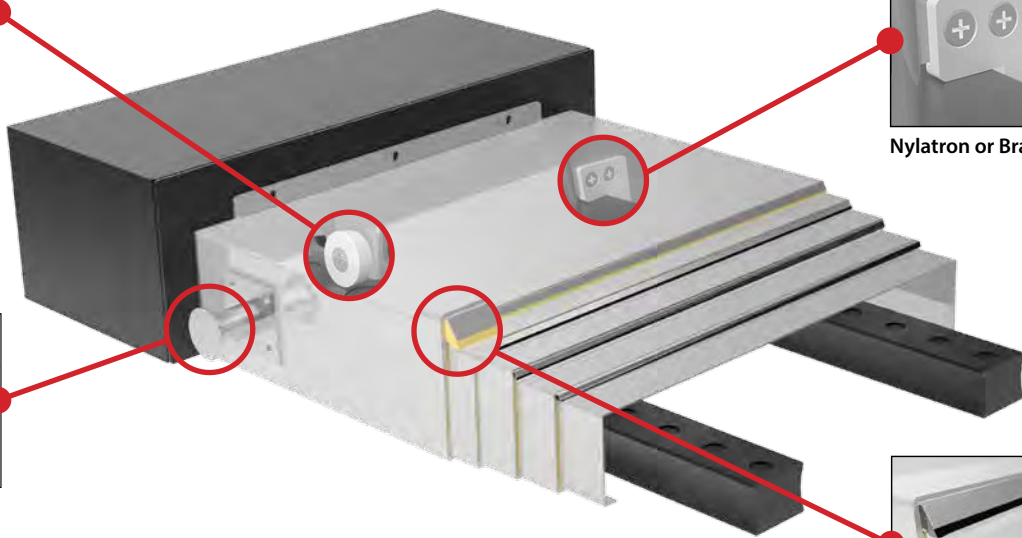
- Top section tread plate or tool tray available
- Section material 18 ga. through 1/4" cold rolled steel (stainless steel option available)
- Way extensions can be provided if necessary
- Standard oiled finished (bright buffed option available)
- Durable wiper options for wet or dry operation
- Options include: nylon or brass guides, bearing rollers, lift lugs



Bearing Rollers



Nylatron or Brass Guides



Lifting Lugs Provided on Large Covers



Heavy-Duty Wipers



**QUOTE REQUEST FORMS:**  
NEW DESIGN – SEE PAGES 36-37.  
REPLACEMENT COVER – SEE PAGES 38-39.  
PLEASE INCLUDE DRAWING.

# NEW DESIGN – TELAFLEX<sup>®</sup> COVERS | QUOTE REQUEST FORM

## MEASURING FROM MACHINE

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

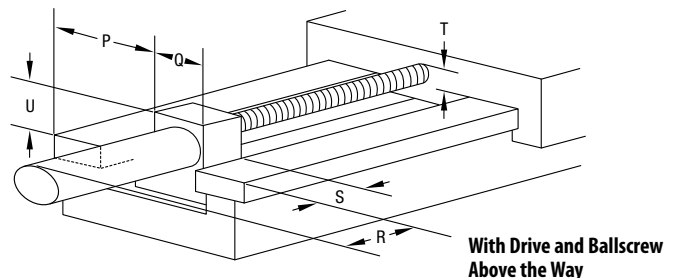
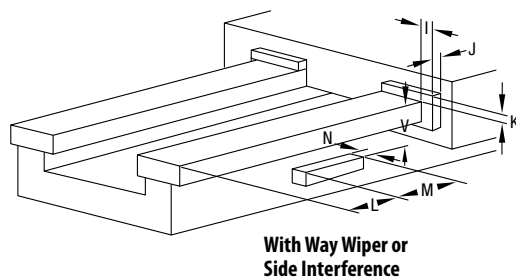
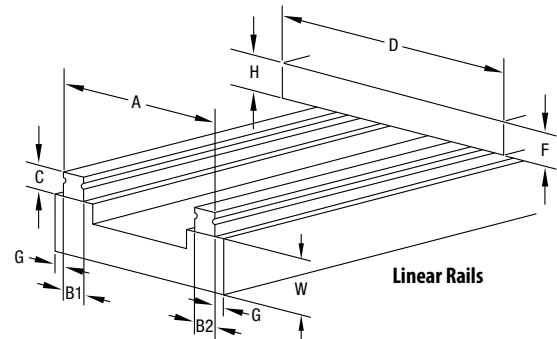
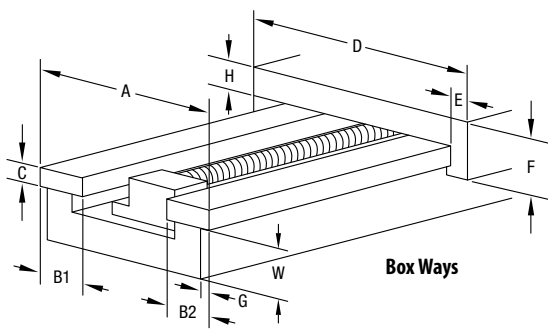
Please supply a sketch/drawing of your application. We have an extensive database of covers on file. Please contact your Dynatect Manufacturing, Inc. representative to locate your previous order(s) or to see if one fits your exact cover requirements.

### 1. Application Information

Existing Covers Only: Manufacture \_\_\_\_\_ Model/Part Number \_\_\_\_\_  
 Machine Make: \_\_\_\_\_ Machine Model: \_\_\_\_\_  
 Axis:  X  Y  Z  Other \_\_\_\_\_  
 Cover Orientation:  Horizontal  Vertical  Cross Rail  Between Column and Table  
 New Design or Replace Existing Cover:  New Design  Existing Machine in our Factory (replacement cover) Number of Boxes? \_\_\_\_\_  
 Operating Environment of the Cover? Please indicate percentage(s).  
 Dry \_\_\_\_\_  Grinding \_\_\_\_\_  Hot Chip \_\_\_\_\_  Aluminum \_\_\_\_\_  Heavy Coolant \_\_\_\_\_  
 Other (describe) \_\_\_\_\_  
 Working Temperature: \_\_\_\_\_  °F  °C Maximum Travel Speed: \_\_\_\_\_ (indicate unit of measurement)  
 Movements/Day \_\_\_\_\_ Acceleration: \_\_\_\_\_ (indicate unit of measurement) Axis: \_\_\_\_\_  
 Are Ways Hardened?  Yes  No

### 2. Way Dimensions (Please indicate and dimension any obstructions below or provide a separate drawing.)

Way Dimension Specified In:  Inches  Millimeters Type of Way:  Box Way  Linear Rails  
 Dimensions: A \_\_\_\_\_ B1 \_\_\_\_\_ B2 \_\_\_\_\_ C \_\_\_\_\_ D \_\_\_\_\_ E \_\_\_\_\_ F \_\_\_\_\_ G \_\_\_\_\_  
 H \_\_\_\_\_ I \_\_\_\_\_ J \_\_\_\_\_ K \_\_\_\_\_ L \_\_\_\_\_ M \_\_\_\_\_ N \_\_\_\_\_ P \_\_\_\_\_  
 Q \_\_\_\_\_ R \_\_\_\_\_ S \_\_\_\_\_ T \_\_\_\_\_ U \_\_\_\_\_ V \_\_\_\_\_ W \_\_\_\_\_

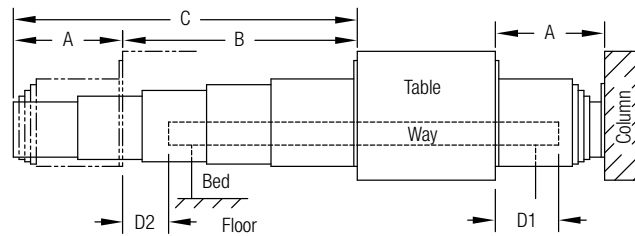


# NEW DESIGN – TELAFLEX® COVERS | QUOTE REQUEST FORM

### 3. Extended/Retracted/Travel Requirements

Dimensions specified in:  in  mm

- (A) Retracted Length: \_\_\_\_\_
- (B) Travel Distance: \_\_\_\_\_
- (C) Extended Length: \_\_\_\_\_
- (D1) Over Travel: \_\_\_\_\_
- (D2) Over Travel: \_\_\_\_\_

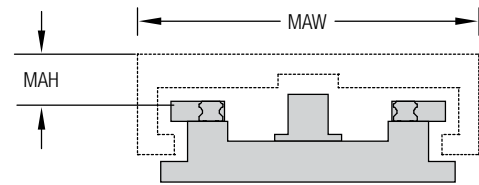


### 4. Maximum Allowable Cover Width and Height Above Way

Dimensions specified in:  in  mm

MAH (Maximum Allowable Height Above Way) Required: \_\_\_\_\_

MAW (Maximum Allowable Cover Width) Required: \_\_\_\_\_



### 5. Cover Configuration

For replacement covers, please choose the profile which matches the existing cover the closest.

- A  B1  B2  C  D  E1  E2
- F1  F2  G1  G2  H1  H2  J (other)

	Other – Please include a drawing (DWG/DXF preferred)			

### 6. Mounting Configuration

Must select configuration for both ends.  
Mounting holes not supplied unless specified.

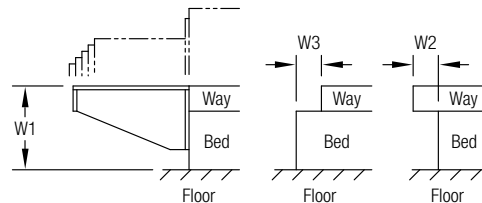
- Large Box:  1  2  3  4  5  6  7  8 (other)
- Small Box:  1  2  3  4  5  6  7  8 (other)

	8 Other – Please include a drawing (DWG/DXF preferred)	

**Note:** Views 1-4 are end views.  
Views 5-7 are views from the side of the cover.

### 7. Extension Brackets

- Yes Dimensions specified in:  in  mm
  - (W1) Top of Ways to Floor: \_\_\_\_\_
  - (W2) Way Extends Beyond Bed: \_\_\_\_\_
  - (W3) Way Ends Before Bed: \_\_\_\_\_
- No



### 8. Options

- Lifting Lugs\*
- Stainless Steel
- Thread Plate (separate)
- Inspection Door

\*On any cover over 250 lbs/113 kg, a lifting system is integrally designed.

# REPLACEMENT COVERS – TELAFLEX<sup>®</sup> | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

Note: The following design information helps us provide you with a budgetary estimate for a replacement cover. Please include photographs of your existing cover when sending in your request, especially the inside of the cover.

## 1. Machine Information

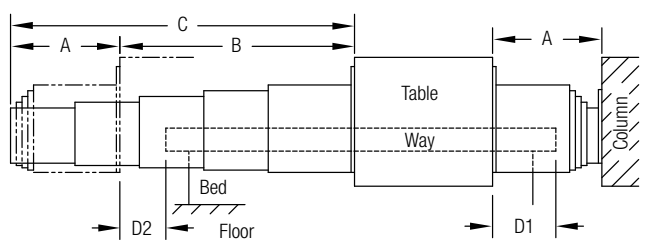
Machine Make: \_\_\_\_\_ Machine Model & Number: \_\_\_\_\_  
 Machine Axis:  X  Y  Z  Other \_\_\_\_\_  
 Type of Way, e.g. Linear Rail: \_\_\_\_\_ Cover Brand\*:  Dynatect<sup>®</sup>/Gortite<sup>®</sup>  Other \_\_\_\_\_  
 \*If you are replacing a Dynatect or Gortite brand cover, let us first look up your design by the cover part number. Cover Part Number: \_\_\_\_\_  
 Cover Orientation:  Horizontal  Vertical  Crossrail  Between column and table  
 Do you have any concerns or are you experiencing any issues with your current cover? \_\_\_\_\_

## 2. Operating Environment

Dry  Grinding  Hot Chips  Aluminum Swarf  Heavy Coolant  Other (describe) \_\_\_\_\_  
 Working Temperature: \_\_\_\_\_ °F °C Maximum Travel Speed: \_\_\_\_\_ (indicate unit of measurement)  
 Acceleration: \_\_\_\_\_ (indicate unit of measurement) Number of cycles: per 8 hrs \_\_\_\_\_ per 16 hrs \_\_\_\_\_ per 24 hrs \_\_\_\_\_  
 Are Ways Hardened?  Yes  No

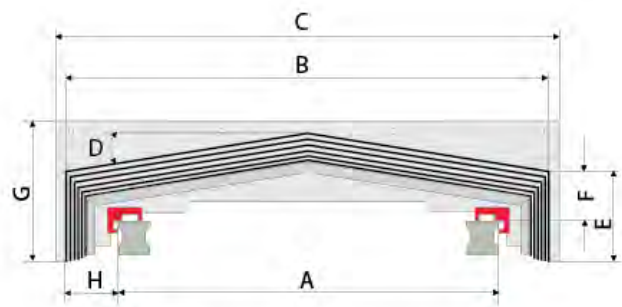
## 3. Extended/Retracted/Travel Requirements



Dimensions specified in:  in  mm  
 (A) Retracted Length: \_\_\_\_\_  
 (B) Travel Distance: \_\_\_\_\_  
 (C) Extended Length: \_\_\_\_\_  
 (D1) Over Travel: \_\_\_\_\_  
 (D2) Over Travel: \_\_\_\_\_



## 4. Cover Dimensions and Shape

Dimensions specified in:  in  mm  
 (A) Width of Bed/Way: \_\_\_\_\_  
 (B) Width of Cover (largest box): \_\_\_\_\_  
 (C) Cover Width incl. Mounting Plate: \_\_\_\_\_  
 (D) Tilt Angle (°) if Peaked: \_\_\_\_\_  
 (E) Height of Cover (largest box): \_\_\_\_\_  
 (F) Height of Cover Above Way: \_\_\_\_\_  
 (G) Total Height of Cover incl. Mounting Plate: \_\_\_\_\_  
 (H) Lateral Overhang of Cover or Wrap Width: \_\_\_\_\_  
 Cover Height and Width of Smallest Box: \_\_\_\_\_  
 Number of Boxes/Sections: \_\_\_\_\_



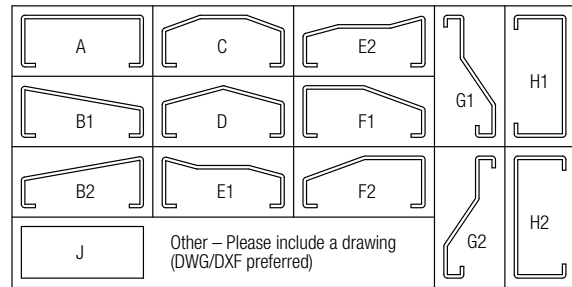
Box Leg, Straight   Box Leg, Side Overhang 

# REPLACEMENT COVERS – TELAFLEX® | QUOTE REQUEST FORM

## 4. Cover Dimensions and Shape (cont'd.)

Choose the profile which matches the existing cover the closest.

- A    B1    B2    C    D    E1    E2  
 F1    F2    G1    G2    H1    H2    J (other)



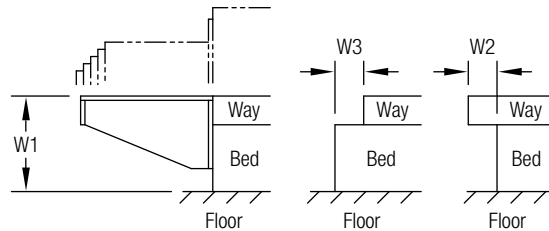
## 5. Cover Options and Accessories

Material: \_\_\_\_\_ e.g. 12GA steel, 18 GA steel

- Wiper Type:    Elastomer Wiper:   Screwed in?    Yes    No  
                    Brass:                                Spot-welded?    Yes    No  
 Side Brass:    Yes    No                    Side Wipers:    Yes    No

Please check the options you require:

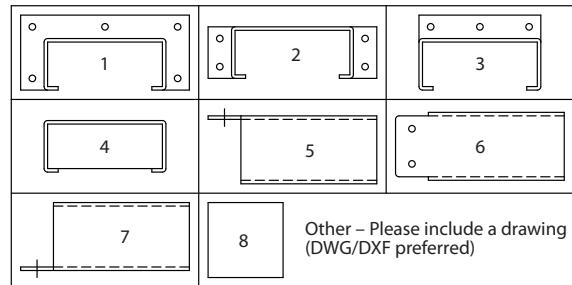
- Lift Lugs                     Scissors \_\_\_\_\_ (how many?)  
 Nylon Riders                Brass Riders  
 Bearing Rollers            Bumpers  
 Tread Plate                 Inspection Door  
 Extension Brackets:  
 (W1) Top of Ways to Floor: \_\_\_\_\_  
 (W2) Way Extends Beyond Bed: \_\_\_\_\_  
 (W3) Way Ends Before Bed: \_\_\_\_\_



## 6. Mounting Configuration

Must select configuration for both ends.  
Mounting holes not supplied unless specified.

- Large Box:    1    2    3    4    5    6    7    8 (other)  
 Small Box:    1    2    3    4    5    6    7    8 (other)  
 Mounting of Cover:    Slide-On    Place-On



**Note:** Views 1-4 are end views.  
Views 5-7 are views from the side of the cover.



## TELAFLIX<sup>®</sup> | REPAIR SERVICE

### FOR ALL TYPES OF DAMAGED METAL TELESCOPIC WAY COVERS

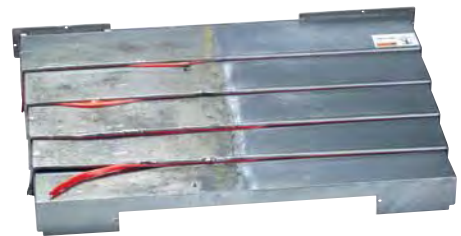
Replacing metal way covers can be costly and is often unnecessary. Dynatect can repair your damaged cover to OEM specs or better, faster than you can replace them with new – at a fraction of the cost.

- Complete repair, reverse engineering, design and fabrication services available
- Single source supplier for all your repair needs
- Prompt, accurate quotations
- Expert analysis and diagnosis of chronic failures
- Technicians with over 20 years production and repair experience
- All covers are tested before shipment
- Expedited service available for most repairs
- Large inventory of replacement parts

When critical parts require continuous protection while in operation, you can't afford to wait for a new cover.

Local Dynatect representatives are available to evaluate your existing protective covers and recommend improvements.

Call or e-mail us for more information regarding returning product for an estimate or to schedule an expedited repair.

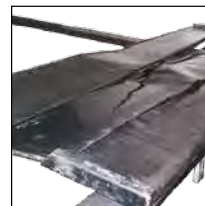


### COVERS FOR DOMESTIC AND IMPORTED MACHINES REWORKED TO LIKE-NEW CONDITION

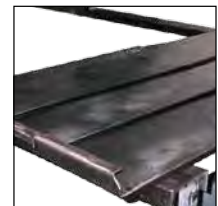
- Repair damaged sections
- Replace riders or rollers
- Install new wipers
- Replace brass wear strips
- Clean and buff to original finish



Before



After



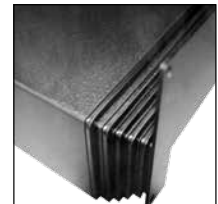
### OEM SPEC OR BETTER?

Gortite<sup>®</sup> Telaflex repair does more than just restore your damaged covers to "like new" condition. After considering your existing cover design, application and machine environment, we use state-of-the-art technology, components, and manufacturing processes to deliver a restored cover that in many cases performs significantly better than the original.



### REVERSE ENGINEERING

If your telescopic way covers are damaged beyond repair, Dynatect can conduct a fee-based design review to assess the damaged cover and generate engineering drawings. Our design team has the knowledge and experience to conduct a formal design review to evaluate alternative solutions or incorporate additional features to better fit your application.



For a repair evaluation, email or call us for a return material authorization (RMA) number.

# TELAFLEX® | REPLACEMENT PARTS

## FOR TELESCOPIC WAY COVER MAINTENANCE AND REPAIR

In addition to way cover repair, Dynatect offers a comprehensive stock of replacement parts for telescoping way covers:

- Extruded and Molded Urethane Wipers (see chart below and website for drawings)
- Steel Wiper Channels and Guards (see chart below and website for drawings)
- Replacement Riders and Rollers\*
- Brass Wear Strips\*

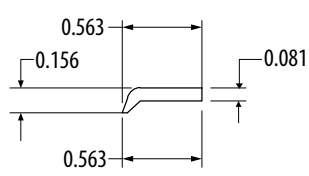
\*Contact Dynatect Sales for options: 800-298-2066.

### SPECIFICATIONS

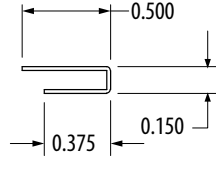
MODEL NO.	PART DESCRIPTION (ITEM NO.)	COLOR	LENGTH inches (mm)	UNIT
<b>EXTRUDED AND MOLDED URETHANE WIPERS</b>				
TFW-1/8	1/8" Wiper x 5' Long (2000167)	Black	60 (1,524)	Each
TFW-1/2	1/2" Wiper x 8' Long (2000004)	Black	96 (2,434)	Each
TFW-3/4	3/4" Wiper x 8' Long (2000005)	Black	96 (2,434)	Each
TFW-MA8 (N6)	MA-8 Wiper x 19.69" Long (2000150-2A)	Black	19.69 (500)	Each
TFW-MA12 (N7)	MA-12 Wiper x 19.69" Long (2000150-1A)	Black	19.69 (500)	Each
TFW-5/16N	5/16" Wiper w/Ridge x 8' Long (2000218)	Black	96 (2,434)	Each
TFW-1/2N	1/2" Wiper w/Ridge x 8' Long (2000222)	Black	96 (2,434)	Each
TFW-740	740 Wiper (740)	Black	Customer Specified	Each
PR2 LIP	PR2 Wiper (AA05984)	Black	Customer Specified	Each
PR2 CASE	PR2 Channel Guard (AA05985)	Black	Customer Specified	Each
TSA-M16	TSAM16 Wiper (MPWIP-6-4-05)	Black	Customer Specified	Each
TFW-N4	N4 Wiper, Channel & Guard (MPWIP-6-4-06)	Black	Customer Specified	Each
TSA-M19	TSAM19 Wiper (MPWIP-6-4-06)	Black	Customer Specified	Each
AA00754	Nitta Wiper w/ Guard (AA00754)	Black	1,000 (25,400)	Each

MODEL NO.	PART DESCRIPTION (ITEM NO.)	LENGTH inches (mm)	UNIT
<b>STEEL WIPER CHANNELS AND GUARDS</b>			
TFC-1/8	Channel for 1/8" Wiper x 4' Long (2000170)	48 (1,219)	Each
TFC-1/2	Channel for 1/2" Wiper x 3' Long (T15876-1)	36 (914)	Each
TFCG-1/2	Channel w/ Guard (new style) for 1/2" Wiper x 4' Long (2000221-U)	48 (1,219)	Each
TFCG-5/16	Channel w/ Guard for 5/16" Wiper x 4' Long (2000219-U)	48 (1,219)	Each
TFC-3/4	Channel for 3/4" Wiper x 3' Long (T15876-2)	36 (914)	Each
TFCG-741	Channel w/ Guard for 740 Wiper Lip (741)	Customer Specified (5' max. increments)	Each
TFG-1/8	Guard for 1/8" Wiper x 4' Long (SK7976-1)	48 (1,219)	Each
TFG-1/2	Guard for 1/2" Wiper x 4' Long (SK7976-2)	48 (1,219)	Each
TFG-3/4	Guard for 3/4" Wiper x 4' Long (SK7976-2)	48 (1,219)	Each
TFG-MA8 (N6)	Guard for MA-8 Wiper x 3' Long (K17593)	36 (914)	Each
TFG-MA12 (N7)	Guard for MA-12 Wiper x 3' Long (K17592)	36 (914)	Each

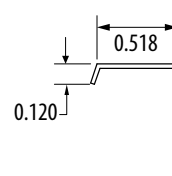
**TELAFLEX**<sup>®</sup> | TELESCOPIC WIPERS, CHANNELS AND GUARDS



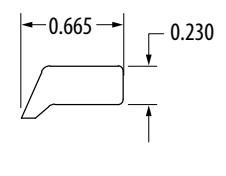
**TFW-1/8 Wiper**



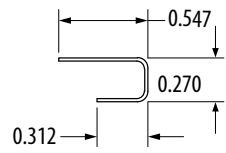
**TFC-1/8 Channel for TFW-1/8**



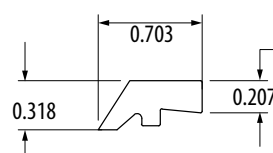
**TFG-1/8 Guard for 1/8" Wiper**



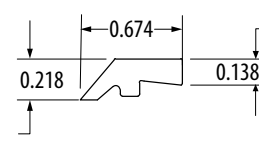
**TFW-1/2 Wiper**



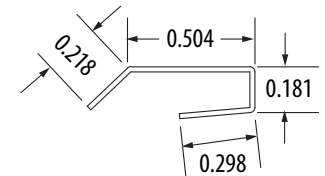
**TFC-1/2 Channel for Wiper TFW-1/2**



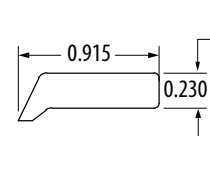
**TFW-1/2N 1/2" Wiper w/ Ridge**



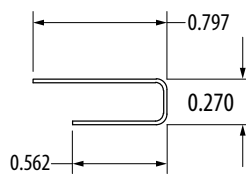
**TFW-5/16N 5/16" Wiper w/ Ridge**



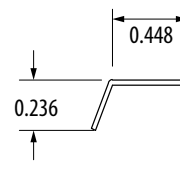
**TFCG-5/16 (2000219-U) Channel w/ Guard for 5/16" Wiper**



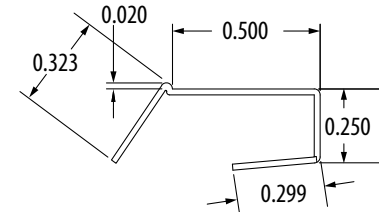
**TFW-3/4 Wiper**



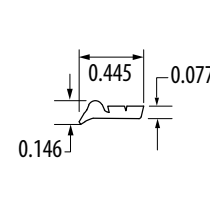
**TFC-3/4 Channel for Wiper TFW-3/4**



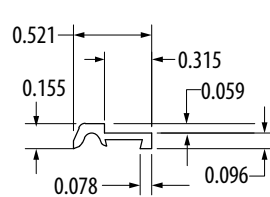
**TFG-1/2 & TFG-3/4 Guard for Wipers TFW-1/2 & TFW-3/4**



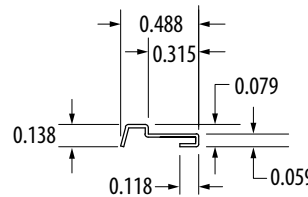
**TFCG-1/2 (2000221-U) Channel w/ Guard for 1/2" Wiper**



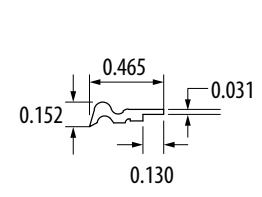
**TFW-740 740 Wiper**



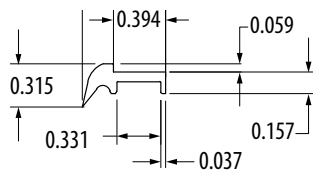
**TFCG-741 Channel & Guard for TFW-740 Wiper**



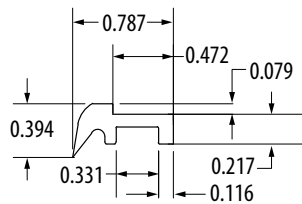
**PR2 Channel Guard**



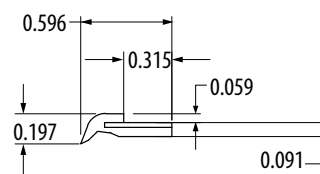
**PR2 Wiper**



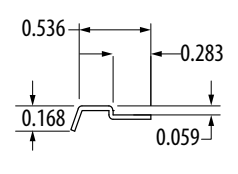
**TSA-M16 TSAM16 Wiper**



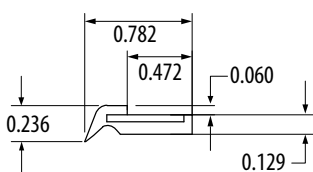
**TSA-M19 TSAM19 Wiper**



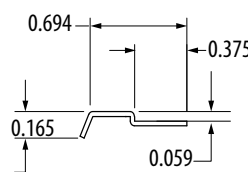
**TFW-MA8/N6 Wiper**



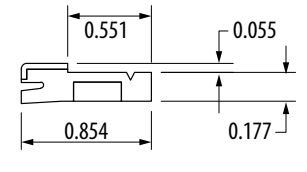
**TFG-MA8/N6 (K17593) Guard for N6 Wiper**



**TFW-MA12/N7 Wiper**



**TFG-MA12/N7 (K17592) Guard for N7 Wiper**



**AA00754 Nitta Wiper w/ Guard**

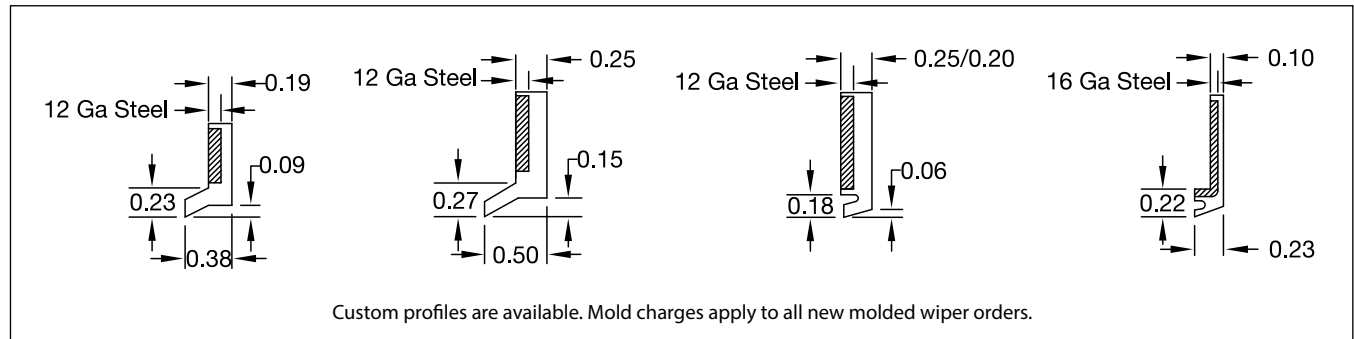
# CUSTOM WAY WIPERS | FABRICATED AND MOLDED PROFILES

## CUSTOM MOLDED (POLYURETHANE)

Molded way wipers are made from high-quality polyurethane for exceptional abrasion resistance. Construction is one-piece with metal inserts. They are ideal for moderate to high volumes and OEM applications (a nominal tooling charge required). Metal chip guards are offered for heavy chip load applications. Standard profiles are 1", 3/4", and Low Profile (LP); also available are custom-engineered cross sections to your specifications. Molded urethane way wipers are also available by part number for Okuma and Mori Seiki machines. Wipers include molded-in steel insert plates and pre-drilled mounting holes for fast, easy installation.



## STANDARD MOLDED WAY WIPER PROFILES

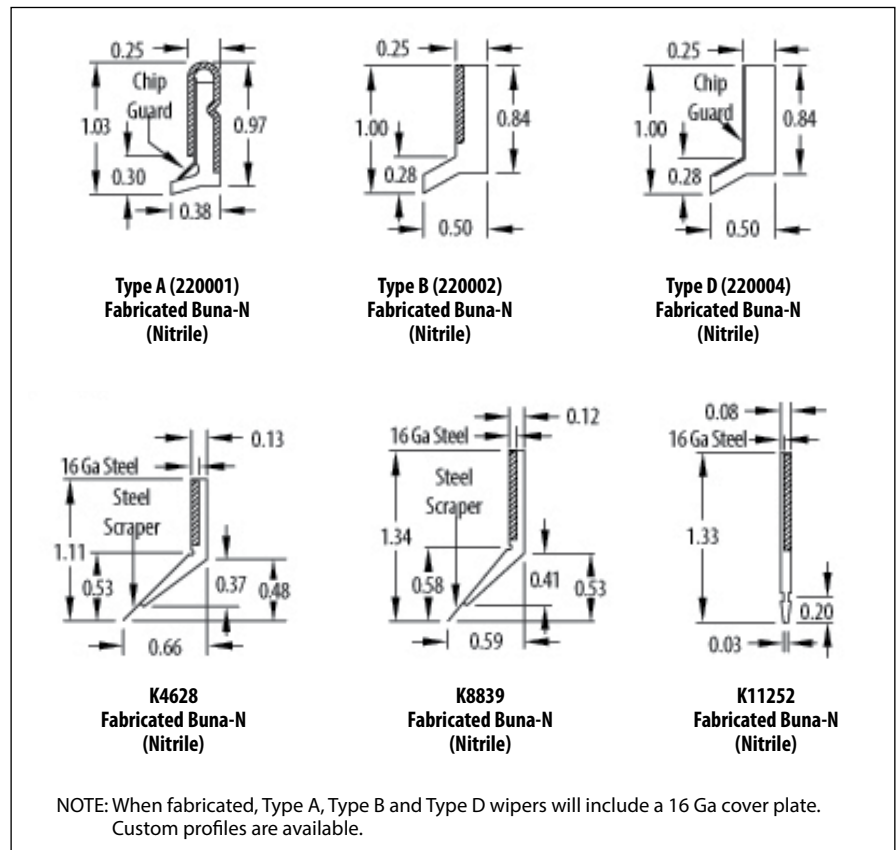


## FABRICATED BUNA-N (NITRILE)

Fabricated way wipers are ideal for low to moderate volumes, typically used in maintenance and repair applications. They are fabricated from corners and straight lengths of molded Buna-N rubber – two basic styles are available:

- Type A** – For heavy chip loads and coolants. Fully enclosed in a metal channel with spring-steel chip guard.
- Type B** – Large wiping edge for heavy coolant applications. Both styles supplied with mounting plate for easy installation. If what you need is not shown, Dynatect can make most any shape. Send a drawing of your custom profile or contact us for instructions on sending in your wiper product for quoting.

## FABRICATED WAY WIPER PROFILES



## STOCK WAY WIPERS

Gortite<sup>®</sup> stock wipers save costly maintenance, reduce downtime, and prolong the service life of machine tool ways. They are molded from abrasion and oil-resistant Buna-N elastomer. Four types of molded wipers and two types of steel edged way wipers are available from stock for fast delivery, without tooling charges.

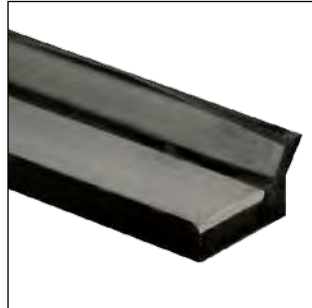
### STANDARD MOLDED STOCK WAY WIPERS

All four types employ the same style wiping member and are available in standard 22" lengths, which can be easily cut to required lengths. Oversized holes may be drilled in wiper and screws may be used to attach wiper to sliding member. Use of oversized holes makes it easy to adjust the wiper closer to the way for extended service life.

- **Type A (Part No. 220001)** – Metal enclosed molded wiper with a finger spring to act as a chip guard
- **Type B (Part No. 220002)** – Molded wiper with metal strip bonded to one side
- **Type C (Part No. 220003)** – Molded wiper only. Recommend use of metal mounting plate
- **Type D (Part No. 220004)** – Molded wiper with light metal strip which acts as finger spring and chip guard



Type A



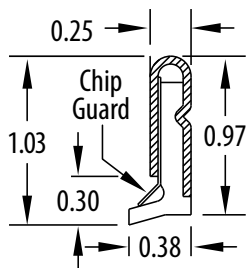
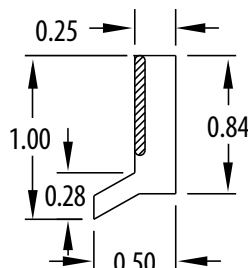
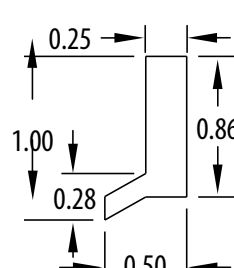
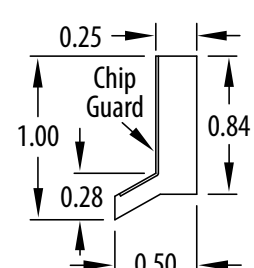
Type B



Type C



Type D

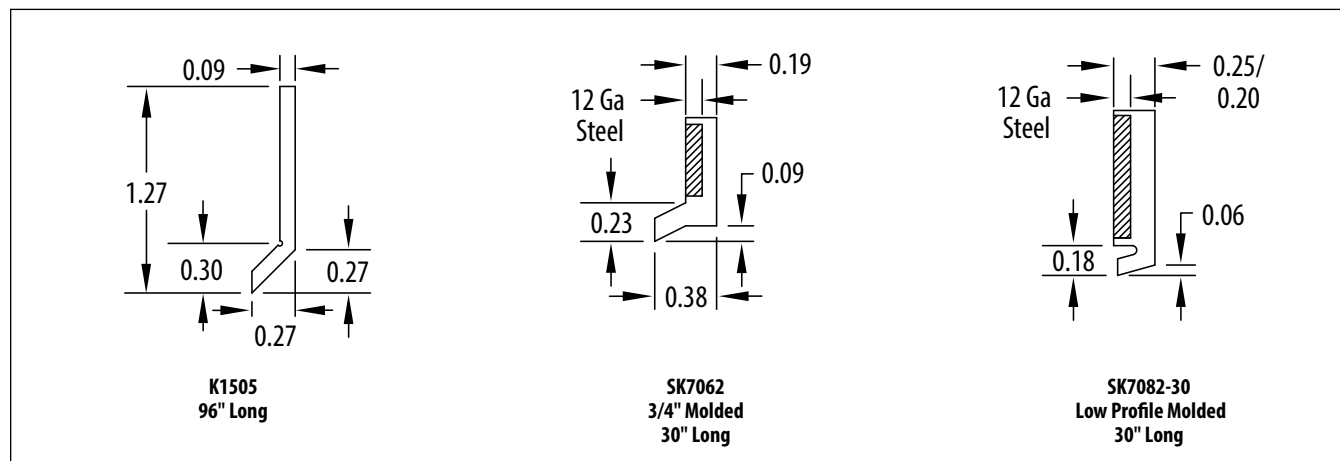

 Type A  
 (220001)  
 22" Long

 Type B  
 (220002)  
 22" Long

 Type C  
 (220003)  
 22" Long

 Type D  
 (220004)  
 22" Long



# STOCK WAY WIPERS

## ADDITIONAL STOCK WIPERS

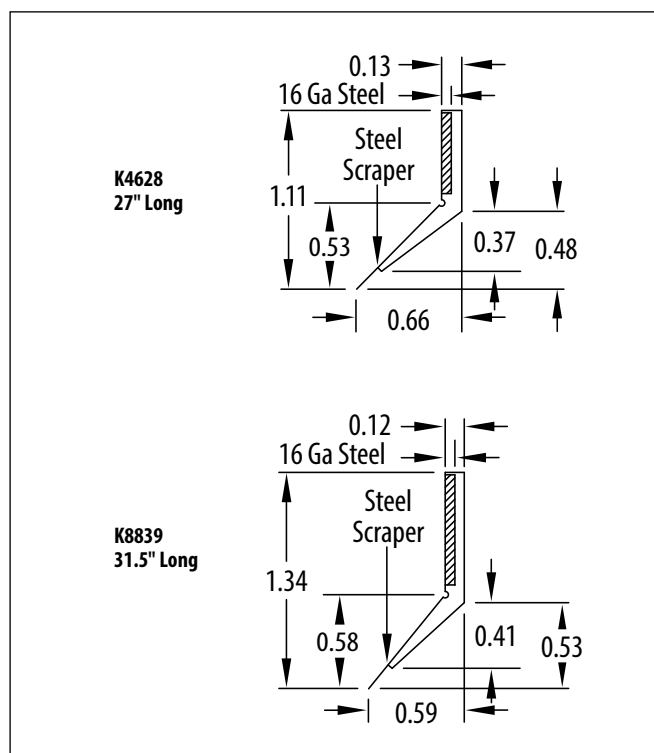
- Part No. K1505 – 96" Long
- Part No. SK7062 – 3/4" Molded – 30" Long
- Part No. SK7082-30 – Low Profile Molded – 30" Long



## STEEL EDGE KNEE WIPERS

Buna-N (Nitrile) rubber wiper with molded-in steel mounting plate, and a thin spring-steel guard along the length of the wiping edge. A unique wiper for tough applications where the aggressive properties of the spring-steel against the surface being wiped are required along with the flex of the rubber hinge (easily cut to the required length). Oversized holes may be drilled for easy installation and adjustment.

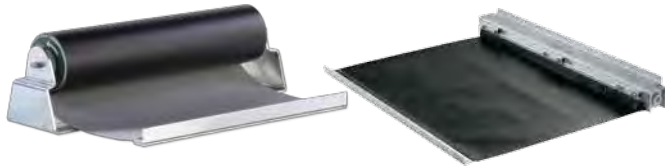
- Part No. K4628 – Available in 27" Lengths
- Part No. K8839 – Available in 31.5" Lengths



**To place an order, call or email us at the number below. Please note, we will send a quotation for your approval before processing your order.**

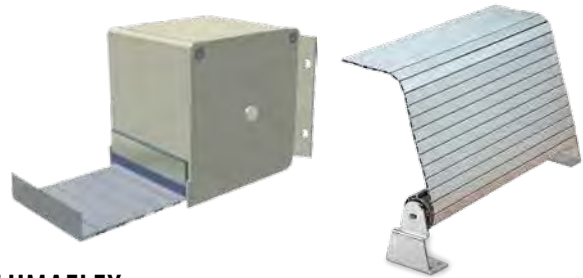
## ROLL-UP COVERS | OVERVIEW

Roll-up type covers are available with mounting brackets or a protective canister and choice of metallic or coated fabric shade material. Different take-up and drive methods are available depending on the type of cover. Dynatect offers repair/refurbishment options and replacement options for all brands of roll-up product. Our design team will suggest a design to best suit your application. Typical applications: way protection, machine doors, automation, tank covers, multi-axis roll up shields, and pit covers.



### SHADE ROLLER

- Fabric shade; light-duty protection
- Spring-loaded roller; optional protective housing
- Uses: guard against involuntary hand contact, dust guard, prevent contamination
- Suitable for high speeds/acceleration



### ALUMAFLEX

- Made of interlocking aluminum extrusions
- Medium-duty protection; upgrade from fabric
- Good for chip loads, some oil and coolant
- Available as free-hanging apron cover (shade only), roller mounted, or in a protective canister



### STANDARD-DUTY STEELFLEX<sup>®</sup>

- Stainless steel shade with 0.25" aluminum support ribs
- Medium-duty protection
- For moderate hot chips, oil and coolant loads
- Minimal deflection over wide spans
- Mounted to roller; optional protective housing



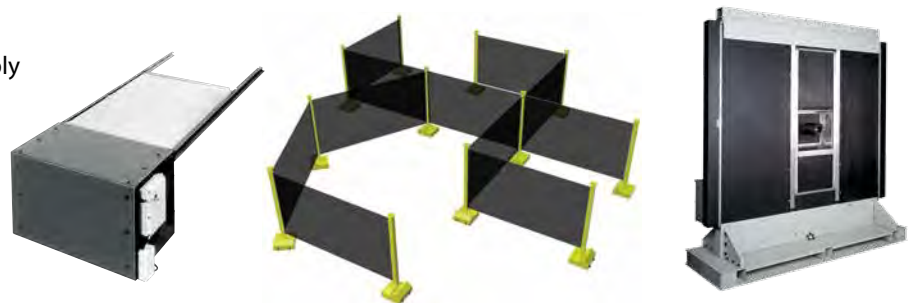
### HEAVY-DUTY STEELFLEX<sup>®</sup>

- Stainless steel shade with aluminum or steel support ribs starting at 5/8" thick or larger
- Suitable as a walk-on surface for open pits and machine ways
- For heavy chip loads, oil and coolant.
- Minimal deflection over wide spans
- See product page for all take-up and drive options

### SPECIAL ROLL-UP COVER ASSEMBLY

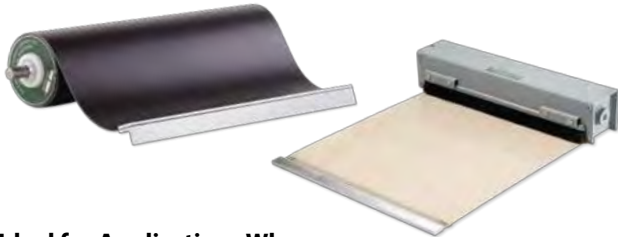
Dynatect will customize a roll-up assembly for your application, such as:

- Manual or motorized tank cover
- Modular weld curtains
- Multi-axis face shields



## SHADE ROLLERS | FABRIC ROLL-UPS

Dynatect shade rollers are custom-made protective roll-up covers for machine guarding, consisting of coated or uncoated textile material attached to an industrial spring roller. Metal housing can be added to protect the roll-up mechanism. Shade rollers are a simple and cost-effective solution for involuntary contact with machine components and protection against UV light or occasional liquid and debris.

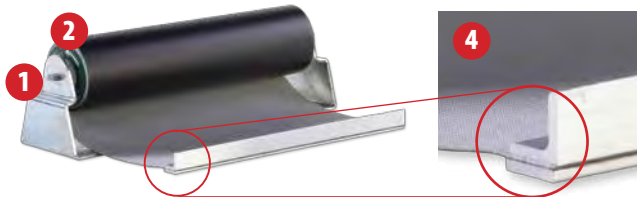
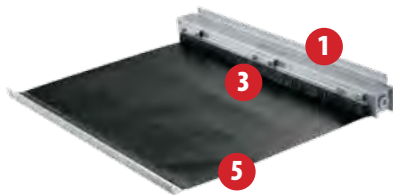


### Ideal for Applications Where:

- There is little room for other protective cover options
- Simple mounting and retrofitting are required
- Cost and delivery time are important factors
- High speed and acceleration are needed
- The complete seal of a bellows is not required

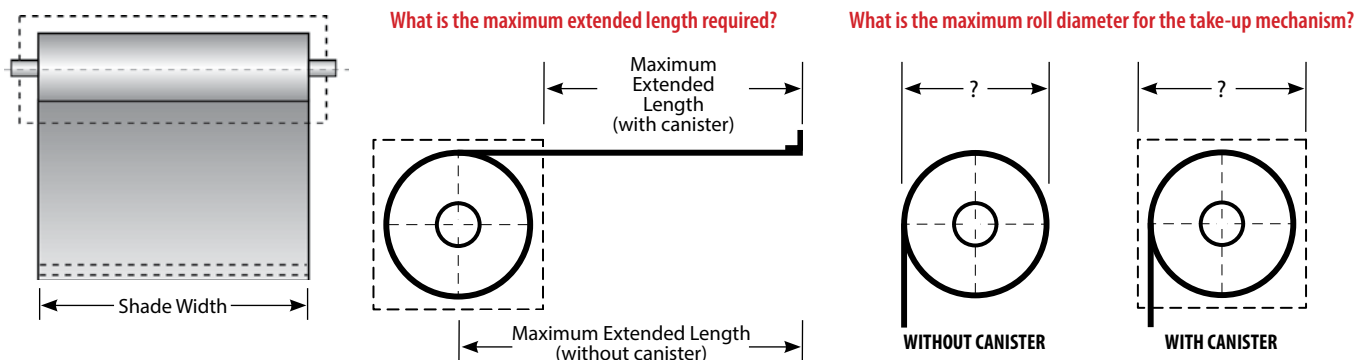
### Common Shade Materials:

- Neoprene/Nylon
- Goralon® CSM/Nylon
- Goralon/Polyester
- Buna/Nylon
- Butyl/Nylon
- Polyurethane-Ester-Laminated Polyester Fabric
- PVC/Polyester
- Silicone/Fiberglass
- Aluminized Fiberglass
- Aluminized Kevlar®
- PTFE/Kevlar®
- PTFE/Fiberglass
- PTFE Film
- Polyvinyl Acetate (PVA) Coated Polyester
- M16/2 (Polyurethane/Polyester)
- Food grade and other specialty materials



- 1 Shade rollers are available with mounting brackets, or with a protective canister with mounting surface in desired orientation.
- 2 Standard and specialty spring roller designs to handle high speeds up to 66 inches per second.
- 3 Optional brush or scraper to clean the shade as it retracts to protect the roll-up hardware.
- 4 End of the shade is fixed to the machine with customer's choice of bracket configuration.
- 5 Wide variety of standard and specialty materials available to suit the application.

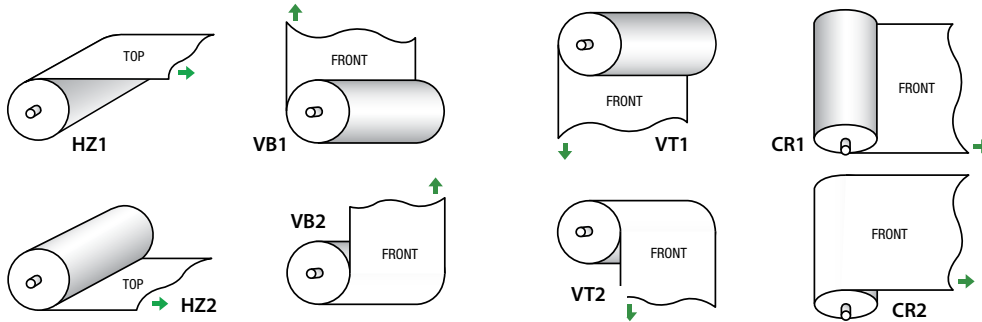
### Key Shade Dimensions and Extended Length:



Kevlar® is a registered trademark of E.I. du Pont de Nemours and Co.

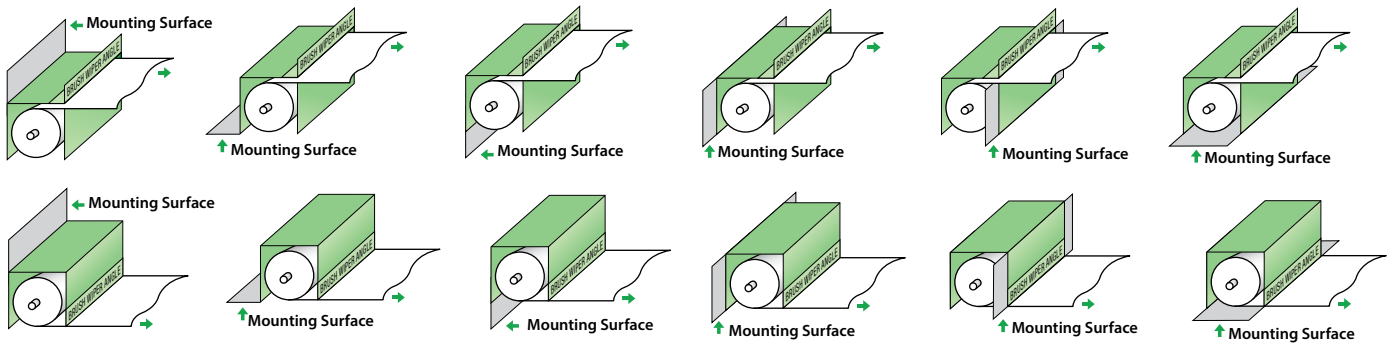
# SHADE ROLLERS | FABRIC ROLL-UPS

**Shade Orientation:** Specify location (above/below) relative to protected surface or way. Indicate exposure side of shade

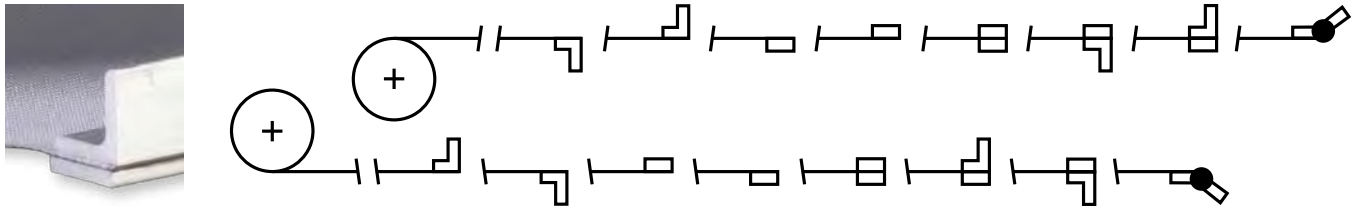


Refer to "Top" or "Front" and opposite to indicate side exposed to contaminant. This depends on the shade orientation to the work surface, and whether the shade is protecting or containing debris.

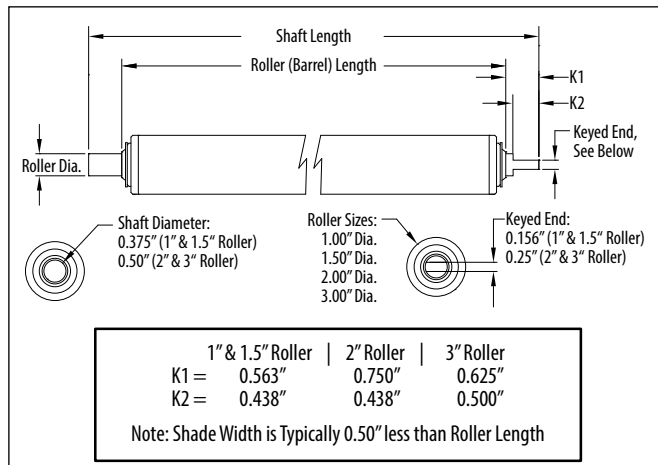
**Canister Mounting Options (horizontal orientation shown):** Select one or send drawing for other type of mounting



**Shade Mounting Bracket Type and Orientation to Exposure Side of Shade:**



## TYPICAL SHADE ROLLER DIMENSIONS



## BRACKET DRAWINGS

CAD drawings on our standard brackets for 1", 1.5", 2", or 3" rollers are available on our website.

Visit: [Dynatect.com/ShadeRollers](http://Dynatect.com/ShadeRollers)

### Standard Mounting Brackets



QUOTE REQUEST FORMS: SEE PAGES 52-53.

# ALUMAFLEX ROLL-UP COVERS

## ALUMINUM ROLL-UP COVERS

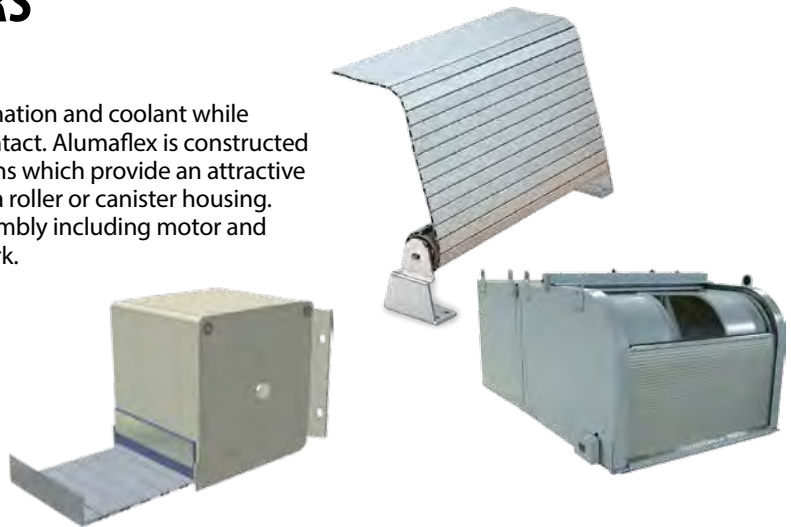
Alumaflex covers protect machine ways from contamination and coolant while reducing the risk of damage caused by involuntary contact. Alumaflex is constructed of precision, interlocking anodized aluminum extrusions which provide an attractive and functional barrier. The cover can be rolled up into a roller or canister housing. Alumaflex covers can be integrated into a custom assembly including motor and drive controls, metal housing, and fabricated framework.

### Applications:

- Protection from heavy chips
- Finite protection from oil and coolant
- Roll-up machine door
- Machine way protection

### Options:

- Angle or flat bar at end of shade
- Choice of 3 rib styles (A, B, C)
- Roller take-up
- Canister housing
- Turnkey motorized assembly



## ALUMAFLEX RIB STYLES

### Type A

Interlocked with polyurethane hinge, bending in both directions possible. Angled or flat bar at end of shade.



### Type B

Ball-and-socket interlock with plastic end caps. No polyurethane components.

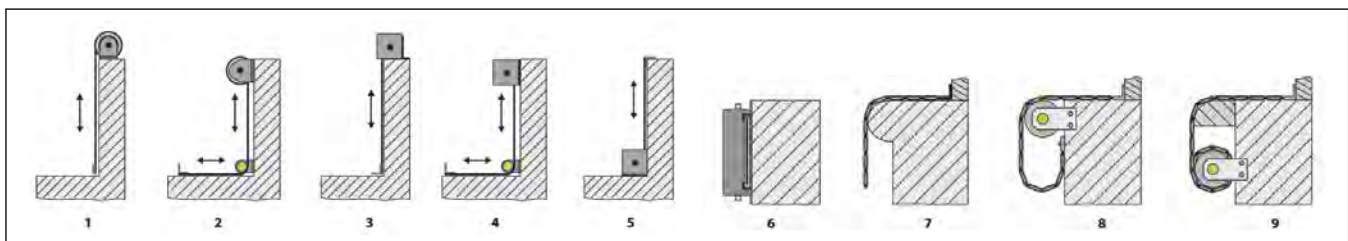


### Type C

Interlocked with hidden polyurethane hinge, resulting in smoothest, flat surface. Angled or flat bar at end of shade.



## ALUMAFLEX MOUNTING EXAMPLES

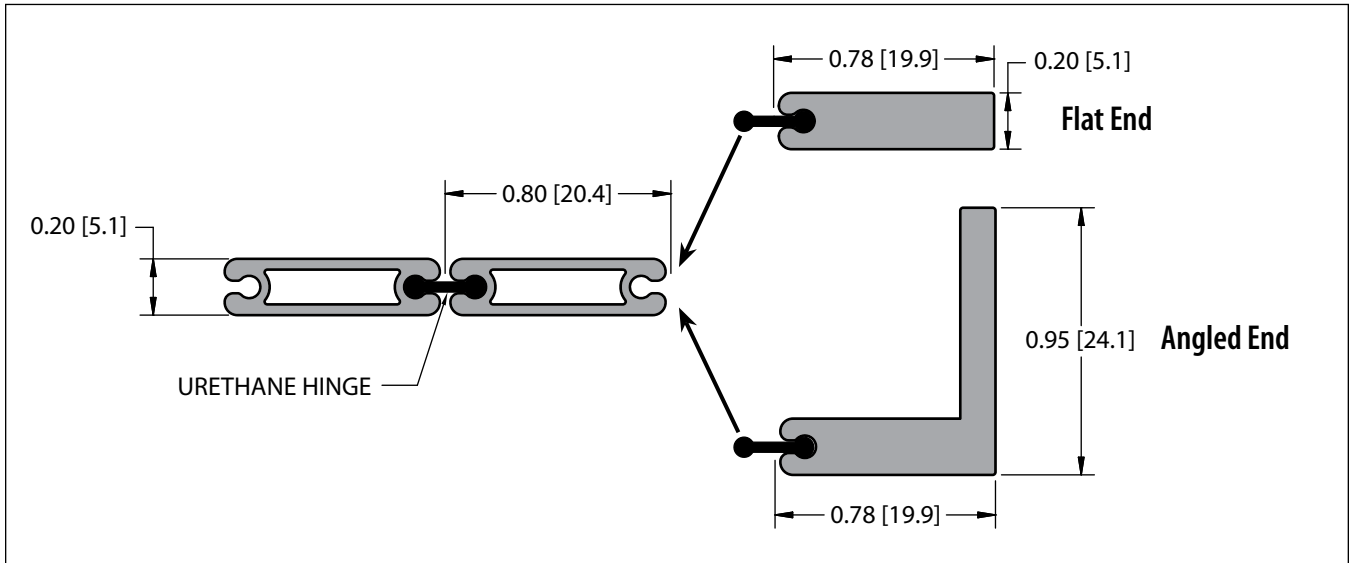


QUOTE REQUEST FORMS: SEE PAGES 52-53.

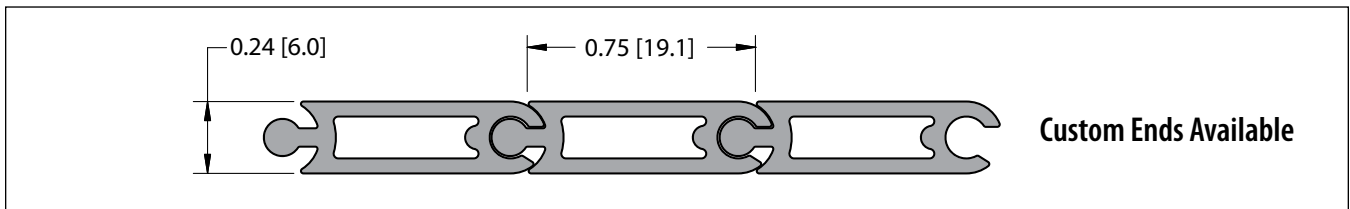


# ALUMAFLEX ROLL-UP COVERS

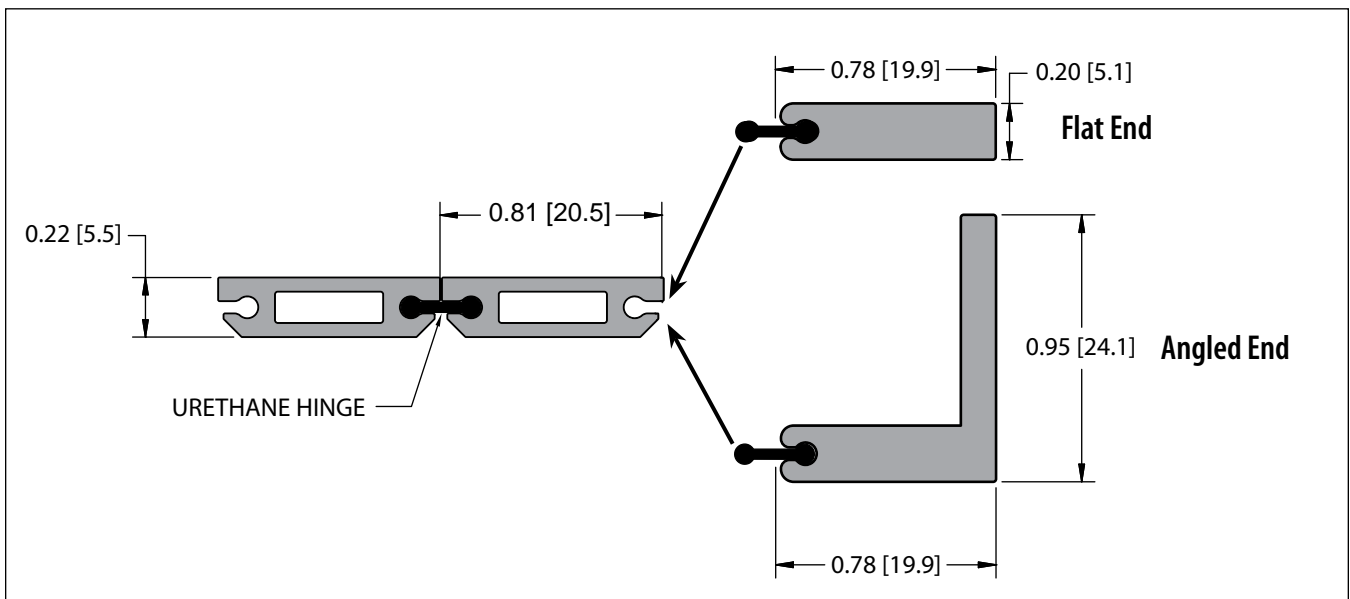
## TYPE A RIB



## TYPE B RIB



## TYPE C RIB



# STEEFLEX<sup>®</sup> STANDARD-DUTY | ROLL-UP COVERS

## METAL ROLL-UP COVERS

Steelflex standard-duty roll-up covers provide way protection against moderate hot chip and coolant loads in milling and drilling machines. With low deflection over wide spans, they are an upgrade over fabric shade protection. All widths can be rolled compactly over a spring-loaded roller. A stainless steel top surface with 1/4" x 1/4" aluminum extrusions bonded to the underside provides extra strength and support.

### Applications:

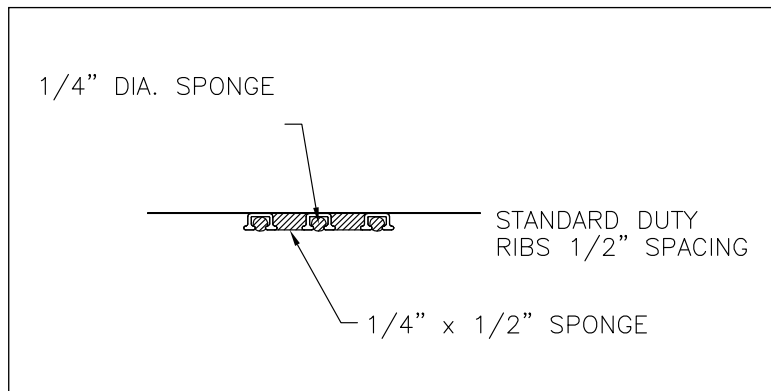
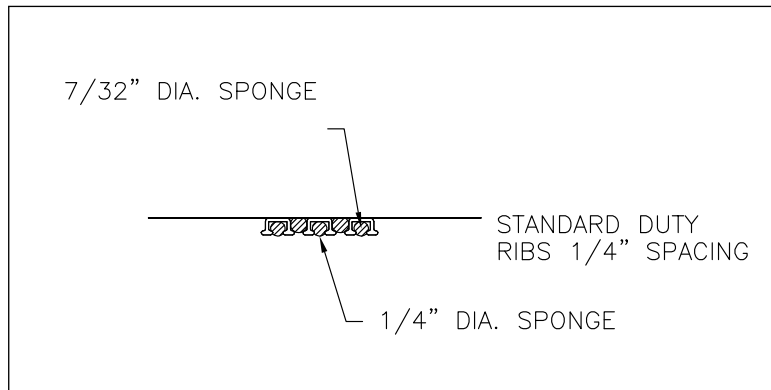
- Moderate hot chip or coolant loads
- Higher ambient operating temperatures
- Machine way protection
- Milling/drilling machines

### Steelflex Standard-Duty Options:

- Canister housing or mounting brackets
- Sponge edge seal
- Air brake
- Nylon riders
- Brush wiper



### SUPPORT RIB SIZE AND SPACING



QUOTE REQUEST FORMS: SEE PAGES 52-53.

# FABRIC/METALLIC ROLL-UP COVERS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Email \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Quantity \_\_\_\_\_

## 1. Application Information

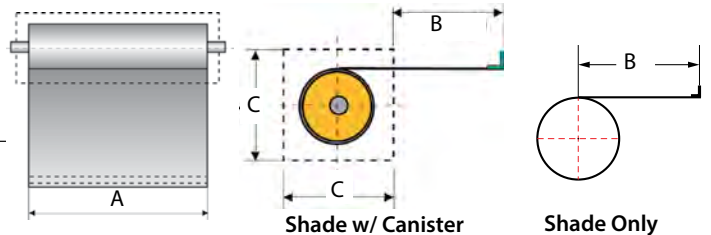
Roll-Up Cover Type:  Roll-Up **without** Canister (ignore canister sections)  Roll-Up **with** Canister (complete canister sections)  
 Shade Material:  Dynatect Recommendation  Preference: \_\_\_\_\_  
 Replacement/Existing Cover? Machine Make: \_\_\_\_\_ Machine Model: \_\_\_\_\_ Part # (if available): \_\_\_\_\_  
 New Design? (send drawing, DWG or DXF preferred)  
 Notes: \_\_\_\_\_

## 2. Environmental Conditions/Protection (Check all that apply)

	<i>Light</i>	<i>Medium</i>	<i>Heavy</i>	
<input type="checkbox"/> Machining				<input type="checkbox"/> Electrostatic Requirements: _____
<input type="checkbox"/> Hot Chips	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Clean Room <input type="checkbox"/> Dry <input type="checkbox"/> Safety or Dust Cover <input type="checkbox"/> FDA
<input type="checkbox"/> Cutting Oils/Coolants/Lubricants	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> Chemicals: _____
Specify Type: _____ (provide MSDS composition pages)				<input type="checkbox"/> 0%-35% <input type="checkbox"/> 35%-55% <input type="checkbox"/> 55%-100%
<input type="checkbox"/> Particles (specify type, e.g. aluminum, glass, wood) _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Temperature Range: <input type="checkbox"/> °F <input type="checkbox"/> °C
<input type="checkbox"/> Water/Moisture	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Ambient _____ Min. _____ Max. _____
<input type="checkbox"/> Grinding and Swarf	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Maximum Travel Speed: _____
<input type="checkbox"/> Weld Spatter	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Acceleration & Units of Measurement: _____
				Cycles/Day: _____ Axis: _____




## 3. Dimensions

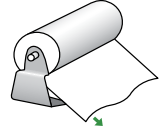
A) Shade Width: \_\_\_\_\_  
 B) Maximum Shade Extended Length: \_\_\_\_\_  
 C) Maximum Allowable Space for Take-Up Hardware: \_\_\_\_\_  
 (canister, or max. rolled up diameter if no canister)



## 4. Roller Mounting Brackets (If Roll-Up Cover without canister, bracket size is determined by maximum roll-up size)

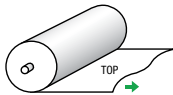
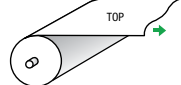
None  Yes (choose one in addition to required)

Required 
 Standard 
 Option 



## 5. Cover Orientation and Shade Exposure to Work Area

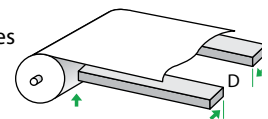
Note: 2 choices required from this section. 1) Choose cover orientation 2) indicate direction of contaminant

Horizontal #1   Contaminant from the Top  Horizontal #2 (specify below how shade will be used) 

Contaminant from the Bottom

For Horizontal Shades:  Unsupported  Supported, distance between support (D): \_\_\_\_\_ inches

If support channels are required, please send a drawing.

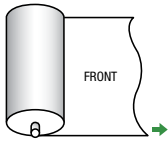
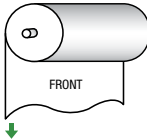
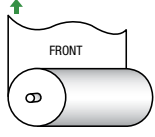
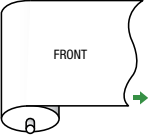
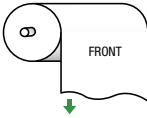
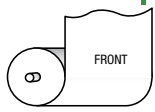


QUOTE REQUEST FORMS: SEE PAGES 56-57.

# FABRIC/METALLIC ROLL-UP COVERS | QUOTE REQUEST FORM

## 5. Cover Orientation and Shade Exposure to Work Area (continued)

Note: 2 choices required from this section. 1) Choose cover orientation 2) indicate direction of contaminant

<input type="checkbox"/> Crossrail #1		<input type="checkbox"/> Vertical Top #1		<input type="checkbox"/> Vertical Bottom #1	
<input type="checkbox"/> Crossrail #2		<input type="checkbox"/> Vertical Top #2		<input type="checkbox"/> Vertical Bottom #2	

Contaminant from the Front  
 Contaminant from the Back

Contaminant from the Front  
 Contaminant from the Back

Contaminant from the Front  
 Contaminant from the Back

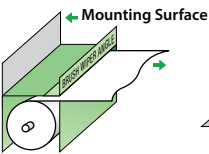
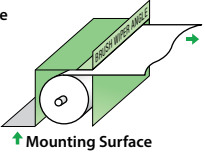
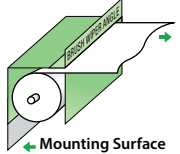
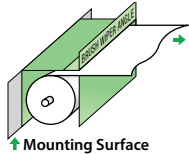
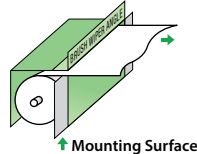
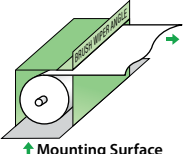
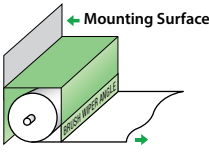
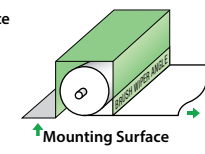
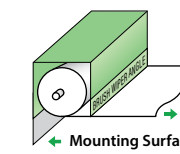
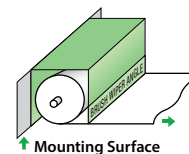
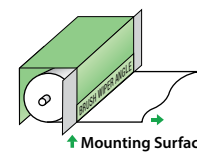
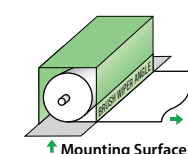
## 6. Shade Mounting Bracket

K1  K2  K3  K4  K5  K6  K7  K8

K1  K2  K3  K4  K5  K6  K7  K8

## 7. Canister Mounting Options

Horizontal canister mounting examples shown. Adjust canister mounting style based on orientation selected on previous page.

<input type="checkbox"/> Code E1T	<input type="checkbox"/> Code E2T	<input type="checkbox"/> Code E3T	<input type="checkbox"/> Code E4T	<input type="checkbox"/> Code E5T	<input type="checkbox"/> Code E6T
					
<input type="checkbox"/> Code E1B	<input type="checkbox"/> Code E2B	<input type="checkbox"/> Code E3B	<input type="checkbox"/> Code E4B	<input type="checkbox"/> Code E5B	<input type="checkbox"/> Code E6B
					

Code E7 – Custom or Special Mounting. Please supply a drawing (DWG or DXF file format) or photo of your application.

## 8. Wiper or Scraper Option

Brush (Standard)  PVC  Felt  Stainless Steel  Other \_\_\_\_\_  None

## 9. Canister Surface Treatment

Raw Steel  Painted Steel  Stainless Steel  Other (paint spec, etc.) \_\_\_\_\_

QUOTE REQUEST FORMS: SEE PAGES 56-57.

## STEELFLEX<sup>®</sup> WALK-ON | ROLL-UP COVERS

### FOR MACHINES, PITS, WAYS AND TANKS

Walk-on-duty Steelflex roll-up covers are ideal for protecting machine ways and ball screws from heavy chip loads and dropped tools. They also address the problem of unprotected openings that create a fall hazard for workers. The walk-on surface provides easy machine access during maintenance periods.

#### Features/Benefits:

- Heavy-duty construction
- Custom-designed to fit your machine or pit
- Safe and strong continuous stainless steel surface
- Impervious to hot chips, coolants and abrasives
- Damaged segments can be individually replaced

#### Take-Up/Drive Methods:

- Air motor with brake
- Spring drive
- Electric motor
- Manual operation with scroll take-up

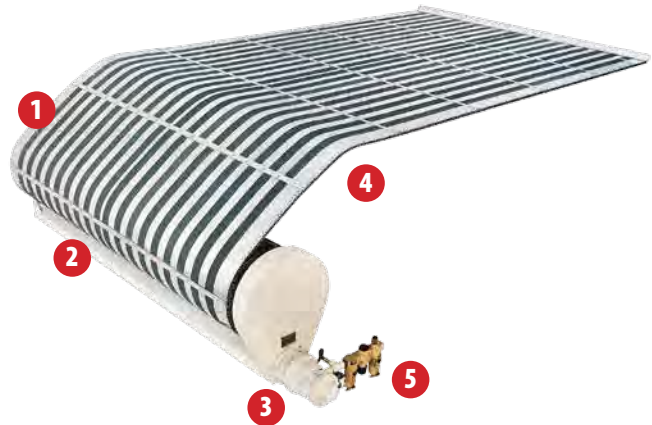


When closed, Steelflex covers create a surface level with the hall floor and are safe to walk on. The covers can also be provided with an automated opening and closing system.

### CONSTRUCTION

The shade consists of aluminum or steel ribs bonded to stainless steel. The rib profile is determined by the width and the cover loading.

- 1 Total length is made of assembled individual segments
- 2 Non-skid coating (tape or paint)
- 3 Air-motor assisted take-up
- 4 Options: Nylon riders, rollers, sponge seals
- 5 Filter / Lubricator / Regulator



Machine pit with cover take-up mounted below the way



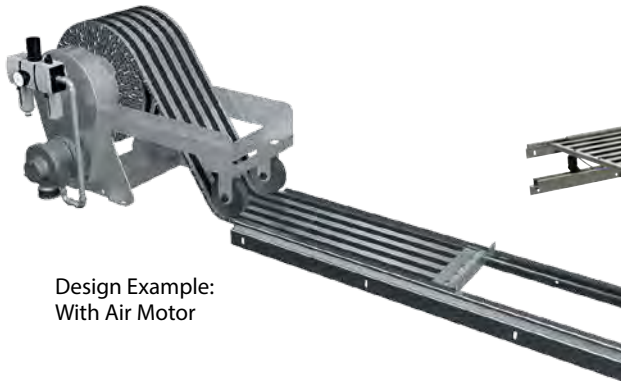
Vehicle inspection pit



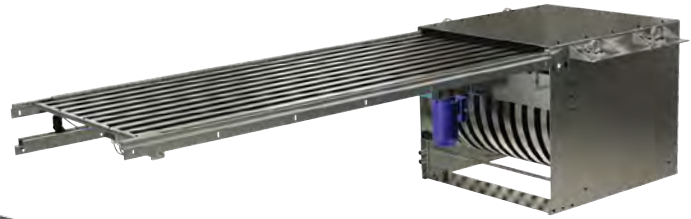
Take-up canister, mounted above the way



# STEEFLEX<sup>®</sup> WALK-ON | ROLL-UP COVERS

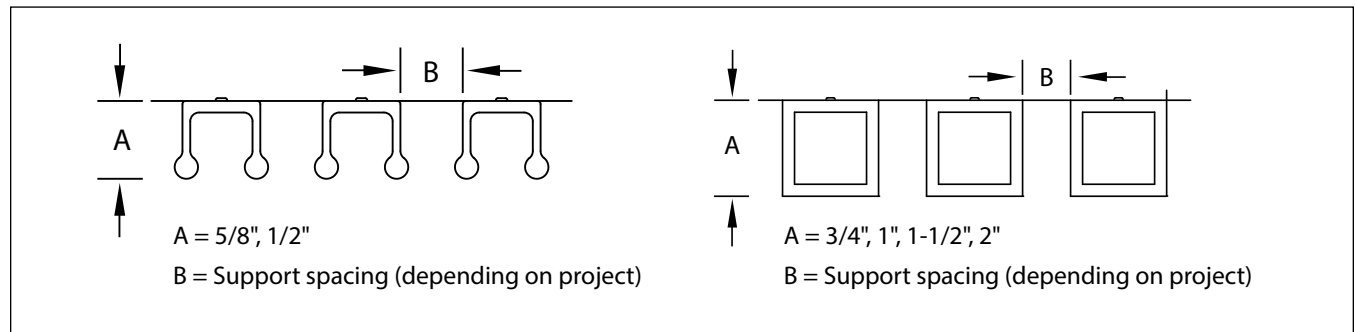


Design Example:  
With Air Motor

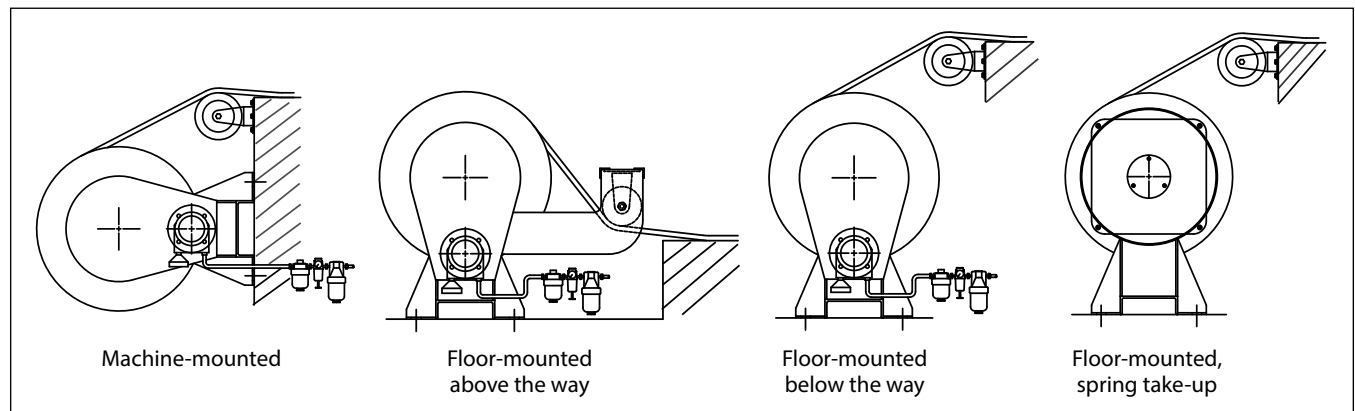


Design Example:  
With Electric Motor

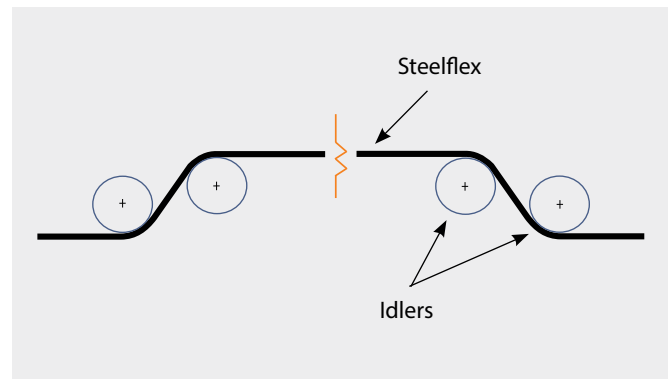
## PROFILE DIMENSIONS DEPENDING ON WIDTH AND LOAD



## INSTALLATION VARIANTS FOR AIR-MOTOR TAKE-UP



Besides walk-on capability, the flexibility to both directions is one of the unique features of this cover.



The drawing shows how idlers guide a Steelflex cover through a machine column onto other levels.

# STEELFLEX<sup>®</sup> WALK-ON WAY COVERS\* | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

## 1. Application Information

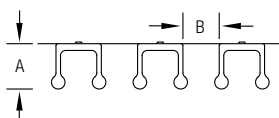
New Design    Existing Cover    Single Cover    Set of Covers (left/right)  
 Machine Make: \_\_\_\_\_ Machine Model/Part #: \_\_\_\_\_

## 2. Environmental Information

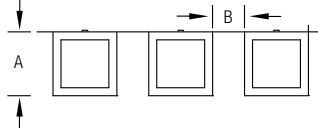
Operating Environment of Cover:  
 Dry    Grinding    Hot Chip    Aluminum    Heavy Coolant    Other \_\_\_\_\_  
 Temperature Range: Continuous (ambient): \_\_\_\_\_ Minimum: \_\_\_\_\_ Maximum: \_\_\_\_\_    °F    °C  
 Maximum Travel Speed: \_\_\_\_\_ Acceleration (please indicate units of measurement): \_\_\_\_\_  
 Movements/Day: \_\_\_\_\_ Axis: \_\_\_\_\_

## 3. Cover Profile (For replacement covers only; please specify Dimensions "A" and "B" below.)

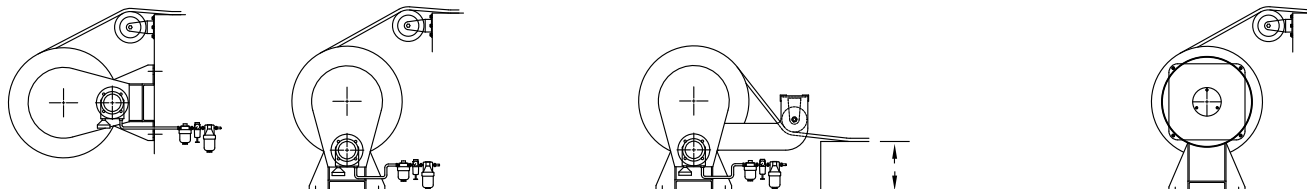
(A) Support Type:  
 1/2" Ribs    1" Tubes  
 5/8" Ribs    1-1/2" Tubes  
 3/4" Tubes    2" Tubes



(B) Support Spacing:  
 1/4"    1/2"    Other \_\_\_\_\_



## 4. Mounting Options (Note: Right-hand drive shown)

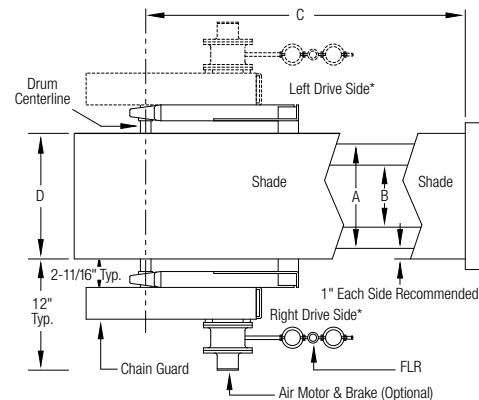


Machine-Mounted    Floor-Mounted, Below the Way    Floor-Mounted, Above the Way    Floor-Mounted, Spring Take-Up

Distance Between Floor and Top of Way: \_\_\_\_\_

## 5. Dimensions (Note: Machine mount example shown)

(A) Overall Way Width: \_\_\_\_\_ (B) Largest Unsupported Span: \_\_\_\_\_  
 (C) Length from Center Line of Roller to Table/Column or Car when Shade Fully Extended: \_\_\_\_\_  
 (D) Shade Width: \_\_\_\_\_ (overall way width +2" recommended for walk-on covers)  
 Travel Distance: \_\_\_\_\_ Total Shade Length: \_\_\_\_\_  
 Way Height Above Floor: \_\_\_\_\_  
 Drive Side Location\*:  Right    Left    Both Same Side (for sets)



## 6. Application Information (Note: If air is turned off, an air brake is recommended)

Air Motor Drive    Spring Drive Take-Up    Air Brake    Non-Skid Tape  
 Non-Skid Paint    Sponge Edge Seal    Brush Wiper    Nylon Riders    Filter Lubricator/Regulator

\*SteelFlex covers should only be walked on while stationary.

# STEEFLEX<sup>®</sup> WALK-ON PIT COVERS\* | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

## 1. Application Information

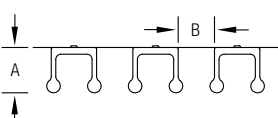
New Design  Existing Cover  Machine Pit Cover  Inspection Pit Cover  Other \_\_\_\_\_

## 2. Environmental Information

Operating Environment of Cover:  
 Dry  Grinding  Hot Chip  Aluminum  Heavy Coolant  Other \_\_\_\_\_  
 Contents of Pit: \_\_\_\_\_  
 Temperature Range: Continuous (ambient): \_\_\_\_\_ Minimum: \_\_\_\_\_ Maximum: \_\_\_\_\_  °F  °C  
 Maximum Travel Speed: \_\_\_\_\_ Acceleration (please indicate units of measurement): \_\_\_\_\_ Movements/Day: \_\_\_\_\_

## 3. Cover Profile (For replacement covers only; please specify Dimensions "A" and "B" below.)

(A) Support Type:  1/2" Ribs  1" Tubes  5/8" Ribs  1-1/2" Tubes  3/4" Tubes  2" Tubes



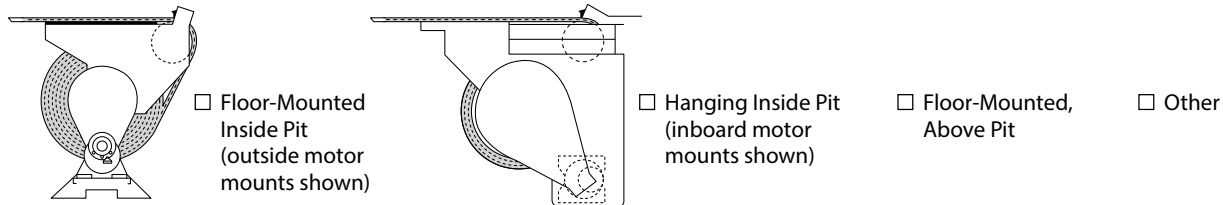
(B) Support Spacing:  1/4"  1/2"  Other \_\_\_\_\_



## 4. Take-Up Hardware

Air Motor Take-Up (if air is turned off, an air brake is recommended)  Scroll-Type Take-Up  
 Motor Mounting:  Inboard  Outboard  Manual  With Electric Motor

## 5. Hardware Mounting Options

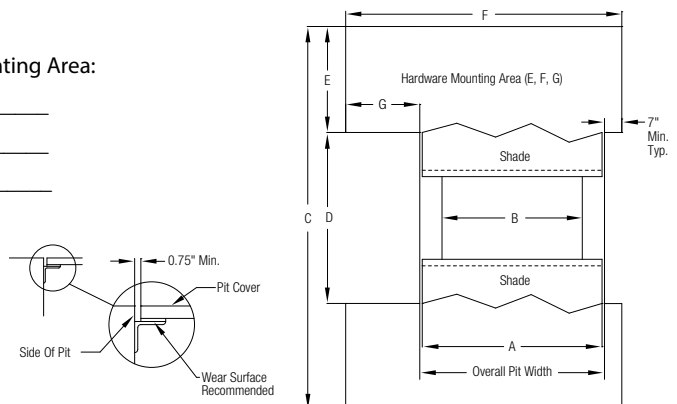


## 6. Options

Non-Skid Tape  Non-Skid Paint  Air Brake  Brush Wiper  Nylon Riders  Sponge Edge Seal  Filter Lubricator/Regulator

## 7. Dimensions

Overall Pit Width: \_\_\_\_\_ Hardware Mounting Area:  
 (A) Shade Width: \_\_\_\_\_ (E) \_\_\_\_\_  
 (B) Unsupported Span: \_\_\_\_\_ (F) \_\_\_\_\_  
 (C) Overall Pit Length: \_\_\_\_\_ (G) \_\_\_\_\_  
 (D) Support Rail Length: \_\_\_\_\_  
 Pit Depth (50" minimum recommended): \_\_\_\_\_  
 Drive Side Locations:  Right  Left  Both Same Side

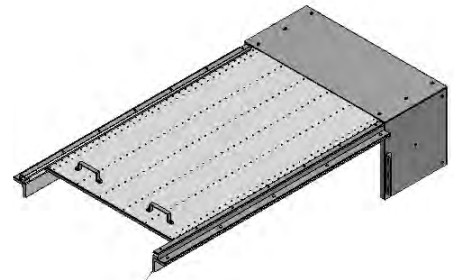


\*Steelflex covers should only be walked on while stationary.

# ROLL-UP TANK COVERS

## MOTOR-DRIVEN OR MANUALLY-OPERATED

Roll-up tank covers are ideal for covering large tanks and can be equipped with a motor drive featuring full electric control for forward, reverse and stop functions. Dynatect will produce a complete system in any width or length you require. A scroll-type take-up mechanism is also available. Shades are constructed of continuous stainless steel top surface with aluminum or stainless steel support ribs for large tanks. When environmental conditions prohibit the use of steel, thermoplastic designs are available.

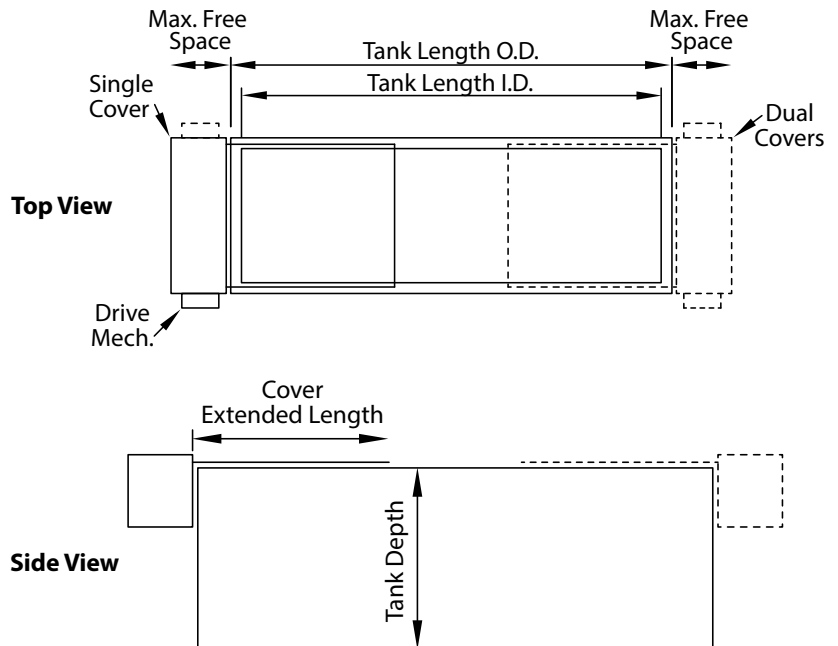


### Applications:

- Chemical, degreasing, plating, and painting tanks
- Containment of hazardous fumes
- Control evaporative emissions
- Prevent contamination in tank
- Protect personnel

## QUOTE REQUEST

1. Please send a sketch, drawing or model of your application along with a description, listing details such as the type of tank, contents of tank, etc. Please note if the application requires dual (opposing) covers at each end, or a single cover mounted to one end.
2. Specify drive system: motor-driven or manual.
3. Provide inner and outer tank dimensions, noting largest unsupported span and tank depth.



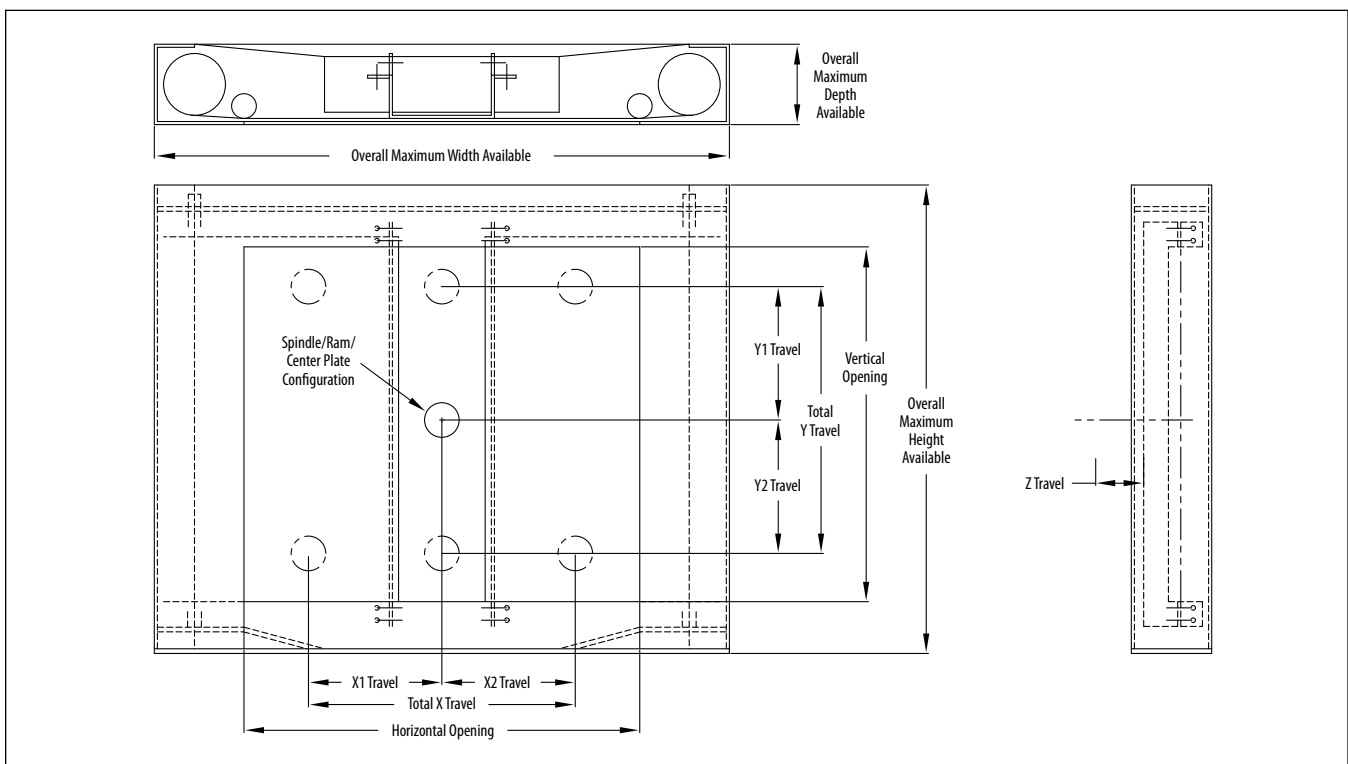
## MULTI-AXIS FACE SHIELD ASSEMBLIES

Multi-axis face shield assemblies have been developed for machining centers or any application needing simultaneous, dynamic protection for each axis of movement. Typical industrial applications are vertical (side or wall) or horizontal (ceiling or floor).

Depending upon your application, XY face shields can incorporate a number of different methods of protection for each axis: Stainless steel shade, elastomer coated belting or Steelflex<sup>®</sup> can be used in conjunction with a spring roller. Gordillo<sup>™</sup> (bellows with steel plates) or sliding steel plates can be used instead of a shade roller. The spindle can use a custom cutout, molded wiper and/or a bellows. Multiple roll-up covers or protective sliding plates cover the two main axis, while a ram wiper or bellows can be used for a third axis.

**Features:**

- Speeds of 3,000 in/minute (76m/min) or more
- Accelerations up to 1g or more
- Designed with ease of installation and longevity in mind
- Supplied fully-assembled or in kit form with operating and maintenance instructions
- Mounting arrangement to suit the customer's needs
- Can be supplied painted to meet current industry standards
- Wipers to clean debris and fluids from the surface of the shade
- Wiper options: (felt, UHMW, brush, molded polyurethane)



# PORTABLE WELD CURTAINS

## THE MOST PORTABLE WELD CURTAIN ON THE MARKET

### Benefits/Features:

- **Protection** against UV radiation during welding. Suitable for MIG, TIG and stick welding.
- **Convenient** – Set up and breakdown in seconds
- **Easy Storage** – Uses minimal storage space when shade is retracted due to small profile
- **Light-Weight and Portable** – Less than 38 pounds – easy transportation between work stations
- **Durable** – Heavy-duty steel construction provides years of use in a manufacturing environment
- **Versatile** – Can be used for work cell separation, as a privacy wall to block distracting views, or to aid in the containment of sawdust or other light debris
- **Customizable** – Alternative shade and base colors can be custom ordered

### Specifications:

- Shade width: 74.5" (1,892 mm)
- Shade height: 72.00" (1,829 mm)
- Canister length: 77.88" (1,978 mm)
- Canister width: 7.66" (195 mm)
- Retracted height: 4.88" (124 mm)
- Weight: 37.5 lbs. (17 kg.)
- Shade material: 0.014" PVC film, dark green or yellow. Alternative shade and base colors can be special ordered.



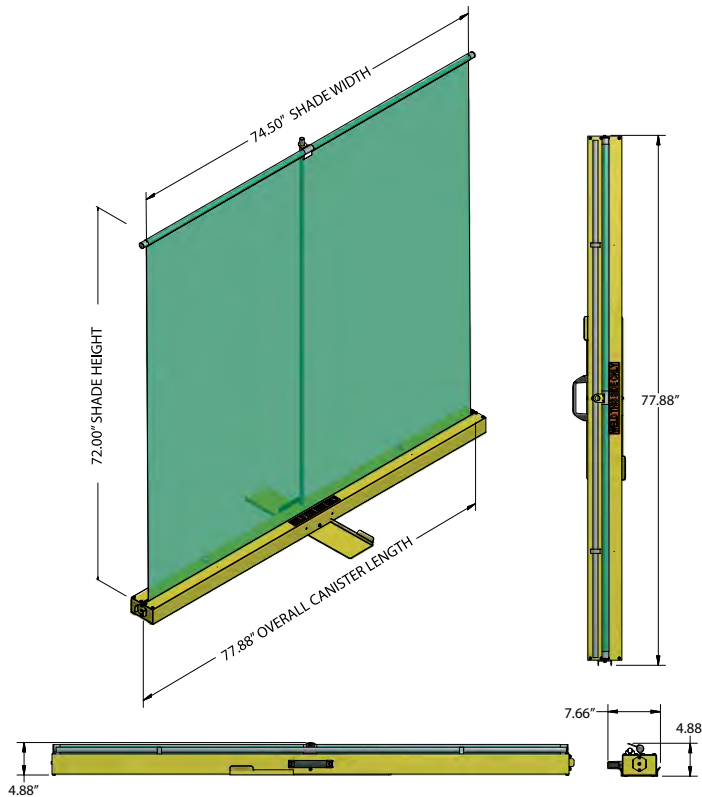
Replaceable shade



Streamlined base ideal for deploying multiple units.



Shade is held in extended position by sliding metal loop through vertical rod.





## MODULAR WELD CURTAINS

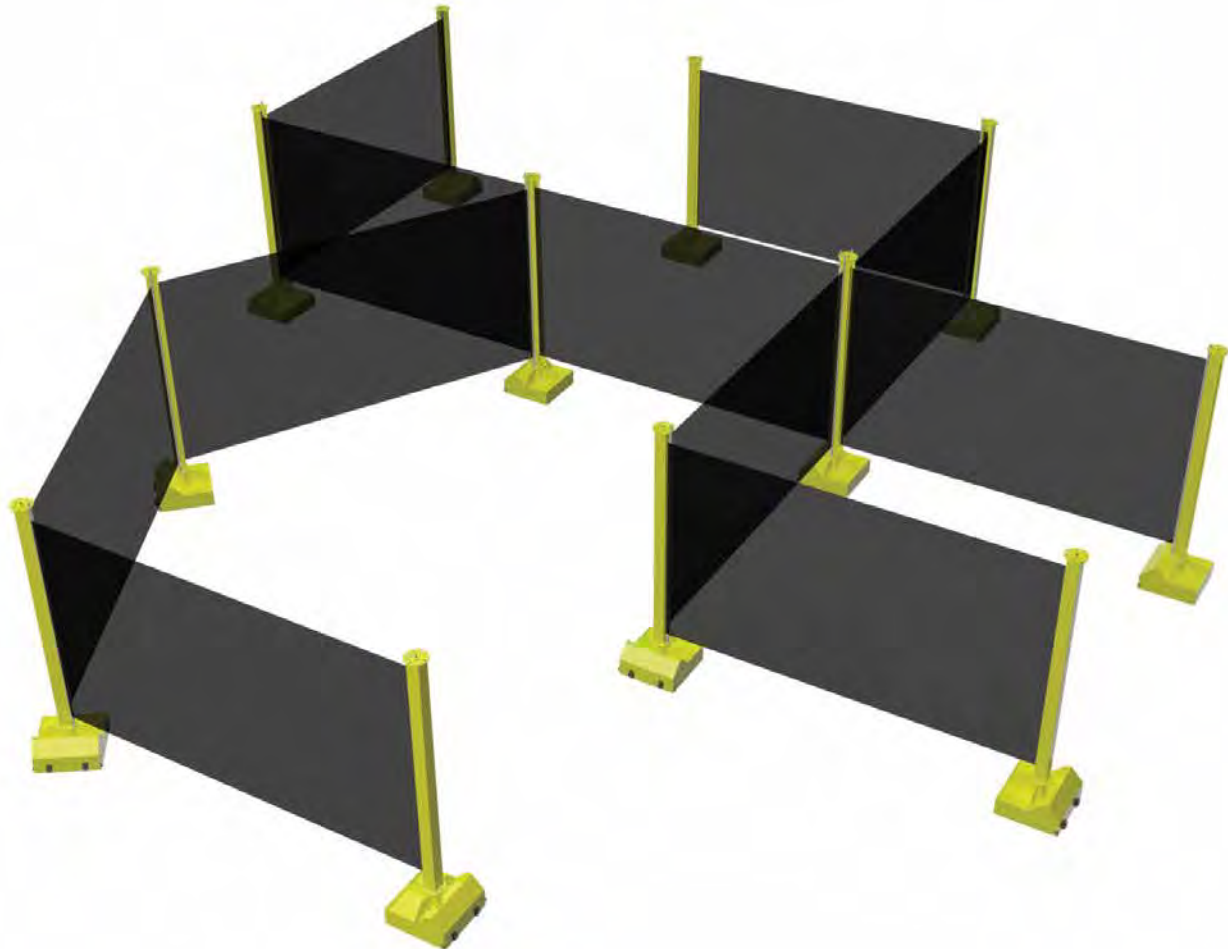
Providing protection up to nearly 90" off the floor, the modular weld curtain system is the most portable, modular and flexible free-standing system available. The unique system design offers virtually any cell configuration for protection against UV radiation during welding. Custom sizes and mounting configurations are also available.

### Benefits:

- Protection against UV radiation during welding
- Portable, modular and flexible
- Ease of work cell assembly
- Unique free-standing design offers virtually any cell configuration

### Specifications for Standard Modular Design:

- Pedestal dimensions: 20.4 in. x 20.4 in. x 10.25 in.
- Mast height: 94 in.
- Shade height: 74.5 in. / From Floor: 89.25 in.
- Shade extended length: 144 in.
- Shade material: 0.014" PVC film, dark green
- Weight without cement: 105 lbs.
- Estimated weight with cement: 210 lbs.



## CUSTOM ROLL-UP MACHINE DOORS AND CURTAINS

### MACHINE TOOL • AUTOMATION • AUTOMOTIVE • AEROSPACE

Complete turn-key motorized roll-up systems are designed to include all components and metalwork. Motorized machine doors are generally suitable for light-duty or indirect machine tool applications with light to moderate direct coolant spray and no direct heavy chip loads.

#### Features/Capabilities:

- Customized to your application needs
- Horizontal, vertical, or bi-parting orientation
- Automated/high-speed operation
- Integrated safety features
- Fabric, metal, plastic doors – with and without windows
- Modular assembly
- Manual roll-up designs available (spring roller or scroll take-up)

#### Applications:

- Robotic assembly
- Welding
- Laser welding
- Automated equipment cells
- Gantry tool changer covers
- General milling/machining
- Titanium machining
- High-speed aluminum machining
- De-burring



OVER 25 YEARS EXPERIENCE  
MANUFACTURING MOTORIZED  
ROLL-UP DOORS



QUOTE REQUEST FORMS: SEE PAGE 63.

# CUSTOM ROLL-UP MACHINE DOOR | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

## 1. Application Information

New or Replacement:  New  Replacement  
 Industrial Application:  Yes  No  
 Door Application Purpose \_\_\_\_\_  
 Acceleration: \_\_\_\_\_ (indicate unit of measurement) Number of cycles: per 8 hrs \_\_\_\_\_ per 16 hrs \_\_\_\_\_ per 24 hrs \_\_\_\_\_  
 Describe Environmental Conditions (exposure to weld spatter, coolant, oil, grit, swarf, etc.): \_\_\_\_\_  
 \_\_\_\_\_

## 2. Door Information

**Door Orientation/Direction of Mounting:**  
 Y-Axis / Vertical-Standard (take-up roller above, pull down to close door, push up to open)  
 Y-Axis / Vertical-Upside-Down (take-up roller below, pull down to open door, push up to close)  
 X-Axis / Crossrail / Frontal (door opens from side to side left/right)  
 Z-Axis / Horizontal Plane (door opens and closes by pulling forward or backward)  
 Door Opening Width: \_\_\_\_\_ Door Opening Height: \_\_\_\_\_  
**Shade Options:**  
 Aluminum Slat  
 Elastomer-Coated Textile or Fabric  
 Weld Curtain Material  
 Steelflex<sup>®</sup> (steel with bonded ribs)

## 3. Options

Electric Gear Motor  
 Supplied with Controls  
 Manual Operation\* (spring-loaded roller or scroll-style)  
 \*What is space available for roller or scroll? \_\_\_\_\_

# MACHINE DOOR ACTUATORS

## SAFE, FAST AND EFFICIENT AUTOMATION

Automating machine door operation is important for the protection of workers and expensive equipment. The SMDA line offers a complete end-to-end solution with a maintenance-free direct drive motor, a compact controller and intelligent operating software.

### Features/Benefits:

- Field-proven TUV certified (EN-13849-1 PLD) iMotion<sup>®</sup> technology for personal access supplied by the TORMAX Division of Landert Motoren AG
- Safe force and speed limits for horizontal doors weighing up to 1,650 lbs (750 kg)
- The actuator drive triggers an immediate directional change when the door encounters an obstacle
- Operates in the low voltage range
- Easy-to-use with SMDTuner Intelligent Operating Software
- Rapid open/close times
- Space-saving design and maintenance free

### Applications

- Machine tools (lathing, milling, grinding etc.)
- Die casting machines
- General production machines



Drive Motor



Controller



Lathing Machine



Multi-Spindle Machine



Machining Center

Dynatect Manufacturing, Inc. is the exclusive North American Distributor of protective machine door actuators by SERVAX. SERVAX is a division and registered trademark of Landert Motoren AG. For more information on SERVAX, visit [www.servax.com](http://www.servax.com).

**QUOTE REQUEST FORMS: SEE PAGE 67.**



# MACHINE DOOR ACTUATORS

## OPERATING SOFTWARE

With the user-friendly SMDTuner operating software, commissioning the protective door the first time is quick and easy. This PC software is used to program the machine door actuator, start up the machine door actuator, query status values, and save the data so that data records already created can be archived for documentation purposes.

### Specifications:

#### MOTOR

- Compact, maintenance-free and gearless direct drive with integrated position sensor
- Three variants available: with attached toothed belt wheel, spur wheel or with free shaft end
- Easy connect power and transmitter connections, turnable 270°
- Protection class IP54 (EU)
- 120 V (Single Phase); 230 V (Single Phase); 400 V (Three Phase)

#### CONTROLLER

- Compact control system with integrated power supply unit, mains filter, motion controller, power driver, and galvanically isolated I/O
- No external components such as sensors or brake resistors necessary
- 7-segment status display
- 12 LEDs for I/O state indication
- Plug-in connections



Drive Motor



Controller

#### INTERFACE

- Actuation via digital I/O
- Programming via RS-232 interface
- USB to RS-232 converter optionally available

#### FUNCTIONALITY

- STO – Safe Torque Off
- SS1 – Safe Stop 1
- SLS – Safe Limited Speed
- SLT – Safe Limited Torque
- Integrated obstacle detection with reverse mode
- AutoTuning with door weight detection and automatic setting of the regulation parameters
- Additional external sensors can be connected and configured if necessary

### Accessories:

- Toothed belt
- Toothed belt clamp
- Idler pulley
- Pre-dimensioned cables for motor and encoder in various lengths
- RS-232 to USB interface converter



Toothed Belt and Idler Pulley



Pre-Dimensional Cables



RS-232 to USB Converter



**Tested Safety: Compliant with EU Machine Directive 2006/42/EC.**

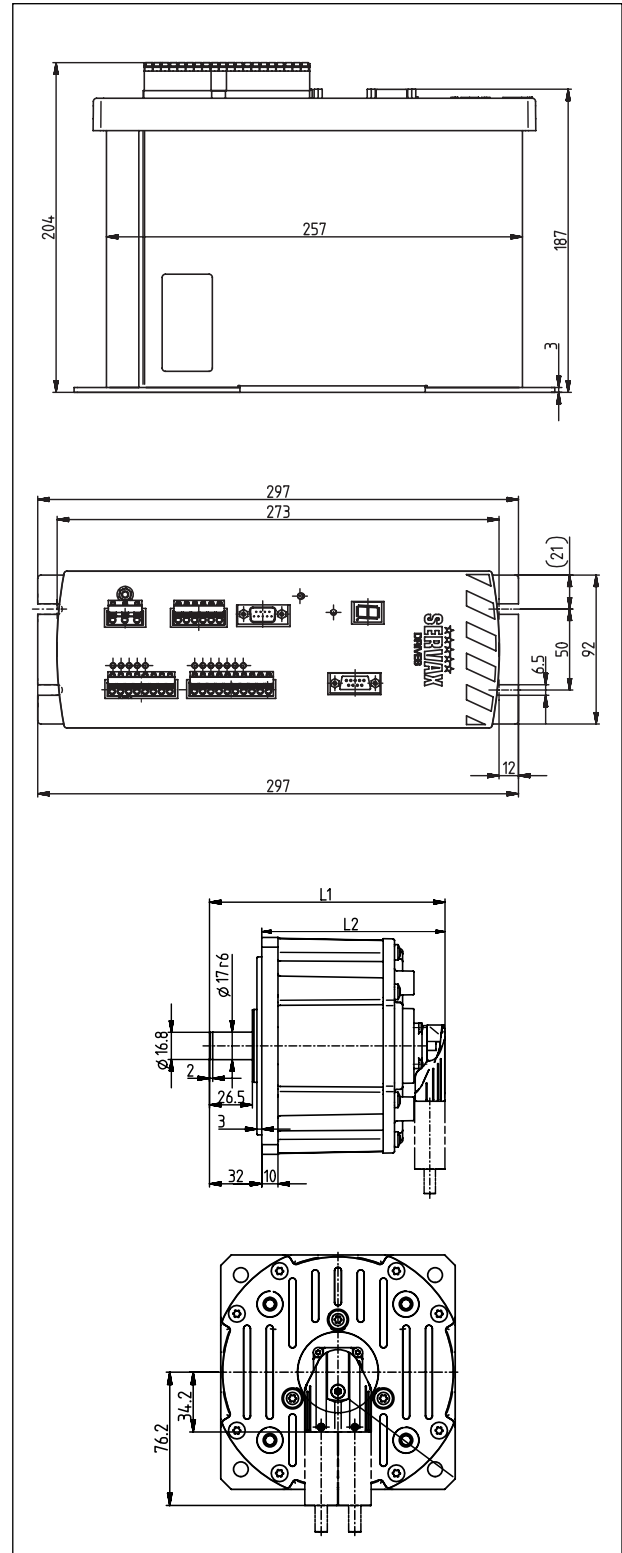
**QUOTE REQUEST FORMS: SEE PAGE 67.**



# MACHINE DOOR ACTUATORS

## SMDA-200 AND SMDA-400 TECHNICAL DATA

TYPE		SMDA-200	SMDA-400
Door Weight	kg	Up to 260	200 to Approx. 750
Tensile Force	N	230	400
Traverse Path	mm	Unlimited	Unlimited
Max. Traversing Speed	m/s	1.0	1.0
MOTOR DATA			
Motor Technology		16-Pole Permanent Magnet Direct Drive	16-Pole Permanent Magnet Direct Drive
Nominal Motor Torque	Nm	3.1	5.4
Motor Pulse Torque	Nm	6.0	9.8
Nominal Speed at Nominal Torque	min <sup>-1</sup>	335	270
Length Over All L1	mm	145.5	169
Installation Depth L2	mm	113.5	137
Motor Weight	kg	3.9	5.3
Mounting Position		Any	Any
Motor Voltage	VAC	17	22
Protection		IP54	IP54
CONTROL DATA			
Continuous Current	A	8.5	10.0
Max. Power Consumption	W	190	310
Mains Voltage	VAC	115/230	115/230
Mains Frequency	Hz	50/60	50/60
Operation Ambient Temperature	°C	+10...+40	+10...+40
Relative Humidity	%	15...85	15...85
Protection		IP20	IP20
Digital I/O	VDC	24	24
Connectors		– 7 Galvanically Isolated Control Inputs – 5 Galvanically Isolated Control Outputs – 1 RS-232 Configuration Interface – 1 Motor Power Connection – 1 Motor Encoder Connection – 1 115/230 VAC Mains Connection	
Preconfigured Input Functions		AUTO Mode, Open, Close	
Freely Selectable Input Functions		2nd Travel Profile, Reduced Open, Reference Switch, External Sensors	
Output Functions		Door Referenced, Door Closed, Door Open, Error, Obstacle Detected	
Housing Dimensions (H x B x T)	mm	297 x 92 x 187	



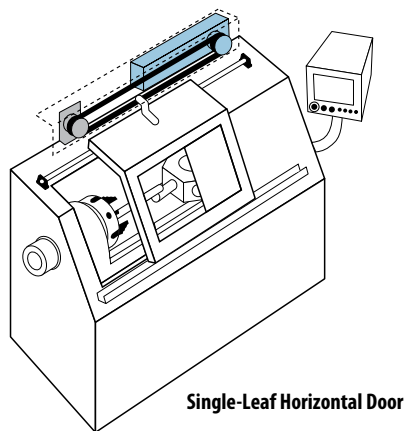
QUOTE REQUEST FORMS: SEE PAGE 67.

# MACHINE DOOR ACTUATORS | QUOTE REQUEST FORM

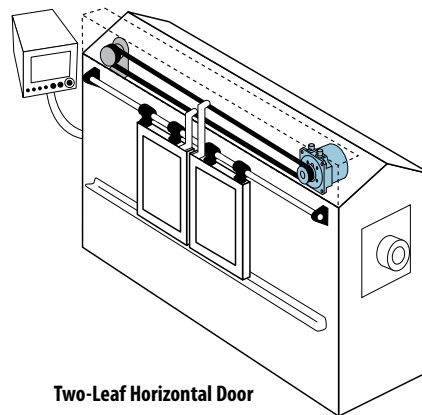
Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

**1. Application Information** (Please supply a sketch/drawing/CAD file [DWG or DXF file format]/photo of your application.)

Machine Make: \_\_\_\_\_ Machine Model/Part Number: \_\_\_\_\_  
 Single Door     Double Door (opposite directions)  
 New Design     Retrofit/Replacement



Single-Leaf Horizontal Door



Two-Leaf Horizontal Door

**2. Environmental Information**

Temperature Range: Continuous (ambient): \_\_\_\_\_ Minimum: \_\_\_\_\_ Maximum: \_\_\_\_\_  °F  °C  
 Comments: \_\_\_\_\_

**3. Voltage Options**

120 V (Single Phase)     230 V (Single Phase)     400 V (Three Phase)

**4. Door Information** (Please specify unit of measurement.)

Door Length: \_\_\_\_\_  
 Door Height: \_\_\_\_\_  
 Door Weight: \_\_\_\_\_  
 Physical Pull Force, Door: \_\_\_\_\_  
 Frequency of Door Motion: \_\_\_\_\_ cycles per day  
 Maximum Door Travel Distance: \_\_\_\_\_  
 Outside Dimensional Restrictions:     Yes – Provide a drawing (DWG or DXF file format preferred) or more information     No

## GORTITE<sup>®</sup> ALUMINUM ROLL-UP DOORS

SAFE AND SECURE ACCESS FOR YOUR EQUIPMENT COMPARTMENTS



For Fire and Emergency Vehicles



For Work Trucks and Service Vehicles



For Trailers and Compartments

### Features/Benefits:

#### Increased Safety

- Keeps personnel safe by allowing them to remain closer to the vehicle
- Eliminates damage associated with swing-out doors

#### Security

- Constructed of strong, double-sided aluminum extrusions
- Manual and powered lock options available to keep your items secure

#### Attractive Appearance

- Smooth, satin anodized aluminum finish
- Available in custom painted finishes to precisely match your vehicle

#### Maximum Use of Compartment Space

- 3-inch diameter take-up roller minimizes header height
- Full view of compartment
- Easy access to equipment

#### Simple, Smooth Operation

- Fast and easy opening and closing
- Quiet idler roller dampens noise and vibration
- Rib design minimizes equipment hang-ups

#### Easy Roller Door Installation and Field Replacement

- Quick and easy installation
- Aluminum extrusions are individually replaceable without disassembling the entire door by removing push out clips on each end
- Choose from several one-piece side rail options, with option mounting holes predrilled free of charge

#### Quality Guaranteed

- Roll-up doors manufactured in the USA
- Stainless steel lift bar

#### Full Complement of Options and Accessories

- Magnetic door ajar switch allows operator to know instantly if door is not securely closed
- Manual lock, or compact power lock with manual override
- See-through slats
- Inside opening handle
- Bright, efficient LED compartment lighting

#### Customer Support

- Largest sales rep and technical support network nationwide

QUOTE REQUEST FORMS: SEE PAGE 72.

## GORTITE® ALUMINUM ROLL-UP DOORS | DESIGN FEATURES

### Maximum Compartment Space

Gortite spring-loaded take-up rollers are only 3" diameter and allow for a small rolled-up diameter and maximum compartment storage.

### Easy Lifting, Fast Opening and Closing

Spring-loaded operation makes it easy to open and close the roll-up door.

### Dynatect's Exclusive Gortite Roller Warranty

The spring-loaded take-up roller carries a lifetime warranty.



### Durable, Strong, Lightweight Design

Slats are made of strong, double-wall of lightweight anodized aluminum, with a weather seal between each slat.



### Stainless Steel Lift Bar

With additional bottom clearance for easy grip, roll-up doors withstand force and speed with a sturdy stainless steel lift bar.



### Noise and Vibration Idler Roller

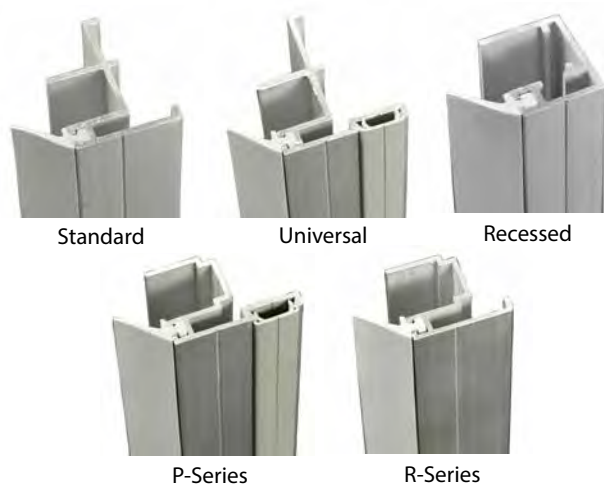
Foam-covered idler roller dampens noise and vibration.



### Individual Slat End Caps Provide Superior Protection Against Leaking

The "G-Rib" design also has a polyurethane seal that rests up against the following rib creating a weather-tight seal when the door is closed.

## STANDARD OPTIONS



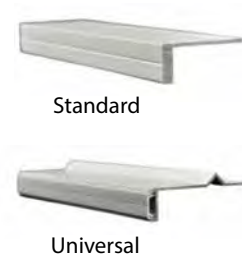
### Side Rail Options

Any of the side rails can be predrilled to your specifications, free of charge. There are five side rail options available to accommodate the structure of your equipment compartment.

### Top Drip Rail



### Still Plate



### Easy to Clean, UV and Extreme Temperature-Resistant Components

All the flexible polymer components such as the wipers and seals are made of Santoprene™. It has a high resistance to UVs and adjusts well to hot and cold extremes. It also cleans easily with mild detergents.

Santoprene™ is a trademark of Exxon Mobil Corporation.

**QUOTE REQUEST FORMS: SEE PAGE 72.**



# GORTITE<sup>®</sup> ALUMINUM ROLL-UP DOORS | OPTIONS AND ACCESSORIES

## STANDARD OPTIONS (CONT'D.)



**Satin Anodized**

### High Quality and Custom Painted Finishes

Gortite roll-up doors are made of the highest quality satin anodized finish, with optional paint finish. Basecoat and clearcoat process is used to exactly match your vehicle.



### Superior Paint Process Protects Against Chipping

Gortite's paint process offers customers the ability to precisely match any vehicle color. To prevent paint chipping, the "G-Rib" design increases clearance between the ribs along the front and back edges of the door.



**Wet Painted**

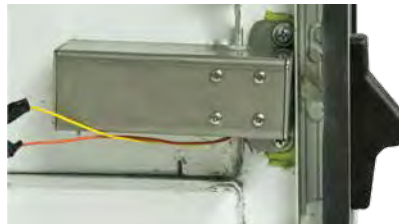


**Wet Painted**

## ACCESSORIES



**Manual Key Lock**  
Choice of standard key codes. Heavy-duty locks available for large doors.



**Power Lock**  
Compact design. Manual override in the event of a power failure.



**LED Cabinet Lighting**  
Bright, long-lasting and energy efficient lighting at 30 Lumens per LED. Wide 180° dispersion angle. Water and salt resistant. Meets NFPA 1901 standard. See page 75 for more information.



**Magnetic Door Ajar Switch**  
Allows operator to know instantly if door is not securely closed.



**Pull Strap**  
Ideal for tall doors.



**See-Through Slats**  
Rugged polycarbonate material. Ideal for exterior or interior compartments.



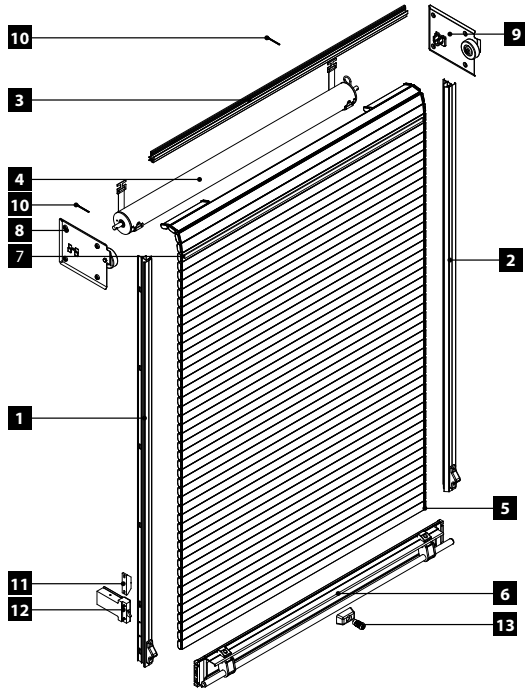
**Inside Opening Lift Bar**  
Simple, easy operation. Exclusive Gortite design.

**QUOTE REQUEST FORMS: SEE PAGE 72.**



# GORTITE® ALUMINUM ROLL-UP DOORS | TECHNICAL INFORMATION

## SPECIFICATIONS



DESCRIPTION	QTY.
1 Side Rail, Left	1
2 Side Rail, Right	1
3 Top Rail	1
4 Roller	1
5 Shade	1
6 Handle Assembly	1
7 Door Seal Foam	1
8 Pennant Plate, Left	1
9 Pennant Plate, Right	1
10 Roller Pin	2
11 Door Ajar Switch	1
12 Power Door Lock	1
13 Manual Lock	1

INTERNAL HEIGHT	MINIMUM DEPTH	HEADER HEIGHT	ROLL-UP DIAMETER
up to 25"	10.000	2.500	5.375
26" to 35"	10.500	2.500	6.000
36" to 50"	11.500	2.500	6.000
51" to 60"	11.875	3.875	7.750
61" to 70"	12.375	4.250	8.250
71" to 90"	13.500	5.375	9.375
91" to 104"	14.125	6.500	10.500

Note: Minimum header height is 2.500. Header heights shown can be used to better hide the rolled up door but are not necessarily required.

DOOR OPENING WIDTH	MAXIMUM INTERNAL HEIGHT
18.000	30.000
19.000	40.000
20.000	56.000
21.000	60.00
22-27	90.000
28-32	100.000
33-78	110.000

## HOW TO SPECIFY

### So, How Do I Specify Gortite Roll-Up Doors? It's Easy!

- Roll-up doors shall be Gortite brand manufactured by Dynatect Manufacturing, Inc.
- Roll-up doors to be constructed of double-sided aluminum extrusions. The extrusions are to be 1-3/8" wide and 3/8" thick with satin anodized finish or painted to match truck body.
- A flexible extrusion shall be between each slat to insure a weather-tight seal
- Aluminum extrusions shall be individually replaceable without disassembling the entire door by removing push out clips on each end
- All non-metallic parts to be glass-filled nylon
- Side channels for the door to ride in shall be provided with seals to prevent dirt and moisture from entering compartment. A single piece top drip rail shall be provided with a seal to prevent dirt and moisture from entering the compartment when the door is fully closed. Bottom of door will also be provided with a seal.
- Lift bar shall be made of stainless steel
- The door shall be capable of operating in temperatures of -40° F to 180° F
- Optional accessories shall include a magnetic door ajar system, compartment lighting, manual key lock, power lock, sill plate and pull strap for tall doors

### Our Exclusive Gortite Roll-Up Door Warranty

Dynatect warrants its Gortite roll-up doors to be free from defects in materials and workmanship for a period of three years from the date of shipment.

The spring-loaded roller carries a lifetime warranty. All parts, with the exception of electronic equipment (which are warranted for 1 year) are covered under this warranty to the original owner. On painted doors, painted finish shall be warranted for five years from peeling or blistering. Damage due to accidents or external causes are not warranted.

QUOTE REQUEST FORMS: SEE PAGE 72.

# GORTITE<sup>®</sup> ROLL-UP DOORS (STANDARD COMPARTMENT) | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Date Required \_\_\_\_\_ Email \_\_\_\_\_  
 Reference \_\_\_\_\_ Quantity \_\_\_\_\_ Compartment \_\_\_\_\_

## 1. Cabinet Dimensions

Compartment: 

--	--	--	--	--	--

DOW: 

--	--	--	--	--	--

DOH: 

--	--	--	--	--	--

HH: 

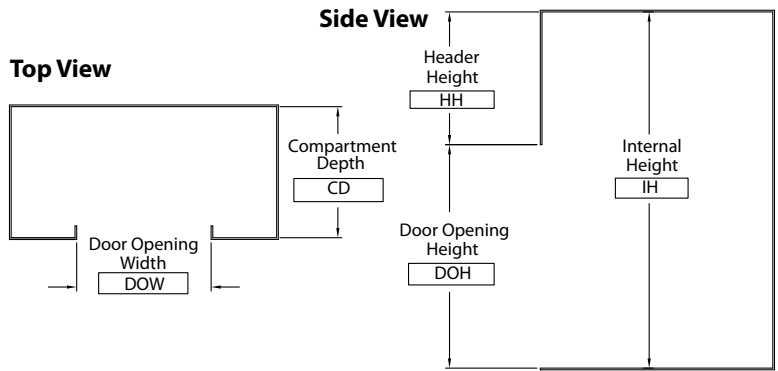
--	--	--	--	--	--

IH: 

--	--	--	--	--	--

CD: 

--	--	--	--	--	--



## 2. Door Requirements

Door Finish:  Satin Anodized  
 Mill Finish (for painting by customer)  
 Wet Painted  
 Door Only  
 Door and Trim  
 Handle/Finger Rail  
 Paint Specification: \_\_\_\_\_

Roller Location:  Front of Compartment  
 Rear of Compartment

### Side Rail:

Standard  Recessed  Universal  P-Series  R-Series

### Pre-Drilled Mounting Holes in Side Rails:

Yes  
 Pattern by Dynatect  
 Pattern by Customer (please attach drawing)

No

### Top Drip Rail:

Yes  Standard Length  
 Custom Length  
 Qty: \_\_\_\_\_ Length: \_\_\_\_\_

No

## 3. Options

Sill Plate:  Yes:  Standard  Universal  
 No

Manual Key Lock:  Yes  No

Key Type:  J236  1250

### Magnetic Door Ajar Switch:

Yes:  Switch on Right Side Facing Door  
 Switch on Left Side Facing Door  
 Ship Loose  
 Output\*:  Positive  Negative  
*\*Output is opposite of ground.*

No

Pull Strap (for tall doors):  Yes  No

### Power Lock (requires manual lock):

Yes:  Lock on Right Side of Door  
 Lock on Left Side of Door  
 Lock on Both Sides of Door (36" or wider)

No

### Cabinet Lights:

Yes:  Lights on Right Side of Door  
 Lights on Left Side of Door  
 Lights on Both Sides of Door  
 Ship Loose

No

# "BREAD BOX STYLE" ALUMINUM ROLL-UP DOOR | QUOTE REQUEST FORM

The typical application for a "bread box" style roll-up door is to provide convenient access to equipment located at the back of a work truck, such as hose reel or portable welder, but provide security when in transit to the work site.

This style of door allows greater access to the sides and top of the compartment.

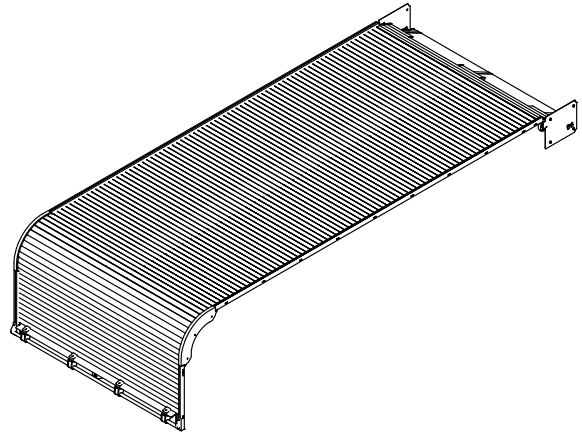
The "bread box" style door has been used in automation to isolate work processes or enclose machine tool changers.

Dynatect will customize for each application.

**Max. Door Width:** Approx. 5 ft.

**Max. Door Length:** 12 ft.

Aluminum ribs with satin anodized finish are standard. Mill or Painted finish is optional.



-----

Date _____	Address _____
Company Name _____	City _____ State/Prov. _____
Contact _____	Country _____ Zip/Postal Code _____
Quantity _____	Telephone _____ Fax _____
	Email _____

-----

## 1. Application Information

New Design     Replacement

Vehicular Application     Other Application (please describe application and environment) \_\_\_\_\_

\_\_\_\_\_

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## 2. Door Information

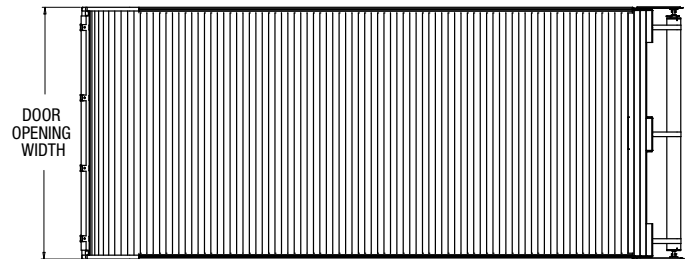
Door Opening Width: \_\_\_\_\_

Total Cabinet Depth: \_\_\_\_\_

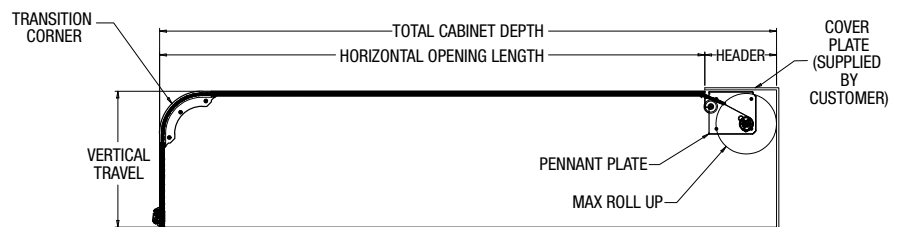
Horizontal Opening Length: \_\_\_\_\_

Header: \_\_\_\_\_

Vertical Travel: \_\_\_\_\_




The standard transition corner has an 8.375 in. radius which will result in a nominal loss of storage space. Let Dynatect know if a tighter transition corner is required.



# "BREAD BOX STYLE" ALUMINUM ROLL-UP DOOR | QUOTE REQUEST FORM

### 3. Door Options and Accessories

Door Finish: Satin Anodized is the default;  
custom painted or mill finish is optional.

Door Side Rail: (recessed side rail profile)   
Seal Color:  Grey (default)  Black

Pre-Drilled Mounting Holes in Side Rails:

Yes:  Pattern by Dynatect  
 Pattern by Customer (please attach drawing)



No

Top Drip Rail:  Yes:  Standard Length  
 Custom Length  
Qty: \_\_\_\_\_ Length: \_\_\_\_\_

No

Sill Plate:  Yes:  Standard  Universal  
   
 No

Manual Key Lock:  Yes  No

Key Type:  J236   1250 

Magnetic Door Ajar Switch:

Yes:  Switch on Right Side Facing Door  
 Switch on Left Side Facing Door  
 Ship Loose  
Output\*:  Positive  Negative  
*\*Output is opposite of ground.*

No

Pull Strap (for tall doors):  Yes  No

Power Lock (requires manual lock):

Yes:  Lock on Right Side of Door  
 Lock on Left Side of Door  
 Lock on Both Sides of Door (36" or wider)

No

LED Cabinet Lights:  Yes:  Lights on Right Side of Door  
 Lights on Left Side of Door  
 Lights on Both Sides of Door  
 Ship Loose

No

Other Requests: \_\_\_\_\_

## GORTITE<sup>®</sup> LED LIGHTING | 12 AND 24 VOLT COMPARTMENT LIGHTING SYSTEMS

### SIMPLE, LONG-LASTING AND AFFORDABLE

LED lights by Gortite provide a simple and affordable solution for compartment lighting with long life, high output, and low amp draw. The flexible, low profile design easily conforms to irregular surfaces.

Available individually for retrofit or pre-installed in Gortite Door assemblies.

#### Features/Benefits:

- 10 year warranty
- Easy installation
- Ultra-thin 3/16" Strip
- High flexibility conforms to irregular surfaces
- Wide 180° light dispersion angle
- Bright lighting at 30 Lumens (12 Volt) and 20 Lumens (24 Volt) per LED
- Long LED life
- Energy efficient
- Water/salt resistant



#### Specifications:

- Meets NFPA 1901 Standard
- Stand alone mounting with 3M<sup>®</sup> adhesive tape or mounted within optional aluminum channel (holes can be drilled by customer or by Dynatect)
- Equipped with two male 156 bullet connectors (one per wire – positive and negative)
- Additional colors available upon request (white, red, blue, green, and amber)
- Operating temperature range: -40°F to +180°F (-40°C to +80°C)
- Custom lengths up to 16' continuous
- Made in the USA

#### 12 Volt

- Operating voltage range: 11-14VDC
- 30 Lumens per LED at 12VDC
- 130 mA per foot at 12VDC
- Standard lengths: 9", 18", 27", 36", 45", 54", 63"

#### 24 Volt

- Operating voltage range: 10-30VDC
- 20 Lumens per LED at 24VDC
- 150 mA per foot at 24VDC
- Standard lengths: 8", 16", 24", 32", 40", 48", 56", 64"



Gortite LED lights installed in aluminum rail channels illuminate the compartment in the dark.



# GORTITE<sup>®</sup> FIRE HOSE BED COVERS

## NFPA COMPLIANT WALK-ON SURFACE

Hose bed covers are made from stainless steel, reinforced with aluminum extrusions to support 250 lbs. per 24-inch section. They retract into a scroll take-up, with no roller or motor required.

### Features/Benefits:

- Prevents fire hoses from falling out of storage compartment
- NFPA compliant walk-on surface/continuous corrosion resistant stainless steel, with a non-skid paint surface
- Easy to open/close: fire hose bed covers roll up manually within a scroll take-up; no spring loaded roller or motorized drive required

**BEFORE**  
WITH TARP COVER ONLY

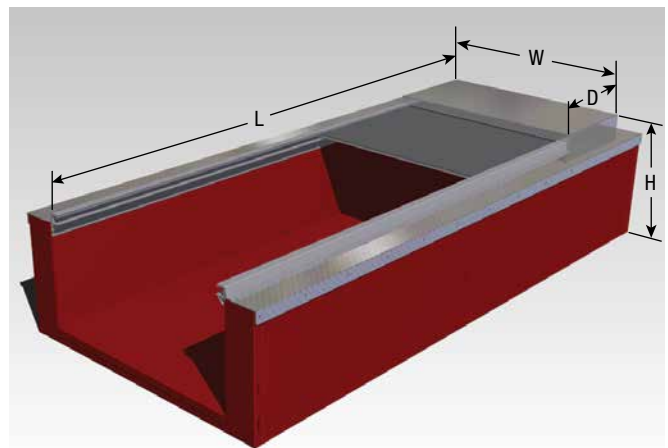


**AFTER**  
WITH GORTITE HOSE BED COVER INSTALLED



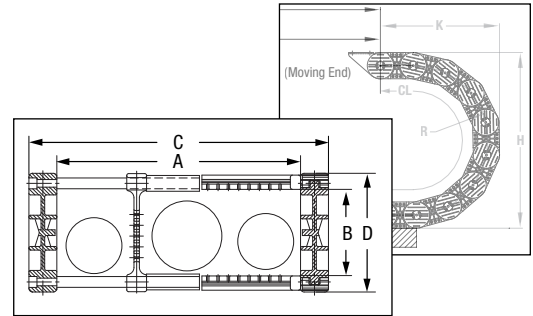
## SPACE REQUIREMENTS

L (LENGTH)	D (DEPTH)	H (HEIGHT)
up to 86"	13.75"	14.5"
86.01" to 109.0"	14.875"	16.0"
109.01" to 132.0"	16.25"	17.25"
132.01" to 155.0"	17.75"	18.75"
155.01" to 178.0"	19.5"	18.5"
178.01" to 201.0"	21.0"	20.25"
201.01" to 224.0"	22.5"	21.5"



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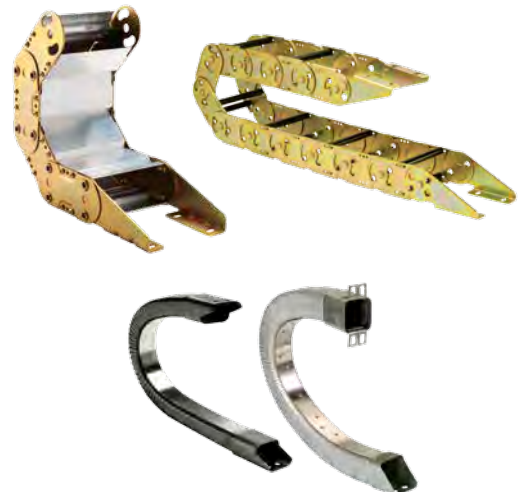
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## PLASTIC CARRIERS OVERVIEW | NYLATRAC<sup>®</sup> AND NYLATUBE<sup>®</sup>

Versatile, user-friendly carrier solutions molded from standard glass-filled nylon or special polymers. These carriers are available in a variety of designs and constructions suited for applications ranging from basic to demanding operation. Durable Nylatrac and Nylatube carriers offer excellent corrosion resistance, and reliable operation in applications requiring high speed/acceleration and/or long travel operation.



### NYLATRAC STANDARD

- Plastic solution for light- to medium-duty applications featuring clean, lightweight designs for economical cable/hose management
- Open-style links leave cables/hoses open to regular inspection
- Simple “snap-together” link construction allows easy repair and adjustment of length
- Hinged plastic crossbars provide quick cavity access and easy installation
- Standard sizes available from stock



### NYLATRAC MODULAR

- Versatile modular design – easily customized from the widest variety of standard components
- Durable construction from separate glass-reinforced nylon sidebands with locking hubs (replaceable bearings) and multiple lockout points (for incredible strength), joined by top and bottom crossbars or lids
- Enclosed-style designs (with snap-in plastic or bolted aluminum lid armor plates) offer additional protection where needed
- Widest variety of crossbars, most available in custom widths and in plastic or aluminum styles



### NYLATUBE STANDARD

- Completely enclosed plastic solution for light- to medium-duty applications featuring clean, lightweight designs for economical cable/hose management
- Enclosed-style links protect cables/hoses from dirt and debris
- Simple “snap-together” link construction allows easy repair and adjustment of length
- Hinged plastic lids (KOE and KLE Series) allow quick cavity access and easy installation
- Standard sizes available from stock

**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

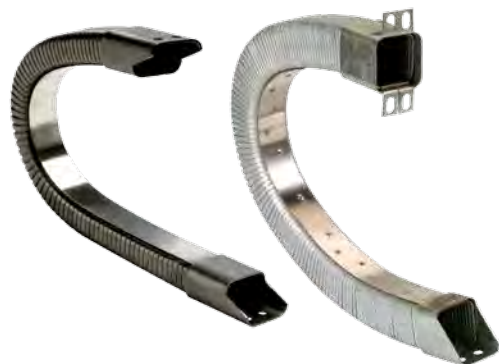
## METAL CARRIERS OVERVIEW | GORTRAC<sup>®</sup> AND GORTUBE<sup>®</sup>

Durable alternative to plastic solutions for heavy-duty or unique and challenging applications. Innovative Gortrac carriers provide superior strength-to-weight ratios and maximum unsupported spans. Fully-enclosed Gortube carriers offer the best protection from hot and abrasive elements and liquids, and can operate at faster speeds and accelerations.



### GORTRAC STEEL

- Excellent load-bearing and unsupported travel capability (depending on carrier load)
- Longer travels can be achieved with Gortrac Long Travel Support Systems (pages 94-97)
- Unique, patented link designs reduce parts and simplify construction while providing the strongest carriers, at lighter weights, relative to size
- Manufactured from plated or stainless steel – our zinc dichromate plating process offers 70% better corrosion resistance than standard zinc plating
- Open-style, self-cleaning designs allow dirt and debris to be expelled from the carrier, and leave cables/hoses open to regular inspection
- Enclosed-style designs (with bolted aluminum lid armor plates) protect cables/hoses from heavy abrasive and hot chip loads



### GORTUBE STEEL

- Conduit-style galvanized steel tube fully encloses cables/hoses to resist hot chips, swarf, cutting oils and lubricants
- Smooth, low-noise operation; suitable for faster speeds and accelerations
- Construction options for high temperatures, corrosive environments, or multi-axis and rotational applications
- Optional black oxide finish
- Wide range of sizes – 24 different size/radius combinations

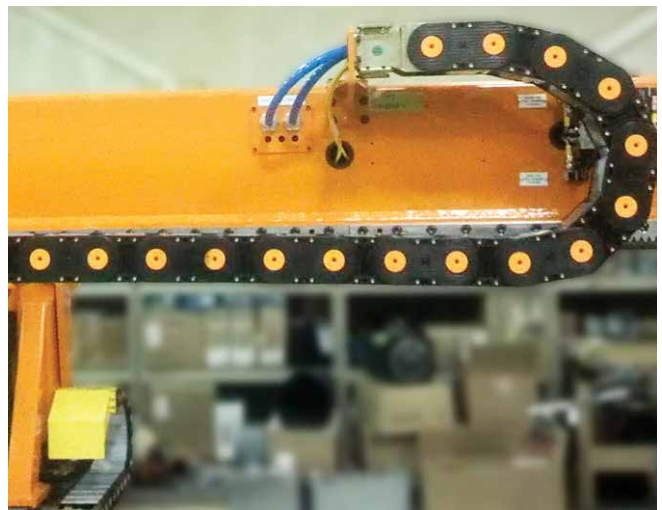
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



## PLASTIC CARRIERS | APPLICATION EXAMPLES



Nylatrac<sup>®</sup> Modular TS and TSC carriers installed on custom pick-and-place equipment provide cable/hose management for long travel and three axis of operation.



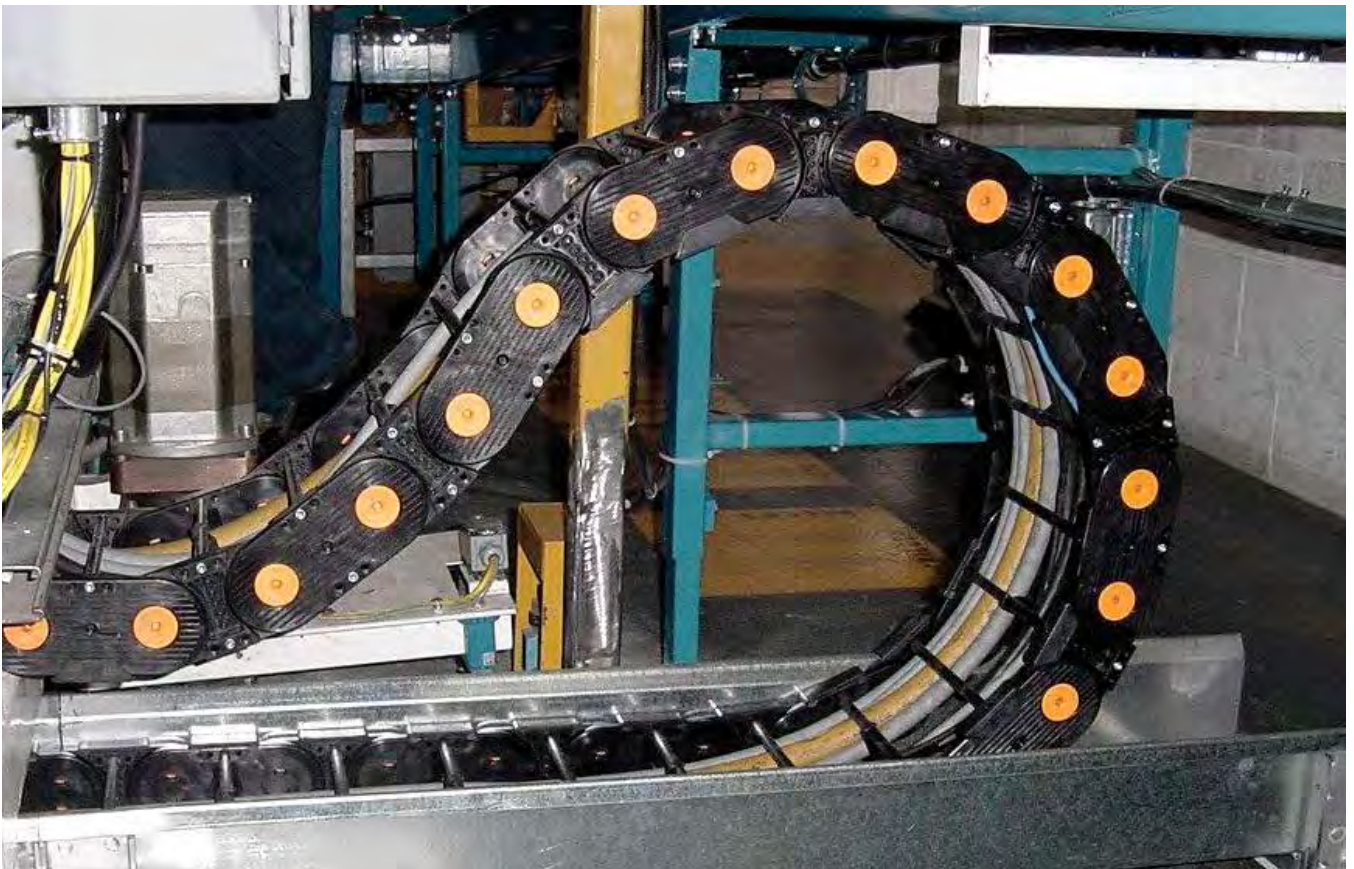
Nylatrac Modular TS carriers protect cables/hoses in multiple directions on high-speed servo-driven press transfer automation equipment. Bolted aluminum armor plates shield the utility package from debris in a metal stamping environment.



## PLASTIC CARRIERS | APPLICATION EXAMPLES



Nested Nylatrac<sup>®</sup> Modular TL carriers operate fully submerged at an entertainment attraction. These carriers are designed for rotational and long travel in a side-mounted configuration.



In this low-mount gliding application, decreased tow force is achieved with a Nylatrac Modular TS carrier with low-friction modular sliders. Low mounts are used in carrier designs for increased load/travel capability.



## PLASTIC CARRIERS | APPLICATION EXAMPLES



Nylatrac<sup>®</sup> Modular TSC carriers manage the cables and hoses connected to a Roboleo automated milking robot. Cavity separators placed every link prevent the hoses from sagging, and replaceable modular sliders on the side-mounted carrier protect link side bands from excessive wear.

A long travel side-mounted TSC carrier (shown at the right) is customized with window extenders equipped with double poly rollers to accommodate hoses along outer radius while keeping cables organized within inner radius due to link height restriction.



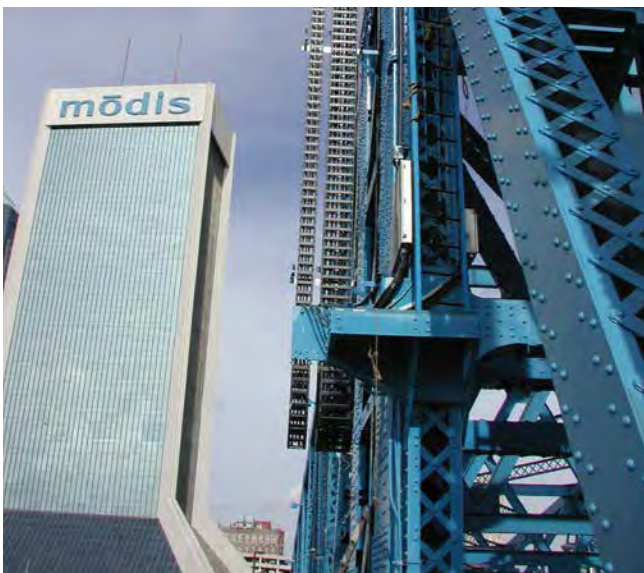
Nylatrac Modular TL carriers designed for long travel on a multi-axis riveting machine. The open-style carrier (lower left) is equipped with aluminum flat bars and low-friction modular sliders in a lowered mounting height configuration. The enclosed-style carrier (upper right) shields cables from ejected rivet heads and debris with heavy-duty bolt-in aluminum armor plates.



## PLASTIC CARRIERS | APPLICATION EXAMPLES



A complete cable carrier system designed by Dynatect includes a high-velocity rolling carriage and Nylatrac<sup>®</sup> Modular TL carriers to achieve long travel in a steel mill.



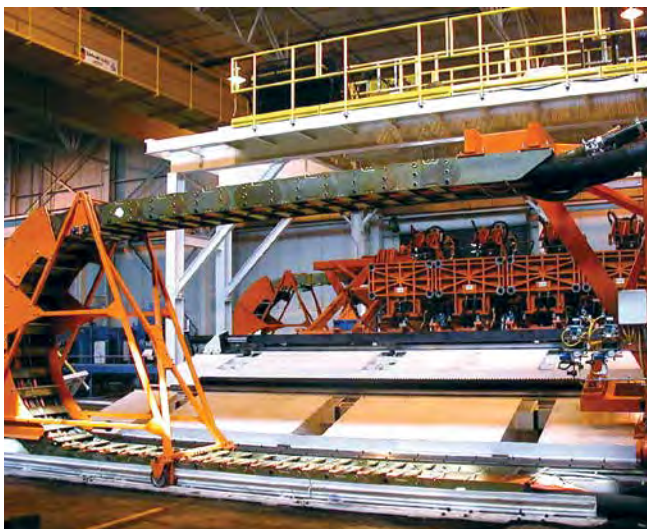
Nylatrac Modular TL carriers, with anodized aluminum crossbars for added strength in heavy wind conditions, maintain the lines for electric and hydraulic controls on a vertical lift bridge. Shown: The Main Street Bridge in Jacksonville, Florida.



## METAL CARRIERS | APPLICATION EXAMPLES



Custom stainless steel Gortrac<sup>®</sup> LRC carrier system with rolling carriage for a rocket launch system in California. Driven end modified for customer's application requirements.



Blow-molding application with Gortrac steel XL carrier with patented "Walker" support system to reduce shock load by preventing link lock-out.



A steel Gortrac LRC Series carrier was customized for increased box strength to handle the vibration experienced by the carrier during operation. This planter with 88-foot wide extension allows greater coverage with fewer passes.



Gortrac steel SRC carrier with window extenders on underground boring equipment.



## METAL CARRIERS | APPLICATION EXAMPLES



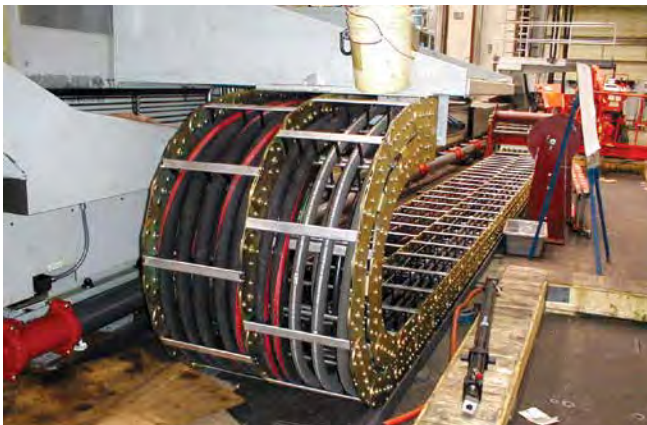
Custom 91-foot long Gortrac<sup>®</sup> stainless steel LRC carrier maintains cables and hoses on an oil rig platform. Dynatect supplies many custom engineered carrier systems to the oil and gas industry.



Custom 24-inch Gortrac steel XL carrier for paper converting application. XL side links can be delivered in virtually any size.



Enclosed-style Gortrac steel XL carrier in steel cable heat-treating application for unsupported long travel. Armor plates protect cables in aggressive environments.



Nested Gortrac steel XL carrier system used on a large machining center for the aerospace industry.



Nested Gortrac SRC Series carriers protect and guide hoses on this horizontal directional drilling machine by Universal HDD<sup>™</sup>.



## HOW TO SIZE YOUR CARRIER

**STEP 1:** List all cables and hoses.

**STEP 2:** Determine minimum cavity height (**dimension B**) by adding a safety factors to the outer diameter of the largest cable or hose.

**Safety Factors**

- Cables: + 10%
- Hoses: + 20%
- Total ideal fill: 60%

**STEP 3:** Determine cavity width (**dimension A**) by adding the outer diameters and appropriate safety factors (see Step 2) of all cables and hoses. If using vertical cavity separators, add separator width. If using horizontal cavity dividers, be sure that the same safety factors apply and there is adequate vertical space between dividers. (See page 90 for carrier installation instructions.)

**STEP 4:** Consult sizing index of the Quick Selection Guide for pre-selection of appropriate series.

- Plastic Carriers Quick Selection Guide: See pages 106-107
- Metal Carriers Quick Selection Guide: See pages 148-149

**STEP 5:** Check outer width (**dimension C**) and outer height (**dimension D**) dimensions against potential space restrictions.

**STEP 6:** Select carrier bend radius (**dimension R**) of carrier by consulting cable/hose manufacturer's specifications.

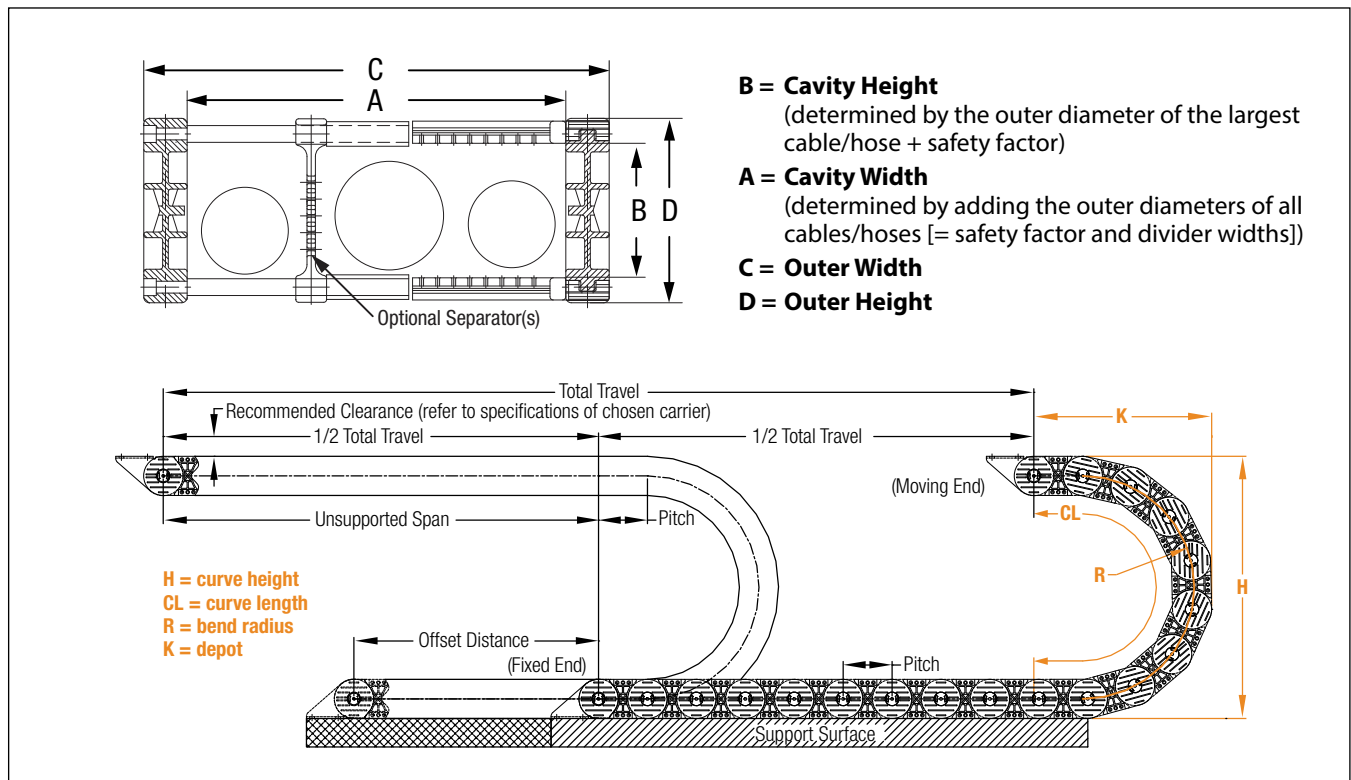
**STEP 7:** Check depot (**dimension K**) and curve height (**dimension H**) dimensions against potential space restrictions\*.

**STEP 8:** Determine total required machine travel (total travel). To minimize carrier length, fixed end of carrier should be mounted at center of travel, when possible.

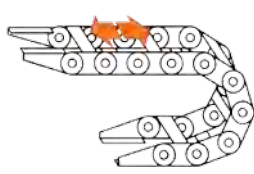
**STEP 9:** Consult the specifications page for curve length (**dimension CL**) of the chosen carrier.

**STEP 10:** Calculate Carrier Length:  
Carrier Length = (Total machine travel/2) + CL (curve length) + Offset distance from center of travel\*

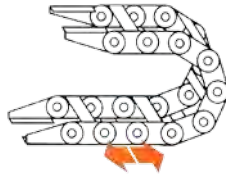
\*If fixed end is not mounted at center of travel. For minimum carrier length, moving bracket should be mounted directly above fixed bracket when machine is in center of travel. Offset is the dimension between fixed and moving bracket at center of travel.



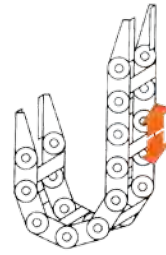
## TYPICAL APPLICATIONS



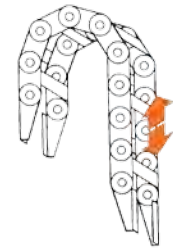
**Horizontal  
Lower-Flange Fixed**



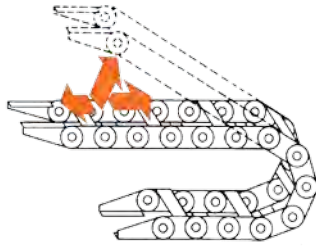
**Horizontal  
Upper-Flange Fixed**



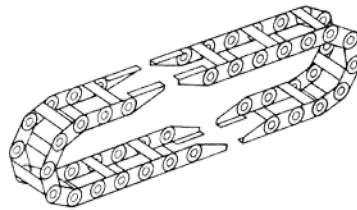
**Vertical Curve Down**



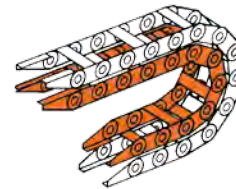
**Vertical Curve Up**



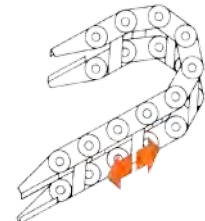
**Combination  
Vertical and Horizontal**



**Opposed**



**Nested Configuration**



**Side Mounted**

## TERMS AND DEFINITIONS

### Carrier Length = (Total Machine Travel/2) + Curve Length + Offset

For minimum carrier length, moving bracket should be mounted directly above fixed bracket when machine is in center of travel. Offset is the dimension between fixed and moving bracket at center of travel.

### Curve Height (H)

The overall height of the carrier at the loop. While (H) is the designed height at the loop, clearance should be provided above the carrier. This will be true of either metal or plastic carrier to account for built-in camber. Gortrac<sup>®</sup> carriers have a positive camber or pre-tension designed into the links in order to provide additional self-supporting length in horizontally oriented applications. This camber adds to the clearance required above the track. (See "Recommended Clearance" specification). In applications with limited space or non-horizontal orientations, this camber can be reduced or eliminated. For details, including any resulting reductions in unsupported span, please contact your Dynatect representative.

### Carrier Bend Radius (R)

Minimum bend radius of the cable and hose carrier should be larger than the recommended bend radius of the stiffest cable or hose installed in the carrier. Consult with cable or hose manufacturer for recommended bend radius.

### Curve Length (CL) = (π x Radius 'R') + (Pitch x 2)

Curve length is dependent on radius and link pitch – refer to Series specifications.

### Pitch

Refers to the distance between the pivot point centerlines of adjacent links.

### Depot (K)

The centerline from the first link pivot point to the end of the carrier in retraction.

### Load

The total weight of the cables and hoses within the carrier. This is usually called out in pounds per foot. If hoses will contain liquid, please include that weight.

### Maximum Speed

The maximum velocity of the moving end of the carrier during its travel.

### Maximum Acceleration

The maximum acceleration of the moving end of the carrier during its travel.

### Unsupported Span

Every carrier has an unsupported span. This span is a condition of link construction and the fill weight of the cables and hoses being carried. As the unsupported span of the carrier is exceeded, the carrier begins to sag. Dynatect will recommend proper support guidance when carrier fill weight exceeds its free carrying length. Refer to Series specifications for load charts.

### Metal vs. Plastic Carriers

Dynatect offers plastic, metal and hybrid carriers to satisfy the broadest range of applications. In general, use Gortrac steel carriers with elevated operating temperatures or when heavy loads exceed the maximum unsupported travel of plastic carriers. Use Gortrac steel carriers with lower speeds; however, higher speeds have been achieved with control of acceleration and deceleration. Plastic carriers are usually the first choice in applications requiring higher speeds and accelerations and long travel.

Gortrac steel link carriers have the highest strength-to-weight ratio and maximum unsupported span capability. Dynatect offers several lightweight steel carriers that are competitively priced with plastic, while providing significantly greater strength than similar-sized plastic carriers.

### Open-Style vs. Enclosed-Style Carriers

Dynatect offers both open and enclosed style options. Open-style carriers provide easy cable/hose inspection, while enclosed-style carriers offer protection from damaging outside elements such as hot chips.

## CABLE CLAMPING AND STRAIN RELIEF

Proper installation in conjunction with clamping cables ensure that the proper length of cable stays consistently in the carrier. Cables ideally should ride as close to the neutral axis of the carrier as possible. Cables that are not clamped can either pull against the inner radius, causing jacket and crossbar wear, or they will pull cables into the carrier causing them to snake and bunch through crossbars at the radius. Cable clamping is recommended at both moving and stationary ends of a carrier; however in applications with high pressure hydraulic hoses, we recommend clamping at moving end of the carrier only.

Dynatect offers a variety of clamp styles and designs, as well as mounting brackets with incorporated strain relief fingers for a

quick and easy zip tie clamping solution. Standard and custom designs are available. Ready to install assemblies can be shipped complete with cables/hoses and necessary clamping.

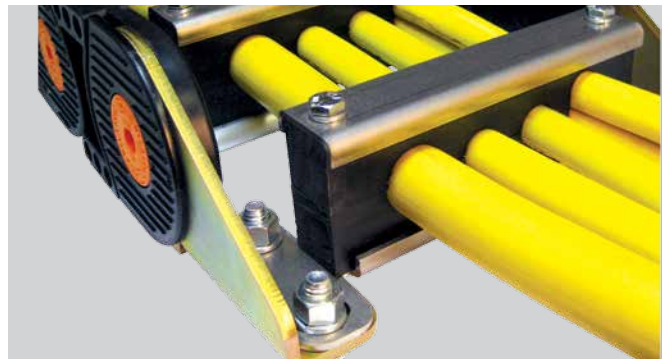
### OPTIONS

- Traditional saddle clamps/rail clamping arrangements (see opposite page for specs)
- Custom UHMW clamps
- Zip tie bracket bar
- Strain relief mounting brackets with integral zip tie fingers



#### Gortrac Rail Clamping System

- Can be integrated into most carriers
- Quick installation
- Stackable design provides space efficiency
- Available for 1, 2, or 3 stacked cable configurations
- Custom spacers can be designed to accommodate cables/hoses too small for clamp range
- Clamp material: hot-dipped galvanized steel (stainless steel available upon request)



#### Custom UHMW Clamps

- Can be integrated into most carriers
- Quick installation



#### Integrated Strain Relief Mounting Brackets

- Optional on most cable carriers
- Cables secured to tabs using zip ties



#### Zip Tie Bar for Mounting Brackets

- Zip tie bars integrated into mounting brackets
- Tiered structure for easy access
- Double rows of large fingers hold more zip ties
- Anti-slip ridges on bar prevent cable slippage

# GORTRAC<sup>®</sup> RAIL CLAMPING | SPECIFICATIONS

## SINGLE STACK CLAMPS

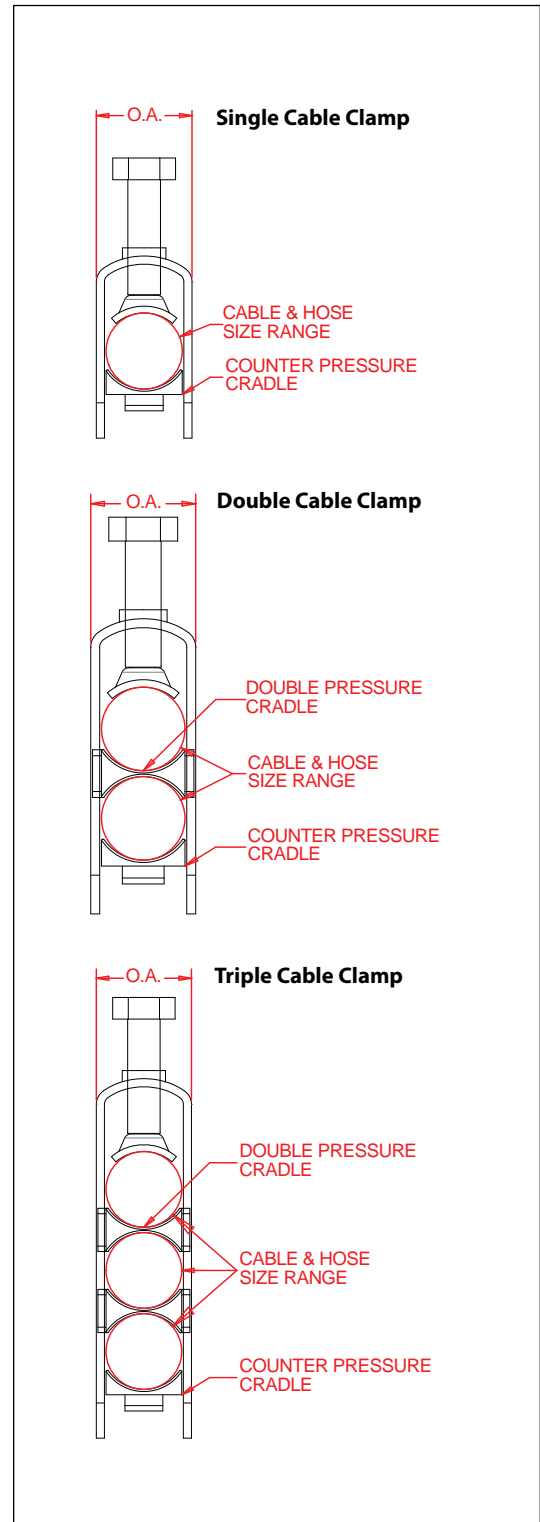
CABLE/HOSE DIAMETER RANGE inches (mm)	OVERALL WIDTH DIM. "O.A." inches (mm)	GORTRAC PART NO.
0.24 (6) - 0.47 (12)	0.61 (16)	HN0003-12.1
0.31 (8) - 0.55 (14)	0.69 (18)	HN0003-14.1
0.31 (8) - 0.63 (16)	0.77 (20)	HN0003-16.1
0.31 (8) - 0.71 (18)	0.85 (22)	HN0003-18.1
0.43 (11) - 0.86 (22)	1.01 (26)	HN0003-22.1
0.67 (17) - 1.02 (26)	1.17 (30)	HN0003-26.1
0.87 (22) - 1.18 (30)	1.32 (34)	HN0003-30.1
0.87 (22) - 1.34 (34)	1.48 (38)	HN0003-34.1
1.10 (28) - 1.50 (38)	1.65 (42)	HN0003-38.1
1.18 (30) - 1.65 (42)	1.81 (46)	HN0003-42.1
1.57 (40) - 1.81 (46)	2.03 (52)	HN0003-46.1
1.65 (42) - 1.97 (50)	2.18 (56)	HN0003-50.1
1.73 (44) - 2.13 (54)	2.34 (60)	HN0003-54.1
1.97 (50) - 2.28 (58)	2.50 (64)	HN0003-58.1
2.13 (54) - 2.52 (64)	2.74 (70)	HN0003-64.1
2.28 (58) - 2.76 (70)	2.97 (76)	HN0003-70.1
2.52 (64) - 2.99 (76)	3.21 (82)	HN0003-76.1
2.76 (70) - 3.23 (82)	3.44 (88)	HN0003-82.1
2.91 (74) - 3.54 (90)	3.76 (96)	HN0003-90.1
3.23 (82) - 3.94 (100)	4.15 (106)	HN0003-100.1
3.70 (94) - 4.33 (110)	4.55 (116)	HN0003-110.1

## DOUBLE STACK CLAMPS

CABLE/HOSE DIAMETER RANGE inches (mm)	OVERALL WIDTH DIM. "O.A." inches (mm)	GORTRAC PART NO.
0.31 (8) - 0.47 (12)	0.61 (16)	HN0002-12.2
0.39 (10) - 0.55 (14)	0.69 (18)	HN0002-14.2
0.47 (12) - 0.63 (16)	0.77 (20)	HN0002-16.2
0.55 (14) - 0.71 (18)	0.85 (22)	HN0002-18.2
0.63 (16) - 0.86 (22)	1.01 (26)	HN0002-22.2
0.79 (20) - 1.02 (26)	1.22 (31)	HN0002-26.2
0.94 (24) - 1.18 (30)	1.38 (35)	HN0002-30.2
1.02 (26) - 1.34 (34)	1.54 (39)	HN0002-34.2
1.26 (32) - 1.50 (38)	1.71 (44)	HN0002-38.2
1.42 (36) - 1.65 (42)	1.87 (48)	HN0002-42.2
1.50 (38) - 1.81 (46)	2.03 (52)	HN0002-46.2
1.69 (43) - 1.97 (50)	2.18 (55)	HN0002-50.2

## TRIPLE STACK CLAMPS

CABLE/HOSE DIAMETER RANGE inches (mm)	OVERALL WIDTH DIM. "O.A." inches (mm)	GORTRAC PART NO.
0.35 (9) - 0.47 (12)	0.61 (16)	HN0004-12.3
0.47 (12) - 0.55 (14)	0.69 (16)	HN0004-14.3
0.51 (13) - 0.63 (16)	0.83 (21)	HN0004-16.3
0.63 (16) - 0.71 (18)	0.89 (23)	HN0004-18.3
0.71 (18) - 0.79 (20)	0.99 (25)	HN0004-20.3
0.71 (18) - 0.86 (22)	1.06 (27)	HN0004-22.3
0.86 (22) - 1.02 (26)	1.22 (31)	HN0004-26.3
0.94 (24) - 1.10 (28)	1.30 (33)	HN0004-28.3
1.10 (28) - 1.18 (30)	1.38 (35)	HN0004-30.3



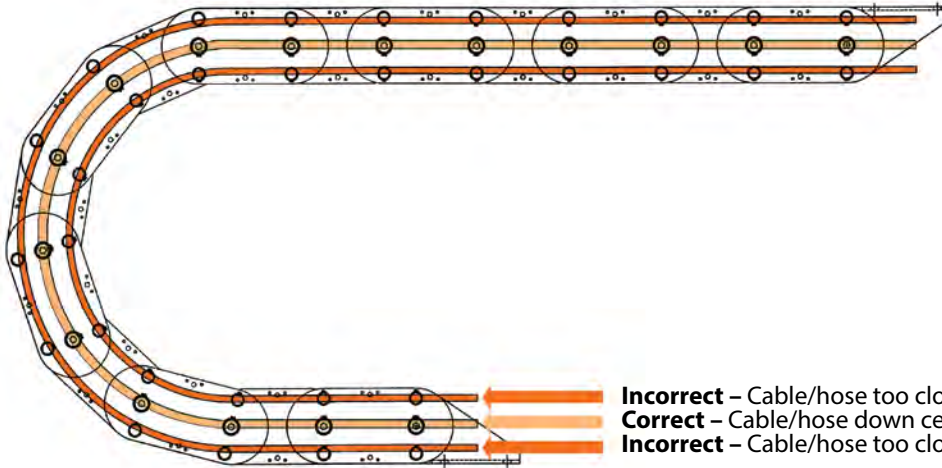
Note: Counter pressure cradles are supplied with all clamps. When clamp rail specified, length is determined by cable carrier width, number of cable clamps and/or customer-specified space requirements.



## CABLE/HOSE CARRIER | INSTALLATION

**Special care and consideration should be taken while installing cables and hoses.** The correct installation of cables and hoses is one of the most important aspects of the entire system. Proper installation will greatly affect the cable

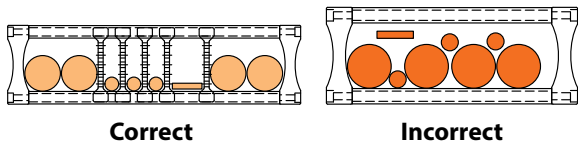
carrier system cycle life, as well as the cycle life of the cables and hoses. The following guidelines should be followed to maximize the life of the cables and cable carrier system.



**Incorrect** – Cable/hose too close to inner diameter  
**Correct** – Cable/hose down centerline of carrier  
**Incorrect** – Cable/hose too close to outer diameter

### Recommended Cable/Hose Placement

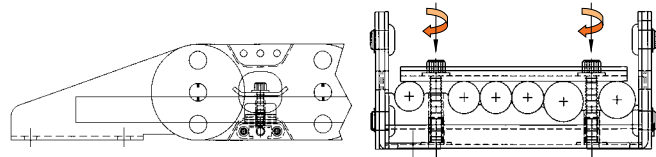
The cables/hoses must not be twisted and should be free of kinks or other irregularities. When stacking cables/hoses, care should be taken to ensure enough slack has been provided to allow cables/hoses to travel freely on top of one another.



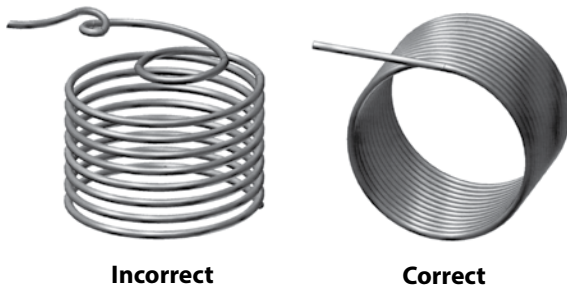
**Correct**

**Incorrect**

The stacking or direct side-by-side placement of cables and hoses with large cross-sectional differences is not recommended.



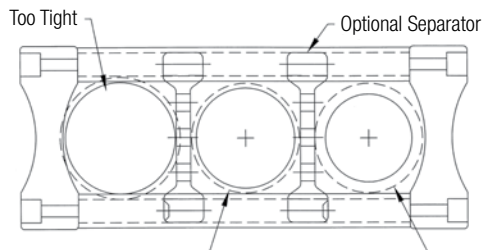
All cables and hoses should be secured at both the fixed and moving ends. Please do not pinch the cables/hoses excessively while clamping the ends in place. In applications with high pressure hydraulic hoses, we recommend clamping only at the moving end of the carrier.



**Incorrect**

**Correct**

Make certain that the cable/hoses are laid into the carrier "twist-free". Cables/hoses supplied in rolls or on roll reels should be unrolled, not pulled sideways or off the top of the coil.



Recommended 10% Clearance for Cables    Recommended 20% Clearance for Hoses

Dynatect recommends a minimal 10% clearance for each cable overall diameter and 20% clearance for each hose overall diameter. (60% total cavity fill optimal)



## GORTRAC<sup>®</sup> | VALUE-ADDED PRODUCTS AND SERVICES

In addition to providing cable and hose carriers, Dynatect offers complete value-added services and programs for our customers. These services range from basic procurement and installation of cables and hoses into carrier assemblies to process support like Kanban, JIT and vendor-managed

inventory programs, to the design and manufacture of turn-key, engineered assemblies. With six plants in North America and divisions in Asia and Europe, we have the capacity and capabilities to support the requirements of high volume OEM programs, as well as large, complex projects.

### PRE-ASSEMBLED CARRIERS

Dynatect can deliver carrier assemblies pre-loaded with cables and hoses or complete harnesses with connectors and fittings for plug-and-play installation. Cables, hoses and fittings can be purchased by Dynatect to your specification or dropped shipped from your vendor. Either way, our installation team will ensure that the final

product arrives on your floor correctly and on time. All pre-loaded systems pass through quality and inspection checks as part of the installation process, confirming arrangement, conformance and cut off lengths, before they leave our facilities.



Nylatrac<sup>®</sup> carrier system pre-loaded on Dynatect-designed reels for quick installation.



Ready-to-install Nylatrac NSB carrier.

Steel SRC carrier pre-loaded with steel hoses.



## GORTRAC® | VALUE-ADDED PRODUCTS AND SERVICES

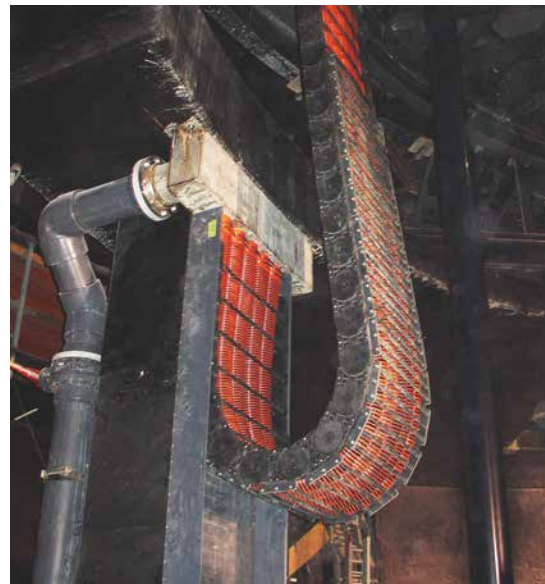
### TURN-KEY ENGINEERED ASSEMBLIES

Whether you require a simple modification to a standard mounting bracket for a drop-in replacement, or you would like us to design and deliver a complete, Turn-key engineered assembly, Dynatect has the value-added solution you are looking for. In addition to completely harnessed carrier systems, we can fabricate manifolds and junction boxes, tow arm assemblies, guidance and support systems, safety mechanisms, shrouds and

enclosures, and other associated components. We can also incorporate other Dynatect products such as protective covers, roll-up doors, slip clutches and motors and ball or lead screws into our designs and our network of plants provide a wide range of manufacturing and fabrication capabilities. This vertical integration allows us to provide specialized assemblies cost effectively and on time.



Blow-molding application with steel XL carrier with patented "Walker" support system to reduce shock load by preventing link lock-out.



Dynatect-designed cable carrier, guidance and manifold system for hydraulic cylinder lifting platform in the entertainment industry.

Stainless steel LRC Series carrier, designed for outdoor-duty, supplied with pre-installed cables and hoses and custom mounting brackets with incorporated bulk-head plates.





## GORTRAC<sup>®</sup> | VALUE-ADDED PRODUCTS AND SERVICES

### ORDERING MADE EASY

In addition to delivering complete assemblies, Dynatect offers a variety of services designed to make specification and procurement easier:

- Using our free web conferencing service, we can quickly put together design teams to facilitate solutions to complex opportunities. More than just video conferences, these meetings allow our engineers to share photo, video and documents with your design team in real time. Design and print approvals can be accomplished online, increasing productivity and shortening the design cycle.
- We can customize a Kanban or JIT program to ensure delivery with minimized inventory requirements. We can

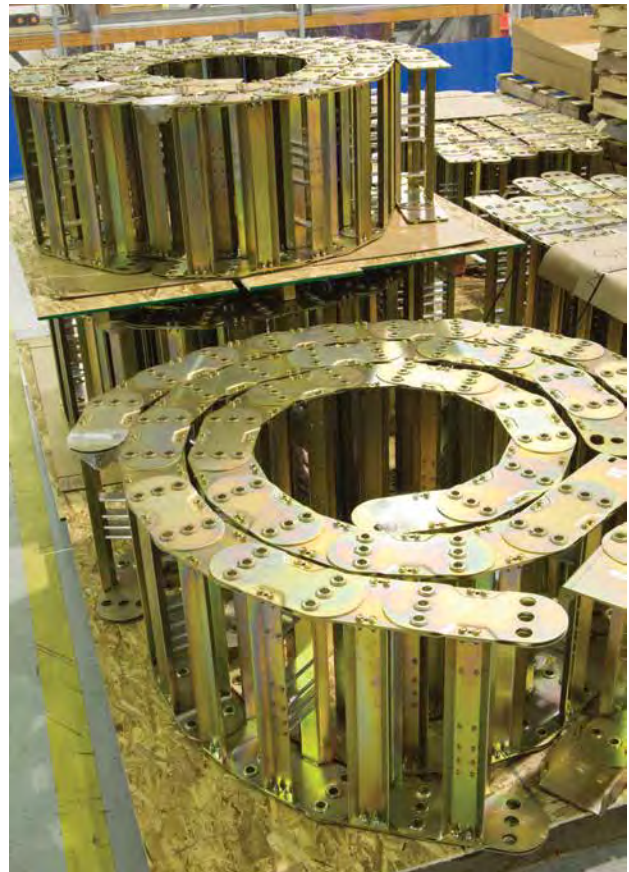
also set up a vendor-managed inventory and tool crib replenishment program designed to directly integrate into your manufacturing process.

- We offer educational forums both in person and online designed to improve your assembly and take time and to pass on best practices for cable and hose management and system design. We can also provide on-site installation supervision.

Dynatect has the experience and capabilities to design and deliver a valued-added carrier system for your next application. Let us show you how easy it is. Call us today and ask to speak to one of our application's engineers.



Dynatect can customize a Kanban or JIT program to ensure delivery with minimized inventory requirements.



Nested steel carrier assembly supplied complete with long travel guide trays and trolley system, and custom steel crossbars.



## LONG TRAVEL SOLUTIONS | GUIDE TROUGH SYSTEMS

### UNSUPPORTED SPAN IN CARRIER OPERATION

Every cable carrier has an unsupported span. This span is a condition of link construction and the fill weight of the cables and hoses being carried. As the unsupported span of the carrier is exceeded, the carrier begins to sag. In plastic carrier systems, support guidance is required when sag reaches the point where the upper (moving) section of the carrier contacts the lower section.

### GUIDE TROUGHS

The most common method of support in plastic carrier applications where unsupported spans are exceeded is to install a guide trough to prevent lateral movement during travel. In a center mounted application, the trough consists of two sections: deep and shallow. As the carrier begins to travel from the retracted position, it initially sags and rides on itself. When the gliding section passes the center point, it transitions to the shallow trough segment.

### Features/Benefits:

- Prevents lateral movement during travel
- Modular: Easy to add/remove sections
- Fast, easy assembly
- Designed for center mount, offset mount, or opposed travel

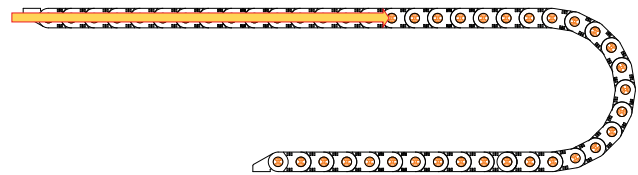


### LOWERED MOUNTING HEIGHT

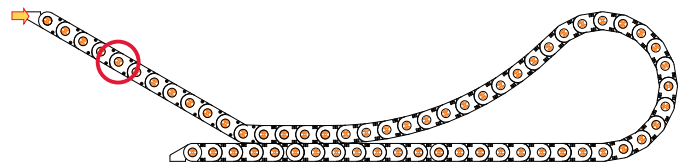
An important consideration for applications requiring plastic carriers in a guide trough is the bending moment that occurs at the moving end as the carrier is pushing, particularly when high velocities/accelerations and heavy fill weights are introduced.

A potential solution for this problem is lowering the mounting height of the carrier, thereby reducing the bending moment. In a lowered mounting height design, the moving end begins gliding immediately as it begins to push. The lowered mounting height is achieved by adding reverse bend links, extending the 'K' dimension of the carrier. Dynatect Engineering can run tow force calculations on an application to determine whether a lowered mounting height is advisable.

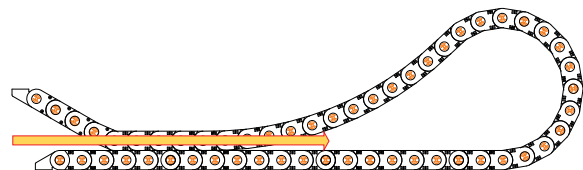
In cases where the moving end cannot be lowered due to application restrictions, a "push plate" may be utilized. If the moving end cannot be mounted at the recommended mounting height, a push plate provides additional support to the carrier system at the bending moment that occurs at the moving end as the carrier is pushing.



When the carrier performs under normal operation without sag, force is applied in a straight trajectory along the moving section.



As sag is introduced, the mass of the carrier falls below the force plane, creating a bending moment on the links at the moving end.



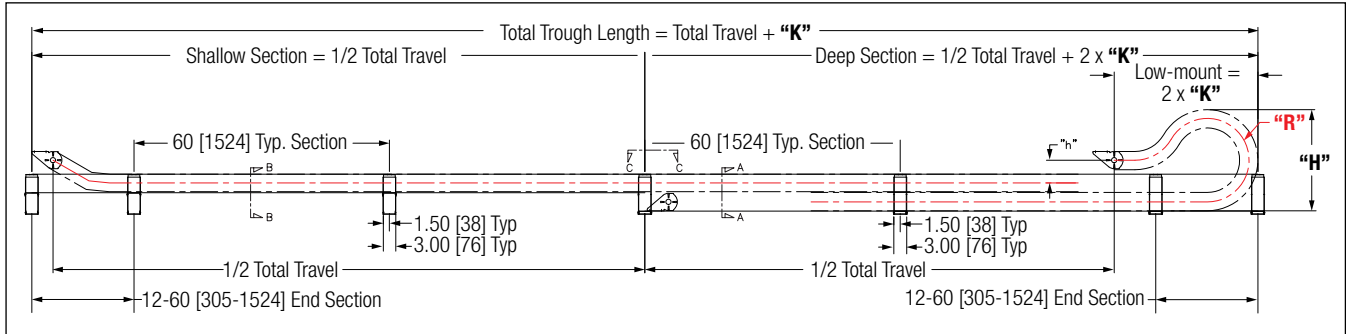
In a long travel carrier system configured for a lowered mounting height, the sag is eliminated, redirecting the force vector back to a straight trajectory. Furthermore, the loading that the carrier introduces as it is dragged over the bottom carrier section is replaced with a more even wear pattern. The force is distributed over the entire system instead of just the first few links at the moving end.



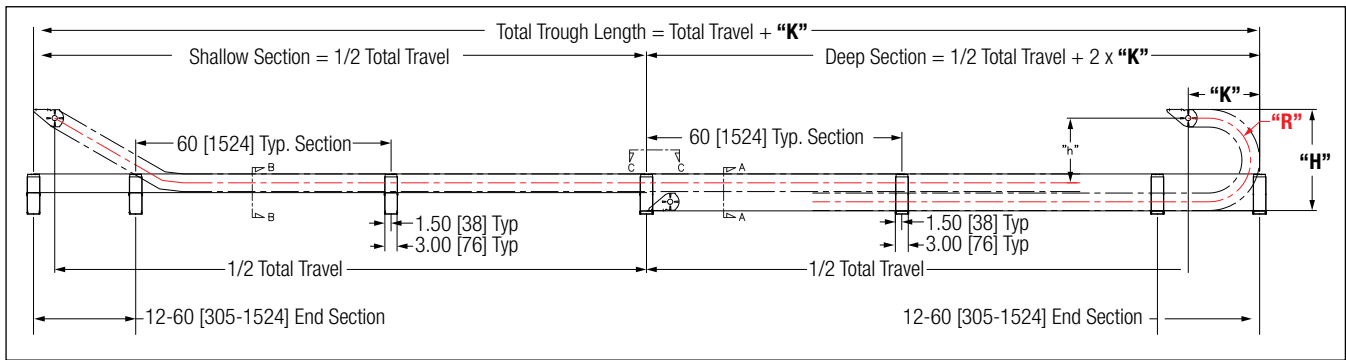
# LONG TRAVEL SOLUTIONS | GUIDE TROUGH SYSTEMS

## GUIDE TROUGH SYSTEM (LOWERED MOUNTING HEIGHT)

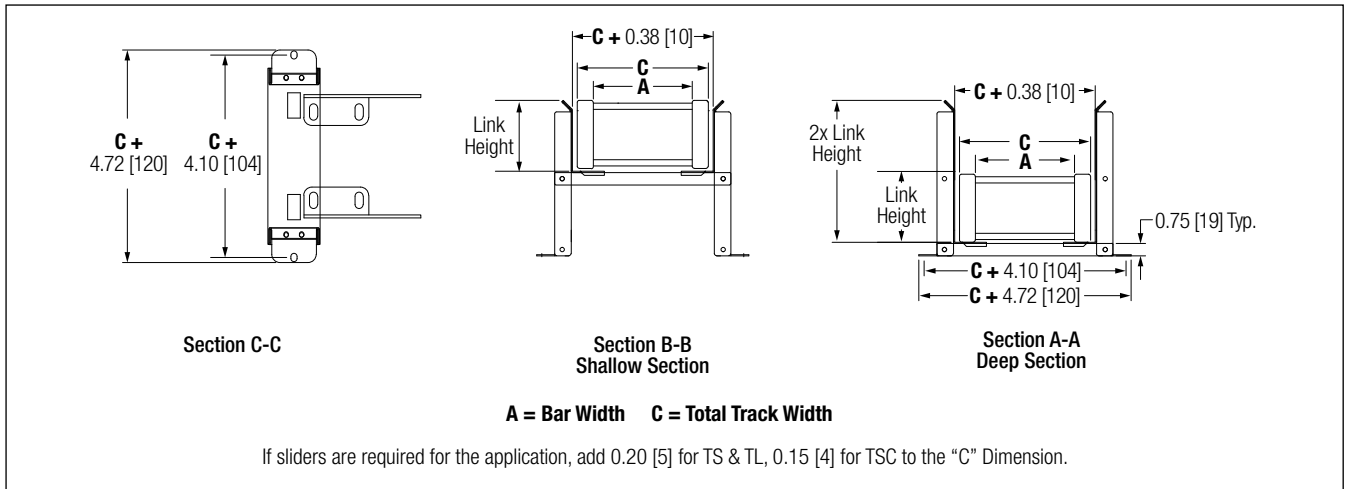
Dimensions in inches (mm)



## GUIDE TROUGH SYSTEM (REGULAR MOUNTING HEIGHT)



## GUIDE TROUGH SYSTEM END VIEWS



## MODULAR LOW-FRICTION SLIDERS

Available on Nylatrac® Modular Series TSC, TS, and TL, modular slider components are often used in long travel applications in which chain bands glide on each other. Sliders are manufactured from special plastic

material that is highly wear resistant and offers extremely good coefficient of friction values. Not only do they reduce tow force and wear, but they are removable and easy to replace.



# LONG TRAVEL SOLUTIONS | STATIONARY SUPPORT ROLLERS

## STATIONARY SUPPORT ROLLERS

Stationary support rollers are available for unsupported spans that exceed the maximum lengths listed on a specific track series load chart. Available on both plastic carriers and metal carriers.

### Support Rollers for Metal Carriers

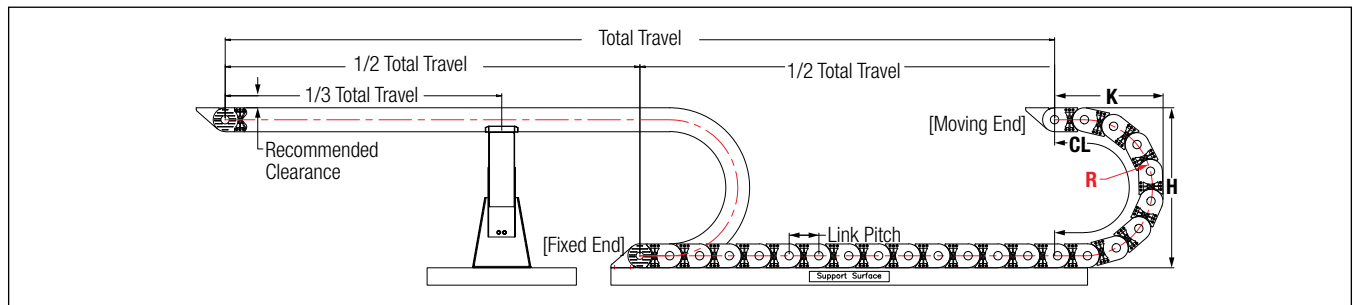
- Single support roller systems provide maximum travel 3 times the recommended travel length (1.5 times unsupported span)
- Double support roller systems provide maximum travel 4 times the recommended travel length (2 times unsupported span)

### Support Rollers for Plastic Carriers

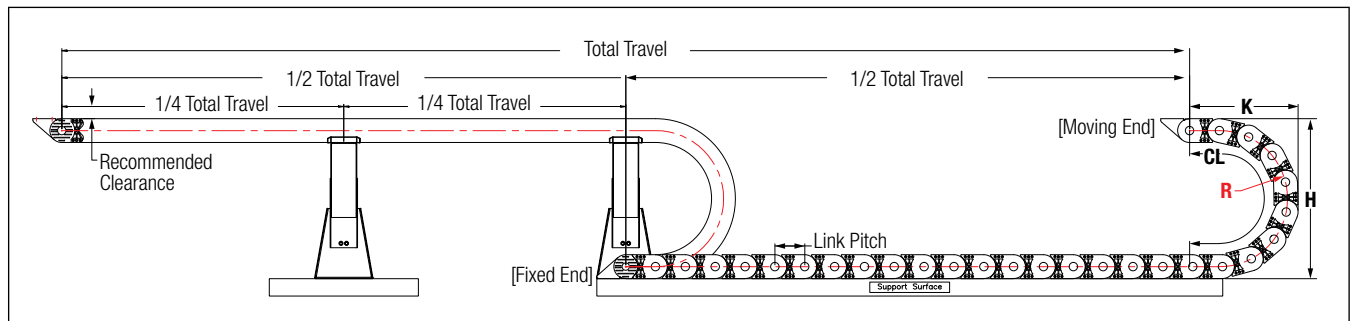
- Single support roller systems provide maximum travel 2.5 times the recommended travel length (1.25 times unsupported span)
- Double support roller systems provide maximum travel 3.5 times the recommended travel length (1.75 times unsupported span)



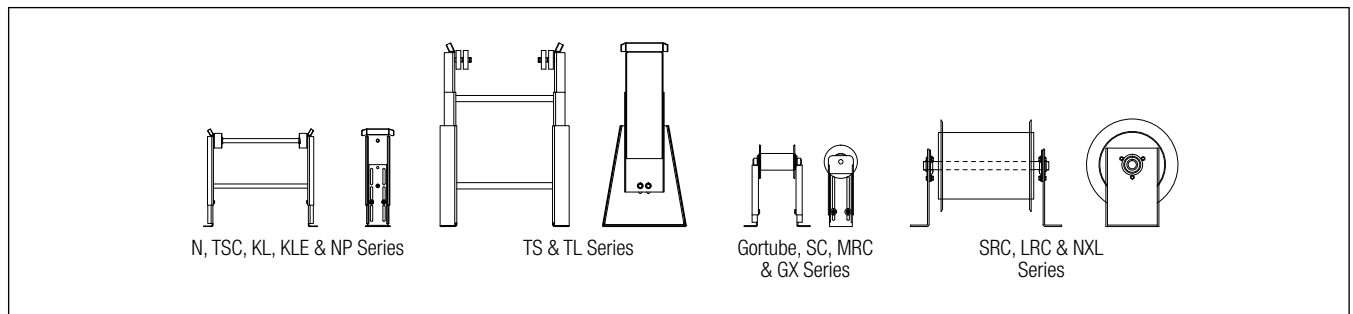
## SINGLE SUPPORT ROLLER SYSTEM



## DOUBLE SUPPORT ROLLER SYSTEM



## SUPPORT ROLLER END VIEWS



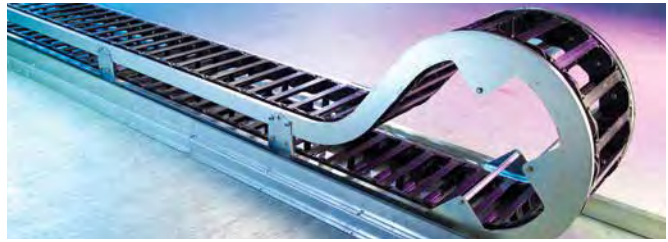
# LONG TRAVEL SOLUTIONS | ROLLING CARRIAGE SUPPORT SYSTEM

## ROLLING CARRIAGE SUPPORT SYSTEM

A rolling style carriage support system is available for high speed and long travel applications when the cable/hose load exceeds the limits available with fixed support rollers or when tow forces exceed the limits available with a traditional gliding application. Rolling carriage support systems consists of rollers, conveyor supports and a moving rail framework that supports the carrier throughout the complete length of travel. The entire system is guided by channels that ensure accuracy and dependability, even at extremely high loads and velocities. The system can be self-guiding for travels under 50 feet. Guide channel required for travels over 50 feet. Depending on mounting location, a guide channel is recommended for all lengths of carrier travel to prevent outside interference.

### Features/Benefits:

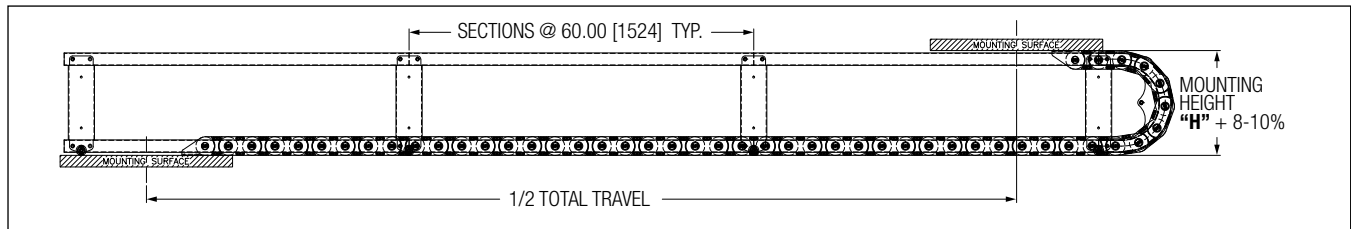
- Lightweight: Reduced tow forces vs. conventional carriage systems
- Modular: Easy to add/remove length
- Easy assembly: Most components are bolted together
- Quiet: Molded nylon wheels used for low noise
- Track drives/returns carriage without use of cable
- Can be used with both metal and plastic carrier systems



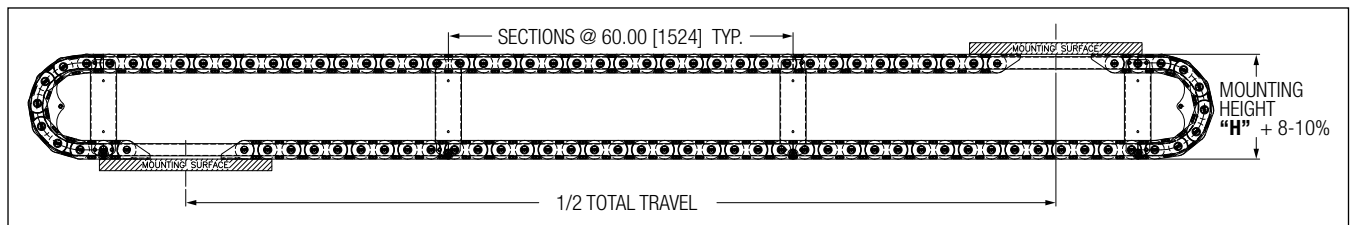
Shown: A customized, low-mounted rolling carriage support system designed to fit a pre-existing mounting envelope.

## ROLLING CARRIAGE SYSTEM (SINGLE CARRIER)

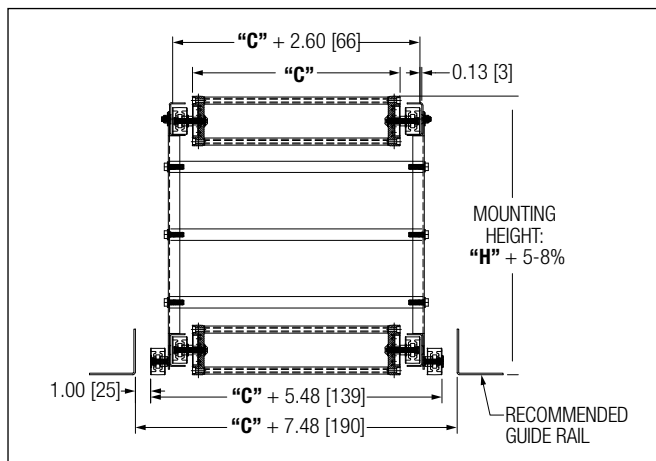
Dimensions in inches (mm)



## ROLLING CARRIAGE SYSTEM (OPPOSED)



## CARRIAGE VIEW END

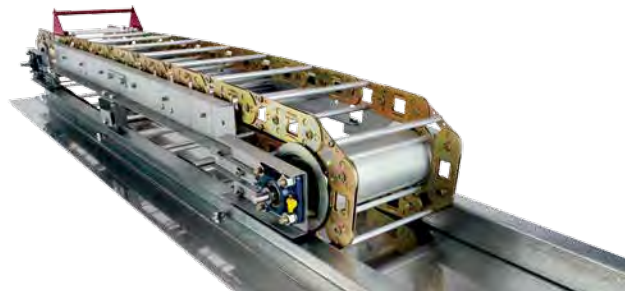


Shown: An opposed rolling carriage with a Nylatrac® Modular carrier (TS Series) designed for high-velocity/long travel in a steel mill.

# LONG TRAVEL SOLUTIONS | CARRIAGE SYSTEM

## DRUM STYLE CARRIAGE SUPPORT SYSTEM

A Drum Style carriage support system is available for long travel applications when the cable/hose load and travel exceed the limits available with fixed support rollers. Carriage support systems consists of a moving framework that has major rollers (Drums) at each end and intermediate conveyor supports between the major rollers, which support the cable carrier for the complete length of travel. The entire system rolls on "C"-channels on the floor (or a bridge). Single carrier carriage systems require a return cable assembly. For use with metal carriers only.

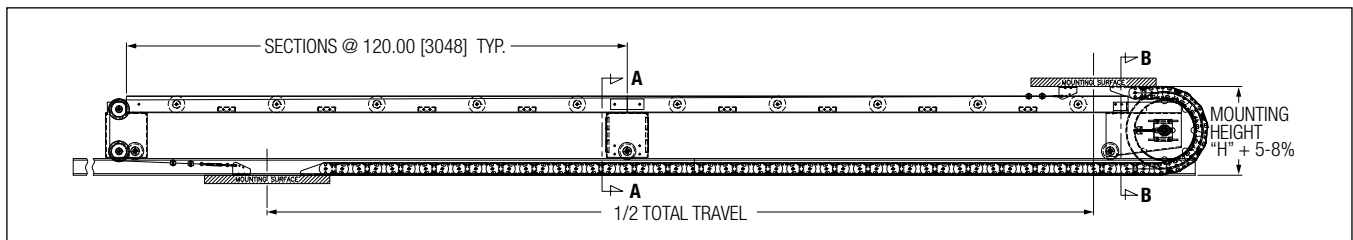


### Features/Benefits:

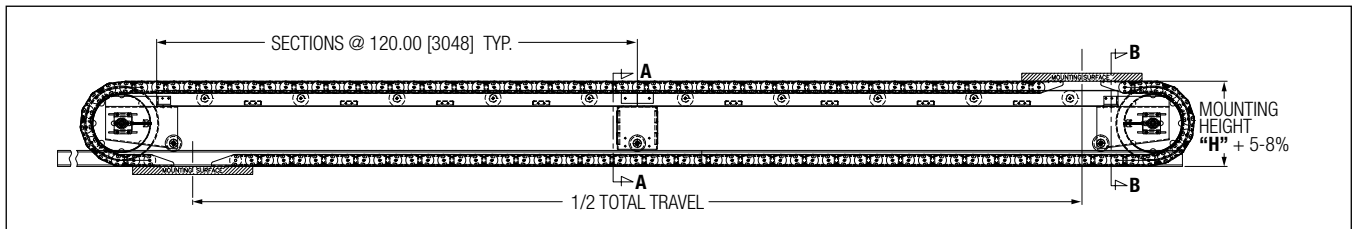
- Robust-designed for heavy-duty operation with steel carriers
- Modular: Easy to add/remove length
- Easy assembly: Most components are bolted together

### DRUM STYLE CARRIAGE SYSTEM (SINGLE CARRIER)

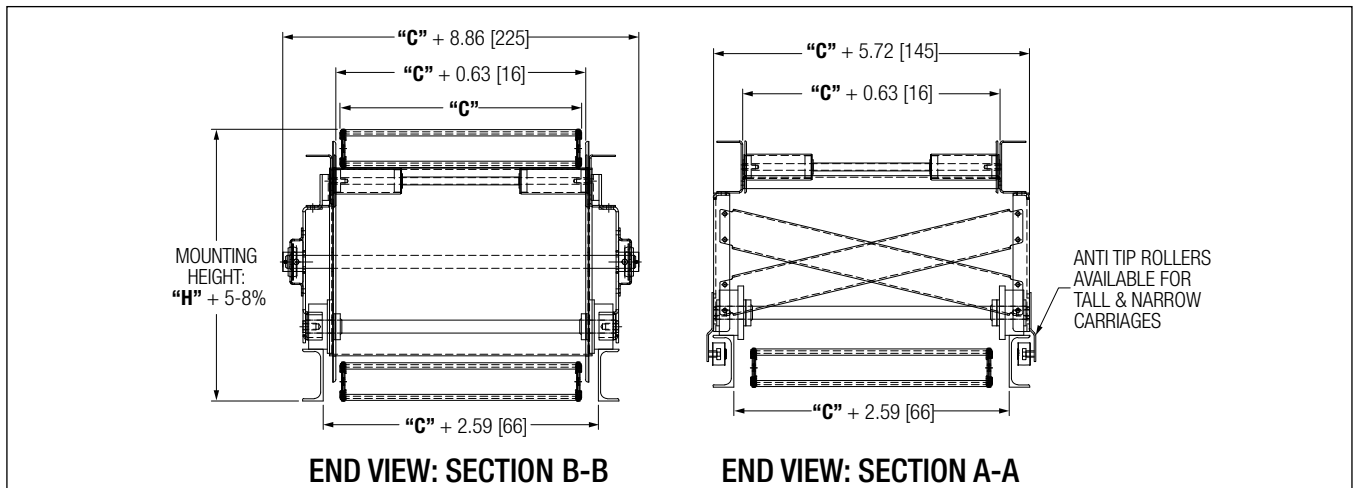
Dimensions in inches (mm)



### DRUM STYLE CARRIAGE SYSTEM (OPOSED)



### CARRIAGE END VIEW



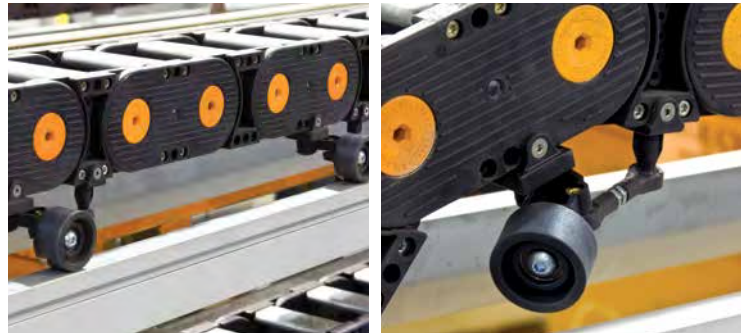


## LONG TRAVEL SOLUTIONS | MARATHON™

### MARATHON LONG TRAVEL SUPPORT SYSTEM

Available on Nylatrac® Modular TS and TL Series plastic carriers, the Marathon system is a custom solution for specialty applications involving high velocities and accelerations. Unlike traditional systems where the carrier glides on itself, the Marathon utilizes a patented retractable roller system that rides on a simple rail system. How it works: Using the carrier's polygonal effect, the rollers are lifted from the guide rail and pulled inward as the links pass through the radius. On the return travel, the roller sets are pushed back out and sit down on the rail providing rolling support through the complete travel.

For additional design considerations, contact Dynatect's Sales Department at 800-298-2066 to discuss your application.



#### Features/Benefits:

- Reduction of Tow Force up to 90%
- Travel speed up to 5 meters/second
- No gliding friction on carrier links

## ROTATIONAL APPLICATIONS

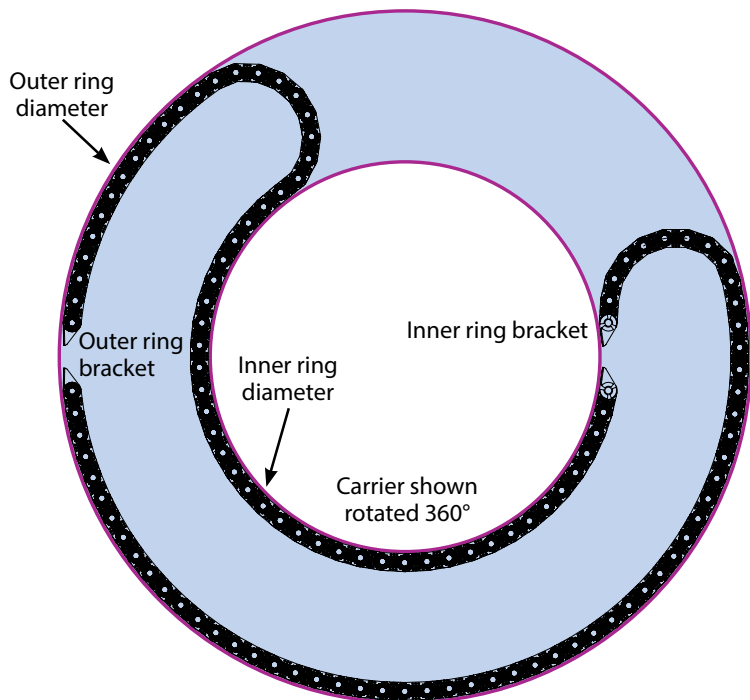
### ROTATIONAL APPLICATION

Rotational applications are achieved by running a carrier that has been modified for reverse bending movement on its side. The carrier can be equipped with polymer slide blocks or casters for low-friction gliding. The carrier is also modified to maintain maximum control of travel path.

#### Design Specifications

The following information is required to design a rotational carrier assembly:

- Degree of rotation
- Inner ring diameter
- Outer ring diameter
- Velocity
- Operating environment and duty cycle
- Fill package
- Mounting location
- Specify which bracket (inner/outer) is rotating



#### Field Application

An automatic storage/retrieval system (ASRF) at a California winery provided consistent, worry-free operation using a 140-ft long Nylatrac Modular (TL-200) carrier assembly. In this side-mounted rotational application, the carrier incorporates both primary and reverse bend radius links where necessary to provide free movement in both directions. Components and accessories were selected to minimize wear and prevent tangling and corkscrewing of cables. (Equipped with poly roller crossbars, low-friction sliders, cavity separators and cable clamps at each end.)



# CABLE/HOSE CARRIERS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

### 1. Quote For

New Design:  Specify Gortrac<sup>®</sup> Part Number: \_\_\_\_\_  Dynatect Recommendation\* (\*please provide design data)  
 Existing Design: Brand: \_\_\_\_\_ Part #: \_\_\_\_\_ Length: \_\_\_\_\_  Drawing Provided?  
 Comments: \_\_\_\_\_

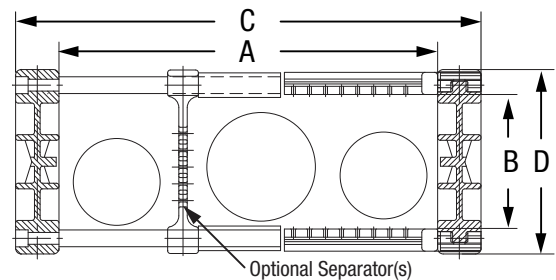
### 2. Cables/Hoses

List type of cable(s) and/or hose(s) below.

TYPE OF CABLE/HOSE	OUTSIDE DIAMETER	QUANTITY	MINIMUM BEND RADIUS	WEIGHT/FOOT	COMMENTS

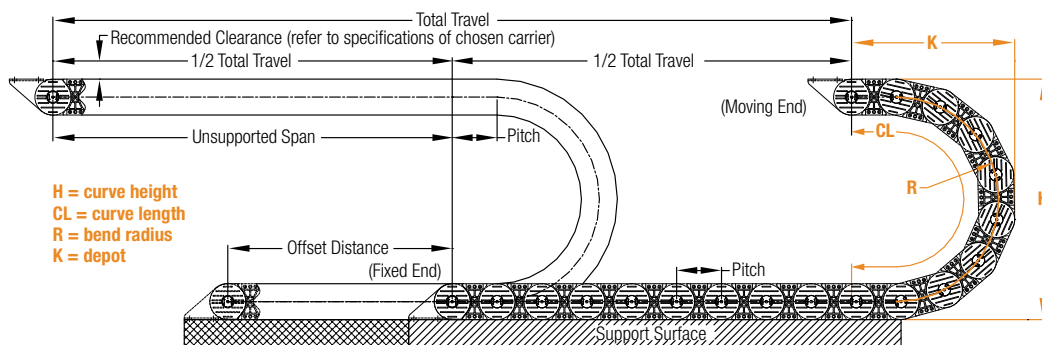
If dimensions A, B, C and D are left blank, Dynatect will determine the correct carrier sizing based on the cables/hoses specified above.

**A = Cavity Width:** \_\_\_\_\_  
 (determined by adding the outer diameters of all cables/hoses + appropriate safety factors and divider/separator widths)  
**B = Cavity Height:** \_\_\_\_\_  
 (determined by the outer diameter of the largest cable/hose + safety factor)  
**C = Outer Width:** \_\_\_\_\_  
 (please specify any space restrictions)  
**D = Outer Height:** \_\_\_\_\_  
 (please specify any space restrictions)  
 Cable/Hose Safety Factor:  
 Cables: +10%      Hoses: +20%  
 Separators?     Yes     No      (Quantity: \_\_\_\_\_)



### 3. Travel Requirements

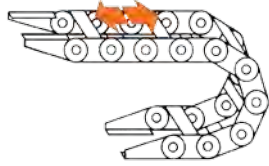
Dimensions specified in:  Inches  Millimeters



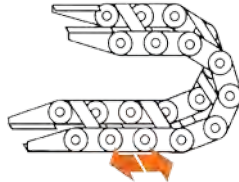
Total Travel Length: \_\_\_\_\_ Will Fixed End be the Center of Travel?  Yes  No (offset distance from center: \_\_\_\_\_)  
 Maximum Travel Speed: \_\_\_\_\_ Acceleration: \_\_\_\_\_ Duty Cycle: \_\_\_\_\_  
 List Space Restrictions (mounting height "H", depot "K"): \_\_\_\_\_

# CABLE/HOSE CARRIERS | QUOTE REQUEST FORM

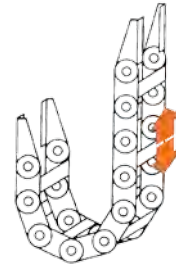
## 4. Travel Orientation



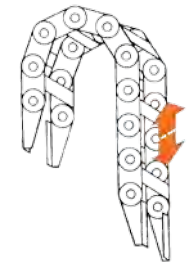
Horizontal Lower-Flange Fixed



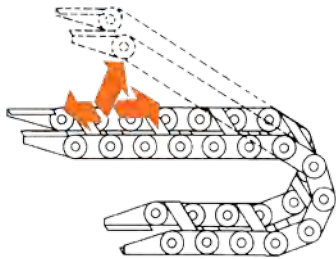
Horizontal Upper-Flange Fixed



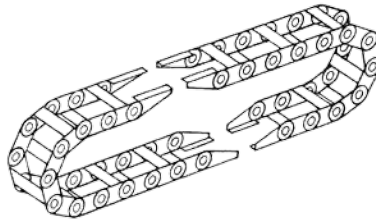
Vertical Curve Down



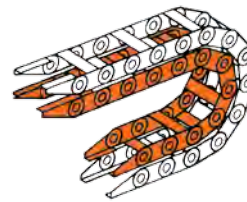
Vertical Curve Up



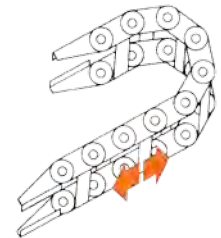
Combination Vertical and Horizontal



Opposed



Nested Configuration



Side Mounted

## 5. Application

Operating Temperature Range: Ambient: \_\_\_\_\_ Minimum: \_\_\_\_\_ Maximum: \_\_\_\_\_

Describe Operating Environment (debris, moisture, chemicals, etc.): \_\_\_\_\_

\_\_\_\_\_

Application Details: \_\_\_\_\_

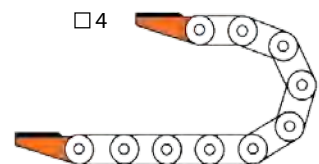
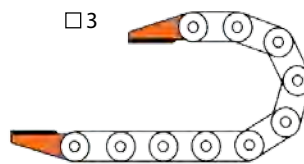
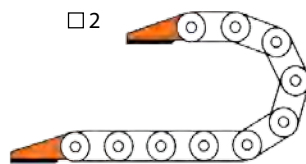
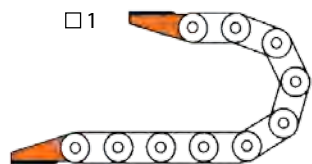
\_\_\_\_\_

Material Preference:  Steel  Plastic  No Preference  Other: \_\_\_\_\_

Style Preference:  Enclosed  Open

## 6. Bracket Configuration

Note: Default bracket configuration is #1-Inward.

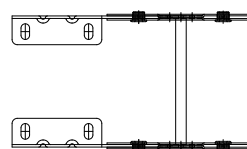


Mounting Holes Inward or Outward of Link:

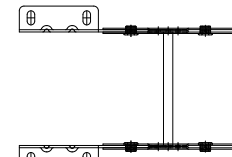
Fixed End:  In  Out

Moving End:  In  Out

Non-Standard Mounting Brackets (provide drawing)



**Brackets Inward**



**Brackets Outward**

## NYLATRAC® STANDARD | OPEN-STYLE CARRIERS

- Plastic solutions for light- to medium-duty applications featuring clean, lightweight designs for economical cable management
- Open-style links leave cables/hoses open to regular inspection
- Simple “snap-together” link construction allows easy adjustment of length, maintenance and repair
- Hinged plastic crossbars allow quick cavity access and easy installation
- Standard sizes available from stock
- Typical applications: robotics, automation, pick-and-place, machine tool, mobile equipment



### KO SERIES

**Features:**

- Smallest accessible standard link
- Hinged crossbars on inside radius
- Integral mounting holes molded into every link (except KO-3) eliminate the need for mounting brackets

**Quick Sizing Reference – inches (mm):**

- Link Height: 0.39 - 0.87 (10 - 22)
- Link Pitch: 0.59 - 1.18 (15.00 - 30.00)
- Curve Heights ('H'): 1.57 - 6.38 (40 - 162)



### KN SERIES

**Features:**

- Smallest solid standard link (crossbars do not hinge open)
- Integral mounting holes molded into every link eliminate the need for mounting brackets

**Quick Sizing Reference – inches (mm):**

- Link Height: 0.59 (15)
- Link Pitch: 0.79 (20)
- Curve Heights ('H'): 2.00 - 3.00 (51 - 76)



### SP SERIES

**Features:**

- Hinged crossbars on inside (standard) or outside radius
- Strain relief mounting brackets are standard

**Quick Sizing Reference – inches (mm):**

- Link Height: 1.05 (27)
- Link Pitch Length: 1.20 (30)
- Curve Heights ('H'): 3.15 - 8.50 (80 - 216)



### KS SERIES

**Features:**

- Hinged crossbars on inside (standard) or outside radius
- Standard one-piece mounting bracket; strain relief brackets optional

**Quick Sizing Reference – inches (mm):**

- Link Height: 1.38 (35)
- Link Pitch: 1.83 (46)
- Curve Height ('H') range: 5.40 - 13.10 (137 - 333)



### P/PH SERIES

**Features:**

- P models – Solid-link design
- PH models – Hinged crossbars on inside (standard) or outside radius
- Large window cavity relative to its overall dimensions

**Quick Sizing Reference – inches (mm):**

- Link Height: 1.50 (38)
- Link Pitch: 1.50 (38)
- Curve Height ('H') range: 4.00 - 10.00 (102 - 254)

QUOTE REQUEST FORMS: SEE PAGES 100-101.



## NYLATRAC<sup>®</sup> STANDARD | OPEN-STYLE CARRIERS



### NP SERIES

**Features:**

- Hinged crossbars on inside (standard) or outside radius
- Excellent strength for long travel applications

**Quick Sizing Reference – inches (mm):**

- Link Height: 2.00 (51)
- Link Pitch: 2.17 (55)
- Curve Height ('H') range: 7.00 - 18.00 (178 - 457)



### KL SERIES

**Features:**

- Hinged crossbars on outside radius
- Ideal for long travel applications
- Excellent strength and unsupported span rating

**Quick Sizing Reference – inches (mm):**

- Link Height: 2.50 (64)
- Link Pitch: 2.62 (67)
- Curve Height ('H') range: 8.50 - 26.00 (216 - 660)

## NYLATUBE<sup>®</sup> STANDARD | ENCLOSED-STYLE CARRIERS

- Completely enclosed, plastic solutions for light- to medium-duty applications featuring clean, lightweight designs for economical cable management
- Enclosed-style links protect cables/hoses from dirt and debris

- Standard sizes available from stock
- Simple “snap-together” link construction with plastic lids allows easy adjustment of length, maintenance and repair
- Hinged plastic lids allow quick cavity access and easy installation (KOE and KLE Series)



### KOE SERIES

**Features:**

- Small to medium range of link sizes
- Hinge-open lids on outside radius
- Integral mounting holes molded into every link eliminate the need for mounting brackets

**Quick Sizing Reference – inches (mm):**

- Link Height: 0.59 - 1.97 (15 - 50)
- Link Pitch: 0.71 - 2.17 (18 - 55)
- Curve Heights ('H'): 3.00 - 13.80 (76 - 351)



### N SERIES

**Features:**

- Small to large range of link sizes
- Solid, enclosed link design and smooth appearance

**Quick Sizing Reference – inches (mm):**

- Link Height: 1.38 - 2.95 (35 - 75)
- Link Pitch: 1.38 - 2.56 (35 - 65)
- Curve Height ('H') range: 8.00 - 26.60 (203 - 676)



### KLE SERIES

**Features:**

- Medium size link available in 3 standard widths (3", 4.5", 7")
- Hinge-open lids on outside radius
- Designed for superior durability – excellent for heavy-duty and long travel applications

**Quick Sizing Reference – inches (mm):**

- Link Height: 2.50 (64)
- Link Pitch: 2.13 (54)
- Curve Height ('H') range: 10.00 - 6.00 (254 - 660)

QUOTE REQUEST FORMS: SEE PAGES 100-101.

## NYLATRAC® MODULAR | OPEN- & ENCLOSED-STYLE CARRIERS

- Modular design – available in custom widths and easily customized from the widest variety of standard components
- Durable construction from separate glass-reinforced nylon sidebands with locking hubs (replaceable bearings) and multiple lockout points (for added precision and load-bearing capability), joined by top and bottom crossbars or lids
- Enclosed-style designs (with snap-in plastic or bolted aluminum lids) offer additional protection where needed
- Ideal for applications requiring long travel, high speeds/accelerations
- Locking hub design of the TSC, TS, TL and NXL Series allows adjustment of length with a hex wrench



### NSB SERIES

#### Features:

- Smallest link modular carrier
- Tongue-and-groove link design result in a nearly indestructible cable carrier
- Standard construction is round aluminum crossbar
- Customer-specified cavity width

#### Quick Sizing Reference – inches (mm):

- Link Height: 1.37 (35)
- Link Pitch: 1.97 (50)
- Curve Heights ('H'):  
6.17 - 7.50 (157 - 191)

#### Crossbar Options:

- Bolted aluminum round bar (standard)
- PVC Poly rollers



### TSC SERIES

#### Features:

- Open-style with multiple crossbar options
- Enclosed-style with plastic lids
- Standard and customer-specified cavity widths
- Replaceable modular sliders available for low-friction and reduced tow force
- Window extenders available for additional cavity height

#### Crossbar Options:

- Snap-in plastic flat bar
- Bolted aluminum round bar
- PVC Poly Rollers
- Bolted aluminum flat bar

#### Lid Option:

- Snap-in plastic lid



#### Quick Sizing Reference – inches (mm):

- Link Height: 2.30 (58)
- Link Pitch: 2.64 (67)
- Curve Heights ('H'):  
8.20 - 29.86 (208 - 758)

QUOTE REQUEST FORMS: SEE PAGES 100-101.

## NYLATRAC<sup>®</sup> MODULAR | OPEN- & ENCLOSED-STYLE CARRIERS



### TS SERIES

**Features:**

- Open-style with multiple crossbar options
- Enclosed-style with plastic or aluminum lids
- Standard and customer-specified cavity widths
- Replaceable modular sliders available for low-friction and reduced tow force
- Window extenders available for additional cavity height

**Quick Sizing Reference – inches (mm):**

- Link Height: 3.25 (83)
- Link Pitch: 4.06 (103)
- Curve Heights ('H'):  
11.00 - 35.50 (279 - 902)

**Crossbar Options:**

- Snap-in plastic flat bar
- Bolted aluminum round bar
- PVC Poly Rollers
- Bolted aluminum flat bar
- Snap-in aluminum flat bar

**Lid Options:**

- Snap-in plastic lid
- Bolted aluminum armor plate
- Snap-in aluminum armor plate



### TL SERIES

**Features:**

- Open-style with multiple crossbar options
- Enclosed-style with plastic or aluminum lids
- Standard and customer-specified cavity widths
- Replaceable modular sliders available for low-friction and reduced tow force
- Window extenders available for additional cavity height

**Quick Sizing Reference – inches (mm):**

- Link Height: 4.13 (105)
- Link Pitch: 5.16 (131)
- Curve Heights ('H'):  
15.75 - 53.50 (400 - 1359)

**Crossbar Options:**

- Snap-in plastic flat bar
- Bolted aluminum round bar
- PVC Poly Rollers
- Bolted aluminum flat bar
- Snap-in aluminum flat bar

**Lid Options:**

- Snap-in plastic lid
- Bolted aluminum armor plate
- Snap-in aluminum armor plate



### NXL SERIES

**Features:**

- Open-style with multiple crossbar options
- Enclosed-style with aluminum lids
- Customer-specified cavity widths
- Window extenders available for additional cavity height

**Quick Sizing Reference – inches (mm):**

- Link Height: 5.91 (150)
- Link Pitch: 7.38 (187)
- Curve Heights ('H'):  
24.00 - 60.00 (610 - 1524)

**Crossbar Options:**

- Bolted aluminum round bar
- PVC Poly Rollers
- Bolted aluminum flat bar

**Lid Option:**

- Bolted aluminum armor plate



QUOTE REQUEST FORMS: SEE PAGES 100-101.

## PLASTIC CARRIERS | QUICK SELECTION GUIDE

MODEL NO.	INNER HEIGHT Dimension B inches (mm)	INNER WIDTH RANGE Dimension A inches (mm)	OUTER HEIGHT Dimension D inches (mm)	OUTER WIDTH RANGE Dimension C inches (mm)	LINK PITCH inches (mm)
<b>NYLATRAC® OPEN-STYLE PLASTIC CARRIERS</b>					
K00	.28 (7)	.28 (7)	.39 (10)	.47 (12)	.59 (15)
K0	.39 (10)	.39 (10)	.59 (15)	.60 (15.)	.79 (20)
K02 / K03 / K04	.38 (10)	.97 (25) - 1.87 (47)	.59 (15)	1.47 (37) - 2.36 (60)	.79 (20)
K20 / K30	.71 (18)	.98 (25) - 1.42 (36)	.87 (22)	1.49 (38) - 1.89 (48)	1.18 (30)
KN	.40 (10)	.97 (25) - 1.87 (47)	.59 (15)	1.48 (38) - 2.36 (60)	.79 (20)
SP	.78 (20)	.59 (15) - 4.00 (102)	1.05 (27)	1.05 (27) - 4.46 (113)	1.20 (30)
KS	1.06 (27)	1.00 (25) - 4.00 (102)	1.37 (35)	1.56 (40) - 4.56 (116)	1.80 (46)
P/PH	P 1.33 (34)/PH 1.32 (34)	1.25 (32) - 4.00 (102)	1.50 (38)	1.72 (44) - 4.47 (114)	1.50 (38)
NP	1.54 (39)	2.00 (51) - 6.00 (152)	2.00 (51)	2.63 (67) - 6.63 (168)	2.17 (55)
KL	1.75 (44)	3.00 (76) - 7.00 (178)	2.50 (64)	3.75 (95) - 7.75 (197)	2.62 (67)
NSB*	.62 (16) - .73 (19)	Customer Specified	1.38 (35)	Specified Width + .94 (24)	1.97 (50)
TSC-F (Standard Width)	1.65 (42)	2.18 (55) - 5.97 (152)	2.30 (58)	Specified Width + .85 (22)	2.64 (67)
TSC*	1.52 (39) - 1.65 (42)	Customer Specified	2.30 (58)	Specified Width + .85 (22)	2.64 (67)
TS-F (Standard Width)	2.31 (59)	2.93 (74) - 13.57 (345)	3.25 (82)	4.45 (113) - 15.09 (383)	4.06 (103)
TS*	2.13 (54) - 2.38 (60)	Customer Specified	3.25 (82)	Specified Width + 1.52 (39)	4.06 (103)
TL-F (Standard Width)	3.01 (76)	3.93 (100) - 13.63 (346)	4.13 (105)	5.87 (149) - 15.57 (395)	5.16 (131)
TL*	2.88 (73) - 3.05 (78)	Customer Specified	4.13 (105)	Specified Width + 1.94 (49)	5.16 (131)
NXL*	3.94 (100) - 4.77 (121)	Customer Specified	5.91 (150)	Specified Width + 2.50 (64)	7.38 (187)

\*Multiple crossbar styles available – see specification page for options and inner height (dimension 'B').

<b>NYLATUBE® ENCLOSED-STYLE PLASTIC CARRIERS</b>					
KOE1	.39 (10)	.95 (24)	.59 (15)	1.42 (36)	.71 (18)
KOE3	.83 (21)	1.34 (34)	1.18 (30)	1.97 (50)	1.38 (35)
KOE4	1.18 (30)	1.89 (48)	1.58 (40)	2.44 (62)	1.77 (45)
KOE5	1.50 (38)	1.89 (48)	1.97 (50)	2.56 (65)	2.17 (55)
KOE6	1.50 (38)	5.28 (134)	1.97 (50)	5.91 (150)	2.17 (55)
N1 / N2 / N3	.90 (23)	.90 (23) - 2.48 (63)	1.38 (35)	1.38 (35) - 2.95 (75)	1.38 (35)
N4 / N5 / N6	1.34 (34)	1.42 (36) - 5.35 (136)	1.97 (50)	1.97 (50) - 5.91 (150)	1.97 (50)
N8	2.24 (57)	5.28 (134)	2.95 (75)	5.91 (150)	2.56 (65)
KLE	1.76 (45)	3.00 (76) - 7.00 (178)	2.50 (64)	3.75 (95.25) - 7.75 (197)	2.13 (54)

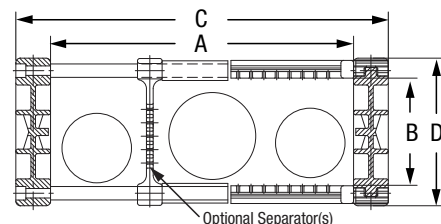
<b>NYLATRAC ENCLOSED-STYLE PLASTIC CARRIERS</b>					
TSC-PL (Plastic Lid)	1.65 (42)	Customer Specified	2.30 (58)	Specified Width + .85 (22)	2.64 (67)
TS-PL (Plastic Lid)	2.13 (54)	Customer Specified	3.25 (83)	Specified Width + 1.52 (39)	4.06 (103)
TS-AP (Aluminum Lid)	2.22 (56)	Customer Specified	3.25 (83)	Specified Width + 1.52 (39)	4.06 (103)
TL-PL (Plastic Lid)	2.88 (73)	Customer Specified	4.13 (105)	Specified Width + 1.94 (49)	5.16 (131)
TL-AP (Aluminum Lid)	2.96 (75)	Customer Specified	4.13 (105)	Specified Width + 1.94 (49)	5.16 (131)
NXL-AP (Aluminum Lid)	4.16 (106)	Customer Specified	5.91 (150)	Specified Width + 2.50 (64)	7.38 (187)

**B = Cavity Height** (determined by the outer diameter of the largest cable/hose + safety factor)

**A = Cavity Width** (determined by adding the outer diameters of all cables/hoses [= safety factor and divider widths])

**C = Outer Width**

**D = Outer Height**



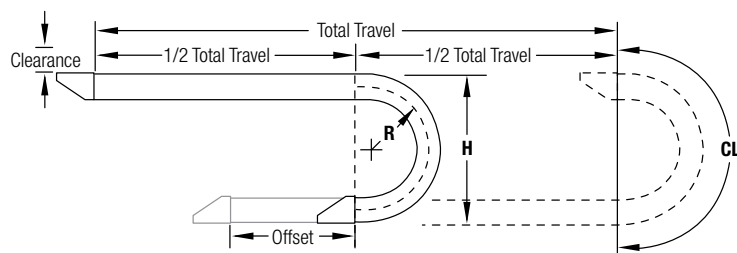


# PLASTIC CARRIERS | QUICK SELECTION GUIDE

MINIMUM BENDING RADIUS Dimension R inches (mm)	MOUNTING HEIGHT RANGE Dimension H inches (mm)	MAXIMUM UNSUPPORTED SPAN feet	SEPARATORS AVAILABLE	PAGE NUMBER(S)	MODEL NO.
.59 (15)	1.57 (40)	1.5	No	114-115	K00
1.20 (30)	3.00 (76)	1.75	No	114-115	K0
.70 (18) - 1.20 (30)	2.00 (51) - 3.00 (76)	1.75	No	114-115	K02 / K03 / K04
1.57 (40) - 2.57 (65)	3.02 (92) - 6.48 (162)	3.25	No	114-115	K20 / K30
.70 (17.78) - 1.20 (30)	2.00 (51) - 3.00 (76)	1.75	No	116-117	KN
1.05 (27) - 3.73 (95)	3.15 (80) - 8.50 (216)	3	✓	118-119	SP
2.02 (51) - 5.87 (149)	5.40 (137) - 13.00 (330)	3.8	✓	120-121	KS
1.25 (32) - 4.25 (108)	4.00 (102) - 10.00 (254)	P 3.5 / PH 3.25	No	122-123	P / PH
2.50 (64) - 7.87 (200)	7.00 (178) - 18.00 (457)	5.25	✓	124-125	NP
3.00 (76) - 11.75 (298)	8.50 (216) - 26.00 (660)	7	✓	126-127	KL
2.39 (61) - 3.06 (78)	6.19 (157) - 7.63 (194)	4	✓	134-135	NSB*
2.95 (75) - 13.78 (350)	8.20 (208) - 29.86 (758)	7.5	✓	136-137	TSC-F (Standard Width)
2.95 (75) - 13.78 (350)	8.20 (208) - 29.86 (758)	7.5	✓	136-137	TSC*
3.88 (99) - 16.13 (410)	11.00 (279) - 35.50 (902)	12.5	✓	138-139	TS-F (Standard Width)
3.88 (99) - 16.13 (410)	11.00 (279) - 35.50 (902)	12.5	✓	138-139	TS*
5.81 (148) - 24.69 (627)	15.75 (400) - 53.50 (1359)	14.75	✓	140-141	TL-F (Standard Width)
5.81 (148) - 24.69 (627)	15.75 (400) - 53.50 (1359)	14.75	✓	140-141	TL*
9.05 (230) - 27.05 (687)	24.00 (610) - 60.00 (1524)	18	✓	142-143	NXL*

1.18 (30) - 1.97 (50)	3.00 (76) - 4.50 (114)	2	No	128-129	KOE1
2.36 (60) - 3.94 (100)	5.90 (150) - 13.00 (330)	2.5	No	128-129	KOE3
2.95 (74.93) - 5.91 (150)	7.50 (20) - 13.40 (340)	5	No	128-129	KOE4
3.94 (101) - 5.91 (150)	9.90 (251) - 13.80 (351)	7	No	128-129	KOE5
3.94 (101) - 5.91 (150)	9.90 (251) - 13.80 (351)	7	No	128-129	KOE6
3.30 (84) - 5.91 (150)	8.00 (203) - 13.20 (335)	N1 2.75 / N2 3 / N3 4	No	130-131	N1 / N2 / N3
3.94 (100) - 7.87 (200)	9.80 (249) - 17.70 (450)	N4 5 / N5 5.25 / N6 5.5	No	130-131	N4 / N5 / N6
5.91 (150) - 11.81 (300)	14.80 (376) - 26.60 (676)	6.1	No	130-131	N8
3.75 (95) - 11.75 (298)	10.00 (254) - 26.00 (660)	7	No	132-133	KLE

4.92 (125) - 13.78 (350)	12.14 (308) - 29.86 (758)	7.5	✓	136-137	TSC-PL (Plastic Lid)
6.81 (173) - 16.13 (410)	16.88 (429) - 35.50 (902)	12.5	✓	138-139	TS-PL (Plastic Lid)
6.81 (173) - 16.13 (410)	16.88 (429) - 35.50 (902)	12.5	✓	138-139	TS-AP (Aluminum Lid)
7.94 (202) - 24.69 (627)	20.00 (508) - 53.50 (1359)	14.75	✓	140-141	TL-PL (Plastic Lid)
7.94 (202) - 24.69 (627)	20.00 (508) - 53.50 (1359)	14.75	✓	140-141	TL-AP (Aluminum Lid)
12.05 (306) - 27.05 (687)	30.00 (762) - 60 (1524)	18	✓	142-143	NXL-AP (Aluminum Lid)



Visit [Dynatect.com](http://Dynatect.com) for 2D and 3D drawings.

## CROSSBARS STYLES AND OPTIONS



Snap-in plastic flat bar



Hinged plastic crossbars

### PLASTIC CROSSBARS

- Lightweight, low cost option
- Many models available with snap-in or hinge crossbars for quick installation and easy maintenance
- Hinge crossbars provide either top and/or bottom link access – available on KO, SP, KS, PH, NP and KL Series
- Snap-in crossbars – available on TSC, TS and TL Series
- Custom widths available on TS and TL Series
- Denoted "F" for standard widths, or "PS" for custom widths in part identification number



Aluminum round bar



Bolted aluminum flat bar

### ALUMINUM CROSSBARS

- Excellent low-friction, high-strength alternative to standard plastic bars
- Provided in customer-specified cavity widths
- Bolt-in flat bar design offers maximum torsional stability
- Snap-in flat bar design allows quick cavity access
- Flat crossbar styles: denoted "AF" (bolted), or "AFS" (snap-in) in part identification number
- Round crossbar styles: denoted "RB" in part id. no.
- Available on NSB, TSC, TS, TL, and NXL Series



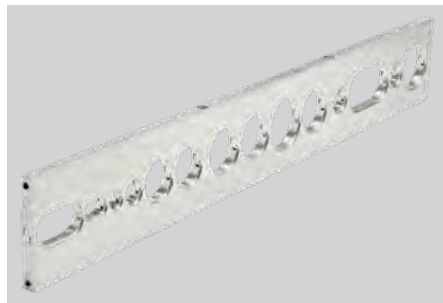
Poly roller over bolted aluminum round bar



Poly roller separator

### PVC POLY ROLLERS

- Provide a low-friction, mechanical wear surface ideal for hoses and soft-jacketed cables
- Can be added to crossbars, vertical separators or horizontal dividers using round bars
- Denoted "PR" in part identification number
- Available on NSB, TSC, TS, TL and NXL Series



### MACHINED CABLE/HOSE BARS

- Optimal placement - ensures each cable/hose rides neutral axis of carrier
- Minimal wear - prolongs jacket and conductor life of cables/hoses)
- Available in aluminum or plastic block-style crossbars
- Custom-bored to specific cable/hose diameters
- Available on TSC, TS, TL and NXL Series



Aluminum machined bar

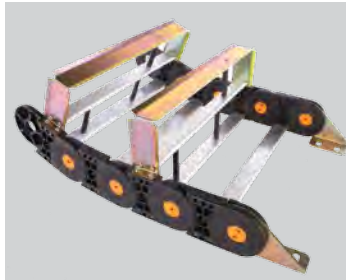


Plastic block style machined bar

## WINDOW EXTENDERS, LIDS, CABLE/HOSE SLEEVES



Round bar window extender with poly rollers



Custom formed window extender

### WINDOW EXTENDERS

- Provide extra interior space in many standard link sizes
- Available in both standard and custom configuration
- Utilize various crossbar styles (flat, round, poly rollers [L] and custom formed [R])
- Can be easily added to most carriers
- Available on NSB, TSC, TS, TL and NXL Series



Bolted aluminum lids



Snap-in aluminum lids

### ARMOR PLATE STYLE ALUMINUM LIDS

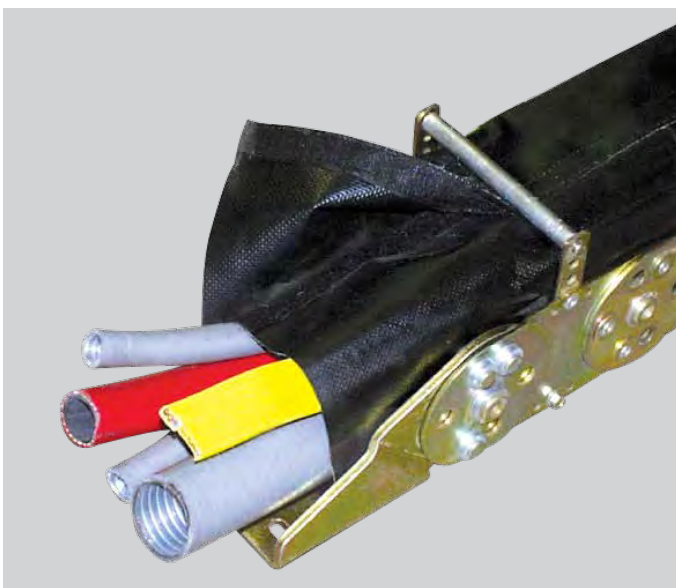
- Offer maximum protection against hot chips and heavy debris
- Ideal for severe and challenging applications (e.g., machine tools, mills, foundries)
- Easy-access snap-in or heavy-duty bolted construction
- Available on TS, TL and NXL Series



Snap-in plastic lids

### PLASTIC LIDS

- A lightweight, easy-access alternative to heavy-duty aluminum lids.
- Ideal for applications where dust and debris are present
- Lids width is customer-specified
- Snap-in design allows cavity access with tip of a screwdriver
- Available on TSC, TS, and TL Series



### CABLE/HOSE SLEEVES

- Simple, reliable and cost-effective method to protect dynamic cables and hoses, either in a carrier or by themselves
- Available with zipper, or hook and loop fasteners
- Wide variety of materials for diverse application requirements
- Provides protection from elements (ozone, heat and liquids)
- Increases machine operator protection
- Applications: Hydraulic hose containment, protection of highly sensitive cables, electrical noise interference, aesthetic enhancement



## SEPARATORS, CABLE/HOSE CLAMPS, BRACKETS



### CAVITY SEPARATION

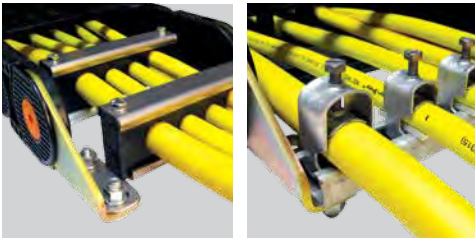
In applications with multiple cables and hoses, cavity separation is a simple, cost-effective method for preventing wear and entanglement. To achieve optimal separation, it is important that each individual compartment be less than twice the height of the cables/hoses inside. This will prevent them from crossing over each other and twisting. Proper separation reduces jacket wear and the potential for cables to corkscrew. Cavity separation can be achieved with simple, snap in vertical separators, or through a more sophisticated horizontal divider or shelving system that will optimize cavity space. The Dynatect Engineering Department can design a cavity separation system that is ideal for your specific application.



### VERTICAL SEPARATORS

- Provide multiple compartments within a single link\*
- Snap or bolt into carrier crossbars
- Available variety of styles, including stationary and rolling designs
- Can be installed every link, or staggered for economy
- Available on most carriers

\*When sizing compartments, Dynatect recommends a safety factor of an additional 10% for cables and 20% for hoses.



Custom UHMW Clamp

Gortrac Rail Clamping System

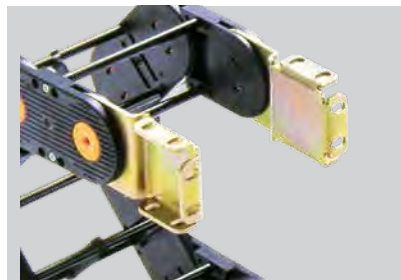
### CABLE/HOSE CLAMPS

- Extend cable/hose life - relieves strain
- Standard and custom designs available
- Fast and simple installation in virtually any application
- Installation at both moving and stationary ends of a carrier recommended
- High pressure hose clamping requirements can be accommodated

See pages 88-89 for more information and specifications.



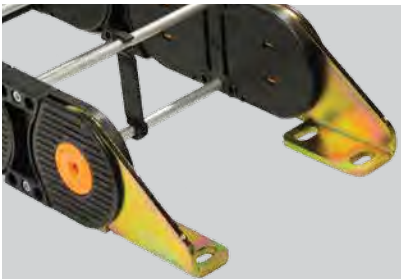
Standard One-Piece Bracket



Universal Mounting Bracket



Zip Tie Bar for Mounting Brackets



Standard Two-Piece Bracket



Strain Relief Bracket

- Zip tie bars integrated into mounting brackets
- Tiered structure for easy access
- Easily removable clamping bars
- Double rows of large fingers hold more zip ties
- Anti-slip ridges on bar prevent cable slippage
- Available on TSC, TS, TL and NXL Series carriers

Note: Custom mounting brackets can be provided for drop-in replacement on all carrier brands.

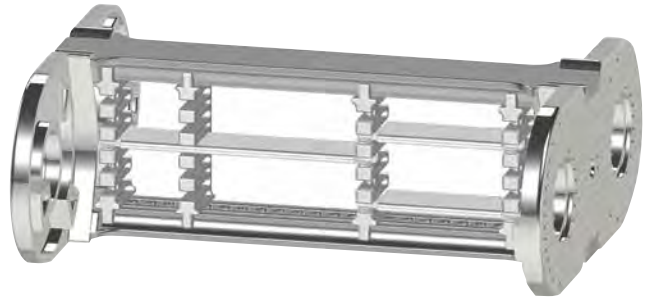


# MODULAR SHELVING

## TS/TL SERIES HORIZONTAL SHELVING SYSTEM\*

- Strong, flexible components easily arranged for optimum cable/hose organization
- No tools required to adjust or remove dividers
- Vertical separators may be locked in place, for use in side-mount applications
- Floating separators can be positioned laterally without tools while horizontal dividers remain stationary
- Available on TS and TL Series models with standard snap-in plastic or flat aluminum crossbars, and aluminum armor plates

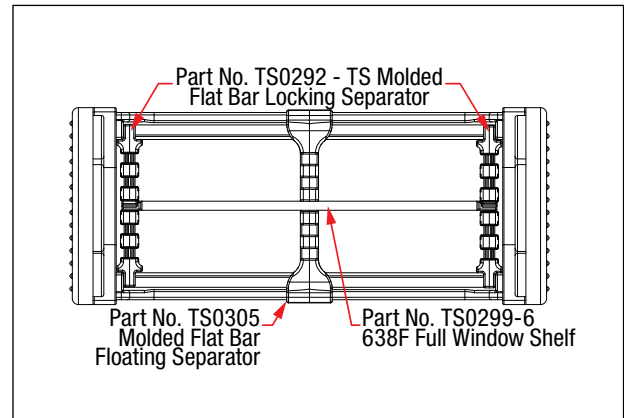
\*See shelving specifications below.



### TS SHELVING PART NUMBERS

PART NO.	DESCRIPTION	USABLE WINDOW WIDTH inches (mm)
TS0299-3	293F Full Window Shelf	2.20 (56)
TS0299-5	480F Full Window Shelf	4.07 (103)
TS0299-6	638F Full Window Shelf	5.64 (143)
TS0299-7	762F Full Window Shelf	6.89 (175)
TS0299-9	1169F Full Window Shelf	10.95 (278)
TS0292	Molded Flat Bar Locking Shelving Sep.	-
TS0305	Molded Flat Bar Floating Shelving Sep.	-
TS0293	Alum. Flat Bar and Plastic Lid Locking Shelving Sep.	-
TS0301	Alum. Flat Bar and Plastic Lid Floating Shelving Sep.	-

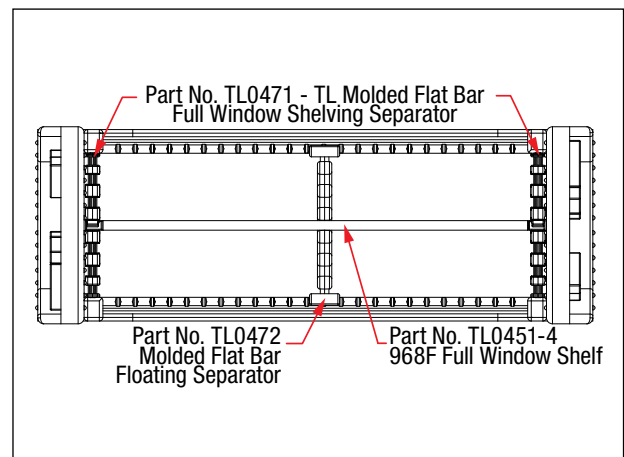
### TS CROSS SECTION EXAMPLE



### TL SHELVING PART NUMBERS

PART NO.	DESCRIPTION	USABLE WINDOW WIDTH inches (mm)
TL0451-1	394F Full Window Shelf	3.28 (83)
TL0451-2	466F Full Window Shelf	4.00 (102)
TL0451-3	789F Full Window Shelf	7.23 (184)
TL0451-4	968F Full Window Shelf	9.03 (229)
TL0451-5	1184F Full Window Shelf	11.18 (284)
TL0471	Molded Flat Bar Full Window Shelving Sep.	-
TL0450	Molded Flat Bar Locking Shelving Sep.	-
TL0472	Molded Flat Bar Floating Shelving Sep.	-
TL0452	Alum. Flat Bar and Plastic Lid Locking Shelving Sep.	-
TL0475	Alum. Flat Bar and Plastic Lid Locking Shelving Sep.	-

### TL CROSS SECTION EXAMPLE



# MATERIAL PROPERTIES | NYLATRAC<sup>®</sup>/NYLATUBE<sup>®</sup>

## CHEMICAL RESISTANCE OF DURETHAN<sup>®</sup> POLYAMIDE RESINS

MEDIA	RATING	MEDIA	RATING	MEDIA	RATING
Acetic Acid, 5%	o	Formaldehyde, 10% in Water	+	Phosphoric Acid, 30%	-
Acetic Acid, 30%	-	Formic Acid, 30%	-	Potassium Carbonate (potash), Saturated Solution	+
Acetone	+	Formic Acid, Concentrated	-	Potassium Cyanide, Saturated Solution	+
Ammonia, 10%	+	Freon** 11/12 Refrigerant (1/1), Under Pressure at 73°F	+	Potassium Dichromate, Saturated Solution	o
Ammonia, Concentrated	+	Fuel Oil, Heavy	+	Potassium Hexacyanoferrate (III), Saturated Solution	+
Ammonium Nitrate, Saturated Solution	+	Fuel Oil, Light	+	Potassium Metabisulfite, 40 g/l in Water	+
Ammonium Sulfate, Saturated Solution	+	Fuel Oil, Medium	+	Potassium Perchlorate, 2% in Water	o
Amyl Acetate	+	Gasohol	o	Potassium Permanganate, 10% in Water	-
Aniline	o	Gasoline	+	Propane Gas	+
Basic Chrome Sulfate, Concentrated	+	Glycerol	+	Propyl Alcohol	+
Baysilone <sup>®</sup> Fluid M 1000	+	Glycol	+	Rapeseed Oil	+
Beer (lager) at 32°F	+	Grapefruit Juice, Unsweetened at 35°F	+	Raspberry Juice (sweetened), Commercial	+
Benzene	+	Hydrochloric Acid, 1%	-	Sea Water	+
Benzyl Alcohol, 100%	-	Hydrochloric Acid, 10%	-	Silicofluoric Acid, 30%	-
Benzyl Benzoate, 100%	o	Hydrochloric Acid, Concentrated	-	Silver Nitrate, 10%	+
Blood (ox blood) at 35°F	+	Hydrofluoric Acid, 40%	-	Sodium Bicarbonate (soda), Saturated Solution	+
Borax*, Saturated Solution	+	Hydrogen Chloride Gas	-	Sodium Chloride (table salt), Saturated Solution	+
Brake Fluid, AT	+	Hydrogen Peroxide, 10%	-	Sodium Hypochlorite	-
Brandy, Commercial	+	Hydrogen Peroxide, 30%	-	Sodium Soap Fat	+
Butane Gas	+	Hydrogen Sulfide	+	Sodium Sulfide, Saturated Solution	+
Butanol, 100%	+	Iodine, Tincture, Commercial	-	Sodium Thiosulfate (fixing bath), 200 g/l	+
Butyric Acid, Concentrated	o	Isopropyl Alcohol	+	Soil Bacterial Culture (anaerobic)	+
Calcium Chloride, Saturated Solution in Water	+	Jet Fuel, JP4	+	Soil Mildew	+
Calcium Hydroxide (suspension), 30%	+	Lactic Acid, 10% in Water	+	Spinning Bath Acid	-
Calcium Soap Fat, Pure	+	Laundry Soap Solution, 1% in Water at 158°F	+	Stannous Chloride, Saturated Solution	-
Camphor Oil, 100%	+	Margarine	+	Sugar Beet Syrup	+
Carbon Dioxide	+	Menthol, 90% in Denatured Alcohol	+	Sugar Solution, Saturated	+
Carbon Disulfide	+	Mesamoll PVC Plasticizer	+	Sulfur Dioxide, Dry, Saturated Atmosphere	+
Carbon Tetrachloride	+	Metasystox*** Insecticide, 0.5% in Water	+	Sulfuric Acid, 10%	-
Caustic Soda Solution, 10%	+	Metasystox*** Insecticide, Concentrated	+	Sulfuric Acid, 30%	-
Caustic Soda Solution, Concentrated	+	Methyl Alcohol, Pure	o	Sulfurous Acid, 10%	o
Chlorine Gas, Dry - Chlorobenzene	+	Methyl Amine, 30% in Water	+	Tallow, Beef, Commercial	+
Chloroform	o	Methylene Chloride	o	Tartaric Acid, 10% in Water	+
Citric Acid, 10%	+	Milk, Whole	+	Tetraethyl Lead, 5% in Aliphatic Hydrocarbons, bp 212° - 284°F	+
Coal Gas	+	Mineral Water, Commercial	+	Thionyl Chloride, 100%	-
Copper Sulfate, Saturated Solution	+	Naphthene Basic Oil (lubricant)	+	Toluene	+
Cyclohexanol	+	Nekal**** BX Wetting Agent, 2% in Water	+	Trichloroethyl Phosphate	-
Cyclohexanone	+	Nitric Acid, 1%	-	Trichloroethylene	+
Dibutyl Phthalate	+	Nitric Acid, 50%	-	Tricresyl Phosphate (low ortho content)	+
Diesel Oil	+	Oleic Acid, Commercial	+	Triethanolamine	o
Dinonyl Phthalate	+	Oxalic Acid, 10% in Water	o	Urea, Saturated Solution	+
Diocetyl Phthalate	+	Oxygen (3 bar)	-	Urine	+
Ether	+	Ozone (at 2 x 10 <sup>-6</sup> parts ozone to 1 part air)	-	Vinyl Chloride, Under Pressure at Room Temperature	+
Ethyl Acetate	+	Paraffin Basic Oil (lubricant)	+	Water (distilled) at 68°F	+
Ethyl Alcohol	+	Perchloric Acid, 10% in Water	-	Water (distilled) at 158°F	+
Ethylene Chloride	+	Petroleum Ether	+	Water (distilled) at 194°F	+
Ethylene Glycol	+	Petroleum Spirit (for dry cleaning), bp 212° - 284°F	+	Wine, Commercial	+
Ferric Chloride, Saturated Solution (neutral)	+	Phenyl Ethyl Alcohol, 100%	o	Wood Turpentine, bp 302° - 338°F	+
Fish Liver Oil	+	Phosphoric Acid, 10%	o		

Ratings: + Resistant o Limited Resistance - Not Resistant  
 Note: Unless otherwise noted, all data were determined at 73°F (23°C).  
 Durethan<sup>®</sup> is a registered trademark of LANXESS Corporation.

\* Borax is a registered trademark of U.S. Borax Inc.  
 \*\* Freon is a registered trademark of E.I. duPont de Nemours and Co.  
 \*\*\* Metasystox is a registered trademark of Chemagro Corporation.  
 \*\*\*\* Nekal is a registered trademark of I.G. Farbenindustrie Aktiengesellschaft.

## MATERIAL PROPERTIES | NYLATRAC<sup>®</sup>/NYLATUBE<sup>®</sup>

The standard material of impact modified, glass-reinforced plastic offers durability and high speed capability. Most carriers are also available in specialty materials for challenging applications with diverse demands, such as extremely low wear, severe temperatures and environments, unique chemical resistance, specialty flammability ratings and explosion proof-requirements.

- Standard Color: Black
- Admissible Operating Temperatures: -40° F to +250° F (-40° C to +121° C)
- Short Term Temperature Limit: +392°F (+200°C)

PROPERTY	TEST METHOD	UNITS	VALUE	
			ENGLISH	(METRIC)
<b>MECHANICAL PROPERTY</b>				
Tensile Strength at Yield	D 638	PSI (Mpa)	26,227	(181)
Tensile Elongation at Yield	D 638	%	3	(3)
Flexural Strength	D 790	PSI (Mpa)	40,600	(280)
Flexural Modulus	D 790	PSI (Mpa)	1,204,000	(8,295)
Impact Strength, Notched Izod	D 256	ft-lb/in (J/m)	3	(160)
<b>FLAMMABILITY</b>				
UL94 Flame Class (0.059" thickness)	UL 94	HB (HB)	94	(94)
<b>ELECTRICAL PROPERTY</b>				
Surface Resistivity	IEC 60093	ohm	1.0E + 14	(1.0E + 14)
Volume Resistivity	IEC 60093	ohm-in (ohm-m)	3.9E + 14	(1.0E + 13)
<b>GENERAL PHYSICAL PROPERTIES</b>				
Specific Gravity	D 792	–	1.36	(1.36)
Density	D 792	lb/cu in (kg/cu m)	0.049	(1,356)
Specific Volume	D 792	cu in/lb (cu m/kg)	20.4	(7.4E -4)
Melting Point	D 789	°F (°C)	500	(260)
Equilibrium Moisture (73°F) @ 50% RH	–	%	2.1	(2.1)
Saturation Moisture	–	%	7.0	(7.0)

**KO SERIES | NYLATRAC<sup>®</sup> STANDARD** (open-style carriers)



Specify part number with dashes Example: K03-3-14	Model	Height	Length
		K03	3

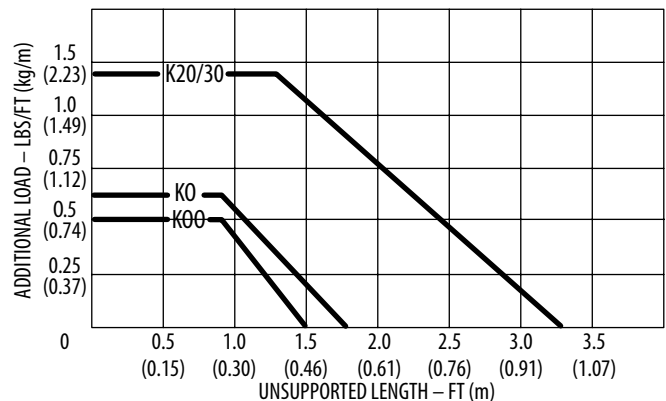
**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	Q inches (mm)	WEIGHT lb/ft (kg/m)
K00	0.28 (7)	0.47 (12)	0.47 (12)	0.04 (0.06)
K0*	0.39 (10)	0.60 (15)	0.59 (15)	0.10 (0.15)
K02	0.97 (25)	1.47 (37)	1.18 (30)	0.14 (0.21)
K03	1.54 (39)	2.04 (52)	1.80 (46)	0.18 (0.27)
K04	1.87 (47)	2.36 (60)	2.16 (55)	0.20 (0.30)
K20	0.98 (25)	1.50 (38)	1.22 (31)	0.22 (0.33)
K30	1.42 (36)	1.89 (48)	1.61 (41)	0.25 (0.37)

\*Does not hinge open – requires plastic mounting brackets (all other KO Series carriers have brackets built into links).

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
K00 - 15	0.59 (15)	1.57 (40)	1.42 (36)	3.04 (77)
K0 - 3	1.20 (30)	3.00 (76)	2.50 (64)	5.35 (136)
K02/K03/K04 - 2	0.70 (18)	2.00 (51)	2.00 (51)	3.77 (96)
K02/K03/K04 - 3	1.20 (30)	3.00 (76)	2.50 (64)	5.35 (136)
K20/K30 - 4	1.57 (40)	3.62 (92)	3.25 (83)	7.29 (85)
K20/K30 - 6	2.57 (65)	6.38 (162)	4.50 (114)	10.43 (265)

**KO SERIES – WEIGHT LOAD**



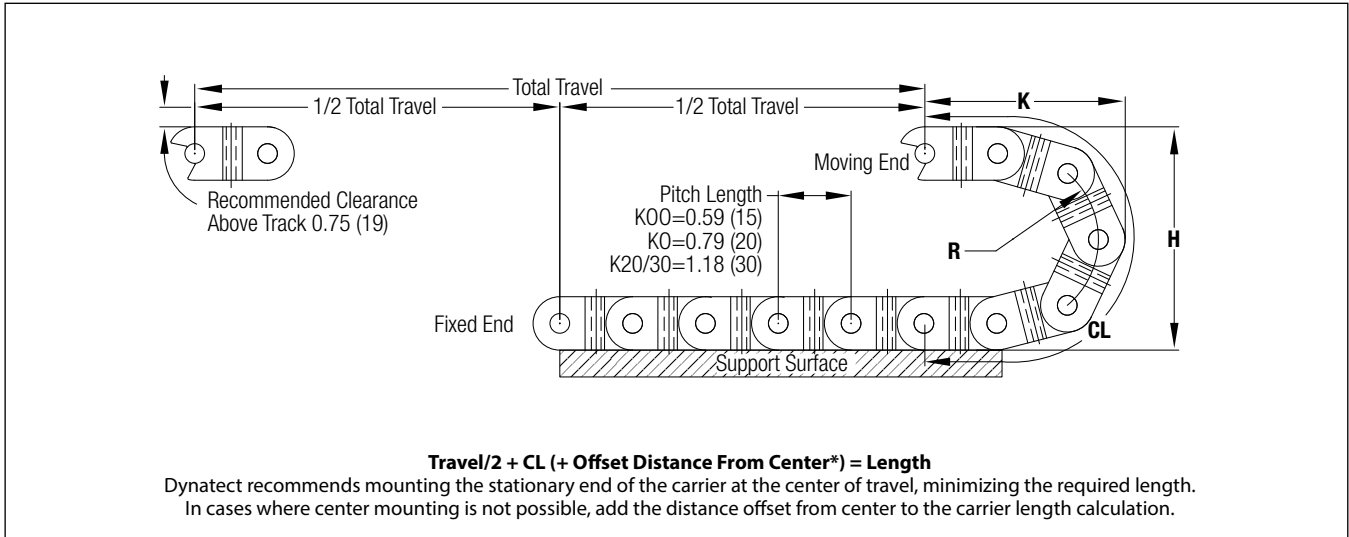
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



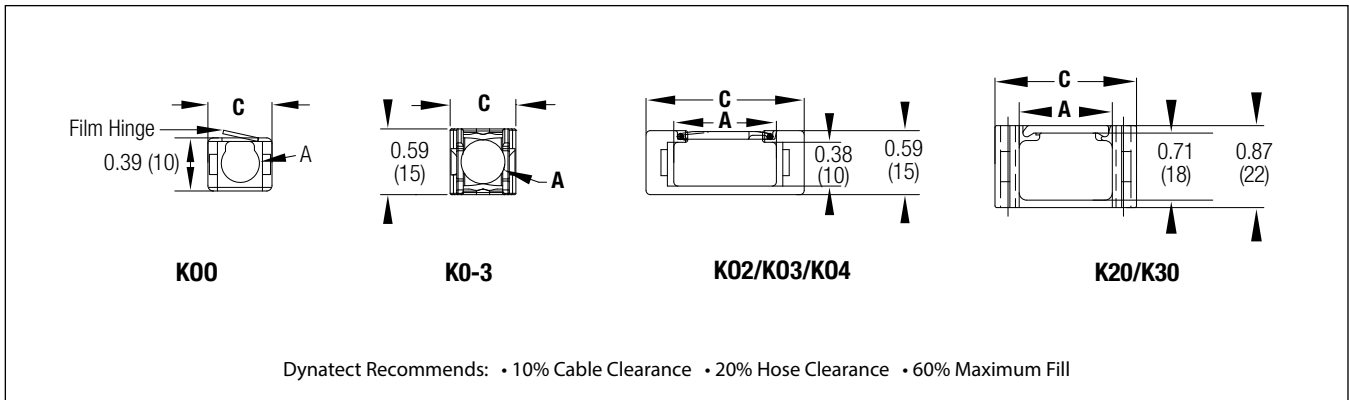
# KO SERIES | NYLATRAC® STANDARD (open-style carriers)

## CARRIER SIDE VIEW

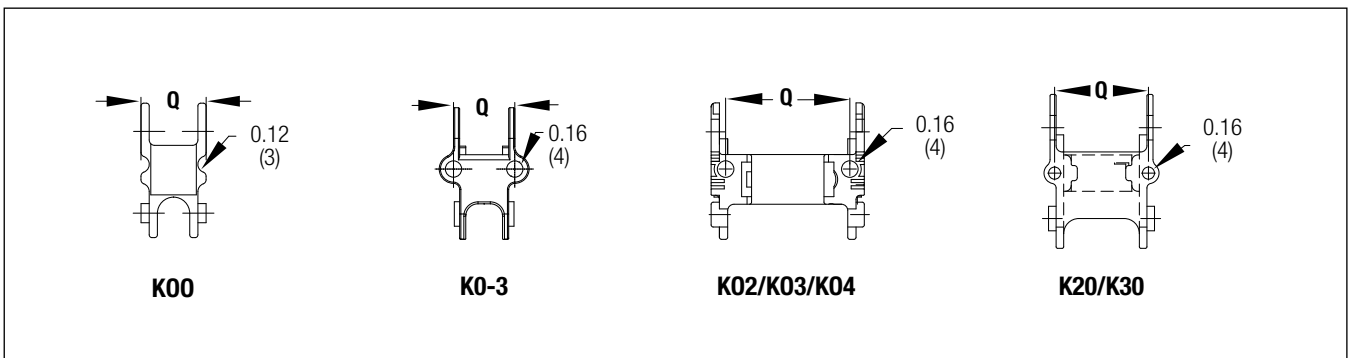
Dimensions in inches (mm)



## CARRIER CROSS SECTION

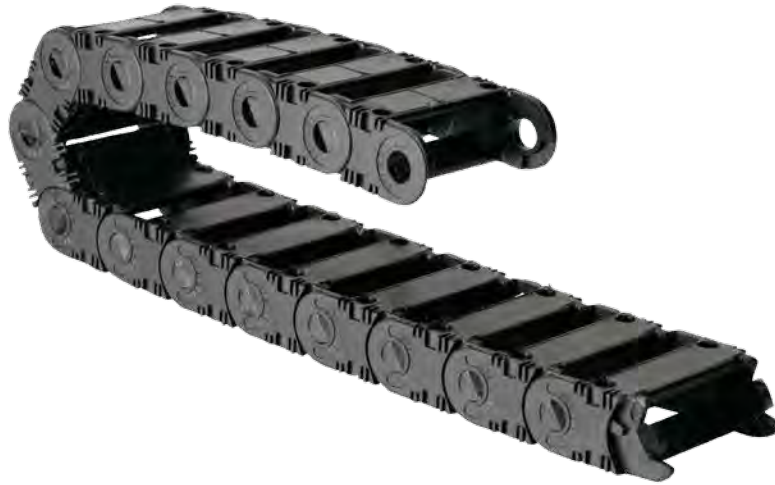


## TOP VIEW: MOUNTING HOLE DIMENSIONS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**KN SERIES** | NYLATRAC<sup>®</sup> STANDARD (open-style carriers)

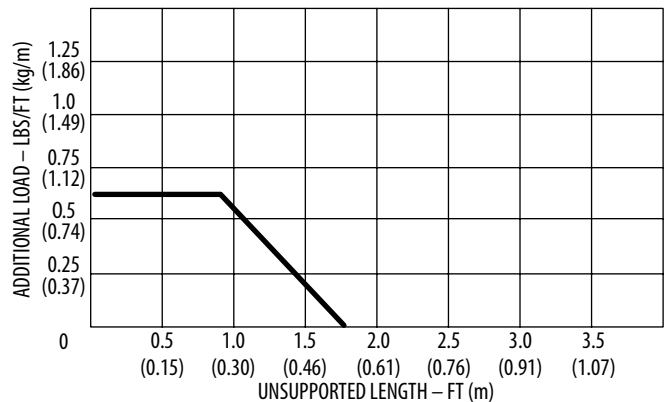


Specify part number with dashes Example: KN2-3-18	Model	Height	Length
	KN2	3	18"

**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	Q inches (mm)	WEIGHT lb/ft (kg/m)
KN2	0.97 (25)	1.47 (37)	1.18 (30)	0.14 (0.21)
KN3	1.54 (39)	2.03 (52)	1.80 (46)	0.18 (0.27)
KN4	1.87 (47)	2.36 (60)	2.16 (55)	0.20 (0.30)
HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
2	0.70 (18)	2.00 (51)	2.00 (51)	3.77 (96)
3	1.20 (30)	3.00 (76)	2.50 (64)	5.35 (136)

**KN SERIES - WEIGHT LOAD**

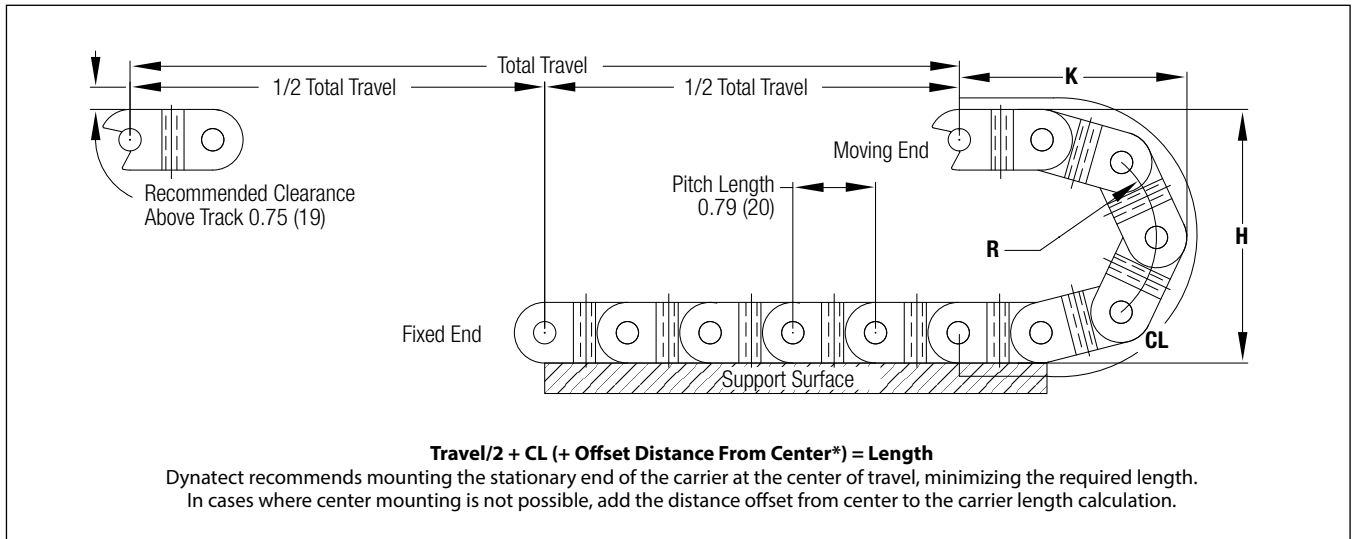


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

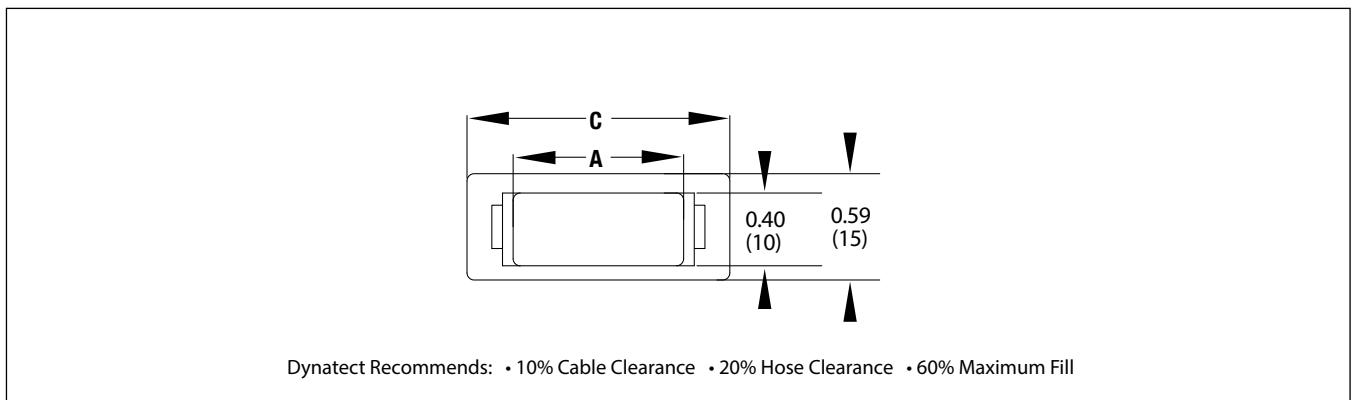
# KN SERIES | NYLATRAC<sup>®</sup> STANDARD (open-style carriers)

## CARRIER SIDE VIEW

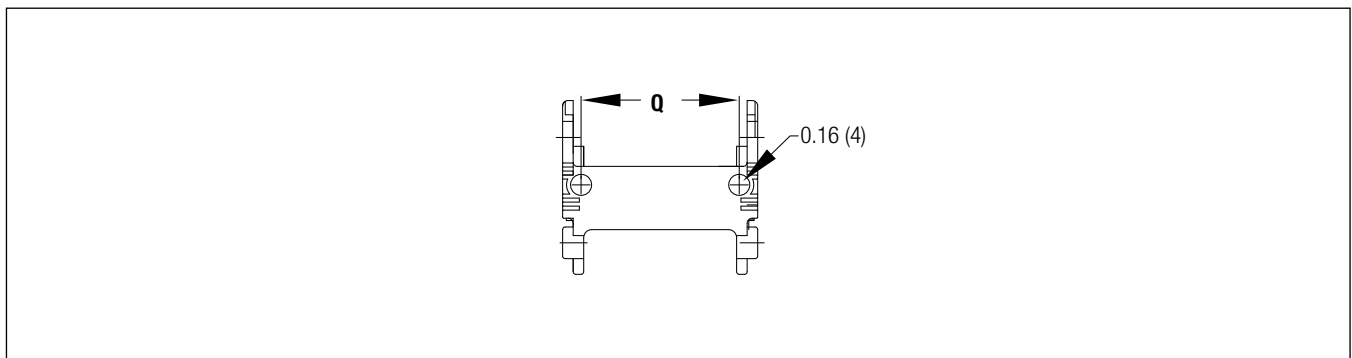
Dimensions in inches (mm)



## CARRIER CROSS SECTION



## TOP VIEW: MOUNTING HOLE DIMENSIONS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**SP SERIES | NYLATRAC<sup>®</sup> STANDARD** (open-style carriers)



Shown with hinged bars on inner radius.

Specify part number with dashes Example: SP300-5-inner-1-24-STRAIN #1	Model	Height	Location of Hinged Bars	Separators	Length	Bracket Arrangement*
	SP300	5	inner	1	24"	STRAIN # 1

\*Strain relief brackets are standard.

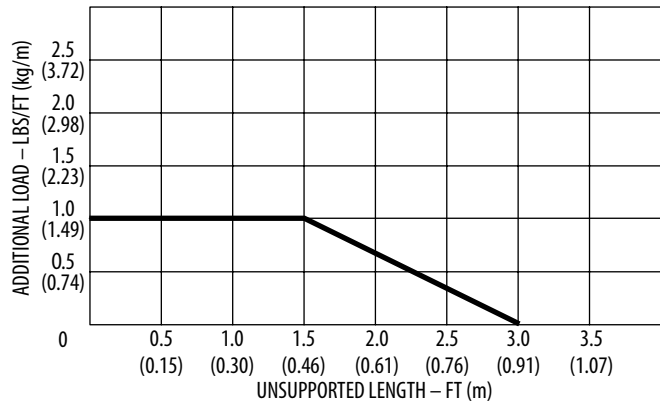
**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	Q inches (mm)	WEIGHT lb/ft (kg/m)
SP059	0.59 (15)	1.05 (27)	One Slot	0.20 (0.30)
SP100	1.00 (25)	1.46 (37)	0.59 (15)	0.20 (0.30)
SP150	1.50 (38)	1.96 (50)	0.94 (24)	0.23 (0.34)
SP200	2.00 (51)	2.46 (62)	1.44 (37)	0.26 (0.39)
SP250	2.50 (64)	2.96 (75)	1.94 (49)	0.28 (0.42)
SP300	3.00 (76)	3.46 (88)	2.44 (62)	0.29 (0.43)
SP400	4.00 (102)	4.46 (113)	3.44 (87)	0.36 (0.54)

Note: Hinged bars available on inner (standard) or outer radius. Please specify when ordering.

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
3	1.05 (27)	3.15 (80)	2.78 (70)	5.70 (145)
4	1.48 (37)	4.00 (102)	3.21 (81)	7.03 (179)
5	1.85 (47)	4.75 (121)	3.58 (91)	8.21 (209)
7	2.85 (72)	6.75 (171)	4.58 (116)	11.35 (288)
85	3.73 (95)	8.50 (216)	5.46 (139)	14.10 (358)

**SP SERIES – WEIGHT LOAD**



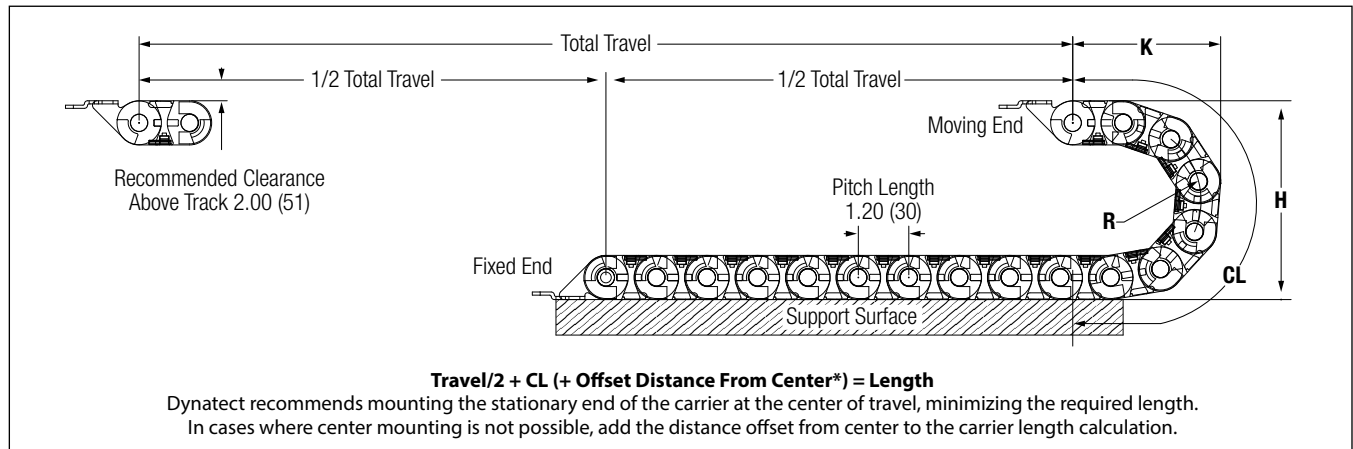
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



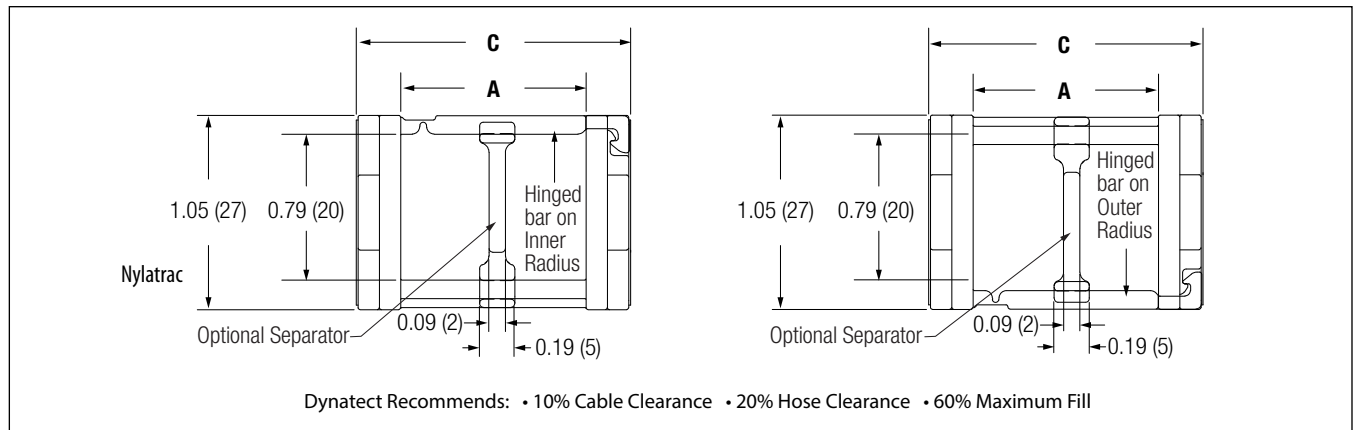
# SP SERIES | NYLATRAC® STANDARD (open-style carriers)

## CARRIER SIDE VIEW

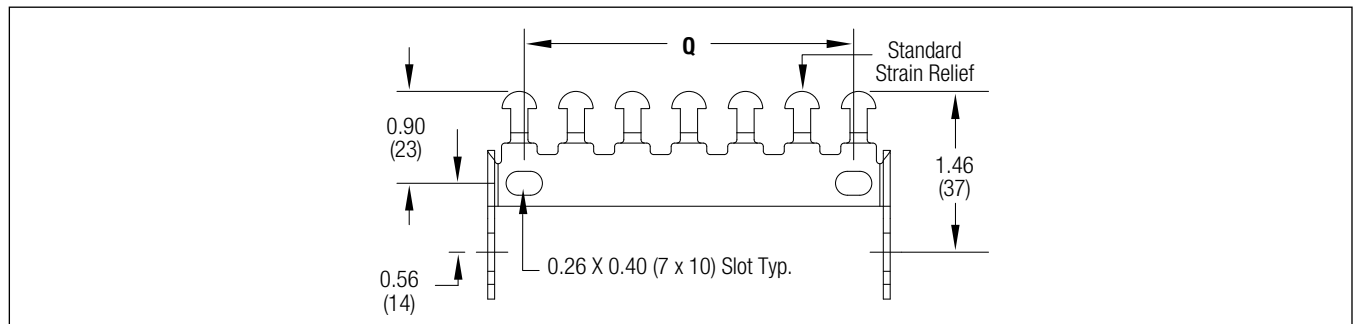
Dimensions in inches (mm)



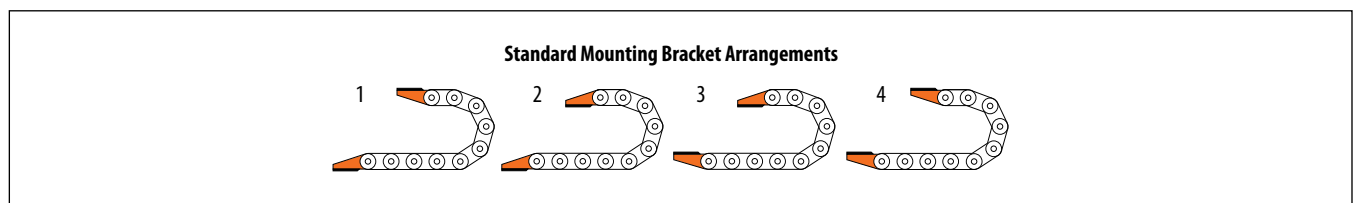
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**KS SERIES | NYLATRAC<sup>®</sup> STANDARD** (open-style carriers)

Shown with hinged bars on inner and outer radius.



Specify part number with dashes Example: KS225-54-inner-1-48-STD #1	Model	Height	Location of Hinged Bars	Separators	Length	Bracket Arrangement*
	KS225	54	inner	1	48"	STD # 1

\*Strain relief brackets are optional. To add strain relief brackets, specify as "STRAIN" + arrangement # (1-4).

**SPECIFICATIONS**

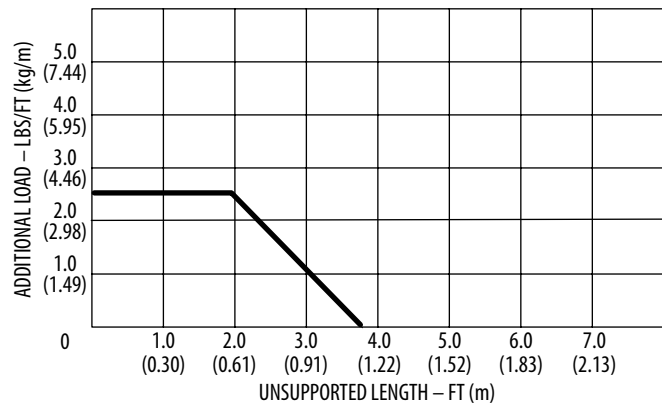
MODEL NO.	A inches (mm)	C inches (mm)	Q inches (mm)	WEIGHT lb/ft (kg/m)
KS100	1.00 (25)	1.52 (39)	0.68 (17)	0.40 (0.60)
KS150	1.50 (38)	2.02 (51)	0.84 (21)	0.44 (0.65)
KS225	2.25 (57)	2.77 (70)	1.66 (42)	0.51 (0.76)
KS300	3.00 (76)	3.52 (89)	2.41 (61)	0.54 (0.80)
KS400	4.00 (102)	4.52 (115)	3.41 (86)	0.60 (0.89)

Note: Hinged bars available on inner or outer radius. Please specify when ordering. (Hinged bars on inner radius is standard.)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
54	2.01 (51)	5.40 (137)	4.56 (116)	9.97 (253)
7*	2.81 (71)	7.00 (178)	5.38 (137)	12.49 (317)
73	2.95 (75)	7.28 (185)	5.32 (135)	12.78 (324)
85	3.69 (94)	8.75 (222)	6.25 (159)	15.23 (387)
11	5.00 (127)	11.38 (289)	7.56 (192)	19.36 (492)
13	5.86 (149)	13.10 (333)	8.37 (213)	21.99 (559)

\*Low camber. Consult factory for unsupported span length.

**KS SERIES – WEIGHT LOAD**

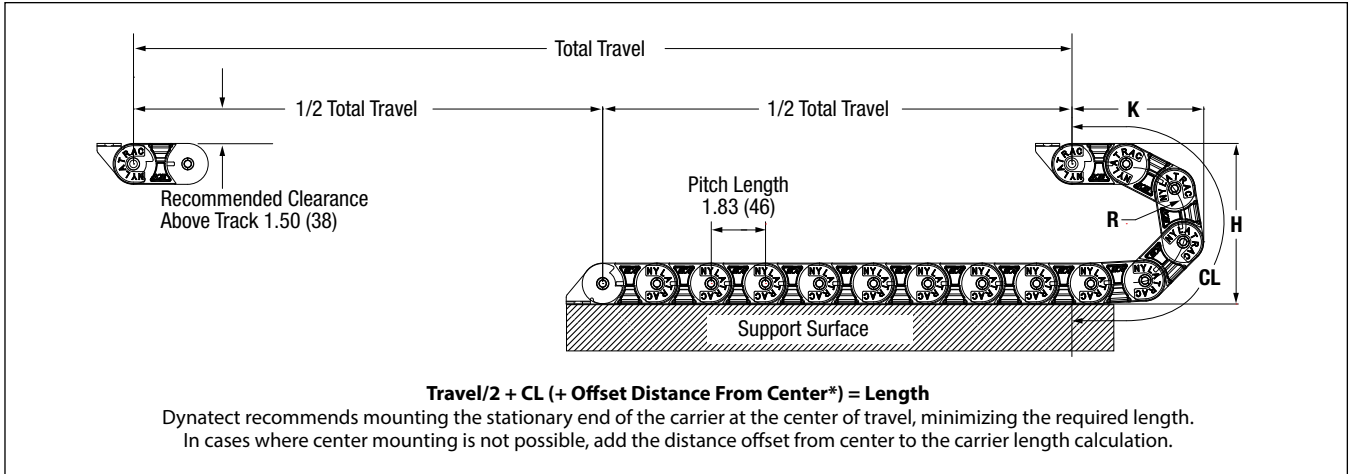


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

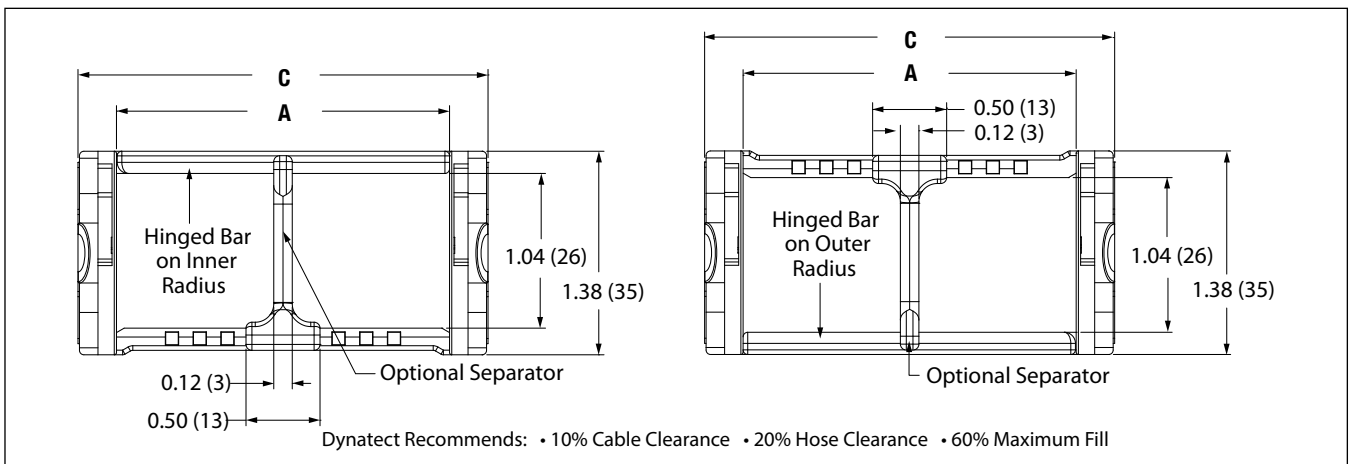
# KS SERIES | NYLATRAC<sup>®</sup> STANDARD (open-style carriers)

## CARRIER SIDE VIEW

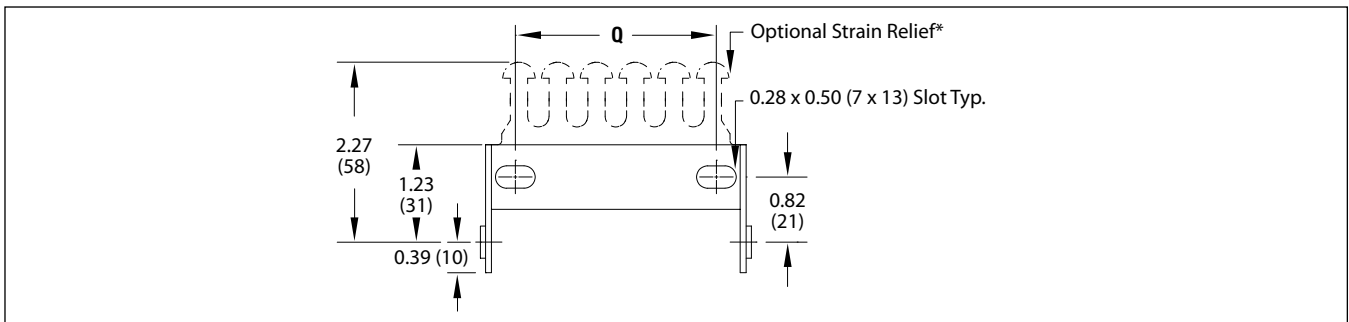
Dimensions in inches (mm)



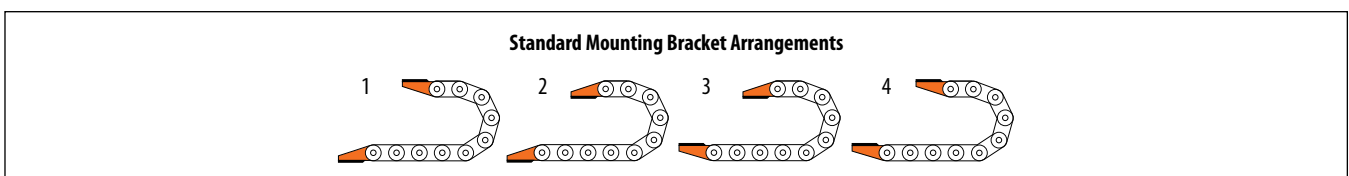
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET

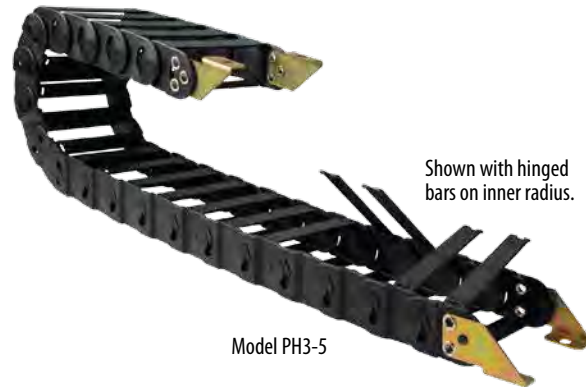


## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**P/PH SERIES | NYLATRAC<sup>®</sup> STANDARD** (open-style carriers)



Specify part number with dashes Example: PH2-5-inner-36-#1 IN	Model	Height	Location of Hinged Bars	Length	Bracket Arrangement*
		PH2	5	inner	36"

\*Specify bracket flange: inward (IN) or outward (OUT).

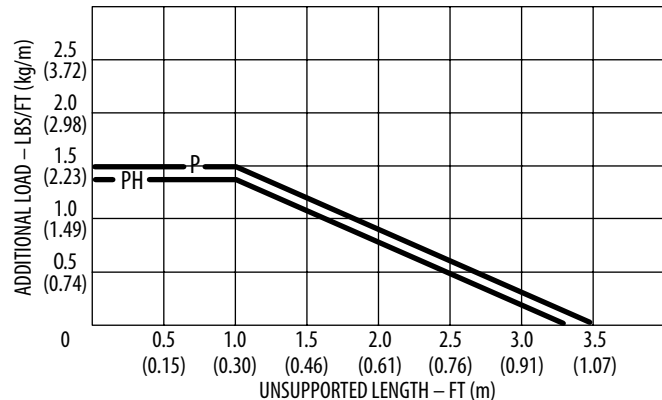
**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
P1	1.25 (32)	1.72 (44)	0.35 (0.52)
PH1*	1.25 (32)	1.72 (44)	0.35 (0.52)
P2	2.50 (64)	2.97 (75)	0.41 (0.61)
PH2*	2.50 (64)	2.97 (75)	0.41 (0.61)
P3	4.00 (102)	4.47 (114)	0.49 (0.73)
PH3*	4.00 (102)	4.47 (114)	0.49 (0.73)

\*PH Series crossbars hinge open on both left and right sides for directional opening. Please specify inner or outer radius for hinged bars. (Inside radius is standard.)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
4	1.25 (32)	4.00 (102)	3.41 (87)	6.69 (170)
5	1.75 (44)	5.00 (127)	4.00 (102)	9.00 (229)
10	4.25 (108)	10.00 (254)	6.50 (165)	16.50 (419)

**P/PH SERIES - WEIGHT LOAD**



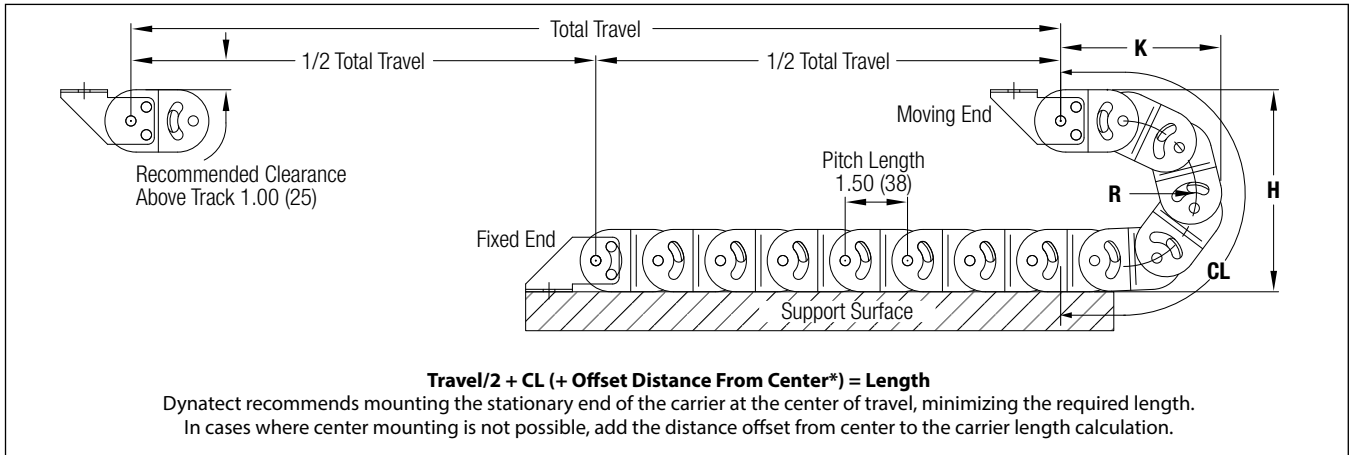
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



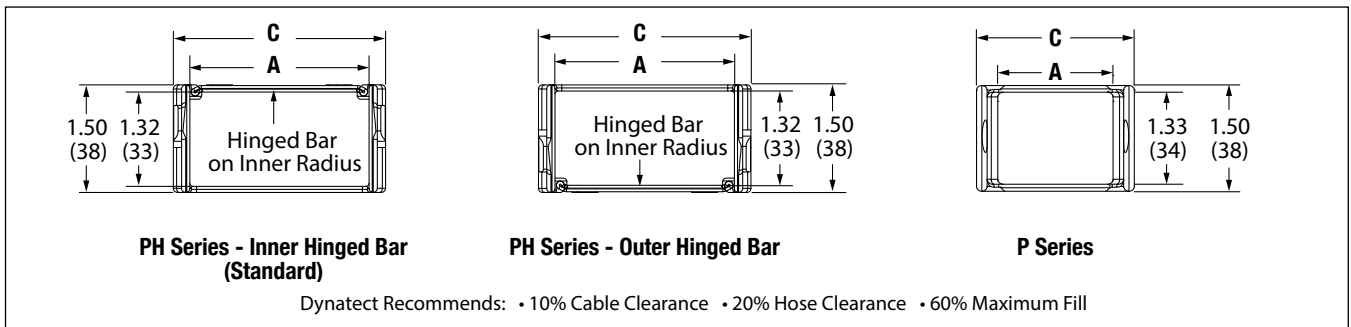
# P/PH SERIES | NYLATRAC® STANDARD (open-style carriers)

## CARRIER SIDE VIEW

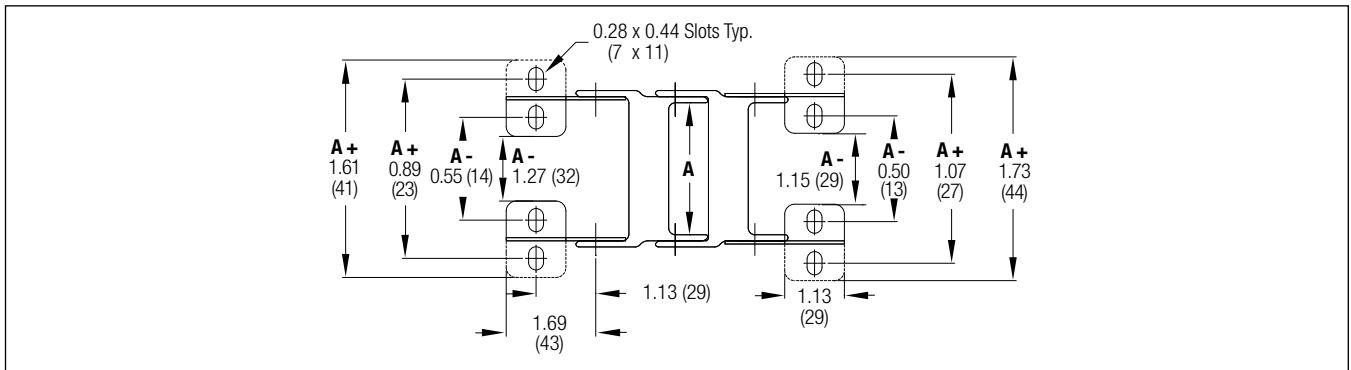
Dimensions in inches (mm)



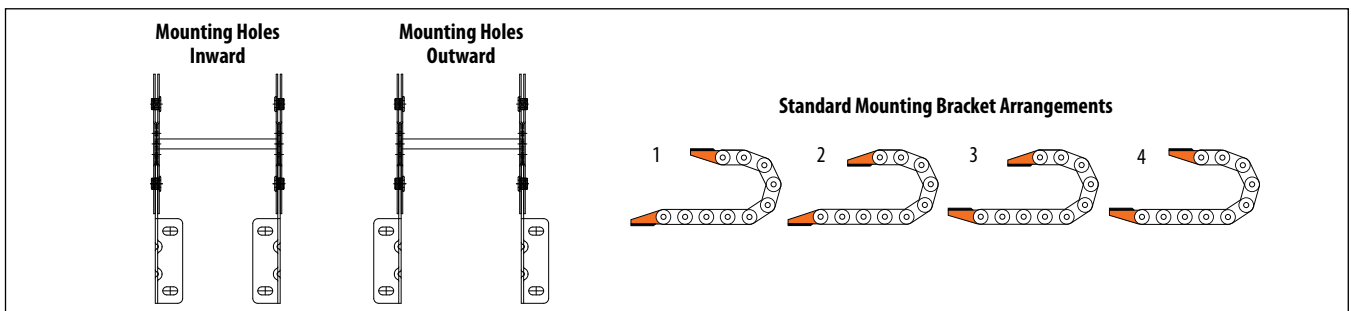
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**NP SERIES | NYLATRAC<sup>®</sup> STANDARD** (open-style carriers)



Specify part number with dashes Example: NP200-7-inner-0-36-STRAIN #1	Model	Height	Location of Hinged Bars	Separators	Length	Bracket Arrangement*
		NP200	7	inner	0	36"

\*Strain relief brackets are standard.

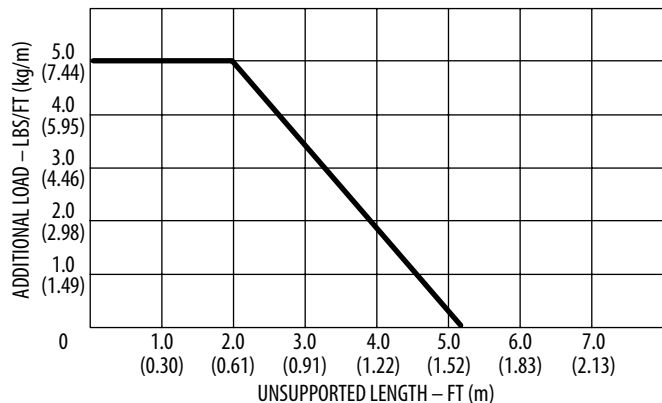
**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	Q inches (mm)	WEIGHT lb/ft (kg/m)
NP200	2.00 (51)	2.63 (67)	1.19 (30)	0.72 (1.07)
NP250	2.50 (64)	3.13 (80)	1.69 (43)	0.74 (1.10)
NP300	3.00 (76)	3.63 (92)	2.19 (56)	0.78 (1.15)
NP400	4.00 (102)	4.63 (118)	3.19 (81)	0.85 (1.26)
NP500	5.00 (127)	5.63 (143)	4.19 (106)	0.95 (1.41)
NP600	6.00 (152)	6.63 (168)	5.19 (132)	1.03 (1.54)

Note: Hinged bars available on inner or outer radius. Please specify when ordering. (Hinged bars on inner radius is standard.)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
7	2.50 (64)	7.00 (178)	5.67 (144)	12.18 (309)
8	2.95 (75)	7.90 (201)	6.12 (155)	13.59 (345)
10	3.94 (100)	9.88 (251)	7.11 (180)	16.70 (424)
12	4.92 (125)	11.84 (301)	8.09 (205)	19.78 (502)
14	5.91 (150)	13.82 (351)	9.07 (230)	22.87 (581)
18	7.87 (200)	18.00 (457)	11.04 (280)	29.04 (738)

**NP SERIES – WEIGHT LOAD**

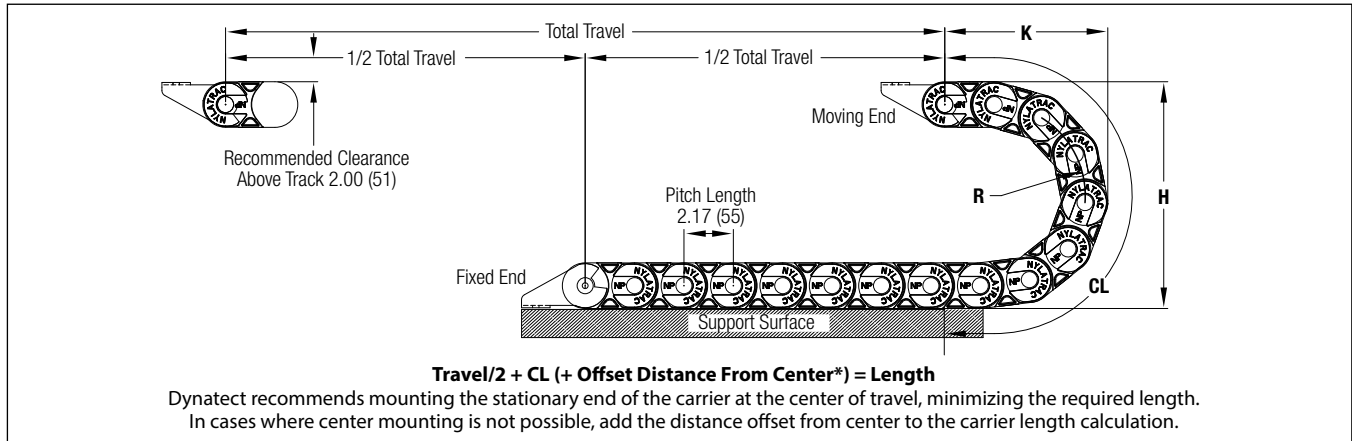


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

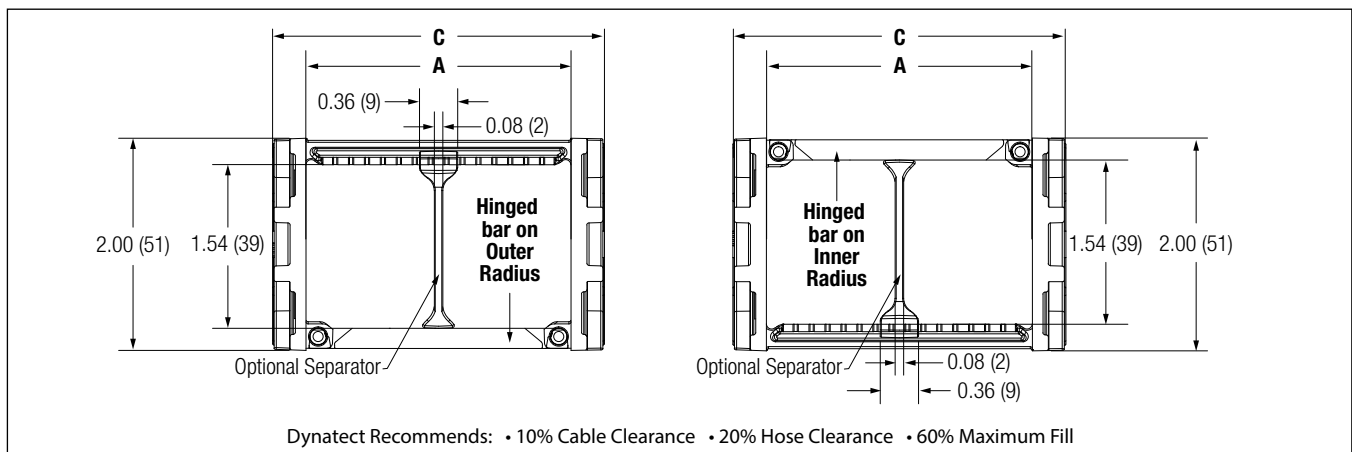
# NP SERIES | NYLATRAC® STANDARD (open-style carriers)

## CARRIER SIDE VIEW

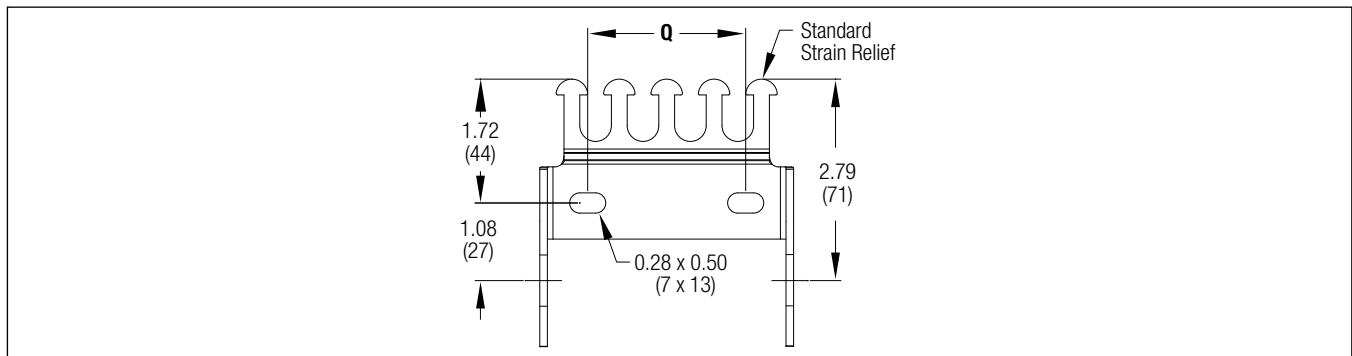
Dimensions in inches (mm)



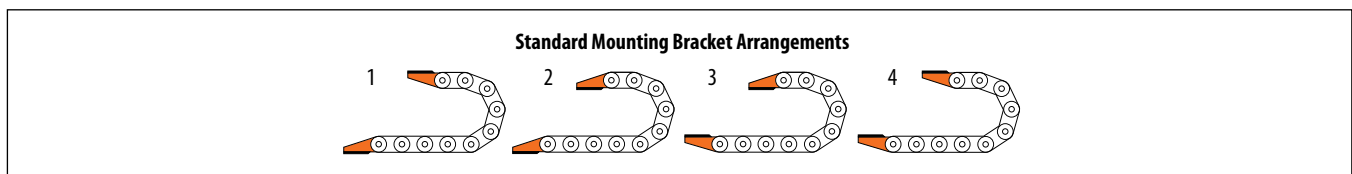
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**KL SERIES | NYLATRAC<sup>®</sup> STANDARD** (open-style carriers)



Shown with optional strain relief style brackets.



**NEW!**  
KL1 available with optional single-piece cavity divider.

Specify part number with dashes Example: KL3-18-2-60-STD #1	Model	Height	Separators	Length	Bracket Arrangement*
	KL3	18	2	60"	STD #1

\*Strain relief brackets are optional.

**SPECIFICATIONS**

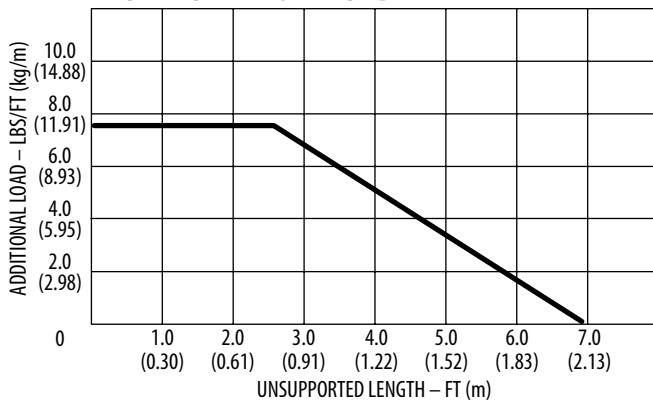
MODEL NO.	A inches (mm)	C inches (mm)	Q inches (mm)	WEIGHT lb/ft (kg/m)
KL200*	2.00 (51)	2.75 (70)	1.05 (27)	1.00 (1.49)
KL1**	3.00 (76)	3.75 (95)	1.88 (48)	0.98 (1.46)
KL2	4.50 (114)	5.25 (133)	3.38 (86)	1.11 (1.65)
KL3	7.00 (178)	7.75 (197)	5.88 (149)	1.48 (2.20)

\*New model: KL200-10 or KL200-15 – hinged bars available on inside (standard) or outside radius. When specifying, please note preferred location of hinged bars.  
\*\*KL1 – optional single-piece cavity divider available.

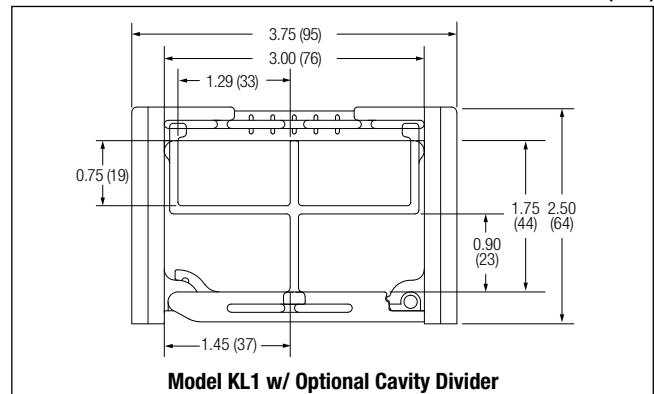
HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
10*	3.75 (95)	10.00 (254)	7.59 (193)	16.80 (427)
15*	6.25 (159)	15.00 (381)	10.08 (256)	24.70 (627)
85	3.00 (76)	8.50 (216)	6.88 (175)	14.68 (373)
12	4.75 (121)	12.00 (305)	8.63 (219)	20.18 (513)
14	5.75 (146)	14.00 (356)	9.63 (244)	23.31 (592)
18	7.75 (197)	18.00 (457)	11.60 (295)	29.50 (749)
26	11.75 (298)	26.00 (660)	15.60 (396)	42.18 (1071)

\*10 and 15 Height No. with KL200 model only (KL200-10 or KL200-15).

**KL SERIES – WEIGHT LOAD**



**CAVITY DIVIDER CROSS SECTION** Dimensions in inches (mm)



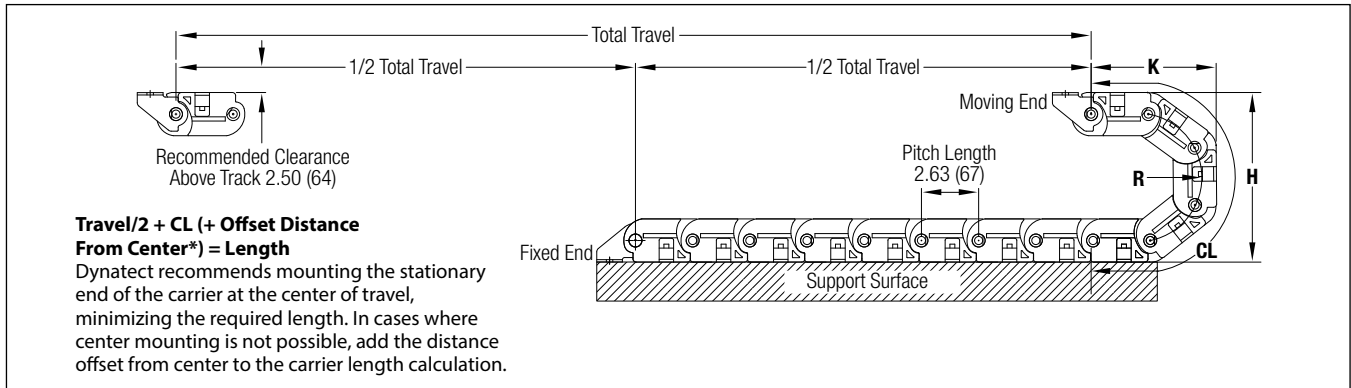
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



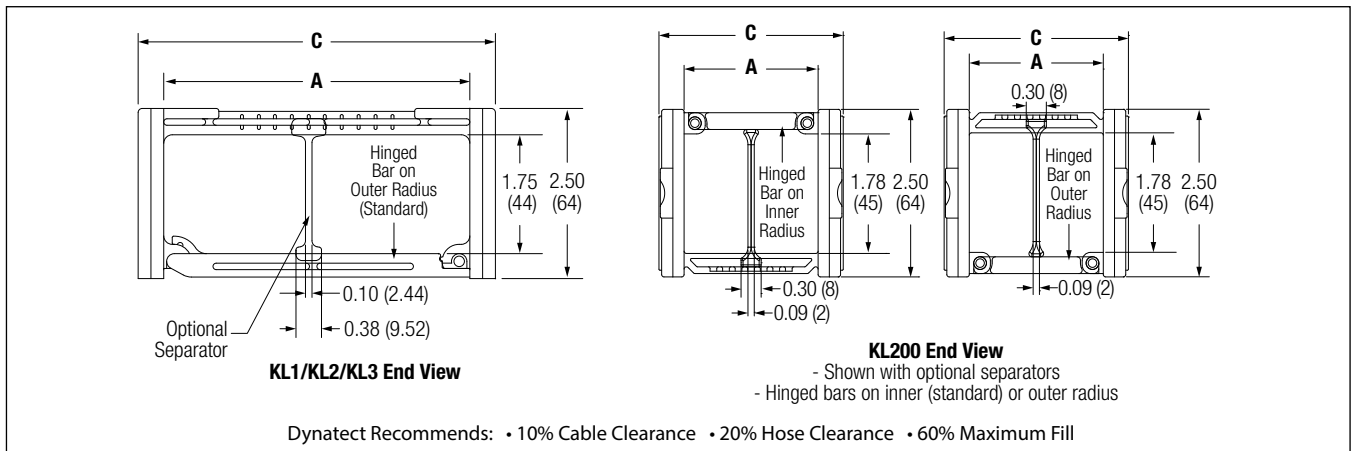
# KL SERIES | NYLATRAC® STANDARD (open-style carriers)

## CARRIER SIDE VIEW

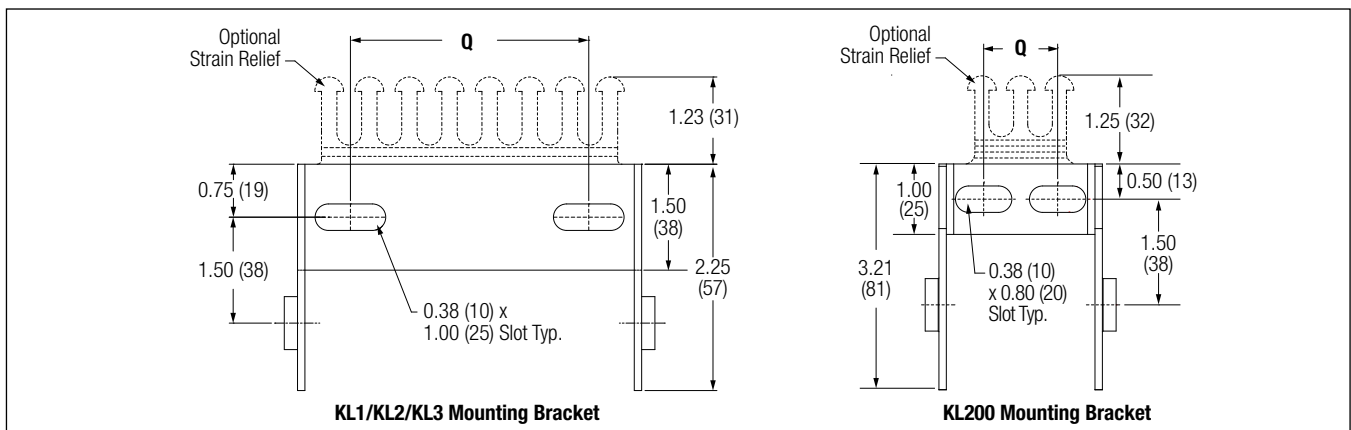
Dimensions in inches (mm)



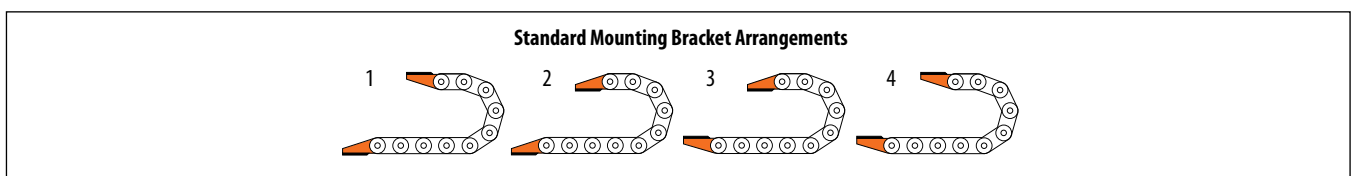
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**KOE SERIES | NYLATUBE<sup>®</sup> STANDARD** (enclosed-style carriers)



Specify part number with dashes Example: KOE1-30-12	<b>Model</b>	<b>Height</b>	<b>Length</b>
	KOE1	30	12"

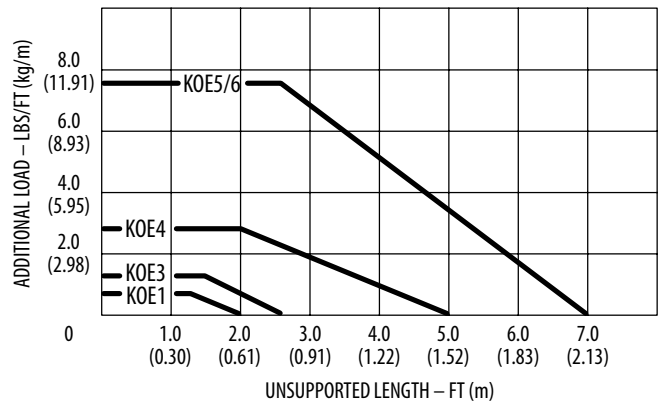
**SPECIFICATIONS**

MODEL NO.	A inches (mm)	B inches (mm)	C inches (mm)	D inches (mm)	Q inches (mm)	M inches (mm)	WEIGHT lb/ft (kg/m)
KOE1	0.95 (24)	0.39 (10)	1.42 (36)	0.59 (15)	1.18 (30)	0.16 (4)	0.19 (0.28)
KOE3	1.34 (34)	0.83 (21)	1.97 (50)	1.18 (30)	1.60 (41)	0.19 (5)	0.44 (0.65)
KOE4	1.89 (48)	1.18 (30)	2.44 (62)	1.58 (40.13)	2.13 (54)	0.19 (5)	0.61 (0.91)
KOE5	1.89 (48)	1.50 (38)	2.56 (65)	1.97 (50)	2.17 (55)	0.23 (6)	0.87 (1.29)
KOE6	5.28 (134)	1.50 (38)	5.91 (150)	1.97 (50)	5.51 (140)	0.23 (6)	1.28 (1.90)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
KOE1 - 30	1.18 (30)	3.00 (76)	2.20 (56)	5.10 (130)
KOE1 - 45	1.97 (50)	4.50 (114)	3.00 (76)	7.60 (193)
KOE3 - 60	2.36 (60)	5.90 (150)	3.80 (96)	10.20 (259)
KOE3 - 90	2.95 (75)	9.10 (231)	4.90 (124)	12.00 (305)
KOE3 - 130	3.94 (100)	13.00 (330)	5.90 (150)	15.10 (384)
KOE4 - 75	2.95 (75)	7.50 (191)	5.50 (140)	12.80 (325)
KOE4 - 95	3.94 (100)	9.50 (241)	6.50 (165)	15.90 (404)
KOE4 - 130	5.91 (150)	13.40 (340)	8.50 (216)	22.10 (561)
KOE5 - 10	3.94 (100)	9.90 (251)	7.10 (180)	16.70 (424)
KOE5 - 14	5.91 (150)	13.80 (351)	9.10 (231)	22.90 (582)
KOE6 - 10	3.94 (100)	9.90 (251)	7.10 (180)	16.70 (424)
KOE6 - 14	5.91 (150)	13.80 (351)	9.10 (231)	22.90 (582)

**KOE SERIES – WEIGHT LOAD**

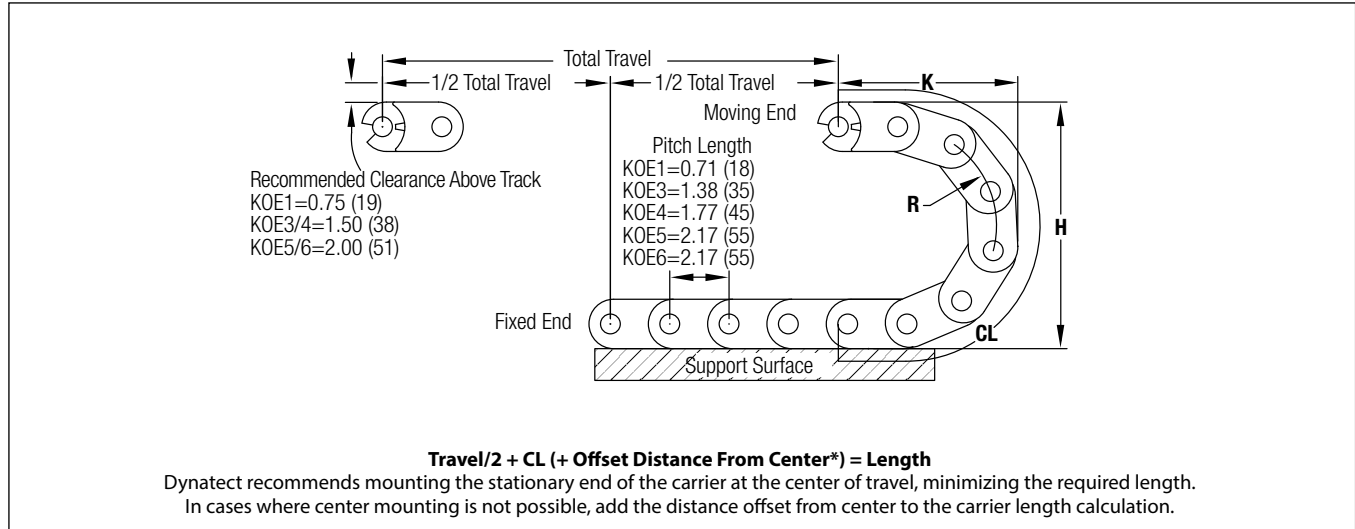


QUOTE REQUEST FORMS: SEE PAGES 100-101.

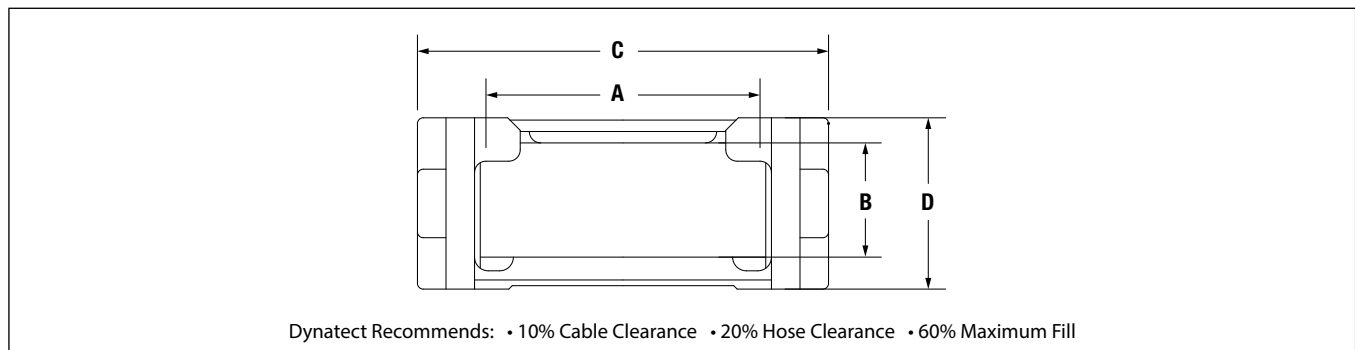
## KOE SERIES | NYLATUBE<sup>®</sup> STANDARD (enclosed-style carriers)

### CARRIER SIDE VIEW

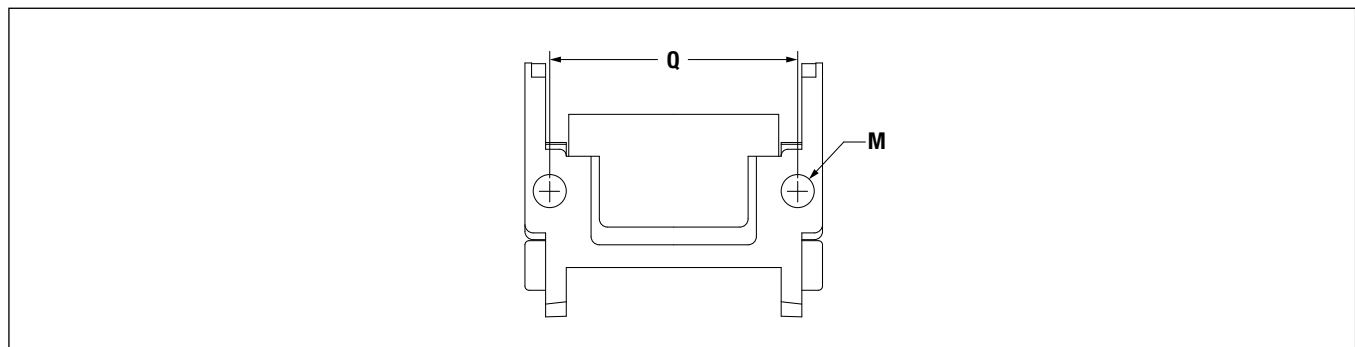
Dimensions in inches (mm)



### CARRIER CROSS SECTION



### TOP VIEW: MOUNTING HOLE DIMENSIONS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

## N SERIES | NYLATUBE<sup>®</sup> STANDARD (enclosed-style carriers)

Specify part number with dashes Example: N4-10-30-A/B	Model	Height	Length	Flange Arrangement*
	N4	10	30"	A/B

\*Specify for each: fixed end/moving end.

### SPECIFICATIONS

MODEL NO.	A inches (mm)	A1 inches (mm)	B inches (mm)	C inches (mm)	D inches (mm)	WEIGHT lb/ft (kg/m)
N1	0.90 (23)	—	0.90 (23)	1.38 (35)	1.38 (35)	0.50 (0.74)
N2	1.34 (34)	—	0.90 (23)	1.97 (50)	1.38 (35)	0.60 (0.89)
N3-D*	2.48 (63)	1.18 (30)	0.90 (23)	2.95 (75)	1.38 (35)	0.80 (1.19)
N4	1.42 (36)	—	1.34 (34)	1.97 (50)	1.97 (50)	0.80 (1.19)
N5	3.39 (86)	—	1.34 (34)	3.94 (100)	1.97 (50)	1.20 (1.79)
N5-D*	3.39 (86)	1.63 (41)	1.34 (34)	3.94 (100)	1.97 (50)	1.20 (1.79)
N6-D*	5.35 (136)	2.62 (67)	1.34 (34)	5.91 (150)	1.97 (50)	1.70 (2.53)
N8	5.28 (134)	—	2.24 (57)	5.91 (150)	2.95 (75)	2.20 (3.27)

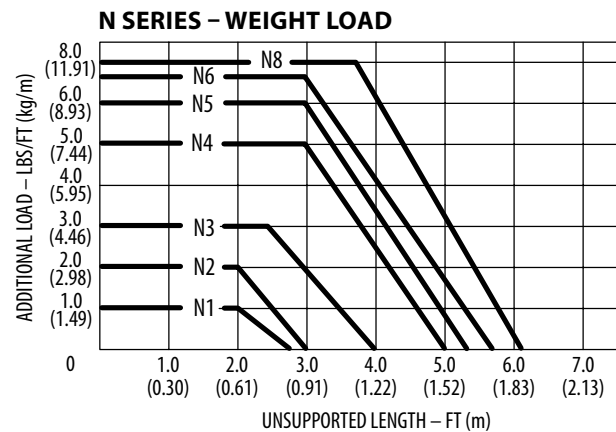


N3-8 with End Flanges: Type B/Type A

\*Designates divided carrier.

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
N1 - 8	3.30 (84)	8.00 (203)	5.40 (137)	13.20 (335)
N1 - 13	5.91 (150)	13.20 (335)	8.00 (203)	21.30 (541)
N2 - 8	3.30 (84)	8.00 (203)	5.40 (137)	13.20 (335)
N2 - 13	5.91 (150)	13.20 (335)	8.00 (203)	21.30 (541)
N3 - 8D*	3.30 (84)	8.00 (203)	5.40 (137)	13.20 (335)
N3 - 13D*	5.91 (150)	13.20 (335)	8.00 (203)	21.30 (541)
N4 - 10	3.94 (100)	9.80 (249)	7.00 (178)	16.30 (414)
N4 - 18	7.87 (200)	17.70 (450)	10.70 (272)	28.70 (729)
N5 - 10	3.94 (100)	9.80 (249)	7.00 (178)	16.30 (414)
N5 - 10D*	3.94 (100)	9.80 (249)	7.00 (178)	16.30 (414)
N5 - 18	7.87 (200)	17.70 (450)	10.70 (272)	28.70 (729)
N5 - 18D*	7.87 (200)	17.70 (450)	10.70 (272)	28.70 (729)
N6 - 10D*	3.94 (100)	9.80 (249)	7.00 (178)	16.30 (414)
N6 - 18D*	7.87 (200)	17.70 (450)	10.70 (272)	28.70 (729)
N8 - 15	5.91 (150)	14.80 (376)	10.00 (254)	23.70 (602)
N8 - 27	11.81 (300)	26.60 (676)	15.90 (404)	42.20 (1072)

\*Designates divided carrier.



QUOTE REQUEST FORMS: SEE PAGES 100-101.

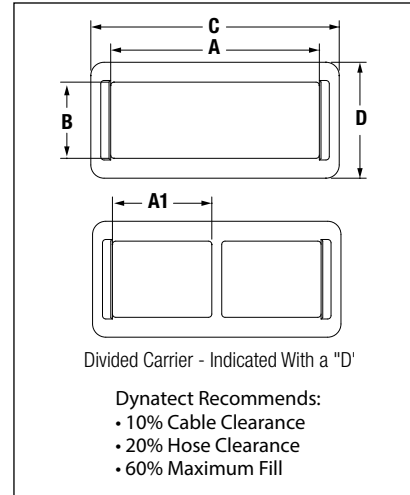
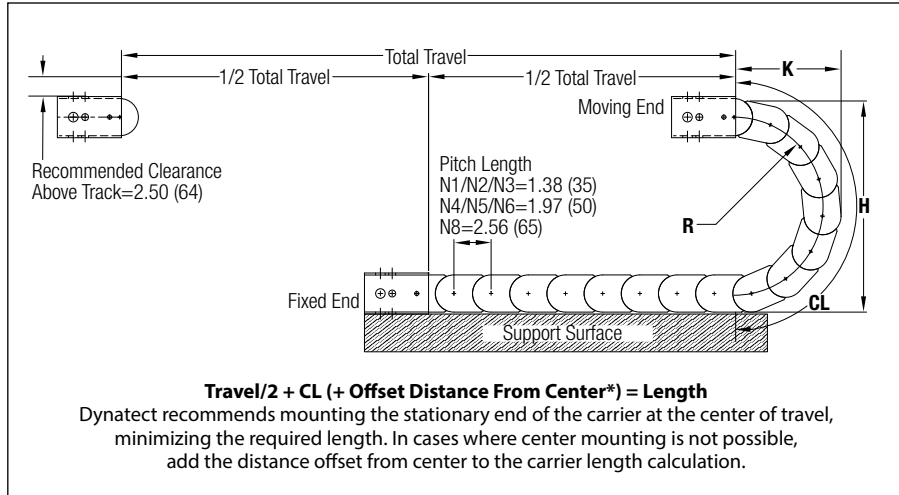


# N SERIES | NYLATUBE® STANDARD (enclosed-style carriers)

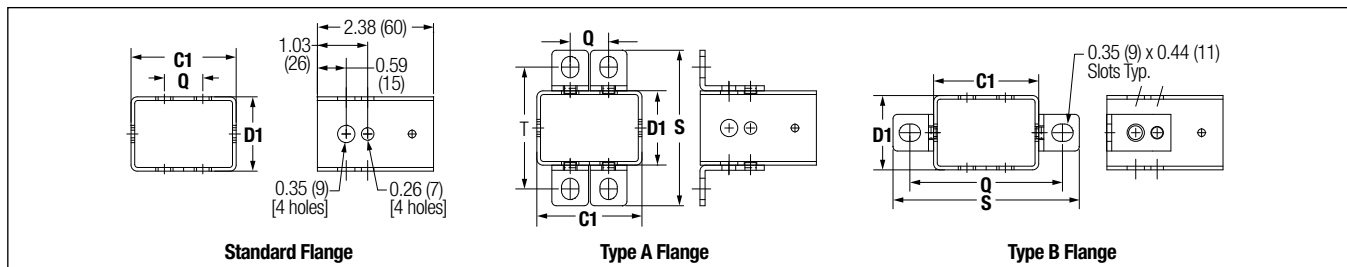
## CARRIER SIDE VIEW

Dimensions in inches (mm)

## CARRIER CROSS SECTION



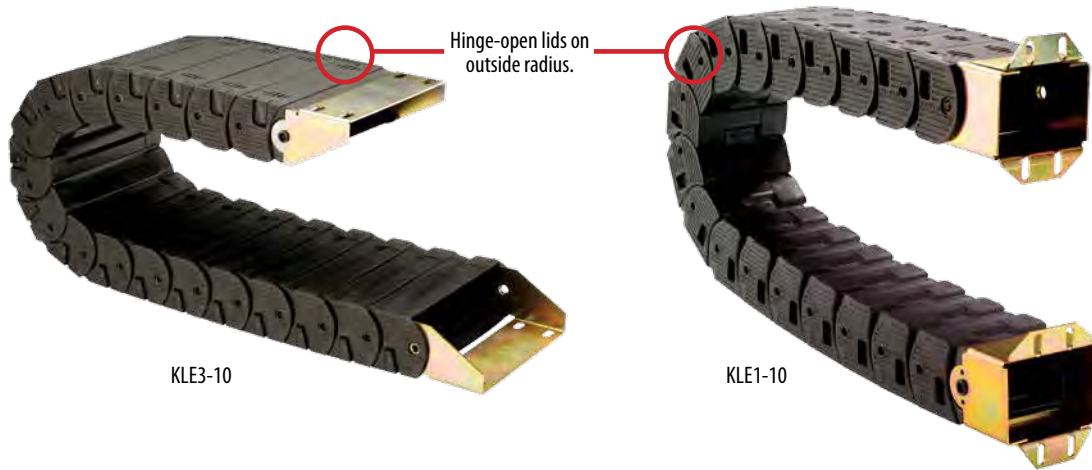
## MOUNTING FLANGE OPTIONS



FLANGE TYPE/ MODEL	C1 inches (mm)	D1 inches (mm)	Q inches (mm)	T inches (mm)	S inches (mm)
Standard / N1	1.59 (40)	1.54 (39)	1 hole	—	—
Standard / N2	2.13 (54)	1.54 (39)	0.79 (20)	—	—
Standard / N3	3.11 (79)	1.54 (39)	1.77 (45)	—	—
Standard / N4	2.13 (54)	2.13 (54)	0.79 (20)	—	—
Standard / N5	4.09 (104)	2.13 (54)	2.76 (70)	—	—
Standard / N6	6.06 (154)	2.13 (54)	4.72 (120)	—	—
Standard / N8	6.06 (154)	3.11 (79)	4.72 (120)	—	—
Type A / N1	1.59 (40)	1.54 (39)	1 hole	2.49 (63)	3.18 (81)
Type A / N2	2.13 (54)	1.54 (39)	0.79 (20)	2.49 (63)	3.18 (81)
Type A / N3	3.11 (79)	1.54 (39)	1.77 (45)	2.49 (63)	3.18 (81)
Type A / N4	2.13 (54)	2.13 (54)	0.79 (20)	3.09 (79)	3.78 (96)
Type A / N5	4.09 (104)	2.13 (54)	2.76 (70)	3.14 (80)	3.83 (97)
Type A / N6	6.06 (154)	2.13 (54)	4.72 (120)	3.14 (80)	3.77 (96)
Type A / N8	6.06 (154)	3.11 (79)	4.72 (120)	4.07 (103)	4.76 (121)
Type B / N1	1.59 (40)	1.54 (39)	2.49 (63)	—	3.18 (81)
Type B / N2	2.13 (54)	1.54 (39)	3.12 (79)	—	3.81 (97)
Type B / N3	3.11 (79)	1.54 (39)	4.14 (105)	—	4.83 (123)
Type B / N4	2.13 (54)	2.13 (54)	3.09 (78)	—	3.78 (96)
Type B / N5	4.09 (104)	2.13 (54)	5.09 (129)	—	5.78 (147)
Type B / N6	6.06 (154)	2.13 (54)	7.04 (179)	—	7.73 (196)
Type B / N8	6.06 (154)	3.11 (79)	7.05 (179)	—	7.71 (196)

QUOTE REQUEST FORMS: SEE PAGES 100-101.

**KLE SERIES | NYLATUBE<sup>®</sup> STANDARD** (enclosed-style carriers)



Specify part number with dashes Example: KLE1-10-36-STD/A	Model	Height	Length	Flange Arrangement*
	KLE1	10	36"	STD/A

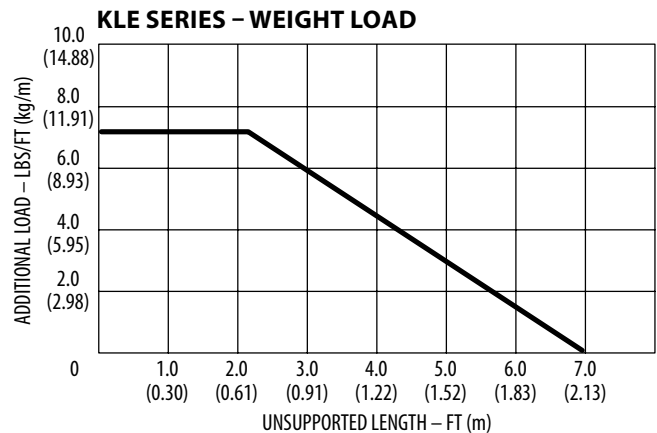
\*Specify for each: fixed end/moving end.

**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)	
KLE1	3.00 (76)	3.75 (95)	1.25 (1.86)	
KLE2	4.50 (114)	5.25 (133)	1.88 (2.80)	
KLE3	7.00 (178)	7.75 (197)	2.92 (4.34)	

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
10	3.75 (95)	10.00 (254)	7.13 (181)	14.88 (378)
12	4.75 (121)	12.00 (305)	8.13 (207)	19.13 (486)
14	5.75 (146)	14.00 (356)	9.13 (232)	21.25 (540)
18	7.75 (197)	18.00 (457)	11.13 (283)	27.63 (702)
26	11.75 (298)	26.00 (660)	15.13 (384)	40.38 (1026)



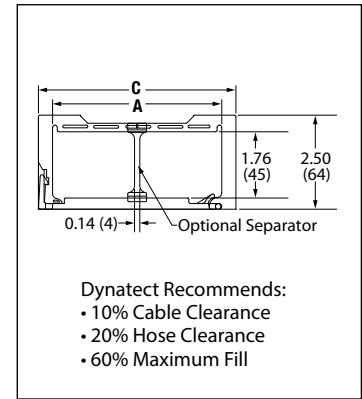
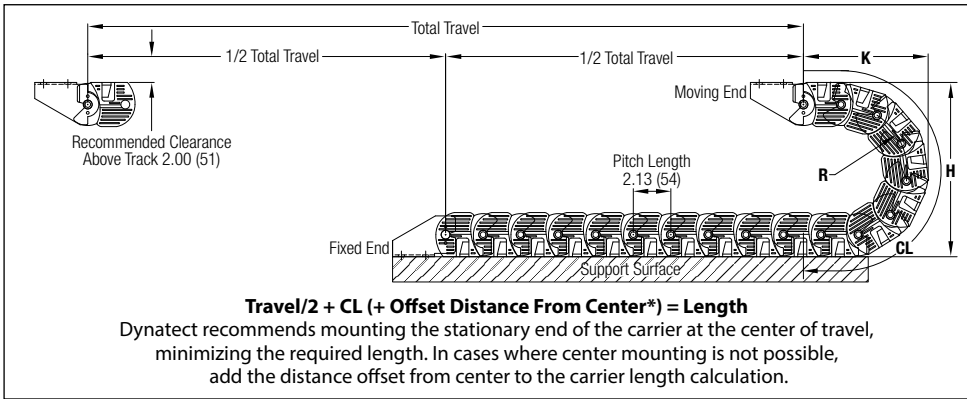
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

# KLE SERIES | NYLATUBE® STANDARD (enclosed-style carriers)

## CARRIER SIDE VIEW

Dimensions in inches (mm)

## CARRIER CROSS SECTION



## MOUNTING FLANGE OPTIONS

**Standard Bracket (Mounting Holes Inward)**

**Standard Bracket (Mounting Holes Outward)**

**Standard Mounting Bracket Arrangements**

**Female Flange: Type A**  
[Type B: Optional "Ears" Available Upon Request]

**Male Flange: Type A**  
[Type B: Optional "Ears" Available Upon Request]

FLANGE DIMENSIONS	Q inches (mm)	C1 inches (mm)	C2 inches (mm)	Dimensions for optional Type B Flange with "ears"			
				F1* inches (mm)	G1* inches (mm)	F2* inches (mm)	G2* inches (mm)
KLE1	1.19 (30)	3.58 (91)	3.38 (86)	4.57 (116)	5.24 (133)	4.35 (110)	5.04 (128)
KLE2	1.97 (50)	5.05 (128)	4.88 (124)	6.02 (153)	6.71 (170)	5.85 (149)	6.54 (166)
KLE3	3.94 (100)	7.58 (192)	7.38 (178)	8.55 (217)	9.24 (235)	8.35 (212)	9.04 (230)

\*Dimensions for optional Type B Flange with "ears".

QUOTE REQUEST FORMS: SEE PAGES 100-101.

**NSB SERIES | NYLATRAC<sup>®</sup> MODULAR** (open-style carriers)



Specify part number with dashes Example: NSB-PR-4.50-55-1-72-#1 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement*
	NSB	PR	4.50"	55	1	72"	#1 IN

\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

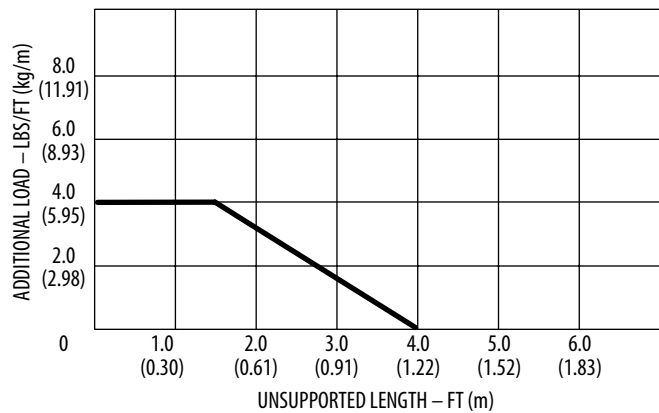
MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
NSB	Customer Specified	A + 0.94 (24)	0.70 (1.04)

**Crossbar Styles:**

RB = Bolted Aluminum Round Bar PR = Poly Roller over Bolted Aluminum Round Bar

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
55	2.39 (61)	6.17 (157)	5.13 (130)	11.50 (292)
75	3.06 (78)	7.50 (191)	5.88 (149)	13.75 (349)

**NSB SERIES – WEIGHT LOAD**

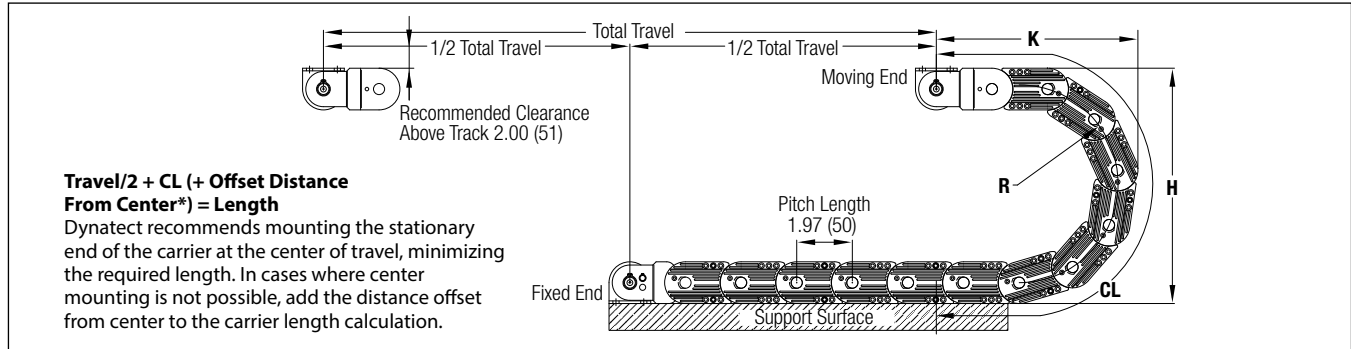


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

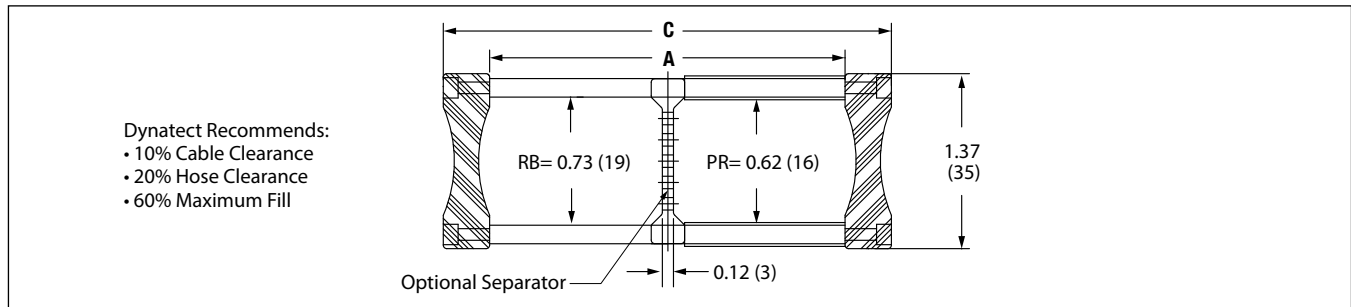
# NSB SERIES | NYLATRAC® MODULAR (open-style carriers)

## CARRIER SIDE VIEW

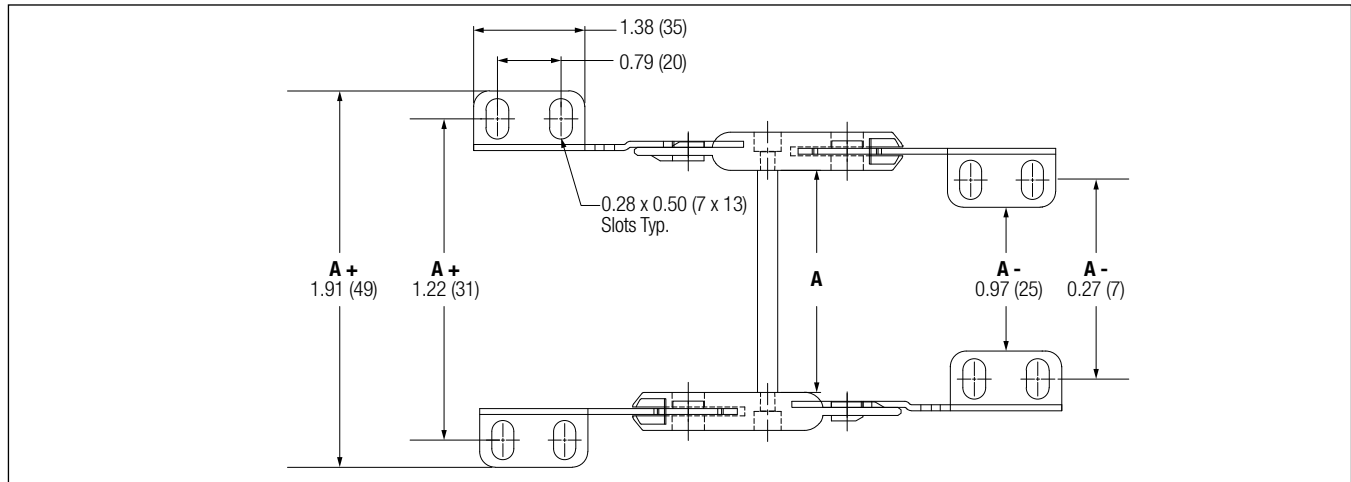
Dimensions in inches (mm)



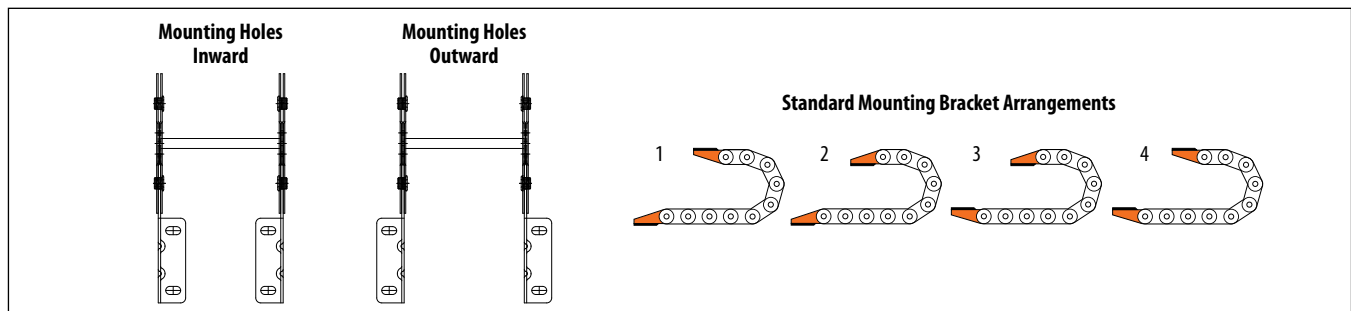
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.



## TSC SERIES | NYLATRAC<sup>®</sup> MODULAR (open- & enclosed-style carriers)

Specify part number with dashes Example: TSC415-F-80-1-72-#1 IN	Model	Bar Style	Bar Width* (inches)	Height	Separators	Length	Bracket Arrangement**
	TSC415	F	(n/a)	80	1	72"	#1 IN

\*Does not apply to 'F' style bar. \*\*Specify bracket flange: inward (IN) or outward (OUT).

### SPECIFICATIONS

MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
TSC218-F	2.18 (55)	3.03 (77)	1.09 (1.62)
TSC317-F	3.17 (81)	4.02 (102)	1.12 (1.67)
TSC368-F	3.68 (94)	4.53 (115)	1.14 (1.70)
TSC415-F	4.15 (105)	5.00 (127)	1.16 (1.73)
TSC513-F	5.13 (130)	5.98 (152)	1.19 (1.77)
TSC554-F	5.54 (141)	6.39 (162)	1.20 (1.79)
TSC597-F	5.97 (152)	6.82 (173)	1.20 (1.79)
TSC846-F	8.51 (216)	9.36 (238)	1.65 (2.46)
TSC998-F	9.98 (253)	10.83 (275)	1.90 (2.83)
TSC-PR	Customer Specified	A + 0.85 (22)	0.88 (1.31)
TSC-RB	Customer Specified	A + 0.85 (22)	0.82 (1.22)
TSC-AF	Customer Specified	A + 0.85 (22)	1.15 (1.71)
TSC-PL***	Customer Specified	A + 0.85 (22)	1.47 (2.19)



Note: Modular low-friction sliders are optional.

#### Crossbar Styles (Top and Bottom):

F = Snap-In Plastic Flat Bar    RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar  
AF = Bolted Aluminum Flat Bar    PL = Plastic Lid (Enclosed-Style Carrier)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
80***	2.95 (75)	8.20 (208)	6.74 (171)	14.24 (362)
100***	3.94 (100)	10.18 (259)	7.73 (196)	17.43 (443)
115***	4.52 (115)	11.34 (288)	8.31 (211)	19.28 (490)
120	4.92 (125)	12.14 (308)	8.71 (221)	20.58 (523)
140	5.91 (150)	14.12 (359)	9.70 (246)	23.69 (602)
160	6.69 (170)	15.68 (398)	10.48 (266)	26.16 (665)
180	7.87 (200)	18.04 (458)	11.66 (296)	29.89 (759)
200	8.46 (215)	19.22 (488)	12.25 (311)	31.72 (806)
220	9.84 (250)	21.98 (558)	13.63 (346)	38.74 (984)
260	11.81 (300)	25.92 (658)	15.60 (396)	42.31 (1075)
300	13.78 (350)	29.86 (758)	17.57 (446)	48.51 (1232)

\*\*\*Plastic lids not available on 80, 100 or 115 height. Optional modular sliders not available on 80 or 100 height.

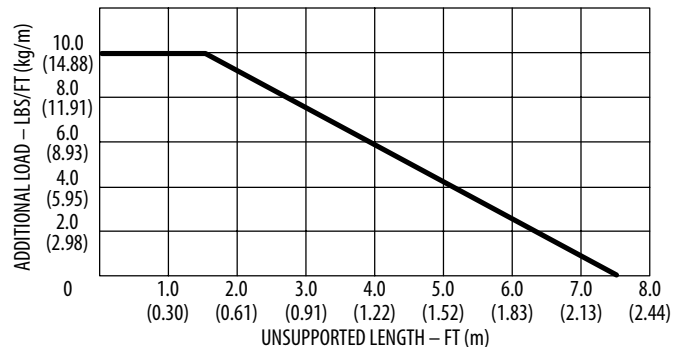
### MODULAR LOW-FRICTION SLIDERS

Modular sliders are often used in long travel applications in which chain bands glide on each other. Sliders are manufactured from special plastic material that is wear-resistant and provides a low coefficient of friction. Not only do they reduce tow force and wear, but they are removable and easy to replace.



When adding sliders to TSC Series, add 0.15" (4 mm) to overall track width ('C' dimension).

### TSC SERIES - WEIGHT LOAD

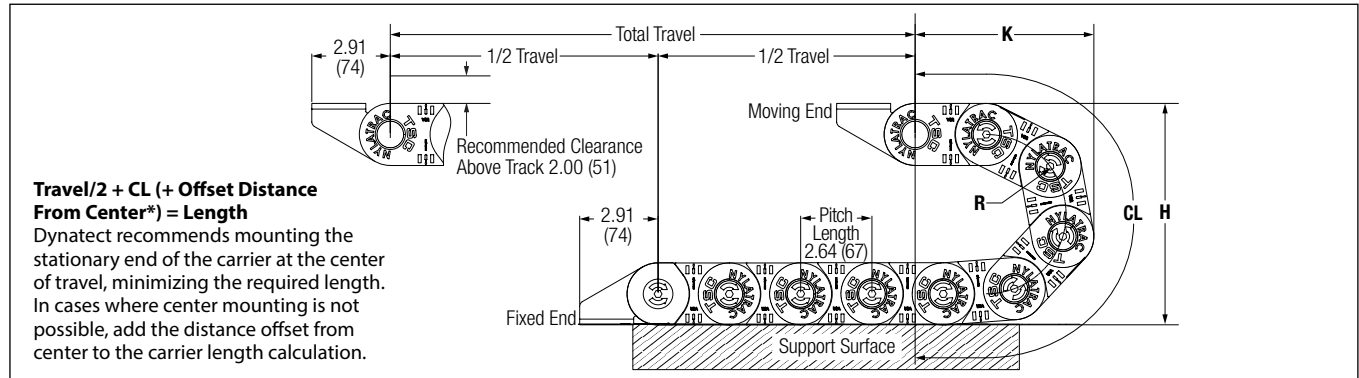


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

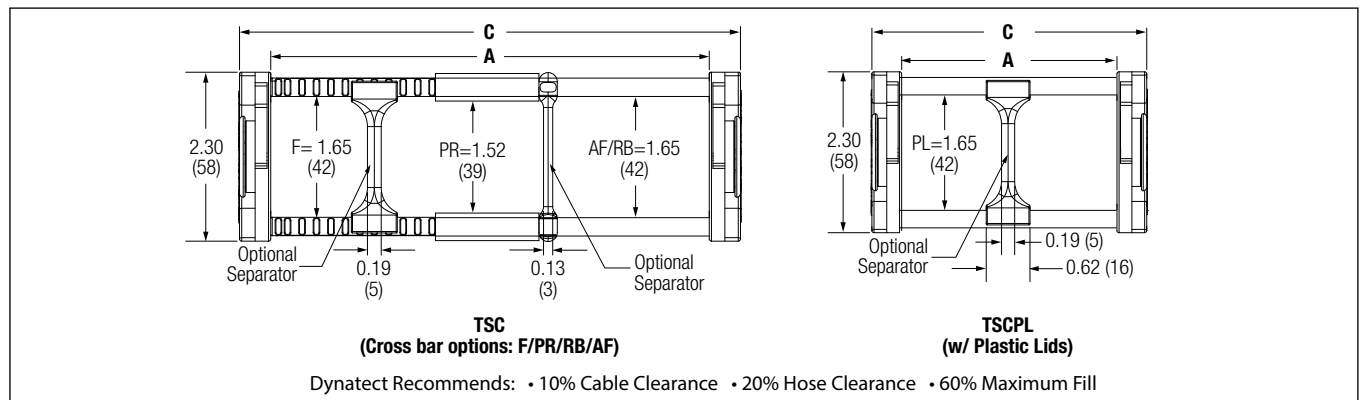
# TSC SERIES | NYLATRAC<sup>®</sup> MODULAR (open- & enclosed-style carriers)

## CARRIER SIDE VIEW

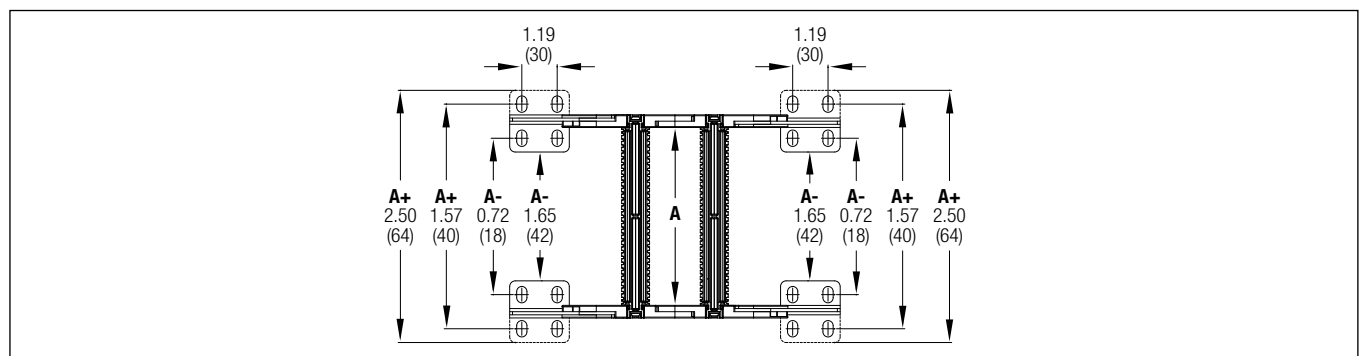
Dimensions in inches (mm)



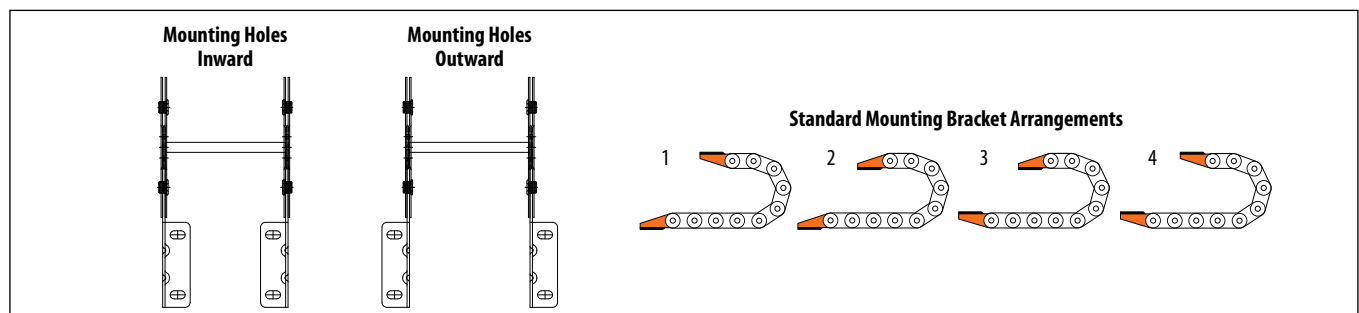
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

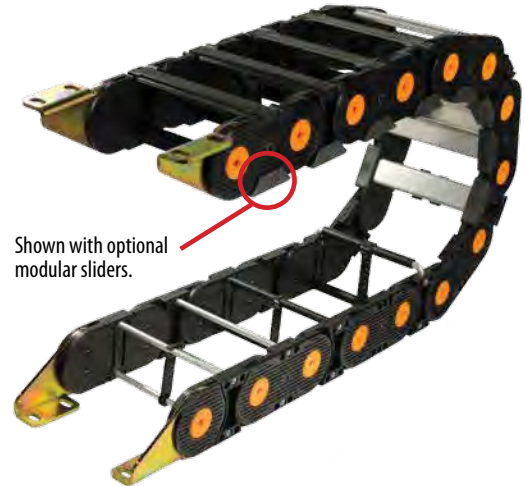
**TS SERIES | NYLATRAC<sup>®</sup> MODULAR** (open- & enclosed-style carriers)

Specify part number with dashes Example: TS-RB-3.25-110-1-72-#1 IN	Model	Bar Style	Bar Width*	Height	Separators	Length	Bracket Arrangement**
TS-RB-3.25-110-1-72-#1 IN	TS	RB	3.25"	110	1	72"	#1 IN

\*Does not apply to 'F' style bar. \*\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
TS293-F	2.93 (74)	4.45 (113)	2.40 (3.57)
TS387-F	3.87 (98)	5.35 (136)	2.50 (3.72)
TS480-F	4.80 (122)	6.33 (161)	2.60 (3.87)
TS638-F	6.36 (162)	7.89 (200)	2.70 (4.02)
TS762-F	7.62 (194)	9.14 (232)	2.80 (4.17)
TS805-F	8.05 (205)	9.57 (243)	2.85 (4.25)
TS980-F	9.79 (249)	11.32 (288)	2.90 (4.32)
TS1101-F	11.01 (280)	12.53 (318)	2.95 (4.39)
TS1148-F	11.48 (292)	13.00 (330)	3.00 (4.46)
TS1169-F	11.68 (297)	13.21 (336)	3.00 (4.46)
TS1357-F	13.57 (345)	15.09 (383)	3.10 (4.61)
TS-PS	Customer Specified	A + 1.52 (39)	3.31 (4.92)
TS-RB / TS-PR	Customer Specified	A + 1.52 (39)	TS-RB = 2.45 (3.65) / TS-PR = 2.69 (4.00)
TS-AF / TS-AFS	Customer Specified	A + 1.52 (39)	TS-AF = 4.93 (7.34) / TS-AFS = 4.81 (7.16)
TS-PL / TS-AP	Customer Specified	A + 1.52 (39)	TS-PL = 4.33 (6.44) / TS-AP = 6.39 (9.51)



**Crossbar Styles (Top and Bottom):**

F / PS = Snap-In Plastic Flat Bar    RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar  
 AF = Bolted Aluminum Flat Bar    AFS = Snap-In Aluminum Flat Bar  
 PL = Plastic Lid (Enclosed-Style Carrier)    AP = Aluminum Armor Plate (Enclosed-Style Carrier)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
110***	3.88 (99)	11.00 (279)	9.56 (243)	20.30 (516)
140***	5.38 (137)	14.00 (356)	11.06 (281)	25.01 (635)
170	6.81 (173)	16.88 (429)	12.50 (318)	29.53 (750)
200	8.31 (211)	19.88 (505)	14.00 (356)	34.24 (870)
245	10.56 (268)	24.38 (619)	16.25 (413)	41.31 (1049)
275	12.13 (308)	27.50 (699)	17.81 (452)	46.22 (1174)
360	16.13 (410)	35.50 (902)	21.81 (554)	58.78 (1493)

\*\*\*The following options are not available with 110 and 140 curve heights: modular sliders, aluminum armor plates, plastic lids.

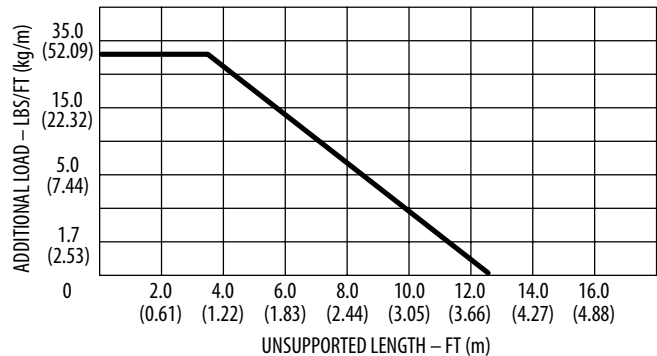
**MODULAR LOW-FRICTION SLIDERS**

Modular sliders are often used in long travel applications in which chain bands glide on each other. Sliders are manufactured from special plastic material that is wear-resistant and provides a low coefficient of friction. Not only do they reduce tow force and wear, but they are removable and easy to replace.



When adding sliders to TS Series, add 0.20" (5 mm) to overall track width ('C' dimension).

**TS SERIES – WEIGHT LOAD**

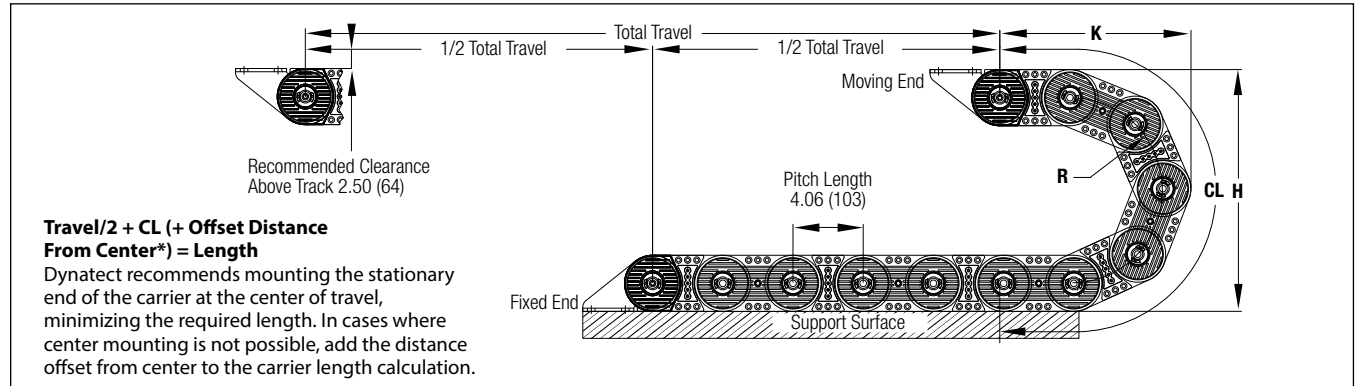


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

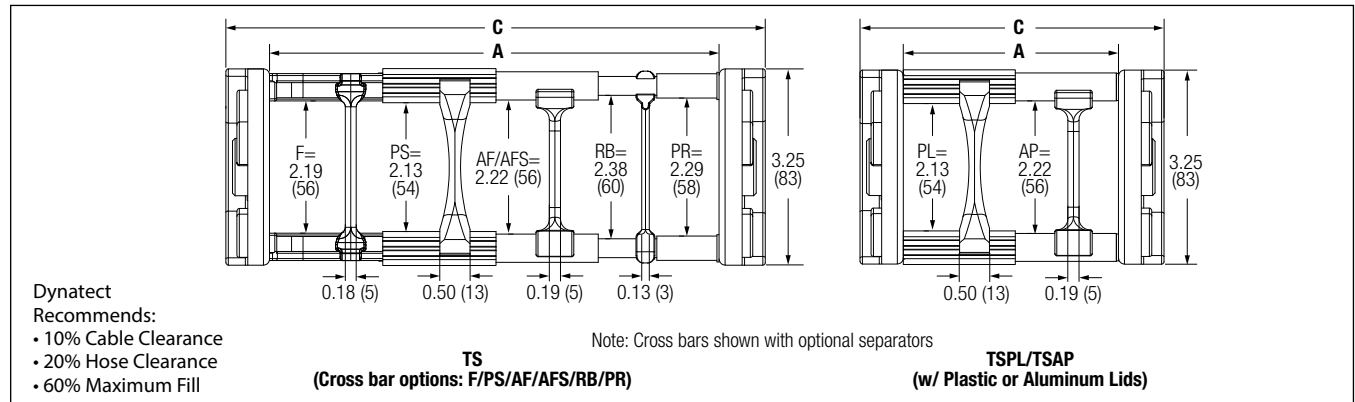
# TS SERIES | NYLATRAC<sup>®</sup> MODULAR (open- & enclosed-style carriers)

## CARRIER SIDE VIEW

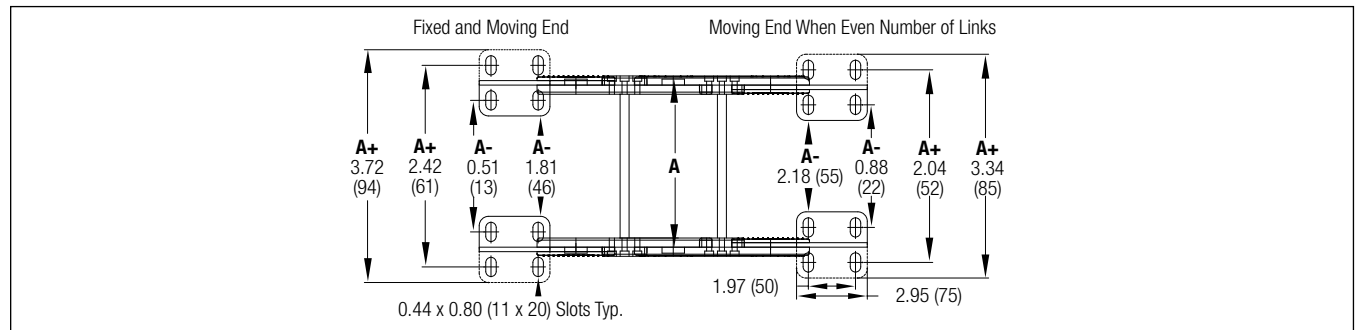
Dimensions in inches (mm)



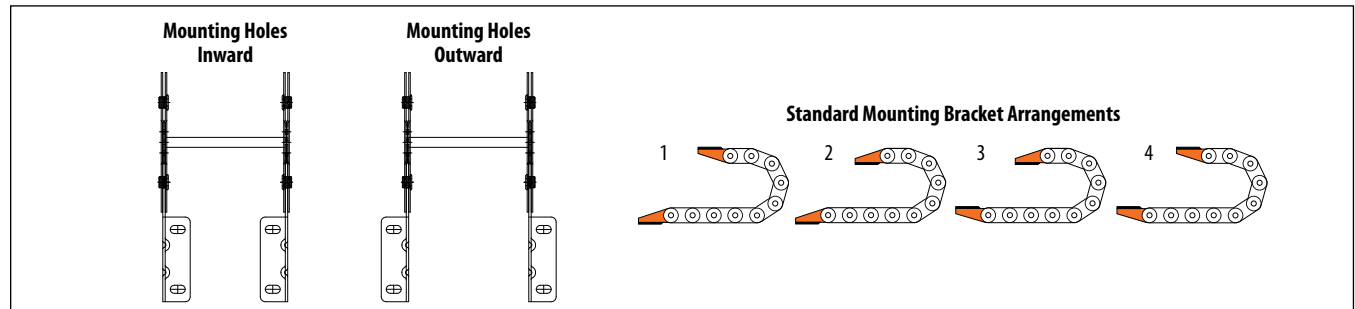
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

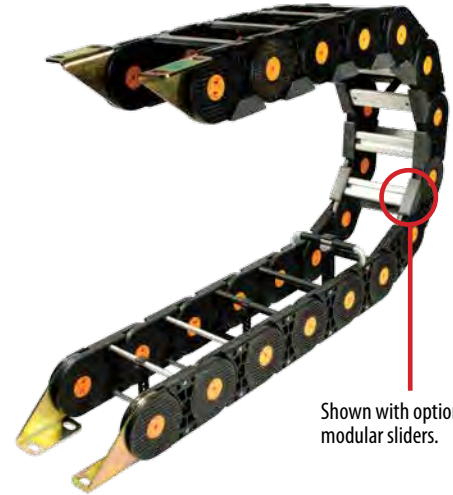
**TL SERIES | NYLATRAC<sup>®</sup> MODULAR** (open- & enclosed-style carriers)

Specify part number with dashes Example: TL-AFS-4.25-275-1-60-#3 OUT	Model	Bar Style	Bar Width*	Height	Separators	Length	Bracket Arrangement**
	TL	AFS	4.25"	275	1	60"	#3 OUT

\*Does not apply to 'F' style bar. \*\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
TL394F	3.94 (100)	5.87 (149)	2.80 (4.17)
TL466F	4.66 (118)	6.59 (168)	2.85 (4.24)
TL573F	5.73 (146)	7.67 (195)	2.90 (4.32)
TL789F	7.88 (200)	9.82 (249)	2.95 (4.39)
TL968F	9.68 (246)	11.62 (295)	3.00 (4.46)
TL1184F	11.84 (300)	13.77 (350)	3.05 (4.54)
TL1363F	13.63 (346)	15.57 (395)	3.10 (4.61)
TS-PS	Customer Specified	A + 1.94 (49)	4.03 (5.99)
TL-RB / TL-PR	Customer Specified	A + 1.94 (49)	TL-RB = 3.42 (5.09) / TL-PR = 3.72 (5.54)
TL-AF / TL-AFS	Customer Specified	A + 1.94 (49)	TL-AF = 5.21 (7.76) / TL-AFS = 5.12 (7.62)
TL-PL / TL-AP	Customer Specified	A + 1.94 (49)	TL-PL = 5.21 (7.75) / TL-AP = 7.56 (11.25)



Shown with optional modular sliders.

**Crossbar Styles (Top and Bottom):**

F / PS = Snap-In Molded Plastic Flat Bar    RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar  
 AF = Bolted Aluminum Flat Bar    AFS = Snap-In Aluminum Flat Bar  
 PL = Plastic Lid (Enclosed-Style Carrier)    AP = Aluminum Armor Plate (Enclosed-Style Carrier)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
160*	5.81 (148)	15.75 (400)	14.50 (368)	28.25 (718)
200	7.94 (202)	20.00 (508)	16.70 (424)	35.25 (895)
237	9.81 (249)	23.75 (603)	18.50 (470)	41.00 (1041)
275	11.75 (298)	27.63 (702)	20.50 (521)	47.00 (1194)
350	15.63 (397)	35.38 (899)	24.40 (620)	59.00 (1499)
415	18.94 (481)	42.00 (1067)	27.70 (704)	69.50 (1765)
525	24.69 (627)	53.50 (1359)	33.40 (848)	87.50 (2223)

\*The following options are not available with the 160 curve height: modular sliders, aluminum armor plates, plastic lids.

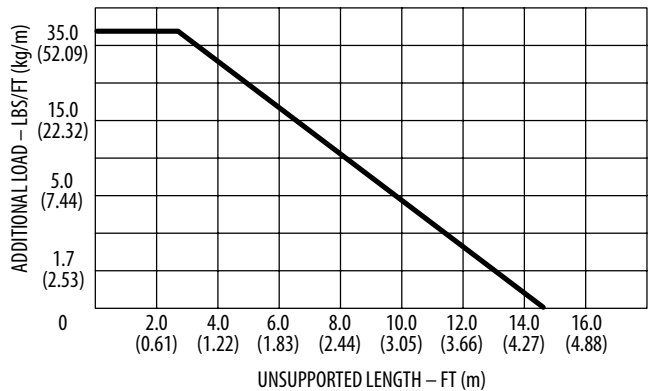
**MODULAR LOW-FRICTION SLIDERS**

Modular sliders are often used in long travel applications in which chain bands glide on each other. Sliders are manufactured from special plastic material that is wear-resistant and provides a low coefficient of friction. Not only do they reduce tow force and wear, but they are removable and easy to replace.



When adding sliders to TL Series, add 0.20" (5 mm) to overall track width ('C' dimension).

**TL SERIES - WEIGHT LOAD**



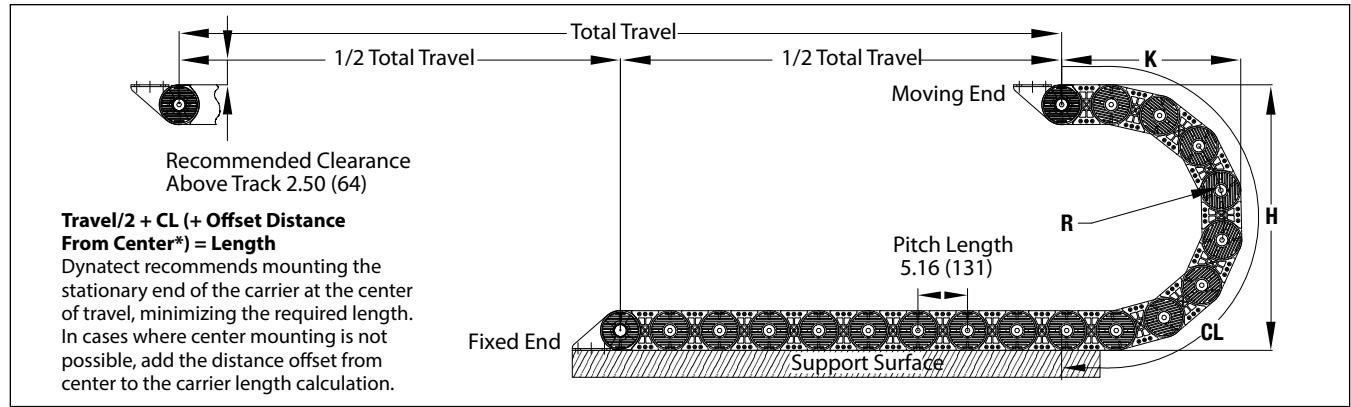
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



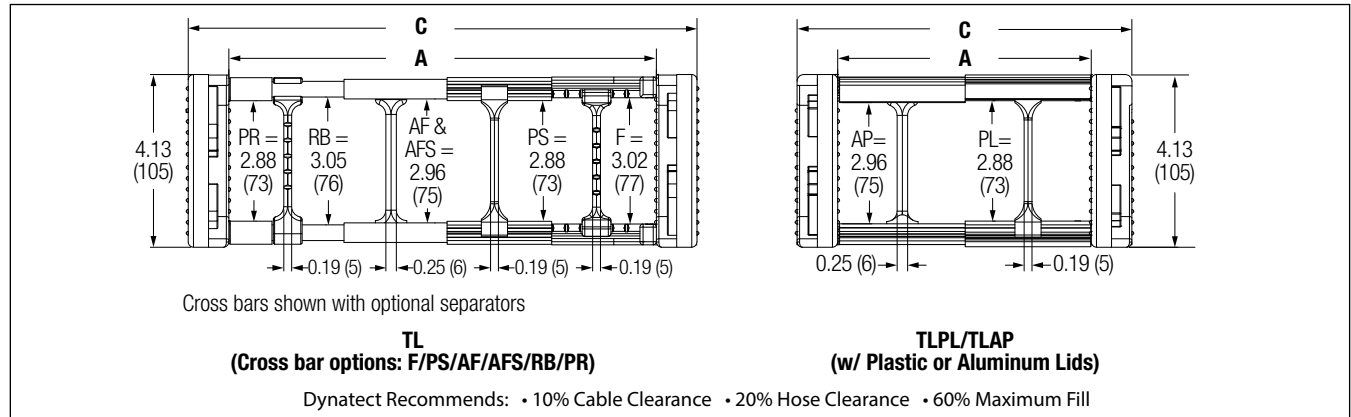
# TL SERIES | NYLATRAC<sup>®</sup> MODULAR (open- & enclosed-style carriers)

## CARRIER SIDE VIEW

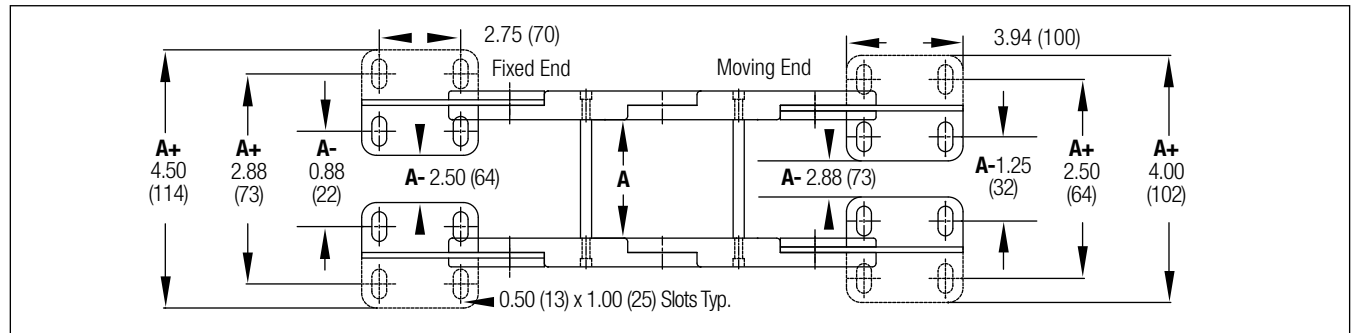
Dimensions in inches (mm)



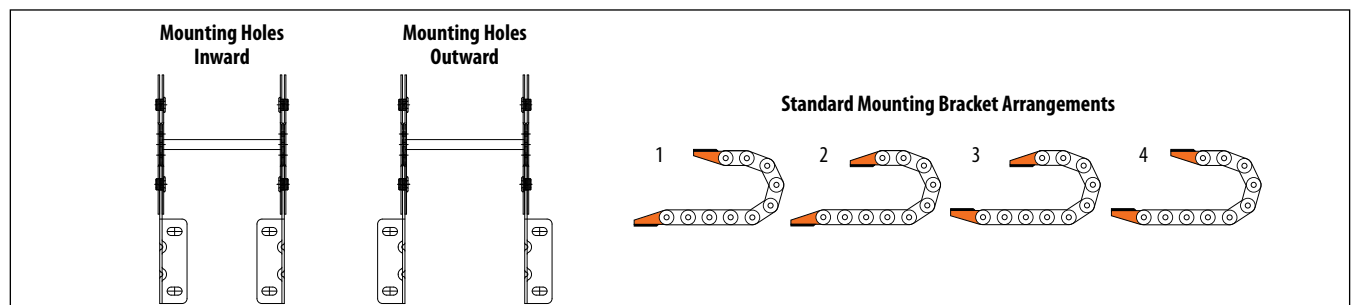
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**NXL SERIES** | NYLATRAC<sup>®</sup> MODULAR (open- & enclosed-style carriers)



Specify part number with dashes Example: NXL-PR-5.00-375-1-120-#2 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement*
	NXL	PR	5.00"	375	1	120"	#2 IN

\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

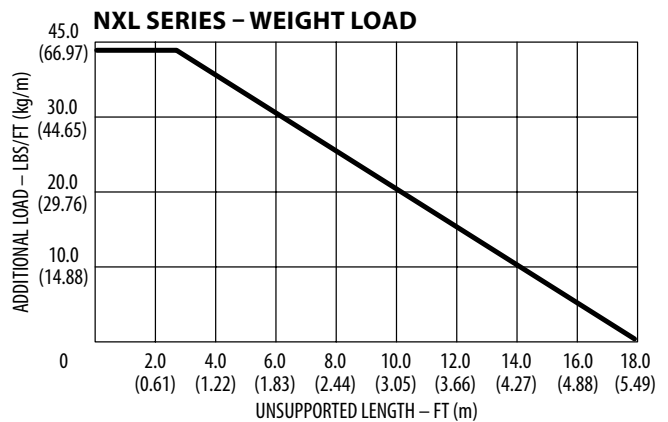
MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
NXL-CC/AF/PR/RB	Customer Specified	A + 2.50 (64)	6.34 (9.43)
NXL-AP	Customer Specified	A + 2.50 (64)	10.40 (---)

**Crossbar Styles:**

AF = Bolted Aluminum Flat Bar    RB = Bolted Aluminum Round Bar  
PR = Poly Roller over Bolted Aluminum Round Bar    AP = Aluminum Armor Plate (Enclosed-Style Carrier)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
240*	9.05 (230)	24.00 (610)	19.50 (495)	43.00 (1092)
270*	10.42 (265)	26.75 (679)	21.00 (533)	47.50 (1207)
300	12.05 (306)	30.00 (762)	22.50 (572)	52.50 (1334)
375	15.80 (401)	37.50 (953)	26.50 (673)	64.50 (1638)
410	17.55 (446)	41.00 (1041)	28.00 (711)	70.00 (1778)
450	19.55 (497)	45.00 (1143)	30.00 (762)	76.00 (1930)
600	27.05 (687)	60.00 (1524)	37.50 (953)	100.00 (2540)

\*Aluminum armor plates are not available on 240 and 270 height.

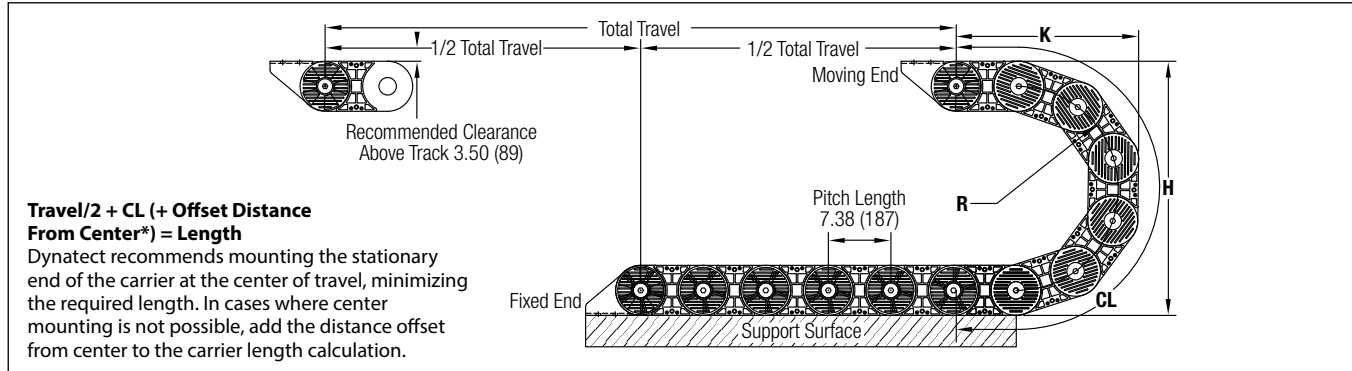


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

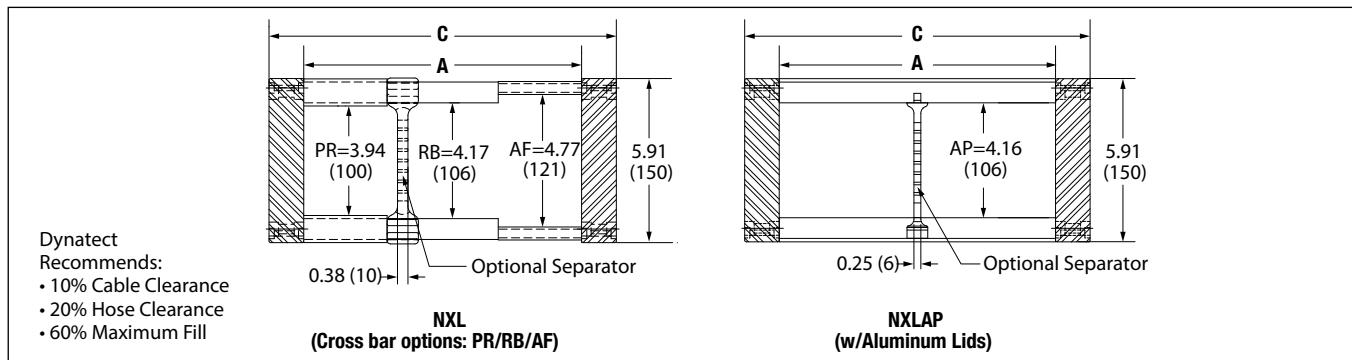
# NXL SERIES | NYLATRAC® MODULAR (open- & enclosed-style carriers)

## CARRIER SIDE VIEW

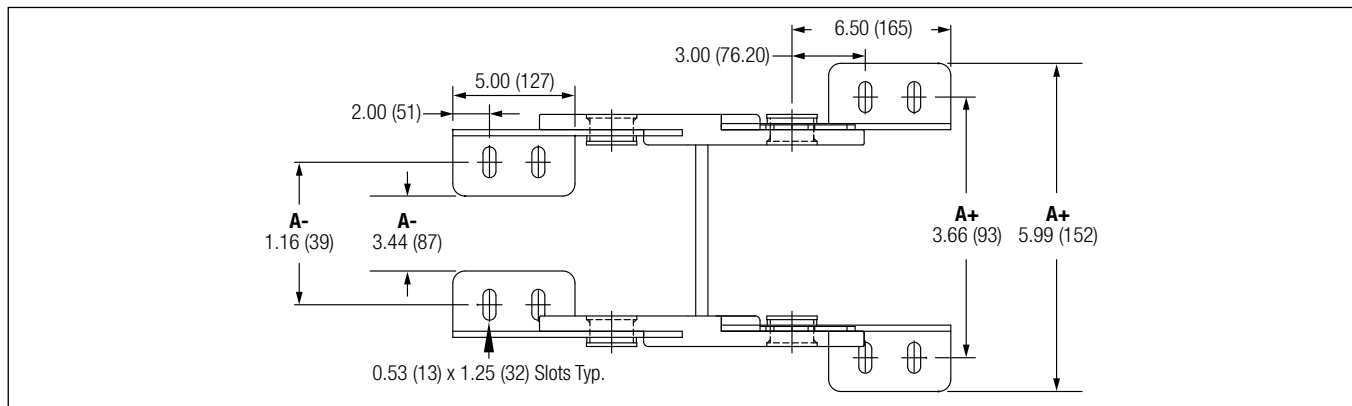
Dimensions in inches (mm)



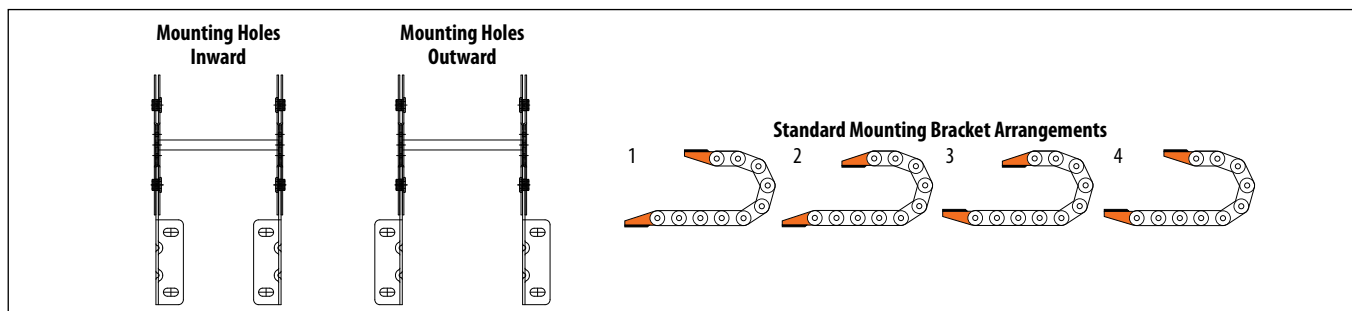
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

## GORTRAC® STEEL | OPEN- & ENCLOSED-STYLE CARRIERS

Gortrac steel carriers are ideal for unique and challenging applications, elevated operating temperatures, and maximum unsupported spans. As the industry leader in metal carrier innovation, Dynatect offers constructions suitable for both heavy “mill-duty” operation, as well as surprisingly lightweight designs without compromising strength.

- Excellent load-bearing and unsupported travel capability (depending on carrier load)
- Longer travels can be achieved with Gortrac Long Travel Support Systems (pages 94-97)
- Unique, patented link designs reduce parts and simplify construction while providing the strongest carriers, at lighter weights, relative to size
- Manufactured from plated or stainless steel – our zinc dichromate plating process offers 70% better corrosion resistance than standard zinc plating

- Open-style, self-cleaning designs allow dirt and debris to be expelled from the carrier, and leave cables/hoses open to regular inspection
- Enclosed-style designs (with bolted aluminum lid armor plates) protect cables/hoses from heavy abrasive and hot chip loads
- Typical applications: mobile construction equipment, cranes, manlifts, aerial work platforms, mill and foundry duty heavy machinery, paper converting equipment, and refining equipment
- Standard pin and snap ring construction of SX, SRC, LRC, XL and XX Series allows adjustment of length with a snap ring tool. Snap ring kits for GX and MRC carriers are available upon request for length modification or repair.

### SA SERIES

#### Features:

- Standard construction: stainless steel link with double locking points and integral flat crossbars
- Custom option: zinc-dichromate plated steel
- Unique one-piece link design results in surprisingly lightweight carrier
- Integral flat crossbars provide added strength

- Self-cleaning link design expels debris from critical areas of the link during operation
- Small curve height

#### Quick Sizing Reference – inches (mm):

- Link Height: 1.00 (25)
- Link Pitch: 1.25 (32)
- Curve Height (‘H’): 3.50 (89)



### SB/SC SERIES

#### Features:

- Standard construction: stainless steel sidebands with round aluminum crossbars
- Custom option: zinc-dichromate plated stainless steel sidebands
- Lightweight carrier provides unsupported spans superior to plastic
- Unlimited cavity width flexibility

#### Crossbar Option:

- PVC Poly rollers

#### Quick Sizing Reference – inches (mm):

##### SB Series

- Link Height: 1.38 (35)
- Link Pitch: 2.00 (51)
- Curve Height (‘H’): 5.50 (140)

#### Quick Sizing Reference – inches (mm):

##### SC Series

- Link Height: 2.00 (51)
- Link Pitch: 2.40 (61)
- Curve Heights (‘H’): 7.50 – 13.25 (191 – 337)



QUOTE REQUEST FORMS: SEE PAGES 100-101.

## GORTRAC<sup>®</sup> STEEL | OPEN- & ENCLOSED-STYLE CARRIERS

### GX SERIES



**Features:**

- Standard construction: zinc-dichromate plated steel link with double locking points and integral flat crossbars alternating top/bottom every other link
- Unique, one-piece link design results in surprisingly lightweight carrier
- Integral flat crossbars provide added strength
- Priced competitively with plastic systems but significantly stronger and longer unsupported span
- Patented half shear lockout system simplifies construction and reduces parts

**Crossbar Options:**

- Bolted aluminum round bars
- PVC poly rollers

**Quick Sizing Reference – inches (mm):**

- Link Height: 2.00 (51)
- Link Pitch: 2.50 (64)
- Curve Heights ('H'): 6.00 – 13.25 (152 – 337)

### MA SERIES **NEW!**



**Features:**

- Standard construction: 3-sided steel link with zinc-dichromate plating, double locking points, and integral flat crossbars alternating top/bottom every other link
- Peanut slots on outside of link allow it to be "self-cleaning"
- Proven extrude technology allows for greater strength and unsupported spans
- One-piece link design with integral flat crossbars provides surprisingly lightweight carrier without sacrificing strength

- Priced competitively with plastic systems but significantly stronger and longer unsupported span
- Streamlined inside window with some details eliminated or moved to outside of link

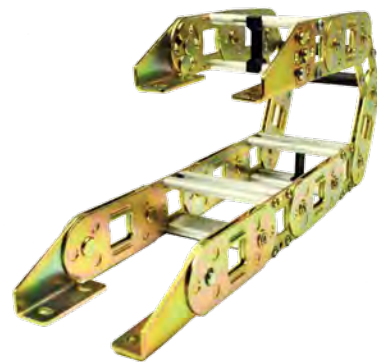
**Crossbar Options:**

- Bolted aluminum round bars
- PVC poly rollers (added to round bar)

**Quick Sizing Reference – inches (mm):**

- Link Height: 2.00 (51)
- Link Pitch: 2.50 (64)
- Curve Heights ('H'): 6.00 – 13.25 (152 – 337)

### MRC SERIES



**Features:**

- Standard construction: zinc-dichromate plated steel sidebands with round aluminum crossbars
- Patented half shear lockout link system simplifies construction by reducing parts
- Unlimited cavity width flexibility
- Non-essential center portions of the link that are not exposed to strain have been removed to further reduce weight

**Crossbar Options:**

- Bolted aluminum flat bar
- PVC poly rollers
- Easy-out aluminum round bar

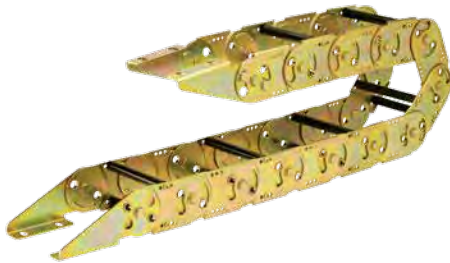
**Quick Sizing Reference – inches (mm):**

- Link Height: 2.00 (51)
- Link Pitch: 3.00 (76)
- Curve Heights ('H'): 7.50 – 17.00 (191 – 432)

**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



## GORTRAC® STEEL | OPEN- & ENCLOSED-STYLE CARRIERS



### SX SERIES

#### Features:

- Standard construction: zinc-dichromate plated steel sidebands with two locking points and round aluminum crossbars
- Self-cleaning link design expels debris from critical areas of the link during operation
- Unlimited cavity width flexibility

#### Crossbar Options:

- Bolted aluminum flat bar
- Snap-in aluminum flat bar
- PVC poly rollers
- Easy-out aluminum round bar

#### Quick Sizing Reference – inches (mm):

- Link Height: 3.20 (81)
- Link Pitch: 4.00 (102)
- Curve Heights ('H'):  
10.13 – 27.31 (257 – 694)



### SRC SERIES

#### Features:

- Standard construction: zinc-dichromate plated steel sidebands with flat aluminum crossbars
- Custom option: stainless steel
- Patented half shear lockout link system simplifies construction by reducing parts
- Unlimited cavity width flexibility
- Non-essential center portions of the link that are not exposed to strain have been removed to further reduce weight
- Available as enclosed-style carrier with bolted aluminum armor plates (side bands are provided without openings)

#### Crossbar Options:

- Bolted aluminum flat bar
- Bolted aluminum round bar
- PVC Poly rollers
- Easy-out aluminum round bar
- Custom-machined cable/hose bar

#### Lid Option:

- Bolted aluminum armor plate

#### Quick Sizing Reference – inches (mm):

- Link Height: 3.00 (76)
- Link Pitch: 4.00 (102)
- Curve Heights ('H'):  
11.00 – 27.50 (279 – 699)



### LRC SERIES

#### Features:

- Standard construction: zinc-dichromate plated steel sidebands with flat aluminum crossbars
- Custom option: stainless steel
- Patented half shear lockout link system simplifies construction by reducing parts
- Unlimited cavity width flexibility
- Non-essential center portions of the link that are not exposed to strain have been removed to further reduce weight
- Available as enclosed-style carrier with bolted aluminum armor plates (side bands are provided without openings)

#### Crossbar Options:

- Bolted aluminum flat bar
- Bolted aluminum round bar
- PVC Poly rollers
- Easy-out aluminum round bar
- Custom-machined cable/hose bar

#### Lid Option:

- Bolted aluminum armor plate

#### Quick Sizing Reference – inches (mm):

- Link Height: 4.00 (102)
- Link Pitch: 5.00 (127)
- Curve Heights ('H'):  
15.00 – 52.50 (381 – 1334)

QUOTE REQUEST FORMS: SEE PAGES 100-101.

## GORTRAC<sup>®</sup> STEEL | OPEN- & ENCLOSED-STYLE CARRIERS



### XL SERIES

**Features:**

- Standard construction: zinc-dichromate plated steel sidebands with 4 locking points and round aluminum crossbars
- Custom option: stainless steel; heavy "mill-duty" construction
- Unlimited cavity width flexibility
- Available as enclosed-style carrier with bolted aluminum armor plates (XL6)

**Crossbar Options:**

- Bolted aluminum round bar
- Bolted aluminum flat bar
- PVC Poly rollers
- Custom machined cable/hose bar
- Custom formed steel channel flat bar

**Lid Option (XL6 Models):**

- Bolted aluminum armor plate

**Quick Sizing Reference – inches (mm): XL6**

- Link Height: 5.91 (150)
- Link Pitch: 7.38 (188)
- Curve Heights ('H'): 26.00 – 65.00 (660 – 1651)

**Quick Sizing Reference – inches (mm): XL8**

- Link Height: 7.87 (200)
- Link Pitch: 9.33 (237)
- Curve Heights ('H'): 29.00 – 80.00 (737 – 2032)

**Quick Sizing Reference – inches (mm): XL10**

- Link Height: 9.84 (250)
- Link Pitch: 11.67 (296)
- Curve Heights ('H'): 48.00 – 80.00 (1219 – 2032)



### XX SERIES **NEW!**

**Features:**

- Standard construction: zinc-dichromate plated steel sidebands with 3 locking points and round aluminum crossbars
- Self-cleaning link design expels debris from critical areas of the link during operation
- Unlimited cavity width flexibility

**Crossbar Options:**

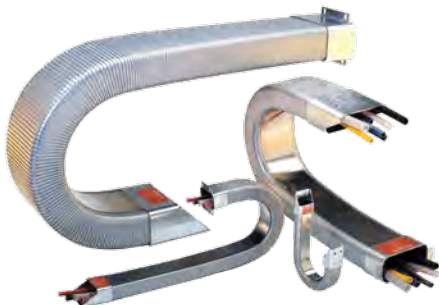
- Bolted aluminum round bar
- Bolted aluminum flat bar
- PVC Poly rollers
- Custom-machined cable/hose bar
- Custom formed steel channel flat bar

**Quick Sizing Reference – inches (mm):**

- Link Height: 6.00 (152)
- Link Pitch: 7.38 (187)
- Curve Heights ('H'): 26.00 – 60.00 (660 – 1524)

## GORTUBE<sup>®</sup> STEEL | ENCLOSED-STYLE CARRIERS

Fully-enclosed Gortube carriers offer the best protection from hot and abrasive elements and liquids, and can operate at faster speeds and accelerations.



**Features:**

- Conduit-style galvanized steel tube fully encloses cables/hoses to resist hot chips, swarf, cutting oils and lubricants
- Smooth, low-noise operation; suitable for fast speeds and accelerations

- Construction options for high temperature, corrosive environments, or multi-axis and rotational applications
- Optional black oxide finish
- Wide range of sizes – 24 different size/radius combinations

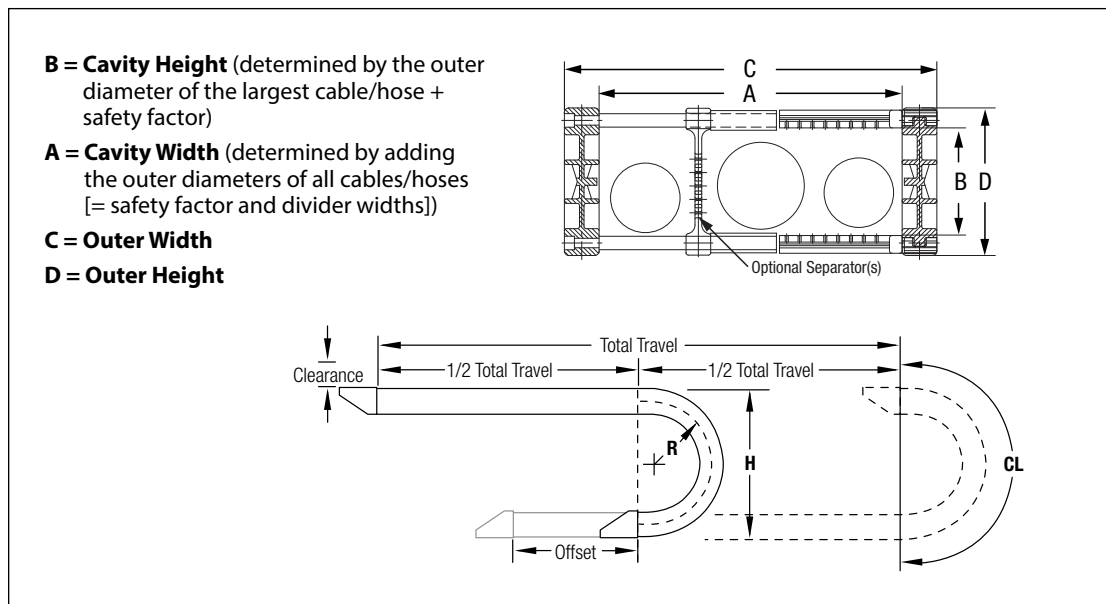
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

# METAL CARRIERS | QUICK SELECTION GUIDE

MODEL NO.	INNER HEIGHT Dimension B inches (mm)	INNER WIDTH RANGE Dimension A inches (mm)	OUTER HEIGHT Dimension D inches (mm)	OUTER WIDTH RANGE Dimension C inches (mm)	LINK PITCH inches (mm)
<b>GORTRAC<sup>®</sup> OPEN-STYLE METAL CARRIERS</b>					
SA	.89 (22)	1.29 (33)	1.00 (25)	1.29 (33)	1.25 (32)
SB*	.62 (16) - .75 (19)	Customer Specified	1.38 (35)	Specified Width + .50 (13)	2.00 (51)
SC*	1.21 (31) - 1.38 (35)	Customer Specified	2.00 (51)	Specified Width + .50 (13)	2.40 (61)
GX*	1.51 (38) - 1.70 (43)	2.25 (57) - 7.00 (178)	2.00 (51)	2.69 (68) - 7.44 (189)	2.50 (64)
MA*	1.50 (38) - 1.73 (44)	4.50 (114) - 5.50 (140)	2.00 (51)	4.88 (124) - 5.88 (149)	2.50 (64)
MRC*	1.08 (27) - 1.25 (32)	Customer Specified	2.00 (51)	Specified Width + .62 (16)	3.00 (76)
SX*	1.76 (45) - 2.00 (51)	Customer Specified	3.20 (81)	Specified Width + .58 (15)	4.00 (102)
SRC*	1.76 (45) - 1.97 (50)	Customer Specified	3.00 (76)	Specified Width + .69 (18)	4.00 (102)
LRC*	2.76 (70) - 2.97 (75)	Customer Specified	4.00 (102)	Specified Width + .69 (18)	5.00 (127)
XL6*	3.86 (98) - 4.08 (104)	Customer Specified	5.91 (150)	Specified Width + 1.25 (32)	7.38 (188)
XX6*	4.18 (106) - 4.40 (112)	Customer Specified	6.00 (152)	Specified Width + 0.81 (21)	7.38 (188)
XL8*	5.82 (148) - 6.05 (154)	Customer Specified	7.87 (200)	Specified Width + 1.25 (32)	9.33 (237)
XL10*	8.09 (206) - 8.32 (211)	Customer Specified	9.84 (250)	Specified Width + 1.25 (32)	11.67 (296)

\*Multiple crossbar styles available – see specification page for options and inner height (dimension 'B').

<b>GORTRAC ENCLOSED-STYLE METAL CARRIERS</b>					
SRC-AP (Aluminum Armor Plate)	1.76 (45)	Customer Specified	3.00 (76)	Specified Width + .69 (18)	4.00 (102)
LRC-AP (Aluminum Armor Plate)	2.76 (70)	Customer Specified	4.00 (102)	Specified Width + .69 (18)	5.00 (127)
XL6-AP (Aluminum Armor Plate)	4.17 (106)	Customer Specified	5.91 (150)	Specified Width + 1.25 (32)	7.38 (188)
<b>GORTUBE<sup>®</sup> ENCLOSED-STYLE METAL CARRIERS</b>					
Gortube (Various)	.62 (16) - 4.02 (102)	.90 (23) - 8.35 (121)	.79 (20) - 4.33 (110)	1.18 (30) - 8.66 (220)	n/a



## METAL CARRIERS | QUICK SELECTION GUIDE

MINIMUM BENDING RADIUS Dimension R inches (mm)	MOUNTING HEIGHT RANGE Dimension H inches (mm)	MAXIMUM UNSUPPORTED SPAN feet	SEPARATORS AVAILABLE	PAGE NUMBER(S)	MODEL NO.
1.25 (32)	3.50 (89)	6.2	No	154-155	SA
2.06 (52)	5.50 (140)	7	✓	156-157	SB*
2.75 (70) - 5.62 (143)	7.50 (191) - 13.25 (337)	10.5	✓	156-157	SC*
2.00 (51) - 5.63 (143)	6.00 (152) - 13.25 (337)	FB 11.8 / RB 12.75	No	158-159	GX*
2.00 (51) - 5.63 (143)	6.00 (152) - 13.25 (337)	14	No	160-161	MA*
2.75 (70) - 7.50 (191)	7.50 (191) - 17.00 (432)	15.8	✓	162-163	MRC*
3.47 (88) - 12.06 (306)	10.13 (257) - 27.31 (694)	21.25	✓	164-165	SX*
4.00 (102) - 12.25 (311)	11.00 (279) - 27.50 (699)	21.75	✓	166-167	SRC*
5.50 (140) - 24.25 (616)	15.00 (381) - 52.50 (1334)	24	✓	166-167	LRC*
10.05 (255) - 29.55 (750)	26.00 (660) - 65.00 (1651)	31.5	✓	170-171	XL6*
10.00 (254) - 27.00 (686)	26.00 (660) - 60.00 (1524)	28	✓	168-169	XX6*
10.57 (268) - 36.07 (916)	29.00 (737) - 80.00 (2032)	35	✓	172-173	XL8*
19.08 (485) - 35.08 (891)	48.00 (1219) - 80.00 (2032)	40	✓	172-173	XL10*
5.25 (133) - 12.25 (311)	13.50 (343) - 27.50 (699)	21.25 ft	✓	166-167	SRC-AP (Aluminum Armor Plate)
8.00 (203) - 24.25 (616)	20.00 (508) - 52.50 (1334)	24 ft	✓	166-167	LRC-AP (Aluminum Armor Plate)
15.80 (401) - 29.55 (750)	37.50 (953) - 65.00 (1651)	31.5 ft	✓	170-171	XL6-AP (Aluminum Armor Plate)
1.80 (46) - 13.80 (351)	4.40 (112) - 30.70 (780)	Varies	No	174-177	Gortube (Various)

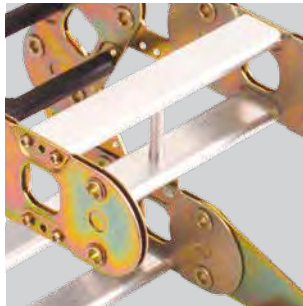
CONSTRUCTION	STANDARD OPERATING TEMPERATURES	
	MINIMUM	MAXIMUM
Glass-filled nylon	-40°F (-40°C)	250°F (121°C)
Plated steel	-40°F (-40°C)	140°F (160°C)
All stainless steel	-40°F (-40°C)	617°F (325°C)
Stainless steel with aluminum crossbars	-13°F (-25°C)	482°F (250°C)
Stainless steel with nylon components	-40°F (-40°C)	250°F (121°C)
Plated steel with nylon components	-40°F (-40°C)	140°F (60°C)
Gortube	32°F (0°C)	212°F (100°C)

Visit [Dynatect.com](http://Dynatect.com)  
for 2D and 3D drawings.

## CROSSBARS, WINDOW EXTENDERS, ARMOR PLATES



Aluminum round bar



Bolted aluminum flat bar

### ALUMINUM CROSSBARS

- Excellent low-friction, high-strength alternative to standard plastic bars
- Provided in customer-specified cavity widths
- Bolt-in flat bar design offers maximum torsional stability
- Snap-in flat bar design allows quick cavity access
- Available on SX, SRC, LRC, XX and XL Series



PVC Poly Roller over bolted aluminum round bar



Bolted separator with PVC Poly Roller

### PVC POLY ROLLERS

- Provide a low-friction, mechanical wear surface ideal for hoses and soft-jacketed cables
- Can be added to crossbars, vertical separators or horizontal dividers using round bars
- Available on any carrier utilizing aluminum round bars



## CROSSBARS, WINDOW EXTENDERS, ARMOR PLATES



### E-Z OUT CROSSBARS

- Boltless, snap-out removal system using innovative spring-loaded pin design
- Offers quick interior accessibility
- Works with aluminum round bars
- Poly rollers can be incorporated for lower wear requirements
- Available on MRC, SX, SRC and LRC Series carriers



### WINDOW EXTENDERS

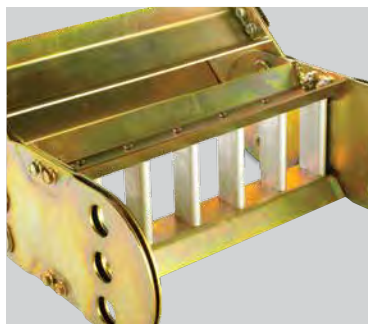
- Provide extra interior space in many standard link sizes
- Available in both standard and custom configuration
- Utilize various crossbar styles (flat, round, poly rollers and custom formed)
- Can be easily added to most carriers



### ARMOR PLATE STYLE ALUMINUM LIDS

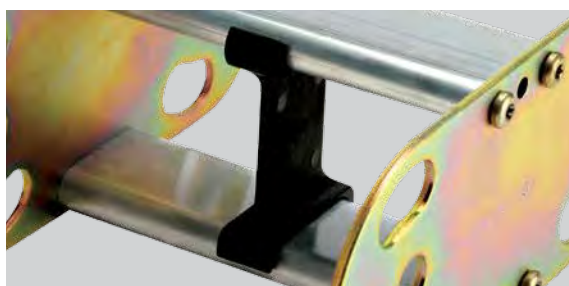
- Offer maximum protection against hot chips and heavy debris
- Ideal for severe and challenging applications (e.g., machine tools, mills, foundries)

## SEPARATORS, CABLE/HOSE SLEEVES, MACHINED CABLE/HOSE BARS



### CAVITY SEPARATION

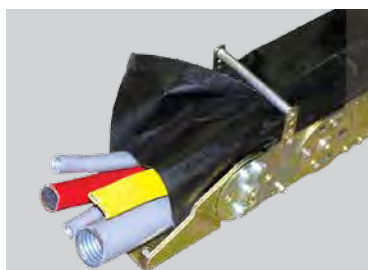
In applications with multiple cables and hoses, cavity separation is a simple, cost-effective method for preventing wear and entanglement. To achieve optimal separation, it is important that each individual compartment be less than twice the height of the cables/hoses inside. This will prevent them from crossing over each other and twisting. Proper separation reduces jacket wear and the potential for cables to corkscrew. Cavity separation can be achieved with simple, snap in vertical separators, or through a more sophisticated horizontal divider or shelving system that will optimize cavity space. The Dynatect Engineering Department can design a cavity separation system that is ideal for your specific application.



### VERTICAL SEPARATORS

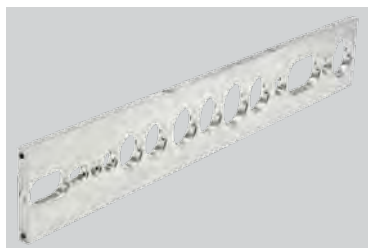
- Provide multiple compartments within a single link\*
- Snap or bolt into carrier crossbars
- Available variety of styles, including stationary and rolling designs
- Can be installed every link, or staggered for economy
- Available on most carriers

\*When sizing compartments, Dynatect recommends a safety factor of an additional 10% for cables and 20% for hoses.



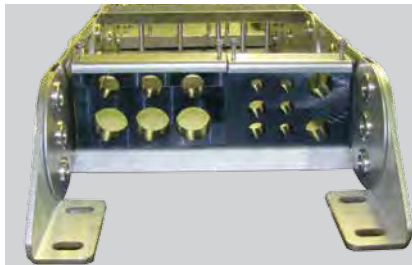
### CABLE/HOSE SLEEVES

- Simple, reliable and cost-effective method to protect dynamic cables and hoses, either in a carrier or by themselves
- Available with zipper, or hook and loop fasteners
- Wide variety of materials for diverse application requirements
- Provides protection from elements (ozone, heat and liquids)
- Increases machine operator protection
- Applications: Hydraulic hose containment, protection of highly sensitive cables, electrical noise interference, aesthetic enhancement



### MACHINED CABLE/HOSE BARS

- Optimal placement – ensures each cable/hose rides neutral axis of carrier
- Minimal wear – prolongs jacket and conductor life of cables/hoses
- Available in aluminum (pictured) or plastic block-style crossbars
- Custom-bored to specific cable/hose diameters



## CABLE/HOSE CLAMPS, BRACKET OPTIONS



Custom UHMW Clamp

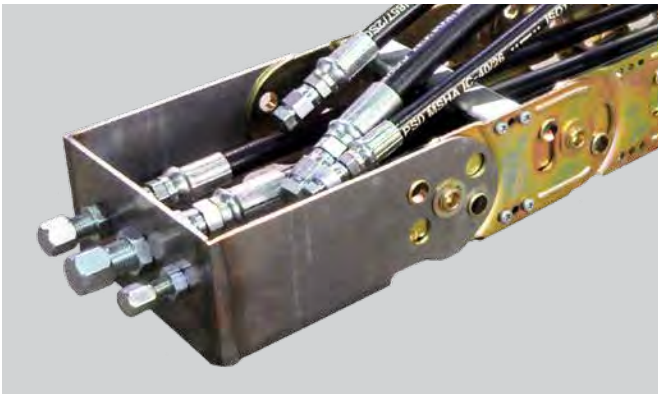


Gortrac Rail Clamping System

### CABLE/HOSE CLAMPS

- Extend cable/hose life - relieves strain
- Standard and custom designs available
- Fast and simple installation in virtually any application
- High pressure hose clamping requirements can be accommodated
- Gortrac Rail Clamping System
- Custom UHMW clamps available

See pages 88-89 for more information and specifications.



Custom mounting bracket with integrated bulk-head plate

### MOUNTING OPTIONS

In addition to standard brackets, Dynatect offers other styles of brackets and options to simplify installation.

- Custom mounting brackets can be provided for drop-in replacement on all carrier brands
- Universal brackets are available
- Brackets with zip tie bars can be added to SRC, LRC, SX and XL6 Series models (see below)



### ZIP TIE MOUNTING BAR

- Zip tie bars integrated into mounting brackets
- Tiered structure for easy access
- Easily removable clamping bars
- Double rows of large fingers hold more zip ties
- Anti-slip ridges on bar prevent cable slippage
- Available on SRC, LRC, SX and XL6 Series carriers

**SA SERIES** | GORTRAC<sup>®</sup> STEEL (open-style carriers)



**NEW – SMALLEST STEEL CARRIER CURVE HEIGHT OF ONLY 3.5 INCHES (89mm)!**

**Key Features:**

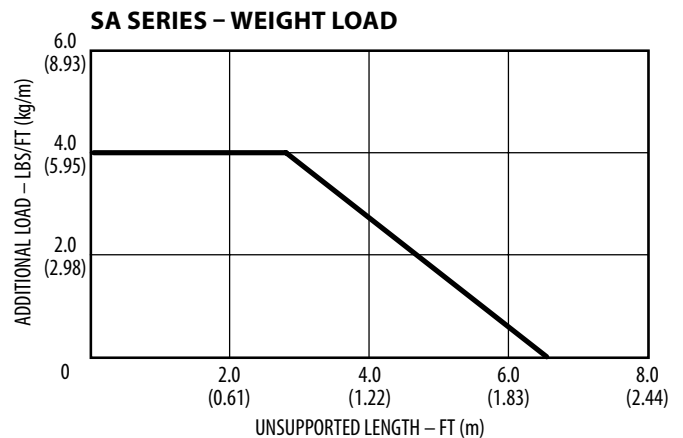
- Great for small O.D. wire management in high temperature applications such as thermal couple wires
- Self-cleaning link design expels debris from critical areas of the link during operation
- Standard construction is stainless steel. (Plated steel can be custom ordered)

Specify part number with dashes Example: SA-35-15-#1 IN	Model	Height	Length	Bracket Arrangement*
	SA	35	15"	#1 IN

\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)	
SA	0.94 (24)	1.29 (33)	0.70 (1.04)	
HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
35	1.25 (32)	3.50 (89)	3.00 (76)	6.43 (163)



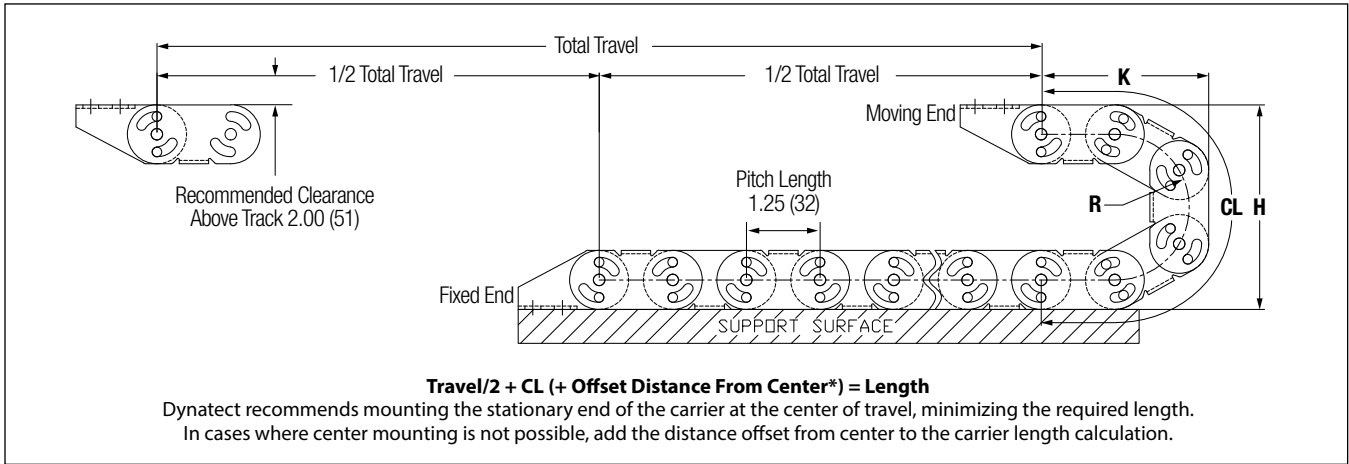
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



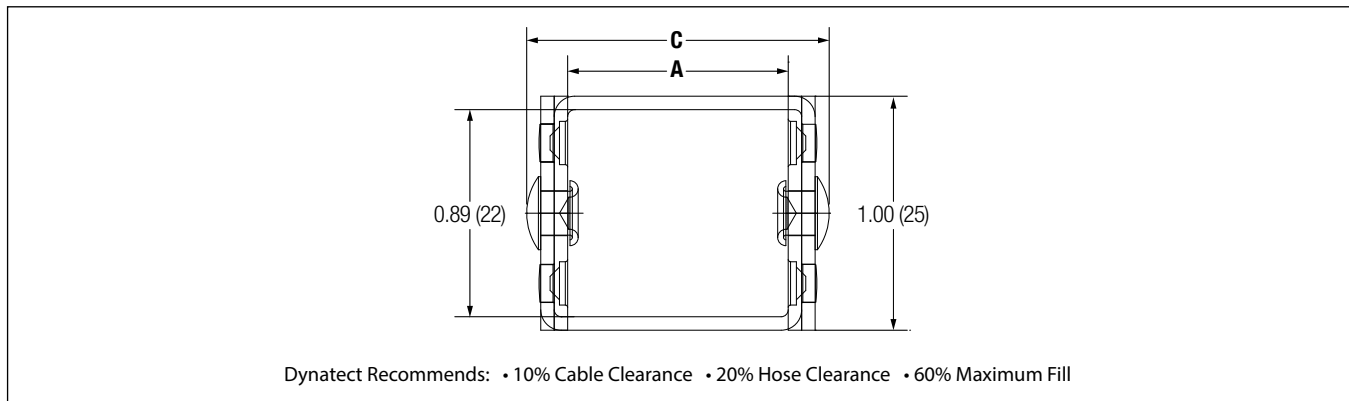
## SA SERIES | GORTRAC<sup>®</sup> STEEL (open-style carriers)

### CARRIER SIDE VIEW

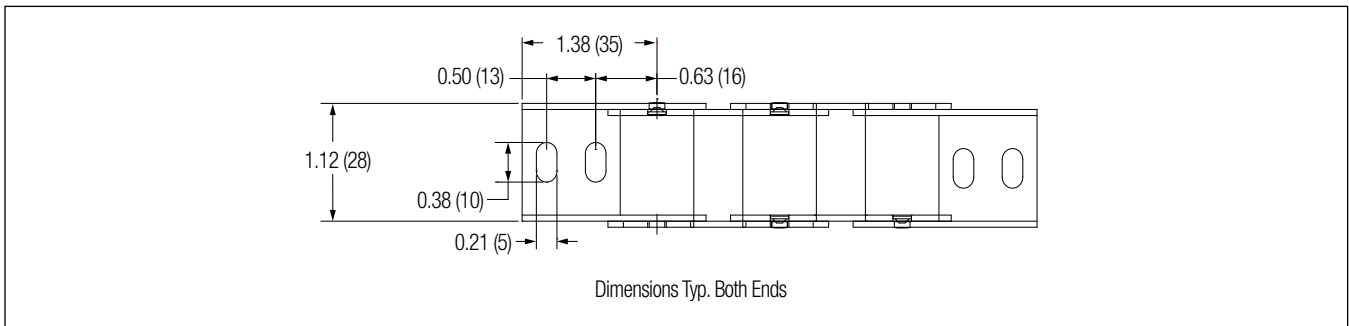
Dimensions in inches (mm)



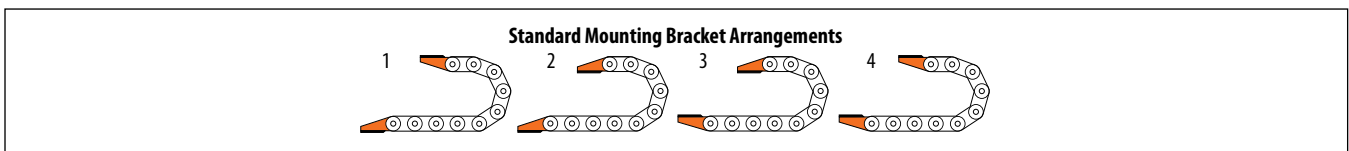
### CARRIER CROSS SECTION



### TOP VIEW MOUNTING BRACKET



### BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.



**SB/SC SERIES** | GORTRAC<sup>®</sup> STEEL (open-style carriers)



SB Series ("RB" Crossbar)



SC Series ("PR" Crossbar)

Specify part number with dashes Example: SB-RB-3.00-55-1-48-#1 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement*
		SB	RB	3.00"	55	1	48"

\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

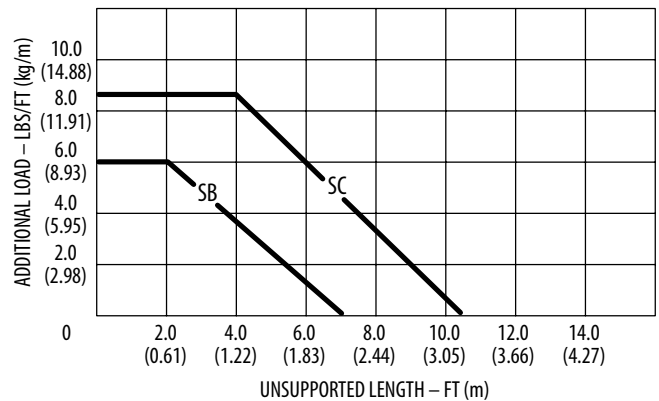
MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
SB	Customer Specified	A + 0.50 (13)	1.08 (1.61)
SC	Customer Specified	A + 0.50 (13)	1.72 (2.56)

**Crossbar Styles:**

RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
SB - 55	2.06 (52)	5.50 (140)	4.75 (121)	10.50 (267)
SC - 75	2.75 (70)	7.50 (191)	6.75 (171)	14.50 (368)
SC - 115	4.75 (121)	11.50 (292)	8.75 (222)	21.00 (533)
SC - 1325	5.62 (143)	13.25 (337)	9.63 (245)	24.00 (610)

**SB/SC SERIES - WEIGHT LOAD**

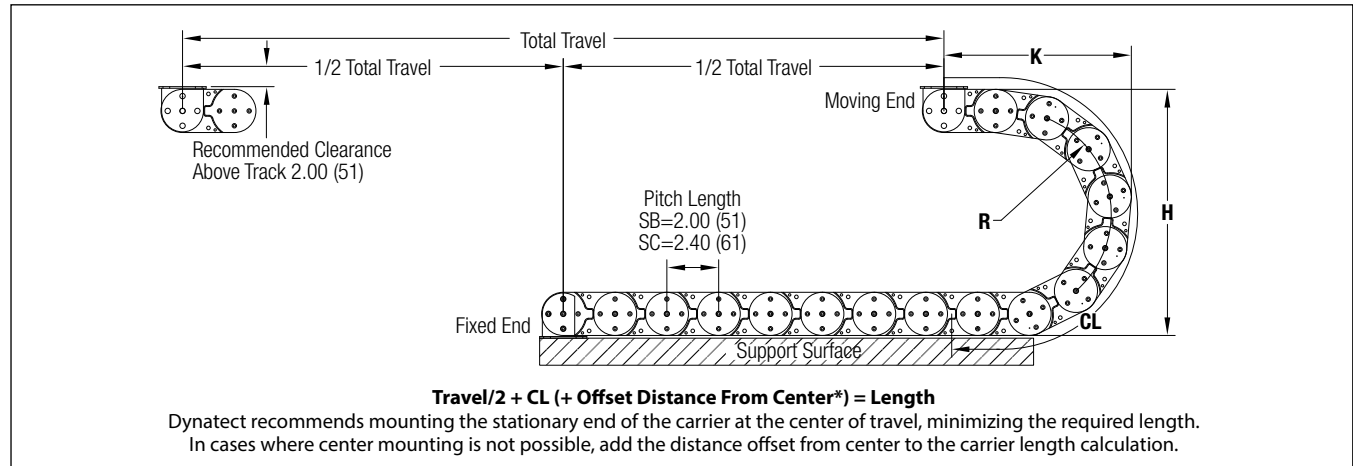


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

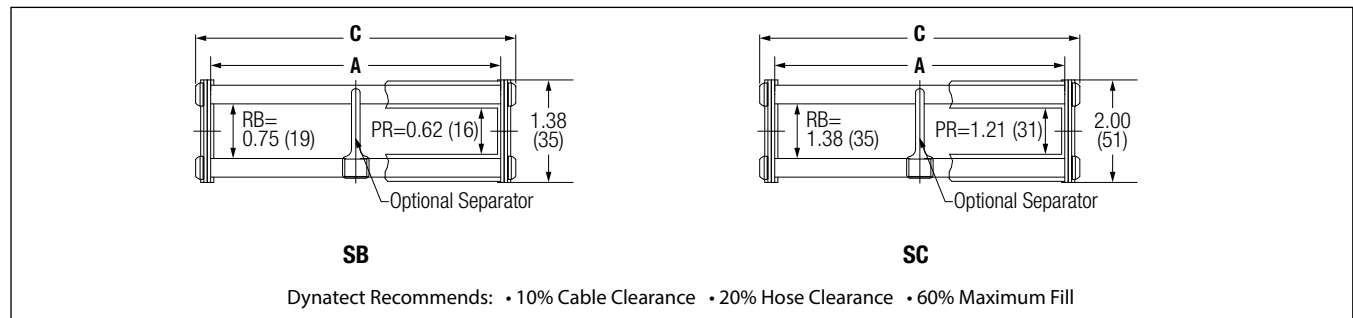
# SB/SC SERIES | GORTRAC<sup>®</sup> STEEL (open-style carriers)

## CARRIER SIDE VIEW

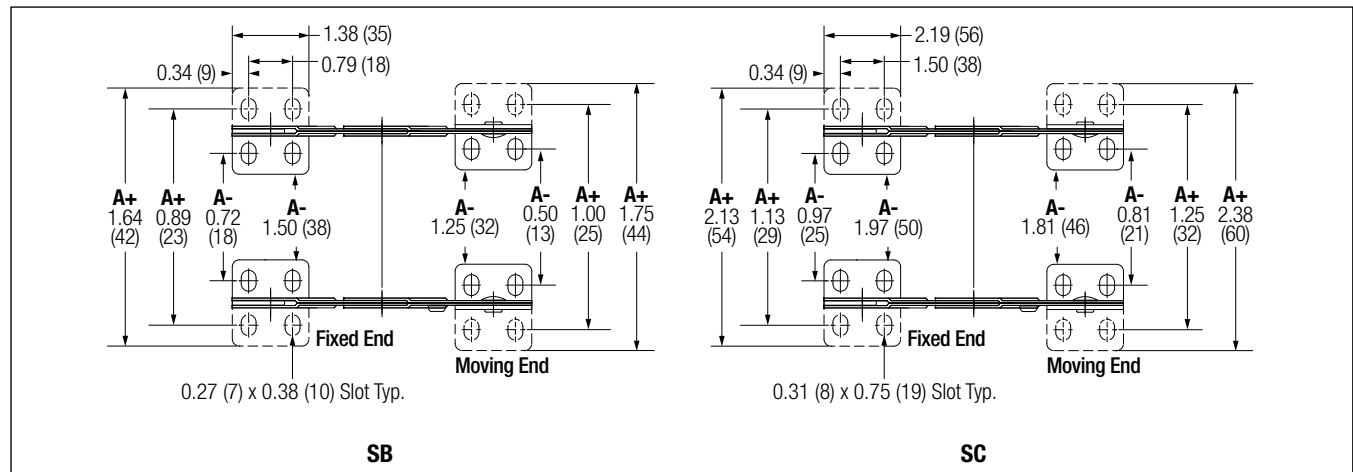
Dimensions in inches (mm)



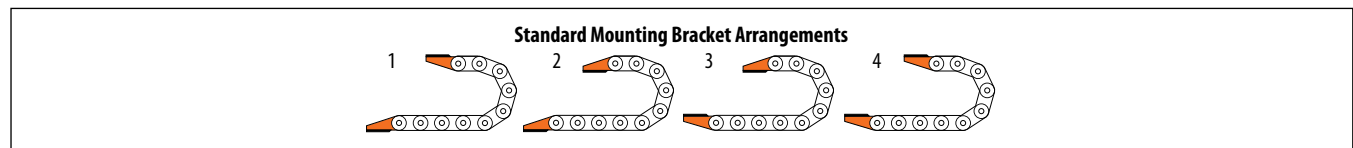
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**GX SERIES | GORTRAC<sup>®</sup> STEEL** (open-style carriers)



Specify part number with dashes Example: GX225-FB-60-35-#1 IN	Model	Bar Style*	Height	Length	Bracket Arrangement**
	GX225	FB	60	35"	#1 IN

\*Crossbar options: 1) FB = steel crossbar alternating inside/outside radius (standard construction).  
2) RB/PR = aluminum round bar 'RB'/poly roller 'R' on inside radius (optional construction).

\*\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

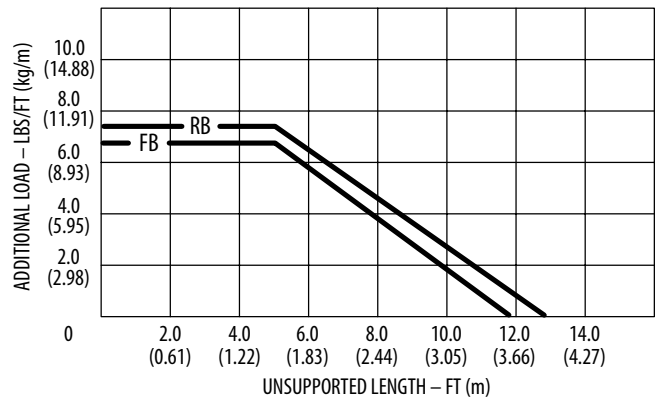
MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
GX225	2.25 (57)	2.69 (68)	1.80 (2.68)
GX300	3.00 (76)	3.44 (87)	1.90 (2.83)
GX450	4.50 (114)	4.94 (125)	2.00 (2.98)
GX550	5.50 (140)	5.94 (151)	2.10 (3.12)
GX700	7.00 (178)	7.44 (189)	2.20 (3.27)

**Crossbar Styles:**

FB = Alternating Link Flat Bar    RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
60	2.00 (51)	6.00 (152)	5.50 (140)	11.28 (287)
75	2.75 (70)	7.50 (191)	6.25 (159)	13.64 (346)
100	4.00 (102)	10.00 (254)	7.50 (191)	17.57 (446)
1325	5.63 (143)	13.25 (337)	9.13 (232)	22.69 (576)

**GX SERIES – WEIGHT LOAD**

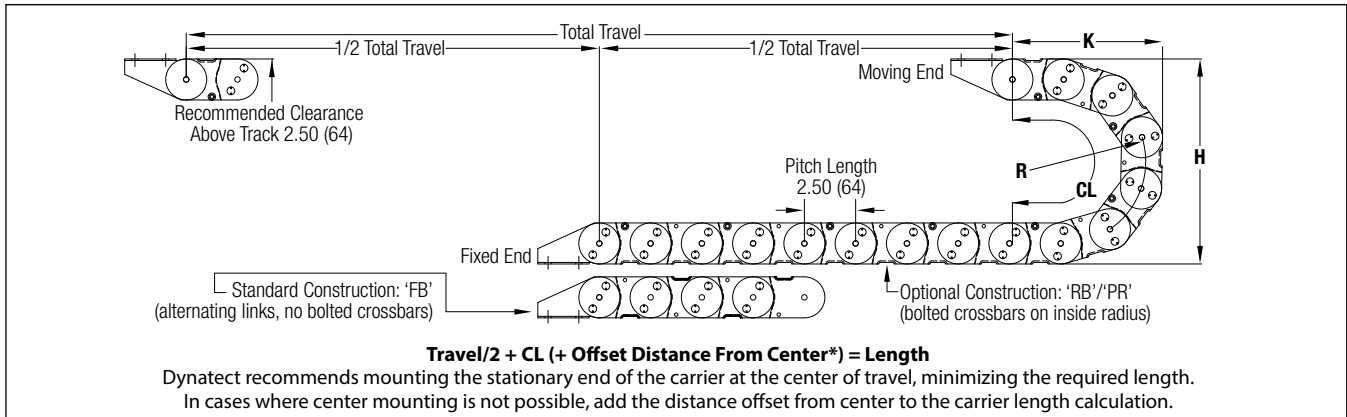


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

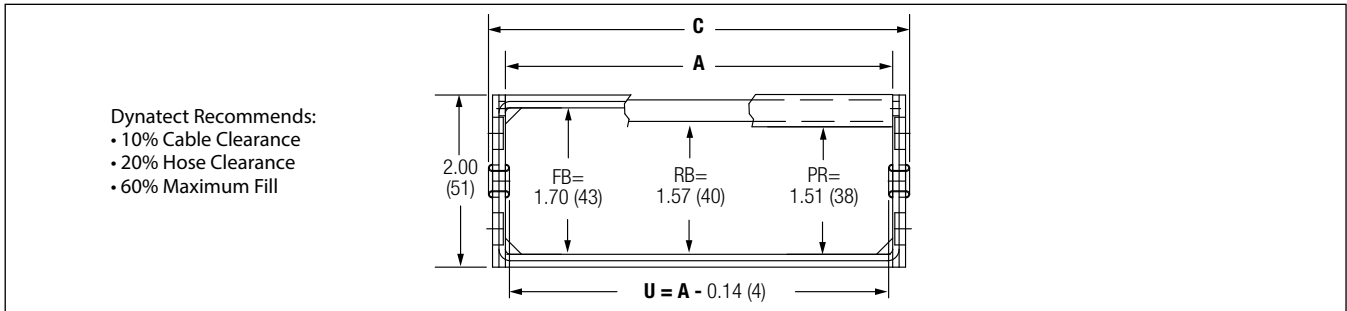
# GX SERIES | GORTRAC<sup>®</sup> STEEL (open-style carriers)

## CARRIER SIDE VIEW

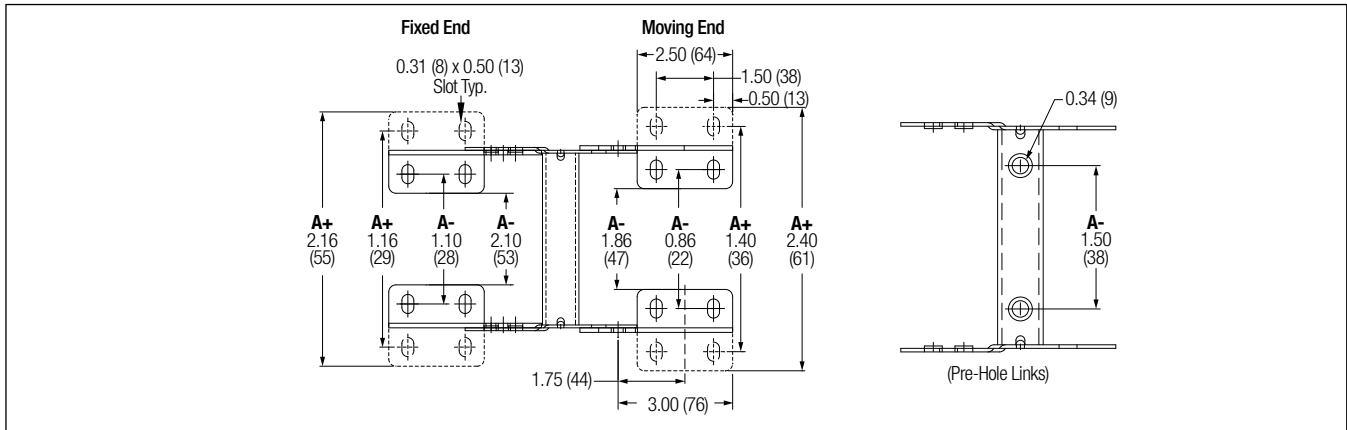
Dimensions in inches (mm)



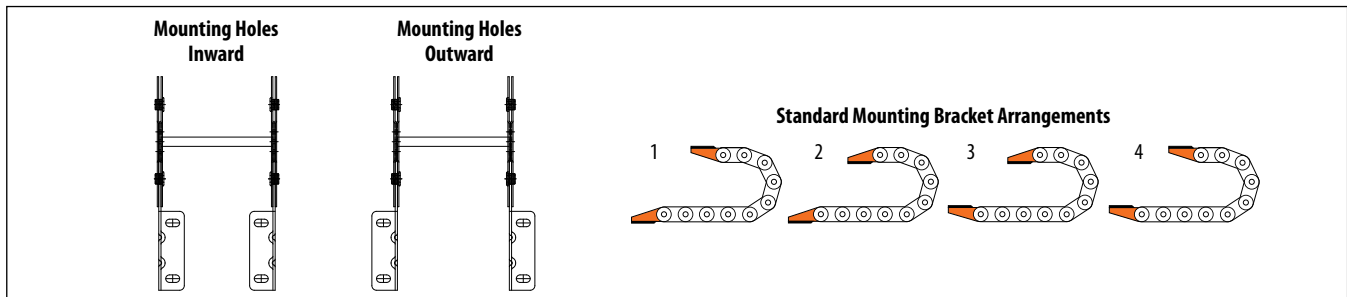
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**MA SERIES | GORTRAC<sup>®</sup> STEEL** (open-style carriers)



**NEW SERIES!**

Specify part number with dashes Example: MA450-RB-75-37.5-#1 IN	Model	Bar Style*	Height	Length	Bracket Arrangement**
	MA450	RB	75	37.5"	#1 IN

\*Crossbar options: 1) FB = steel crossbar alternating inside/outside radius (standard construction).  
2) RB/PR = aluminum round bar 'RB'/poly roller 'R' on inside radius (optional construction).

\*\*Specify bracket flange: inward (IN) or outward (OUT).

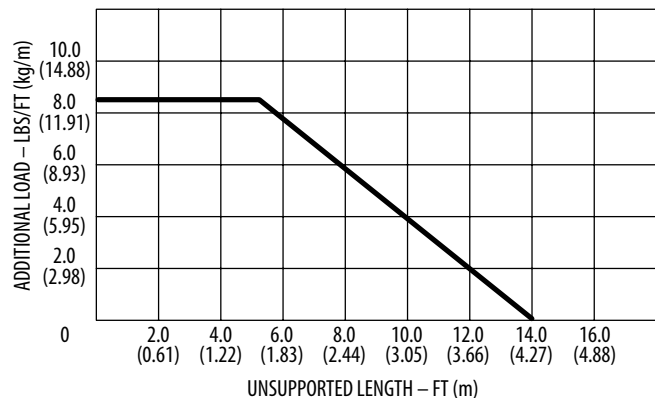
**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)	
MA450	4.50 (114)	4.88 (124)	2.00 (2.98)	
MA550	5.50 (140)	5.88 (149)	2.10 (3.13)	

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
60	2.00 (51)	6.00 (152)	5.50 (140)	11.28 (287)
75	2.75 (70)	7.50 (191)	6.25 (178)	13.64 (346)
100	4.00 (102)	10.00 (254)	7.50 (191)	17.57 (5446)
1325	5.63 (143)	13.25 (337)	9.13 (232)	22.69 (576)

**MA SERIES – WEIGHT LOAD**



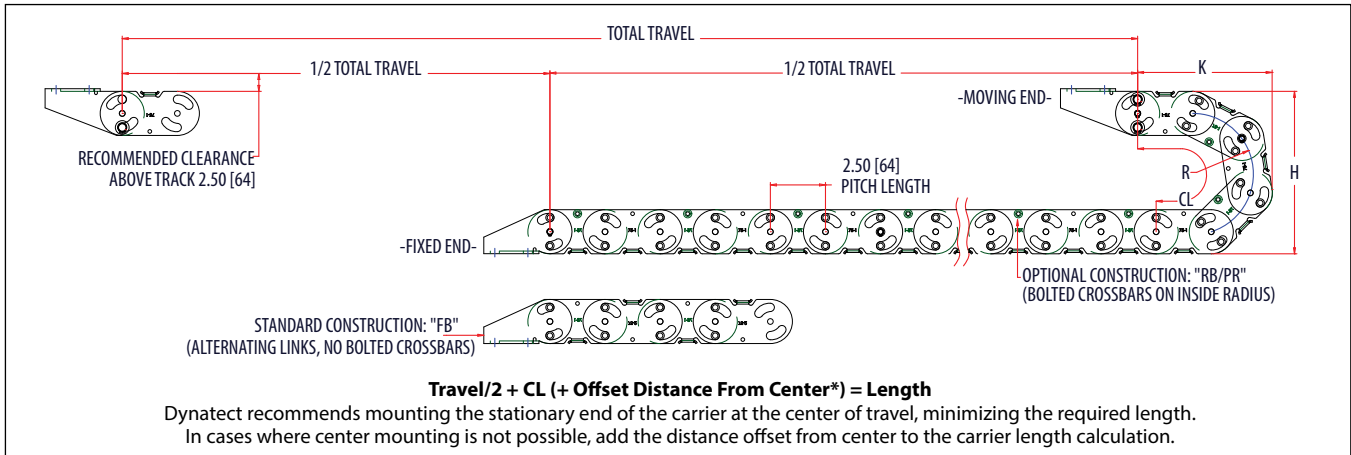
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



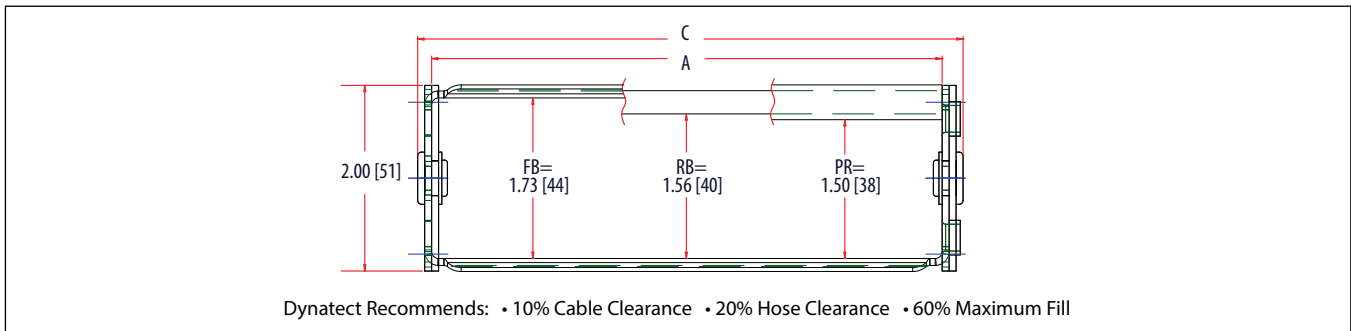
# MA SERIES | GORTRAC® STEEL (open-style carriers)

## CARRIER SIDE VIEW

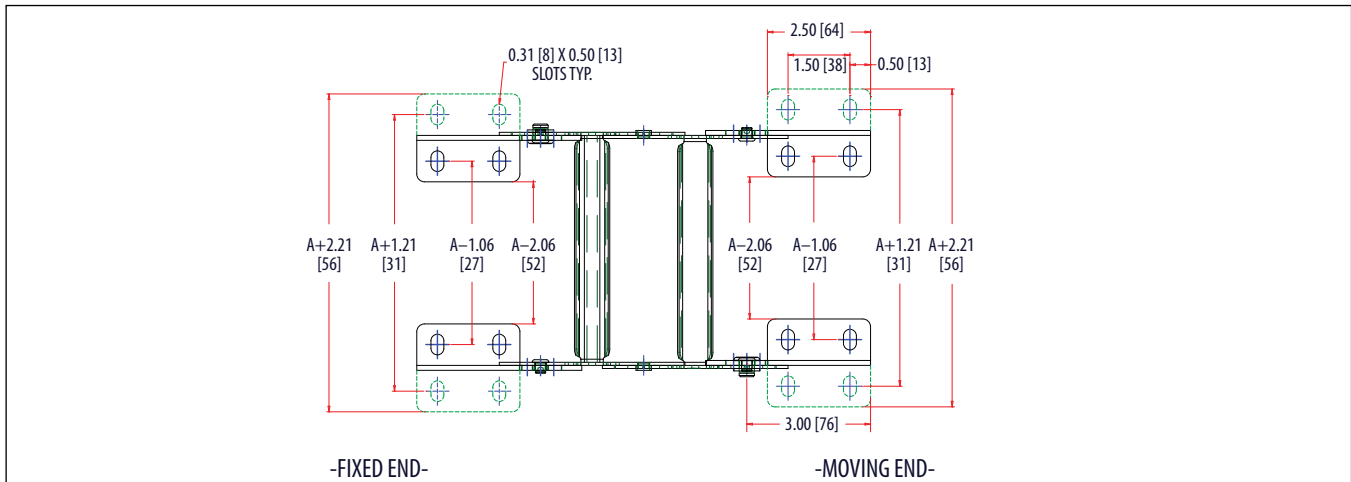
Dimensions in inches (mm)



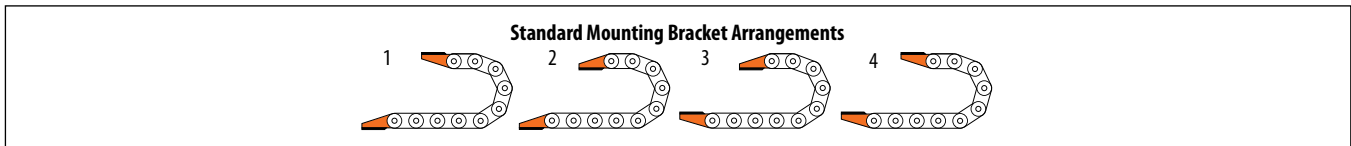
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET

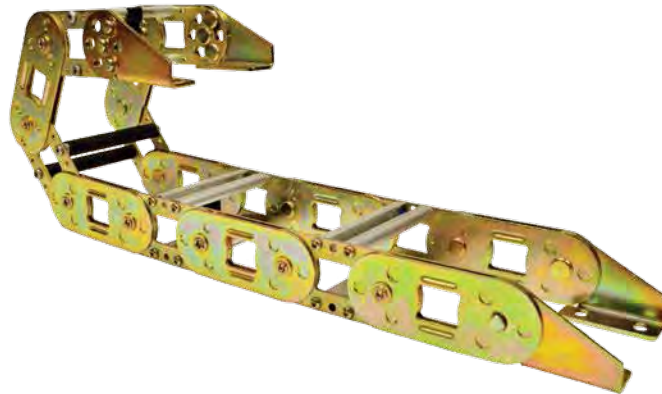


## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**MRC SERIES** | GORTRAC<sup>®</sup> STEEL (open-style carriers)



Specify part number with dashes Example: MRC-AF-4.00-75-1-90-#1 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement*
	MRC	AF	4.00"	75	1	90"	#1 IN

\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

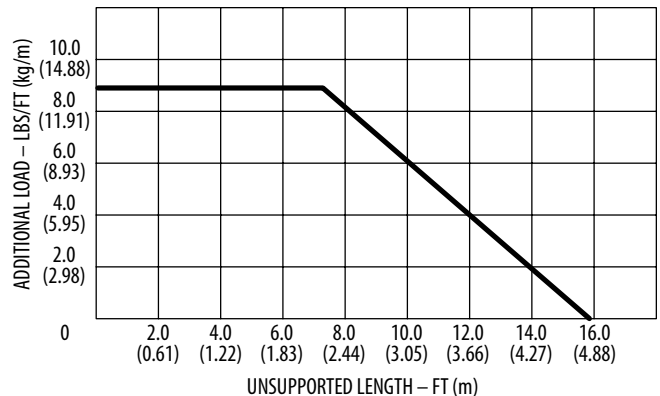
MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
MRC	Customer Specified	A + 0.62 (16)	2.95 (4.39)

**Crossbar Styles:**

RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar    AF = Bolted Aluminum Flat Bar

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
75	2.75 (70)	7.50 (191)	7.00 (178)	14.50 (368)
115	4.75 (121)	11.50 (292)	8.00 (229)	21.00 (533)
1325	5.63 (143)	13.25 (337)	9.75 (248)	23.50 (597)
170	7.50 (191)	17.00 (432)	11.75 (298)	29.50 (749)

**MRC SERIES - WEIGHT LOAD**

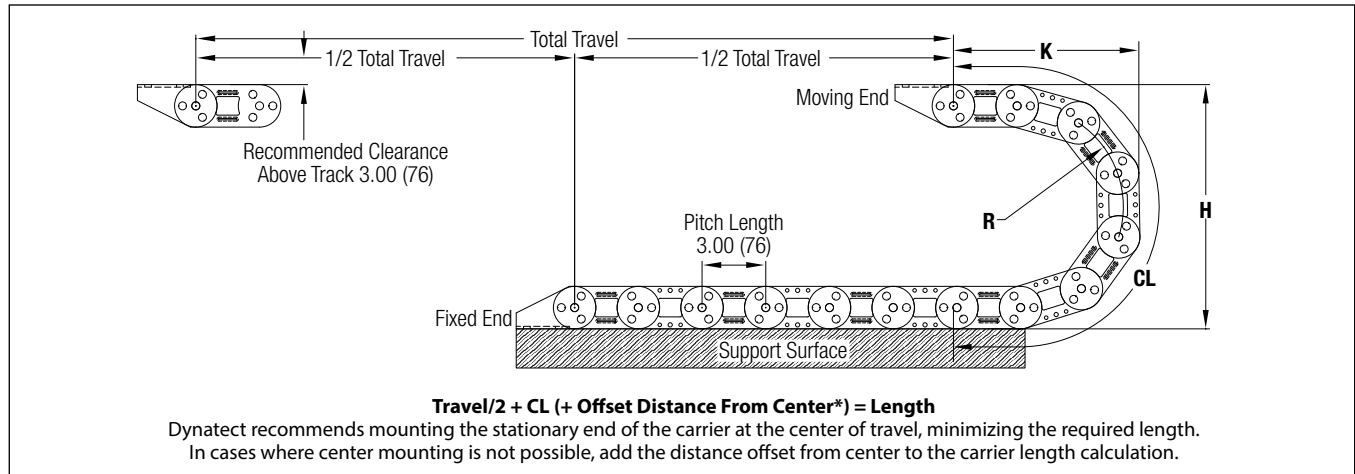


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

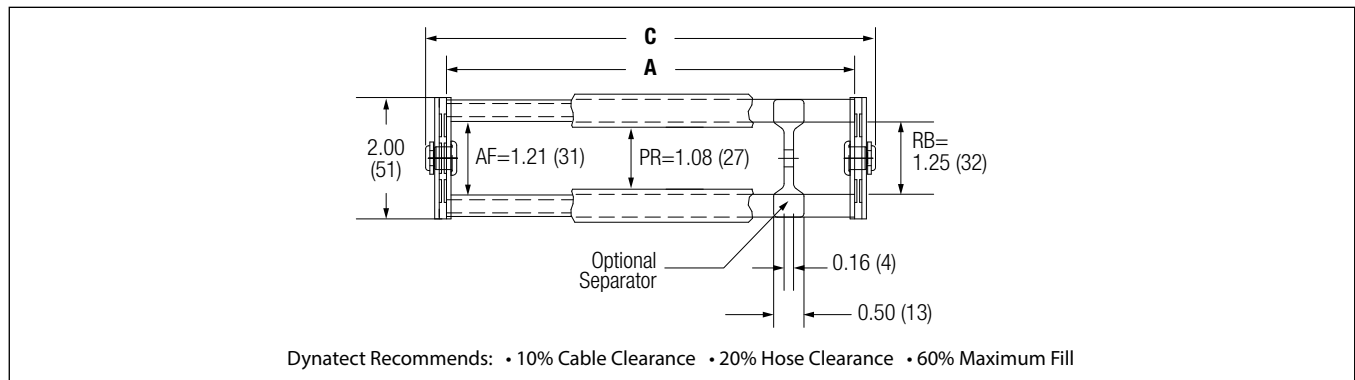
# MRC SERIES | GORTRAC<sup>®</sup> STEEL (open-style carriers)

## CARRIER SIDE VIEW

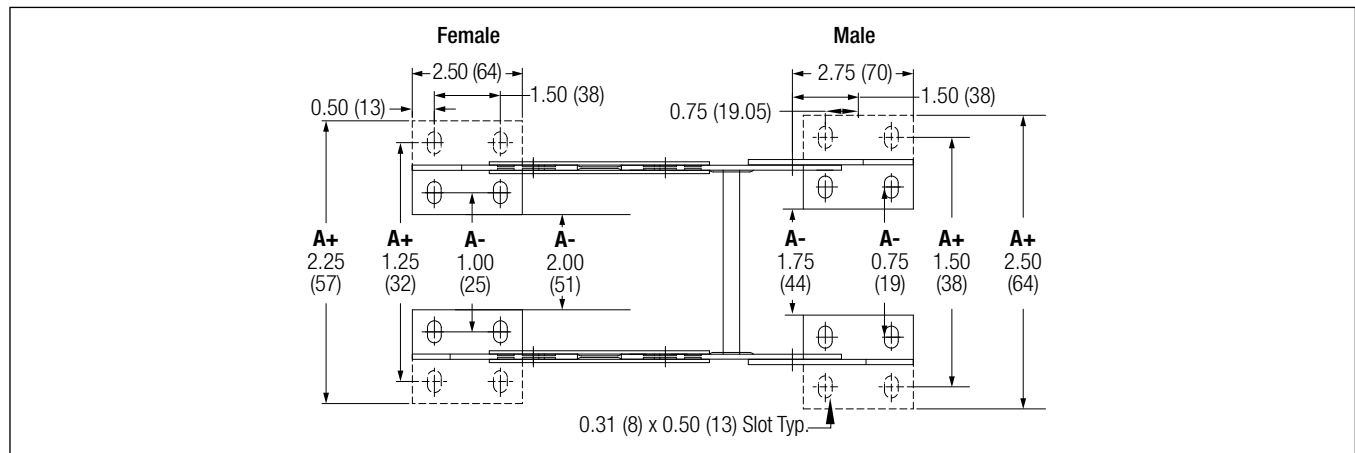
Dimensions in inches (mm)



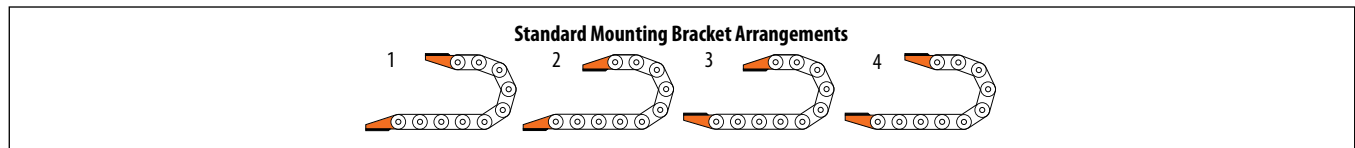
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET

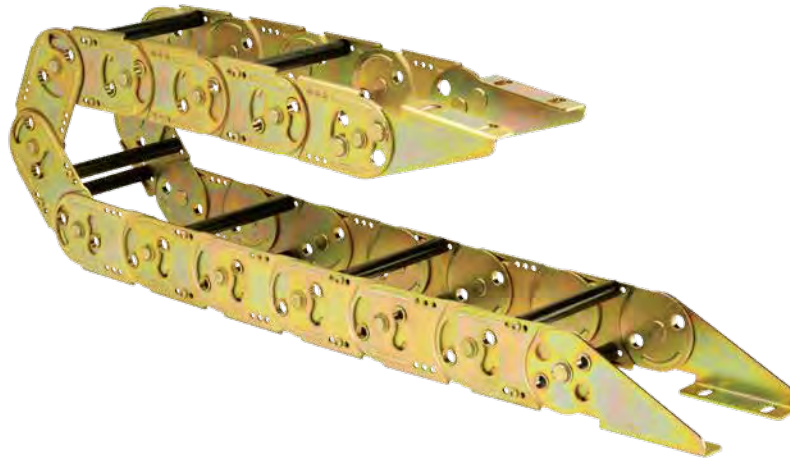


## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**SX SERIES | GORTRAC<sup>®</sup> STEEL** (open-style carriers)



Specify part number with dashes Example: SX-RB-3.25-170-1-120-#1 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement*
	SX	RB	3.25"	170	1	120"	#1 IN

\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

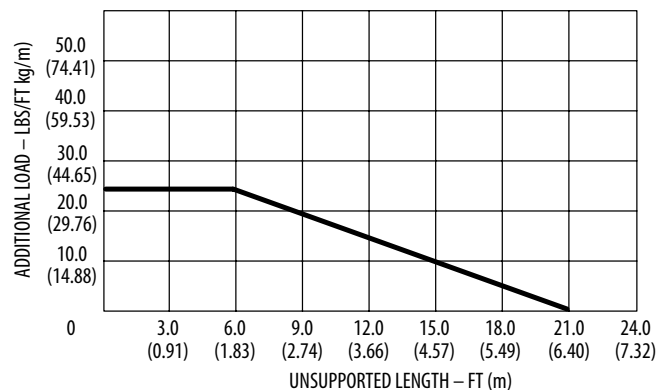
MODEL NO.	A inches (mm)	C inches (mm)	U (USABLE WIDTH) inches (mm)	WEIGHT lb/ft (kg/m)
SX	Customer Specified	A + 0.58 (15)	A - 0.47 (12)	4.6 (6.85)

**Crossbar Styles:**

AF = Bolted Aluminum Flat Bar    AFS = Snap-In Aluminum Flat Bar  
RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
110	3.47 (88)	10.13 (257)	9.16 (233)	18.90 (480)
135	4.87 (124)	12.93 (328)	10.56 (268)	23.29 (592)
170	6.78 (172)	16.75 (425)	12.47 (317)	29.29 (744)
200	8.34 (212)	19.87 (505)	14.03 (356)	34.19 (868)
245	10.59 (269)	24.37 (619)	16.28 (414)	41.25 (1048)
275	12.06 (306)	27.31 (694)	17.75 (451)	45.87 (1165)

**SX SERIES – WEIGHT LOAD**

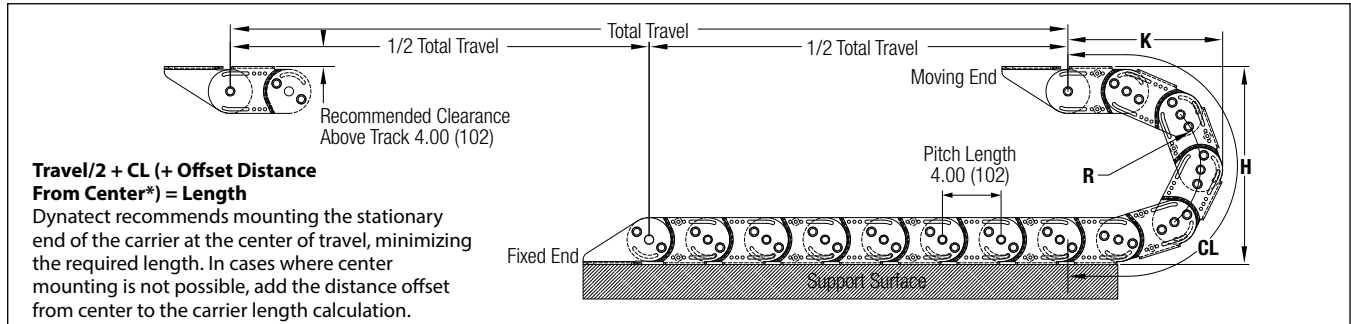


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

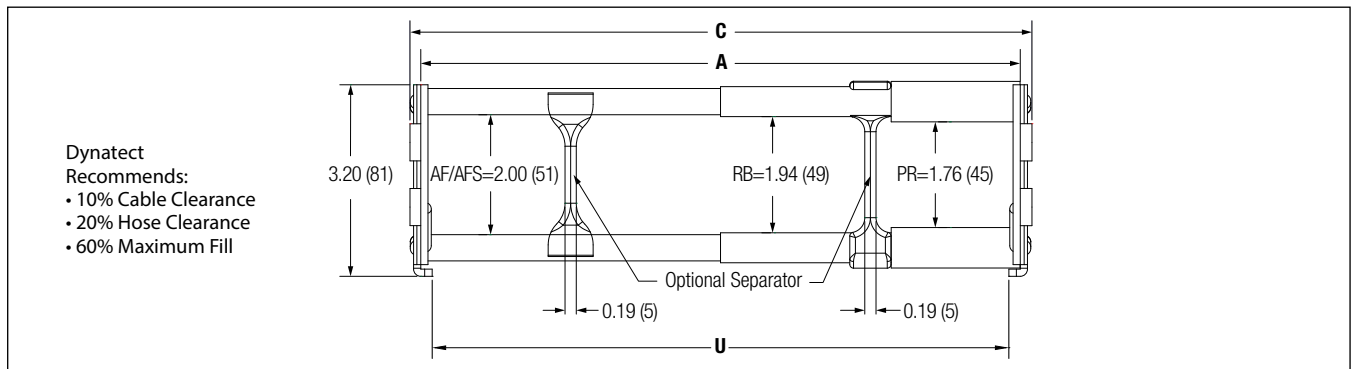
# SX SERIES | GORTRAC® STEEL (open-style carriers)

## CARRIER SIDE VIEW

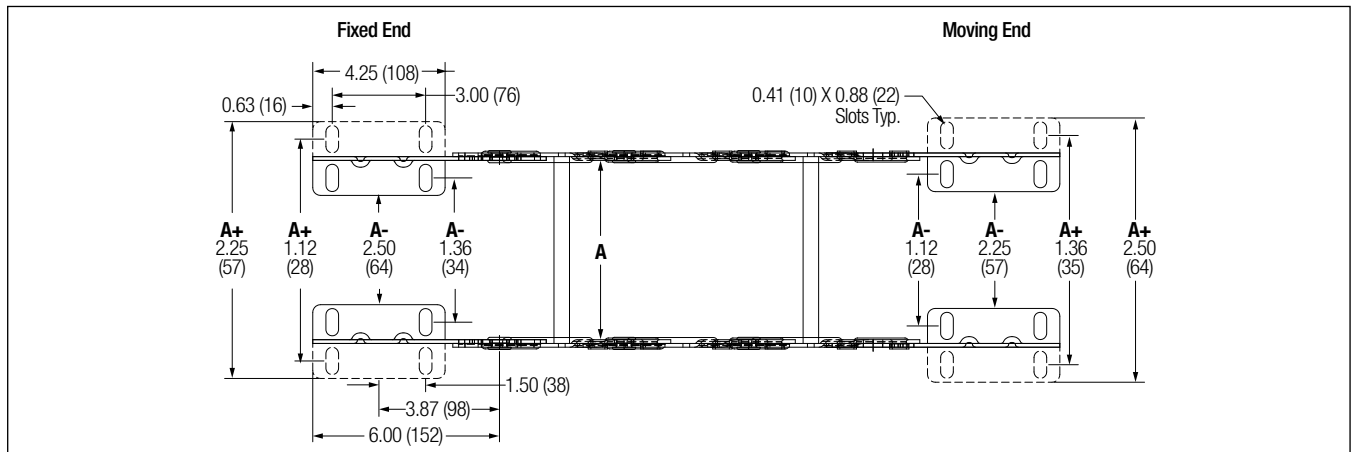
Dimensions in inches (mm)



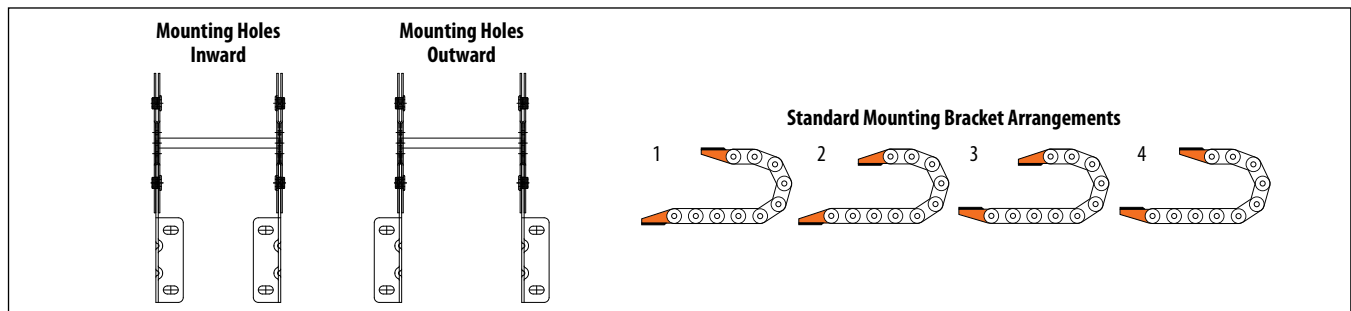
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.



**SRC/LRC SERIES | GORTRAC<sup>®</sup> STEEL** (open- & enclosed-style carriers)



SRC



SRC-AP



LRC



LRC-AP

Specify part number with dashes Example: SRC-RB-5.25-110-2-72-#1 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement*
	SRC	RB	5.25"	110	2	72"	#1 IN

\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	U (USABLE WIDTH) inches (mm)	WEIGHT lb/ft (kg/m)
SRC	Customer Specified	A + 0.69 (17)	A - 0.28 (7)	5.00 (7.44)
LRC	Customer Specified	A + 0.69 (17)	A - 0.40 (10)	6.00 (8.93)

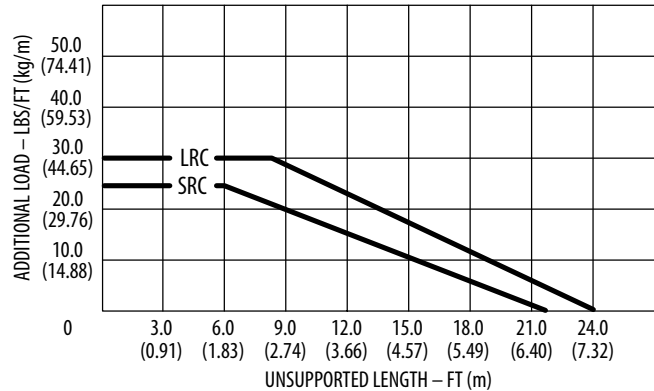
**Crossbar Styles:**

AF = Bolted Aluminum Flat Bar    RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar  
MC = Machined Carrier Bar (Custom)    AP = Bolted Aluminum Armor Plate (Enclosed-Style Carrier)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
SRC-110*	4.00 (102)	11.00 (279)	9.50 (241)	20.56 (522)
SRC-135	5.25 (133)	13.50 (343)	10.75 (273)	24.49 (922)
SRC-170	7.00 (178)	17.00 (432)	12.50 (318)	29.98 (761)
SRC-200	8.50 (216)	20.00 (508)	14.00 (356)	34.69 (881)
SRC-245	10.75 (273)	24.50 (622)	16.25 (413)	41.76 (1061)
SRC-275	12.25 (311)	27.50 (699)	17.75 (451)	46.47 (1180)
LRC-150*	5.50 (140)	15.00 (381)	12.50 (318)	27.27 (693)
LRC-200	8.00 (203)	20.00 (508)	15.00 (381)	35.12 (892)
LRC-275	11.75 (298)	27.50 (699)	18.75 (476)	46.90 (1191)
LRC-3125	13.63 (346)	31.25 (794)	20.63 (524)	52.78 (1341)
LRC-350	15.50 (394)	35.00 (889)	22.50 (572)	58.67 (1490)
LRC-415	18.75 (476)	41.50 (1054)	25.75 (654)	68.88 (1749)
LRC-525	24.25 (616)	52.50 (1334)	31.25 (794)	86.15 (2188)

\*Armor plates are not available with the 110 (SRC-110) and 150 (LRC-150) curve heights.

**SRC/LRC SERIES – WEIGHT LOAD**

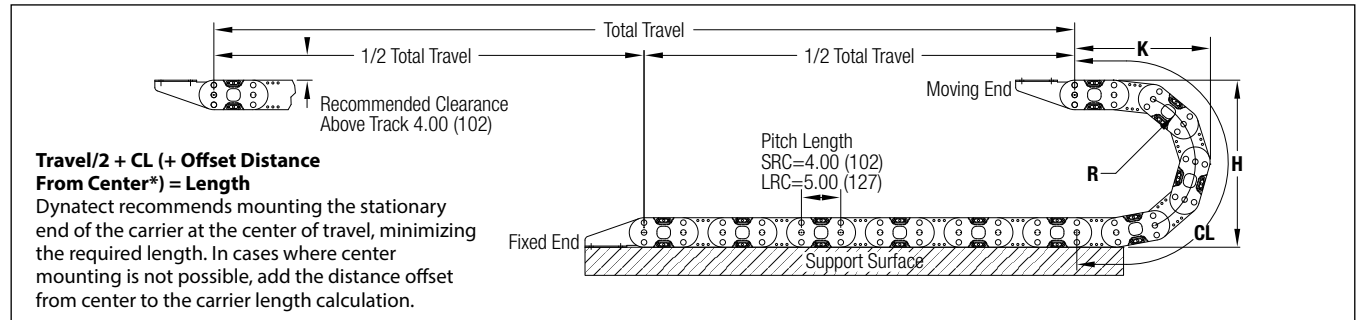


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

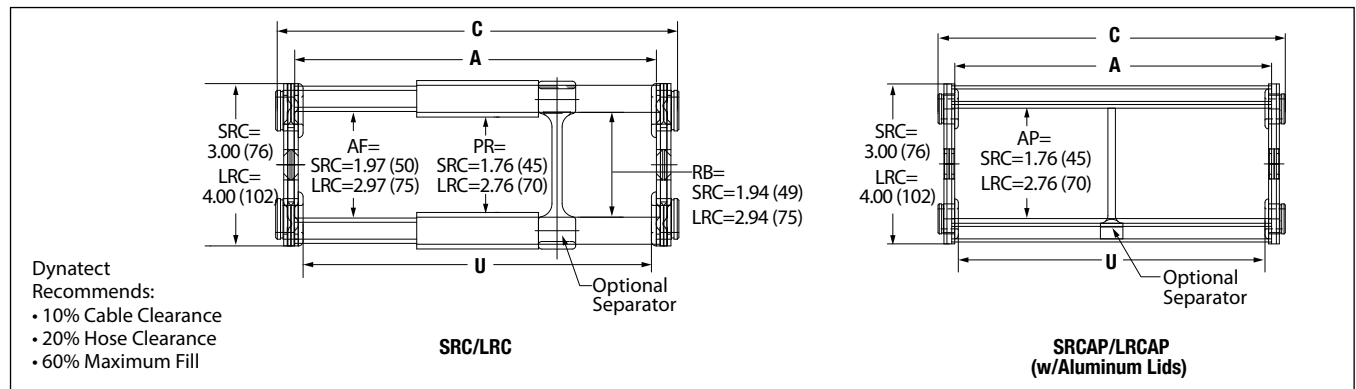
# SRC/LRC SERIES | GORTRAC® STEEL (open- & enclosed-style carriers)

## CARRIER SIDE VIEW

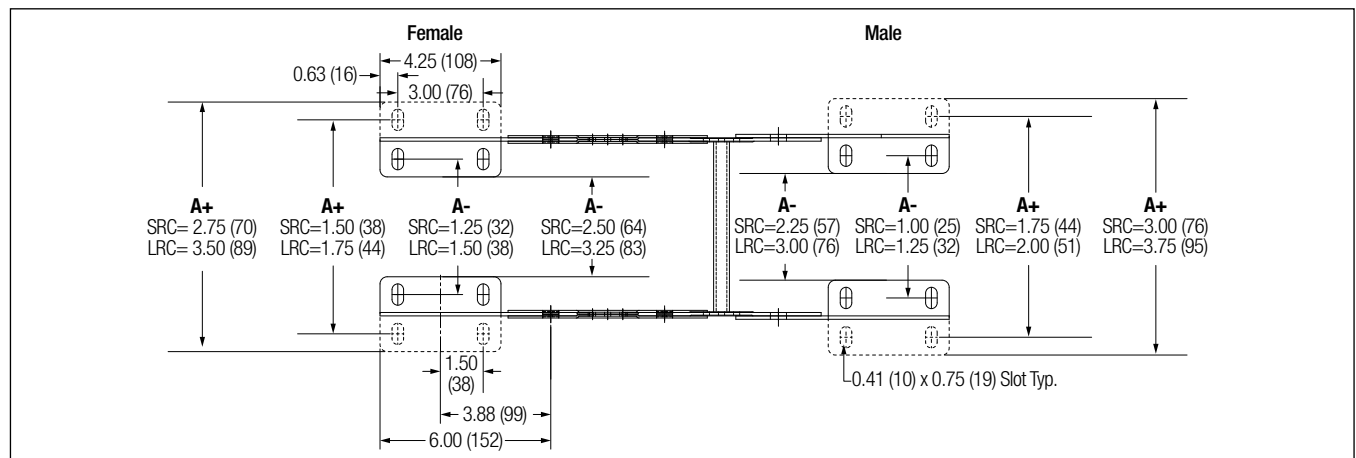
Dimensions in inches (mm)



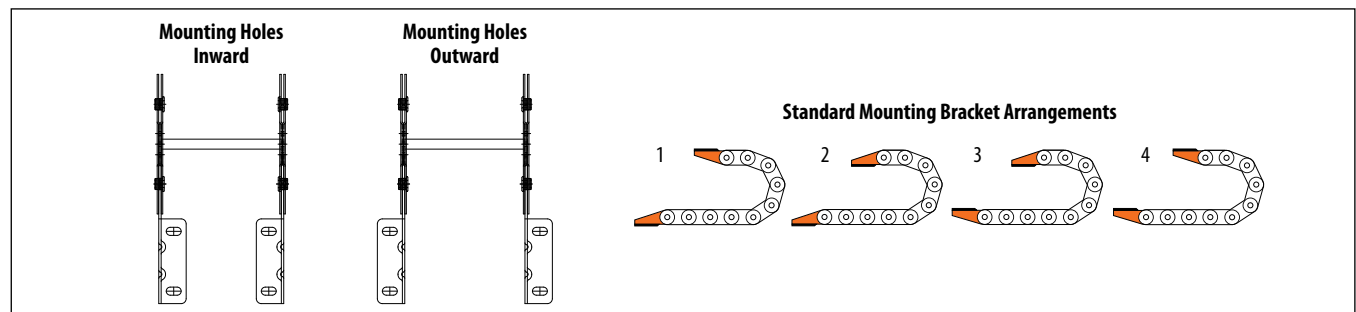
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS

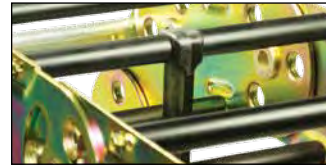


QUOTE REQUEST FORMS: SEE PAGES 100-101.

**XX SERIES** | GORTRAC<sup>®</sup> STEEL (open-style carriers)



Aluminum Round Bar (XX6-RB)



Poly Roller over Round Bar (XX6-PR)



Aluminum Flat Bar (XX6-AF)

Specify part number with dashes Example: XX6-RB-6.25-470-1-144-#1 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement*
	XX6	RB	6.25"	470	1	144"	#1 IN

\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

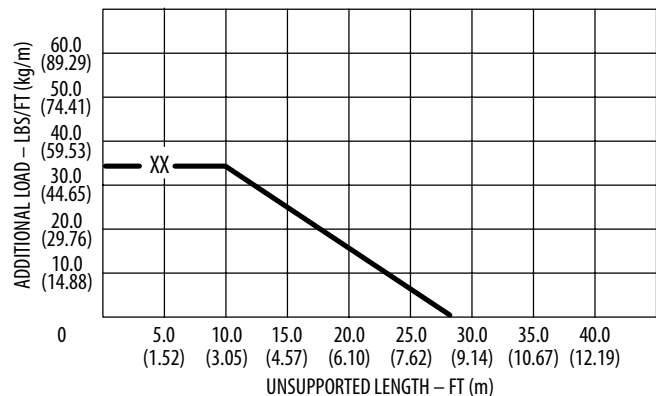
MODEL NO.	A inches (mm)	C inches (mm)	U (USABLE CAVITY WIDTH) inches (mm)	WEIGHT lb/ft (kg/m)
XX6	Customer Specified	A + 0.81 (21)	A - 0.38 (10)	13.00 (19.35)

**Crossbar Styles:**

AF = Bolted Aluminum Flat Bar    RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar  
MC = Machined Carrier Bar (Custom)    FC = Formed Channel Bar (Custom)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
260	10.00 (254)	26.00 (660)	20.36 (517)	45.46 (1155)
375	15.75 (400)	37.50 (953)	25.95 (659)	63.79(1620)
470	20.50 (521)	47.00 (1194)	30.73 (780)	78.81 (2002)
530	23.50 (597)	53.00 (1346)	33.88 (861)	88.28 (2242)
600	27.00 (686)	60.00 (1524)	37.31 (948)	99.32 (2523)

**XX SERIES – WEIGHT LOAD**

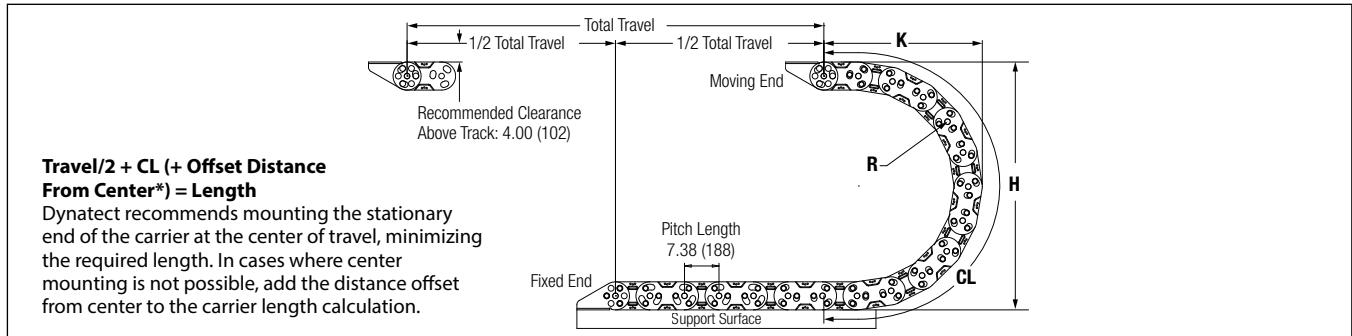


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

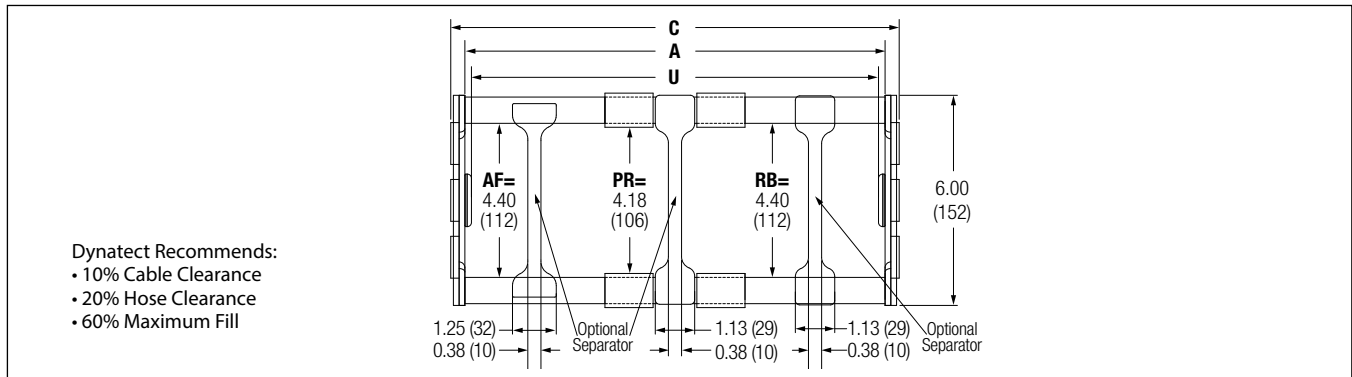
# XX SERIES | GORTRAC® STEEL (open-style carriers)

## CARRIER SIDE VIEW

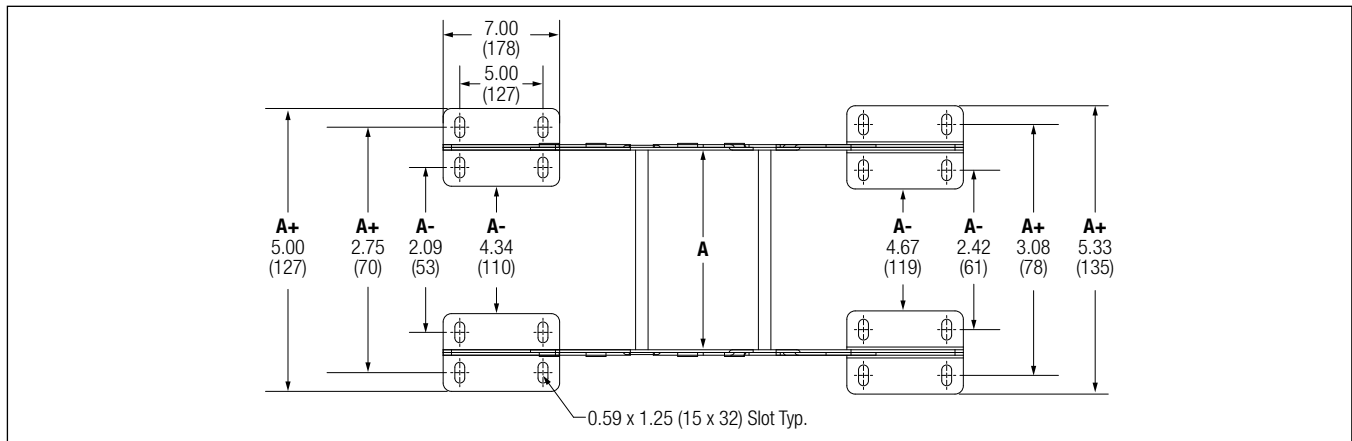
Dimensions in inches (mm)



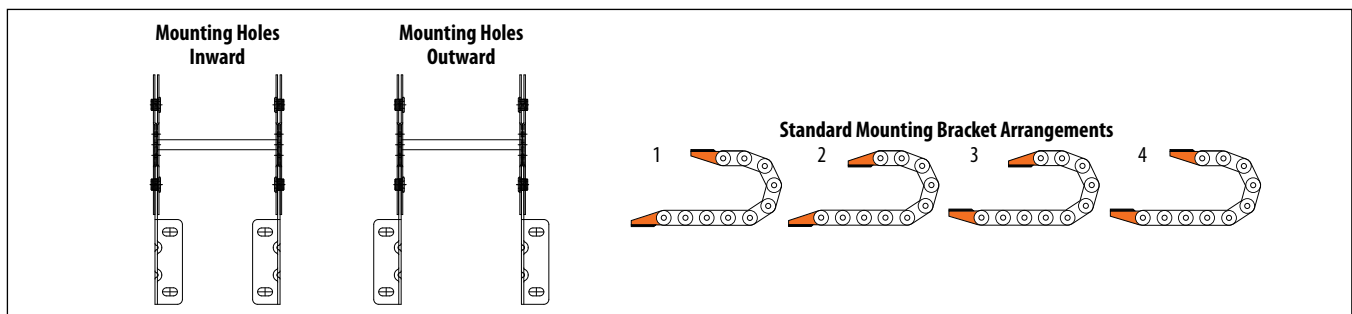
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**XL SERIES\* (XL6) | GORTRAC<sup>®</sup> STEEL** (open- & enclosed-style carriers)



Poly Roller over Aluminum Bar



Custom Formed Channel Bar



Aluminum Flat Bar



Aluminum Armor Plates



Custom Window Extender with Aluminum Flat Bar

Specify part number with dashes Example: XL6-AF-5.25-470-2-111-#1 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement**
	XL6	AF	5.25"	470	2	111"	#1 IN

\*XL6 – See pages 172-173 for XL8 and XL10 larger cavity heights. \*\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	U (USABLE WIDTH) inches (mm)	WEIGHT lb/ft (kg/m)
XL6	Customer Specified	A + 1.25 (32)	A - 0.51 (13)	20.00 (29.76)

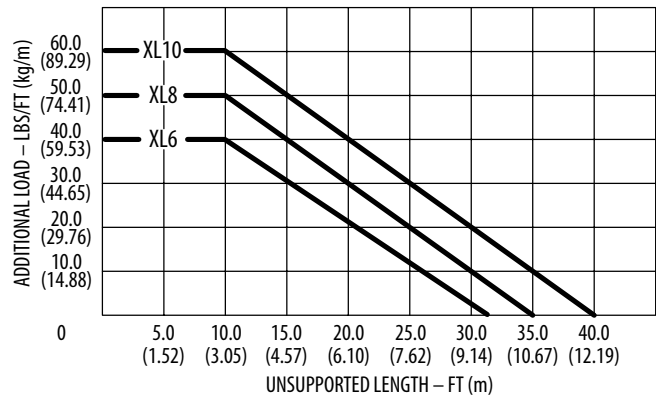
**Crossbar Styles:**

AF = Bolted Aluminum Flat Bar    RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar  
MC = Machined Carrier Bar (Custom)    FC = Formed Channel Bar (Custom)    AP = Bolted Aluminum Armor Plate (Enclosed-Style Carrier)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
260*	10.05 (255)	26.00 (660)	20.38 (518)	46.31 (1176)
375	15.80 (401)	37.50 (953)	26.13 (664)	64.36 (1635)
470	20.55 (522)	47.00 (1194)	30.88 (784)	79.28 (2014)
530	23.55 (598)	53.00 (1346)	33.88 (861)	88.70 (2253)
650	29.55 (750)	65.00 (1651)	39.88 (1013)	107.54 (2731)

\*Armor plates are not available with the 260 curve height (XL6-260).

**XL SERIES – WEIGHT LOAD**



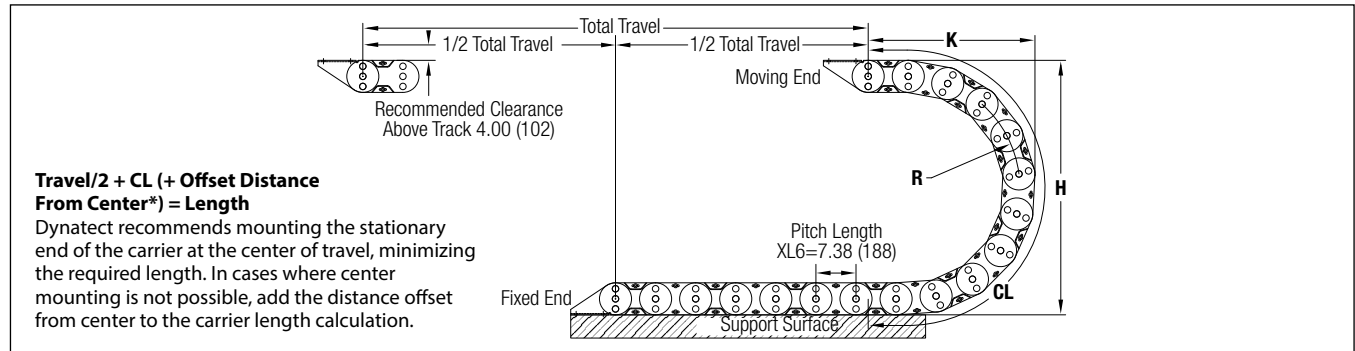
**QUOTE REQUEST FORMS: SEE PAGES 100-101.**



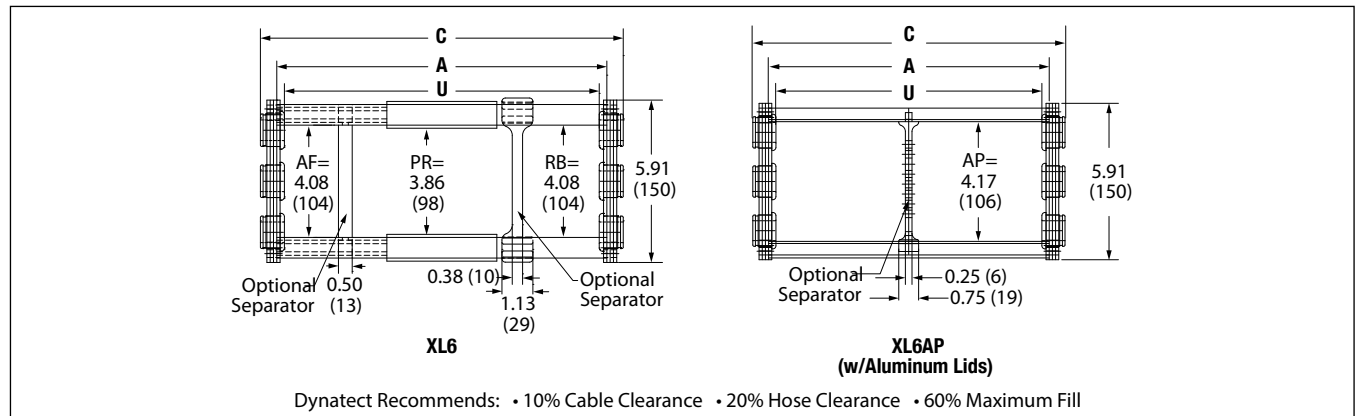
# XL SERIES\* (XL6) | GORTRAC<sup>®</sup> STEEL (open- & enclosed-style carriers)

## CARRIER SIDE VIEW

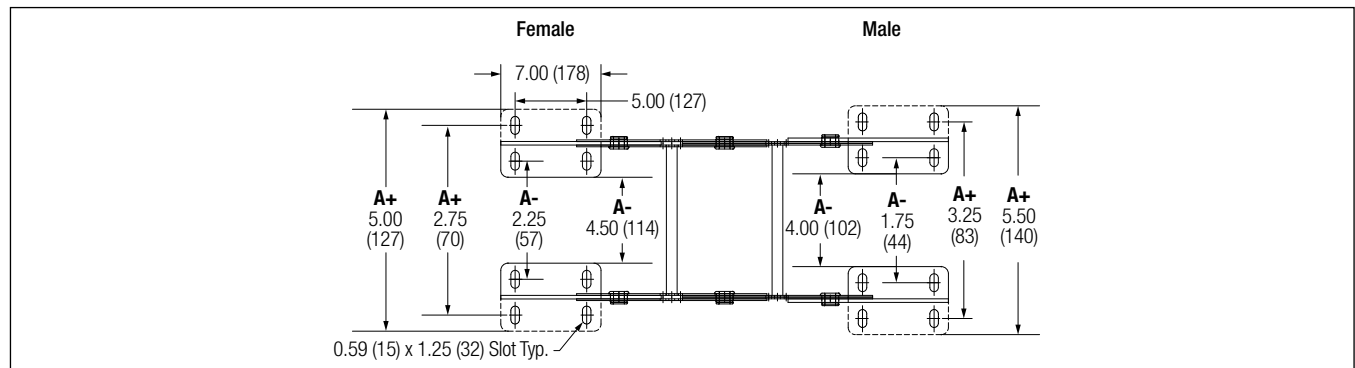
Dimensions in inches (mm)



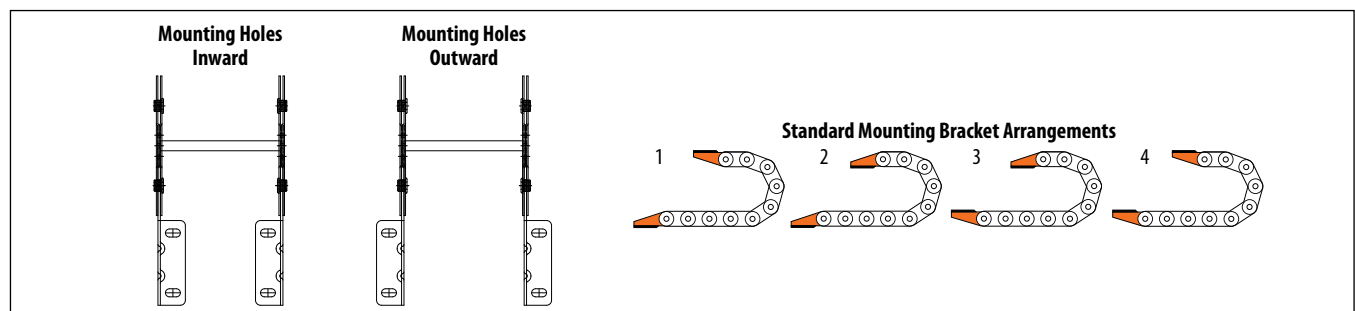
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

**XL SERIES\* (XL8/XL10) | GORTRAC<sup>®</sup> STEEL** (open-style carriers)



Specify part number with dashes Example: XL8-AF-10.25-540-4-60-#1 IN	Model	Bar Style	Bar Width	Height	Separators	Length	Bracket Arrangement**
	XL8	AF	10.25"	540	4	60"	#1 IN

\*XL8 and XL10 – See pages 170-171 for XL6 smaller cavity height. \*\*Specify bracket flange: inward (IN) or outward (OUT).

**SPECIFICATIONS**

MODEL NO.	A inches (mm)	C inches (mm)	U (USABLE WIDTH) inches (mm)	WEIGHT lb/ft (kg/m)
XL8	Customer Specified	A + 1.25 (32)	A - 0.51 (13)	28.00 (41.66)
XL10	Customer Specified	A + 1.25 (32)	A - 0.51 (13)	32.00 (47.62)

**Crossbar Styles:**

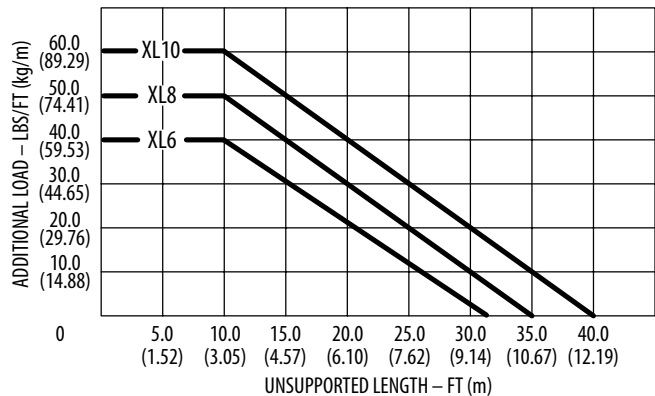
AF = Bolted Aluminum Flat Bar    RB = Bolted Aluminum Round Bar    PR = Poly Roller over Bolted Aluminum Round Bar  
MC = Machined Carrier Bar (Custom)    FC = Formed Channel Bar (Custom)

HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)
XL8 - 290	10.57 (268)	29.00 (737)	23.83 (605)	51.84 (1317)
XL8 - 330	12.57 (319)	33.00 (838)	25.83 (656)	58.12 (1476)
XL8 - 470	19.57 (497)	47.00 (1194)	32.83 (834)	80.10 (2035)
XL8 - 540	23.07 (586)	54.00 (1372)	36.33 (923)	91.09 (2314)
XL8 - 800	36.07 (916)	80.00 (2032)	49.33 (1253)	131.91 (3351)
XL10 - 480	19.08 (485)	48.00 (1219)	35.66 (906)	82.23 (2114)
XL10 - 600	25.08 (637)	60.00 (1524)	41.66 (1058)	102.07 (2593)
XL10 - 800	35.08 (891)	80.00 (2032)	51.66 (1312)	133.47 (3390)



Shown: 24" steel XL carrier for paper converting application. XL side links can be provided in custom sizes.

**XL SERIES – WEIGHT LOAD**

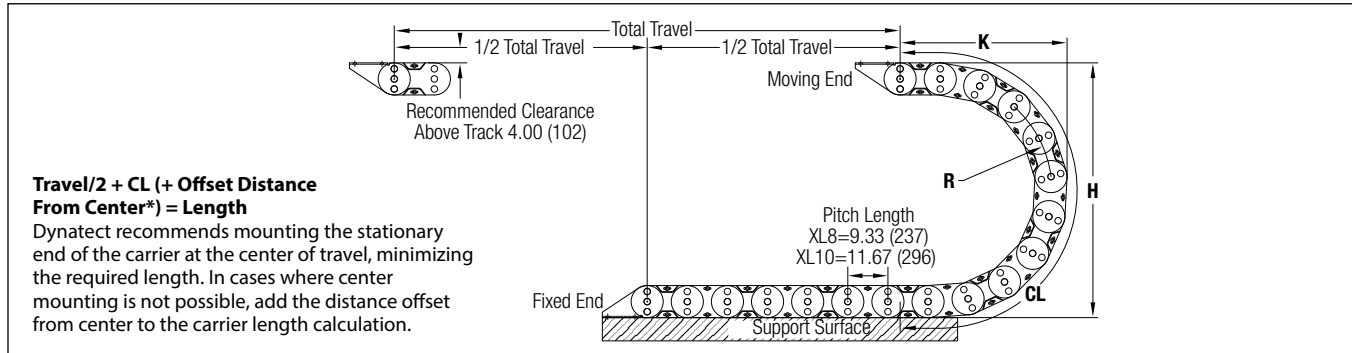


**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

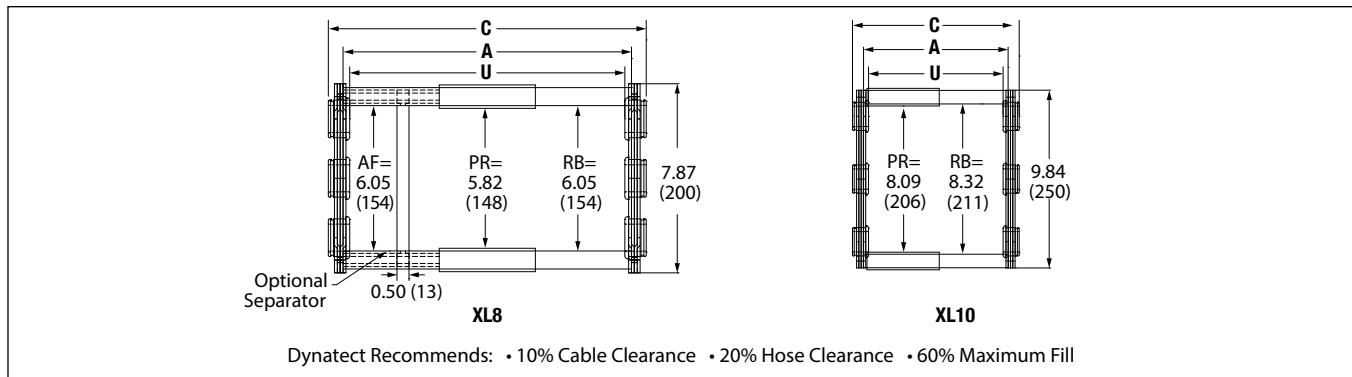
# XL SERIES\* (XL8/XL10) | GORTRAC<sup>®</sup> STEEL (open-style carriers)

## CARRIER SIDE VIEW

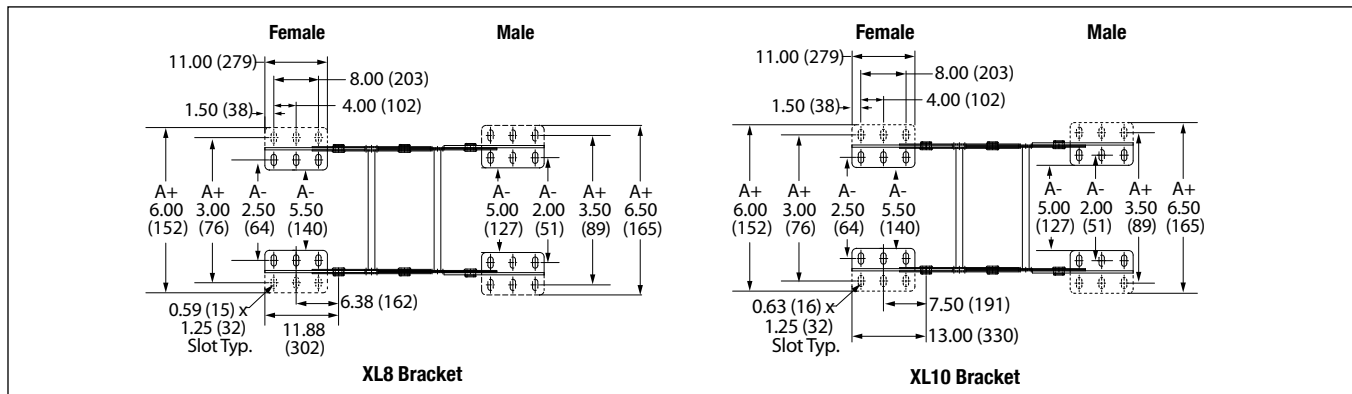
Dimensions in inches (mm)



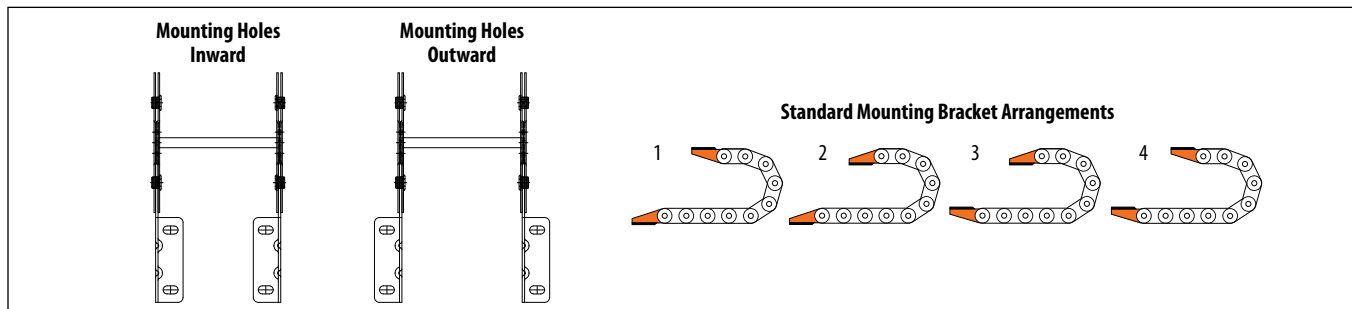
## CARRIER CROSS SECTION



## TOP VIEW MOUNTING BRACKET



## BRACKET ARRANGEMENTS



QUOTE REQUEST FORMS: SEE PAGES 100-101.

## GORTUBE<sup>®</sup> SERIES | STEEL (enclosed-style carriers)

Specify part number with dashes Example: C1-9-36-STD#1/STD#1	Model	Height	Length	Flange Arrangement*
	C1	9	36"	STD#1/STD#1

\*Specify for each: fixed end/moving end. See pages 176-177 for flange options.

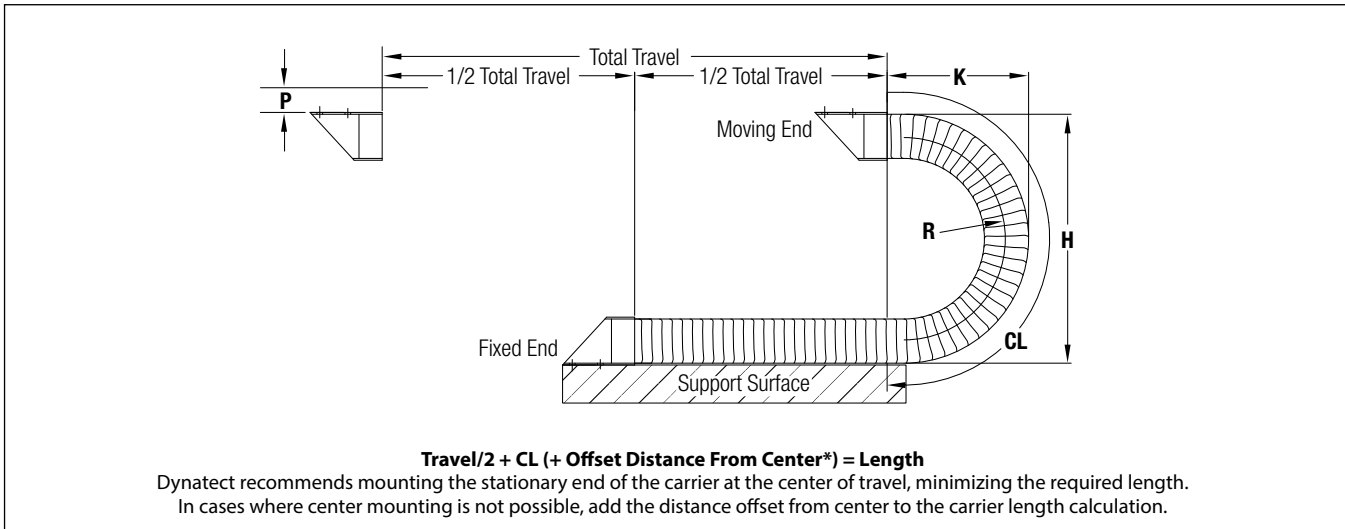
### SPECIFICATIONS

MODEL NO.	A inches (mm)	B inches (mm)	C inches (mm)	D inches (mm)	WEIGHT lb/ft (kg/m)
C0	1.02 (26)	0.63 (16)	1.18 (30)	0.79 (20)	0.40 (0.60)
C1	1.79 (45)	1.00 (25)	1.97 (50)	1.18 (30)	0.90 (1.34)
C1A	1.79 (45)	1.79 (45)	1.97 (50)	1.97 (50)	0.90 (1.34)
C1B	1.98 (50)	1.59 (40)	2.17 (55)	1.77 (45)	0.90 (1.34)
C2	2.97 (75)	1.59 (40)	3.15 (80)	1.77 (45)	1.50 (2.23)
C2C	3.17 (81)	1.59 (40)	3.35 (85)	1.77 (45)	1.70 (2.53)
C2A	3.56 (90)	1.79 (45)	3.74 (95)	1.97 (50)	2.10 (3.12)
C2AA	3.17 (81)	2.19 (56)	3.35 (85)	2.36 (60)	2.10 (3.12)
C3	4.11 (104)	2.15 (55)	4.33 (110)	2.36 (60)	2.40 (3.57)
C3A	4.29 (109)	2.93 (74)	4.53 (115)	3.15 (80)	2.40 (3.57)
C3AA	4.31 (109)	2.15 (55)	4.53 (115)	2.36 (60)	2.80 (4.17)
C3C	5.26 (134)	3.29 (84)	5.51 (140)	3.54 (90)	3.50 (5.21)
C4	6.48 (165)	2.93 (74)	6.69 (170)	3.15 (80)	3.80 (5.65)
C5	6.42 (163)	3.50 (89)	6.69 (170)	3.74 (95)	4.00 (5.95)
C6	7.68 (195)	3.71 (94)	7.87 (200)	3.94 (100)	4.10 (6.10)
C7	8.43 (214)	4.09 (104)	8.66 (220)	4.33 (110)	4.60 (6.84)
HEIGHT NO.	R inches (mm)	H inches (mm)	K inches (mm)	CL inches (mm)	P inches (mm)
C0-4	1.77 (45)	5.15 (131)	3.20 (81)	7.64 (194)	1.00 (25)
C1-6	2.56 (65)	7.12 (181)	4.00 (102)	9.74 (247)	1.50 (38)
C1-9	3.54 (90)	9.10 (231)	5.60 (142)	14.06 (357)	1.50 (38)
C1-13	5.51 (140)	13.06 (332)	7.50 (191)	20.11 (511)	1.50 (38)
C1A-10	3.94 (100)	10.65 (271)	6.00 (152)	14.53 (369)	1.50 (38)
C1B-9	3.54 (90)	9.67 (246)	5.50 (140)	13.27 (337)	1.50 (38)
C2-10	3.54 (90)	9.67 (246)	5.90 (150)	14.07 (357)	2.00 (51)
C2-175	7.48 (190)	17.56 (446)	9.80 (249)	26.37 (670)	2.00 (51)
C2-22	8.66 (220)	19.91 (506)	11.80 (300)	31.72 (806)	2.00 (51)
C2C-11	3.54 (90)	9.67 (246)	6.40 (163)	15.07 (383)	2.00 (51)
C2A-12	4.33 (110)	11.48 (292)	7.00 (178)	16.98 (431)	2.50 (64)
C2AA-135	5.51 (140)	14.19 (360)	7.70 (196)	19.33 (491)	2.50 (64)
C3-135	5.32 (135)	14.21 (361)	7.70 (196)	19.11 (485)	2.50 (64)
C3-20	8.27 (210)	20.11 (511)	11.10 (282)	29.28 (744)	3.00 (76)
C3-26	11.22 (285)	26.02 (661)	14.00 (356)	38.45 (977)	3.00 (76)
C3A-18	6.69 (170)	17.76 (451)	9.90 (251)	24.29 (617)	3.00 (76)
C3AA-13	5.32 (135)	14.21 (361)	7.30 (185)	18.31 (465)	3.00 (76)
C3C-18	7.09 (180)	18.93 (481)	10.00 (254)	24.55 (624)	3.00 (76)
C4-18	6.89 (175)	18.14 (461)	9.90 (251)	24.52 (623)	3.00 (76)
C4-23	9.25 (235)	22.87 (581)	12.50 (318)	32.41 (823)	3.00 (76)
C4-31	13.19 (335)	30.74 (781)	16.40 (417)	44.71 (1136)	3.00 (76)
C5-22	8.27 (210)	21.50 (546)	11.90 (302)	29.50 (749)	3.00 (76)
C6-23	8.66 (220)	22.50 (572)	12.50 (318)	30.95 (786)	3.00 (76)
C7-24	9.25 (235)	24.08 (612)	13.00 (330)	32.23 (819)	3.00 (76)

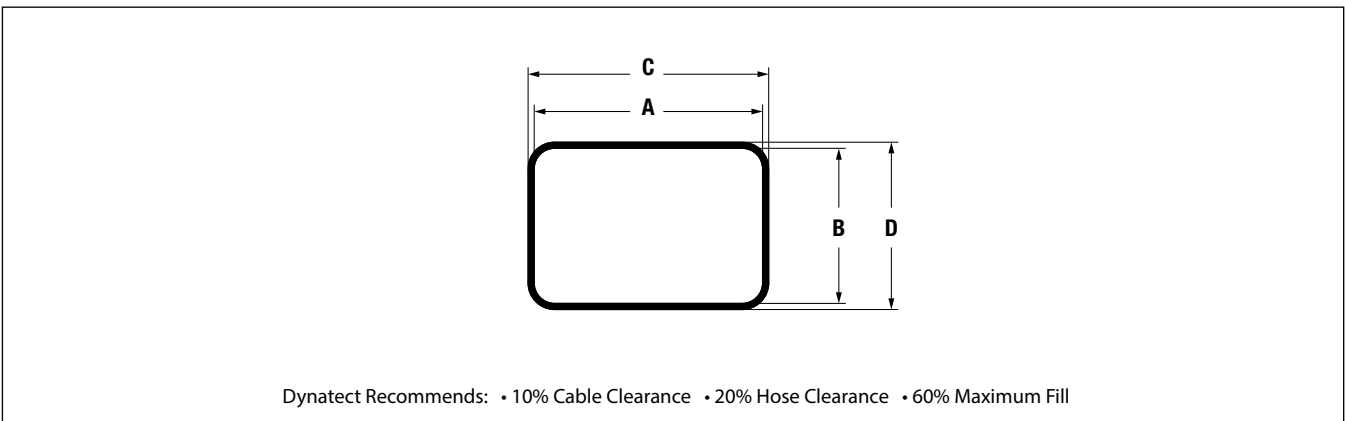
QUOTE REQUEST FORMS: SEE PAGES 100-101.

## GORTUBE<sup>®</sup> SERIES | STEEL (enclosed-style carriers)

### CARRIER SIDE VIEW



### CARRIER CROSS SECTION

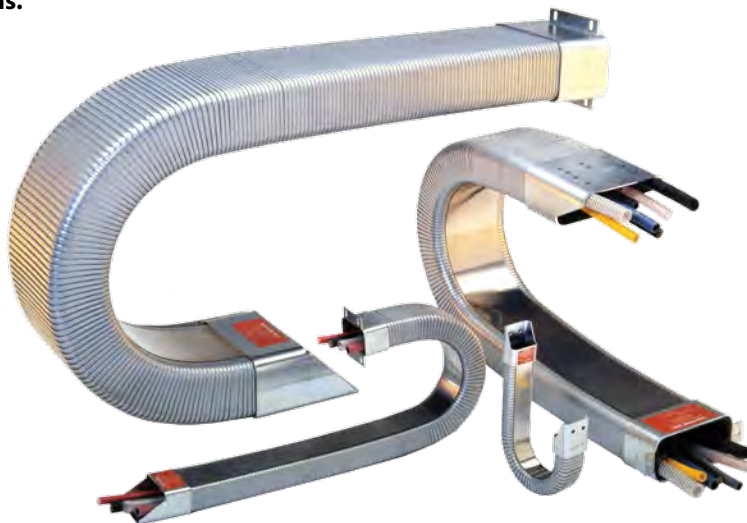


Please see next page for mounting options.

#### Optional Construction Types:

(Please consult factory for lead times)

- Amflex (inner band)
- Riveted
- No Band
- Black Oxide finish



QUOTE REQUEST FORMS: SEE PAGES 100-101.

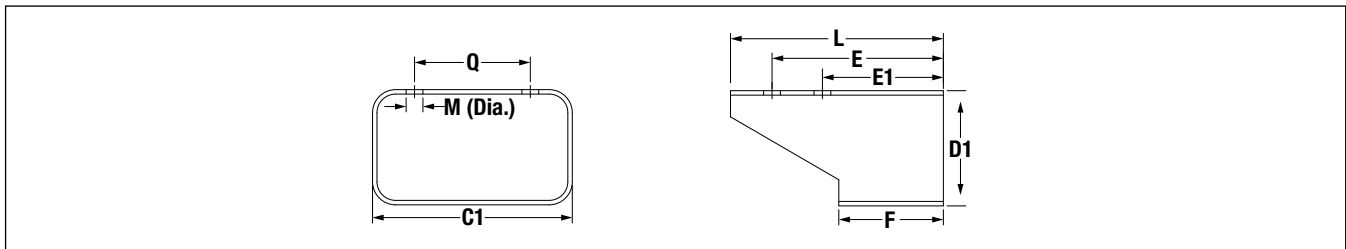


## GORTUBE<sup>®</sup> SERIES | MOUNTING FLANGES (enclosed-style carriers)

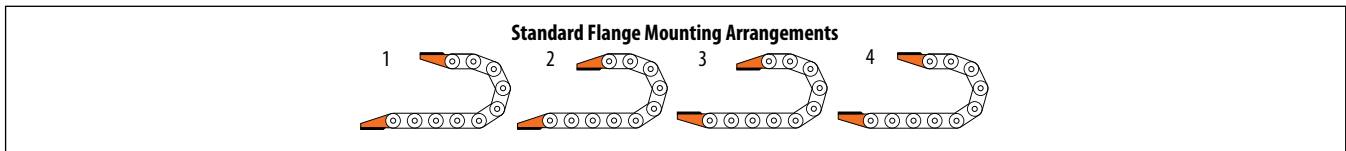
### SPECIFICATIONS – STANDARD FLANGE OPTIONS

MODEL NO.	C1 inches (mm)	D1 inches (mm)	Q inches (mm)	M inches (mm)	E inches (mm)	E1 inches (mm)	F inches (mm)	L inches (mm)
C0	1.33 (34)	0.94 (24)	0.50 (13)	0.22 (6)	1.63 (41)	-	1.25 (32)	2.00 (51)
C1	2.11 (54)	1.34 (34)	0.88 (22)	0.28 (7)	1.75 (44)	-	1.19 (30)	2.38 (60)
C1A	2.11 (54)	2.12 (54)	0.88 (22)	0.38 (10)	1.69 (43)	-	1.19 (30)	2.38 (60)
C1B	2.31 (59)	1.93 (49)	0.88 (22)	0.28 (7)	1.75 (44)	-	1.19 (30)	2.38 (60)
C2	3.32 (84)	1.96 (50)	1.94 (49)	0.28 (7)	2.69 (68)	-	1.75 (44)	3.56 (90)
C2C	3.52 (89)	1.96 (50)	1.94 (49)	0.38 (10)	3.05 (77)	2.17 (55)	1.75 (44)	3.52 (89)
C2A	3.92 (100)	2.15 (55)	2.50 (64)	0.34 (9)	3.25 (83)	-	2.06 (52)	4.19 (106)
C2AA	3.52 (89)	2.55 (65)	1.94 (49)	0.38 (10)	3.44 (87)	2.19 (56)	1.75 (44)	4.13 (105)
C3	4.58 (116)	2.62 (67)	2.75 (70)	0.34 (9)	3.56 (90)	2.50 (64)	2.50 (64)	4.75 (121)
C3A	4.78 (121)	3.41 (87)	2.75 (70)	0.41 (10)	3.50 (90)	-	2.38 (60)	4.75 (121)
C3AA	4.77 (121)	2.62 (67)	2.75 (70)	0.38 (10)	4.67 (119)	3.42 (87)	3.00 (76)	5.36 (136)
C3C	5.76 (146)	3.80 (97)	3.50 (89)	0.38 (10)	5.80 (147)	3.67 (93)	3.50 (89)	6.25 (159)
C4	6.94 (176)	3.41 (87)	3.94 (100)	0.34 (9)	4.75 (121)	3.50 (89)	3.13 (80)	6.31 (160)
C5	6.95 (177)	4.01 (102)	4.00 (102)	0.34 (9)	6.13 (156)	4.94 (125)	3.69 (94)	7.31 (186)
C6	8.15 (207)	4.22 (107)	4.75 (121)	0.41 (10)	6.69 (170)	5.38 (137)	3.94 (100)	8.13 (207)
C7	8.94 (227)	4.62 (117)	5.50 (140)	0.41 (10)	7.38 (187)	5.88 (149)	4.16 (106)	8.75 (222)

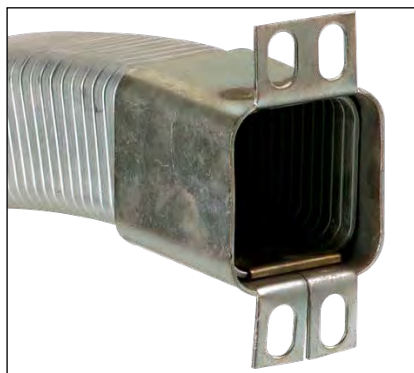
### GORTUBE STANDARD FLANGE



### STANDARD FLANGE ARRANGEMENTS – Please specify arrangement when ordering standard flanges



Standard Flange



Type "A" Flange



Type "B" Flange

**QUOTE REQUEST FORMS: SEE PAGES 100-101.**

# GORTUBE<sup>®</sup> SERIES | MOUNTING FLANGES (enclosed-style carriers)

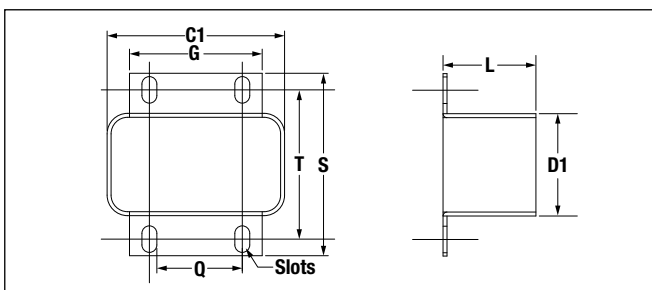
## SPECIFICATIONS – TYPE A FLANGE OPTIONS

MODEL NO.	C1 inches (mm)	D1 inches (mm)	Q inches (mm)	SLOTS inches (mm)	G inches (mm)	S inches (mm)	T inches (mm)	L inches (mm)
C0	1.33 (34)	0.94 (24)	0.38 (10)	0.22 x 0.38 (6 x 10)	0.75 (19)	1.86 (47)	1.30 (33)	1.25 (32)
C1	2.11 (54)	1.34 (34)	0.69 (18)	0.28 x 0.50 (7 x 13)	1.38 (35)	2.80 (71)	2.11 (54)	1.56 (40)
C1A	2.11 (54)	2.12 (54)	0.69 (18)	0.38 x 0.63 (10 x 16)	1.38 (35)	4.00 (102)	3.16 (80)	2.38 (60)
C1B	2.31 (59)	1.93 (49)	0.69 (18)	0.38 x 0.63 (10 x 16)	1.38 (35)	3.75 (95)	2.94 (75)	2.38 (60)
C2	3.32 (84)	1.96 (50)	1.75 (44)	0.28 x 0.50 (7 x 13)	2.50 (64)	3.50 (89)	2.88 (73)	1.75 (44)
C2C	3.52 (89)	1.96 (50)	1.75 (44)	0.28 x 0.50 (7 x 13)	2.56 (65)	3.56 (90)	2.81 (71)	1.75 (44)
C2A	3.92 (100)	2.15 (55)	2.00 (51)	0.34 x 0.50 (9 x 13)	2.75 (70)	3.75 (95)	2.94 (75)	2.06 (5)
C2AA	3.52 (89)	2.55 (65)	1.75 (44)	0.41 x 0.68 (10 x 17)	2.50 (64)	4.31 (109)	3.42 (87)	3.53 (90)
C3	4.58 (116)	2.62 (67)	2.38 (60)	0.34 x 0.50 (9 x 13)	3.13 (80)	4.31 (109)	3.50 (89)	2.38 (60)
C3A	4.78 (121)	3.41 (87)	2.38 (60)	0.34 x 0.50 (9 x 13)	3.25 (83)	5.13 (130)	4.38 (111)	4.56 (116)
C3AA	4.77 (121)	2.62 (67)	2.38 (60)	0.34 x 0.50 (9 x 13)	3.50 (89)	4.39 (112)	3.50 (89)	3.00 (76)
C3C	5.76 (146)	3.80 (97)	3.25 (83)	0.38 x 0.56 (10 x 14)	4.25 (108)	5.53 (140)	4.75 (121)	3.50 (89)
C4	6.94 (176)	3.41 (87)	3.75 (95)	0.34 x 0.50 (9 x 13)	4.75 (121)	5.13 (130)	4.31 (109)	3.13 (80)
C5	6.95 (177)	4.01 (102)	3.75 (95)	0.34 x 0.75 (9 x 19)	4.75 (121)	6.06 (154)	5.00 (127)	3.69 (94)
C6	8.15 (207)	4.22 (107)	4.00 (102)	0.41 x 0.75 (10 x 19)	5.50 (140)	6.22 (158)	5.16 (131)	3.94 (100)
C7	8.94 (227)	4.62 (117)	4.50 (114)	0.41 x 0.75 (10 x 19)	6.06 (154)	6.81 (173)	5.81 (148)	4.38 (111)

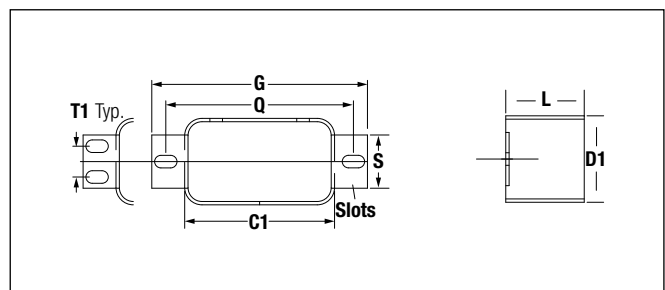
## SPECIFICATIONS – TYPE B FLANGE OPTIONS

MODEL NO.	C1 inches (mm)	D1 inches (mm)	Q inches (mm)	SLOTS inches (mm)	G inches (mm)	S inches (mm)	T1 inches (mm)	L inches (mm)
C0	1.33 (34)	0.94 (24)	1.81 (46)	0.22 x 0.38 (6 x 10)	2.31 (59)	0.50 (13)	n/a - 1 hole	1.25 (32)
C1	2.11 (54)	1.34 (34)	3.00 (76)	0.28 x 0.50 (7 x 13)	3.68 (93)	0.56 (14)	n/a - 1 hole	1.19 (30)
C1A	2.11 (54)	2.12 (54)	3.16 (80)	0.38 x 0.63 (10 x 16)	4.00 (102)	1.38 (35)	0.69 (18)	2.38 (60)
C1B	2.31 (59)	1.93 (49)	3.41 (87)	0.38 x 0.63 (10 x 16)	4.22 (107)	1.38 (35)	0.69 (18)	2.38 (60)
C2	3.32 (84)	1.96 (50)	4.19 (106)	0.28 x 0.50 (7 x 13)	4.81 (122)	1.19 (30)	n/a - 1 hole	1.75 (44)
C2C	3.52 (89)	1.96 (50)	4.19 (106)	0.28 x 0.50 (7 x 13)	4.81 (122)	1.19 (30)	n/a - 1 hole	1.75 (44)
C2A	3.92 (100)	2.15 (55)	4.88 (124)	0.34 x 0.50 (9 x 13)	5.75 (146)	1.00 (25)	n/a - 1 hole	2.06 (52)
C2AA	3.52 (89)	2.55 (65)	4.63 (118)	0.41 x 0.68 (10 x 17)	5.50 (140)	1.72 (44)	1.13 (29)	3.53 (90)
C3	4.58 (116)	2.62 (67)	5.56 (141)	0.34 x 0.50 (9 x 13)	6.38 (162)	1.38 (35)	n/a - 1 hole	2.38 (60)
C3A	4.78 (121)	3.41 (87)	5.56 (141)	0.38 x 0.50 (10 x 13)	6.38 (162)	2.25 (57)	1.50 (38)	5.14 (131)
C3AA	4.77 (121)	2.62 (67)	5.56 (141)	0.34 x 0.50 (9 x 13)	6.38 (162)	1.38 (35)	0.88 (22)	3.00 (76)
C3C	5.76 (146)	3.80 (97)	6.91 (176)	0.38 x 0.56 (10 x 14)	7.78 (198)	2.75 (70)	2.00 (51)	3.50 (89)
C4	6.94 (176)	3.41 (87)	7.88 (200)	0.34 x 0.50 (9 x 13)	8.69 (221)	1.56 (40)	n/a - 1 hole	3.13 (80)
C5				Type B flange not available for C5				
C6				Type B flange not available for C6				
C7	8.94 (227)	4.62 (117)	10.11 (257)	0.38 x 0.63 (10 x 16)	10.80 (274)	3.00 (76)	2.25 (57)	4.38 (111)

### GORTUBE TYPE "A" FLANGE



### GORTUBE TYPE "B" FLANGE



QUOTE REQUEST FORMS: SEE PAGES 100-101.

## PRECISION GROUND BALL SCREWS | NEW DESIGNS AND REPAIR

Dynatect is a full-service ball screw manufacturer with special expertise in large diameters (0.5 to 6 inches) and longer screws (over 50 feet). To balance price, uptime and performance, Dynatect provides custom engineering for repair, reverse-engineered or entirely new ball screws.

### Why Settle for a Standard Design?

Customers receive unlimited selection and design flexibility, since ball screws are manufactured around customers' parameters, not a catalog.

### Key Advantages/Capabilities:

- New ball screws manufactured from customer specification, print, or sample part
- High precision ground ball screws up to ANSI Class 2 or DIN/JIS Class 1 spec
- Ball screw characteristics based on ANSI & ISO standard calculations
- Fully automated CAD system to design in real-time, providing a solid model early in the design process
- Diameter and lead sizes in both imperial and metric sizes
- Full service repair on nearly all brands of screws
- Emergency reload service with 24-hour turnaround
- Change-out and refurbishment programs to reduce costs by 20% and machine downtime by 70% (ideal for customers with a large fleet of machine tools)
- Local support and design assistance – network of factory-trained sales reps and dedicated engineering staff offer support from concept through delivery



## BALL SCREW REPAIR SERVICE

### Types of Repair

All repair evaluations begin with cleaning and inspecting the unit. A final inspection and testing occurs prior to returning repaired units. Repair options may be limited by the condition of the screw received.

- **“Warranty” Reload** – The unit is reloaded with new balls, tested, and inspected to ensure the unit is repaired to “like-new” operating characteristics (one year warranty).
- **“Temporary” Reload** – The unit is reloaded with new balls, tested, and inspected, but “like new” characteristics cannot be entirely achieved (no warranty).
- **Regrind Screw and New Ball Nut** – When the unit cannot be reloaded due to pitting, brinelling, and/or damage to interior or exterior of unit, an alternative to full replacement is available. This option consists of regrinding the screw to remove pitting and taper and manufacturing a new ball nut (one year warranty).



### Acme, Lead Screw and Other Types of Threads

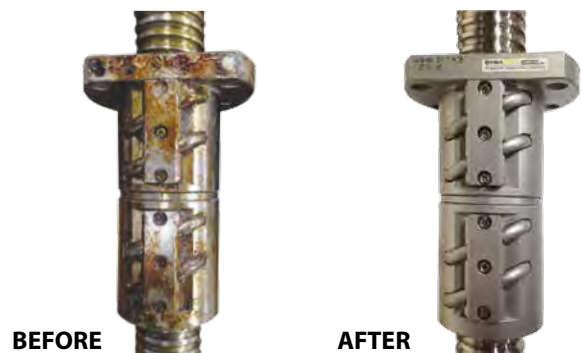
While Dynatect specializes in ground threads, in some circumstances Dynatect may design a ball screw replacement in lieu of a lead or acme screw.

### Need to Get Back Up and Running in a Hurry?

Please call ahead to make arrangements for emergency repair service.

### Return Policy and Instructions

Dynatect's return policy and shipping instructions are posted online. Contact Dynatect for a return material authorization (RMA) number prior to shipping to ensure proper tracking and prompt updates on repairs.



**QUOTE REQUEST FORMS: SEE PAGES 180-181.**

## PRECISION GROUND BALL SCREWS | DESIGN FEATURES

A ground ball screw offers superior energy efficiency, converting nearly all input torque to thrust. In addition to lower energy consumption, a ground ball screw offers greater precision, predictability of life and long-term preload. Dynatect ball screws offer the following advantages:

### High Precision

Ball screws manufactured up to ANSI Class 2 or DIN/JIS Class 1 specification.

### Large Diameter Up to 6 Inches

Screw diameters from 1/2" to 6" (16mm to 150mm). Larger diameters may be available upon request.

### Long Screw Lengths

Available in virtually any length. (Our longest ball screw is 54 feet in length.)

### "Zero Lost Motion" Solutions

We customize your design to minimize backlash and eliminate deadband.



### Internal Ball Return Design\*

Our internal ball return design gives you the following benefits:

- **Optimal Life** – Balls travel in paths that are tangent to the pitch, resulting in longer life and reduced speed
- **Higher Operating Speeds** – Travel path increases permissible speed
- **Smooth Operation and Low Noise** – Balls spend less time traveling unloaded
- **Cost-effective Design** – A single component which allows for smallest overall package sizes
- **Ease of Installation** – Components protected by design means low risk of damage during installation

### Customization

Your ball screw will be configured with the options you specify, and can be further customized for a complete turn-key solution that is quick and easy to install, saving you time and money.

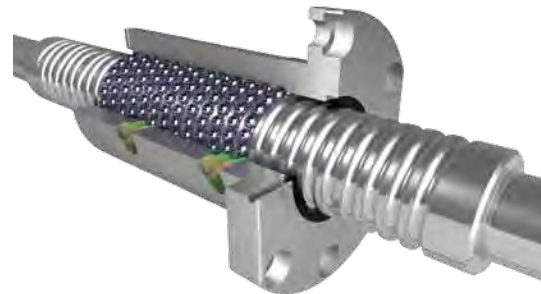
- Ball nut configuration (single or double nut, 2-piece flange to flange nut, middle flange nut)
- Internal or external ball returns
- Wipers and end seals
- Custom journal ends
- Custom housing and mounting block

\*External tube ball return designs can be provided to accommodate shorter length nut designs and multi-start screws can be provided for long lead – high capacity applications.

## DYNATECT BALL RETURN DESIGNS



END CAP RETURN



INTERNAL BUTTON RETURN

### Single Circuit with Multiple Turns

- Best for long lead applications where lead is greater than 50% of the screw diameter
- Smaller overall package space versus external tube design
- Best design for balancing life
- Single circuit with multiple turns and load

### Single Turn with Multiple Circuits

- Good for typical lead and diameter combinations
- Smallest overall package space versus endcap and external tube
- Best design for balancing life and speed

QUOTE REQUEST FORMS: SEE PAGES 180-181.

# PRECISION GROUND BALL SCREWS | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

Please use this form to request a quote for a custom ball screw. Fill in as many specification values as possible. If measurement units are different than the options shown, please specify unit of measure.

## 1. Application Information


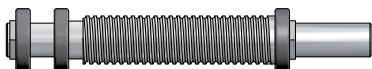
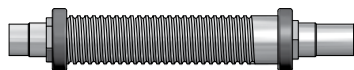
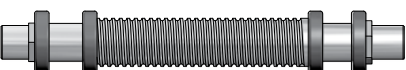
New Design or Replacement Application:  New Design  Replacement (machine and model: \_\_\_\_\_)

Linear Velocity: _____ <input type="checkbox"/> in/min <input type="checkbox"/> mm/sec	Input RPM: _____
Maximum Load: _____ <input type="checkbox"/> lbf <input type="checkbox"/> N	Cycle Time: _____ <input type="checkbox"/> min. <input type="checkbox"/> sec.
Equivalent Load: _____ <input type="checkbox"/> lbf <input type="checkbox"/> N	Duty Cycle (%): _____
Maximum Speed: _____ <input type="checkbox"/> ft/min <input type="checkbox"/> m/min	Static Load Rating: _____ <input type="checkbox"/> lbf @ <input type="checkbox"/> N @
Equivalent Speed: _____ <input type="checkbox"/> ft/min <input type="checkbox"/> m/min	1M inches 1M revolutions
Required Preload: _____ <input type="checkbox"/> lbf <input type="checkbox"/> Ns	Dynamic Load Rating: _____ <input type="checkbox"/> lbf @ <input type="checkbox"/> N @
Required Stiffness: _____ <input type="checkbox"/> lbf/in <input type="checkbox"/> N/mm	1M inches 1M revolutions
	Expected Life (L10): _____ <input type="checkbox"/> hours <input type="checkbox"/> revolutions

## 2. Ball Screw and Nut Material

Carbon Steel  Stainless Steel  Other (please specify) \_\_\_\_\_

## 3. Ball Screw Mounting Style

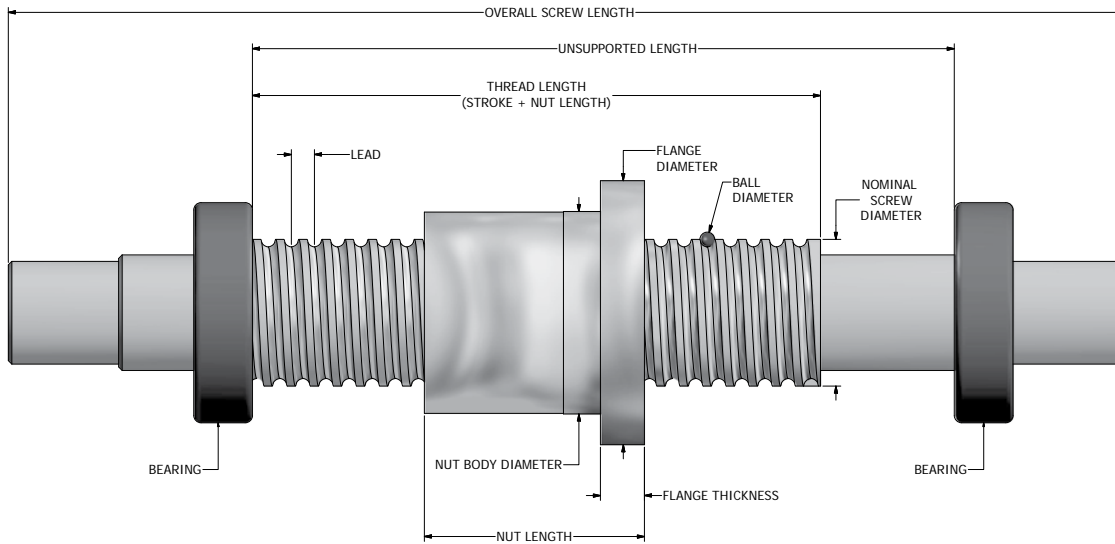
<input type="checkbox"/> Fixed-Free 	<input type="checkbox"/> Fixed-Support 
<input type="checkbox"/> Support-Support 	<input type="checkbox"/> Fixed-Fixed 

## 4. Ball Screw Protection

For longer life, we recommend a bellows to protect the screw from contaminants.  
 Would you like more information on Gortite<sup>®</sup> bellows?  Yes  No



# PRECISION GROUND BALL SCREWS | QUOTE REQUEST FORM



## 5. Ball Screw and Nut Specifications

Ball Diameter: \_\_\_\_\_  in  mm  
 Screw Diameter: \_\_\_\_\_  in  mm  
 Lead: \_\_\_\_\_  in  mm

Screw Orientation:  Horizontal  Vertical

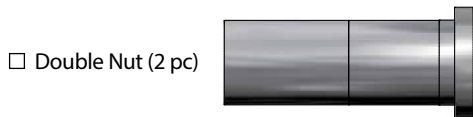
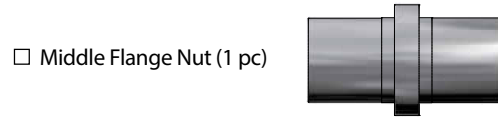
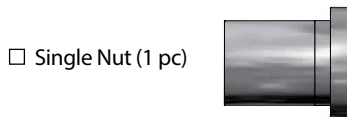
Lead Accuracy:  .0002 in/ft or 5 μm/300mm (ANSI C2, DIN/JIS C1)  
 .0005 in/ft or 12 μm/300mm (ANSI C5, DIN C3)  
 .001 in/ft or 25 μm/300mm (ANSI C7, DIN C5)  
 .006 in/ft or 150 μm/300mm (ANSI C8)

Maximum Nut  
 Body Diameter: \_\_\_\_\_  in  mm  
 Flange Diameter: \_\_\_\_\_  in  mm  
 Flange Thickness: \_\_\_\_\_  in  mm

Overall Screw Length: \_\_\_\_\_  in  mm  
 Screw Stroke: \_\_\_\_\_  in  mm  
 Unsupported Screw Length: \_\_\_\_\_  in  mm

Journal Ends must be specified by customer; please see our website for typical configurations.

## 6. Ball Nut Style (Note: Internal and external returns can be applied to all styles.)



Ball Return Type: \_\_\_\_\_  Internal (recommended)  External

## 7. Additional Design Details

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## POLYCLUTCH | SLIP CLUTCH SELECTION

### HOW TO DETERMINE THE PERFECT CLUTCH FOR YOUR APPLICATION

Three factors in determining the right clutch are: the maximum shaft size, torque capacity of the clutch, and wattage capacity. Maximum wattage capacities are listed for each model in the Series specifications. Please consider the maximum torque capacities when making your selection.

Slip Clutch	Max. Shaft Size	Torque Capacities Up To (lb-in)					Unique Features
		10	100	150	300	500	
 <b>SERIES 16 (MECHANICAL)</b>	Up to 3/8" dia.	→					<ul style="list-style-type: none"> <li>• Very cost-effective for low torque needs up to 10 lb-in</li> <li>• Compact, small package (1 inch outer diameter)</li> </ul>
 <b>SLIPPER (MECHANICAL)</b>	Up to 1" dia.	→					<ul style="list-style-type: none"> <li>• Standard-duty mid-size clutch</li> <li>• Economical for low torque but larger shaft applications</li> </ul>
 <b>V-SERIES SLIPPER (MECHANICAL)</b>	Up to 1" dia.	→					<ul style="list-style-type: none"> <li>• Self-supporting design eliminates need for through-shaft, allows vertical installation</li> <li>• Integrated ball bearing allows thrust loads up to 650 lbs. without any effect on torque</li> <li>• Easy to install in vertical and horizontal applications without driveshaft modification</li> </ul>
 <b>SLIP-EASE (MECHANICAL)</b>	Up to 1" dia.	→					<ul style="list-style-type: none"> <li>• Smallest and largest available models</li> <li>• Low backlash design</li> <li>• Smallest O.D. to torque ratio</li> </ul>
 <b>SLIP-AIRE (PNEUMATIC)</b>	Up to 5/8" dia.	→					<ul style="list-style-type: none"> <li>• Based on mechanical slipper design: pneumatic piston replaces adjustment nut</li> <li>• Applications: adjustment while machine is running or from a remote location</li> </ul>

Note: For torque adjustment while clutch is in use (remote torque adjustment), see the SLIP-AIRE clutches.

For Jaw Clutches and One-Way Clutches, visit website for details.



# POLYCLUTCH® CONTINUOUS SLIP CLUTCHES

**POLYCLUTCH ELIMINATES STICTION** – Polyclutch has developed a unique technology and manufacturing process resulting in static friction being lower than dynamic friction. This characteristic generates repeatable torque control and smooth operation while slipping.

- No sudden shock on sensitive paper, film, wire, thread, etc.
- Repeatable cushioned torque for protection during overload
- Ideal for friction hinges when smooth movement of lids, doors, screens, covers, etc., is required

- Smooth, accurate starting/stopping of conveyors, indexing mechanisms, linear actuators, etc.
- Repeatable accurate torque for capping machines, automatic screw driving, valve control, etc.

Our proprietary burn-in process ensures that all Polyclutch Slip Clutches will perform consistently right out of the box, with no break-in period required.

## APPLICATIONS:

- Overload Protection (machine and personnel safety)
- Torque Control (bottle capping, fastener driving)
- Tension Control (printing, stamping, labeling and take-up reels)
- Positioning Hinge (covers, medical equipment, light fixtures)

## KEY BENEFITS:

- Smooth breakaway and continuous slip
- Long life of 20 to 30 million cycles in slip condition
- Torque range from 0.5 lb-in to 750 lb-in
- Fixed, adjustable and custom designs
- Clutches are bi-directional
- No lubrication needed
- Made in the USA

## A GREAT ALTERNATIVE TO:

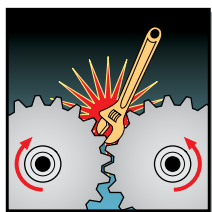
- Servo-motors: our solution costs less
- Magnetic clutches: smaller, less expensive
- Ball detent: no clicking, no reset required
- Torque limiters: consistent repeatability, continuous slip
- Electronic protection only: added mechanical safety in electronically controlled systems

## LIMITATIONS:

- Maximum 1.25-inch shaft size
- Not to be used as a universal joint or a spring coupler
- Does not de-couple at overload
- Cannot be exposed to radiation
- Contact a Polyclutch application specialist if slip clutch would be directly exposed to weather or wash down

## CONTINUOUS SLIP CLUTCHES SOLVE MANY DESIGN ENGINEERING PROBLEMS:

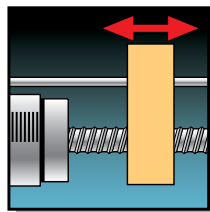
Polyclutch slip clutches can slip continuously or intermittently for over 30 million cycles. This opens up many design engineering options including...



### Overload Protection

Protect machinery and operator. Clutch will slip when mechanism is jammed. Motion will

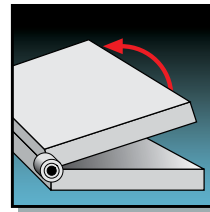
continue when impediment is removed.



### Soft Starts/ Cushioned Stops

Inertia makes clutch slip when starting and/or stopping. Results in less shock throughout the

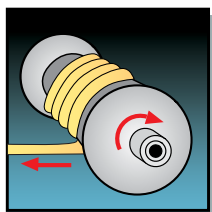
system. Ideal for slip at the end of stroke.



### Positioning Hinge

Hold lid, cover, door, light fixture, screen, etc., at any position. Fingertip control. Combine with one way

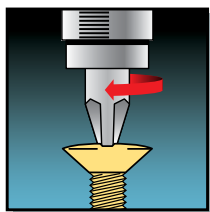
clutch for free movement in one direction.



### Tension Control

Maintain constant tension while winding or unwinding wire, paper, film, thread, etc. Slip clutch automatically

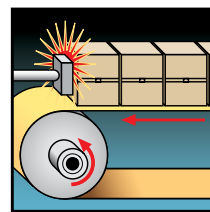
compensates for changes in speed and diameter. Pneumatic clutch can change tension during operation.



### Torque Control

Screw bottle caps, screws, controls, etc., to correct torque setting. Combine with one way clutch to slip

at rated torque in one direction and freewheel or positive drive in other direction.



### Force Control

Push product against gate with constant force. Remove gate and move to next position. No damage to product

or conveyor – clutch does all the slipping. Also used for overload protection when jammed and for indexing the conveyor.

## APPLICATION EXAMPLES



### Polyclutch Extends Machinery Life

Polyclutch adjustable slip clutches control the precise amount of torque to tighten bottle caps, without wear or breakage, in this capping line application. All the slippage is in the clutch, with no appreciable wear.



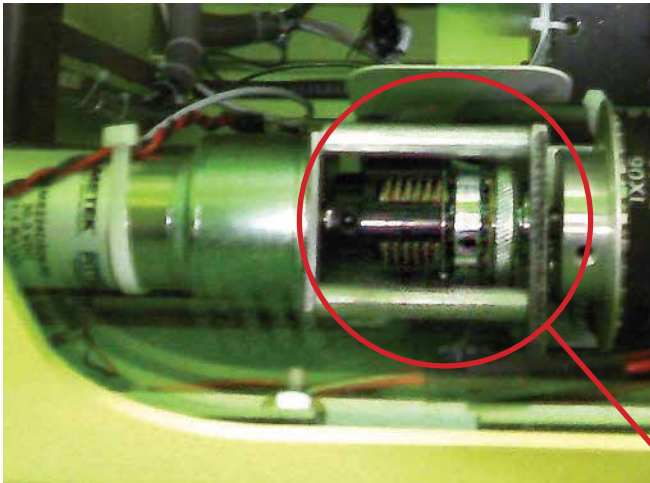
### Constant Torque Gives You the Slip

A slip clutch acts as a continuous drag brake to meet the specific torque requirement for this unwind/rewind system application in a DATAMAX® bar code printer.

Other applications apply constant tension to film, wire, thread, paper, etc.

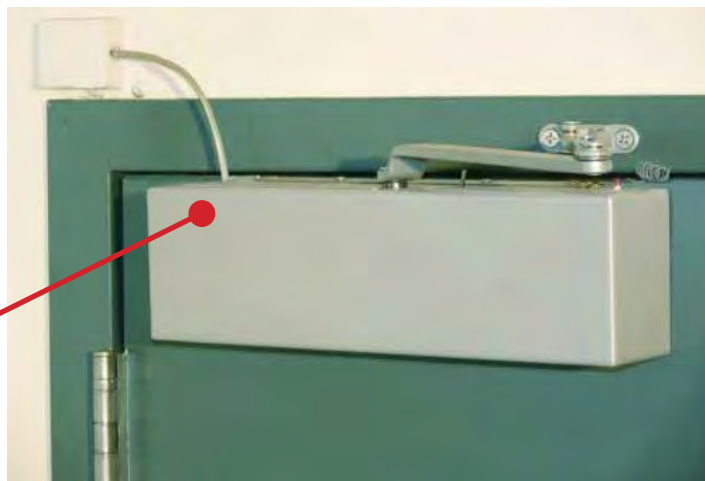
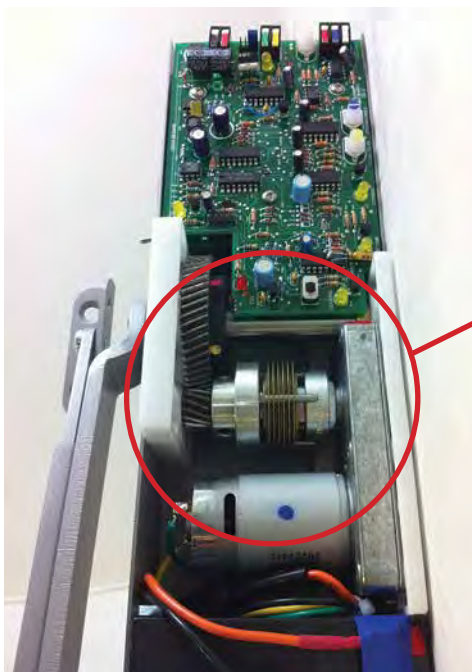
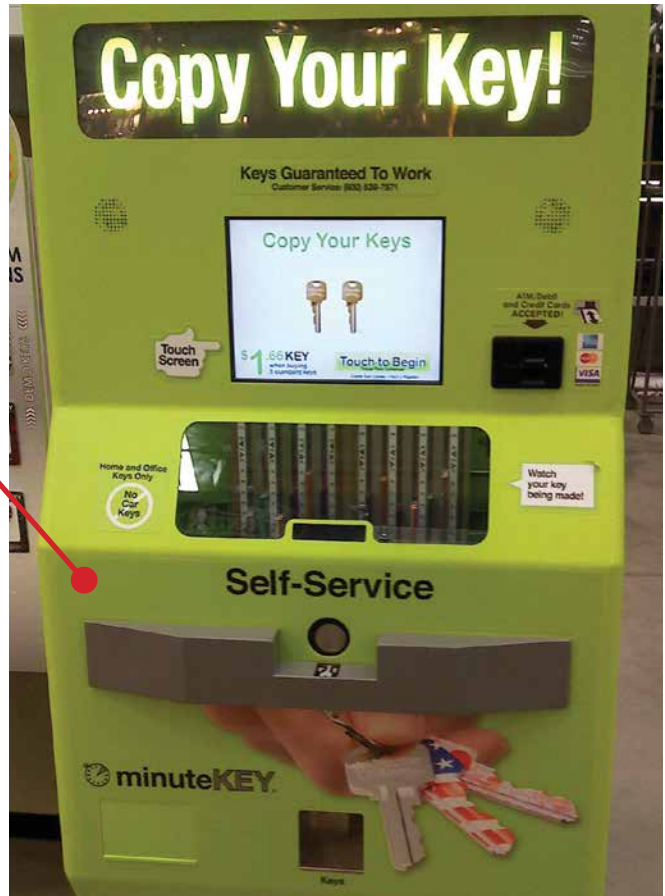


## APPLICATION EXAMPLES



### Automated Kiosks

Polyclutch slip clutches are an integral part of many retail kiosks. As shown in this photo, a slip clutch is used to protect the sensitive drive mechanisms of these automated machines.



### Disabled Access Systems

A Polyclutch slip clutch provides safety in many disabled access systems, as seen in this photo, where it is being used for overload protection in an automated door opener.



## APPLICATION EXAMPLES



### Ice-Dispensing Machines

Hidden deep inside of this ice-making machine, a Polyclutch slip clutch prevents overload to the drive mechanism during the forming and dispensing of ice cubes.



### Retail Vending Kiosks

A Polyclutch protects this machine against any type of overload or jamming during the process of dispensing a DVD.



### MRI Beds

Polyclutch adds a mechanical safety for moving MRI beds as seen in this picture.

## APPLICATION EXAMPLES



### Conveyors

Polyclutch slip clutches offer an added level of safety and protection to both the machine and its operators.



### Label Printers

Polyclutch slip clutches are the perfect solution for adding just the right amount of tension to any reel or spool without having to worry about the tension varying over time or wearing out prematurely.

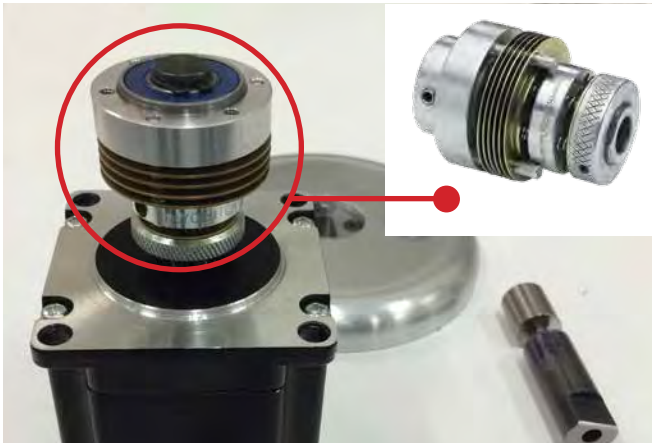


### Military and Law Enforcement Inspection Robots

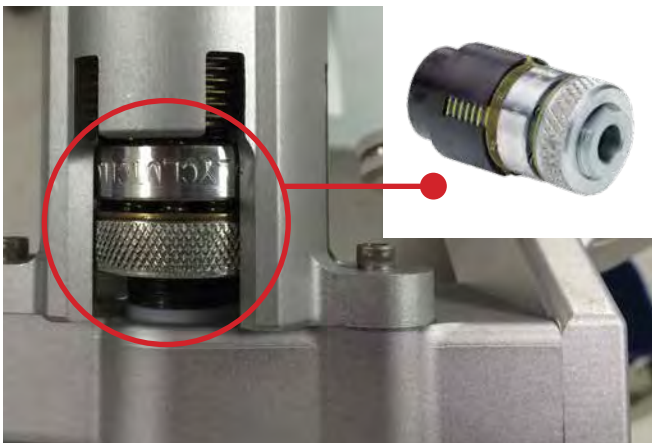
The Machine Lab, Inc., an industry leader in defense robotics, uses two Polyclutch slip clutches in each robot arm for overload protection.



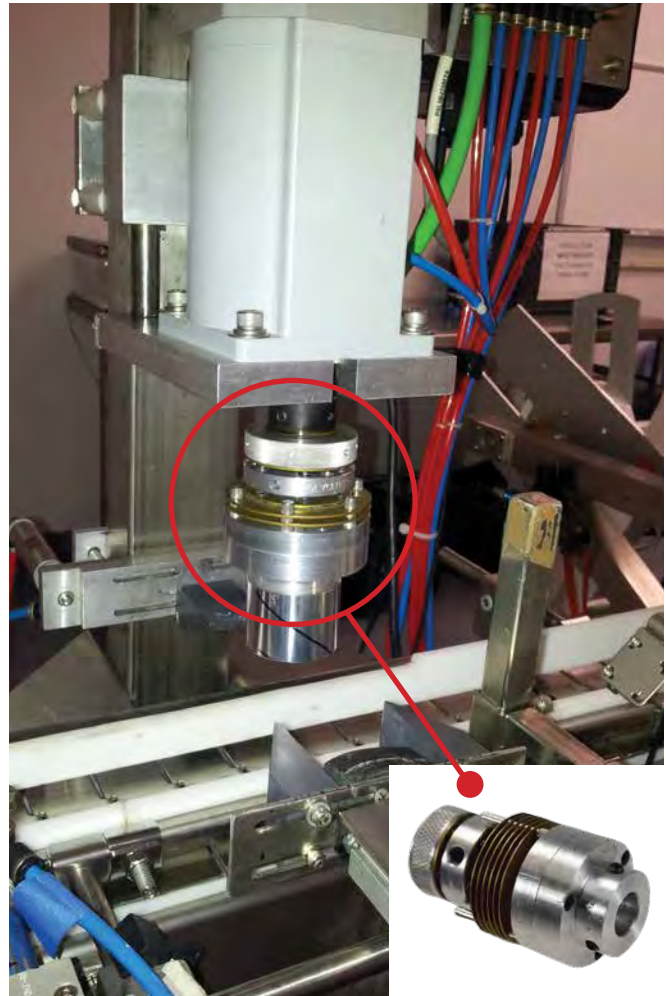
## APPLICATION EXAMPLES



The Polyclutch slipper provides precision torque control during the manufacturing of dental implants.



In this medical application, a Slip-Ease clutch is used as a retention hinge on a mounting platform of a surgical device.



The V-Series slipper is the ideal solution for torque control on capping machines.



The V-Series slipper provides overload protection and increases operator safety to this manual cutting tool. This mechanical slip clutch limits the amount of torque that is transferred to the cutting tool, making this a safer operation for the user.

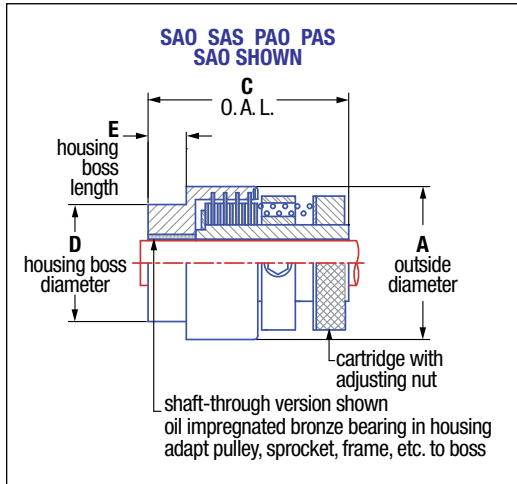
# SERIES 16 | MECHANICAL SLIP CLUTCHES

OUR MOST COMPACT MODEL FEATURES BIG TORQUE IN A SMALL PACKAGE

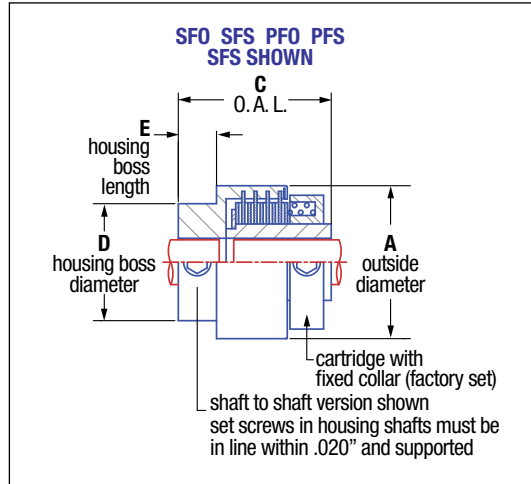
See pages 198-199 for slip clutch operation (construction, installation, capacity) and mounting options.



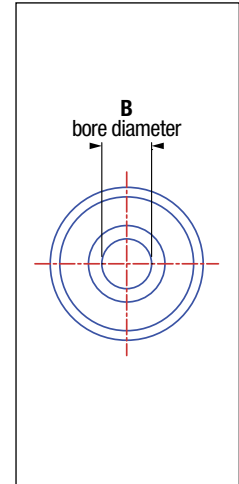
### ADJUSTABLE



### FIXED FACTORY SET – NON ADJUSTABLE



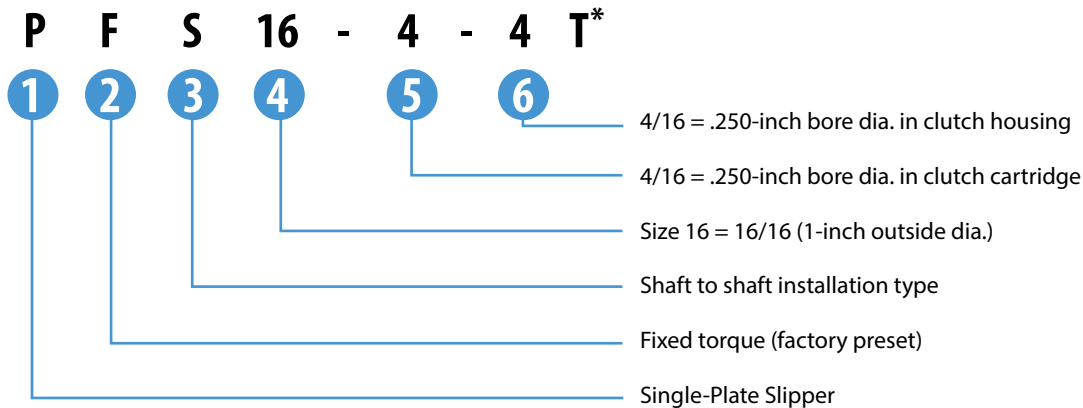
### END VIEW TYPICAL



MODEL NO.	A inches (mm)	B STD.	B MAX.	C inches (mm)	D inches (mm)	E inches (mm)	CAPACITY @ 50 RPM		FRICTION SURFACES
		inches (mm)	inches (mm)				lb-in (Nm)	Watts	
SFS 16 & SFO 16	1.00 (25.4)	.250 (8)	.375 (10)	1.00 (25.40)	.760 (19.30)	.25 (6.35)	10 (1.2)	6	8
SAS 16 & SAO 16	1.00 (25.4)	.250 (8)	.375 (10)	1.31 (33.27)	.760 (19.30)	.25 (6.35)	10 (1.2)	6	8
PFS 16 & PFO 16	1.00 (25.4)	.250 (8)	.375 (10)	.78 (19.81)	.760 (19.30)	.25 (6.35)	2 (.3)	1	2
PAS 16 & PAO 16	1.00 (25.4)	.250 (8)	.375 (10)	1.06 (26.92)	.760 (19.30)	.25 (6.35)	2 (.3)	1	2

### PART NUMBER EXAMPLE

See page 200 for part number identification.



\*T = Preset Torque Value, customer-specified

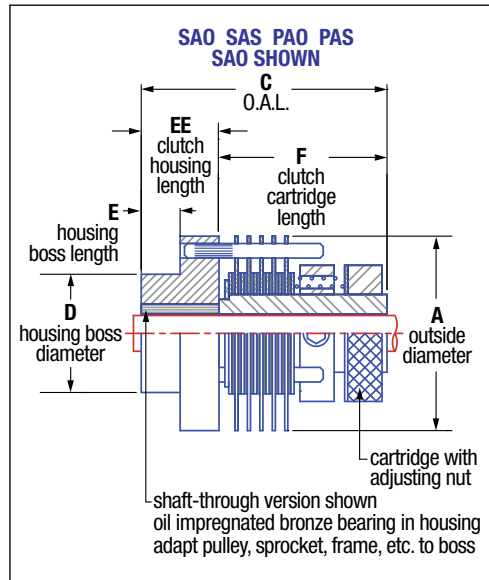
QUOTE REQUEST FORMS: SEE PAGE 201.

# SLIPPER | MECHANICAL SLIP CLUTCHES

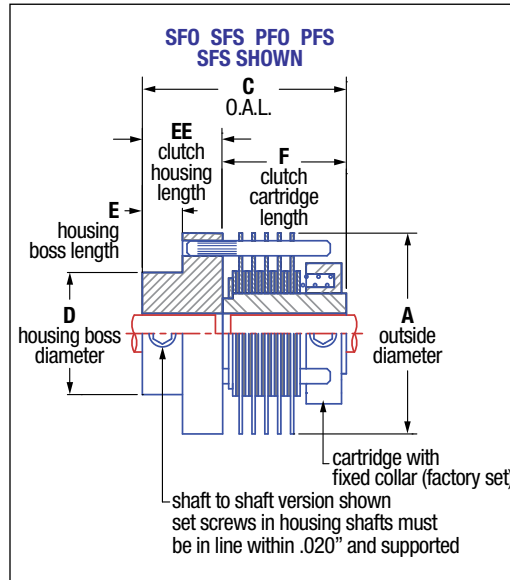
The Polyclutch slipper controls torque for intermittent, continuous or overload slip. It contains a number of brass plates interfaced with long life friction material. Soft springs maintain pressure on the friction plates, assuring constant torque. An adjacent component of your mechanism can often be used as the clutch housing reducing overall cost or space concerns. Torque control in one direction can be achieved by combining with our one-way clutch.



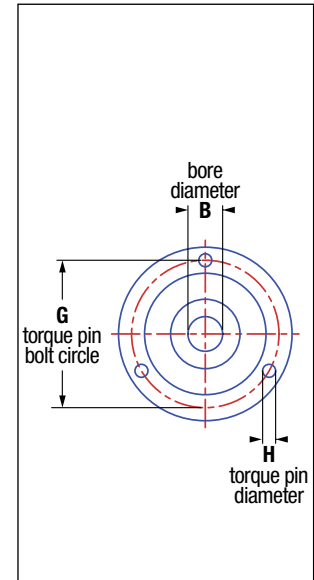
## ADJUSTABLE



## FIXED FACTORY SET – NON ADJUSTABLE



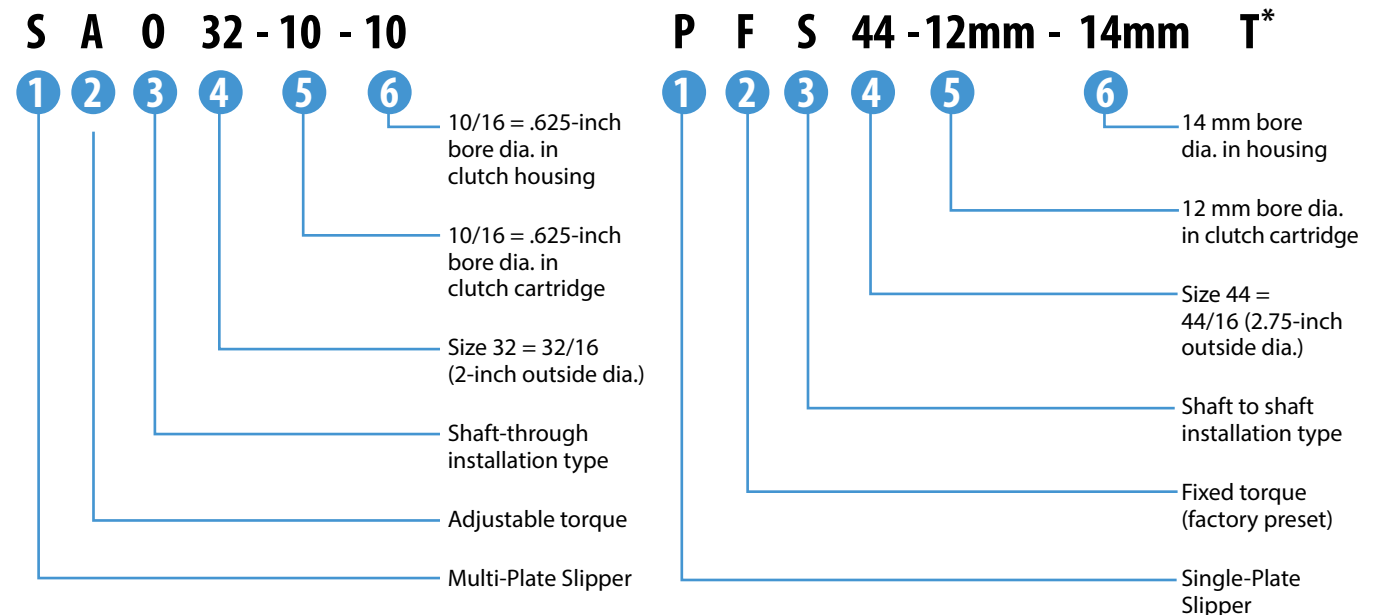
## END VIEW TYPICAL



**NOTE:** Multi-plate clutches shown. Single-plate clutch supplied with one set of friction plates and pads.

## PART NUMBER EXAMPLE

See page 200 for part number identification.



\*T = Preset Torque Value, customer-specified

**QUOTE REQUEST FORMS: SEE PAGE 201.**



# SLIPPER | SPECIFICATIONS

See pages 198-199 for slip clutch operation (construction, installation, capacity) and mounting options.

MODEL NO.	A inches (mm)	B* STD.	B MAX.	C inches (mm)	D inches (mm)	E inches (mm)	EE inches (mm)	F inches (mm)	G inches (mm)	H inches (mm)	CAPACITY @ 50 RPM		FRICTION SURFACES
		inches (mm)	inches (mm)								lb-in (Nm)	Watts	
SFS 20 & SFO 20	1.25 (31.75)	.250 (8)	.375 (10)	1.19 (30.2)	.760 (19.30)	.25 (6.35)	.50 (12.70)	.69 (17.50)	1.062 (26.97)	.094 (2.38)	12 (1.35)	6	8
SAS 20 & SAO 20	1.25 (31.75)	.250 (8)	.375 (10)	1.50 (38.1)	.760 (19.30)	.25 (6.35)	.50 (12.70)	1.00 (25.40)	1.062 (26.97)	.094 (2.38)	12 (1.35)	6	8
SFS 24 & SFO 24	1.50 (38.10)	.375 (10)	.500 (13)	2.00 (50.08)	1.010 (25.65)	.38 (9.65)	.75 (19.05)	1.25 (31.75)	1.312 (33.32)	.125 (3.18)	25 (2.82)	15	12
SAS 24 & SAO 24	1.50 (38.10)	.375 (10)	.500 (13)	2.50 (63.5)	1.010 (25.65)	.38 (9.65)	.75 (19.05)	1.75 (44.50)	1.312 (33.32)	.125 (3.18)	25 (2.82)	15	12
SFS 32 & SFO 32	2.00 (50.80)	.500 (12)	.625 (16)	2.31 (58.7)	1.385 (35.18)	.50 (12.70)	1.00 (25.40)	1.31 (33.30)	1.672 (42.47)	.188 (4.78)	50 (5.65)	30	12
SAS 32 & SAO 32	2.00 (50.80)	.500 (12)	.625 (16)	2.87 (72.9)	1.385 (35.18)	.50 (12.70)	1.00 (25.40)	1.88 (47.80)	1.672 (42.47)	.188 (4.78)	50 (5.65)	30	12
SFS 44 & SFO 44	2.75 (69.85)	.500 (12)	.625 (16)	2.31 (58.7)	1.635 (41.53)	.50 (12.70)	1.00 (25.40)	1.31 (33.30)	2.375 (60.33)	.188 (4.78)	75 (8.47)	43	12
SAS 44 & SAO 44	2.75 (69.85)	.500 (12)	.625 (16)	2.87 (72.9)	1.635 (41.53)	.50 (12.70)	1.00 (25.40)	1.88 (47.80)	2.375 (60.33)	.188 (4.78)	75 (8.47)	43	12
SFS 48 & SFO 48	3.00 (76.20)	.625 (16)	1.00 (25)	3.00 (76.2)	1.760 (44.70)	.50 (12.70)	1.00 (25.40)	2.00 (50.80)	2.625 (66.80)	.250 (6.35)	100 (11.29)	55	12
SAS 48 & SAO 48	3.00 (76.20)	.625 (16)	1.00 (25)	3.50 (88.9)	1.760 (44.70)	.50 (12.70)	1.00 (25.40)	2.50 (63.50)	2.625 (66.80)	.250 (6.35)	100 (11.29)	55	12
PFS 20 & PFO 20	1.25 (31.75)	.250 (8)	.375 (10)	.78 (19.8)	.760 (19.30)	.19 (4.83)	.31 (7.87)	.47 (11.90)	1.062 (26.97)	.094 (2.38)	2.5 (0.28)	1	2
PAS 20 & PAO 20	1.25 (31.75)	.250 (8)	.375 (10)	1.06 (26.9)	.760 (19.30)	.19 (4.83)	.31 (7.87)	.75 (19.10)	1.062 (26.97)	.094 (2.38)	2.5 (0.28)	1	2
PFS 24 & PFO 24	1.50 (38.80)	.375 (10)	.500 (13)	1.07 (27.0)	1.010 (25.65)	.19 (4.83)	.38 (9.65)	.69 (17.50)	1.312 (33.32)	.125 (3.18)	4 (0.45)	2	2
PAS 24 & PAO 24	1.50 (38.80)	.375 (10)	.500 (13)	1.32 (33.5)	1.010 (25.65)	.19 (4.83)	.38 (9.65)	.94 (23.90)	1.312 (33.32)	.125 (3.18)	4 (0.45)	2	2
PFS 32 & PFO 32	2.00 (50.80)	.500 (12)	.625 (16)	1.22 (31.0)	1.385 (35.18)	.25 (6.35)	.50 (12.70)	.72 (18.30)	1.672 (42.47)	.188 (4.78)	8 (0.90)	5	2
PAS 32 & PAO 32	2.00 (50.80)	.500 (12)	.625 (16)	1.72 (43.7)	1.385 (35.18)	.25 (6.35)	.50 (12.70)	1.22 (31.00)	1.672 (42.47)	.188 (4.78)	8 (0.90)	5	2
PFS 44 & PFO 44	2.75 (69.85)	.500 (12)	.625 (16)	1.22 (31.0)	1.635 (41.53)	.25 (6.35)	.50 (12.70)	.72 (18.30)	2.375 (60.33)	.188 (4.78)	12 (1.35)	7	2
PAS 44 & PAO 44	2.75 (69.85)	.500 (12)	.625 (16)	1.72 (43.7)	1.635 (41.53)	.25 (6.35)	.50 (12.70)	1.22 (31.00)	2.375 (60.33)	.188 (4.78)	12 (1.35)	7	2
PFS 48 & PFO 48	3.00 (76.10)	.625 (16)	1.00 (25)	2.25 (57.15)	1.760 (44.70)	.50 (12.70)	1.0 (25.40)	1.25 (31.75)	2.625 (66.80)	.250 (6.35)	20 (2.26)	13	2
PAS 48 & PAO 48	3.00 (76.10)	.625 (16)	1.00 (25)	2.75 (69.85)	1.760 (44.70)	.50 (12.70)	1.0 (25.40)	1.75 (44.45)	2.625 (66.80)	.250 (6.35)	20 (2.26)	13	2

\*Bore diameters (Dimension B) other than standards shown are available up to the maximum diameter. Please note that torque capacities are only guidelines. Higher torques and speeds are possible depending on operating conditions. Consult factory for details.

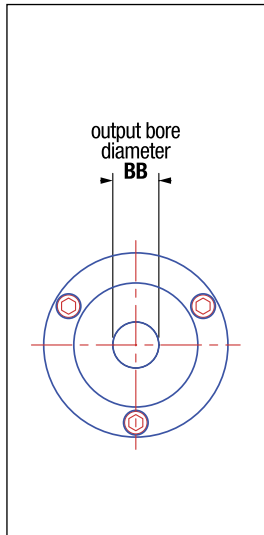
**QUOTE REQUEST FORMS: SEE PAGE 201.**

## V-SERIES SLIPPER | MECHANICAL SLIP CLUTCHES

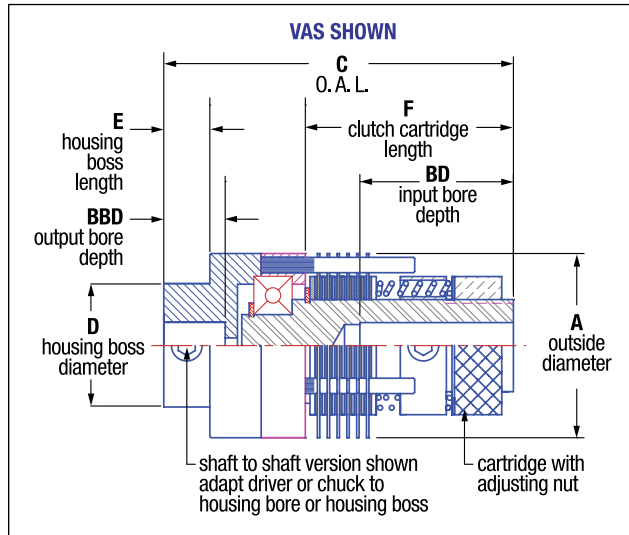
The V-Series slipper provides torque control for driving, capping and other applications where thrust loads are applied. Its integrated ball bearing allows thrust loads up to 650 pounds without any effect on torque. Self-supporting hub design allows for easy installation; shaft-through support is not required. The V-Series slipper may be used for pulley applications; and its design allows rebuilding, if necessary.



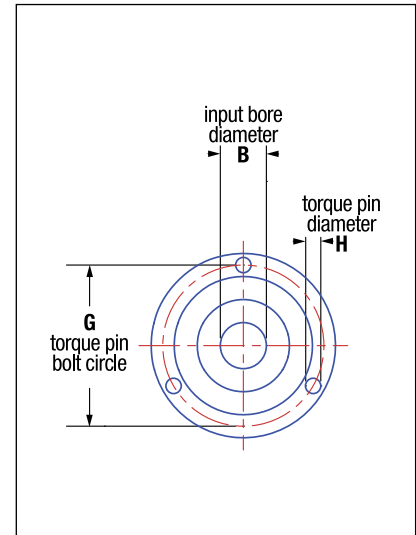
END VIEW TYPICAL



ADJUSTABLE



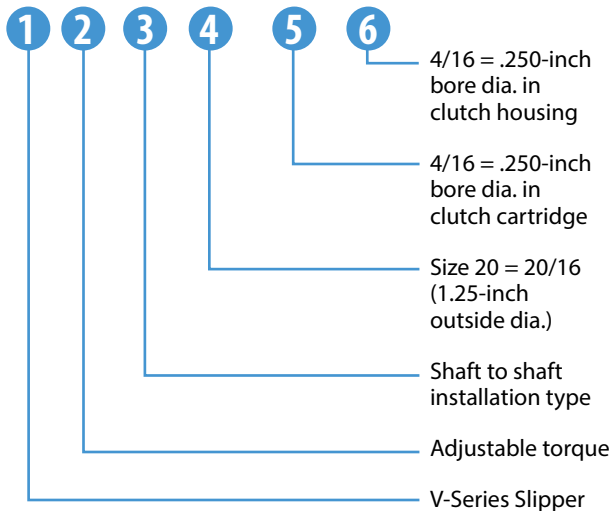
END VIEW TYPICAL



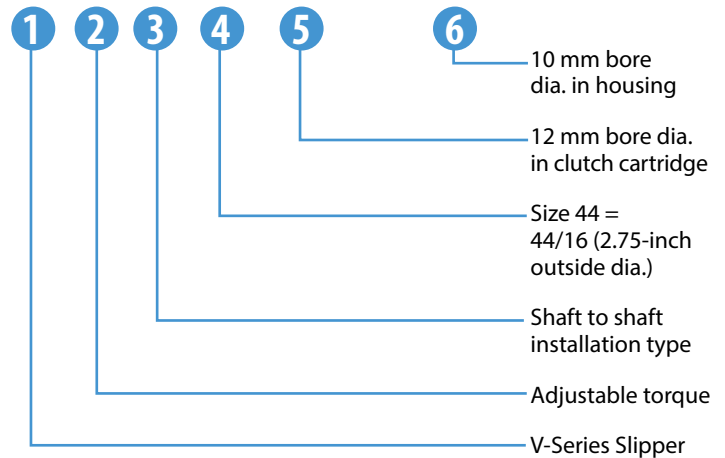
### PART NUMBER EXAMPLE

See page 200 for part number identification.

**V A S 20 - 4 - 4**



**V A S 44 - 12mm - 10mm**



QUOTE REQUEST FORMS: SEE PAGE 201.

# V-SERIES SLIPPER | SPECIFICATIONS

## HORIZONTAL AND VERTICAL INSTALLATION WITHOUT DRIVESHAFT MODIFICATIONS!

See pages 198-199 for slip clutch operation (construction, installation, capacity) and mounting options.



MODEL NO.	A inches (mm)	B* STD. inches (mm)	B MAX. inches (mm)	BD inches (mm)	BB** inches (mm)	BBD inches (mm)	C inches (mm)	+ .002 / -.000 inches (+.05 / -.00 mm)	E inches (mm)	F inches (mm)	G inches (mm)	H inches (mm)
		+.002 / -.000 inches (+.05 / -.00 mm)						D inches (mm)				
VAS 20	1.25 (31.75)	.250 (8)	.375 (10)	.750 (19.05)	.250 (6.35)	.500 (12.7)	2.05 (52.07)	.750 (19.05)	.350 (8.89)	.98 (24.89)	1.062 (26.97)	.094 (2.39)
VAS 24	1.50 (38.10)	.375 (10)	.500 (13)	1.25 (31.75)	.250 (6.35)	.500 (12.7)	2.85 (72.39)	1.000 (25.40)	.375 (9.53)	1.69 (42.93)	1.312 (33.32)	.125 (3.19)
VAS 32	2.00 (50.80)	.500 (12)	.625 (16)	1.25 (31.75)	.250 (6.35)	.500 (12.7)	3.00 (76.20)	1.375 (34.93)	.500 (12.70)	1.80 (45.72)	1.672 (42.47)	.1884 (4.78)
VAS 44	2.75 (69.85)	.500 (12)	.625 (16)	1.25 (31.75)	.250 (6.35)	.700 (17.78)	3.30 (83.82)	1.625 (41.28)	.500 (12.70)	1.80 (45.72)	2.375 (60.33)	.188 (4.78)
VAS 48	3.00 (76.20)	.625 (16)	1.000 (25)	1.75 (44.45)	.250 (6.35)	.700 (17.78)	4.00 (101.60)	1.750 (44.45)	.500 (12.70)	2.43 (61.72)	2.625 (66.80)	.250 (6.35)

\*Bore diameters (Dimension B): other than standards shown are available up to the maximum diameter.

\*\*Standard output bore (Dimension BB): other diameters (English and Metric), hex sizes or custom configurations are available upon request.

MODEL NO.	THRUST LOAD lbs. (N)	CAPACITY @ 50 RPM		FRICTION SURFACES
		lb-in (Nm)	Watts	
VAS 20	165 (37)	12 (1.36)	6	8
VAS 24	255 (57)	25 (2.82)	15	12
VAS 32	300 (67)	50 (5.65)	30	12
VAS 44	400 (89)	75 (8.47)	43	12
VAS 48	665 (149)	100 (11.29)	55	12

Please note that torque capacities are only guidelines. Higher torques and speeds are possible depending on operating conditions. Consult factory for details.

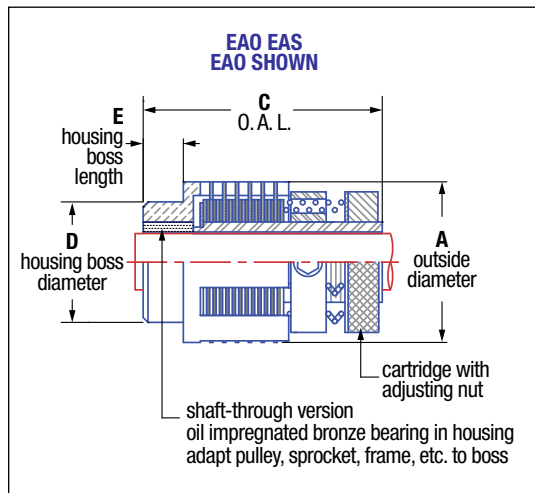
**QUOTE REQUEST FORMS: SEE PAGE 201.**

## SLIP-EASE | MECHANICAL SLIP CLUTCHES

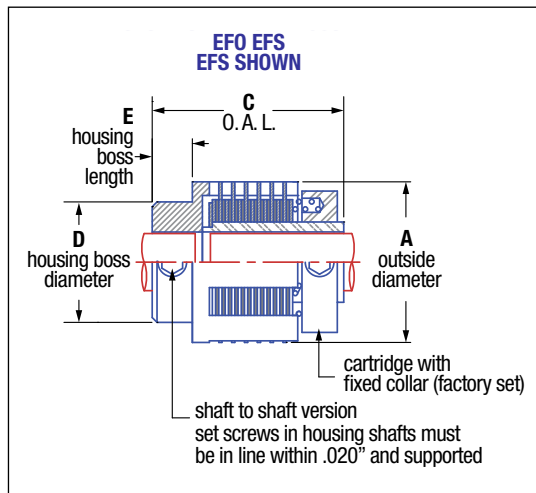
Utilizes an axial loaded multi-plate design. For applications where space is at a premium and low backlash is required.



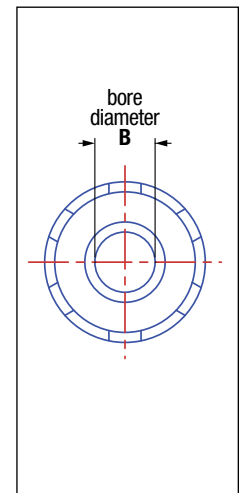
### ADJUSTABLE



### FIXED FACTORY SET – NON ADJUSTABLE



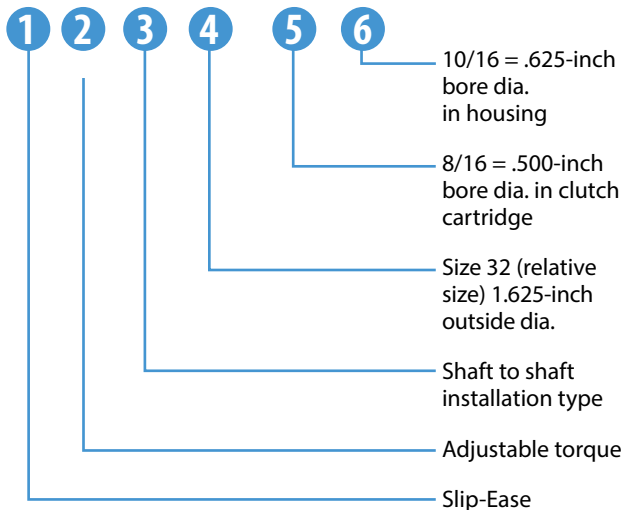
### END VIEW TYPICAL



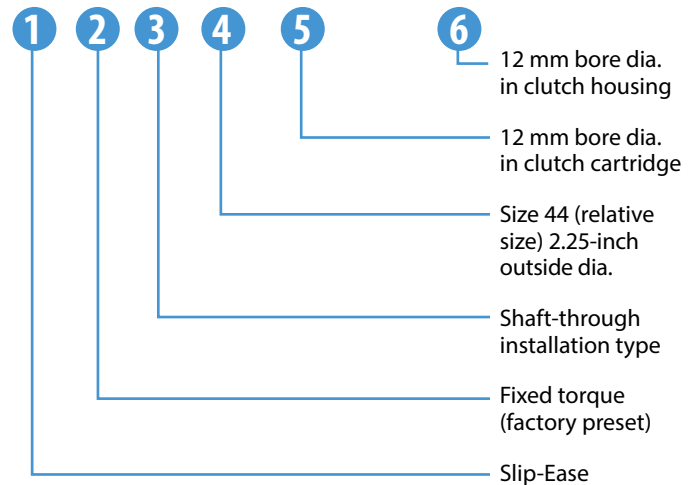
### PART NUMBER EXAMPLES

See page 200 for part number identification.

**E A S 32 - 8 - 10**



**E F O 44 - 12mm - 12mm**



QUOTE REQUEST FORMS: SEE PAGE 201.

## SLIP-EASE | SPECIFICATIONS

See pages 198-199 for slip clutch operation (construction, installation, capacity) and mounting options.

MODEL NO.	A inches (mm)	B* STD. inches (mm)	B MAX. inches (mm)	C inches (mm)	D inches (mm)	E inches (mm)	CAPACITY @ 50 RPM		FRICTION SURFACES
		+.002 / -.000 inches (+.05 / -.00 mm)					lb-in (Nm)	Watts	
EAS 12 & EAO 12	.750 (19.05)	.1875 (5)	.250 (6)	1.25 (31.75)	.562 (14.28)	.188 (4.78)	8.5 (.96)	4.5	8
EFS 12 & EFO 12	.750 (19.05)	.1875 (5)	.250 (6)	1.00 (25.40)	.562 (14.28)	.188 (4.78)	8.5 (.96)	4.5	8
EFS 16 & EFO 16	1.000 (25.40)	.250 (8)	.375 (10)	1.19 (30.2)	.750 (19.05)	.25 (6.35)	16 (1.81)	9	12
EAS 16 & EAO 16	1.000 (25.40)	.250 (8)	.375 (10)	1.50 (38.1)	.750 (19.05)	.25 (6.35)	16 (1.81)	9	12
EFS 24 & EFO 24	1.375 (34.90)	.375 (10)	.500 (13)	2.00 (50.8)	1.000 (25.40)	.38 (9.65)	25 (2.82)	15	12
EAS 24 & EAO 24	1.375 (34.90)	.375 (10)	.500 (13)	2.50 (63.50)	1.000 (25.40)	.38 (9.65)	25 (2.82)	15	12
EFS 32 & EFO 32	1.625 (41.28)	.500 (12)	.625 (16)	1.87 (47.5)	1.375 (34.93)	.50 (12.70)	50 (5.65)	30	12
EAS 32 & EAO 32	1.625 (41.28)	.500 (12)	.625 (16)	2.44 (62.0)	1.375 (34.93)	.50 (12.70)	50 (5.65)	30	12
EFS 44 & EFO 44	2.250 (57.15)	.500 (12)	.625 (16)	1.87 (47.5)	1.625 (41.28)	.50 (12.70)	75 (8.47)	43	12
EAS 44 & EAO 44	2.250 (57.15)	.500 (12)	.625 (16)	2.44 (62.0)	1.625 (41.28)	.50 (12.70)	75 (8.47)	43	12
EAS 52 & EAO 52	3.250 (82.55)	.750 (20)	1.250 (32)	4.00 (101.6)	2.000 (50.8)	.50 (12.70)	150 (16.95)**	85	12

\*Bore diameters (Dimension B): other than standards shown are available up to the maximum diameter.

\*\*Maximum capacity is 500 lb-in / 56 Nm. Heat generation should not exceed maximum Watts capacity. Watts = Torque x RPM x Duty Cycle x 0.011

QUOTE REQUEST FORMS: SEE PAGE 201.

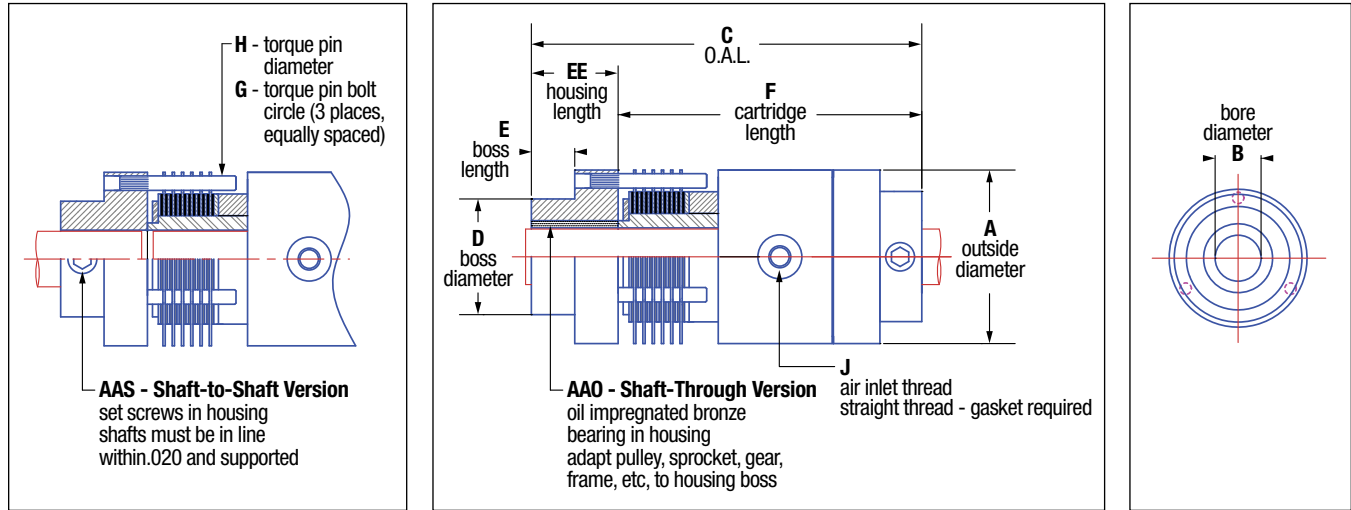


## SLIP-AIRE | PNEUMATIC SLIP CLUTCHES

The Polyclutch Slip-Aire is an air actuated version of the mechanical Polyclutch slip clutch. It has the same long life friction plates, assuring constant torque or tension. With air actuation it can be used to engage/disengage, to vary the torque during operation, or to adjust the torque remotely at any time. Ideal for servo mechanisms, it transmits higher torque levels than comparably sized mechanical slip clutches.



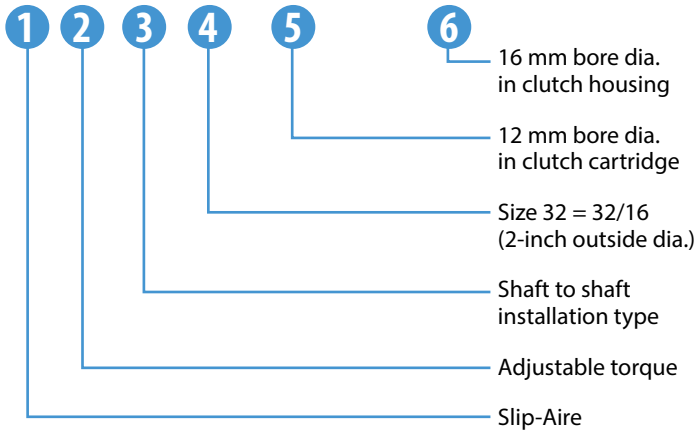
END VIEW TYPICAL



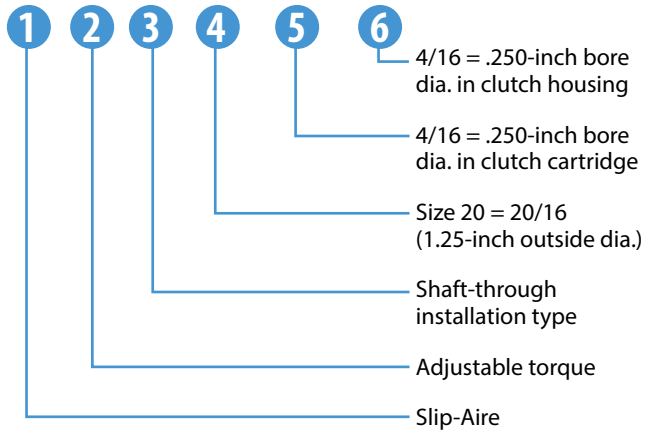
### PART NUMBER EXAMPLES

See page 200 for part number identification.

**A A S 32 - 12mm - 16mm**



**A A O 20 - 4 - 4**



QUOTE REQUEST FORMS: SEE PAGE 201.

## SLIP-AIRE | SPECIFICATIONS

See pages 198-199 for slip clutch operation (construction, installation, capacity) and mounting options.

MODEL NO.	A inches (mm)	B* STD.	B MAX.	C inches (mm)	D** inches (mm)	E inches (mm)	EE inches (mm)	F inches (mm)	G inches (mm)	H inches (mm)	J inches (mm)
		inches (mm)	inches (mm)								
AAS 20 & AA0 20	1.25 (31.75)	.250 (8)	.375 (10)	2.50 (63.50)	.760 (19.30)	.25 (6.35)	.50 (12.70)	2.00 (50.80)	1.062 (26.98)	0.94 (2.39)	10-32
AAS 24 & AA0 24	1.50 (38.10)	.375 (10)	.500 (13)	3.38 (85.85)	1.010 (25.65)	.38 (9.65)	.75 (19.05)	2.63 (66.80)	1.312 (33.73)	.125 (3.18)	10-32
AAS 32 & AA0 32	2.00 (50.80)	.500 (12)	.625 (16)	3.63 (92.20)	1.385 (35.18)	.50 (12.70)	1.00 (25.40)	2.63 (66.80)	1.672 (42.47)	.188 (4.78)	10-32
AAS 44 & AA0 44	2.75 (69.85)	.500 (12)	.625 (16)	3.63 (92.20)	1.635 (41.53)	.50 (12.70)	1.00 (25.40)	2.63 (66.80)	2.375 (60.33)	.188 (4.78)	10-32

\*Bore diameters (Dimension B): other than standards shown are available up to the maximum diameter.

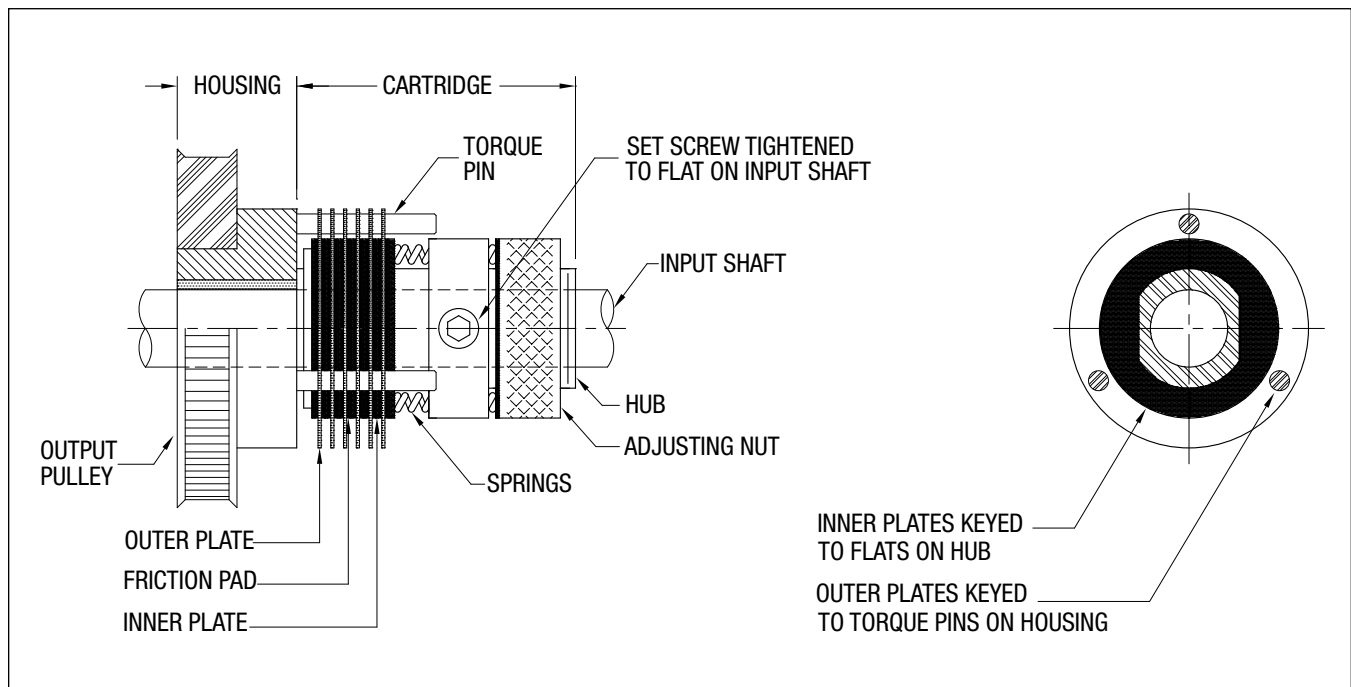
MODEL NO.	CAPACITY CONTINUOUS @ 50 PSI* lb-in (Nm)	CAPACITY MAXIMUM @ 100 PSI** lb-in (Nm)	WATTS	FRICTION SURFACES
AAS 20 & AA0 20	12 (1.36)	20 (2.26)	6	8
AAS 24 & AA0 24	25 (2.82)	50 (5.65)	15	12
AAS 32 & AA0 32	50 (5.65)	100 (11.30)	30	12
AAS 44 & AA0 44	75 (8.47)	300 (33.90)	43	12

\*Rated torque for continuous operation at 50 RPM. Torque can be higher or lower depending on actual RPM and duty cycle.

\*\*Maximum torque attainable (at 100 PSI).

QUOTE REQUEST FORMS: SEE PAGE 201.

## SLIP CLUTCH | CONSTRUCTION, INSTALLATION & CAPACITY



### CONSTRUCTION

A Polyclutch consists of two parts: a cartridge and a housing (see above).

The cartridge is set screwed or keyed to the input shaft.

- The cartridge includes the clutch pack: outer plates, friction pads, inner plates
- Plates are brass with a proprietary finish
- Inner plates are keyed to the cartridge hub
- Outer plates are keyed to the cartridge housing
- Friction pads are a proprietary plastic-based composite (no asbestos)

The housing is either set screwed or keyed to the output shaft, or (as shown), attached to the output gear or pulley, with a bronze bearing to allow relative motion between the input shaft and the output gear/pulley.

Torque is controlled by changing the pressure applied to the clutch pack. In an adjustable style clutch, the torque level is controlled by compressing the springs with the adjusting nut. In a fixed style clutch, a collar is attached to the hub in a fixed position, and the torque level is set by pushing and locking the spring collar to a calibrated position.

All slip clutch torques are calibrated to +/- 20% but can be held to closer tolerances.

Backlash of 6° is standard for Slipper models and 2° for the Slip-Ease models. Slipper models can be held to 2° if required.

Our proprietary burn-in process ensures that all Polyclutch slippers will perform consistently right out of the box, with no break-in period required.

### INSTALLATION (see page 199 for mounting options)

*Shaft-through versions:* Insert input shaft into cartridge and tighten set screws. Insert housing around input shaft, with torque pins engaging holes in outer plates. Input shaft will keep the cartridge and housing aligned.

*Shaft to Shaft versions:* Insert input shaft into cartridge and tighten set screws. Insert output shaft into housing and tighten set screws. Input and output shafts must be properly journaled with centerlines within +/- .010 T.I.R.

Do not lubricate the clutch. Friction materials are designed to run without additional lubrication. Lubrication will cause a change in torque and erratic behavior. The inherent axial loaded design will keep dirt and dust out of the friction surfaces.

### CAPACITY

The clutch capacity is based on continuous operation at 50 RPM for over 25 million cycles. Torque, RPM, duty cycle and life are interdependent. A reduction of any of these will allow an increase in any other. (Running at 25 RPM will allow twice the torque, or running for only 10% of the cycle will allow higher RPM, etc.). The limit is based on heat buildup measured in watts per:

$$\text{Watts} = \text{Torque (lb-in)} \times \text{RPM} \times \text{Duty Cycle}^* \times 0.011$$

Please consult our factory for high torque, high RPM and rapid cycling applications.

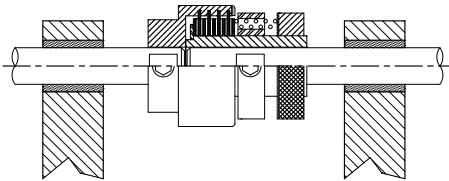
\*Percent of the time the clutch is slipping, expressed as a decimal. For example, 0.5 = 50% of the time the clutch is slipping.

## SLIP CLUTCH | TYPICAL MOUNTING FOR MECHANICAL & PNEUMATIC SLIP CLUTCHES

All Polyclutch slip clutches perform the basic function of controlling the torque between two elements. They can be supplied as a shaft-to-shaft coupling or a shaft to pulley, gear, or sprocket model. Polyclutch custom slip clutches can be provided with non-standard bore sizes, keyways, low backlash or higher torque, minus housings and with pulley, gear or sprocket.

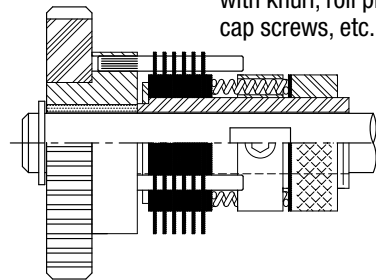
**EXAMPLE 1**

Shaft to Shaft  
Shafts must be supported  
and aligned within .010-.015



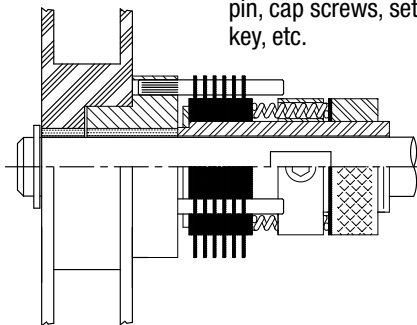
**EXAMPLE 2**

Gear/Pulley/Sprocket  
adapted to housing  
with knurl, roll pin,  
cap screws, etc.



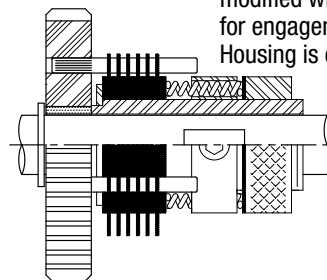
**EXAMPLE 3**

Supply or rewind spool  
adapted to housing with knurl,  
pin, cap screws, set screw,  
key, etc.



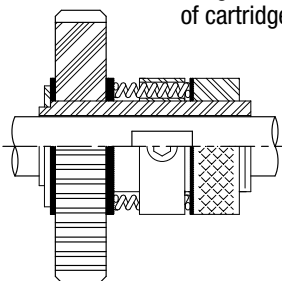
**EXAMPLE 4**

Gear/Pulley/Sprocket  
modified with pins  
for engagement  
Housing is eliminated



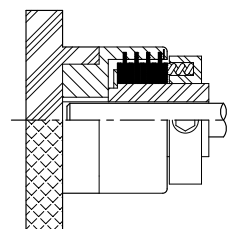
**EXAMPLE 5**

Gear/Pulley/Sprocket  
integrated as part  
of cartridge



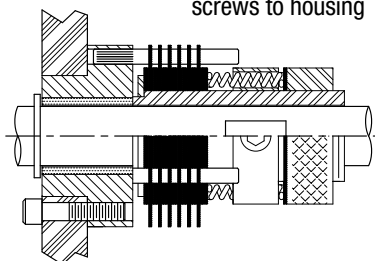
**EXAMPLE 6**

Knob adapted to housing  
knurl, set screw, pin, etc.



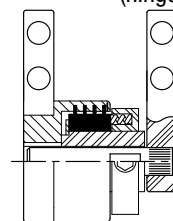
**EXAMPLE 7**

Machine frame  
adapted with cap  
screws to housing



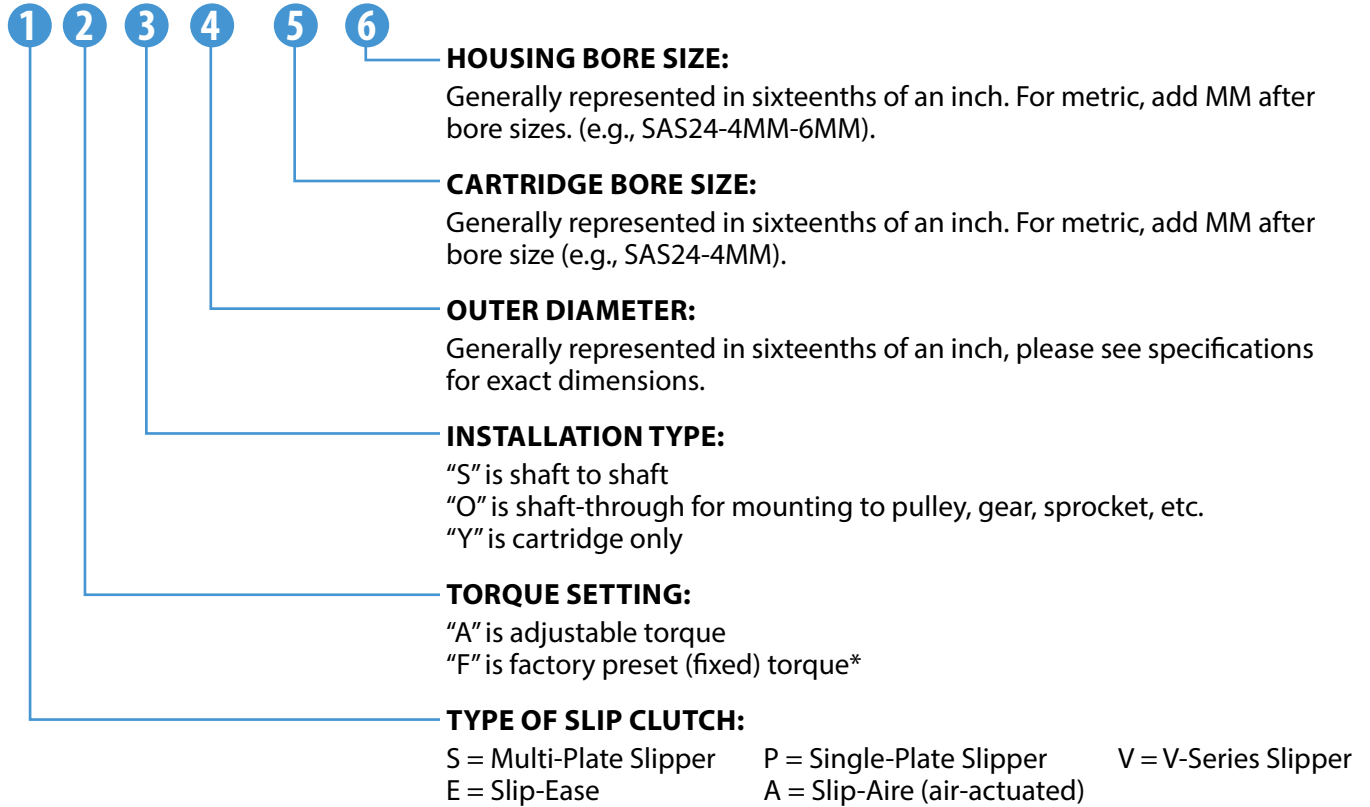
**EXAMPLE 8**

Rotary position holder  
(hinge)



## SLIP CLUTCH | HOW TO CREATE A PART NUMBER

**S A S 24 - 4 - 6**



\*Please indicate torque value if fixed - 'T' =

### STANDARD OPTIONS

Polyclutch slip clutches are designed to cover a wide range of solutions. To help better fit the clutch to your specific application, here is a list of standard options:

- Bore size changes – English (inches) and metric (mm)
- High torque option, accomplished by extra springs – "H" part no. suffix
  - Will increase capacity of standard adjustable slip clutches by 50% (note: removing springs will lower capacity, increase sensitivity)
- Keyways – English and metric – "K" part no. suffix
- Low backlash in Slipper clutch – "UL" part no. suffix
- Heavy inner plates for extra cooling – "D" part no. suffix
- 303/304 stainless steel construction – "Q" part no. prefix
- Two-plate Slipper clutch – "R" version (part no. begins with "R")
- Plastic cover for Slipper and Slip-Aire clutches

### CUSTOM CLUTCHES

If you are looking for something outside of our standard options, our engineers will work with you to help design a clutch for your specific application.



# PRECISION SLIP CLUTCHES | QUOTE REQUEST FORM

Date \_\_\_\_\_ Address \_\_\_\_\_  
 Company Name \_\_\_\_\_ City \_\_\_\_\_ State/Prov. \_\_\_\_\_  
 Contact \_\_\_\_\_ Country \_\_\_\_\_ Zip/Postal Code \_\_\_\_\_  
 Quantity \_\_\_\_\_ Telephone \_\_\_\_\_ Fax \_\_\_\_\_  
 Email \_\_\_\_\_

## 1. Application Information

- Overload Protection
- Constant Tension/Force
- Soft Start/Cushioned Stop
- Other \_\_\_\_\_
- Torque Control (i.e. bottle capping, screwdriver)
- Brake
- Positioning Hinge

Operating Environment: (list specific requirements, # corrosives, water, etc.)

Orientation:  Vertical  Horizontal

Temperature Range: \_\_\_\_\_ Type of Equipment: \_\_\_\_\_

Other Application Information: \_\_\_\_\_

## 2. Clutch Information

Polyclutch Part Number (if known): \_\_\_\_\_

- Mechanical Slip Clutch
- Pneumatic Slip Clutch
- One-Way Clutch
- Jaw Clutch
- Combination

Torque Range: \_\_\_\_\_  lb-in  Nm  Other \_\_\_\_\_

Type of Mount (select one):

- Shaft/Shaft Mounting
  - Shaft Through Mounting
  - Other \_\_\_\_\_
- Input Shaft Diameter: \_\_\_\_\_ Input Shaft Diameter: \_\_\_\_\_  
 Output Shaft Diameter: \_\_\_\_\_ Output Type: \_\_\_\_\_  
 (gear, pulley, frame...)

RPM (at the clutch): \_\_\_\_\_

Duty Cycle (percentage of the time the clutch will be in slip condition): \_\_\_\_\_

Maximum Space Limitations (envelope size, only if a limitation exists): \_\_\_\_\_

Life Requirements (number of cycles, only if a specification exists): \_\_\_\_\_

## CUSTOM MOLDED RUBBER AND URETHANE



### DYNATECT RO-LAB CUSTOM MOLDED RUBBER AND URETHANE PRODUCTS

Dynatect Ro-Lab is a leading specialist in compounding and producing custom rubber and urethane products with over 100 years of combined elastomer experience, in-house quality control and testing. Our expertise in production and process selection helps us deliver a well-designed and functional product.

#### Molding Capabilities

- Rubber molding (compression, injection, transfer)
- Urethane molding (compression, RIM, low pressure injection, open cast)
- Mandrel-formed products (hoses, industrial and agricultural rolls, rubber-lined pipes, continuous lengths of tubing and belts)

#### Specialties

- Small sized, high-volume parts
- Large-scale parts
- Insert molding (functional metal, textiles or ceramic inserts molded into rubber or polyurethane)
- Custom material formulation (to meet performance specifications for durability, flexibility and elasticity)
- Precise tolerances and special finishes

## CUSTOM MOLDING | RUBBER AND POLYURETHANE

### TOTAL PRODUCTION CONTROL FROM CONCEPT THROUGH MANUFACTURING... ALL UNDER ONE ROOF

The toughest challenges in rubber and polyurethane routinely come to Dynatect Ro-Lab, thanks to a complete in-house capability that stretches from design consulting and custom material formulation to precision molding, finishing and beyond. Generations of OEM manufacturers have trusted Dynatect Ro-Lab to expand the range of possibilities in rubber and urethane components:

- **Tighter tolerances** – stricter adherence to dimensional standards in molding – including RMA A1
- **Custom material formation** – creation of custom polymer blends to conform precisely to customer requirements
- **Exceptional size and thickness** – components that are extra large or extremely small, very thin or extraordinarily thick
- **Insert molding and special finishes** – adding insert components to meet special mechanical requirements, or conforming appearance to RMA F1... the highest standard for exterior attractiveness

Dynatect Ro-Lab capability expands to improve every part of the component life cycle. It begins with the design collaboration between Dynatect Ro-Lab molding specialists and custom engineers. The capability continues with the first article inspections, dimensional validation and part traceability.

Let us show you how we bring extra flexibility into the manufacturing of custom components. Contact us at 800-298-2066, or email to [sales@dynatect.com](mailto:sales@dynatect.com).

### MORE PRESSES, MORE PROCESSES FOR GREATER MOLDING OPTIONS

#### Press Capacity for Large Components, High Volumes

The Dynatect Ro-Lab commitment is supported by an inventory of 100 rubber and urethane presses, with capacities ranging from 5 to 2,500 tons.

#### Rubber Molding

- 75+ presses, 40 - 2,500 ton capacity
- Presses up to 80" wide
- Platen sizes up to 20' long
- Internal mixing for custom compound production

#### Urethane Molding

- 23 presses with capacities from 5 - 250 tons
- Up to 24" x 24" platen size
- Machine mixing to 40 lbs/min.
- Oven capacities to 2,880 cubic feet (20' x 12' x 12')



## CUSTOM MOLDING | RUBBER AND POLYURETHANE

### RUBBER MOLDING

#### Compression Molding

A straightforward elastomeric molding method involving placement of raw rubber into a two-part heated mold, followed by compression of the rubber in the mold to form and cure the thermoset material under heat and pressure.

- Dynatect Ro-Lab's 1,400 ton compression press is ideal for large molds or thin sheets with close tolerances
- Multi-cavity molds can produce parts down to two grams
- Continuous curing for long, uninterrupted items
- A preferred process for gaskets, seals and O-rings

#### Transfer Molding

In a process that is a hybrid of compression and injection techniques,

a piston forces preheated material from a transfer pot into a closed mold.

- Creates finished components with intricate shapes
- Compatible with the use of delicate inserts
- Delivers tight dimensions and tolerances
- Usable for all rubber durometers

#### Injection Molding

A more complex process that injects a preheated material into the cavities of a closed mold.

- Delivers faster curing times than compression or transfer molding
- Shortens cycle times
- Ideal for high volume component production



### HOT CAST URETHANE MOLDING

#### Compression Molding

Liquid polyurethane is poured into a mold and cured in a compression press with capacities up to 250 tons. This technique is most suitable for components that must maintain dimensional accuracy and repeatability.

#### Low Pressure Injection Molding

Injection of liquid polyurethane into a closed mold under low pressure, in a process ideal for projects in which a component size, component shape

or tooling configuration would make compression molding practical.

#### Open Cast Molding

The pouring of liquid polyurethane into an open mold, which is then cured in an oven or on a heated table.

- Usable on part sizes from less than an ounce to more than 500 lbs.
- Excellent for projects where conventional tooling would be expensive or impractical



### SPECIAL PROCESS

#### Hoses

- Hoses are built on a mandrel (cylindrical form) in a variety of configurations
  - Soft or wire reinforced walls
  - Plain ends, or duck and rubber flanges with back-up rings
  - Built-in nipples

#### Other Mandrel-Made Products

- Non-hose mandrel-made products with 4" - 60" diameters with lengths to 50'
- Rubber transition chutes
- Mandrel-made endless belts

#### Rubber-Lined Pipes

#### Industrial and Agricultural Rolls

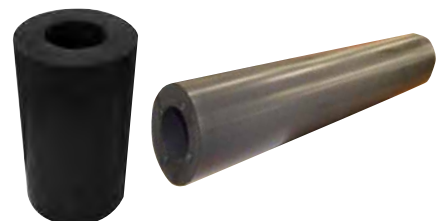
- Rubber or urethane covers
- New or stripped/recovered cores
- Roll regrinding
- Crowns and grooves



### RIM (REACTION INJECTION MOLDING)

Injection of polyols and isocyanates into a closed mold, triggering a chemical reaction that causes the material to expand and form the finished product.

- Effective in forming extremely large products with very light weights
- Able to improve or eliminate secondary operations
- Workable for flexible or rigid products in foams or solids
- Delivers reliable control of components with varying wall thickness



# CUSTOM MOLDING | RUBBER AND POLYURETHANE

## PROPERTIES OF POLYURETHANE AND RUBBER

PROPERTY	POLYURETHANE	RUBBER				
		NITRILE	NEOPRENE	NATURAL	SBR	BUTYL
Tensile Strength (MPa)	20.7 to 65.5	13.8+/-	20.7+/-	20.7+/-	18.8+/-	18.8+/-
Durometer	5A to 85D	40 to 95A	40 to 95A	30 to 90A	40 to 90A	40 to 75A
Specific Gravity	1.10 to 1.24	1.0	1.23	0.93	0.94	0.92
Tear Resistance	Outstanding	Fair	Good	Good	Fair	Good
Abrasion Resistance	Outstanding	Good	Excellent	Excellent	Good-Excellent	Good
Compression Set	Good	Good	Fair-Good	Good	Good	Fair
Rebound	Very High to Very Low	Medium	High	Very High	Medium	Very Low
Gas Permeability	Fair-Good	Fair	Low	Fair	Fair	Very Low
Acid Resistance	Fair-Good	Good	Excellent	Fair-Good	Fair-Good	Excellent
Aliphatic Hydrocarbons	Excellent	Excellent	Good	Poor	Poor	Poor
Aromatic Hydrocarbons	Fair-Good	Good	Fair	Poor	Poor	Poor
Oil and Gas Resistance	Excellent	Excellent	Good	Poor	Poor	Poor
Oxidation Resistance	Outstanding	Good	Excellent	Good	Good	Excellent
Ozone Resistance	Outstanding	Fair	Excellent	Fair	Fair	Excellent
Low Temperature Resistance	Excellent	Good	Good	Excellent	Excellent	Good

	HARDNESS SCALES			PLASTIC
	DUROMETER A	DUROMETER D	ROCKWELL A	
				Phenolics  Acrylics Polycarbonate  Nylon Polystyrene Polypropylene
			- 150 -	
			- 140 -	
			- 130 -	
			- 120 -	
			- 110 -	
			- 100 -	
			- 90 -	
			- 80 -	
			- 70 -	
			- 60 -	
			- 50 -	
			- 50 -	
			- 40 -	
			- 30 -	
			- 20 -	
				RUBBER  Auto Tire Treads Inner Tubes  Rubber Bands
			- 95 -	
			- 90 -	
			- 80 -	
			- 70 -	
			- 60 -	
			- 50 -	
			- 40 -	
			- 30 -	
			- 20 -	

POLYURETHANE
Bowling Balls
Metal-Forming Wiper Dies
Nonspark Hammers
Solid Truck Tires
Metal-Forming Die Pads
Idler Rolls
Abrasive-Handling Pads
Silk Screen Wiper Blades
Door Seals
Can Tester Rolls
Printing Rolls





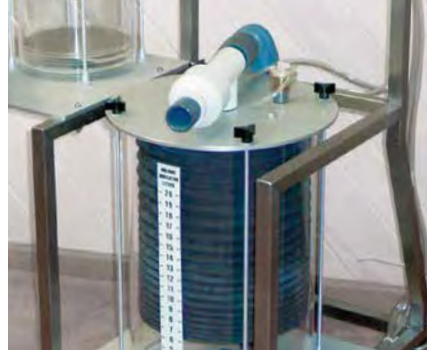
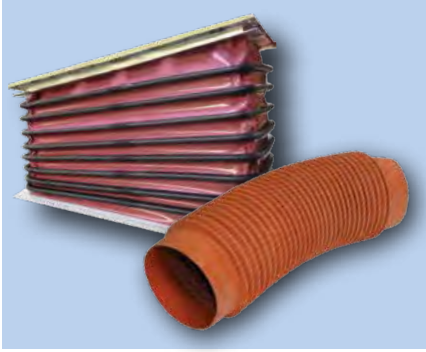
TRANSPORTATION



MEDICAL



OIL & GAS

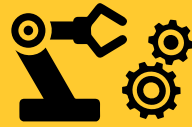




# RANGE OF INDUSTRIES



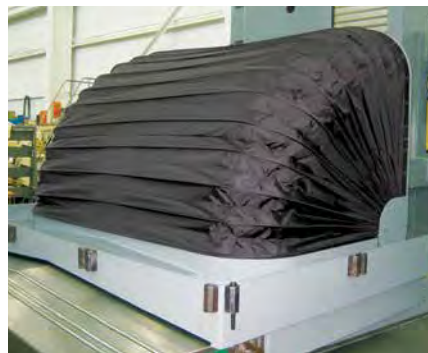
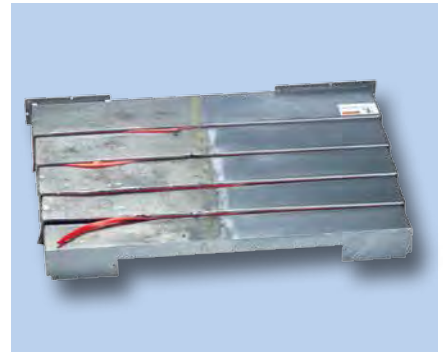
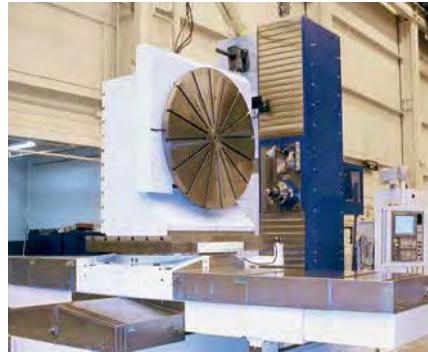
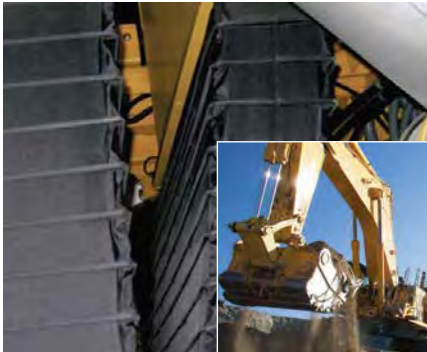
CONSTRUCTION &  
AGRICULTURE



MACHINETOOL &  
AUTOMATION



MAINTENANCE,  
REPAIR & OPERATIONS







# MARKETS

TRANSPORTATION

MEDICAL

OIL & GAS

CONSTRUCTION & AGRICULTURE

MACHINE TOOL & AUTOMATION

MAINTENANCE, REPAIR & OPERATIONS

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for Equipment and People

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