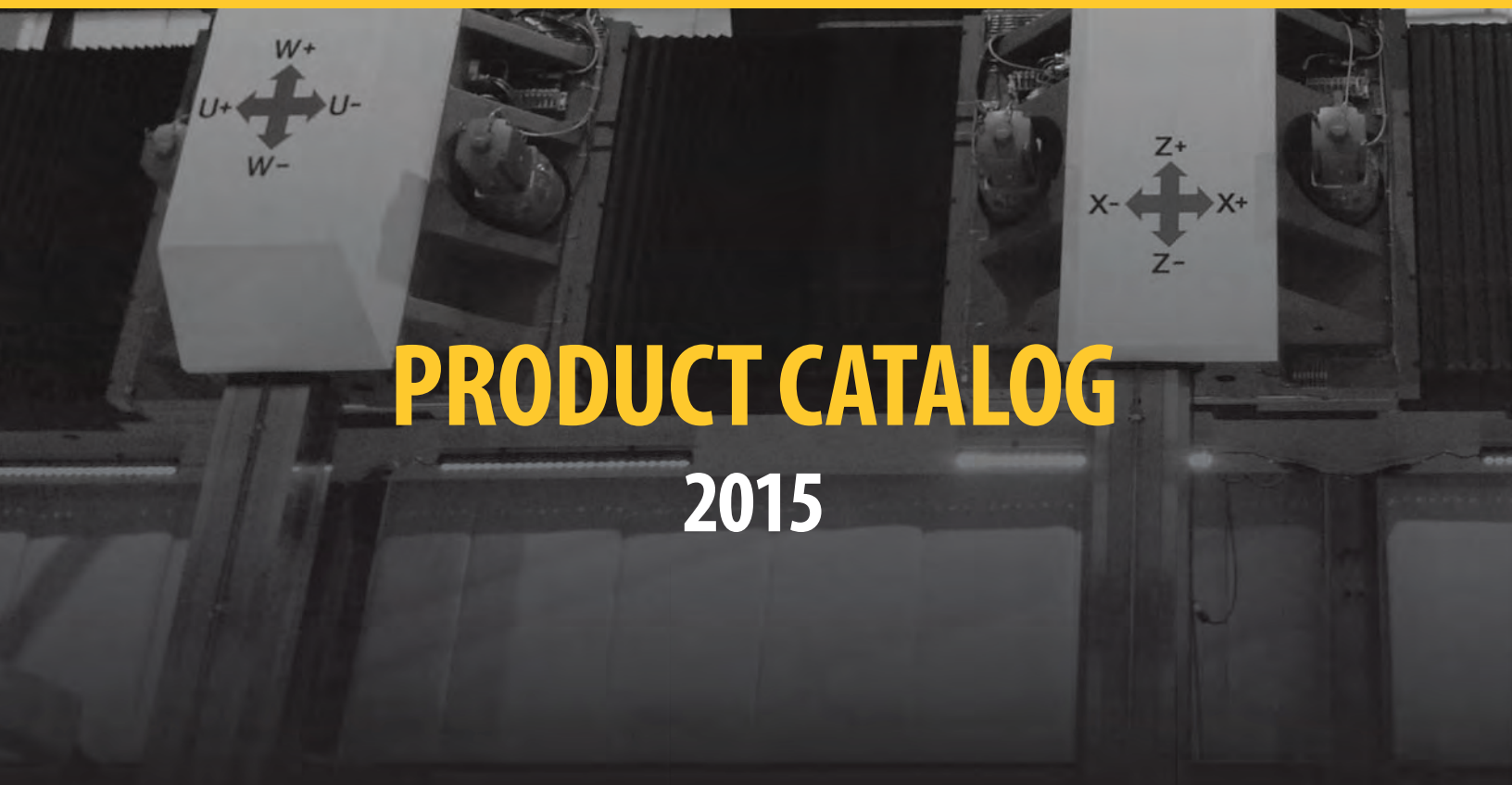
DYNATECT™

DYNAMIC EQUIPMENT PROTECTION



PRODUCT CATALOG

2015

PROTECTIVE COVERS

CABLE AND HOSE CARRIERS

MECHANICAL MOTION CONTROL PRODUCTS

ELASTOMER PRODUCTS

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

1. Global Headquarters & Manufacturing, Gortite Division
   NEW BERLIN, WISCONSIN, U.S.A.
2. U.S.A. Manufacturing, Gortrac Division
   VALPARAISO, INDIANA, U.S.A.
3. U.S.A. Manufacturing, Polyclutch Division
   NORTH HAVEN, CONNECTICUT, U.S.A.
4. U.S.A. Manufacturing, LSI Division
   TRAVERSE CITY, MICHIGAN, U.S.A.
5. U.S.A. Manufacturing, Ro-Lab Division
   TRACY, CALIFORNIA, U.S.A.
6. Europe Sales & Distribution, Halltech GmbH
   SCHWAIG, GERMANY
7. Europe Manufacturing, MFB Technik
   BIELEFELD, GERMANY
8. Asia Sales & Support
   SHANGHAI, CHINA

FIND WHAT WORKS FOR YOU

As you browse through this catalog, you will get a sense of one reason why Dynatect is the largest manufacturer of industrial equipment protection in the United States. Here you will find everything from protective way covers and bellows to precision ball screws, cable and hose carriers, and custom elastomer products.

With a library of over 500,000 designs, most people would call that a great range.

We call it an excellent starting point.

At Dynatect, we appreciate that unique applications demand unique protection solutions. While 95% of new requests can be met through modification or combination of our existing designs, we're always ready to innovate. The designs you see here represent just the tip of the iceberg. Dynatect has created numerous customized solutions for a perfect fit. We're talking over 500,000. So never think that you're asking too much from us when you need a tailor-made design. Ask away.

Our engineers and application specialists are keen listeners, and they understand that knowing all the ins and outs of your situation is key to coming up with the perfect solution. You can expect us to pay special attention to every detail. And since all our designs are products of comprehensive vertical integration, you can count on the final result being as solid as the original idea. That is why more than 98% of new Dynatect designs meet application standards on the very first production piece.

This method is as successful today as it was when Dynatect was founded 65 years ago. It's the way of the born engineer: exact, timely and dependable.

Just right.

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REQUEST FOR QUOTE

Whether you have a straightforward order, want us to modify an existing design or need an entirely new solution, visit www.dynatect.com/request-for-quote to submit a custom Request for Quote, and follow the steps below to ensure perfect compatibility with your application.

Our technical advisors are standing by to discuss any questions that might arise. Depending on your particular needs, you might be able to skip a step or two, and orders of existing designs and reverse-engineered parts are also accepted over the phone. Complete dimensional drawings can be emailed directly to our Engineering team.

1 **SPECIFY THE NATURE OF YOUR ORDER: EXISTING DESIGN, MODIFICATION OR NEW SOLUTION.**

2 **FILL OUT DIMENSIONAL INFORMATION REGARDING THE APPLICATION OR SEND IN A DRAWING OR MODEL.**

3 **DESCRIBE THE APPLICATION ENVIRONMENT INCLUDING TEMPERATURE, CHEMICALS, UV, SPEED OF MOTION, DIRECTION OF MOTION, AND ACCELERATION.**

4 **SPECIFY QUANTITY NEEDED AND IF THIS IS A PROTOTYPE OR SERIAL PRODUCTION.**

5 **COMPLEMENT WITH BRACKETS, ACCESSORIES AND OTHER POTENTIAL OPTIONS FOR THE CHOSEN DESIGN.**

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

DYNATECT™
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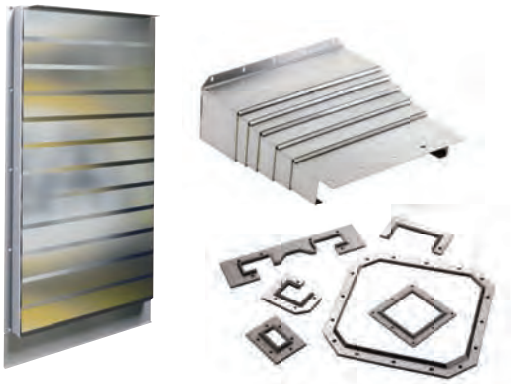
BELLOWS AND LIFT COVERS | PAGES 8-40

ROLL-UP COVERS AND DOORS | PAGES 41-60

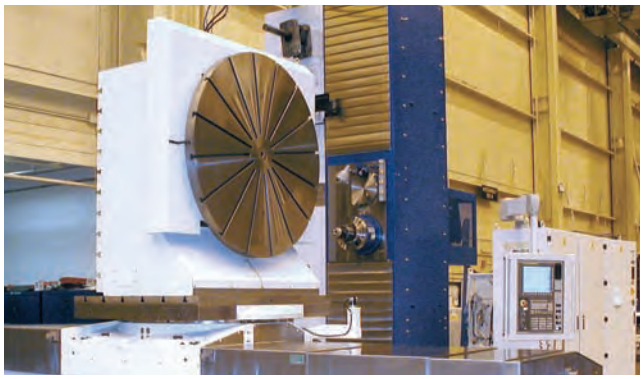
STEEL COVERS AND WIPERS | PAGES 61-69



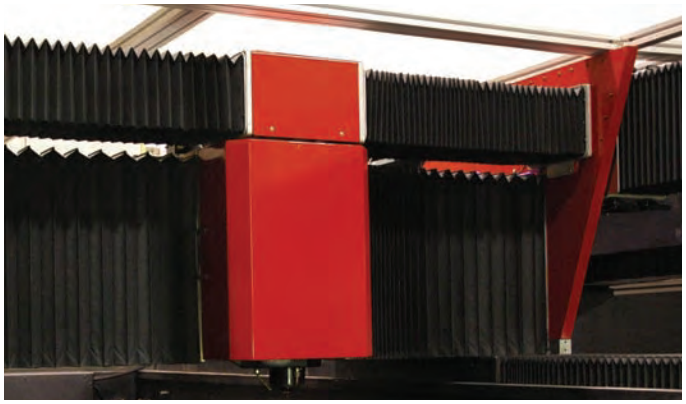
SPECIAL APPLICATION PRODUCTS | PAGES 70-83

APPLICATION EXAMPLES

Light-tight bellows used on a photo enlarger, folded construction.



Telaflex® steel covers and Gordillo™ bellows protect the machine ways of horizontal boring machines from accumulating chips and liquids.



Special laser beam bellows used in horizontal and vertical configurations on a laser.

Bellows and plastic cable carriers on a waterjet machine.

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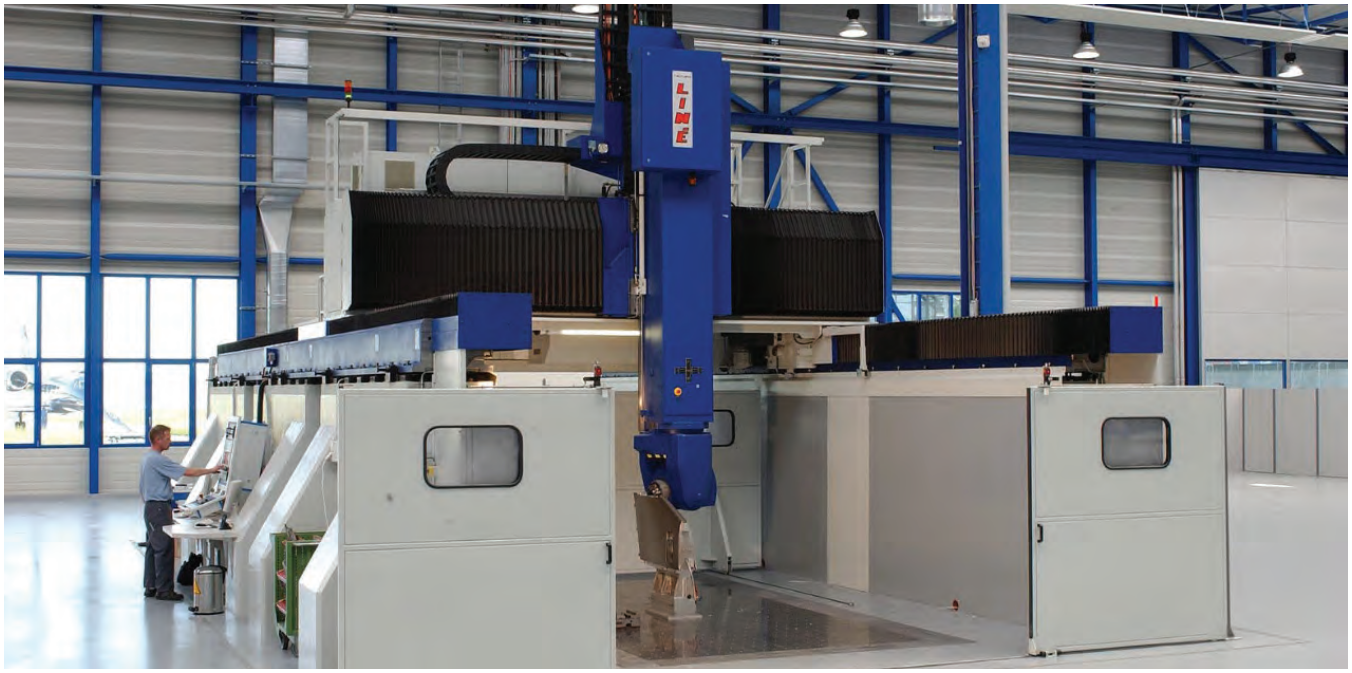
APPLICATION EXAMPLES

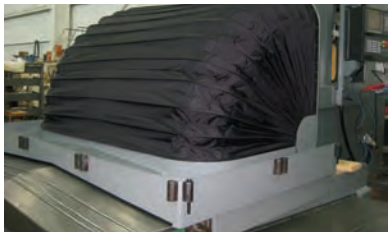
Bellows type way covers and plastic cable carriers with long travels on large vertical machining center.



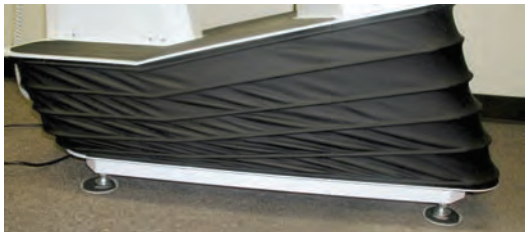
Bellows type way covers on large machining center.

APPLICATION EXAMPLES

Gordillo™ bellows covers for machine way protection. Gordillo covers have been successfully applied in vertical, horizontal and crossrail configurations.



Gorframe™ used on a machining center tilt table. Made of ballistic nylon, this three-sided cover provides protection in limited space.



An enclosed Gorframe cover conceals the operational mechanism while withstanding a range of motion in a variety of directions.

Gorframe bellows for ducting on large mining truck.

Suitable for operation in rugged, outdoor environments, Gortiflex® bellows have been applied on military, commercial vehicles, aircraft and more. They are constructed of elastomer materials rated to withstand UV light, temperature variations and moisture.

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APPLICATION EXAMPLES

Steelflex® walk-on duty covers have been used for decades for personnel safety and machine protection, in the covering of machine ways and inspection pits.

Heavy-duty roll-ups can be applied to fire truck hose beds as a retractable cover, and a walk-on surface when not in use.

Fabric and metallic roll-up covers protect in machining environments, such as the lathe application shown.

Gortite® aluminum roll-up doors are used on fire and emergency vehicles, work/utility trucks, and other commercial vehicles.

CUSTOM-ENGINEERED BELLOWS

Dynatect's bellows portfolio offers the greatest variety of cover materials and construction methods available anywhere; your sales representative is in a position to give you an unbiased recommendation as to the proper product for your application.

When a protective cover design is needed, our engineers analyze the application, suggest the method of manufacture, the materials to be used and any other design considerations required to meet the needs of the specific application. This includes the necessary mounting material, metal work, guides or supports, so that you receive a finished product ready to apply to your machine.

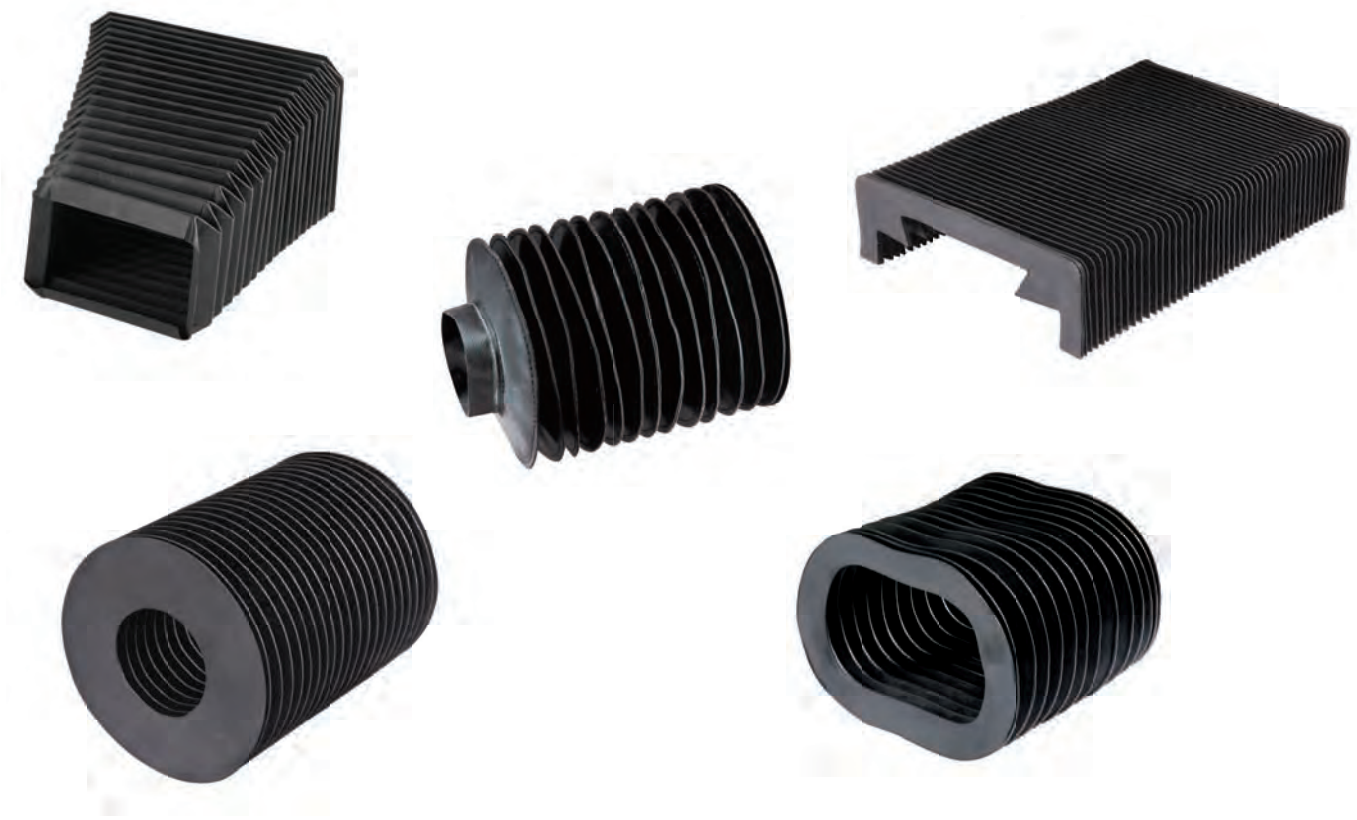
OPTIMIZING YOUR DESIGN

When designing your bellows, we consider the following factors to optimize your design:

- Space available for cover in retracted positions, as well as cross sectional areas
- Interference points along travel path

COVER SHAPE AND ORIENTATION

- Necessary cover support for long travel and maximum unsupported span
- Type and volume of contaminants
- Fitness for operating purpose: temperature extremes, high-cycle operating, acceleration, environment
- Ventilation for sealed covers

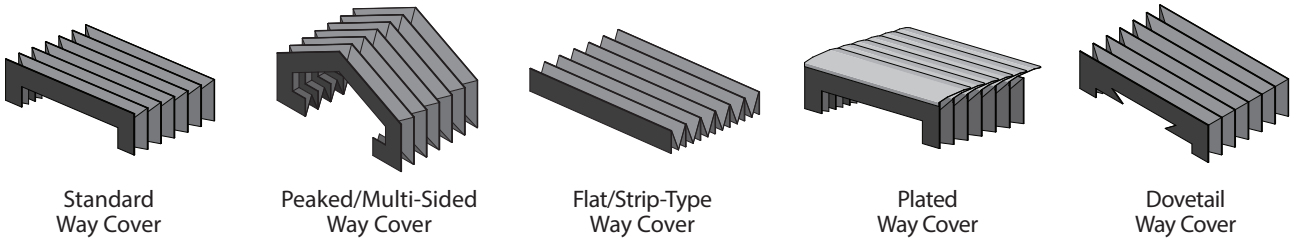


CUSTOM-ENGINEERED BELLOWS

BELLOWS DESIGNED TO FIT ALL SHAPES AND SIZES

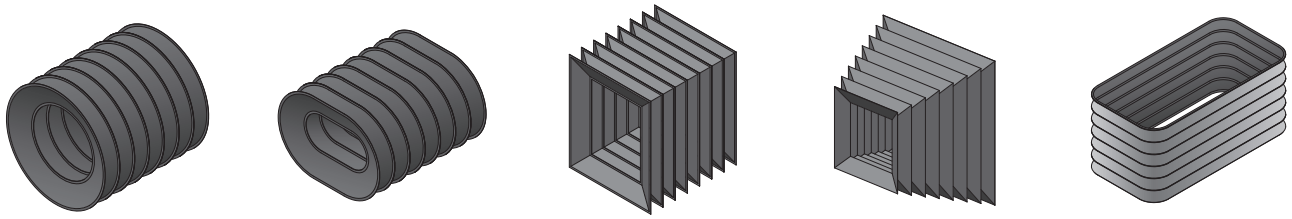
We supply custom bellows in virtually any shape. A few examples of bellows shapes/profiles are shown below. Our database contains over 10,000 protective covers which gives our design team a superior frame of reference to supply the right bellows, quickly and cost-effectively.

OPEN/WAY COVER SHAPES



Standard Way Cover | Peaked/Multi-Sided Way Cover | Flat/Strip-Type Way Cover | Plated Way Cover | Dovetail Way Cover

ENCLOSED SHAPES

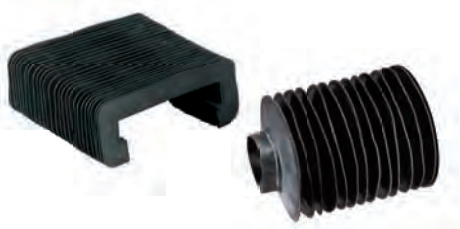


Round | Oval | Rectangular | Tapered | Wire Frame

PRE-ENGINEERED STANDARD BELLOWS FROM STOCK

Our most popular bellows are available in pre-selected sizes and materials, with short lead times.

Standard Sewn Bellows:
For 12-inch length increments and shipment within 1-2 business days, see pages 28-29. For longer lengths (typical delivery in 2 to 3 weeks), please ask a Dynatect sales representative.



Gortiflex® Bellows:
For convoluted tubing from stock, see pages 26-27. For die set shields, see page 25.

CUSTOM ENGINEERED BELLOWS

CUSTOMIZED PROTECTION FOR EVERY APPLICATION…

Some applications require special materials or bellows constructions. Here are some common application requirements we take into consideration when customizing your bellows.

HIGH TEMPERATURE BELLOWS

High temperature bellows materials are used in applications where there is high ambient temperature or high temperature gas going through the bellows.

HEAVY CHIP LOADS

Heavy chip loads require a cover that can hold up to sharp chips and coolant. Several options will work in these applications, based on the cover travel requirements.

CHEMICAL OR COOLANT RESISTANT BELLOWS

Dynatect has unparalleled resources to select a suitable material that can withstand chemicals or coolants and processes that provide maximum durability.

BELLOWS IN ABRASIVE ENVIRONMENTS

Abrasive environments from grinding, sanding, and other processes will require constructions that will survive in these difficult applications.

CLEAN ROOM BELLOWS

Manufacturing process and material options are available to provide bellows for a variety of clean room applications.

AIR DUCT BELLOWS

Before an air duct bellows is designed, the temperature, pressure, shear and environment must be properly defined.

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BELLOWS EXPOSED TO WELD SPLATTER

Weld splatter and hot sparks from lasers, plasma cutting, or welding require either high temperature materials or metal-plated construction that will prevent the cover from being destroyed in the environment.

LIGHT-TIGHT BELLOWS FOR LASER BEAM PATH

Laser beam bellows need to be air and light-tight and capable to withstand high cycles and high-speed movement.

BELLOWS FOR OUTDOOR AND TRANSPORTATION ENVIRONMENTS

Outdoor applications require materials that will hold up in environments that include UV, temperature variations, dirt and dust, and exposure to liquids and ice.

BELLOWS IN VERTICAL CONFIGURATION

Vertical applications can be solved with several bellows constructions dependent on environment or aesthetic requirements.

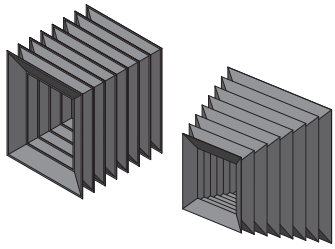
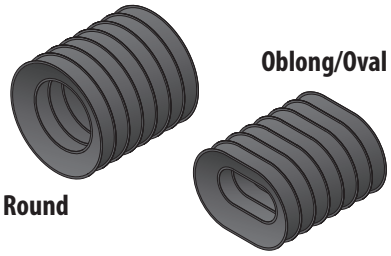
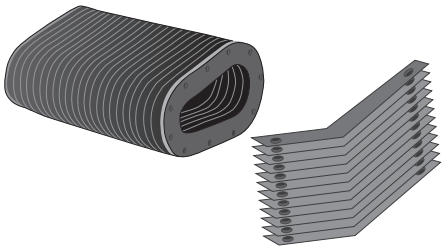
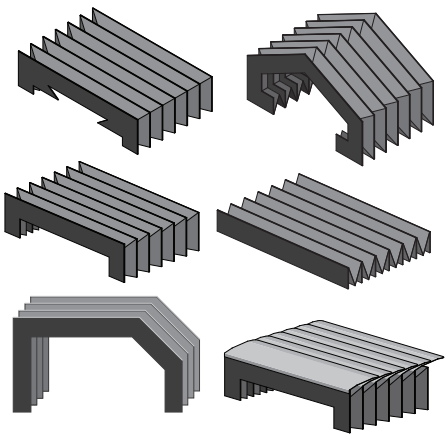
MECHANICAL AND MEDICAL LIFT COVERS

The environment and regulatory requirements will be considered to select a suitable material and process.

BELLOWS OPERATING IN SHEAR/TILT/ LATERAL MOVEMENTS

Dynatect has several constructions that will work in applications requiring shear or tilt.

SELECTION GUIDE | BELLOWS BY SHAPE

SHAPE/BELLOWS PROFILE	BELLOWS CONSTRUCTIONS Configurable To Shape	TYPICAL APPLICATIONS
 **Square, Rectangular, or Tapered**	• Folded • Gorframe™* • Gortiflex®* • Heal-Sealed • Liftgard™ • Sewn • Sewn-Folded • Thermiseal • Vulca Seal® **Rounded corners* Tapered Profile: Folded, Gortiflex, Sewn	• Laser bellows • Air intake or exhaust manifolds • Flexible air duct connections • Cameras, imaging equipment • Scissors mechanisms, lift tables • Amusement ride base • Tilt table • Medical table
 **Oblong/Oval** **Round**	• Gortiflex • Sewn • Thermiseal • Vulca Seal	• Rod Boot • Hydraulic cylinder cover • Ball screw cover • Pipe penetration seal • Bellows-type expansion joint • Air intake or exhaust manifolds • Flexible air duct connections
 **Non-Standard/Special Shapes**	• Folded • Gorframe • Gortiflex • Sewn • Thermiseal • Vulca Seal	• Bus and light rail bellows • Robotics • Shift/joystick covers • Seat covers • Screen or aesthetic barrier
 **Way Cover** (Flat/Strip-Type Screens and Variable Profiles with Legs)	• Folded • Gordillo™ • Gorframe • Gortiflex • Heat-Sealed • Sewn • Sewn-Folded • Thermiseal • Vulca Seal **Related Products** • Gorplate™ Low Profile Stainless Steel Cover (see page 61) • Telaflex® Steel Way Cover (see page 62) • Roll-Up Covers (see pages 41-48)	• Machine ways • Linear guide protection • Screen or aesthetic barrier

QUOTE REQUEST FORM

- Enclosed-Shape Bellows RFQ (see pages 30-31)

- Enclosed-Shape Bellows RFQ (see pages 30-31)

- Not Available

- Bellows Way Covers RFQ (see pages 32-34)
- Flat/Strip-Type Bellows RFQ (see page 38)
- Gordillo Way Covers RFQ (Way cover with protective stainless steel plates) (see pages 36-37)

SPECIFYING A BELLOWS

Bellows need to be specified accurately to perform reliably and maximize life. Beyond basic dimensions, operating conditions such as exposure, required movements, temperature and space restrictions should be taken into consideration. For example, covers for horizontally-oriented ball screws usually require internal guide plates.

Our quote request forms have been divided into the following areas to assist you with your request:

- Type of application (component covered; cover orientation and direction of movement
- Operation requirements (ambient operating temperature, including periodic extremes; frequency and movement cycles/day; vacuum or pressure, when enclosed-shape bellows)
- Environmental or special requirements (type and amount of liquids, oil or contaminants; application regulatory compliance standards)
- Travel length of the bellows (required extended or maximum retracted length requirements; or, indicate travel and we will advise retracted length)
- Dimensions (equipment dimensions or cover dimensions; any interference points along travel path, or space restrictions noted)
- Mounting considerations (adapting the bellows ends to your mounting requirements; mounting accessories such as clamps, metal plates, hook and loop fastener, etc.)

Replacement Bellows

If you are looking for a replacement of a bellows made by another manufacturer, send us a sketch of what you need covered or a drawing of your existing part. Please include a description of your operating environment so we can maximize the life of your replacement bellows.

Some of our customers prefer to send their old bellows in to us to measure and quote. Just call or email us for a Return Material Authorization (RMA).

Our Quote Process

Our quote request forms are designed to save you time by gathering information to design a custom bellows for your specific application requirements. You can also speak to application specialists over the phone to discuss any questions or concerns. Although our forms are comprehensive, there may be sections that are not applicable, especially if you already have a dimensional drawing.

GORTIFLEX® MOLDED BELLOWS

Gortiflex bellows are constructed from a tube of pure elastomer or elastomer-coated fabric, formed into a completely sealed cover. Internal and external supports can be provided for use at pressures up to 15 psi, depending on size. Gortiflex is available as any enclosed bellow shape, with numerous material options for standard and special applications.

Gortiflex Bellows Are Ideal For:

- No tooling fee for standard shapes (nominal tooling for special shapes)
- OEMs use for prototypes and production models

Features/Benefits:

- Exceptionally durable molded cover
- Neat appearance makes this cover ideal for aesthetics
- Excellent extended-to-retracted ratio for a molded cover
- Withstands moderate internal or external pressure
- Sealed construction resists moisture, liquid or chemical spray, contaminants and dirt
- Superior protection in outdoor environments with exposure to moisture, ice, sand, oil, temperature variations and ultra violet radiation

Materials:

- Materials available for temperature ranges of -100° F to 450° F
- Base elastomer materials: Neoprene (Chloroprene), Goralon® (Chlorosulphonated Polyethylene), nitrile, silicone, butyl, Viton, EPDM (Ethylene Propylene Diene Monomer)
- Optional support materials: Nylon, Kevlar®
- Special material options: Neoprene available as flame retardant (FR), food grade (FG) or low-temperature rating

Applications:

- Rod/ball screw covers
- Expansion joints
- Piping penetration seals
- Compressor and engine intake and exhaust manifold connections
- Fan duct connections
- Food processing

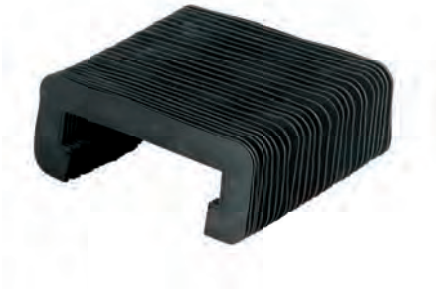
STANDARD SIZES

Limited sizes of round bellows are available from stock. See pages 26-27 for full details.

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

SEWN BELLOWS

Gortite® brand sewn bellows have been the standard solution for machine tool protection for many decades. They are manufactured from heavy-duty elastomer-coated fabric stitched with nylon or specialty thread. A liquid elastomer coating can be added to seams for greater life in severe applications by reducing the thread exposure to the environment, or to limit liquid. Sewn bellows are not liquid or air-tight, however, Dynatect offers several alternative bellows constructions that are suitable for these requirements. Sewn bellows are the most versatile when it comes to shape and size: any size or shape is possible – round, oval, rectangular, strip-type, way cover and more.



Features/Benefits:

- Low cost protection from dust, dirt and other contaminants
- Flexible process – almost any size and configuration can be sewn
- Widest material selection available
- No tooling costs
- Economical even in low quantities
- Round, sewn bellows can ship within 1 business day using our expedited ordering system

Materials:

- Aluminized fiberglass (high ambient temperature, weld splatter, hot chips)
- Buna/Nylon (coolant/oil resistance)
- Goralon® (CSM)
- Neoprene/Nylon (general purpose, oil resistance)
- Silicone-coated fiberglass (high ambient temperature, high cycle durability)
- PTFE fiberglass (high temperature, weld splatter, hot chips)
- Specialty: Materials are also available for use with fire resistant hydraulic fluids, expanded temperature ranges and other special application requirements

Applications:

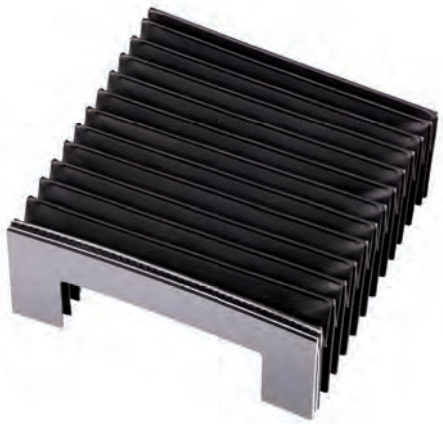
- Way and linear rail covers
- Rod boots, ball screw covers
- Pneumatic and hydraulic cylinder covers

STANDARD SIZES

Limited sizes of round bellows are available from stock. See pages 28-29 for full details.

HEAT SEALED BELLOWS

Heat sealed bellows are manufactured from a single sheet of thermoplastic-coated fabric, which is pleated and then thermically welded to a PVC stiffener at every fold. Typically used as a bellows-type way cover, they are available in any flat-sided, non-circular form.



Features/Benefits:

- No stitch holes, seams or breaks
- Uniform cover shape is maintained throughout range of motion
- Stiffener profile can be made to match any way or rail geometry
- Attractive, clean, uniform appearance
- Excellent protection for linear bearings and other precision equipment
- Ideal for applications requiring very large or rigid covers
- Cover retains shape throughout travel
- Can be fabricated with metal plates attached to each convolution (see Gordillo™)

Materials:

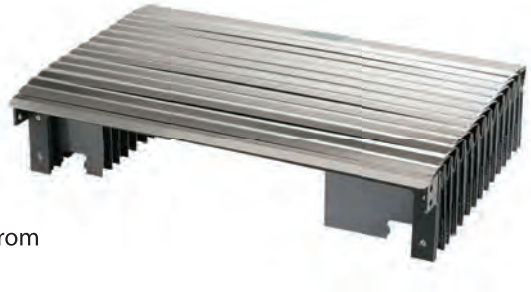
- Lasertex (Pre-oxidized Kevlar®)
- Polyurethane/Kevlar
- Polyurethane/polyester
- Polyurethane/polyester-conductive
- PTFE/polyester/polyurethane
- PVC/polyester

Applications:

- Way covers: light- to medium-duty environments, e.g., small particles, light abrasives, light oil, occasional large chips, liquids

GORDILLO STAINLESS-STEEL-CLAD BELLOWS

A Gordillo is a sewn-folded or heat sealed way cover made with stainless steel plates covering each convolution. It is available in any flat sided form. The stainless steel plates shield the bellows from damaging hot chips and hot sparks, which would quickly damage a conventional bellows. A convenient option where there is not enough space for a telescoping steel way cover.



Features/Benefits:

- Added protection against hot chip loads and weld splatter
- Greater resistance than standard fabric bellows
- Smaller footprint and extended-to-retracted ratio versus telescoping covers

Materials:

- Plates: Gordillo plates are made from stainless steel
- Bellows: Refer to heat-sealed or sewn-folded constructions for materials

Applications:

- Vertical, horizontal or cross-rail protection for machine components and ways
- Medium- to heavy-duty operating conditions that would quickly damage a traditional bellows: weld splatter, heavy chip loads, abrasives, and hot sparks

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

SEWN-FOLDED BELLOWS

Sewn-folded bellows are 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. Typically used as a bellows-type way cover, they are available in any flat-sided, non-circular form.

Features/Benefits:

- Cover shape is maintained throughout range of motion
- Stiffener profile can be made to match any way or rail geometry
- Excellent protection for linear bearings and other precision equipment
- Ideal for applications requiring very large or rigid covers
- Diverse material selection – we are able to use thermoset elastomer coated materials that cannot be welded

Materials:

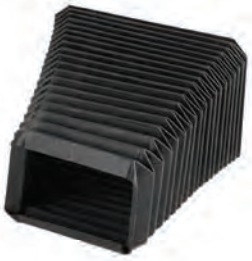
- Aluminized/polyester
- CSM (Goralon®)/polyester
- Neoprene/nylon (general purpose, oil resistance)

Applications:

- Way covers: light- to medium-duty environments, e.g., small particles, light abrasives, light oil, occasional large chips, liquids

FOLDED BELLOWS

Folded bellows are often used in applications requiring the cover to be completely sealed and light-proof, such as laser bellows. These covers can also be used in applications requiring bellows to be able to handle internal or external pressure and motion. Folded covers can be constructed out of elastomer or thermoplastic materials. Square or rectangular designs can be tapered, including offset configurations. Folded bellows are available as an enclosed-shape bellow in any flat-sided form. An alternative, lower cost option is a single-layer folded construction, made from thermoplastic film.



Features/Benefits:

- Completely sealed from light, air and dirt penetration
- High durability – can withstand high cycles and high-speed movement
- No tooling charges

Materials:

- Aluminized/polyester
- Buna/nylon food grade
- CSM (Goralon)/polyester
- Neoprene/nylon (general purpose, oil resistance)
- Polyurethane/ballistic polyester

Applications:

- Laser beam paths, air ducts, cameras, copy machines, enlargers, imaging equipment

THERMISEAL BELLOWS

Thermiseal bellows are made from thermoplastics bonded together by thermic weld process. The result is a lightweight, completely sealed cover. When additional strength is needed, nylon-reinforced fabric can be used. Available in any size or shape (e.g. round, oval, rectangular, strip-type, way cover). Tooling charges for new designs may apply.

Features/Benefits:

- Attractive, clean, uniform appearance – great as an aesthetic cover to conceal mechanical components
- Excellent extended to retracted ratio
- Generates minimal airborne particles
- Air, dust and liquid tight
- Can withstand high cycles and high-speed movement
- Lightweight construction and superior extended to retracted ratio is ideal for covering sensitive measuring equipment

Materials:

- Polyurethane films and polyurethane coated fabrics

Applications:

- Medical equipment
- Semi-conductor equipment
- Inspection and test equipment
- Clean room environments

VULCA SEAL® BELLOWS

Vulca Seal is made from separate sections and then joined by vulcanizing alternating seams to form convolutions, resulting a completely sealed cover without stitch holes, seams or breaks. Available in any size or shape (e.g. round, oval, rectangular, strip-type, way cover). Sealed PTFE is available for harsh environments such as chemicals, coolants and high temperatures up to 500° F.

Features/Benefits:

- Extreme durability – long life in abrasive environments
- Withstands moderate internal or external pressure
- No tooling fee – ideal for OEM use on both prototype models and new designs
- Attractive, clean, uniform appearance – great as an aesthetic cover to conceal mechanical components
- Custom designed to match any rail or way profile

Materials:

- Goralon® (CSM), PTFE

Applications:

- Way and linear rail covers
- Rod boots, ball screw covers
- Medium- to heavy-duty environments: abrasives, chip loads, weld splatter, hot sparks, chemicals, coolants, high temperatures

STANDARD OPTIONS AND ACCESSORIES | ENCLOSED BELLOWS

Breather Vents – For breathing in sealed covers.

Grommets – For use with supports or guide rods.

Tie Strips – To limit cover stretch.

Wire Guides, Internal or External – To maintain shape in sealed covers experiencing internal pressure or vacuum.

Internal Guides (inserts) – For ball screw applications.

Zipper – For easy installation without disassembling machine parts.

Mounting Accessories
- Clamps, back-up plates and hook & loop fastener

ROBUST BELLOWS | HIGH TEMPERATURE

Robust bellows are characterized by a long service life and high tensile strength. The robust bellows is especially designed for high temperatures and aggressive operating conditions. They perform reliably in harsh environments to protect your equipment. In addition to contact and radiant heat resistance, the key benefits of Robust bellows: high tear strength, extreme durability, and a material selection for chemical, UV and ozone resistance.

Features/Benefits:

- High temperature resistance to up to 900° C radiant heat
- Resistance to acid and basic chemicals
- UV/Ozone resistance
- Extreme durability and tear strength
- Optional PTFE coating to inside or outside of bellows

Applications:

- Industrial plant equipment
- Automotive industry
- Printing equipment
- Ball screw or piston rod cover

Materials:*

CR-Rubber/Fabric

- Chloroprene (also known as Neoprene), with cotton fabric base
- Temperature range: -20° C to +110°C (-4° to 230° F)
- Optional coating: PTFE inside and/or outside
- Thicknesses: 0.5 mm to 3.0 mm

Aluminized Carbon Fiber

- Carbon fabric with aluminum coating on one side
- Temperature range:
  – radiant heat up to 900° C (1,652° F)
  – contact heat up to 200° C (392° F)
- Optional coating: PTFE inside and/or outside
- Thicknesses: 0.45 mm or 1.0 mm

Aluminized Kevlar®

- Kevlar fabric with aluminum coating on one side
- Temperature range:
  – radiant heat up to 900° C (1,652° F)
  – contact heat up to 200° C (392° F)
- Optional coating: PTFE inside and/or outside
- Thickness: 1.0 mm

Fiberglass

- Green color, uncoated fiberglass
- Temperature range:
  – radiant heat up to 700° C (1,292° F)
  – contact heat up to 800° C (1,472° F)
- Optional coating: PTFE inside and/or outside
- Thickness: 1.0 mm

*Leather is available for special sewn applications, available upon request. It is not meant for high temperature applications. Thicknesses: 1.0 mm and 2.0 mm.

Robust bellows are made in our European manufacturing facility in Bielefeld, Germany.

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

MOLDED BELLOWS | MULTIFLEX DIP-MOLDED

Multiflex bellows are produced using a dip molding process, resulting in a neat, clean-looking bellows. We develop precise aluminum forms in-house to ensure a flexible, fast and precise solution. This process is suitable for up to 5,000 pieces. Dip-molded bellows are available in almost any geometry and with single or two-color immersion. Black, grey and white PVC plastisol are the most common selections; additional colors are available for high volume production runs.

The thermoplastic has good UV- and ozone-resistance, oil- and grease-resistance and even food-grade compatibility. Operating temperature range is -30° C to +80° C. The bellows can be immersed to create defined hard- and soft areas upon special request. Most prototype tools can be produced in one week, with delivery of first sample within two weeks. Many mounting configurations are available, including flanges and collars.

Features/Benefits:

- Available in almost any geometry
- Neat, clean appearance with many color options
- Low cost tooling and low cost per bellows
- Speedy prototype tooling and sample delivery
- Seamless protection against water, oil and other contaminants
- Excellent UV and ozone resistance
- Suitable for special applications such as food grade and clean room

Applications:

Multiflex bellows protect mechanical components from dust, water, mineral oil and other contaminants. Multiflex is used in numerous applications:

- Clean-room environments
- Medical, robotics and automation applications
- Joint covers
- Joystick/shift covers

Multiflex dip-molded bellows are made in our European manufacturing facility in Bielefeld, Germany.

GORFRAME™ WIREFRAME

Gorframe wireframe bellows are used in applications involving lateral (shear) movement, washdown, clean room, or where materials must meet special requirements. Its rugged, flexible design uses internal or external wires to maintain the shape of the bellows. The Gorframe cover is available in multiple shapes: a four-sided cover with rounded corners, three-sided "clamshell"-style cover, or a round-shaped cover.

Features/Benefits:

- Designed to withstand a range of motion in a variety of directions, including lateral (shear) movement
- Ideal for concealing operational mechanisms, as a lift/tilt table cover
- Wide range of materials available, including specialty materials: some that meet UL burn standards or incorporate anti-microbial agents
- Small retracted length allows cover to retract into a tight space

Materials:

- Aluminized fiberglass (high temperature, weld splatter, hot chips)
- Aluminized Kevlar® (high temperatures)
- Ballistic nylon (high durability against abrasion and tears)
- Goralon®/polyester (chemical/UV/ozone resistance)
- Neoprene/nylon (oil resistance)
- Neoprene/polyester-FR (non-conductive, fire retardant)
- Urethane/preoxidized Kevlar (spark resistance, weld splatter resistance)
- Urethane-polyester (antimicrobial, fire retardant, grey and black color options)
- Vinyl/nylon (color options available)
- Vinyl/polyester (washdown environments)

Applications:

- Enclosing bases of medical tables, imaging tables, dental chairs and amusement rides
- Flexible, "clamshell" style cover for light-duty protection in machine tool environments

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

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

LIFTGARD™* LIFT TABLE COVER

The Liftgard is designed to cover scissors/lift tables. Its innovative, cost-effective design provides significant advantages over the traditional stitched covers that utilize steel rods which must be inserted into the fabric. Precision engineered aluminum extrusions are shaped to provide structure and strength to a durable, folded material. The standard design is equipped with vented corners and a zipper, however, the design can be modified as needed for moisture concerns.

Features/Benefits:

- Reduced assembly time and freight cost: pre-assembled covers are folded for shipping, then easily unfolded for assembly – this reduces assembly time by eliminating the need to insert steel rods
- Smooth operation: corner venting optimized to accommodate rapidly rising and descending lifts
- Strong structure without steel rods: aluminum frame provides a stiffer, more supportive structure than typical steel rod configuration – eliminates rusty metal rods protruding from cover ends
- End mounting configuration: standard flange/ inside collar; alternative options available

Materials:

- Standard material: 18 oz. yellow PVC/nylon, 0.021" nominal thickness, with black corners
- Custom materials available for special applications; several color options available

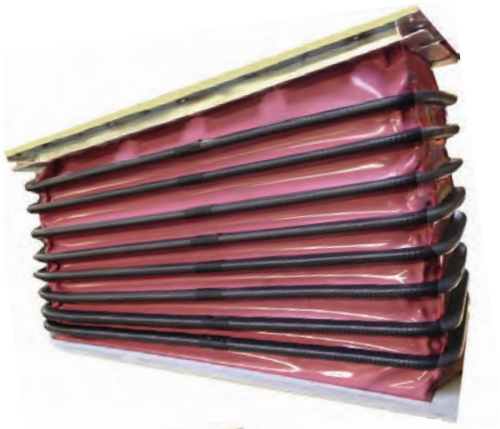
Applications:

- Enclosing the bases of lift tables, tilt tables or scissors lift mechanisms
- Aesthetic cover for concealing operational components
- Ideal for large enclosed-type cover applications
- If a more sealed cover is required such as in a washdown application, covers can be manufactured without vents or zipper. In this case, customer should provide alternative cover venting.

*Patent Pending.

BELLOWS | TRANSPORTATION

This design is specialized for the ventilation of traction motors on electric locomotives and railcars. The bellows serve as an integral part of the cooling air flow as a flexible connecting element between traction motor blower and drive motor. They are fixed from the bottom of the underfloor area of the locomotive to the upper flange of the traction motor fan collar. A seal is provided between the upper flange and the traction motor fan collar in order to prevent loss of air and to prevent moisture ingress. The lower part of the bellows will normally be fixed to the bottom flange of the traction motor or fastened with a bayonet fitting. Other mounting options are available.



Features/Benefits:

- Air and water proof vulcanized endless tubing
- Material: silicone-coated Meta-aramid (pink)
- Dimensional stability assured by stainless steel wire rings inside the convolution peaks
- Bellows convolutions are secured by protection profiles
- Mounting using custom made metal or silicone flanges

Made in our European manufacturing facility in Bielefeld, Germany.

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

GORTIFLEX® 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 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® material. Each set consists of 2 bellows, 2 clamps and 2 back-up plates for quick and easy installation.

Features/Benefits:

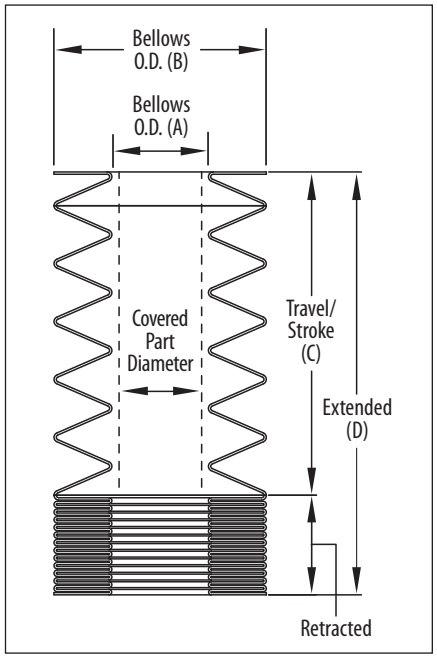
- Durable construction provides long-life operation, even in high-speed die set applications
- Completely seals out damaging dirt, dust, scrap and scale
- Lengthens die set life
- Provides increased operator safety
- Delivered with back up mounting plate and clamp for a complete solution

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® 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® 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.

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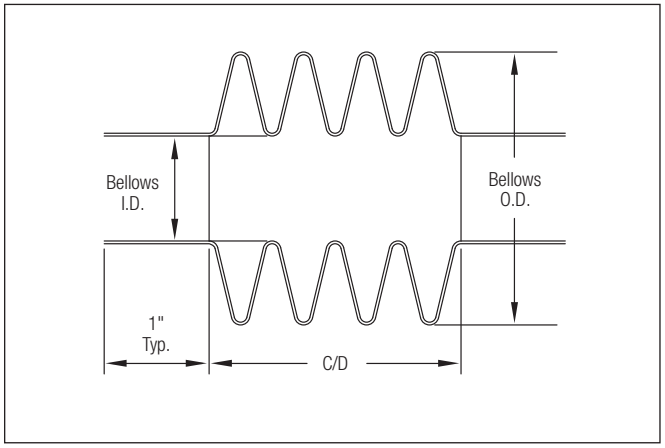
GORTIFLEX® CONVOLUTED TUBING | STOCK

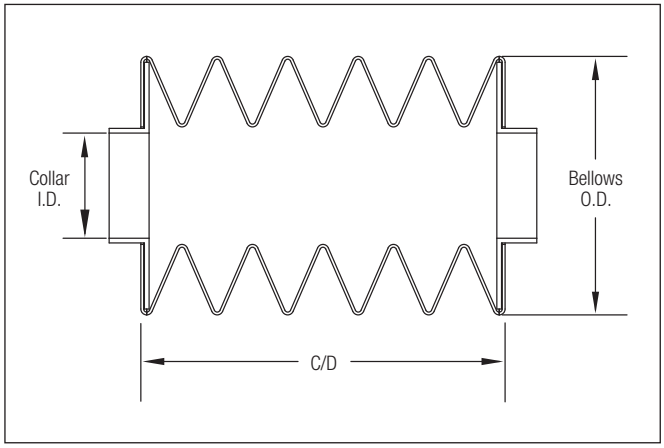
DIMENSIONS

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

STOCK ROD BOOTS | STANDARD SEWN BELLOWS

Gortite® 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.

STOCK 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

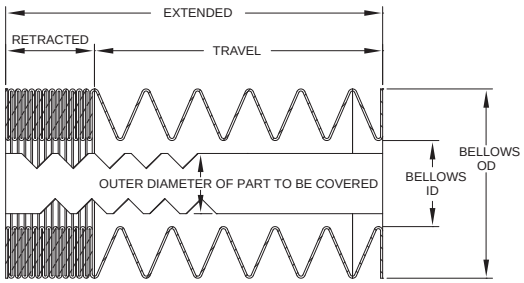
ROD BOOT STYLE	I.D. (Inside Diameter)	O.D. (Outside Diameter)	RETRACTED LENGTH (every 12" extended)	COLLARS: AVAILABLE I.D. SIZES (must be ordered in 1/8" increments)
SRA-15	3/4"	3"	3/4"	1/2" to 3"
SRB-15	1-1/8"	3-3/8"	3/4"	1/2" to 3-3/8"
SRC-15	1-1/2"	3-3/4"	3/4"	1/2" to 3-3/4"
SRD-15	1-7/8"	4-1/8"	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: _____

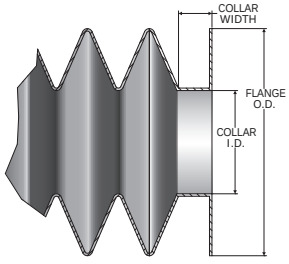
Other End: ☐ Standard Flange

Outer Diameter: _____ Inner Diameter: _____

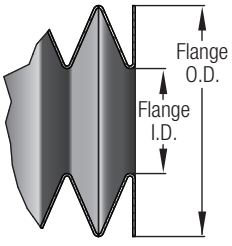
☐ Collar

Outer Diameter: _____ Width: _____

COLLAR END



STANDARD FLANGE



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)

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

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

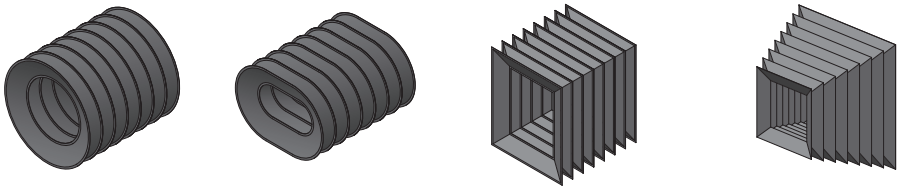
New or Replacement Application: ☐ New Design ☐ Replacement

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®-Molded ☐ Sewn ☐ Vulca-Seal® ☐ 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 Splatter ☐ 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: _____

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

ENCLOSED-SHAPE BELLOWS | QUOTE REQUEST FORM

4. Cover Dimensions

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

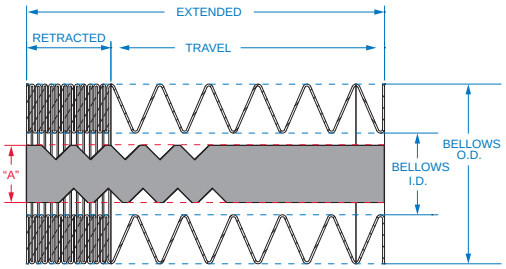
Dimensions specified in: ☐ in ☐ mm

Covered Part Dimensions: Diameter: _____ or 4-sided: _____ x _____

Bellows I.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)

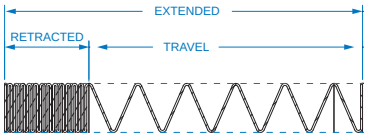
I.D. = Inside Diameter (round) or Inside Dimensions (rectangular)

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

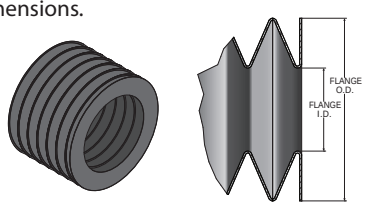
Extended Length: _____ Retracted Length: _____ Travel Distance: _____



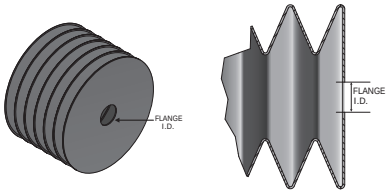
6. End Dimensions

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

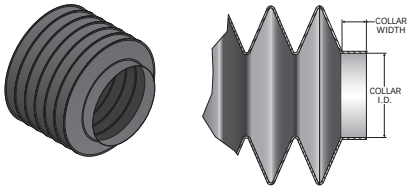
STANDARD FLANGE



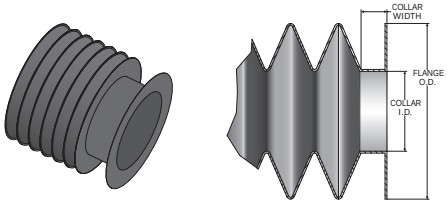
INSIDE FLANGE



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: _____ or 4-sided: _____ x _____

End 1 Mounting:

☐ Mounting Hole Pattern*
☐ Mounting Plate**
☐ Clamp†

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: _____ or 4-sided: _____ x _____

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.

BELLOWS WAY COVER | QUOTE REQUEST FORM

Date _____ Address _____

Company Name _____ City _____ State/Prov. _____

Contact _____ Country _____ Zip/Postal Code _____

Quantity _____ Telephone _____ Fax _____

Email _____

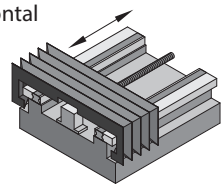
1. Application Information (Please supply a sketch/drawing/CAD file (DWG or DXF file format)/photo of your application.)

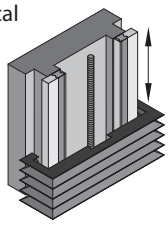
New Design or Replace Existing Cover: ☐ New cover design (only fill out pages 32 and 33)
☐ Replace existing cover (only fill out pages 32 and 34)

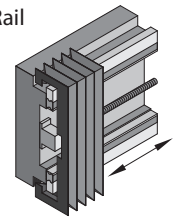
Describe the type of equipment or part you need to cover: _____

Machine Make: _____ Machine Model: _____

Cover Orientation: ☐ Horizontal ☐ Vertical ☐ Cross Rail







Construction Preference: ☐ Dynatect Recommendation ☐ Heat-Sealed ☐ Sewn ☐ Vulca-Seal® ☐ 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 Splatter ☐ 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

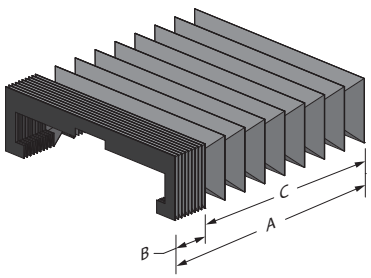
Miscellaneous: ☐ UV/Ozone ☐ Outdoors ☐ Food-Grade/FDA ☐ Laser Beam ☐ Clean Room ☐ Other (specify) _____

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: _____

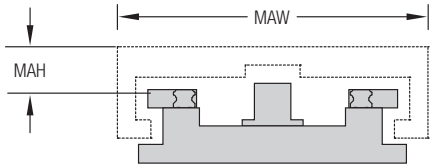
BELLOWS WAY COVER –NEW DESIGN | QUOTE REQUEST FORM

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: _____



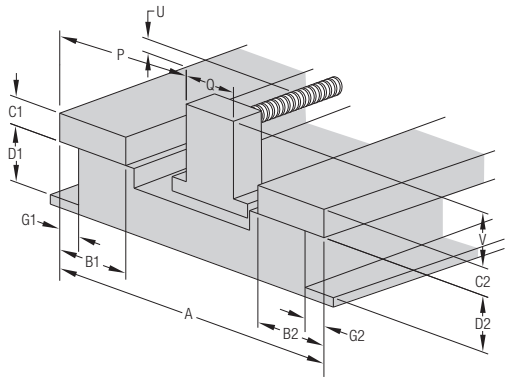
2. Way Dimensions

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.

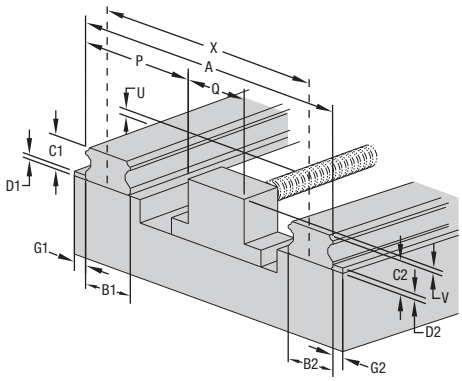
Cover Type: ☐ Box/Bed Way ☐ Linear Rail – Dual ☐ Linear Rail – Single (provide dimensions B1, C1 and D1 only)

Rail Type and Model: _____

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

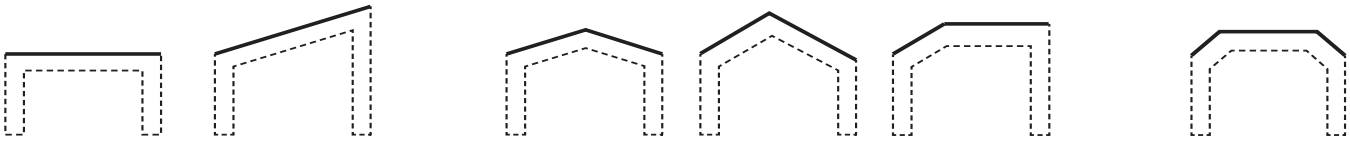


SINGLE OR DUAL LINEAR RAILS



STANDARD BOX/ BED WAYS

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



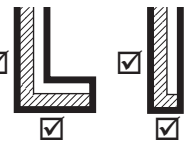
☐ 1 Side, Flat ☐ 1 Side, Angled ☐ 2 Sides, Center Peak ☐ 2 Sides, Offset Peak ☐ 2 Sides, Flat and Angled ☐ 3 Sides

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



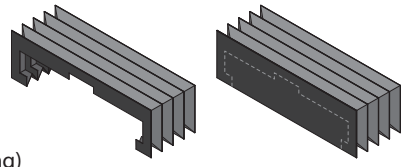
Note: Dynatect will design left/right sides (legs) according to cover orientation and way dimensions provided.

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)

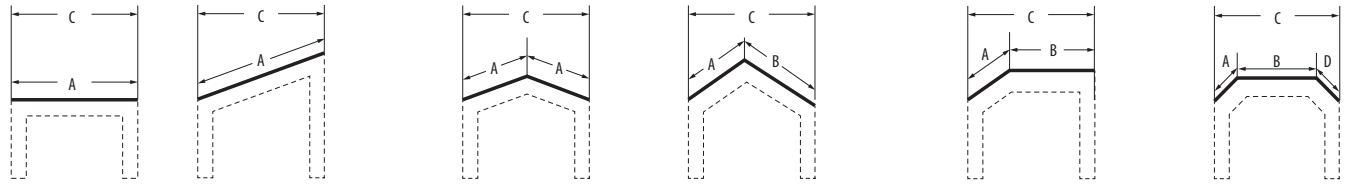


OPEN FLANGE **CLOSED FLANGE**

BELLOWS 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

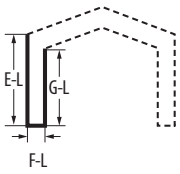
Dimension "A" _____ Dimension "B" _____ Dimension "C" _____ Dimension "D" _____

2. External Cover Profile Dimensions – Sides/Legs

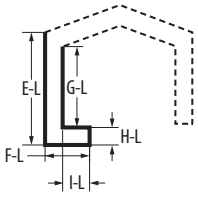
Please specify what the "legs" of your cover look like for left and right sides of the cover, and fill in applicable dimensions.

Left Leg: ☐ No ☐ Yes

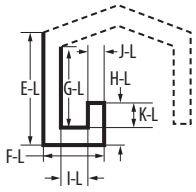
☐ Straight Leg



☐ L-Shaped Leg



☐ U-Shaped Leg

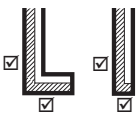


Does Cover Ride on Leg(s): ☐ No ☐ Yes

Left Leg Dimensions: E-L _____ F-L _____ G-L _____ H-L _____ I-L _____ J-L _____ K-L _____

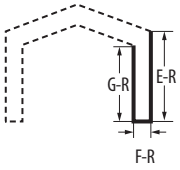
Finishing/Fabric Warp-Around: ☐ Sides Only (standard)

☐ Sides and Bottom

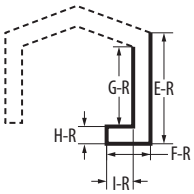


Right Leg: ☐ No ☐ Yes

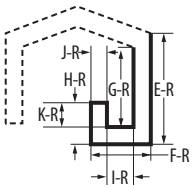
☐ Straight Leg



☐ L-Shaped Leg



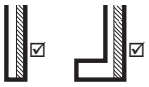
☐ U-Shaped Leg



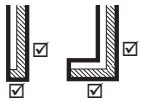
Does Cover Ride on Leg(s): ☐ No ☐ Yes

Right Leg Dimensions: E-R _____ F-R _____ G-R _____ H-R _____ I-R _____ J-R _____ K-R_____

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



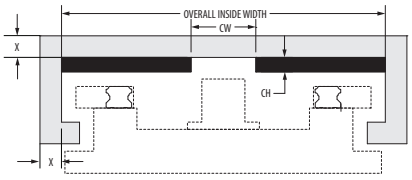
☐ Sides and Bottom



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): _____

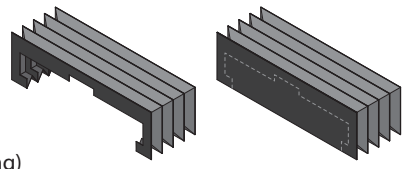


5. End Mounting

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)



OPEN FLANGE CLOSED FLANGE

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

GORDILLO™ WAY COVER | 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 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.

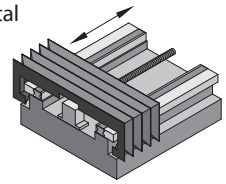
1. Application Information

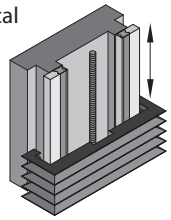
New Design or Replace Existing Cover: ☐ New cover design (fill out pages 35 and 36)
☐ Replace existing cover (fill out pages 35 and 37)

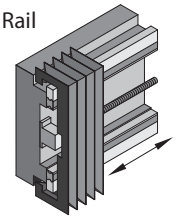
Describe the type of equipment or part you need to cover: _____

Machine Make: _____ Machine Model: _____

Cover Orientation: ☐ Horizontal ☐ Vertical ☐ Cross Rail







Construction Preference:
☐ Dynatect Recommendation
☐ Heat-Sealed
☐ Sewn/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 Splatter ☐ 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): _____

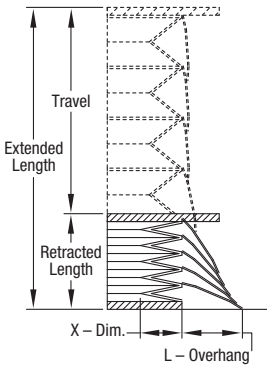
Extended Length (travel + retracted length): _____

Shields: ☐ Rotating ☐ Fixed

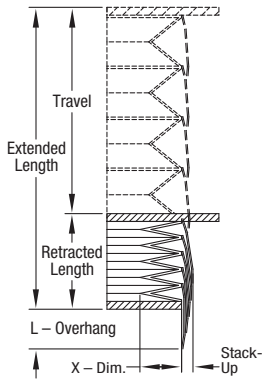
CONVOLUTION HEIGHT	MINIMUM/MAXIMUM FACTOR	OVERHANG
0.75	7:1	1.63 / 2.75*
1	10:1	2 / 3.5*
1.25	12:1	2.38 / 4.25*
1.5	15:1	5
1.75	17:1	3.25
2	20:1	3.5

*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.



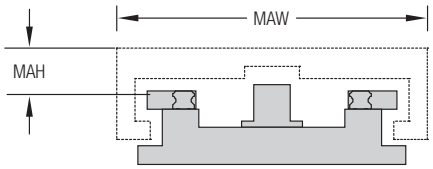
ROTATING SHIELDS



FIXED SHIELDS

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

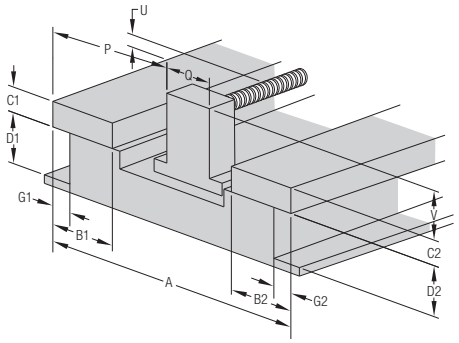
Single or dual linear rails – see left diagram below and specify rail type and model. Standard box/bed ways – see right diagram below. If the way does not resemble the way profiles shown below, please send a sketch/drawing of your actual way dimensions. Be sure to note any space restrictions; reference "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)

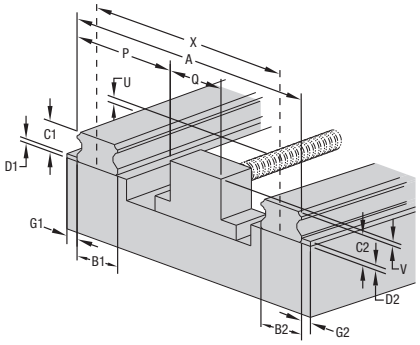
Rail Type and Model: _____

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

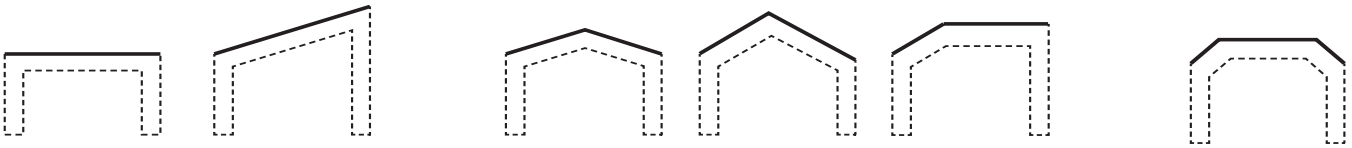
SINGLE OR DUAL LINEAR RAILS



STANDARD BOX/BED WAYS



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



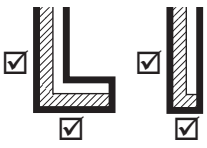
☐ 1 Side, Flat ☐ 1 Side, Angled ☐ 2 Sides, Center Peak ☐ 2 Sides, Offset Peak ☐ 2 Sides, Flat and Angled ☐ 3 Sides

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



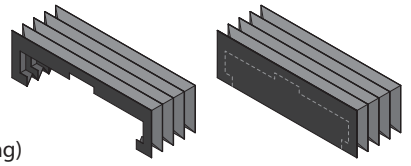
Note: Dynatect will design left/right sides (legs) according to cover orientation and way dimensions provided.

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)



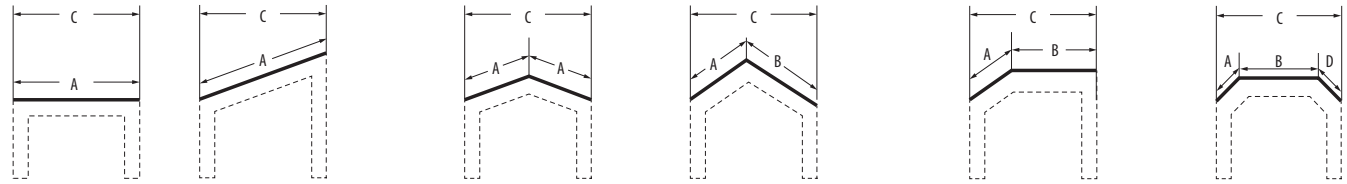
OPEN FLANGE CLOSED FLANGE

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

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

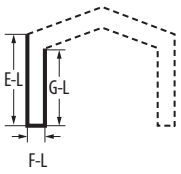
Dimension "A" _____ Dimension "B" _____ Dimension "C" _____ Dimension "D" _____

2. External Cover Profile Dimensions – Sides/Legs

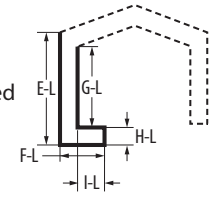
Please specify what the "legs" of your cover look like for left and right sides of the cover, and fill in applicable dimensions.

Left Leg: ☐ No ☐ Yes

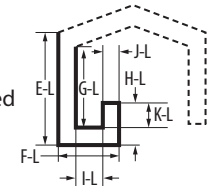
☐ Straight Leg



☐ L-Shaped Leg



☐ U-Shaped Leg

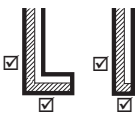


Does Cover Ride on Leg(s): ☐ No ☐ Yes

Left Leg Dimensions: E-L _____ F-L _____ G-L _____ H-L _____ I-L _____ J-L _____ K-L _____

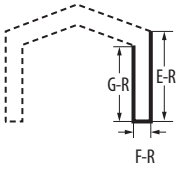
Finishing/Fabric Warp-Around: ☐ Sides Only (standard)

☐ Sides and Bottom

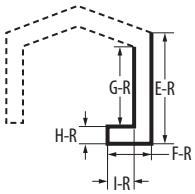


Right Leg: ☐ No ☐ Yes

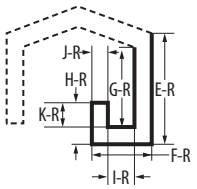
☐ Straight Leg



☐ L-Shaped Leg



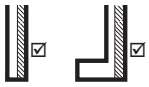
☐ U-Shaped Leg



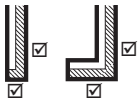
Does Cover Ride on Leg(s): ☐ No ☐ Yes

Right Leg Dimensions: E-R _____ F-R _____ G-R _____ H-R _____ I-R _____ J-R _____ K-R_____

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



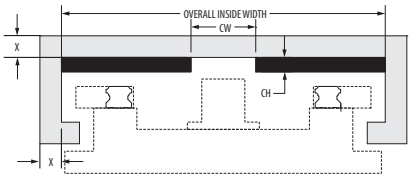
☐ Sides and Bottom



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): _____

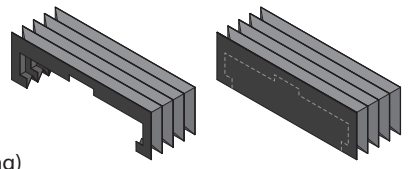


4. End Mounting

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)



OPEN FLANGE CLOSED FLANGE

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®

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 Splatter ☐ 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.)

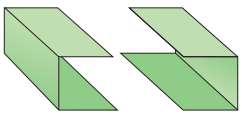
Will the cover operate within an existing channel? ☐ Yes ☐ No*

*Would you like us to provide channel supports? ☐ Yes ☐ No

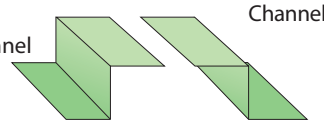
Channel Material: ☐ Aluminum ☐ Steel ☐ Stainless Steel

Support Type:

☐ C-Channel



☐ Z-Channel



5. Cover Dimensions

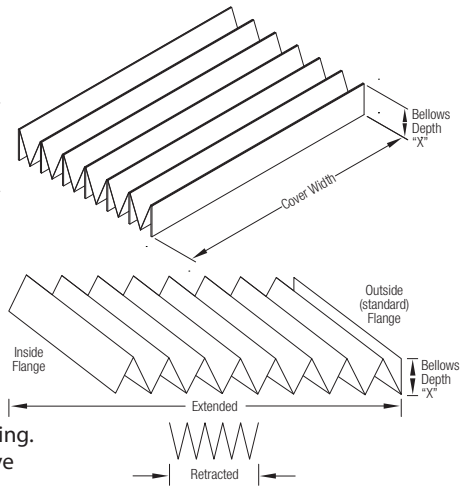
(X) Bellows Fold Height: _____ Cover Width: _____ ☐ in ☐ mm

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.

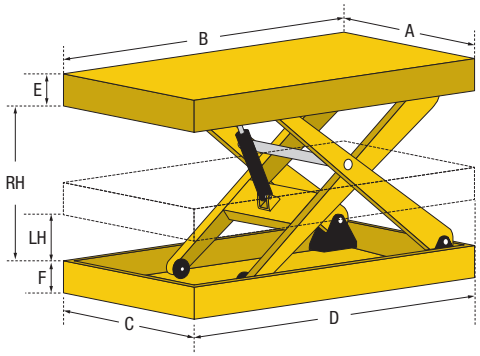
2. Cover Construction Type

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)

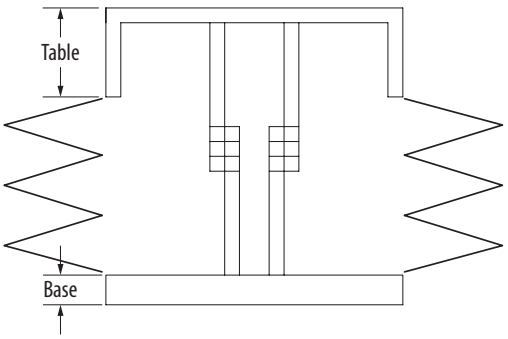
*Vents are required if base and table mounts do not allow for air exhaust. Liftgard covers already incorporate a venting system. Depending on speed, additional venting may be required.

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

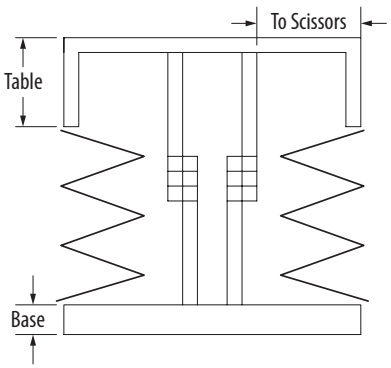
☐ Outside Cover Location
(proceed to "Outside Cover Mount" on next page)

☐ 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)



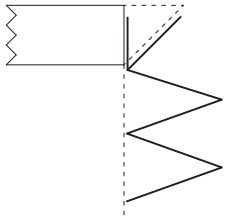
Shortest distance between scissors mechanism and outside edge of table top: _____ (required)

LIFT TABLE/SCISSORS MECHANISM COVERS | QUOTE REQUEST FORM

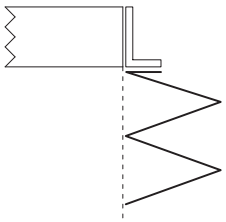
6. Outside Cover Mount – Select mounting type (collar or flange), then a mounting option.

– MOUNTING TO TABLE TOP –

☐ **Collar Mount**
(specify "straight" or "angled")
☐ Straight ☐ Angled
☐ Reinforced* with PVC Strips (default)
☐ Reinforced* with Metal Strips
(specify type) _____
☐ Hook & Loop Fastener
☐ Other (specify) _____

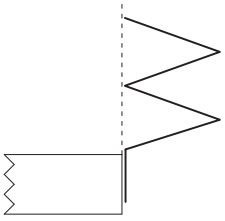


☐ **Flange Mount**
☐ Reinforced* with PVC Strips (default)
☐ Reinforced* with Metal Strips
(specify type) _____
☐ Hook & Loop Fastener
☐ Other (specify) _____

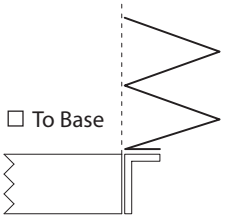


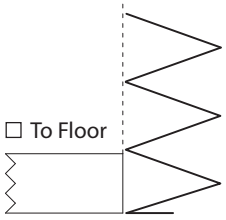
– MOUNTING TO BASE/FLOOR (OPTIONAL) –

☐ **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



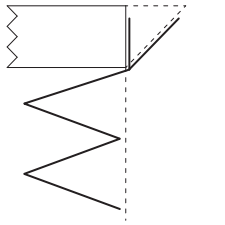


*Reinforced strips shipped without mounting holes unless dwg. received.

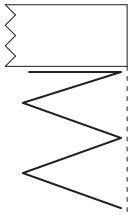
7. Inside Cover Mount – Select mounting type (collar or flange), then a mounting option.

– MOUNTING TO TABLE TOP –

☐ **Collar Mount**
(specify "straight" or "angled")
☐ Straight ☐ Angled
☐ Reinforced* with PVC Strips (default)
☐ Reinforced* with Metal Strips
(specify type) _____
☐ Hook & Loop Fastener
☐ Other (specify) _____

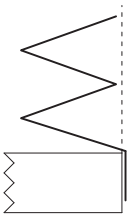


☐ **Flange Mount**
☐ Reinforced* with PVC Strips (default)
☐ Reinforced* with Metal Strips
(specify type) _____
☐ Hook & Loop Fastener
☐ Other (specify) _____

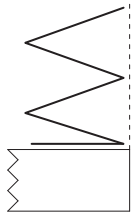


– MOUNTING TO BASE (OPTIONAL) –

☐ **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.

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

ROLL-UP COVERS AND DOORS | OVERVIEW

Roll-up covers are used in applications from machine tool to transportation. Over 65 years of manufacturing and application experience combined with the largest cover selection in the industry, we have had the opportunity to solve the most challenging applications. Available in a variety of fabrics, stainless steel, or flexible aluminum, roll-up shades can be delivered on a roller, or in a protective canister – factory pre-loaded and ready to mount.

Dynatect offers repair/refurbishment and reverse engineering services for all brands of roll-up product. 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.

SHADE ROLLERS

A roll-up cover for light-duty protection, with a coated or uncoated fabric attached to a spring roller, with or without a protective canister. Suitable for high speeds and acceleration.

ALUMAFLEX

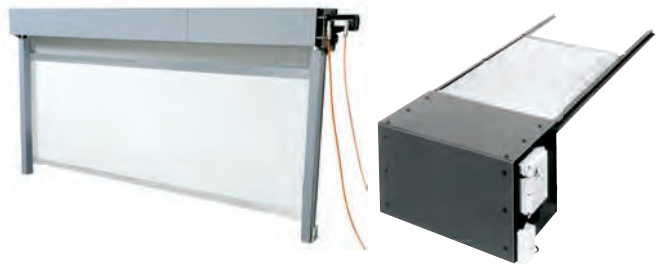
Made of interlocking aluminum extrusions. Available as a free-hanging apron cover, on a roller or in a canister. Alumaflex is an upgrade to medium-duty protection over fabric shades.

STANDARD-DUTY STEELFLEX®

Offering minimal deflection over wide spans, a Steelflex guards against moderate hot chip and coolant loads.

STEELFLEX WALK-ON COVER

Steelflex covers are available as a heavy-duty, retractable, walk-on style cover with minimal deflection. Applications: covering machine ways or pits.



TANK COVERS, MOTORIZED MACHINE CURTAINS AND DOORS

We offer custom assemblies such as motorized machine curtains or tank covers, which integrate standard and custom components to provide a complete solution, fully assembled and ready to install to minimize design and start-up costs.

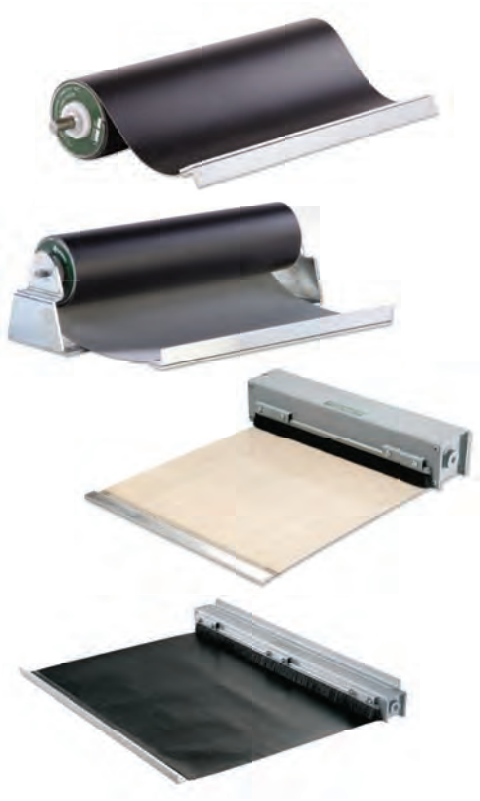
GORTITE® ROLL-UP DOORS

Attractive, durable and light-weight aluminum roll-up doors are ideal for fire trucks, emergency vehicles, work trucks and trailers. Made of strong, double-sided aluminum extrusions, available with a full complement of options.

SHADE ROLLERS | LIGHT-DUTY

ROLL-UP PROTECTIVE COVERS FOR MACHINE GUARDING

Dynatect shade rollers are custom-made protective roll-up covers consisting of coated or uncoated textile material attached to an industrial spring roller and mounting components. They can be applied in a vertical, cross rail, or horizontal orientation. Flexible mounting include bracket options or protective canister housing.



Dynatect Shade Rollers Are 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

Applications:

- A barrier for involuntary contact with machine components
- Equipment protection from contaminants such as liquid, light chip loads, dust and other particulate
- UV protection

Options:

- A canister with scraper (or optional brush), which cleans the shade as it retracts, and prevents foreign matter from damaging the take-up hardware
- Channels are available to guide the shade as well as minimize the amount of contamination getting past the shade

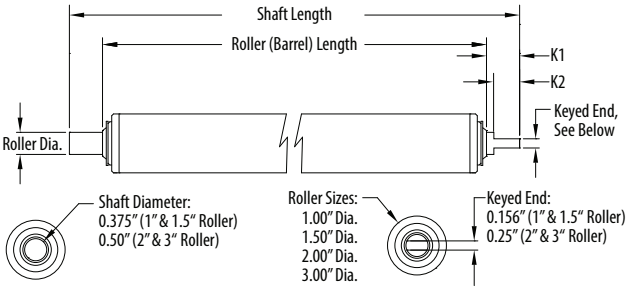
Common Materials:

- Neoprene/nylon – General purpose
- Goralon®/nylon – General purpose
- Goralon/polyester – Chemical resistance, ozone resistance, abrasion resistance
- Butyl/nylon – Chemical resistance
- Buna/nylon – Coolant/oil resistance
- Food-grade buna/nylon (white color)
- Aluminized fiberglass – High ambient temperature
- Aluminized Kevlar® – High ambient temperature
- PTFE/Kevlar – High ambient temperature, high tensile strength, coolant resistance (non-stick surface)
- PTFE/fiberglass – High ambient temperature, coolant resistance (non-stick surface)
- Silicone-coated fiberglass – High ambient temperature, high cycle durability
- Polyvinyl acetate (PVA) coated polyester – Chemical resistance
- Polyurethane coated polyester – Chemical resistance, applications with wide spans (very rigid)
- Lasertex – High-cycle durability, spark and weld splatter resistance
- Urethane/polyester/Kevlar – Spark and weld splatter resistance

Quote Request:

Refer to pages 56-57 for the Light/ Medium-Duty Roll-Up Cover Quote Request Form.

TYPICAL SHADE ROLLER DIMENSIONS



	1" & 1.5" Roller	2" Roller	3" Roller
K1 =	0.563"	0.719"	0.625"
K2 =	0.438"	0.594"	0.500"

Note: Shade Width is Typically 0.50" less than Roller Length

BRACKET DRAWINGS

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

Visit: www.dynatect.com/protective-covers/roll-up-covers/shade-roller

Standard Mounting Brackets

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

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

ALUMAFLEX ROLL-UP COVERS | MEDIUM-DUTY

ALUMINUM ROLL-UP COVERS

Alumaflex roll-up covers provide optimal protection of machine ways from contamination and coolant while at the same time reducing the risk of damage by preventing contact. They are constructed of interlocking precision anodized aluminum extrusions. Alumaflex can be rolled up into a roller or canister housing. We will provide a customized design to meet your application.

Applications/Environments:

- Protection from heavy chips, oil and coolant
- An attractive barrier is desired
- As an apron cover
- A roll-up machine door

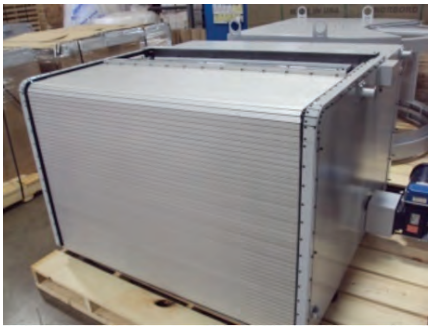
Alumaflex Options:

- Angle or flat bar at end of shade
- Choice of 3 rib styles
- Roller take-up option
- Canister housing option
- Alumaflex covers can be incorporated into a custom integrated assembly including metal housing, motor and drive controls

Alumaflex Rib Styles*:

- **Type A** – Interlocked with polyurethane hinge, bending in both directions possible
- **Type B** – Ball-and-socket interlock with plastic end caps
- **Type C** – Interlocked with hidden polyurethane hinge, resulting in smoothest, flat surface

*1" minimum radius on all. Type A and C available with flat or angled end rib.

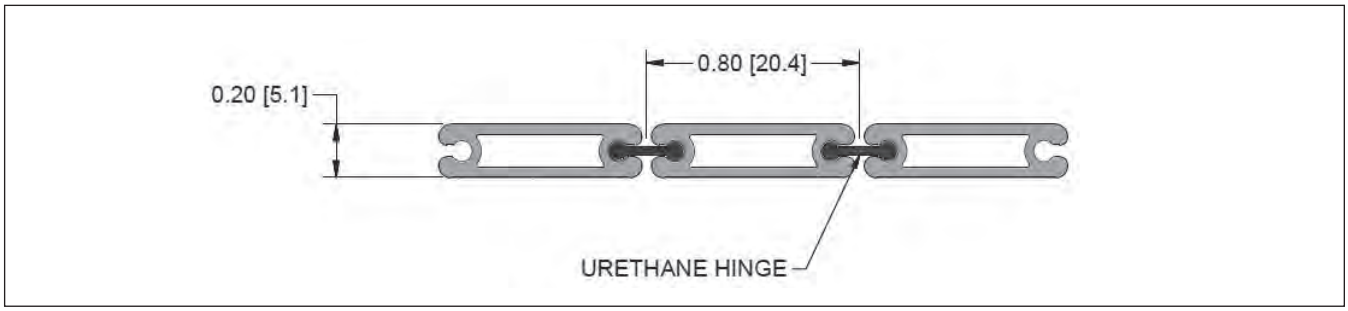


Quote Request:

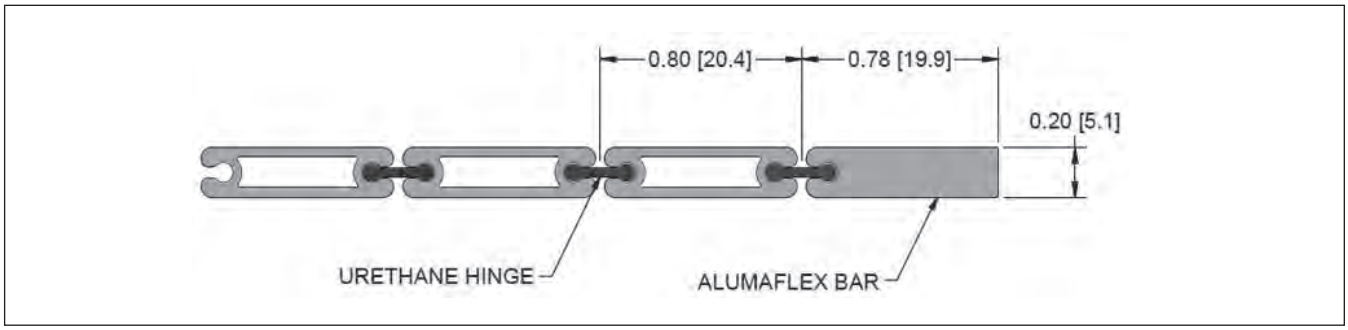
Refer to pages 56-57 for the Light/Medium-Duty Roll-Up Cover Quote Request Form.

ALUMAFLEX ROLL-UP COVERS | MEDIUM-DUTY

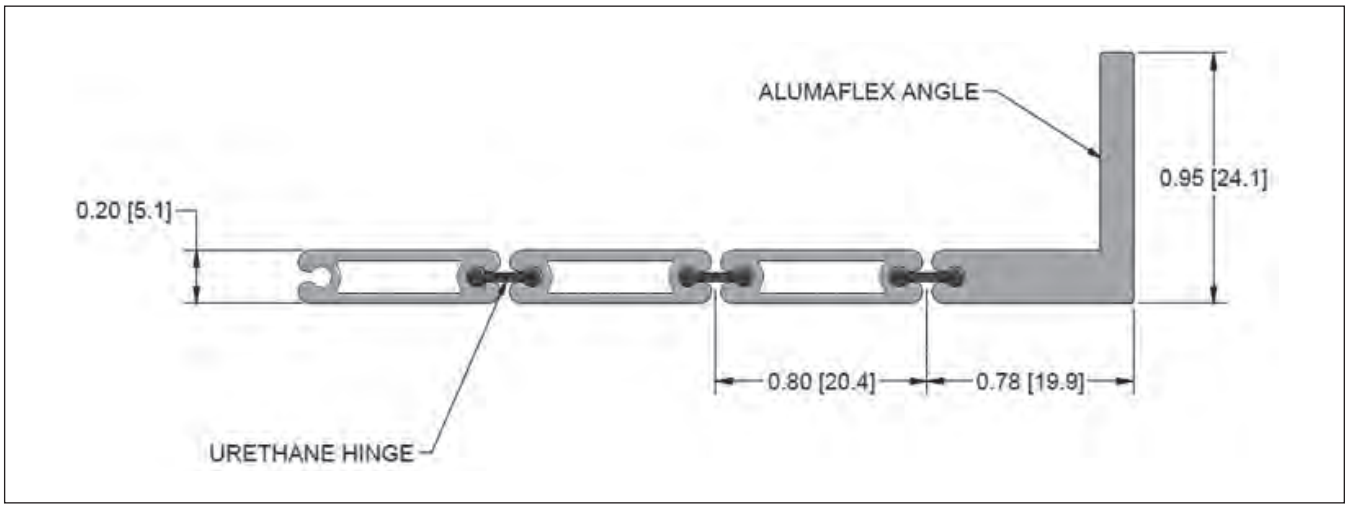
TYPE A RIB



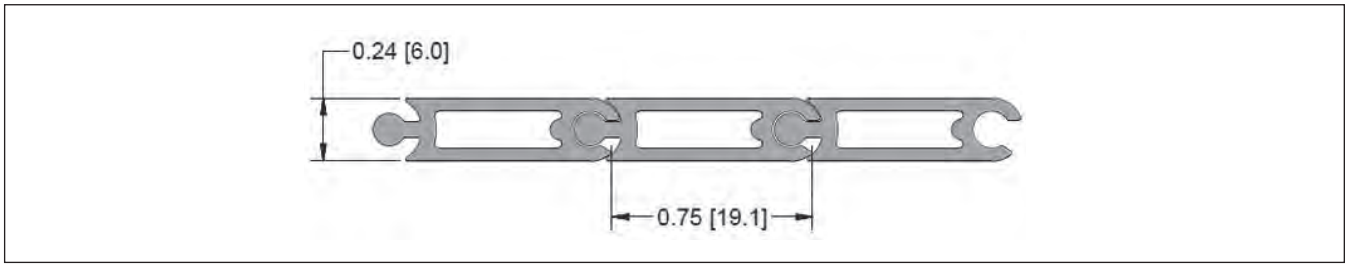
TYPE A WITH FLAT END RIB



TYPE A WITH ANGLED END RIB



TYPE B RIB



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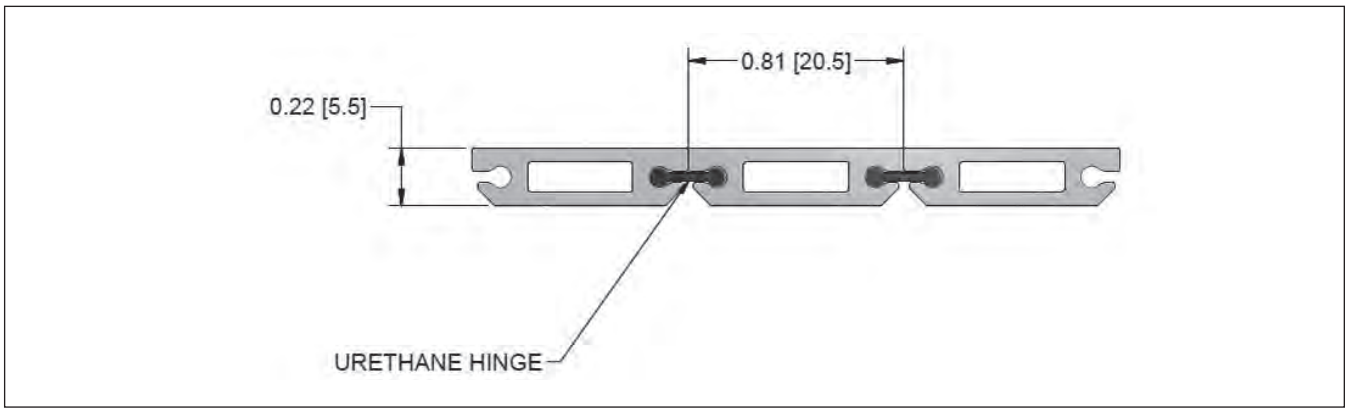
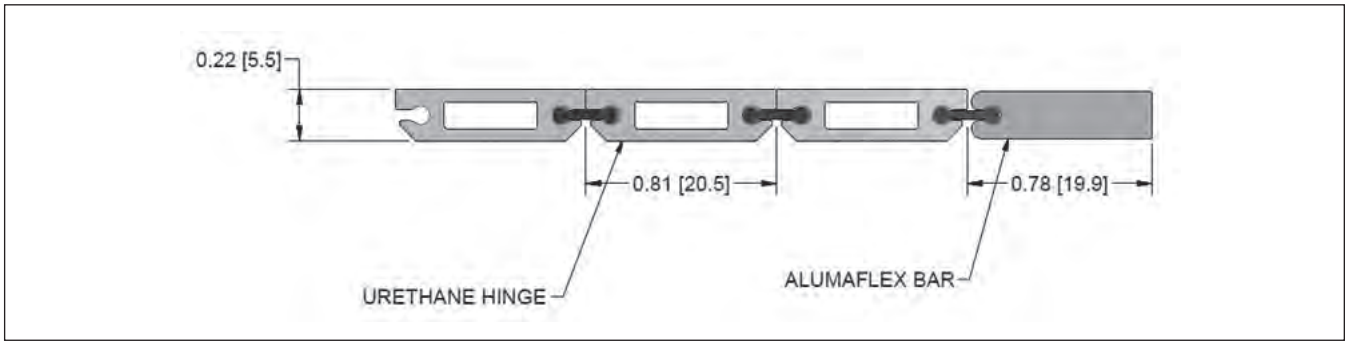
ALUMAFLEX ROLL-UP COVERS | MEDIUM-DUTY

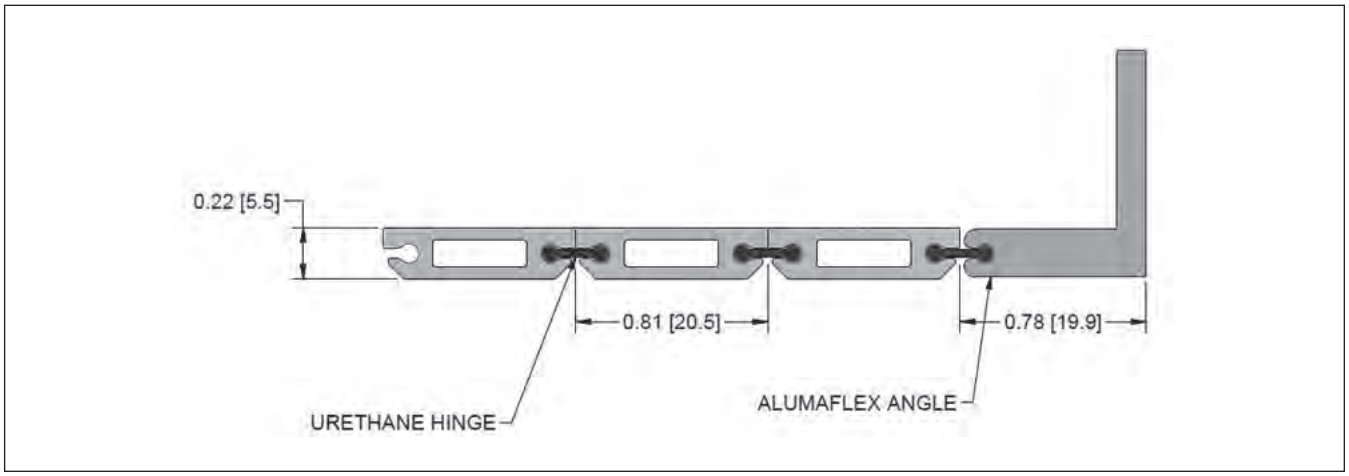
TYPE C RIB



TYPE C WITH FLAT END RIB



TYPE C WITH ANGLED END RIB



STEELFLEX® ROLL-UP COVERS | STANDARD-DUTY

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 for milling and drilling machines. All widths can be rolled compactly over a spring-loaded roller. Standard-duty Steelflex has a stainless steel top surface with 1/4" x 1/4" aluminum extrusions bonded to the underside for extra strength and support.

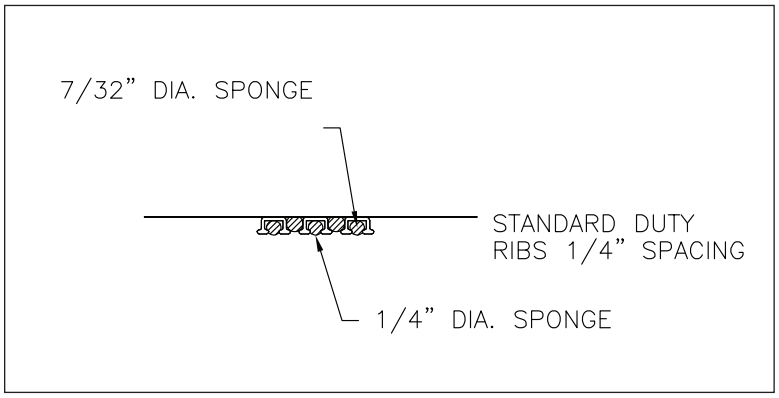
Applications/Environments:

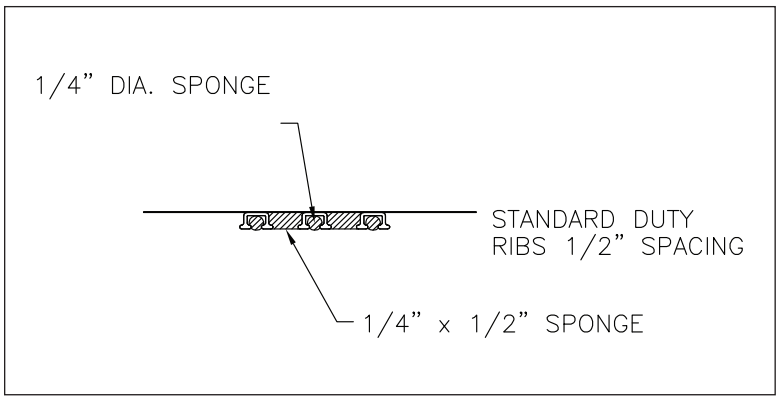
- Moderate hot chip or coolant loads
- Higher ambient operating temperatures
- Machine way protection
- Milling/drilling machines

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:

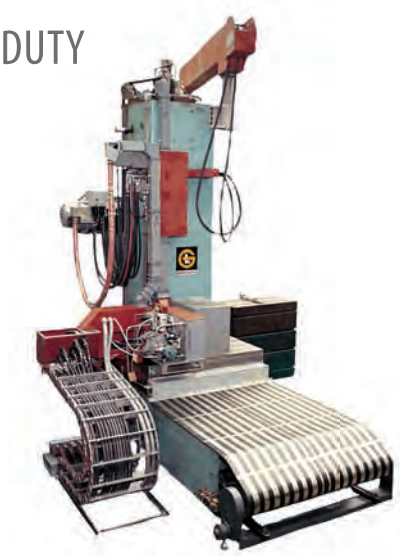
Refer to pages 56-57 for the Light/Medium Roll-Up Cover Quote Request Form.

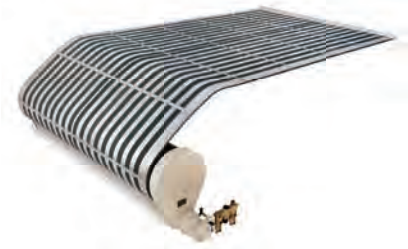
Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

STEELFLEX® WALK-ON ROLL-UP COVERS | HEAVY-DUTY

METAL ROLL-UP COVERS FOR MACHINE WAYS AND PITS

Steelflex "walk-on" style covers are designed for applications for covering machine ways or for covering pits. These covers were primarily used in the machine tool industry but have recently been used to cover inspection pits, machine tool changers, or large chemical tanks. The shade consists of aluminum or steel ribs bonded to stainless steel, and customized with the appropriate options and take-up hardware. Steelflex covers can be rolled up using an air-motor or into a scroll, and can be made to cover openings up to 8 meters wide. These covers can also be supplied in a custom enclosure that can be mounted at the end of the bed way or pit or on a gantry for a large machine.





Steelflex Walk-On Covers Are Ideal for Applications Where:

- Exposed ways or pits create a safety-hazard for workers
- Containment of large tanks requires a wide/long span
- Workers may need a walk-on surface to access machinery during maintenance period

Steelflex Walk-On Cover Options:

- Spring drive take-up
- Motor-driven scroll take-up
- Filter lubricator regulator
- Air brake
- Nylon riders
- Brush wiper
- Non-skid tape or paint
- Sponge sealed edges

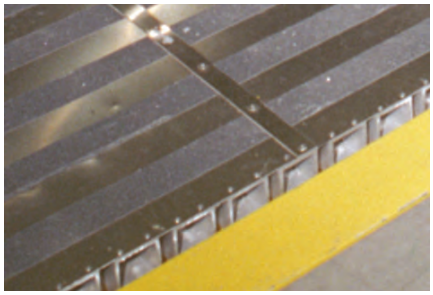
Sponge Sealed Edges

Sponge sealed edges provided added protection of ball screws and precision scales mounted below the cover by preventing wicking of coolant along the bottom of the cover surface.

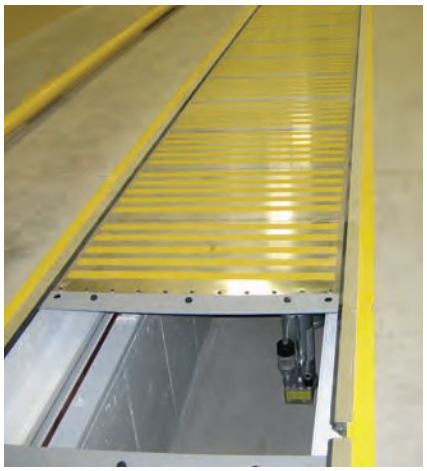
Applications/Environments:

- Machine ways or pit cover
- Inspection pit cover or machine tool changer pit cover
- Roll-up cover for chemical tanks

Non-Skid Paint



Non-Skid Tape



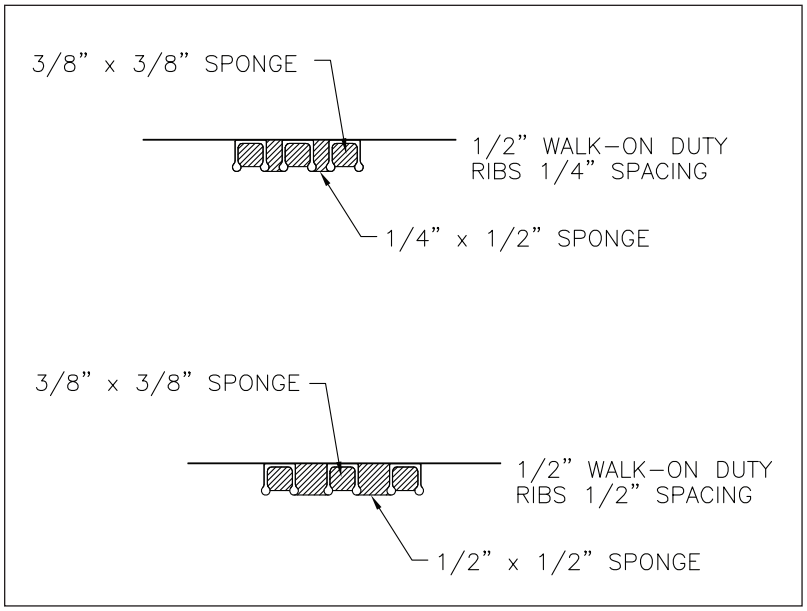
Quote Request:

Refer to page 59 for the Steelflex Walk On Pit Cover Quote Request Form and page 58 for the Steelflex Walk-On Way Cover Quote Request Form.

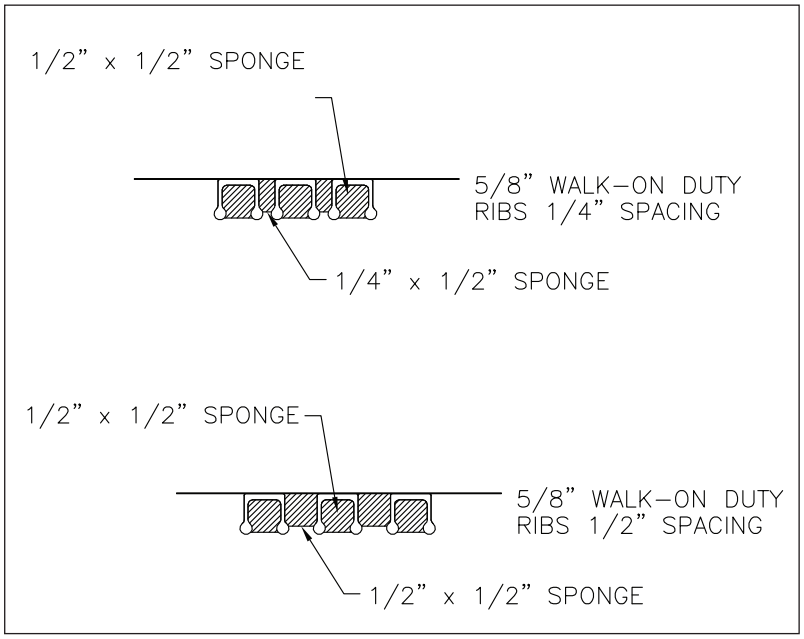
STEELFLEX® WALK-ON ROLL-UP COVERS | HEAVY-DUTY

STEELFLEX WALK-ON SUPPORT RIB SIZE AND SPACING

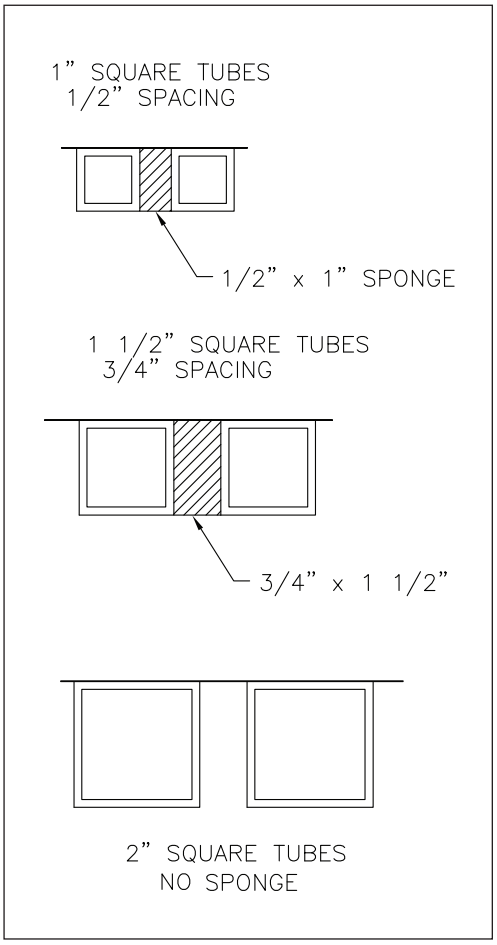
1/2" SUPPORT RIBS, SHOWN WITH OPTIONAL SPONGE SEAL



5/8" SUPPORT RIBS, SHOWN WITH OPTIONAL SPONGE SEAL



1"-2" SQUARE SUPPORT TUBES, SHOWN WITH OPTIONAL SPONGE SEAL FOR 1" AND 1-1/2" TUBES



Steelflex Deflection Calculator

A deflection calculation worksheet to measure load bearing capability is available on our website.

Visit: www.dynatect.com/protective-covers/roll-up-covers/steelflex/walk-on-cover

GORTITE® ROLL-UP DOORS | FEATURES AND BENEFITS

SAFE AND SECURE ACCESS FOR YOUR EQUIPMENT COMPARTMENTS

For Fire and Emergency Vehicles

For Work Trucks and Service Vehicles

For Trailers and Compartments

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

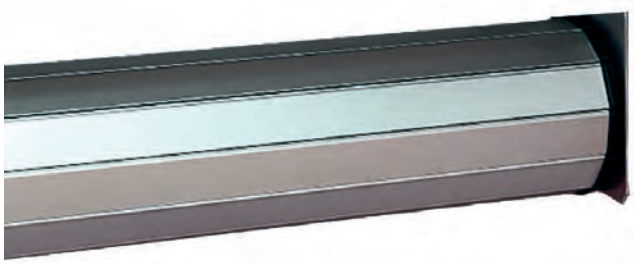
DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

GORTITE® 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 carriers 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.

Noise and Vibration Idler Roller
Foam-covered idler roller dampens noise and vibration.

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.


Standard


Universal


Recessed


P-Series


R-Series

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.

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.

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

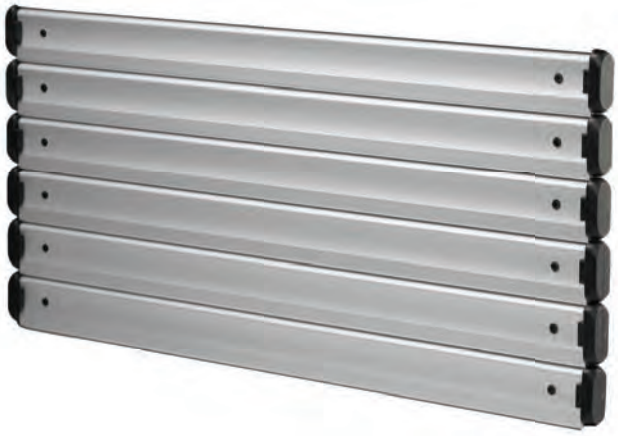
GORTITE® ROLL-UP DOORS | DESIGN FEATURES

Satin Anodized

Wet Painted

Wet Painted

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.



Individual Slat End Caps
Individually replaceable end caps provide easy disassembling, should you ever need to replace a slat.

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.

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.

GORTITE® ROLL-UP DOORS | OPTIONS AND ACCESSORIES

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

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

Pull Strap
Ideal for tall doors.

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

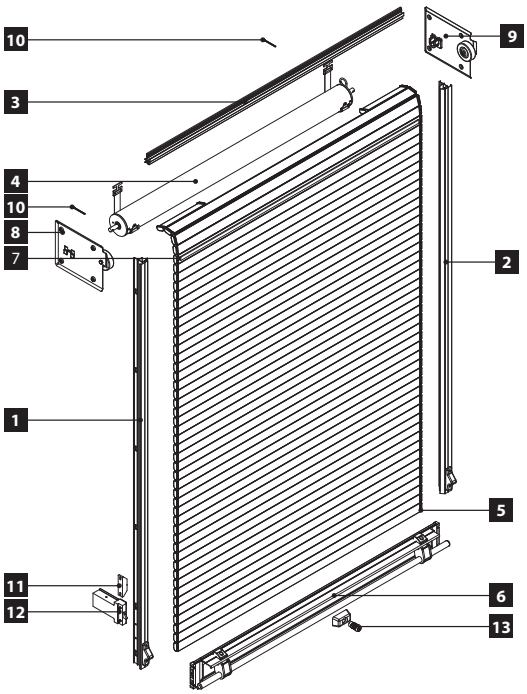
LED Cabinet Lighting
Bright, long-lasting and energy efficient lighting at 30 Lumens per LED. Wide 180° dispersion angle. Water and salt resistant. Meets NFPA 1901 standard.

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

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

GORTITE® 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

STANDARD OPTIONS

Side Rail Configuration

Standard | Universal | Recessed | P-Series | R-Series

Door Finish (Available in Satin Anodized, Wet Painted, or Mill Finish)

Satin Anodized | **Wet Painted** | **Wet Painted**

Top Drip Rail

Still Plate

Standard | Universal

GORTITE® ROLL-UP DOORS | 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
- 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.
- All non-metallic parts to be glass-filled nylon
- 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:

Refer to page 60 for the Gortite Aluminum Roll-Up Door Quote Request Form.

RELATED PRODUCTS

More information is available on our website, Dynatect.com.

Fold Down Compartment Step

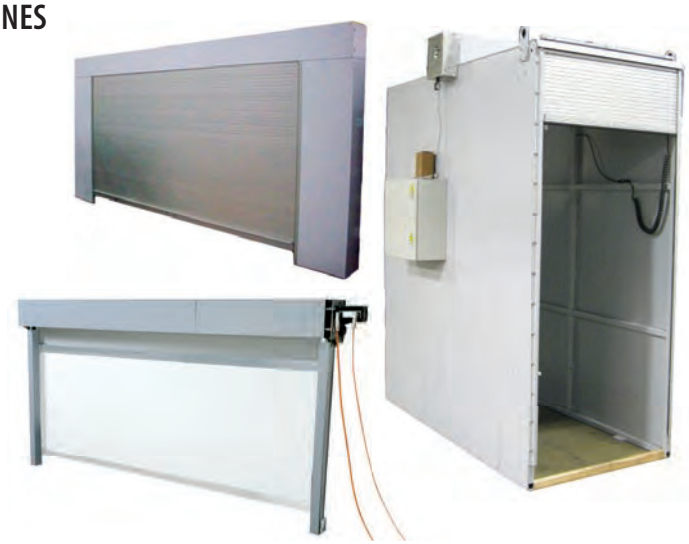
LED Compartment Lighting

Hose Bed Cover

TANK COVERS, MOTORIZED MACHINE CURTAINS AND DOORS

MOTORIZED CURTAINS, DOORS AND SHADES FOR MACHINES

Motorized machine curtains offer a custom-engineered frame and drive unit requiring no limit switches. The maintenance-free, gearless direct-drive motor can be programmed for acceleration, partial opening and closing, and speeds up to two meters per second via provided software. Curtain materials are application-based, such as welding screens, aluminum slats, or metallic roll up shade.



Applications in Automated Equipment Cells and Machining Centers

Motorized curtains are ideal for robotic welding areas, operator protection, and other automated equipment cells. Metallic doors for machining centers are also available. Manually operated or motor-driven metallic roll up curtains are suitable for easy access and attractive styling on a metal cutting laser machine tool or for other industrial enclosures.

MOTOR-DRIVEN OR MANUALLY-OPERATED TANK COVERS

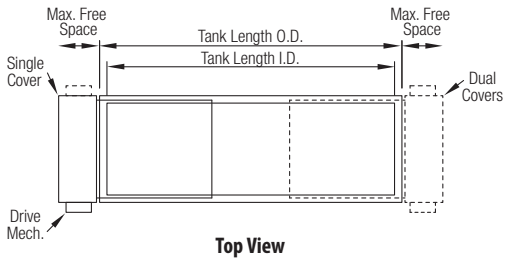
Roll-up tank covers are ideal for covering large tanks and can be equipped with a motor drive featuring full electric control for forward, reverse and stop functions. Dynatect has the resources to design and deliver a complete system in any width or length you require. A scroll-type take-up mechanism is also available. Shades are usually 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:

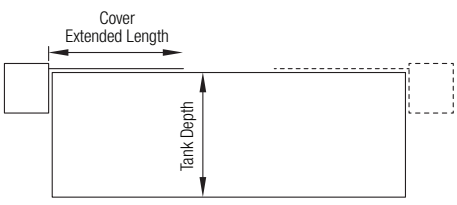
- Chemical, degreasing, plating, and painting tanks
- Containment of hazardous fumes
- Control evaporative emissions
- Prevent contamination in tank
- Protect personnel

Quote Request:

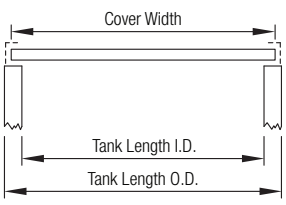
1. Please send a sketch, drawing or model of your application along with a description, listing details such as the type of tank, contents of tank, etc. Please note if the application requires dual (opposing) covers at each end, or a single cover mounted to one end.
2. Specify drive system: Motor-driven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



Top View



Side View



Front View

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

LIGHT/MEDIUM-DUTY ROLL-UP COVERS | QUOTE REQUEST FORM

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

1. Application Information

Roll-Up Cover Type: ☐ Roll-Up **without** Canister ☐ Roll-Up **with** Canister (please complete Canister sections on next page)
Shade Material*: ☐ Coated Fabric ☐ Metal
Existing Cover or New Design: ☐ Existing Cover
Machine Make (enter if known):_____
Machine Model/Part # (enter if known): _____
☐ New Design – please supply a sketch/drawing/CAD file (DWG or DXF file format/photo of your application)

*Based on your application, Dynatect will choose the material which best meets your requirements.

2. Environmental Conditions/Protection (Please check all that apply)

	Light	*Medium*	*Heavy*
☐ Machining			
☐ Hot Chips	☐	☐	☐
☐ Cutting Oils/Coolants/Lubricants	☐	☐	☐
Specify Type: _____ (provide MSDS composition pages)			
☐ Particles (specify type, e.g. aluminum, glass, wood) _____	☐	☐	☐
☐ Water/Moisture	☐	☐	☐
☐ Grinding and Swarf	☐	☐	☐
☐ Weld Splatter	☐	☐	☐

☐ Electrostatic Requirements (specify) _____
☐ Clean Room ☐ Dry ☐ Safety or Dust Cover ☐ FDA
☐ Chemicals (specify type) _____
☐ 0%-35% ☐ 35%-55% ☐ 55%-100%
Temperature Range: ☐ °F ☐ °C
Ambient _____ Minimum _____ Maximum _____
Maximum Travel Speed: _____
Acceleration:
(please indicate units of measurement) _____
Movements/Day: _____ Axis: _____

3. Dimensions

Shade Width: _____ Maximum Allowable Width for Roller or Canister: _____ Travel Distance: _____
Total Shade Length: _____ Maximum Roll-Up Diameter: _____

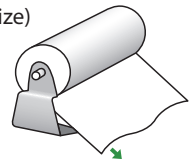
4. Roller Mounting Brackets (If Roll-Up Cover **without canister**, bracket size is determined by maximum roll-up size)

☐ None ☐ Yes (choose one in addition to required)


☑ Required


☐ Standard

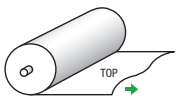

☐ Option



5. Cover Orientation and Shade Exposure to Work Area

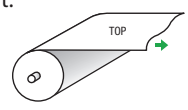
Note: Two choices required from this section. First choose cover orientation, then indicate direction of contaminant.

☐ Horizontal #1 (specify below how shade will be used

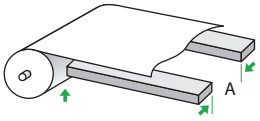


☐ Contaminant from the Top
☐ Contaminant from the Bottom

☐ Horizontal #2 (specify below how shade will be used)

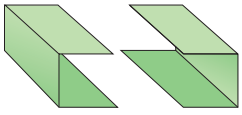


Shade: ☐ Unsupported Shade ☐ Supported Shade ([A] distance between support: _____ inches)

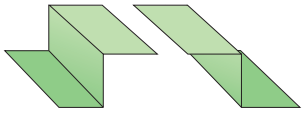


Channels to be Included by Dynatect Upon Request**:

☐ C-Channel Support



☐ Z-Channel Support



Channel Material:
☐ Aluminum
☐ Steel
☐ Stainless Steel

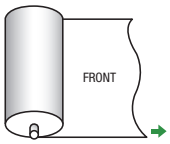
**Customer drawing recommended, otherwise Dynatect will provide dimensions with quotation.

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

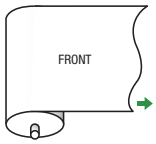
LIGHT/MEDIUM-DUTY ROLL-UP COVERS | QUOTE REQUEST FORM

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

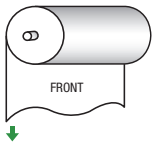
☐ Crossrail #1



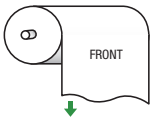
☐ Crossrail #2



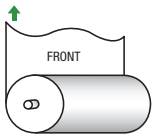
☐ Vertical Top #1



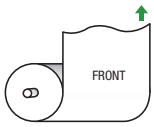
☐ Vertical Top #2



☐ Vertical Bottom #1



☐ 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

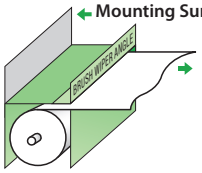
6. Shade Mounting Bracket

☐ K1 ☐ K2 ☐ K3 ☐ K4 ☐ K5 ☐ K6 ☐ K7 ☐ K8

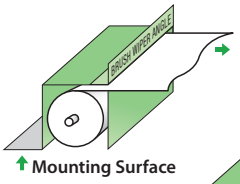
7. Canister Mounting Options

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

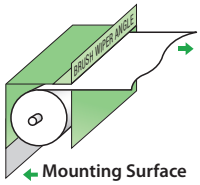
☐ Code E1T



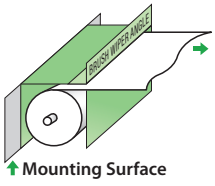
☐ Code E2T



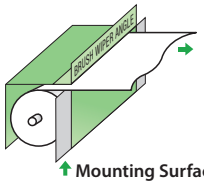
☐ Code E3T



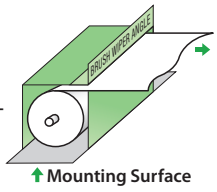
☐ Code E4T



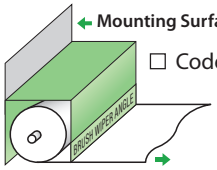
☐ Code E5T



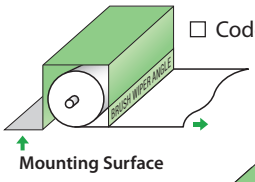
☐ Code E6T



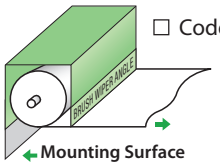
☐ Code E1B



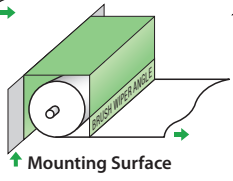
☐ Code E2B



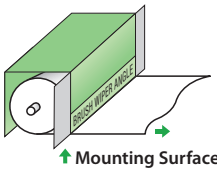
☐ Code E3B



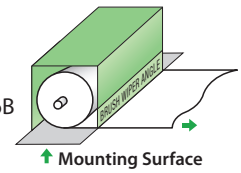
☐ Code E4B



☐ Code E5B



☐ Code E6B



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

8. Maximum Canister Dimensions

☐ 2" ☐ 2.5" ☐ 3" ☐ 3.5" ☐ 4" ☐ 4.5" ☐ 5" ☐ 5.5" ☐ 6" ☐ 6.5"
☐ 7" ☐ 7.5" ☐ 8" ☐ 8.5" ☐ 9" ☐ 9.5" ☐ 10" ☐ Other (Custom) _____

9. Wipers

☐ Brush (Standard) ☐ PVC ☐ Felt ☐ Stainless Steel ☐ Other _____ ☐ None

10. Canister Surface Treatment

☐ Raw Steel ☐ Painted Steel ☐ Stainless Steel ☐ Other (paint spec, etc.)_____

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

STEELFLEX® 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 _____

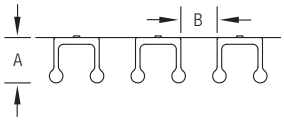
Temperature Range: Continuous (ambient): _____ Minimum: _____ Maximum: _____ ☐ °F ☐ °C

Maximum Travel Speed: _____ Acceleration (please indicate units of measurement): _____

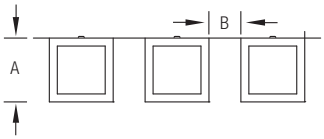
Movements/Day: _____ Axis: _____

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

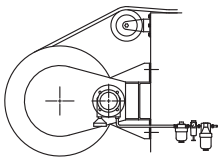
(A) Support Type:
☐ 1/2" Ribs ☐ 1-1/2" Tubes
☐ 5/8" Ribs ☐ 2" Tubes
☐ 1" Tubes ☐ Other _____



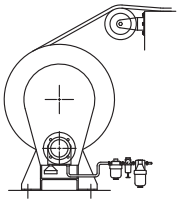
(B) Support Spacing:
☐ 1/4"
☐ 1/2"
☐ Other _____



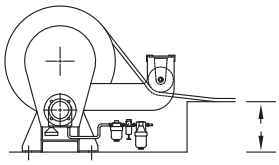
4. Mounting Options (Note: Right-hand drive shown)



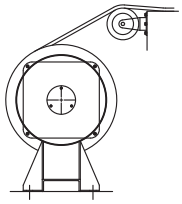
☐ Machine-Mounted



☐ Floor-Mounted, Below the Way



☐ Floor-Mounted, Above the Way
Distance Between Floor and Top of Way: _____



☐ Floor-Mounted, Spring Take-Up

5. Dimensions (Note: Machine mount example shown)

(A) Overall Way Width: _____ (B) Largest Unsupported Span: _____

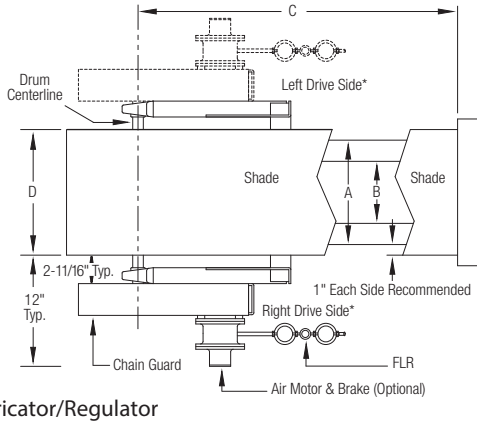
(C) Length from Center Line of Roller to Table/Column or Car when Shade Fully Extended: _____

(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.

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

STEELFLEX® 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: _____

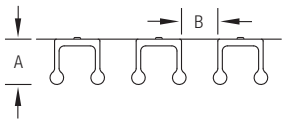
3. Cover Profile (For replacement covers only; please specify Dimensions "A" and "B" below.)

(A) Support Type:

☐ 1/2" Ribs ☐ 1-1/2" Tubes

☐ 5/8" Ribs ☐ 2" Tubes

☐ 1" Tubes ☐ Other _____

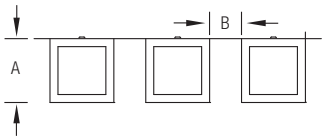


(B) Support Spacing:

☐ 1/4"

☐ 1/2"

☐ Other _____

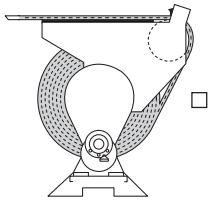


4. Take-Up Hardware

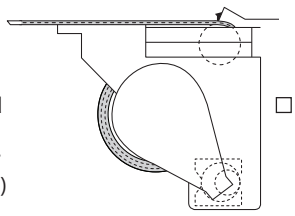
☐ Air Motor Take-Up (if air is turned off, an air brake is recommended)
Motor Mounting: ☐ Inboard ☐ Outboard

☐ Scroll-Type Take-Up
☐ Manual ☐ With Electric Motor

5. Hardware Mounting Options



☐ Floor-Mounted Inside Pit (outside motor mounts shown)



☐ Hanging Inside Pit (inboard motor mounts shown)

☐ Floor-Mounted, Above Pit

☐ Other

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: _____

(A) Shade Width: _____

(B) Unsupported Span: _____

(C) Overall Pit Length: _____

(D) Support Rail Length: _____

Pit Depth (50" minimum recommended):_____

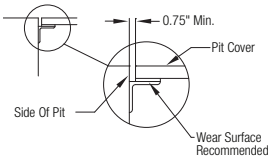
Drive Side Locations: ☐ Right ☐ Left ☐ Both Same Side

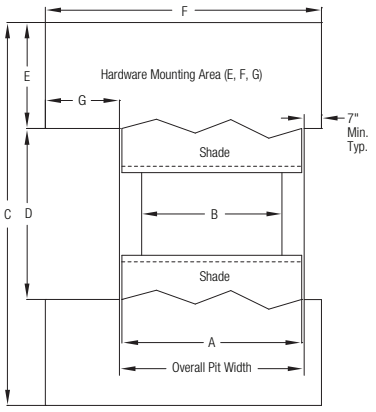
Hardware Mounting Area:

(E) _____

(F) _____

(G) _____





*Steelflex covers should only be walked on while stationary.

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

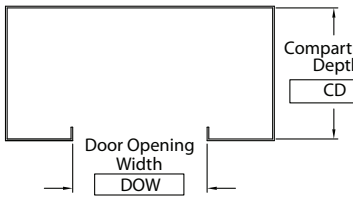
GORTITE® ROLL-UP DOORS | QUOTE REQUEST FORM

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

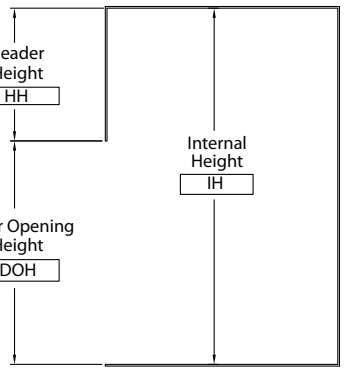
1. Cabinet Dimensions

Compartment:						
DOW:						
DOH:						
HH:						
IH:						
CD:						

Top View



Side View



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)

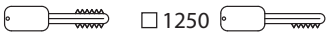
Top Drip Rail:
☐ Yes ☐ Standard Length
☐ Customer Length
Qty:_____ Length:_____
☐ No

3. Options

Still 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
Ground: ☐ Pos ☐ Neg
☐ No

Pull Strap (for tall doors): ☐ Yes ☐ No

Pull 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

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DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

GORPLATE™ | STEEL COVERS

Ideally suited for protection from hot chips and weld splatter, Gorplate stainless steel protective covers provide an additional level of protection not available using conventional fabric bellows. This innovative system of stainless steel plates and monofilament connections creates a lightweight cost-effective system to protect linear rails, ways and machine elements from damage.

The unidirectional monofilament plate connection provides uniform plate expansion in a low profile design. Overall cover depth is approximately 1 inch with the capability of manufacturing cover widths as narrow as 7 inches.

These covers have performed to one million cycles at up to 2G's to ensure that they meet your high speed and high cycle requirements.

Features/Benefits:

- Alternative to sliding plate systems that are prone to locking
- Non-corrosive stainless steel
- Low profile
- Light weight
- Mild steel side rails and end plates included (stainless steel option available)
- Resists heavy chip load
- Resists weld splatter
- Excellent extended to retracted ratios
- Quiet operation

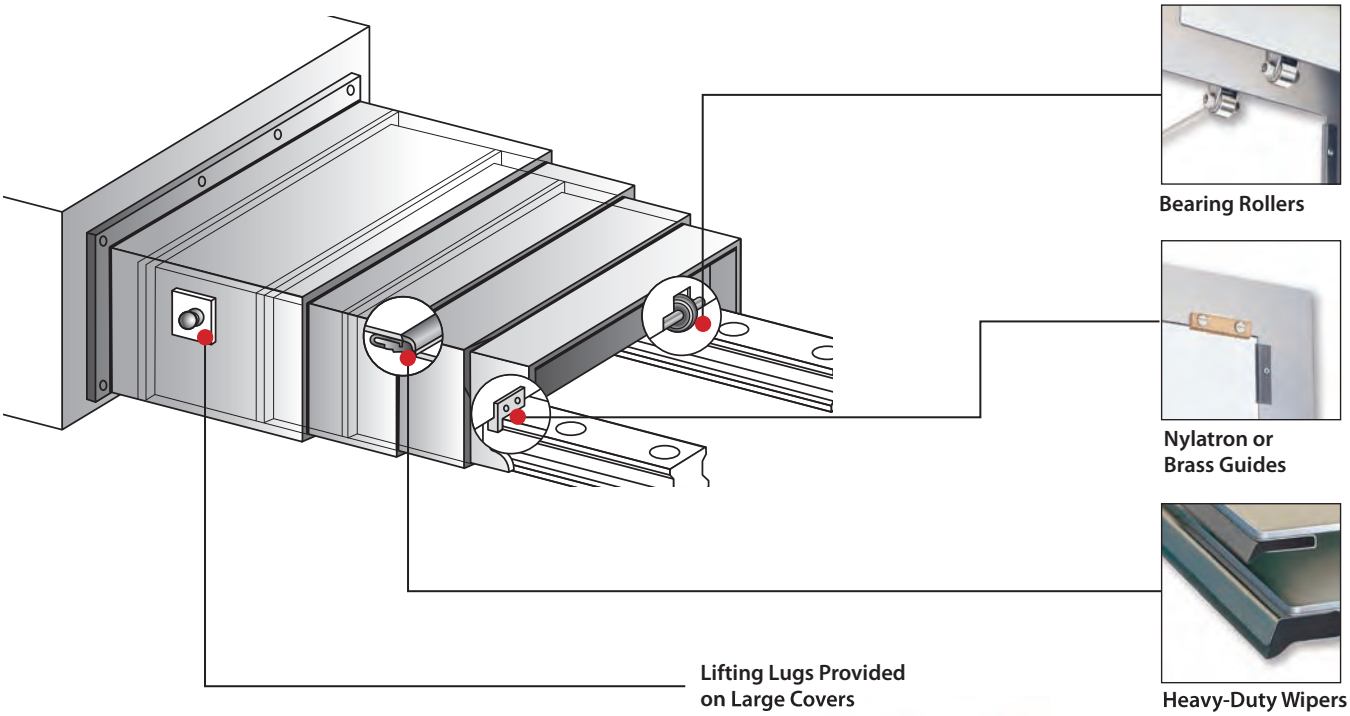
TELAFLEX® | STEEL COVERS

CUSTOM DESIGNED

Telaflex telescopic covers are custom-designed for any machine tool application requiring protection of machine ways and screws. With a Telaflex way cover, your valuable equipment will be protected from hot or heavy chip loads, dirt, oil, coolants, and from accidental damage caused by dropped tools and work pieces.

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)



Quote Request:

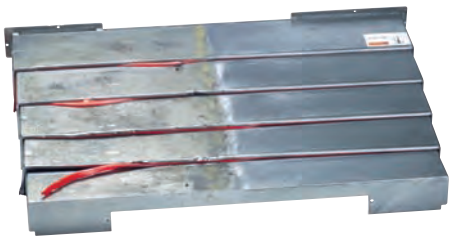
For a quote request, please send us a drawing. To specify a cover based on machine way dimensions, please see the quote request form on page 68.

TELAFLEX® | REPAIR SERVICES

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



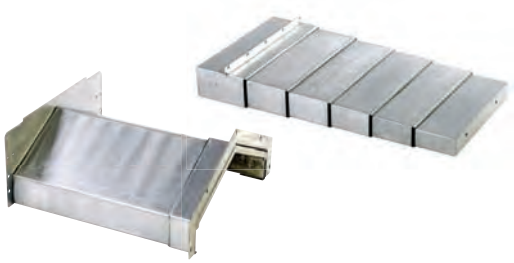
When critical parts require continuous protection while in operation, you can't afford to wait for a new cover.

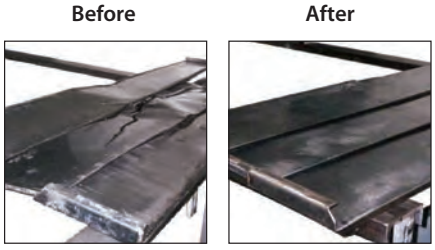
Local Dynatect representatives are available to evaluate your existing protective covers and recommend improvements.

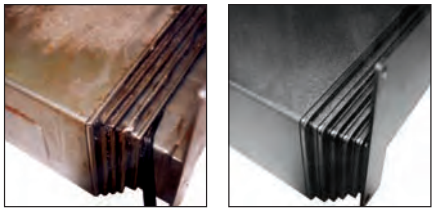
Call or e-mail us for more information regarding returning product for an estimate or to schedule an expedited repair.

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







OEM SPEC OR BETTER?

Gortite® 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.

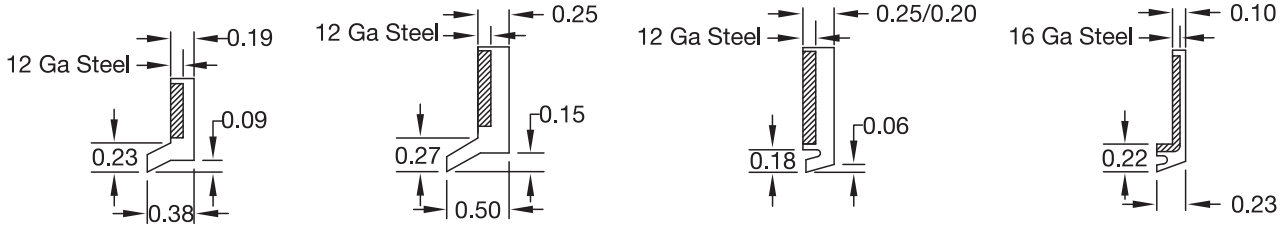
For a repair evaluation, email or call us for a return material authorization (RMA) number.

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



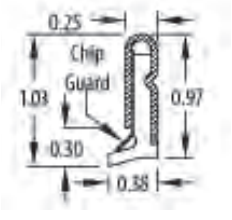
Custom profiles are available. Mold charges apply to all new molded wiper orders.

FABRICATED BUNA-N (NITRILE)

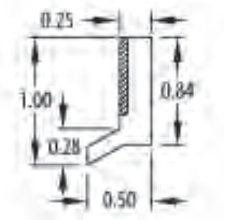
Fabricated way wipers are ideal for low to moderate volumes, typically used in maintenance and repair applications. They are fabricated from corners and straight lengths of molded Buna-N rubber – two basic styles are available:

1. **Type A** – For heavy chip loads and coolants. Fully enclosed in a metal channel with spring-steel chip guard.
2. **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.

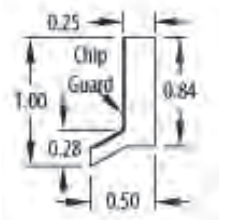
FABRICATED WAY WIPER PROFILES



Type A (220001)
Fabricated Buna-N
(Nitrile)

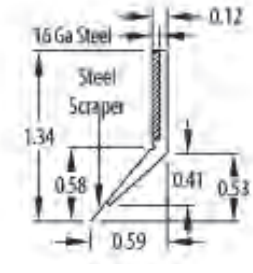


Type B (220002)
Fabricated Buna-N
(Nitrile)

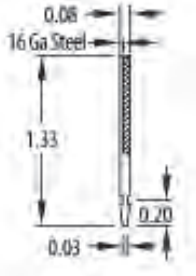


Type D (220004)
Fabricated Buna-N
(Nitrile)

K4628
Fabricated Buna-N
(Nitrile)



K8839
Fabricated Buna-N
(Nitrile)



K11252
Fabricated Buna-N
(Nitrile)

NOTE: When fabricated, Type A, Type B and Type D wipers will include a 16 Ga cover plate. Custom profiles are available.

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

STOCK WAY WIPERS

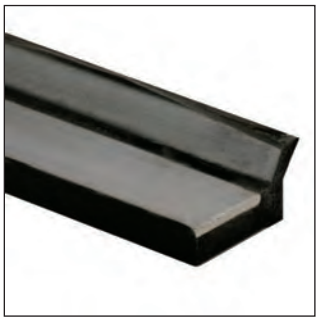
Gortite® stock wipers save costly maintenance, reduce downtime, and prolong the service life of machine tool ways. They are molded from abrasion and oil-resistant Buna-N elastomer. Four types of molded wipers and two types of steel edged way wipers are available from stock for fast delivery, without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

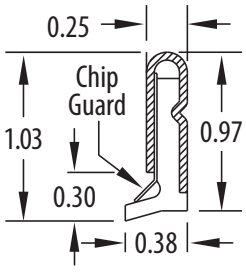
Type A



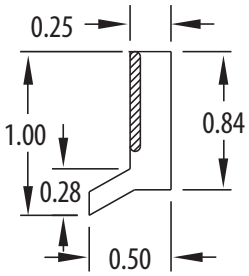
Type B

Type C

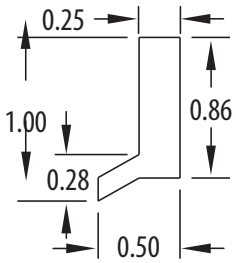
Type D



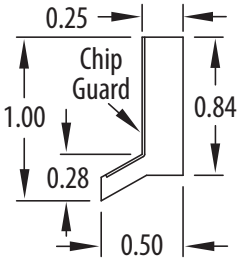
Type A (220001) 22" Long



Type B (220002) 22" Long



Type C (220003) 22" Long

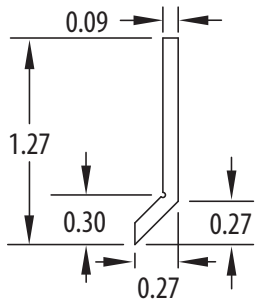


Type D (220004) 22" Long

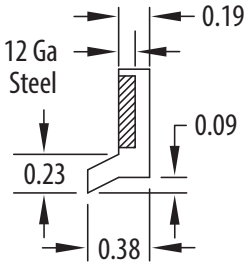
STOCK WAY WIPERS

ADDITIONAL STOCK WIPERS

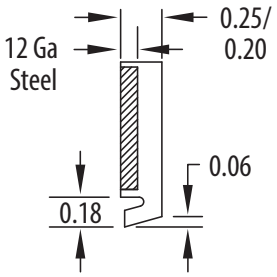
- **Part No. K1505** – 96" Long
- **Part No. SK7062** – 3/4" Molded – 30" Long
- **Part No. SK7082-30** – Low Profile Molded – 30" Long



K1505
96" Long



SK7062
3/4" Molded
30" Long



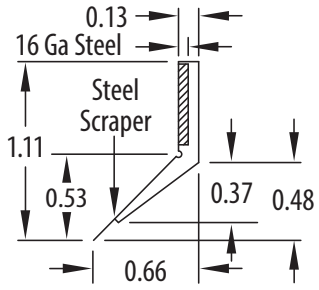
SK7082-30
Low Profile Molded
30" Long

STEEL EDGE KNEE WIPERS

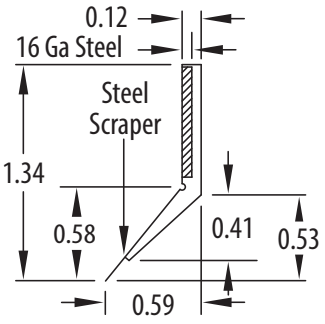
Buna-N (Nitrile) rubber wiper with molded-in steel mounting plate, and a thin spring-steel guard along the length of the wiping edge. A unique wiper for tough applications where the aggressive properties of the spring-steel against the surface being wiped are required along with the flex of the rubber 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

K4628
27" Long



K8839
31.5" Long



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.

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

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*: _____

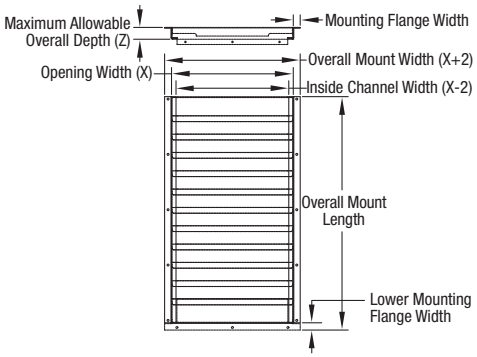
*Please indicate unit of measurement for each value.

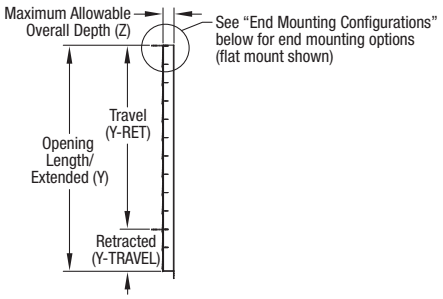
4. Cover Dimensions (Specify opening length requirement or indicate travel. Dynatect Manufacturing, Inc. will advise overall length needed for cover.)

(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.

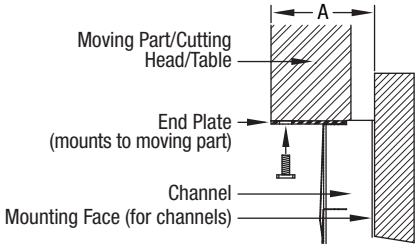




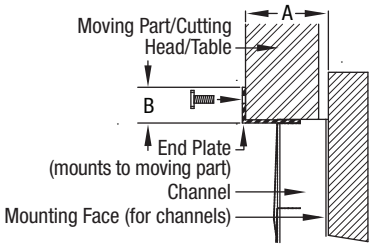
5. Way Interference (Please describe any interference.)

_____

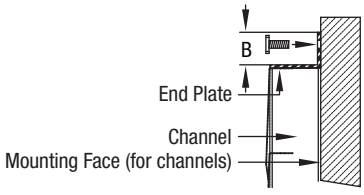
6. End Mounting Configurations Dimension A: _____ Dimension B: _____



☐ Flat Mount



☐ Projected Angle Mount



☐ Face Angle Mount

☐ Custom Mounting

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.

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

TELAFLEX® WAY COVERS* | QUOTE REQUEST FORM

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.

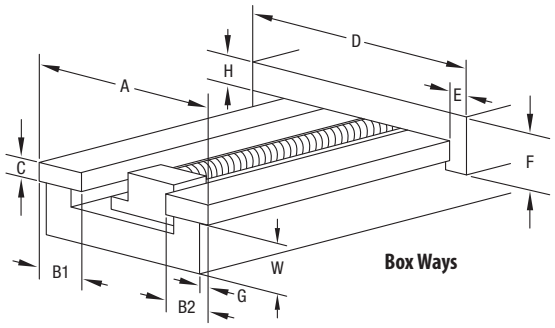
1. Application Information

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

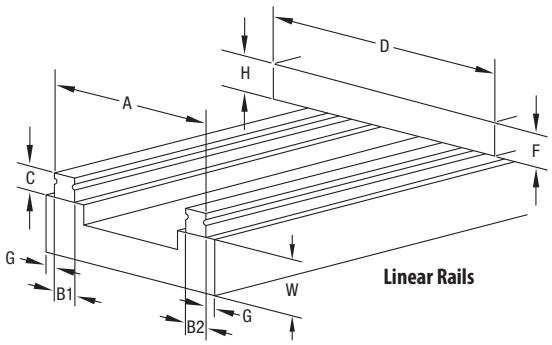
2. Way Dimensions (Please indicate and dimension any obstructions below or provide a separate drawing.)

Way Dimension Specified In: ☐Inches ☐Millimeters Type of Way: ☐Box Way ☐Linear Rails

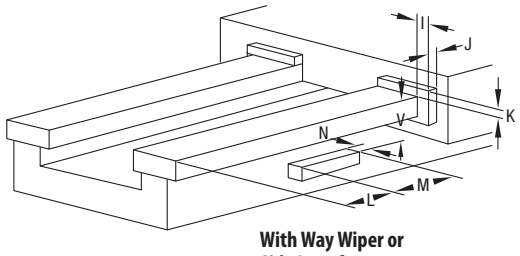
Dimensions: A _____ B1 _____ B2 _____ C _____ D _____ E _____ F _____ G _____
H _____ I _____ J _____ K _____ L _____ M _____ N _____ P _____
Q _____ R _____ S _____ T _____ U _____ V _____ W _____



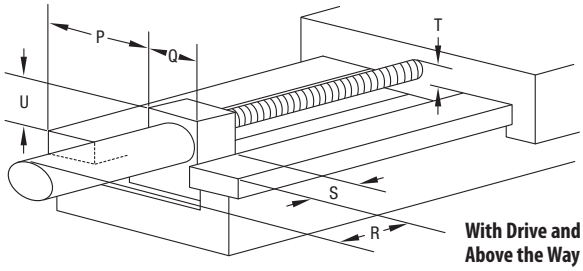
Box Ways



Linear Rails



With Way Wiper or Side Interference



With Drive and Ballscrew Above the Way

*Measuring from the machine.

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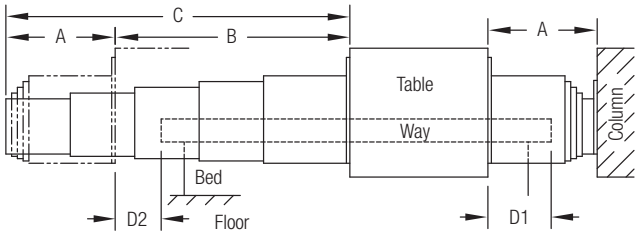
TELAFLEX® WAY COVERS* | QUOTE REQUEST FORM

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: _____

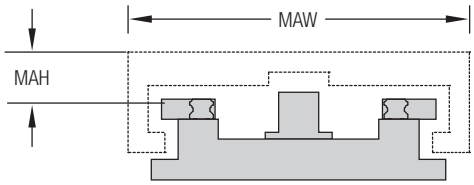


4. Maximum Allowable Cover Width and Height Above Way

Dimensions specified in: ☐ in ☐ mm

MAH (Maximum Allowable Height Above Way) Required: _____

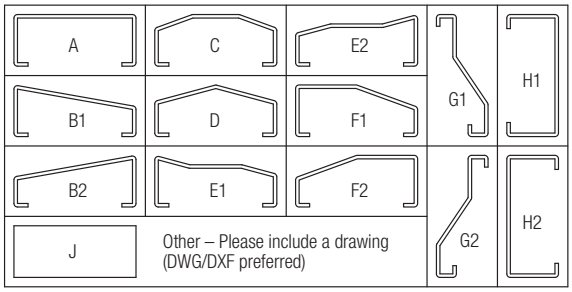
MAW (Maximum Allowable Cover Width) Required: _____



5. Cover Configuration

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

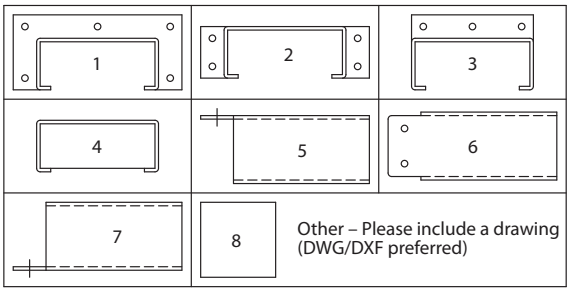
☐A ☐B1 ☐B2 ☐C ☐D ☐E1 ☐E2
☐F1 ☐F2 ☐G1 ☐G2 ☐H1 ☐H2 ☐J (other)



6. Mounting Configuration

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

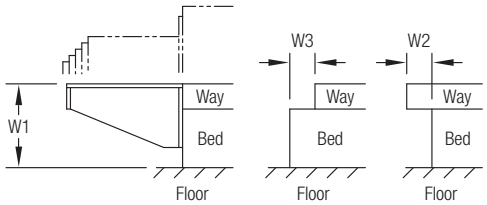
Large Box: ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 (other)
Small Box: ☐1 ☐2 ☐3 ☐4 ☐5 ☐6 ☐7 ☐8 (other)



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

*Measuring from the machine.

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

SPECIAL APPLICATION PRODUCTS OVERVIEW

JANUS MACHINE DOOR ACTUATORS

Automate the door operation of protective machine hoods with proven technology to implement a safe force and speed limit on horizontal doors weighing up to 750 kg. Read more on pages 71-75.

GORTITE® PORTABLE AND MODULAR WELD CURTAINS

Convenient weld curtains with high-visibility yellow-painted bases are offered as single, portable curtains, or as modular assemblies design to attach together to provide a work cell. Read more on pages 76-78.

GORTITE MACHINE ROOF COVER

A bellows cover fastened to a lightweight gliding system, with a large, self-supporting span and minimal deflection. Read more on pages 79-81.

GORTITE MULTI-AXIS FACE SHIELDS

Multi-axis covers for machine tools or any other application needing multi-axis protection. Read more on page 82.

BUS BELLOWS

Complete articulation solutions are available for buses and light rail vehicle OEMs, including the main bellows, floor coverings, ceiling bellows and articulation joints. Read more on page 83.

JANUS MACHINE DOOR ACTUATORS

NEW SAFE PROTECTIVE MACHINE DOOR DRIVES

JANUS Type SMDA-200 and SMDA-400

The use of automatic door drives in modern machines has increased in recent years. The trend towards automating every possible machine function also includes opening and closing the doors of protective machine hoods. Loading and unloading machines represents a particular source of danger for both the operating personnel and expensive loading robots.

Thanks to functionality based on many years of experience, machine door actuators offer application-specific software and the latest generation of drive elements for the ideal solution both technically and economically.

New generation and yet tried and proven. The basis for the new generation is the tried and proven TÜV certified (EN-13849-1 PLd) iMotion® technology for personal access supplied by the TORMAX Division of Landert Motoren AG.

JANUS protective machine door drives include the technology for implementing a safe force and speed limit for horizontal doors with door weights up to 750 kg (approx. 1,653 lbs) and more. This enables safe compliance with the approved forces without requiring additional safety elements such as light barriers or two-handed operation. The drive is fitted with a protective function which triggers an immediate change of direction to prevent irreversible damage if an obstacle is encountered.

The intelligent operating software – SMDTuner – assures efficient commissioning of the drive. Thanks to the integrated AutoTuning, there is virtually no need to perform settings during commissioning. The system works in the low voltage range and includes a galvanically isolated mains power supply as well as an opto-isolated interface for the superordinate PLC. With the new JANUS drives, Dynatect continues to offer mechanical engineers valuable support for implementing safe and reliable automated protective doors.

TRIED AND PROVEN THANKS TO MANY YEARS OF EXPERIENCE

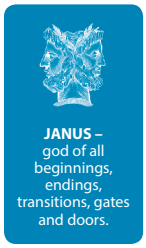
Features:

- Fast opening and closing times
- Compact, space saving and maintenance free
- Direct drive configurable with the SMDTuner Intelligent Operating Software

Applications:

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

Multi-Spindle Machine



JANUS – god of all beginnings, endings, transitions, gates and doors.

Dynatect Manufacturing, Inc. is the exclusive North American Distributor of JANUS 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.

Lathing Machine

Machining Center

JANUS MACHINE DOOR ACTUATORS

YOUR ADVANTAGES AT-A-GLANCE

The new generation of machine door actuators from Dynatect unite reliable components, integrated safety, self-optimization, and our many years of practical application experience on the market. The result: a complete end-to-end solution. The system includes the technology for implementing safe force and speed limits compliant with EN 13849 for horizontal doors. The permissible forces compliant with EN 12453 are maintained.

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)

Control System:

- 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

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

Motor with Free Shaft End

Motor with Toothed Belt Wheel

Motor with Spur Wheel

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

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JANUS MACHINE DOOR ACTUATORS

SDM TUNER

Quick and easy. 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.

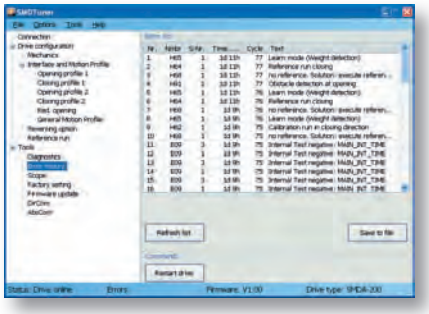
The software is easy to use and requires no special training. A wizard guides you through the submenus in just a few steps. The software lets you individually optimize all JANUS drive types for various door configurations. This reduces costs during commissioning and maintenance.

Optimization:

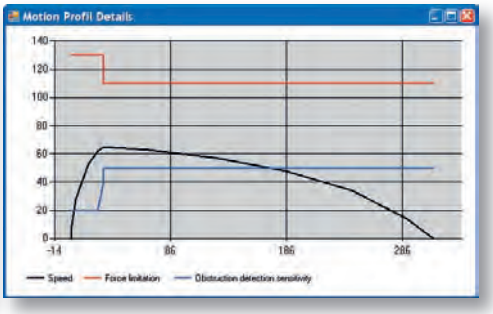
- Optimization tools are available to advanced users in order to achieve the maximum dynamics and elegance of the motion sequence for each specific system and to record movement profiles in real time.

Accessories:

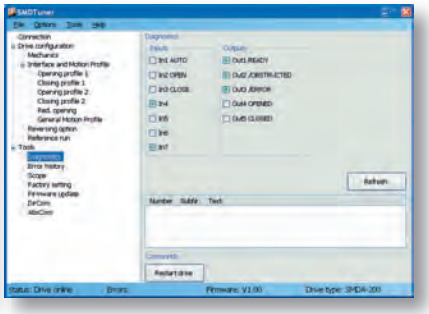
- The right toothed belt in the required length
- Toothed belt clamp
- Idler pulley
- Pre-dimensioned cables for motor and encoder in various lengths
- RS-232 to USB interface converter



Error History



Scope Function



Status Query

Toothed Belt and Idler Pulley

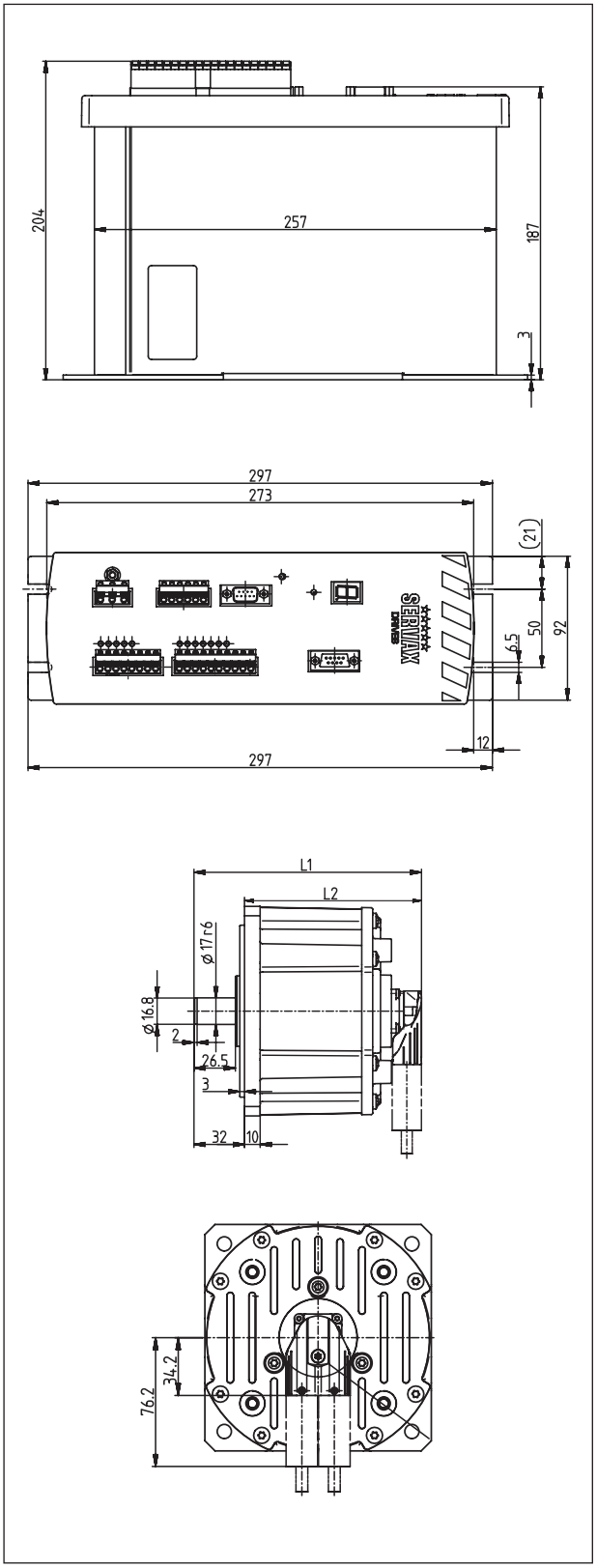
RS-232 to USB Converter

Pre-Dimensional Cables

JANUS 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^{-1}	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	



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JANUS DOOR ACTUATORS | QUOTE REQUEST FORM

Date _____ Address _____

Company Name _____ City _____ State/Prov. _____

Contact _____ Country _____ Zip/Postal Code _____

Quantity _____ Telephone _____ Fax _____

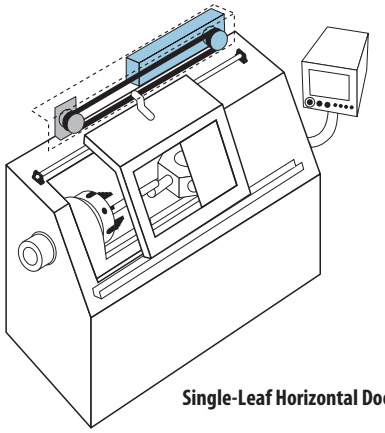
Email _____

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

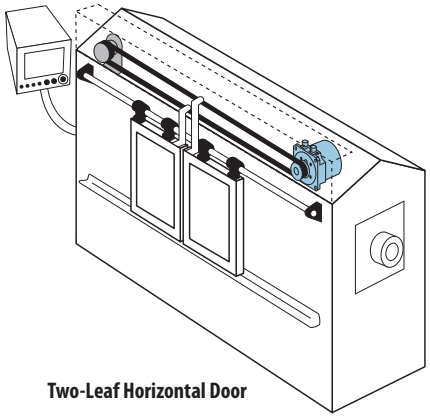
Machine Make: _____ Machine Model/Part Number: _____

☐ 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

PORTABLE WELD CURTAINS

THE MOST PORTABLE WELD CURTAIN ON THE MARKET IS NOW AVAILABLE IN TWO CONVENIENT STYLES

1st Generation Weld Curtain

Classic unit featuring smooth, durable roller wheels on one end, and a handle on the other end for easy transportation to new working stations.

Generation 1 Weld Curtain in Retracted Mode

Generation 1 Curtain (Weld Side)

2nd Generation Weld Curtain

Newly designed unit features a replaceable shade and a streamlined canister that is ideal for deploying multiple units.

Generation 2 Weld Curtain in Retracted Mode

Generation 2 Curtain (Non-Weld Side)

WHY GORTITE PORTABLE WELD CURTAINS?

- **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

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

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PORTABLE WELD CURTAINS

GEN 1 PORTABLE WELD CURTAIN SPECIFICATIONS

Dimensions:

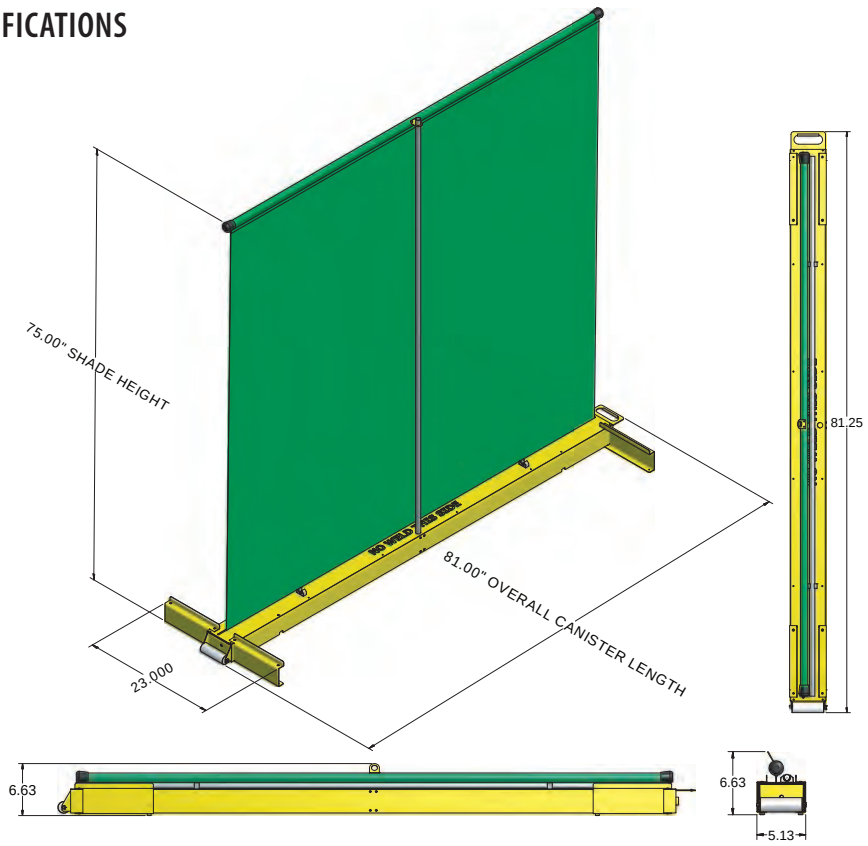
Shade width: 74.5" (1,892 mm)
Shade height: 75.00" (1,905 mm)
Canister length: 81.25" (2,064 mm)
Canister width: 5.13" (130 mm)
Retracted height: 6.63" (168 mm)
Base support leg length: 23.00" (584 mm)

Weight: 38 lbs. (17.2 kg.)

Appearance:

Shade material: 0.014" PVC film, dark green or yellow. Alternative shade and base colors can be special ordered.

Generation 1 Curtain (Weld Side)



GEN 2 PORTABLE WELD CURTAIN SPECIFICATIONS

Dimensions:

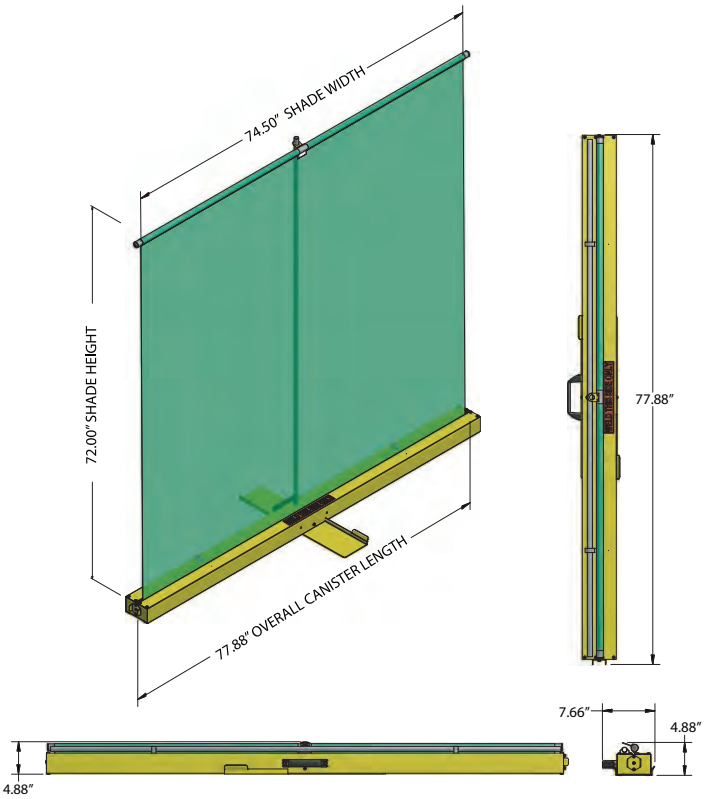
Shade width: 74.5" (1,892 mm)
Shade height: 72.00" (1,829 mm)
Canister length: 77.88" (1,978 mm)
Canister width: 7.66" (195 mm)
Retracted height: 4.88" (124 mm)

Weight: 37.5 lbs. (17 kg.)

Appearance:

Shade material: 0.014" PVC film, dark green or yellow. Alternative shade and base colors can be special ordered.

Generation 2 Curtain (Non-Weld Side)



MODULAR WELD CURTAINS

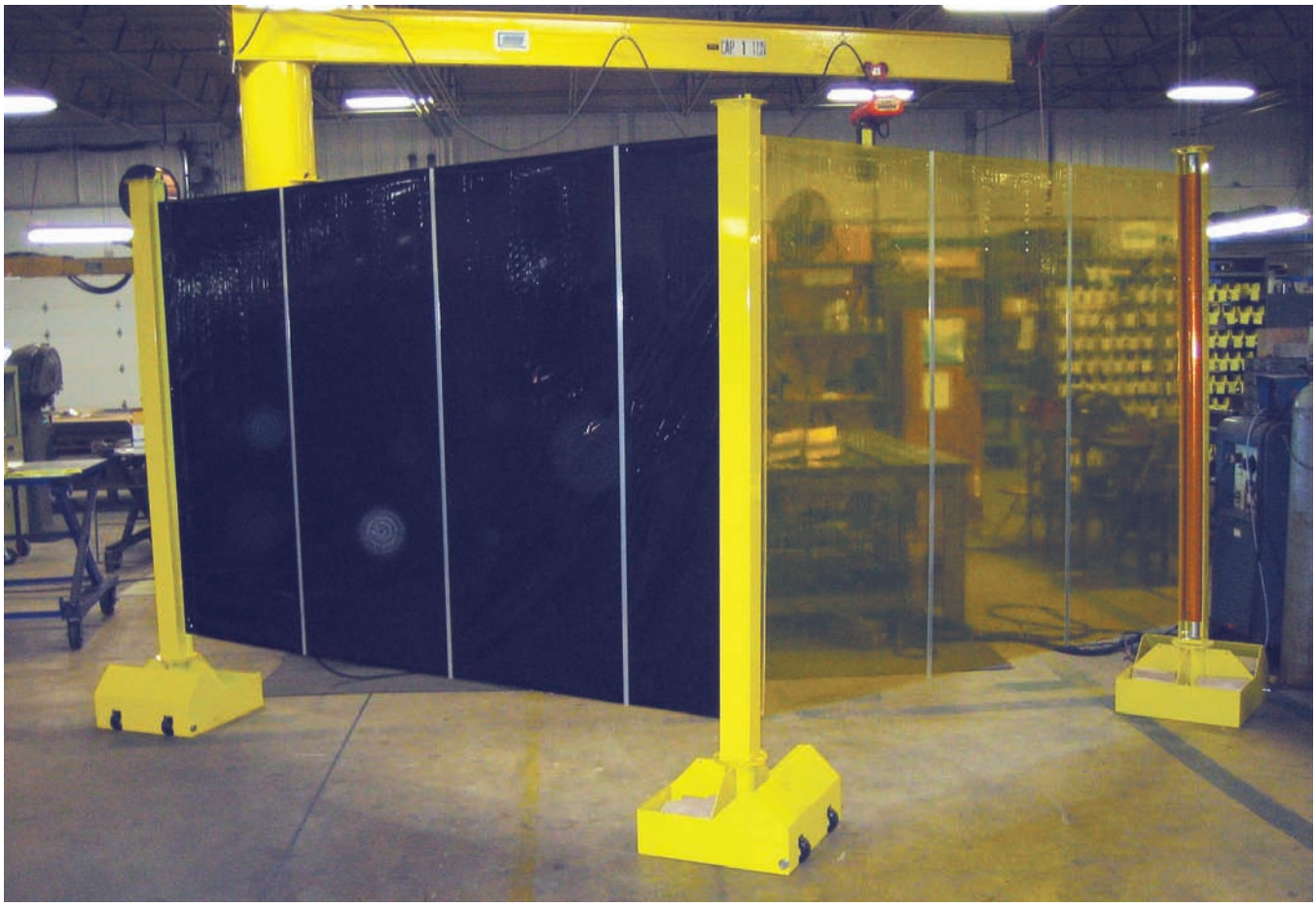
Providing protection up to nearly 90" off the floor, the modular weld curtain system is the most portable, modular and flexible free-standing system available. The unique system design offers virtually any cell configuration for protection against UV radiation during welding. Custom sizes and mounting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

Features:

- 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.



DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

GORTITE® MACHINE ROOF COVERS

FOR NOISE ATTENUATION AND CONTAINMENT OF DUST AND PARTICLES

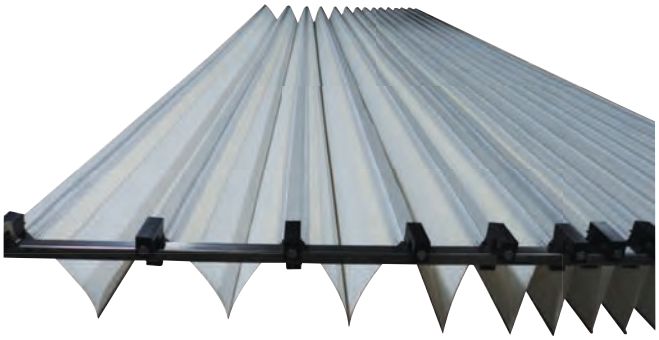
Specifications:

- Material: translucent bellows using polyurethane TPE with high-strength monofilament polyester
- Support structure: lightweight aluminum with low-friction plastic guide blocks and precision bearing rollers to minimize energy consumption
- Capable of 1G acceleration; 60 meter/minute velocity
- Capable of over 10:1 extended length to retracted length ratio
- Optional Dynatect-supplied mounting rails
- Variable fold depth and folding direction (standard or inverted) provides necessary clearances

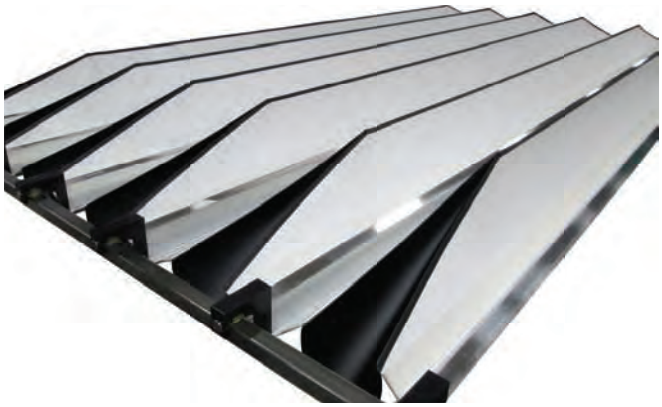
Features:

- Translucent covers protect environment from dust and provide noise attenuation
- Large self-supporting span with minimal deflection – up to 30 ft. (9.144 m)
- Configurable to almost any rail or way system
- Individually replaceable folding sections

Standard Fold Direction



Inverted Fold Direction



GORTITE® 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.

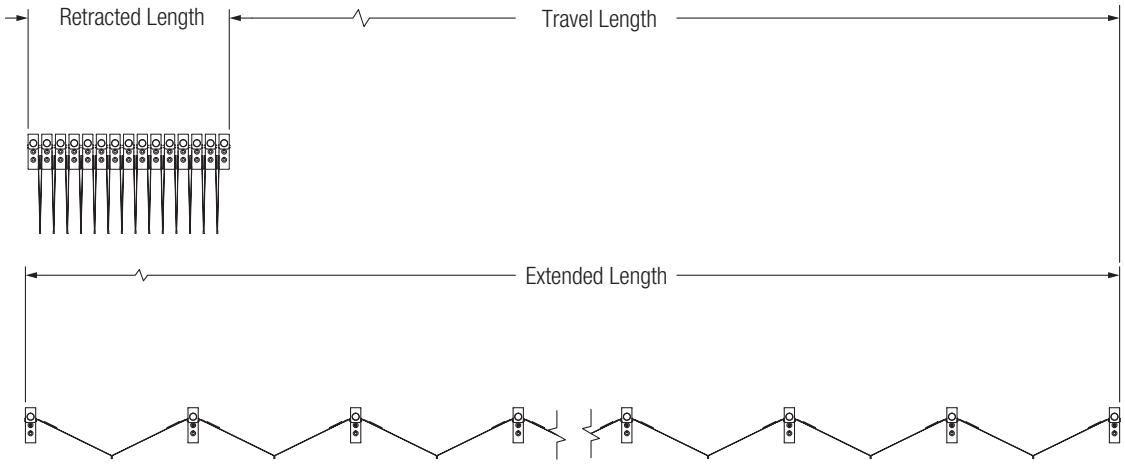


Diagram #1 – Extended/Retracted Travel

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GORTITE® MACHINE ROOF COVERS | QUOTE REQUEST FORM

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

(A) Machine or Pit Width: _____

(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.)

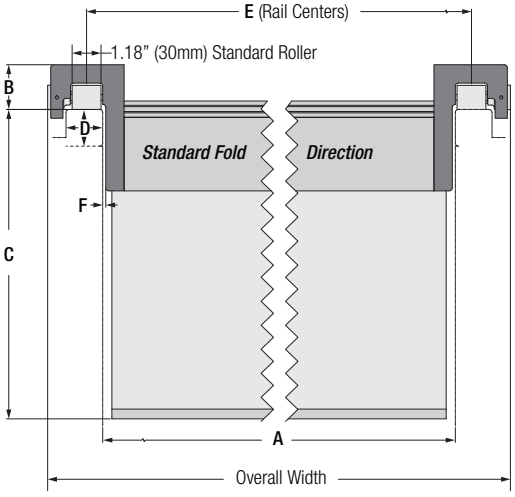


Diagram #2 – Standard Fold Direction

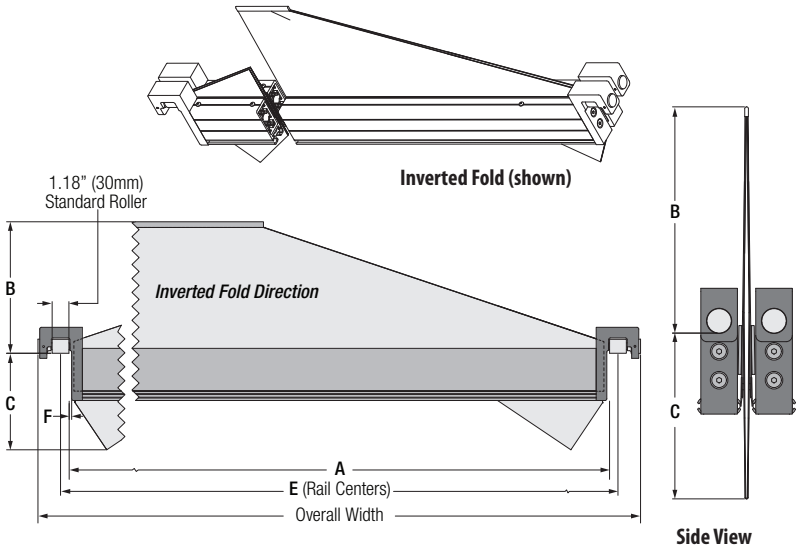


Diagram #3 – Inverted Fold Direction

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

- Medium-Duty – 12 to 24 ft. (most common)
- Heavy-Duty – 24 to 30 ft.
- Light-Duty – <12 ft. and less than 1,400 in./min. (35 m./min.)

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: _____

- Medium-Duty Cover: 12.65" (321 mm) for standard fold direction; 3.33" (85 mm) for inverted fold direction
- Heavy-Duty Cover: 15.65" (397 mm) for standard fold direction; 6.33" (161 mm) for inverted fold direction
- Light-Duty Cover: 11.65" (296 mm) for standard fold direction; 2.33" (60 mm) for inverted fold direction

(F) Standard Gap: _____

- 0.13" (3 mm) depending on surface flatness

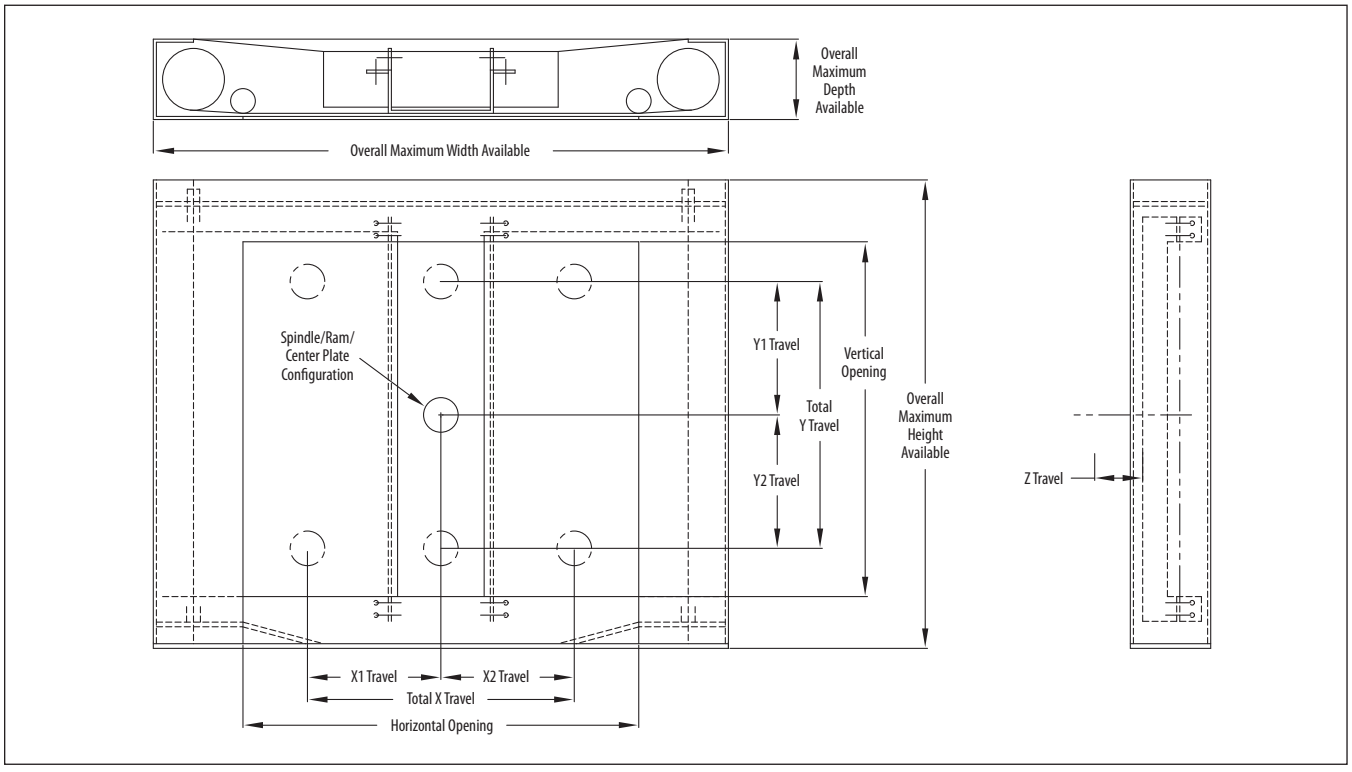
MULTI-AXIS FACE SHIELD ASSEMBLIES

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® can be used in conjunction with a spring roller. Gordillo™ (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)



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DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

BUS BELLOWS

BELLOWS FOR ARTICULATION BUSES AND LIGHT RAIL VEHICLES

For decades, we have supplied bus and rail OEMs, new as well as replacement units, to numerous transit authorities throughout North America. Dynatect has partnered with ATG of Siek, Germany to provide complete articulation solutions: articulation joint, bellows and center hoop.

Our bellows can be manufactured from a variety of materials including pure elastomers, elastomer coated fabrics, urethane coated fabrics, and PVC coated fabrics. The proper material for each application will be selected, taking into account environmental conditions, flame retardant requirements and smoke emission requirements.

Additional Custom Bellows Offered for Transportation Applications:

- Bellows for ventilation of traction motors (on electric locomotives/railcars)
- Bellows for air ducting
- Cylinder rod covers
- Steering column bellows
- Bellows covers for door hinges
- Shift/joystick bellows

Contact us for more information, or to discuss your application.

NOTES

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PLASTIC BRANDS

NYLATRAC® STANDARD

NYLATRAC MODULAR

NYLATUBE® STANDARD

METAL BRANDS

GORTRAC® STEEL

GORTUBE® STEEL

PLASTIC CARRIERS | NYLATRAC® AND NYLATUBE®

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

METAL CARRIERS | GORTRAC® AND GORTUBE®

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.

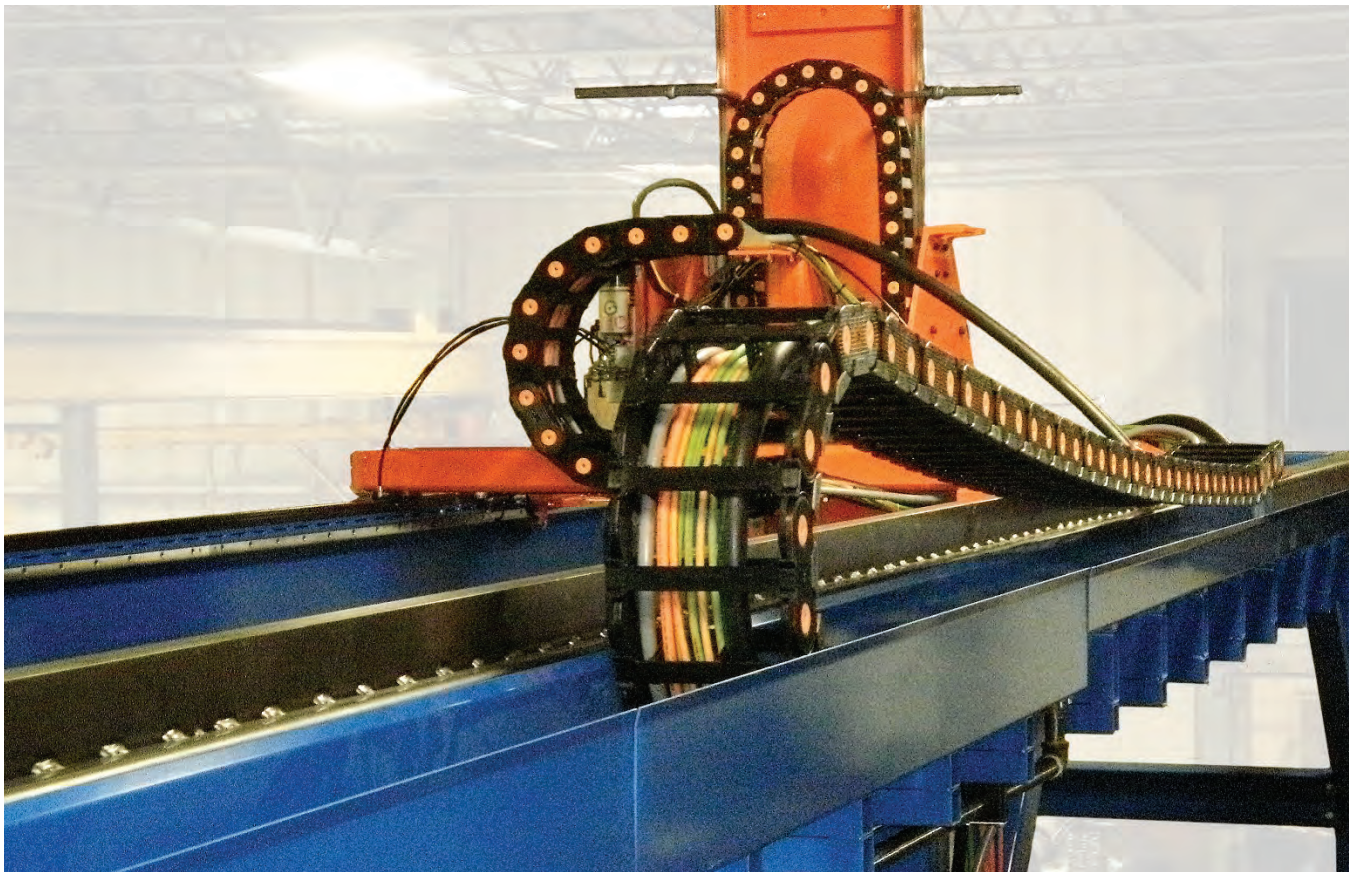
GORTRAC STEEL

- Excellent load-bearing and unsupported travel capability (depending on carrier load)
- Longer travels can be achieved with Gortrac Long Travel Support Systems (pages 102-105)
- 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

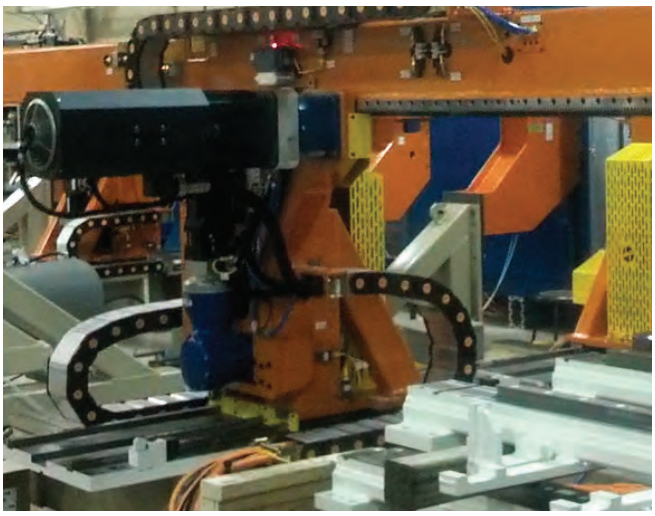
GORTUBE STEEL

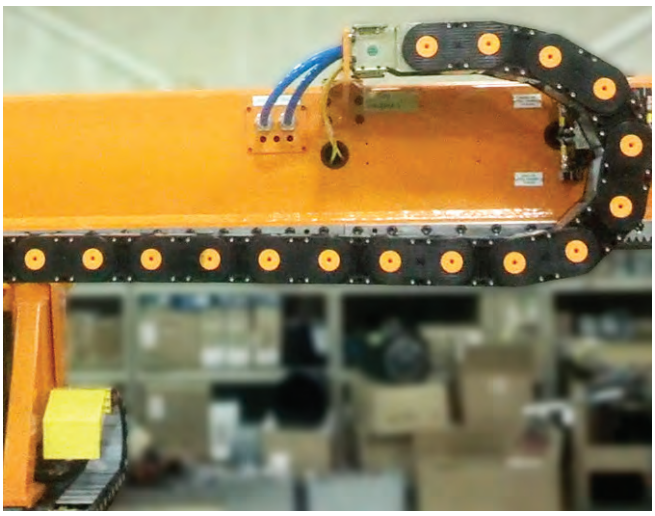
- Conduit-style galvanized steel tube fully encloses cables/hoses to resist hot chips, swarf, cutting oils and lubricants
- Smooth, low-noise operation; suitable for faster speeds and accelerations
- Construction options for high temperatures, corrosive environments, or multi-axis and rotational applications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

PLASTIC CARRIERS | APPLICATION EXAMPLES



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

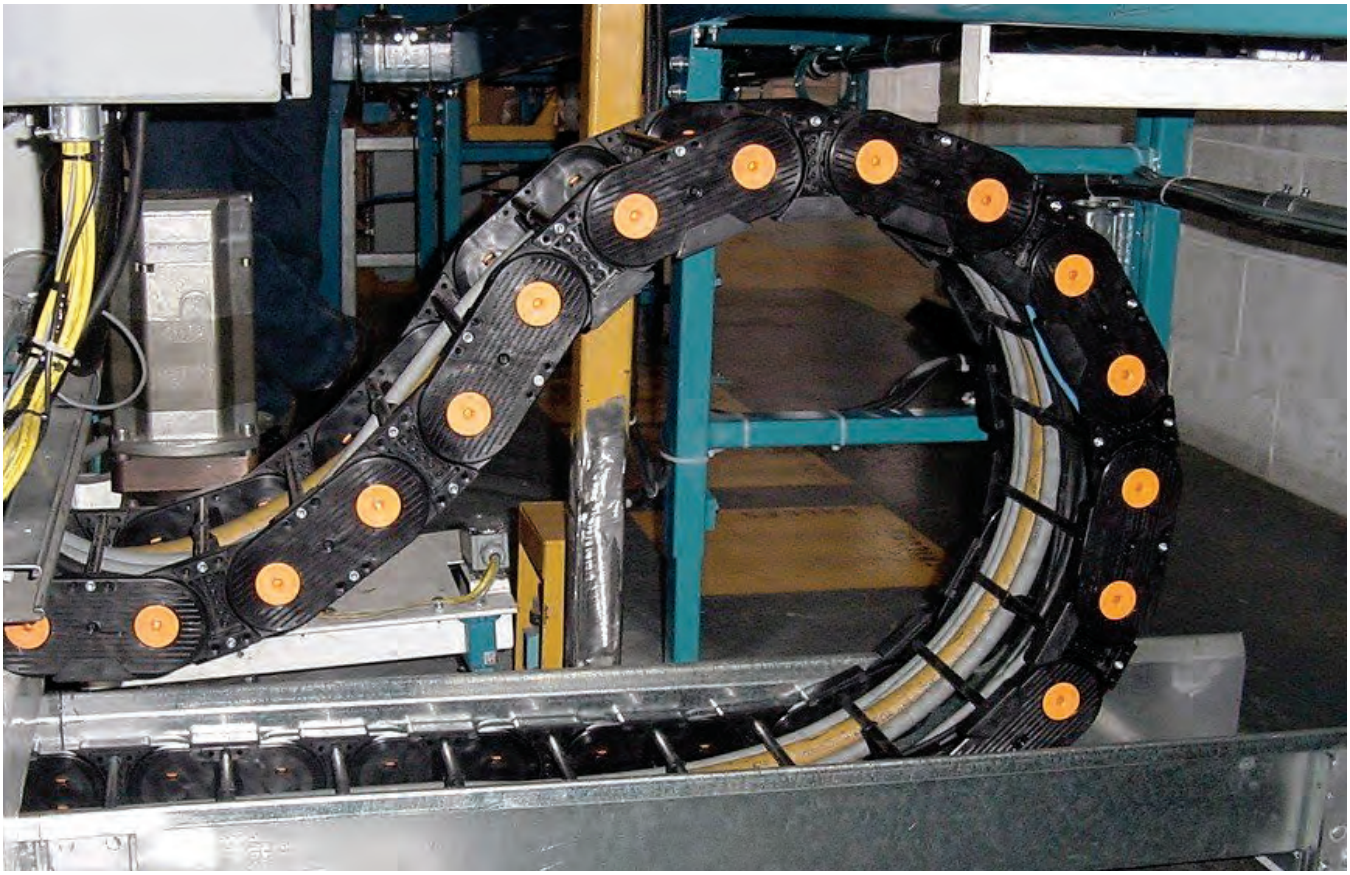




Nylatrac Modular TS carriers protect cables/hoses in multiple directions on high-speed servo-driven press transfer automation equipment. Bolted aluminum armor plates shield the utility package from debris in a metal stamping environment.

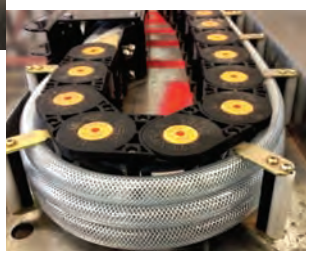
PLASTIC CARRIERS | APPLICATION EXAMPLES

Nested Nylatrac® 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

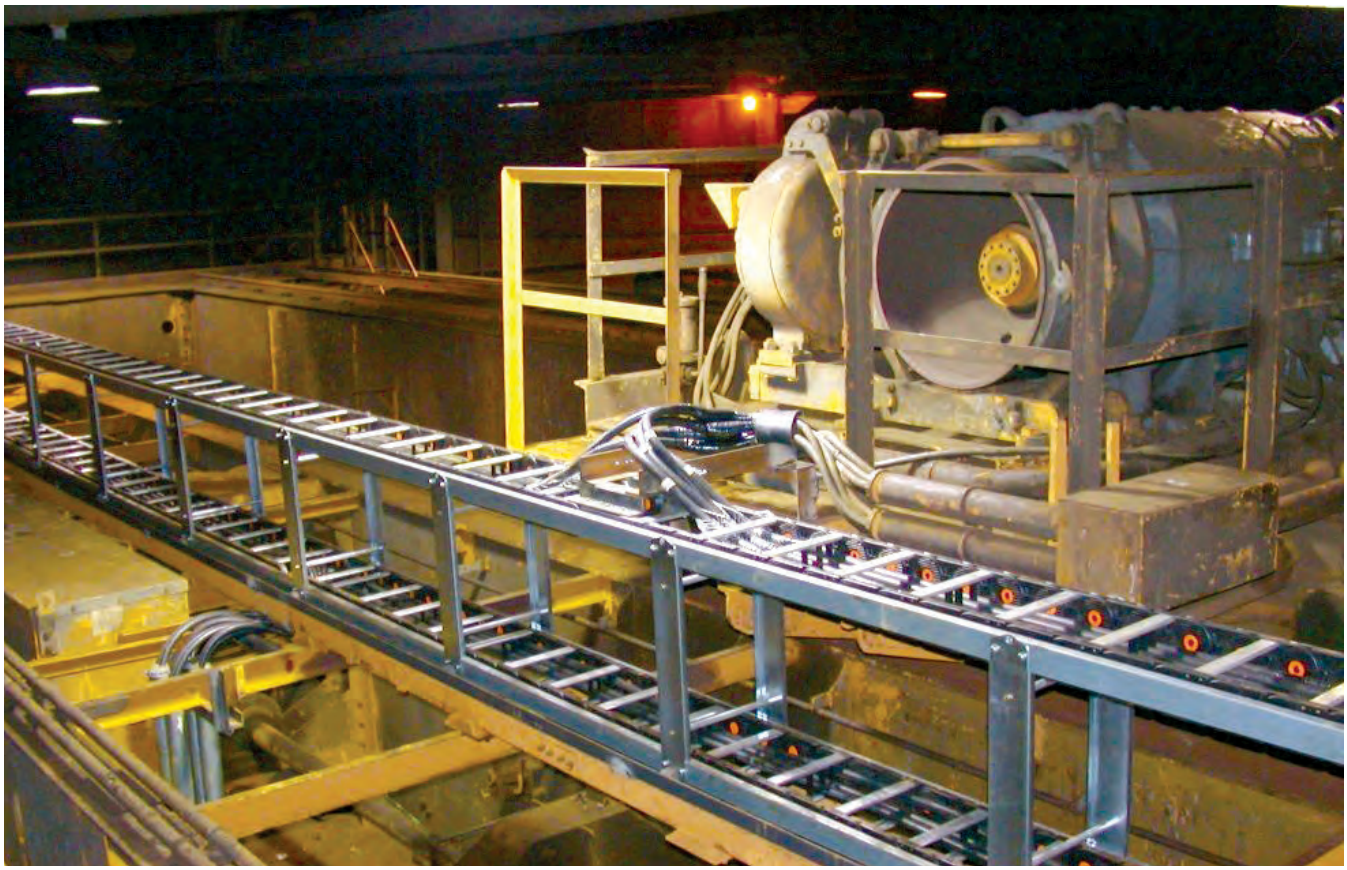


Nylatrac® Modular TSC carriers manage the cables and hoses connected to a Roboleo automated milking robot. Cavity separators placed every link prevent the hoses from sagging, and replaceable modular sliders on the side-mounted carrier protect link side bands from excessive wear.

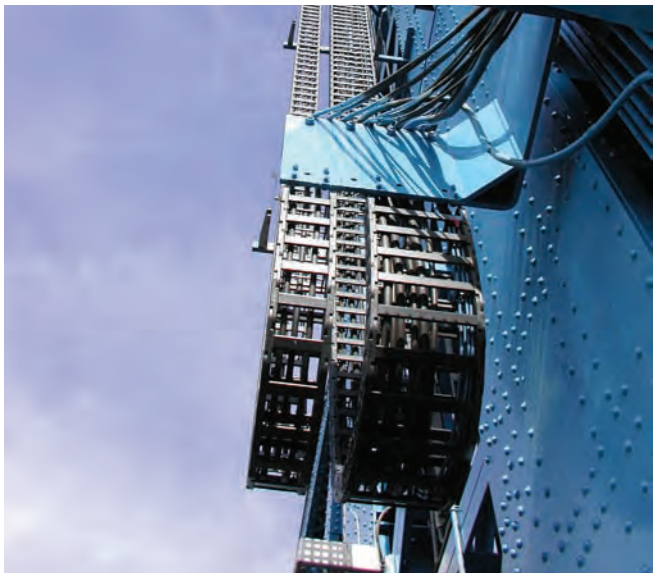
A long travel side-mounted TSC carrier (shown at the right) is customized with window extenders equipped with double poly rollers to accommodate hoses along outer radius while keeping cables organized within inner radius due to link height restriction.

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

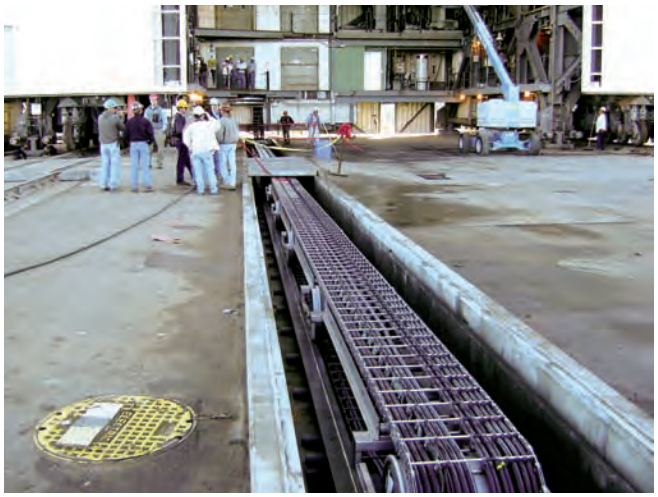


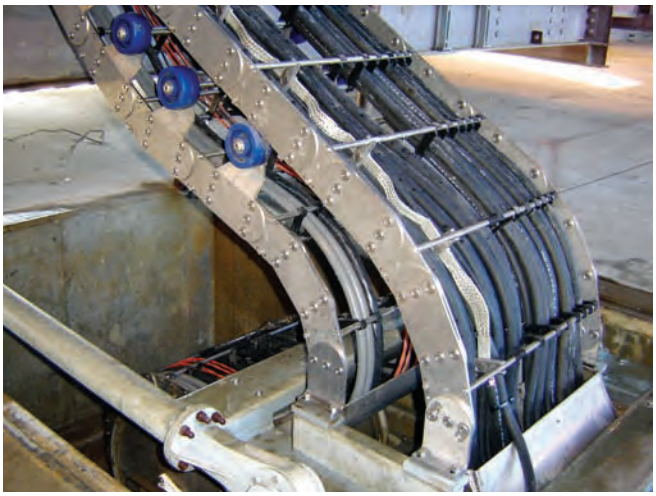
A complete cable carrier system designed by Dynatect includes a high-velocity rolling carriage and Nylatrac® Modular TL carriers to achieve long travel in a steel mill.



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

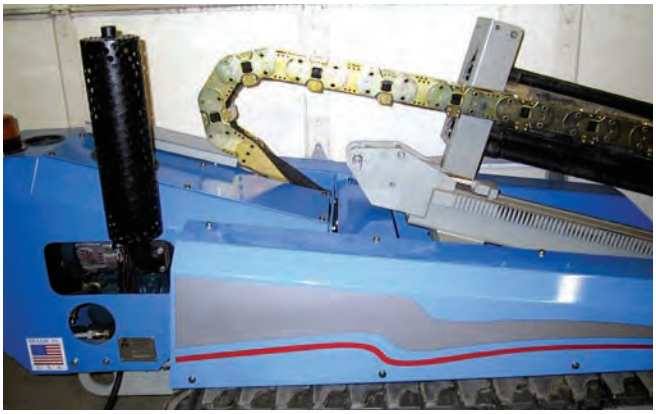




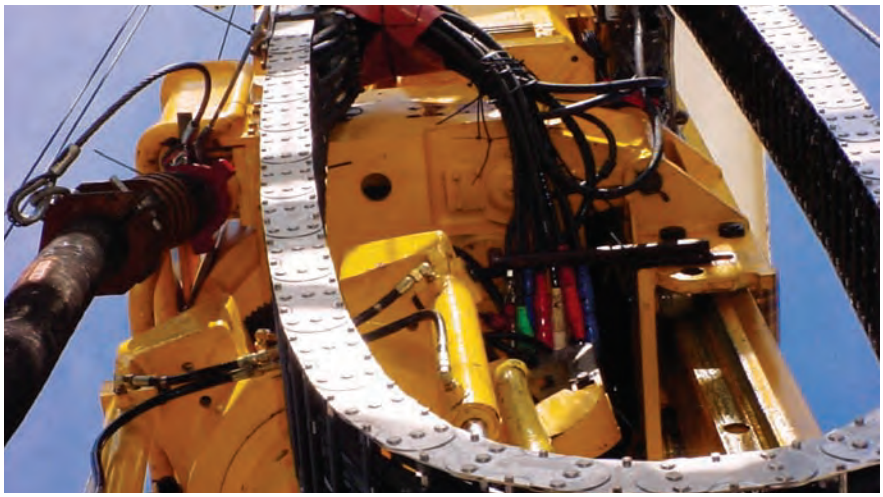
Custom stainless steel Gortrac® LRC carrier system with rolling carriage for a rocket launch system in California. Driven end modified for customer's application requirements.

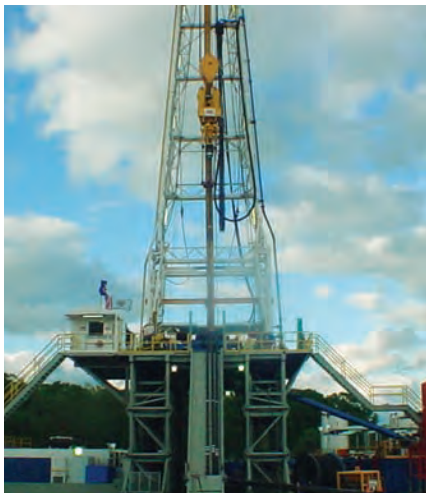
Blow-molding application with Gortrac steel XL carrier with patented "Walker" support system to reduce shock load by preventing link lock-out.

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



METAL CARRIERS | APPLICATION EXAMPLES

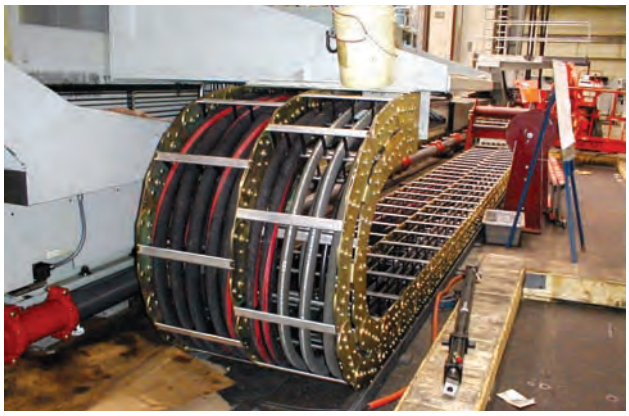




Custom 91-foot long Gortrac® stainless steel LRC carrier maintains cables and hoses on an oil rig platform. Dynatect supplies many custom engineered carrier systems to the oil and gas industry.

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.

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 98 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 114-115
- Metal Carriers Quick Selection Guide: See pages 156-157

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.

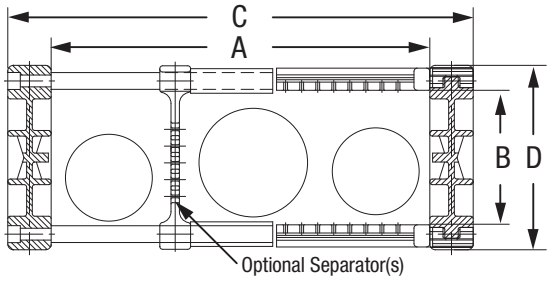
STEP 7: Check depot **(dimension K)** and curve height **(dimension H)** dimensions against potential space restrictions*.

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.

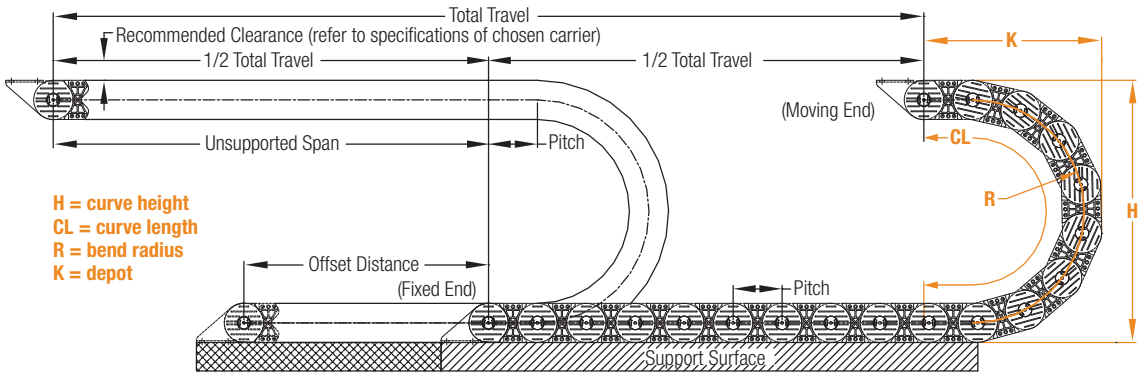


B = Cavity Height
(determined by the outer diameter of the largest cable/hose + safety factor)

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

C = Outer Width

D = Outer Height



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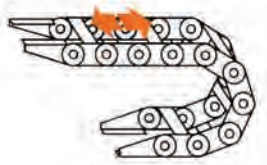
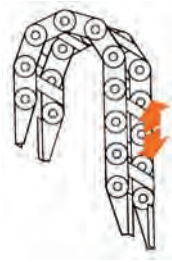
TYPICAL APPLICATIONS



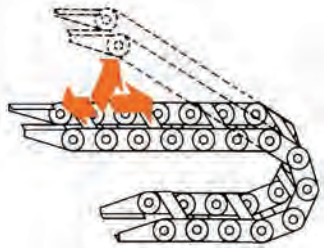
Horizontal Lower-Flange Fixed

Horizontal Upper-Flange Fixed

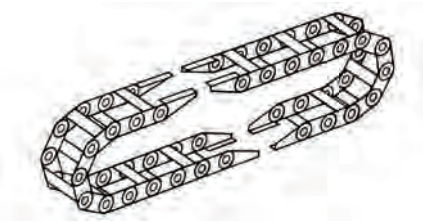
Vertical Curve Down



Vertical Curve Up

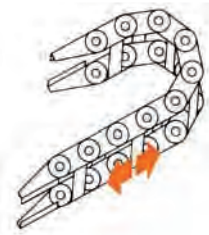


Combination Vertical and Horizontal



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® 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.

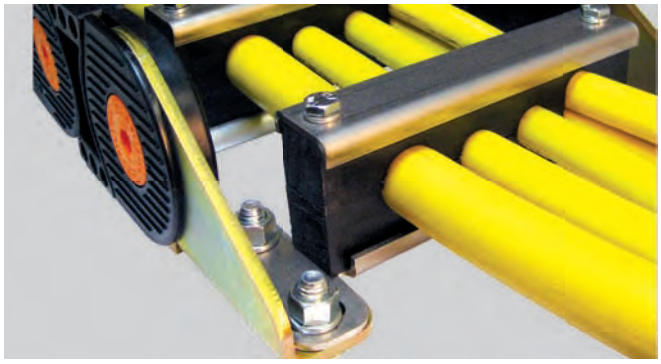
Dynatect offers a variety of clamp styles and designs, as well as mounting brackets with incorporated strain relief fingers for a quick and easy zip tie clamping solution. Standard and custom designs are available. Ready to install assemblies can be shipped complete with cables/hoses and necessary clamping.

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)

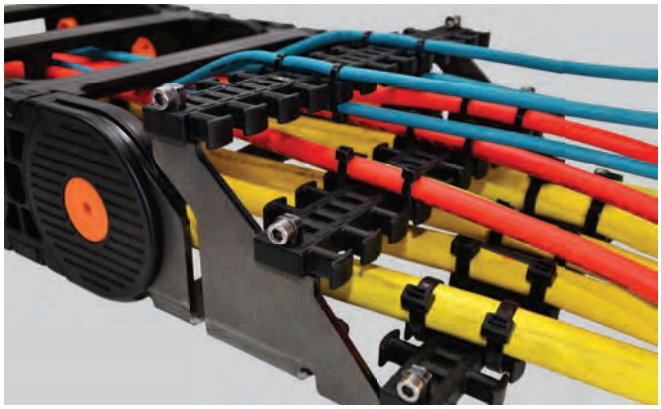


Custom UHMW Clamps

- 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® RAIL CLAMPING | SPECIFICATIONS

SINGLE STACK CLAMPS

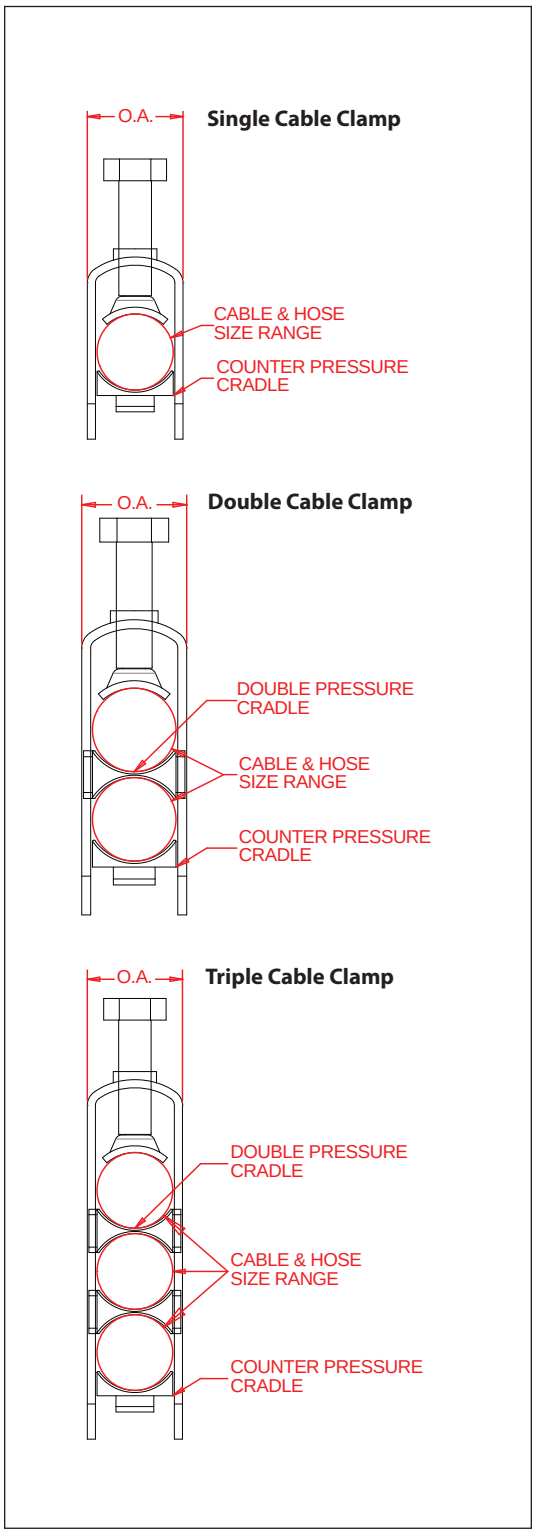
CABLE/HOSE DIAMETER RANGE inches (mm)	OVERALL WIDTH DIM. "O.A." inches (mm)	GORTRAC PART NO.
0.24 (6) - 0.47 (12)	0.61 (16)	HN0003-12.1
0.31 (8) - 0.55 (14)	0.69 (18)	HN0003-14.1
0.31 (8) - 0.63 (16)	0.77 (20)	HN0003-16.1
0.31 (8) - 0.71 (18)	0.85 (22)	HN0003-18.1
0.43 (11) - 0.86 (22)	1.01 (26)	HN0003-22.1
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

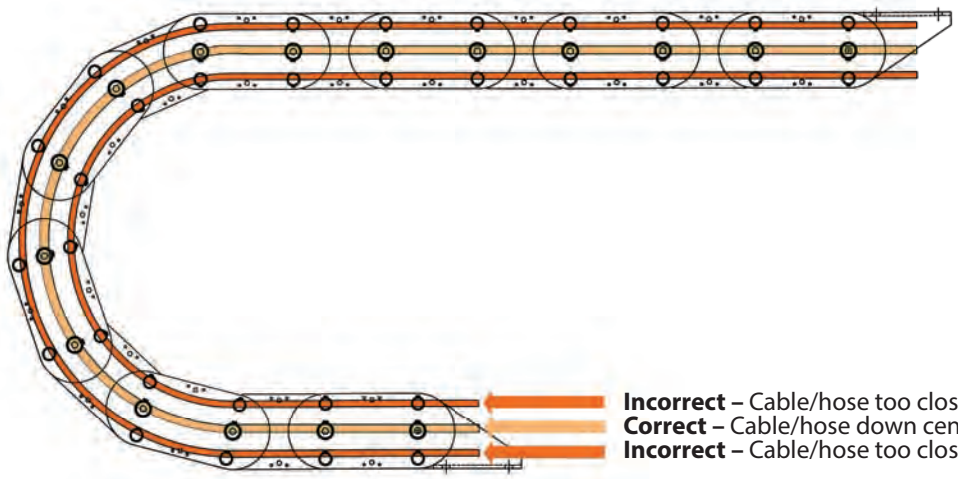
CABLE/HOSE DIAMETER RANGE inches (mm)	OVERALL WIDTH DIM. "O.A." inches (mm)	GORTRAC PART NO.
0.35 (9) - 0.47 (12)	0.61 (16)	HN0004-12.3
0.47 (12) - 0.55 (14)	0.69 (16)	HN0004-14.3
0.51 (13) - 0.63 (16)	0.83 (21)	HN0004-16.3
0.63 (16) - 0.71 (18)	0.89 (23)	HN0004-18.3
0.71 (18) - 0.79 (20)	0.99 (25)	HN0004-20.3
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 GUIDE

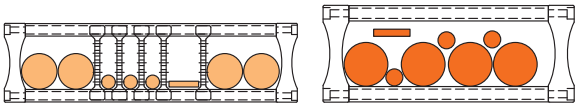
Special care and consideration should be taken while installing cables and hoses. The correct installation of cables and hoses is one of the most important aspects of the entire system. Proper installation will greatly affect the cable carrier system cycle life, as well as the cycle life of the cables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

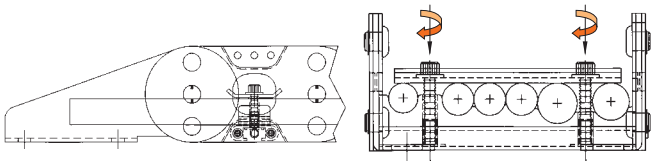
Recommended Cable/Hose Placement

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.

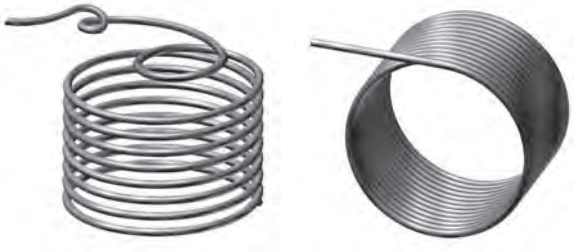


Correct **Incorrect**

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

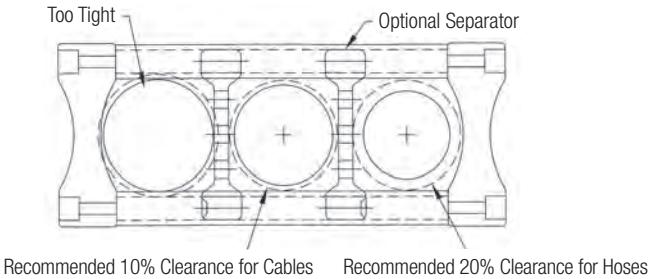


All cables and hoses should be secured at both the fixed and moving ends. Please do not pinch the cables/hoses excessively while clamping the ends in place. In applications with high pressure hydraulic hoses, we recommend clamping only at the moving end of the carrier.



Correct **Incorrect**

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.



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® | DYNATECT ADVANTAGES ADD VALUE

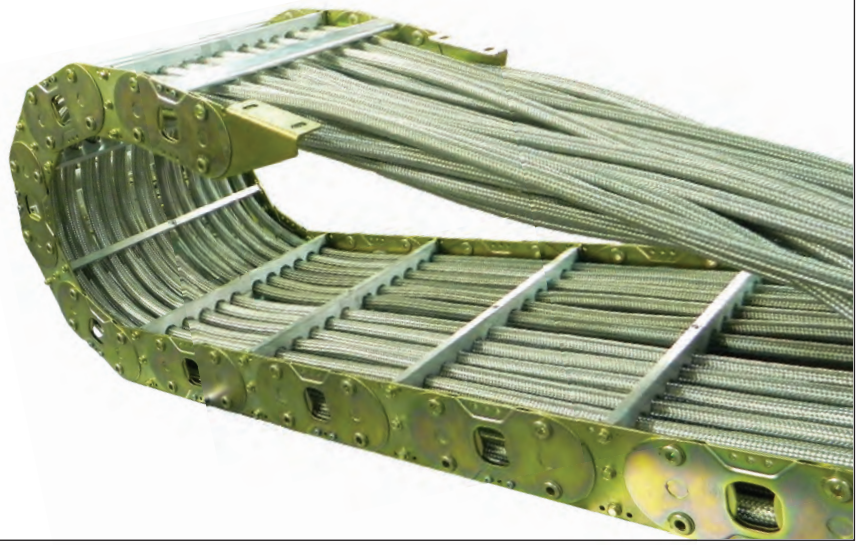
In addition to providing cable and hose carriers, Dynatect offers complete value-added services and programs for our customers. These services range from basic procurement and installation of cables and hoses into carrier assemblies to process support like Kanban, JIT and vendor-managed inventory programs, to the design a 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® carrier system pre-loaded on Dynatect-designed reels for quick installation.

Ready-to-install Nylatrac NSB carrier.

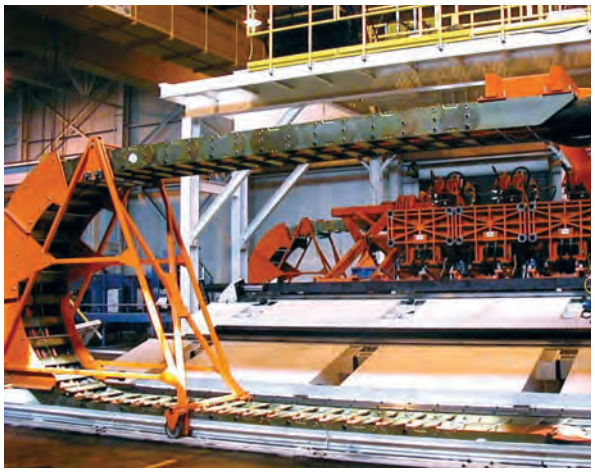


Steel SRC carrier pre-loaded with steel hoses.

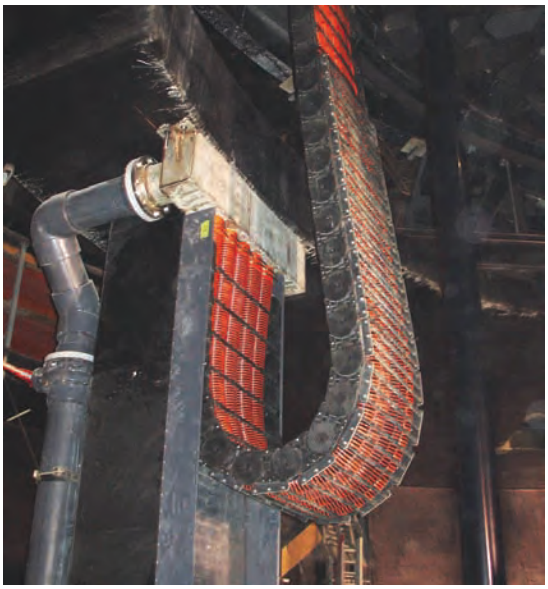
GORTRAC® | DYNATECT ADVANTAGES ADD VALUE

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.

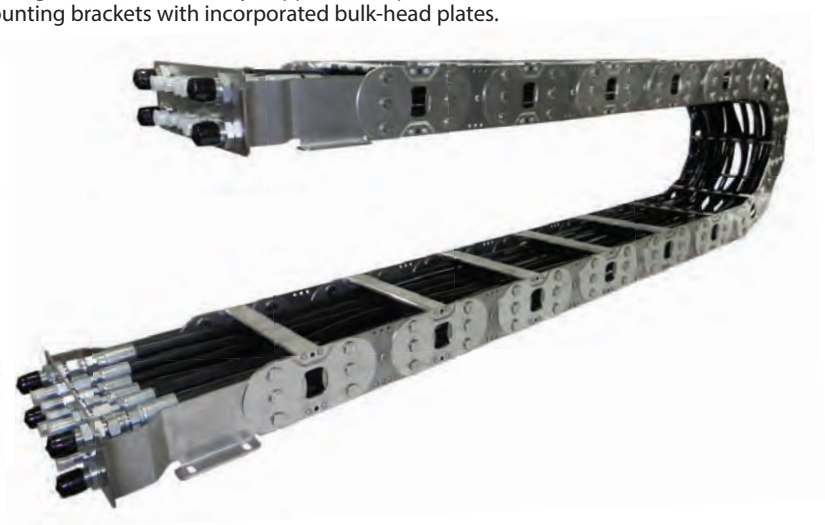


Blow-molding application with steel XL carrier with patented "Walker" support system to reduce shock load by preventing link lock-out.



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® | DYNATECT ADVANTAGES ADD VALUE

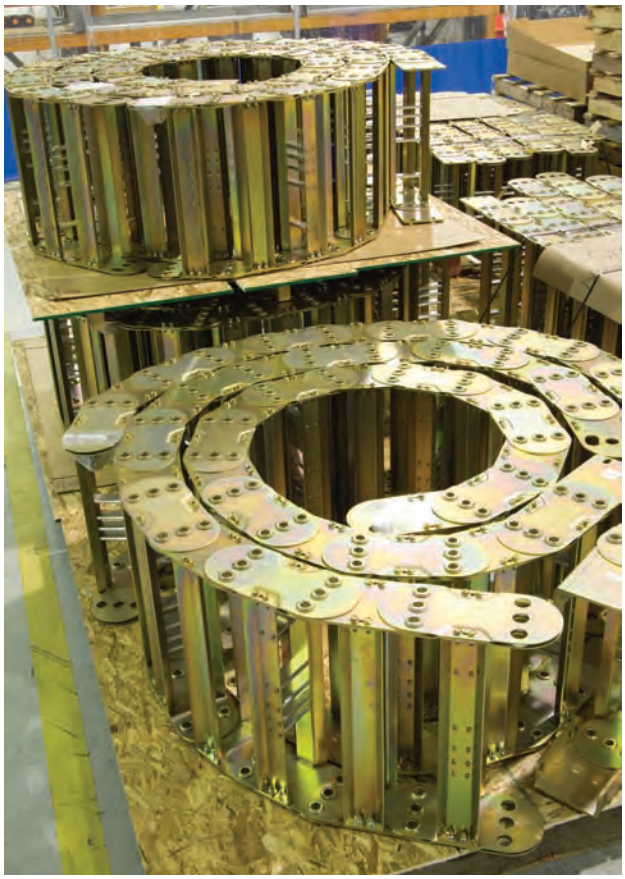
ORDERING MADE EASY

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 meeting 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.

GUIDE TROUGH SYSTEMS | PLASTIC CARRIERS

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:

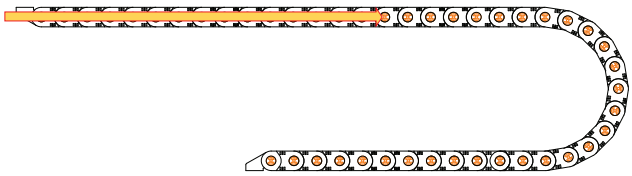
- Prevents lateral movement during travel
- Modular: Easy to add/remove sections
- Fast, easy assembly
- Designed for center mount, offset mount, or opposed travel

LOWERED MOUNTING HEIGHT

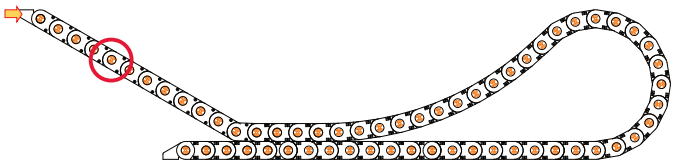
An important consideration for applications requiring plastic carriers in a guide trough is the bending moment that occurs at the moving end as the carrier is pushing, particularly when high velocities/accelerations and heavy fill weights are introduced.

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.

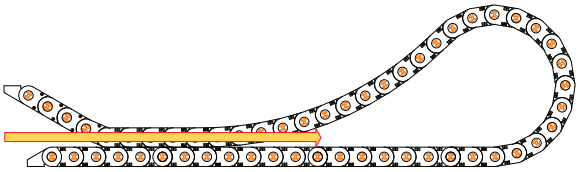
In cases where the moving end cannot be lowered due to application restrictions, a "push plate" may be utilized. If the moving end cannot be mounted at the recommended mounting height, a push plate provides additional support to the carrier system at the bending moment that occurs at the moving end as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

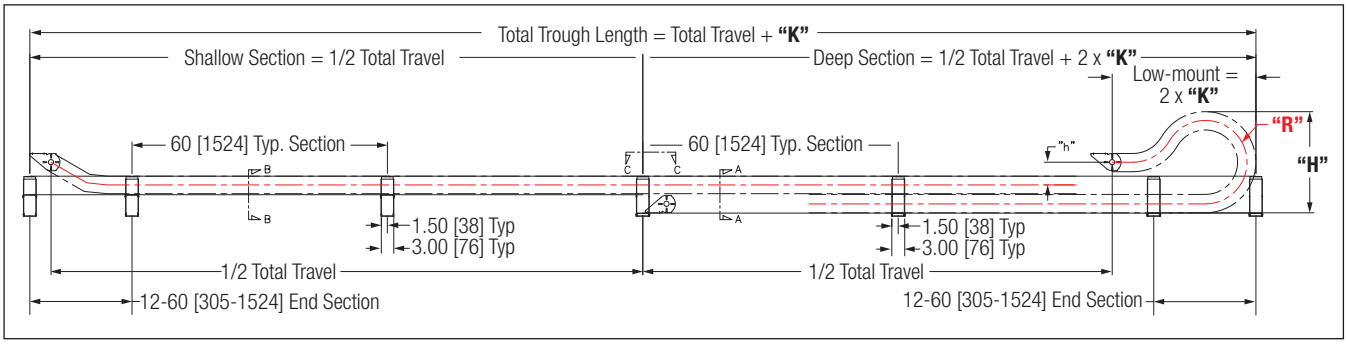


In a long travel carrier system configured for a lowered mounting height, the sag is eliminated, redirecting the force vector back to a straight trajectory. Furthermore, the loading that the carrier introduces as it is dragged over the bottom carrier section is replaced with a more even wear pattern.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

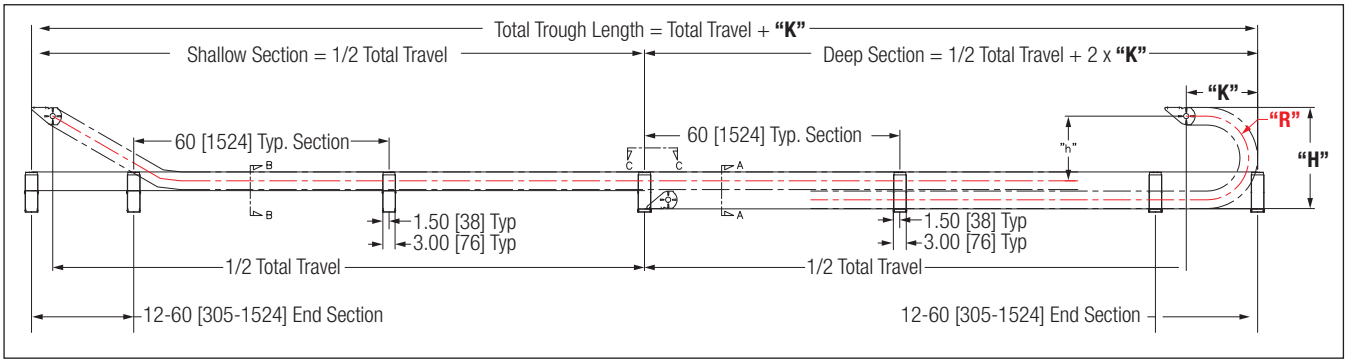
GUIDE TROUGH SYSTEMS | PLASTIC CARRIERS

GUIDE TROUGH SYSTEM (LOWERED MOUNTING HEIGHT)

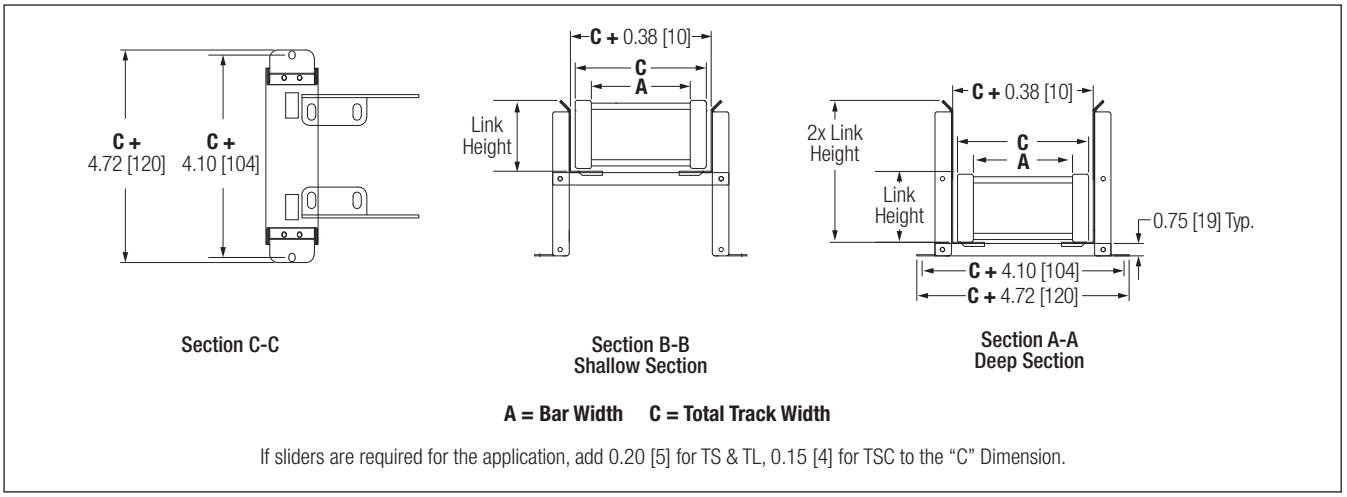
Dimensions in inches (mm)



GUIDE TROUGH SYSTEM (REGULAR MOUNTING HEIGHT)



GUIDE TROUGH SYSTEM END VIEWS



A = Bar Width **C = Total Track Width**

If sliders are required for the application, add 0.20 [5] for TS & TL, 0.15 [4] for TSC to the "C" Dimension.

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.

STATIONARY SUPPORT ROLLERS | PLASTIC AND METAL CARRIERS

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.

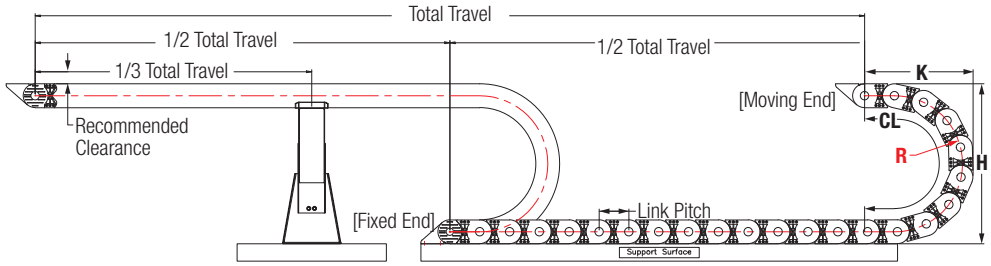
Support Rollers for Metal Carriers

- 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)

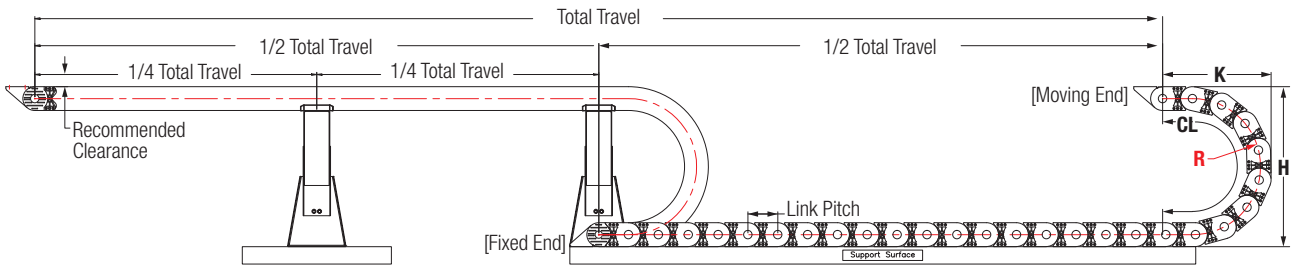
Support Rollers for Plastic Carriers

- 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)

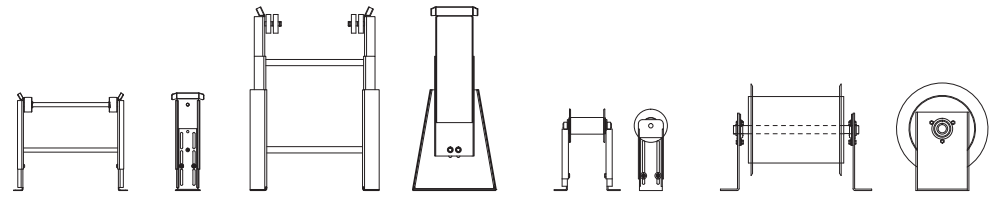
SINGLE SUPPORT ROLLER SYSTEM



DOUBLE SUPPORT ROLLER SYSTEM



SUPPORT ROLLER END VIEWS



Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

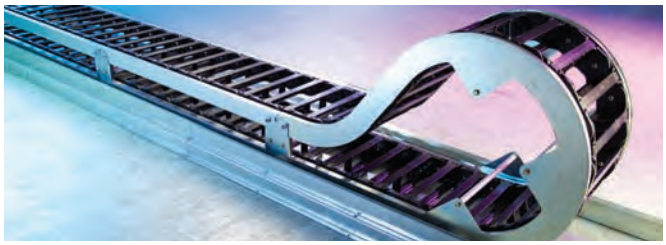
ROLLING CARRIAGE SUPPORT SYSTEM | PLASTIC AND METAL CARRIERS

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:

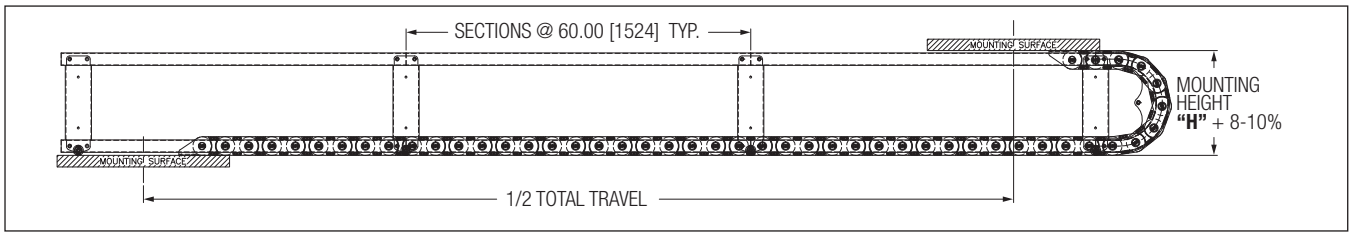
- Lightweight: Reduced tow forces vs. conventional carriage systems
- Modular: Easy to add/remove length
- Easy assembly: Most components are bolted together
- Quiet: Molded nylon wheels used for low noise
- Track drives/returns carriage without use of cable
- Can be used with both metal and plastic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



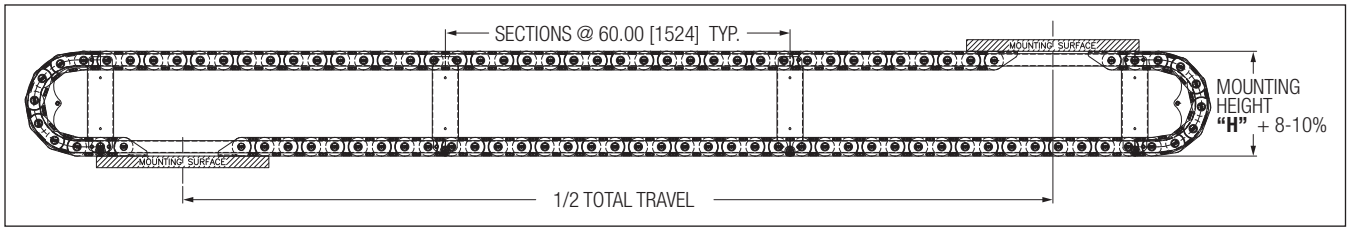
Shown: A customized, low-mounted rolling carriage support system designed to fit a pre-existing mounting envelope.

ROLLING CARRIAGE SYSTEM (SINGLE CARRIER)

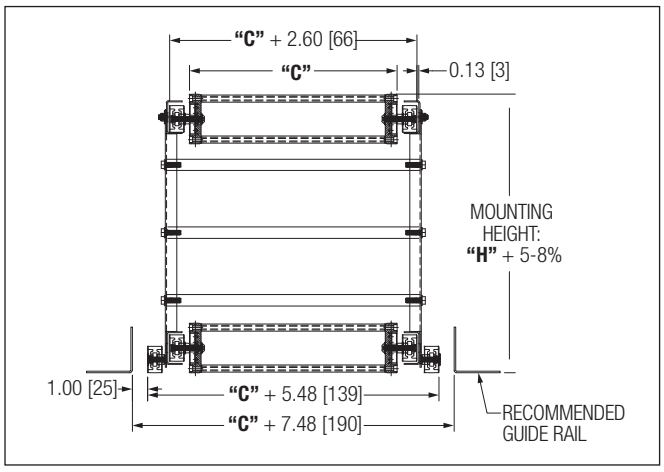
Dimensions in inches (mm)

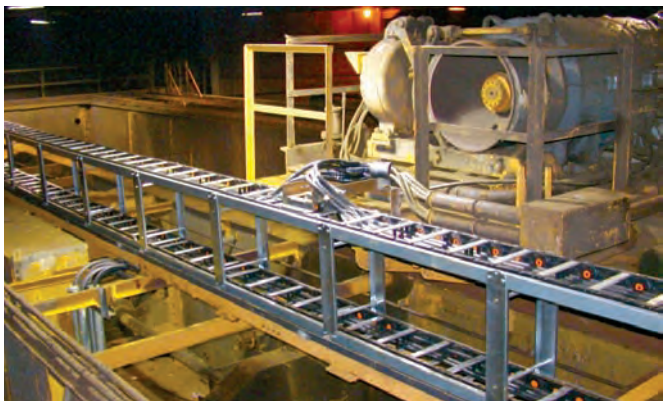


ROLLING CARRIAGE SYSTEM (OPPOSED)



CARRIAGE VIEW END



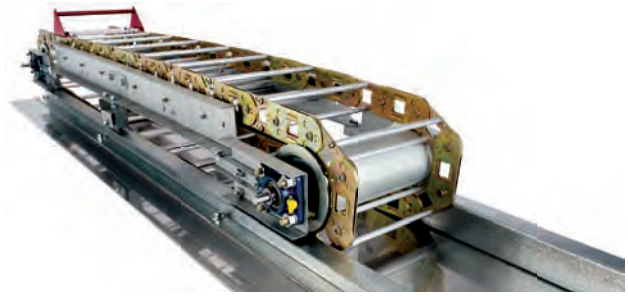


Shown: An opposed rolling carriage with a Nylatrac® Modular carrier (TS Series) designed for high-velocity/long travel in a steel mill.

DRUM-STYLE CARRIAGE SUPPORT SYSTEM | METAL CARRIERS

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.

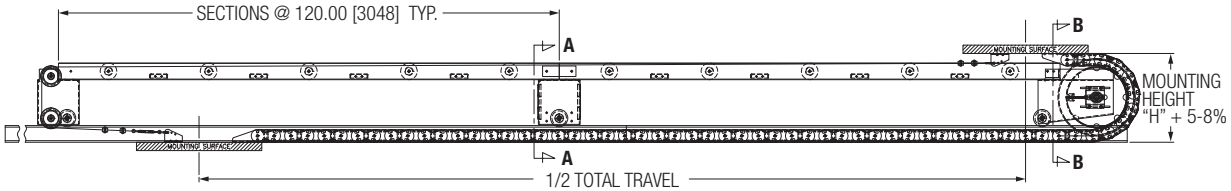


Features/Benefits:

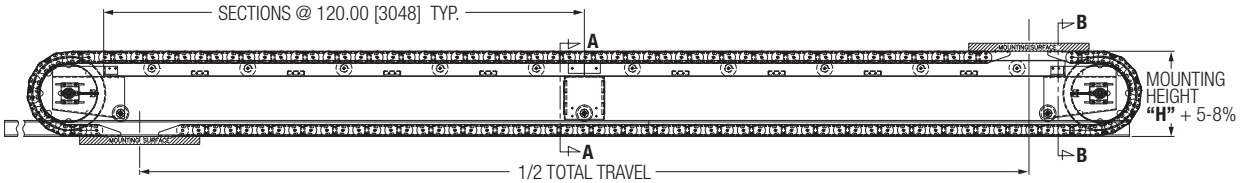
- Robust-designed for heavy-duty operation with steel carriers
- Modular: Easy to add/remove length
- Easy assembly: Most components are bolted together

DRUM STYLE CARRIAGE SYSTEM (SINGLE CARRIER)

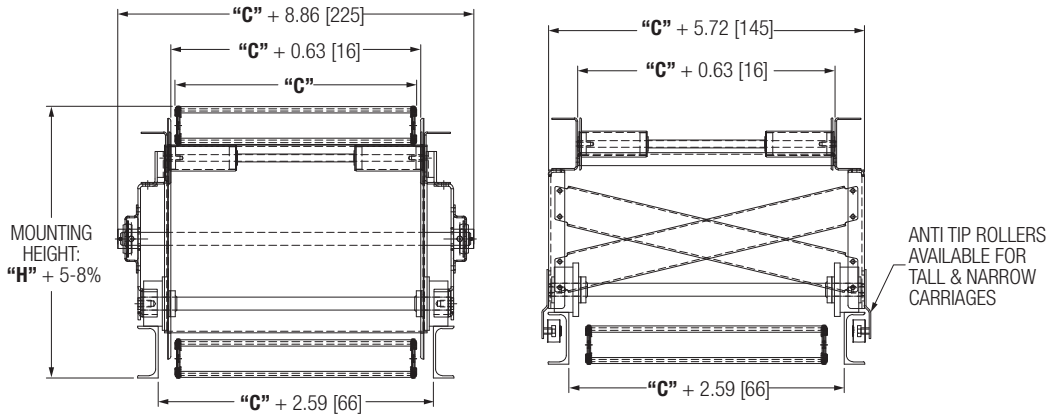
Dimensions in inches (mm)



DRUM STYLE CARRIAGE SYSTEM (OPPOSED)



CARRIAGE END VIEW



MARATHON™ LONG TRAVEL SUPPORT SYSTEM | PLASTIC CARRIERS

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.

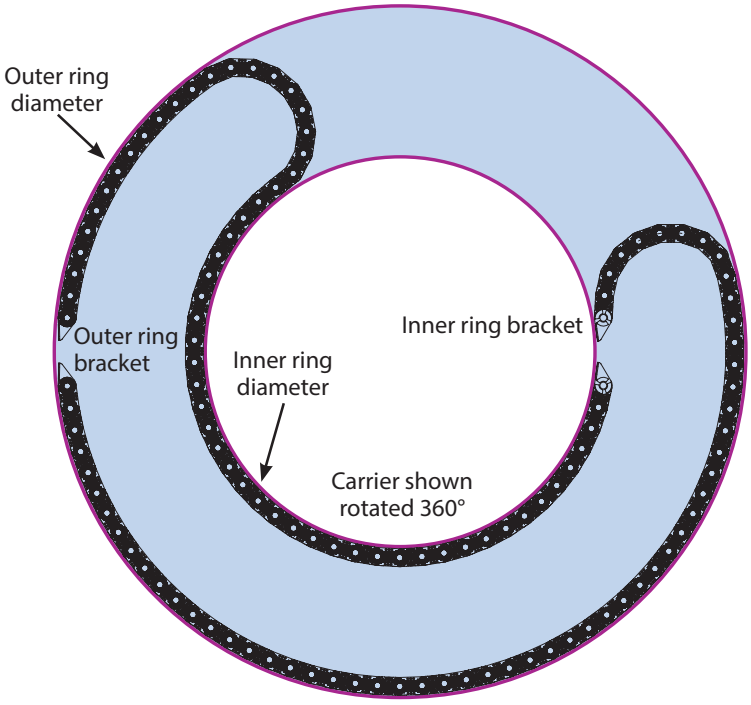
Features/Benefits:

- 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® 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

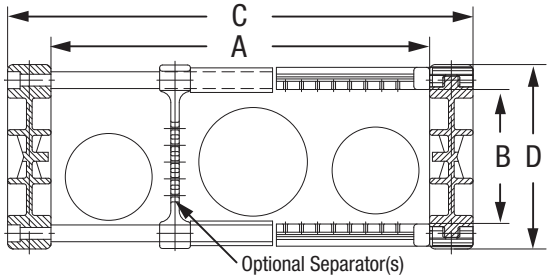
If dimensions A, B, C and D are left blank, Dynatect will determine the correct carrier sizing based on the cables/hoses specified above.

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)

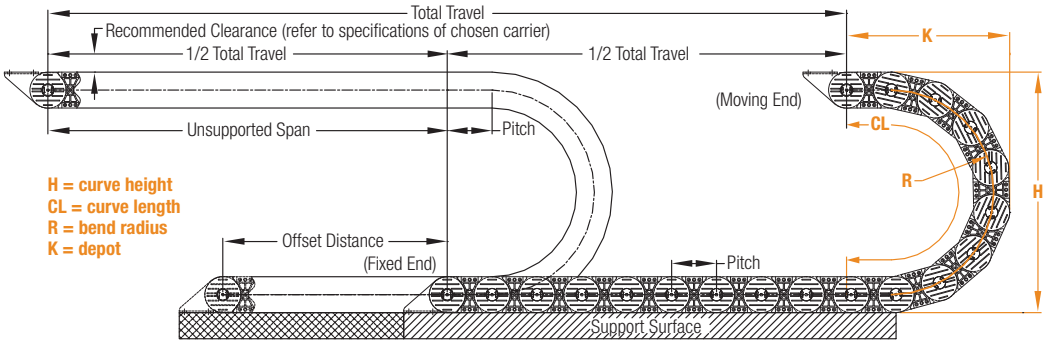


Cable/Hose Safety Factor:
Cables: +10% Hoses: +20%

Separators? ☐ Yes ☐ No (Quantity: _____)

3. Travel Requirements

Dimensions specified in: ☐ Inches ☐ Millimeters



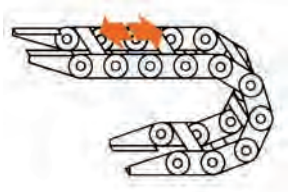
Total Travel Length: _____ Will Fixed End be the Center of Travel? ☐ Yes ☐ No (offset distance from center: _____)

Maximum Travel Speed: _____ Acceleration: _____ Duty Cycle: _____

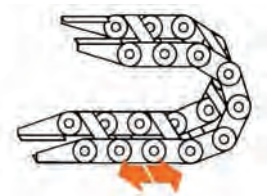
List Space Restrictions (mounting height "H", depot "K"): _____

CABLE/HOSE CARRIERS | QUOTE REQUEST FORM

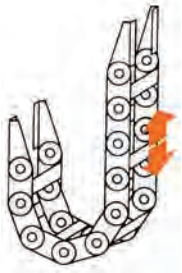
4. Travel Orientation



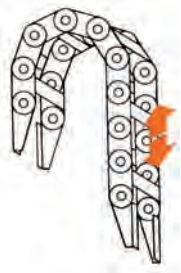
☐ Horizontal Lower-Flange Fixed



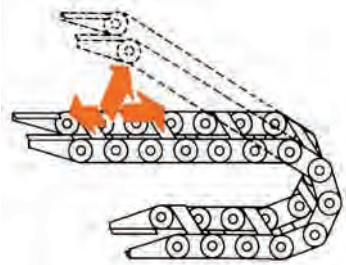
☐ Horizontal Upper-Flange Fixed



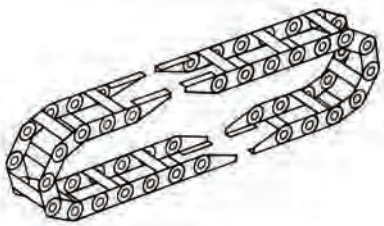
☐ Vertical Curve Down



☐ Vertical Curve Up

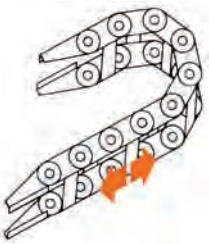


☐ Combination Vertical and Horizontal



☐ Opposed

☐ Nested Configuration



☐ Side Mounted

5. Application

Operating Temperature Range: Ambient: _____ Minimum: _____ Maximum: _____

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

_____

_____

Application Details: _____

_____

_____

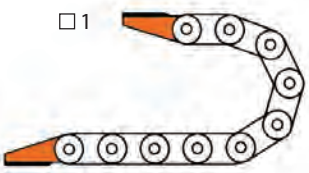
Material Preference: ☐ Steel ☐ Plastic ☐ No Preference ☐ Other: _____

Style Preference: ☐ Enclosed ☐ Open

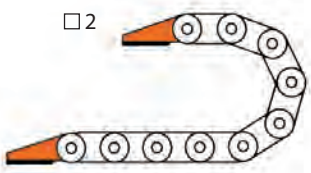
6. Bracket Configuration

Note: Default bracket configuration is #1-Inward.

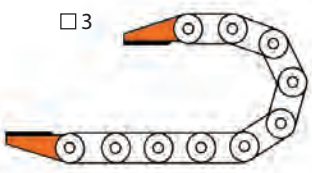
☐ 1



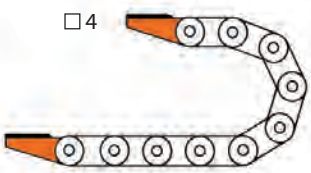
☐ 2



☐ 3



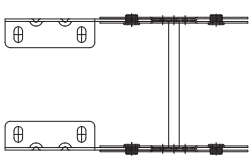
☐ 4



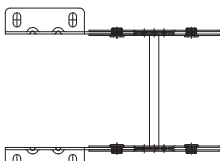
Mounting Holes Inward or Outward of Link:

Fixed End: ☐ In ☐ Out Moving End: ☐ In ☐ Out

☐ Non-Standard Mounting Brackets (provide drawing)



Brackets Inward

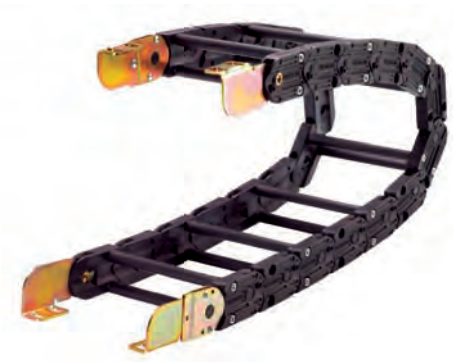


Brackets Outward

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

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

Quick Sizing Reference – inches (mm):

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

Crossbar Options:

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

Lid Option:

- Snap-in plastic lid

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

NYLATRAC® 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

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

NYLATRAC® 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® 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)

PLASTIC CARRIERS | QUICK SELECTION GUIDE

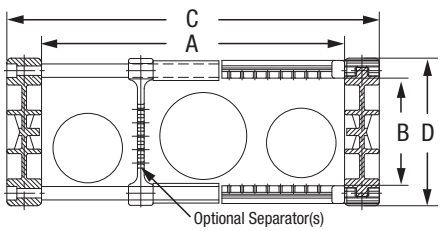
MODEL NO.	INNER HEIGHT Dimension B inches (mm)	INNER WIDTH RANGE Dimension A inches (mm)	OUTER HEIGHT Dimension D inches (mm)	OUTER WIDTH RANGE Dimension C inches (mm)	LINK PITCH inches (mm)
NYLATRAC® OPEN-STYLE PLASTIC CARRIERS					
K00	.28 (7)	.28 (7)	.39 (10)	.47 (12)	.59 (15)
K0	.39 (10)	.39 (10)	.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').					
NYLATUBE® ENCLOSED-STYLE PLASTIC CARRIERS					
K0E1	.39 (10)	.95 (24)	.59 (15)	1.42 (36)	.71 (18)
K0E3	.83 (21)	1.34 (34)	1.18 (30)	1.97 (50)	1.38 (35)
K0E4	1.18 (30)	1.89 (48)	1.58 (40)	2.44 (62)	1.77 (45)
K0E5	1.50 (38)	1.89 (48)	1.97 (50)	2.56 (65)	2.17 (55)
K0E6	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)
NYLATRAC ENCLOSED-STYLE PLASTIC CARRIERS					
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])

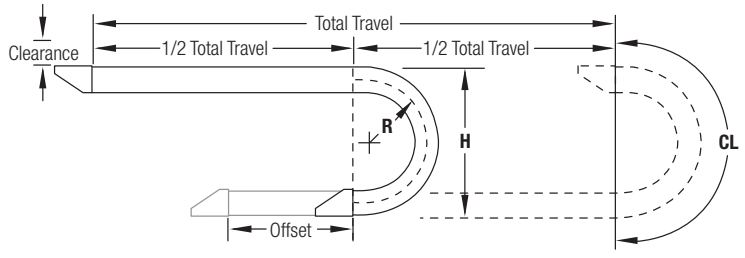
C = Outer Width

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	122-123	K00
1.20 (30)	3.00 (76)	1.75	No	122-123	K0
.70 (18) - 1.20 (30)	2.00 (51) - 3.00 (76)	1.75	No	122-123	K02 / K03 / K04
1.57 (40) - 2.57 (65)	3.02 (92) - 6.48 (162)	3.25	No	122-123	K20 / K30
.70 (17.78) - 1.20 (30)	2.00 (51) - 3.00 (76)	1.75	No	124-125	KN
1.05 (27) - 3.73 (95)	3.15 (80) - 8.50 (216)	3	✓	126-127	SP
2.02 (51) - 5.87 (149)	5.40 (137) - 13.00 (330)	3.8	✓	128-129	KS
1.25 (32) - 4.25 (108)	4.00 (102) - 10.00 (254)	P 3.5 / PH 3.25	No	130-131	P / PH
2.50 (64) - 7.87 (200)	7.00 (178) - 18.00 (457)	5.25	✓	132-133	NP
3.00 (76) - 11.75 (298)	8.50 (216) - 26.00 (660)	7	✓	133-135	KL
2.39 (61) - 3.06 (78)	6.19 (157) - 7.63 (194)	4	✓	136-137	NSB*
2.95 (75) - 13.78 (350)	8.20 (208) - 29.86 (758)	7.5	✓	138-139	TSC-F (Standard Width)
2.95 (75) - 13.78 (350)	8.20 (208) - 29.86 (758)	7.5	✓	138-139	TSC*
3.88 (99) - 16.13 (410)	11.00 (279) - 35.50 (902)	12.5	✓	140-141	TS-F (Standard Width)
3.88 (99) - 16.13 (410)	11.00 (279) - 35.50 (902)	12.5	✓	140-141	TS*
5.81 (148) - 24.69 (627)	15.75 (400) - 53.50 (1359)	14.75	✓	142-143	TL-F (Standard Width)
5.81 (148) - 24.69 (627)	15.75 (400) - 53.50 (1359)	14.75	✓	142-143	TL*
9.05 (230) - 27.05 (687)	24.00 (610) - 60.00 (1524)	18	✓	144-145	NXL*
1.18 (30) - 1.97 (50)	3.00 (76) - 4.50 (114)	2	No	146-147	KOE1
2.36 (60) - 3.94 (100)	5.90 (150) - 13.00 (330)	2.5	No	146-147	KOE3
2.95 (74.93) - 5.91 (150)	7.50 (20) - 13.40 (340)	5	No	146-147	KOE4
3.94 (101) - 5.91 (150)	9.90 (251) - 13.80 (351)	7	No	146-147	KOE5
3.94 (101) - 5.91 (150)	9.90 (251) - 13.80 (351)	7	No	146-147	KOE6
3.30 (84) - 5.91 (150)	8.00 (203) - 13.20 (335)	N1 2.75 / N2 3 / N3 4	No	148-149	N1 / N2 / N3
3.94 (100) - 7.87 (200)	9.80 (249) - 17.70 (450)	N4 5 / N5 5.25 / N6 5.5	No	148-149	N4 / N5 / N6
5.91 (150) - 11.81 (300)	14.80 (376) - 26.60 (676)	6.1	No	148-149	N8
3.75 (95) - 11.75 (298)	10.00 (254) - 26.00 (660)	7	No	150-151	KLE
4.92 (125) - 13.78 (350)	12.14 (308) - 29.86 (758)	7.5	✓	138-139	TSC-PL (Plastic Lid)
6.81 (173) - 16.13 (410)	16.88 (429) - 35.50 (902)	12.5	✓	140-141	TS-PL (Plastic Lid)
6.81 (173) - 16.13 (410)	16.88 (429) - 35.50 (902)	12.5	✓	140-141	TS-AP (Aluminum Lid)
7.94 (202) - 24.69 (627)	20.00 (508) - 53.50 (1359)	14.75	✓	142-143	TL-PL (Plastic Lid)
7.94 (202) - 24.69 (627)	20.00 (508) - 53.50 (1359)	14.75	✓	142-143	TL-AP (Aluminum Lid)
12.05 (306) - 27.05 (687)	30.00 (762) - 60 (1524)	18	✓	144-145	NXL-AP (Aluminum Lid)



Visit 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

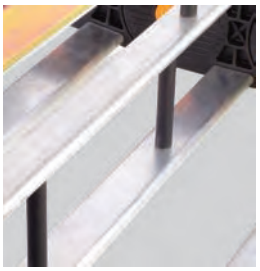
Aluminum round bar

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



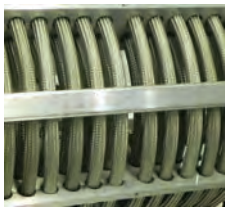
Poly roller separator

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

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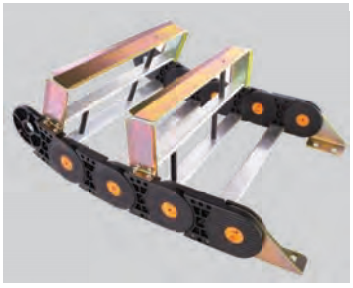
WINDOW EXTENDERS, LIDS, CABLE/HOSE SLEEVES

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

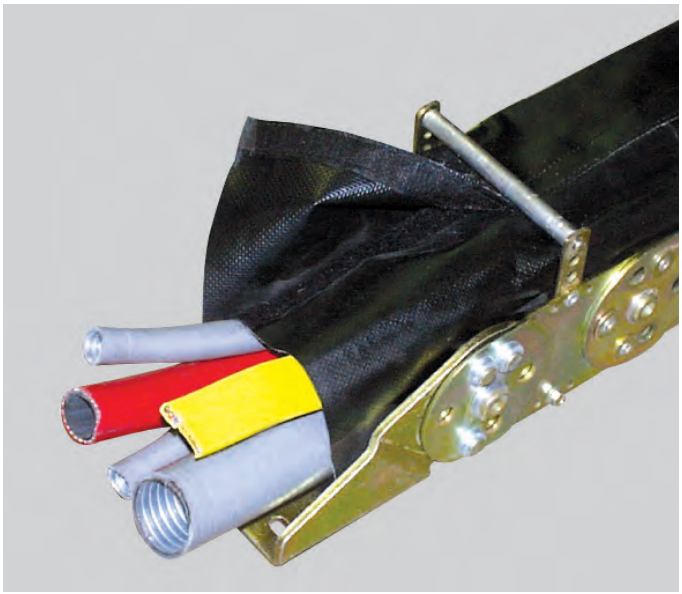
ARMOR PLATE STYLE ALUMINUM LIDS

- 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.

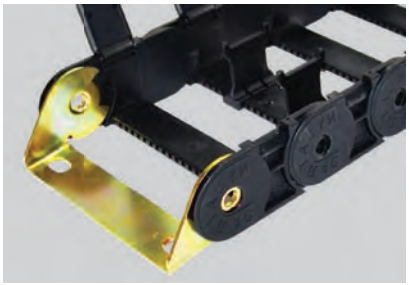
Custom UHMW Clamp

Gortrac Rail Clamping System

CABLE/HOSE CLAMPS

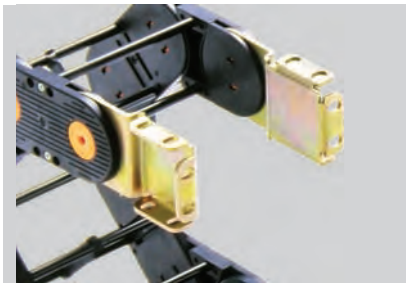
- Extend cable/hose life - relieves strain
- Standard and custom designs available
- Fast and simple installation in virtually any application
- Installation at both moving and stationary ends of a carrier recommended
- High pressure hose clamping requirements can be accommodated

See pages 96-97 for more information and specifications.



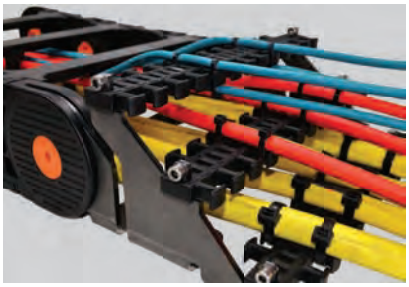
Standard One-Piece Bracket

Standard Two-Piece Bracket



Universal Mounting Bracket

Strain Relief Bracket



Zip Tie Bar for Mounting Brackets

- 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

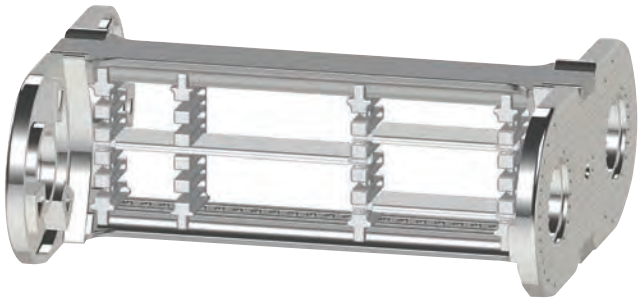
Note: Custom mounting brackets can be provided for drop-in replacement on all carrier brands.

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

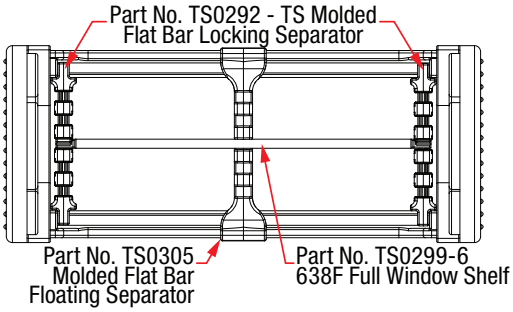
*See shelving specifications below.



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.	-

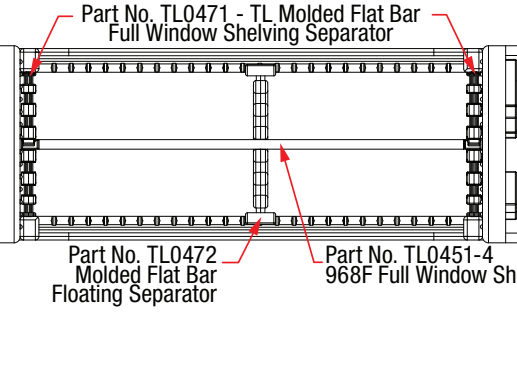
TS CROSS SECTION EXAMPLE



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



STANDARD NYLATRAC®/NYLATUBE® | MATERIAL PROPERTIES

CHEMICAL RESISTANCE OF DURETHAN® POLYAMIDE RESINS

MEDIA	RATING
Acetic Acid, 5%	o
Acetic Acid, 30%	–
Acetone	+
Ammonia, 10%	+
Ammonia, Concentrated	+
Ammonium Nitrate, Saturated Solution	+
Ammonium Sulfate, Saturated Solution	+
Amyl Acetate	+
Aniline	o
Basic Chrome Sulfate, Concentrated	+
Baysilone® Fluid M 1000	+
Beer (lager) at 32°F	+
Benzene	+
Benzyl Alcohol, 100%	–
Benzyl Benzoate, 100%	o
Blood (ox blood) at 35°F	+
Borax*, Saturated Solution	+
Brake Fluid, AT	+
Brandy, Commercial	+
Butane Gas	+
Butanol, 100%	+
Butyric Acid, Concentrated	o
Calcium Chloride, Saturated Solution in Water	+
Calcium Hydroxide (suspension), 30%	+
Calcium Soap Fat, Pure	+
Camphor Oil, 100%	+
Carbon Dioxide	+
Carbon Disulfide	+
Carbon Tetrachloride	+
Caustic Soda Solution, 10%	+
Caustic Soda Solution, Concentrated	+
Chlorine Gas, Dry – Chlorobenzene	+
Chloroform	o
Citric Acid, 10%	+
Coal Gas	+
Copper Sulfate, Saturated Solution	+
Cyclohexanol	+
Cyclohexanone	+
Dibutyl Phthalate	+
Diesel Oil	+
Dinonyl Phthalate	+
Dioctyl Phthalate	+
Ether	+
Ethyl Acetate	+
Ethyl Alcohol	+
Ethylene Chloride	+
Ethylene Glycol	+
Ferric Chloride, Saturated Solution (neutral)	+
Fish Liver Oil	+

MEDIA	RATING
Formaldehyde, 10% in Water	+
Formic Acid, 30%	–
Formic Acid, Concentrated	–
Freon** 11/12 Refrigerant (1/1), Under Pressure at 73°F	+
Fuel Oil, Heavy	+
Fuel Oil, Light	+
Fuel Oil, Medium	+
Gasohol	o
Gasoline	+
Glycerol	+
Glycol	+
Grapefruit Juice, Unsweetened at 35°F	+
Hydrochloric Acid, 1%	–
Hydrochloric Acid, 10%	–
Hydrochloric Acid, Concentrated	–
Hydrofluoric Acid, 40%	–
Hydrogen Chloride Gas	–
Hydrogen Peroxide, 10%	–
Hydrogen Peroxide, 30%	–
Hydrogen Sulfide	+
Iodine, Tincture, Commercial	–
Isopropyl Alcohol	+
Jet Fuel, 1P4	+
Lactic Acid, 10% in Water	+
Laundry Soap Solution, 1% in Water at 158°F	+
Margarine	+
Menthol, 90% in Denatured Alcohol	+
Mesamoll PVC Plasticizer	+
Metasystox*** Insecticide, 0.5% in Water	+
Metasystox*** Insecticide, Concentrated	+
Methyl Alcohol, Pure	o
Methyl Amine, 30% in Water	+
Methylene Chloride	o
Milk, Whole	+
Mineral Water, Commercial	+
Naphthene Basic Oil (lubricant)	+
Nekal**** BX Wetting Agent, 2% in Water	+
Nitric Acid, 1%	–
Nitric Acid, 50%	–
Oleic Acid, Commercial	+
Oxalic Acid, 10% in Water	o
Oxygen (3 bar)	–
Ozone (at 2 x 10-6 parts ozone to 1 part air)	–
Paraffin Basic Oil (lubricant)	+
Perchloric Acid, 10% in Water	–
Petroleum Ether	+
Petroleum Spirit (for dry cleaning), bp 212° - 284°F	+
Phenyl Ethyl Alcohol, 100%	o
Phosphoric Acid, 10%	o

MEDIA	RATING
Phosphoric Acid, 30%	–
Potassium Carbonate (potash), Saturated Solution	+
Potassium Cyanide, Saturated Solution	+
Potassium Dichromate, Saturated Solution	o
Potassium Hexacyanoferrate (III), Saturated Solution	+
Potassium Metabisulfite, 40 g/l in Water	+
Potassium Perchlorate, 2% in Water	o
Potassium Permanganate, 10% in Water	–
Propane Gas	+
Propyl Alcohol	+
Rapeseed Oil	+
Raspberry Juice (sweetened), Commercial	+
Sea Water	+
Silicofluoric Acid, 30%	–
Silver Nitrate, 10%	+
Sodium Bicarbonate (soda), Saturated Solution	+
Sodium Chloride (table salt), Saturated Solution	+
Sodium Hypochlorite	–
Sodium Soap Fat	+
Sodium Sulfide, Saturated Solution	+
Sodium Thiosulfate (fixing bath), 200 g/l	+
Soil Bacterial Culture (anaerobic)	+
Soil Mildew	+
Spinning Bath Acid	–
Stannous Chloride, Saturated Solution	–
Sugar Beet Syrup	+
Sugar Solution, Saturated	+
Sulfur Dioxide, Dry, Saturated Atmosphere	+
Sulfuric Acid, 10%	–
Sulfuric Acid, 30%	–
Sulfurous Acid, 10%	o
Tallow, Beef, Commercial	+
Tartaric Acid, 10% in Water	+
Tetraethyl Lead, 5% in Aliphatic Hydrocarbons, bp 212° - 284°F	+
Thionyl Chloride, 100%	–
Toluene	+
Trichloroethyl Phosphate	–
Trichloroethylene	+
Tricresyl Phosphate (low ortho content)	+
Triethanolamine	o
Urea, Saturated Solution	+
Urine	+
Vinyl Chloride, Under Pressure at Room Temperature	+
Water (distilled) at 68°F	+
Water (distilled) at 158°F	+
Water (distilled) at 194°F	+
Wine, Commercial	+
Wood Turpentine, bp 302° - 338°F	+

Ratings: + Resistant o Limited Resistance – Not Resistant
Note: Unless otherwise noted, all data were determined at 73°F (23°C).
Durethan® 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.

STANDARD NYLATRAC®/NYLATUBE® | MATERIAL PROPERTIES

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)
MECHANICAL PROPERTY				
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)
FLAMMABILITY				
UL94 Flame Class (0.059" thickness)	UL 94	HB (HB)	94	(94)
ELECTRICAL PROPERTY				
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)
GENERAL PHYSICAL PROPERTIES				
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® STANDARD (open-style carriers)


K00-15


K02-3


K20-4

Specify part number with dashes Example: KO3-3-14	Model	Height	Length
	KO3	3	14"

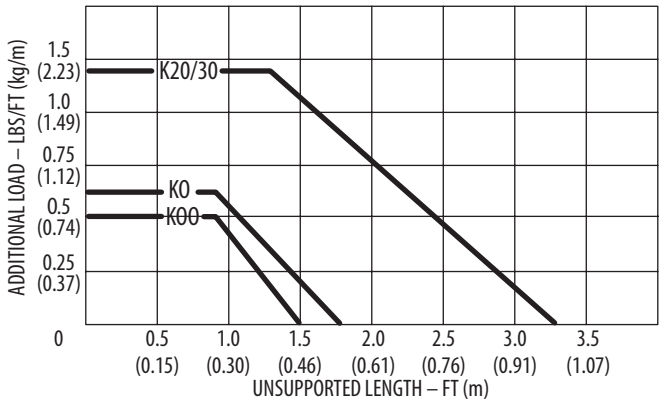
SPECIFICATIONS

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



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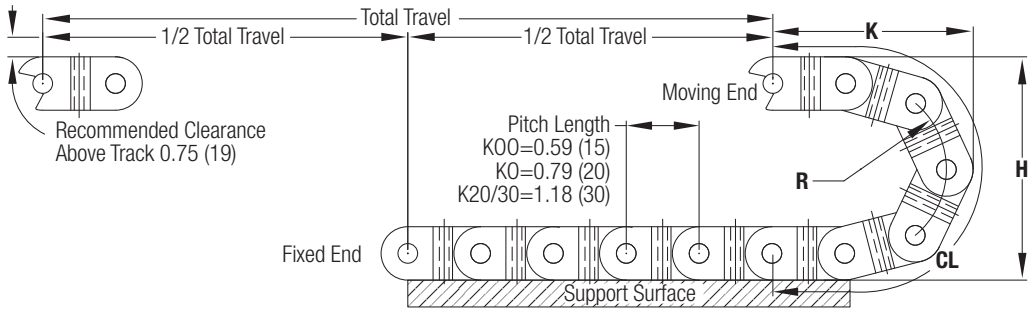
K0 SERIES | NYLATRAC® STANDARD (open-style carriers)

CARRIER SIDE VIEW

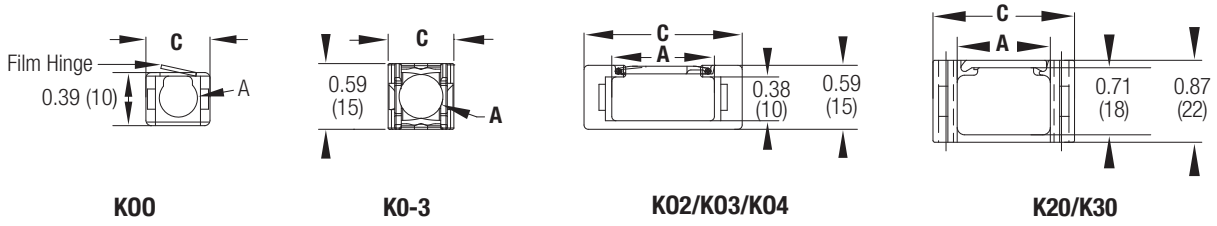
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

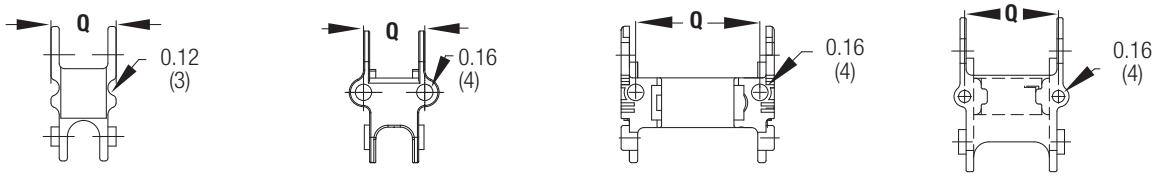
CARRIER CROSS SECTION



K00 **K0-3** **K02/K03/K04** **K20/K30**

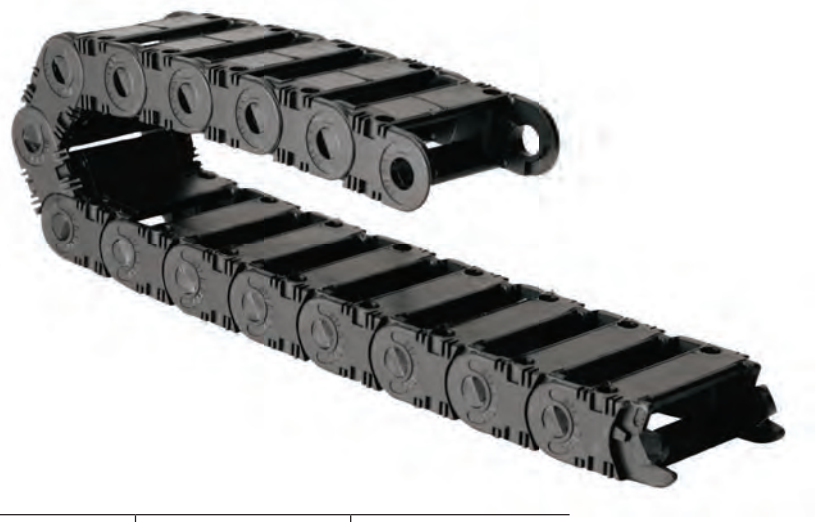
Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW: MOUNTING HOLE DIMENSIONS



K00 **K0-3** **K02/K03/K04** **K20/K30**

KN SERIES | NYLATRAC® STANDARD (open-style carriers)

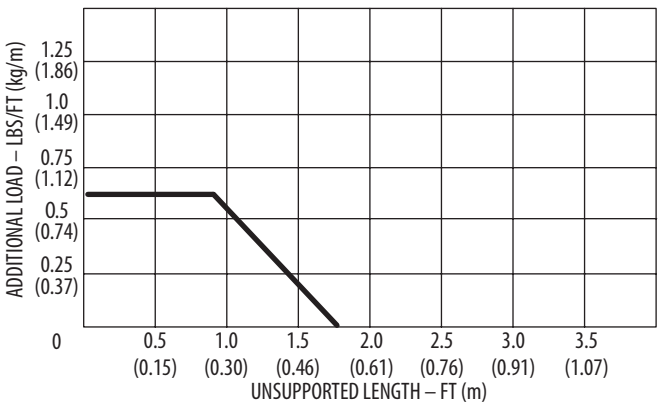


Specify part number with dashes Example: KN2-3-18	Model	Height	Length
	KN2	3	18"

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)

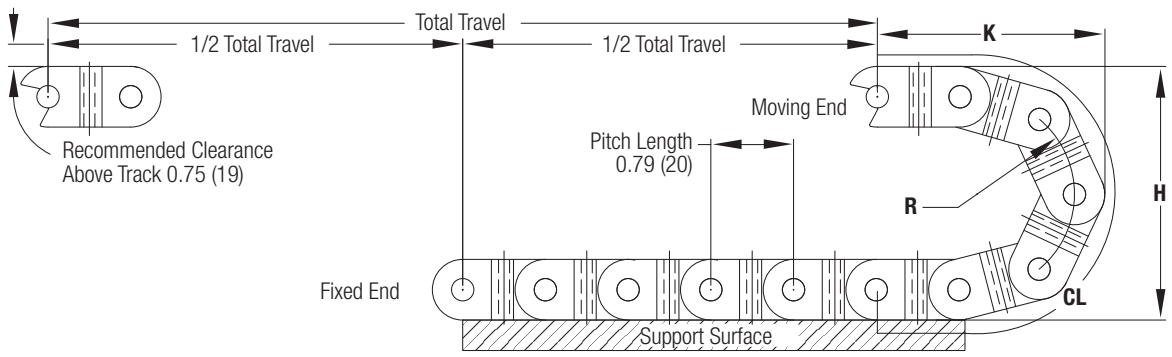
KN SERIES – WEIGHT LOAD



KN SERIES | NYLATRAC® STANDARD (open-style carriers)

CARRIER SIDE VIEW

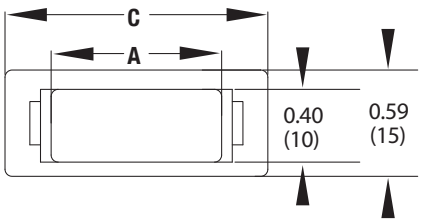
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

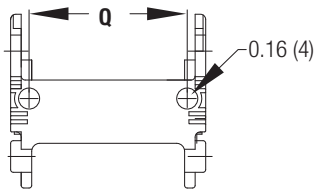
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW: MOUNTING HOLE DIMENSIONS



SP SERIES | NYLATRAC® 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.

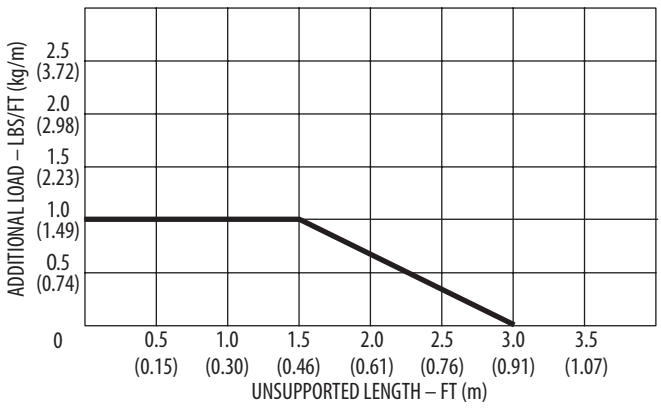
SPECIFICATIONS

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



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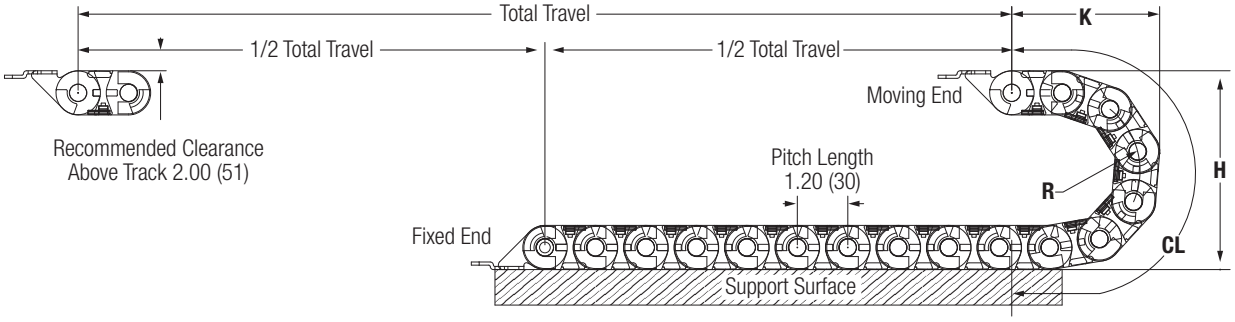
SP SERIES | NYLATRAC® STANDARD (open-style carriers)

CARRIER SIDE VIEW

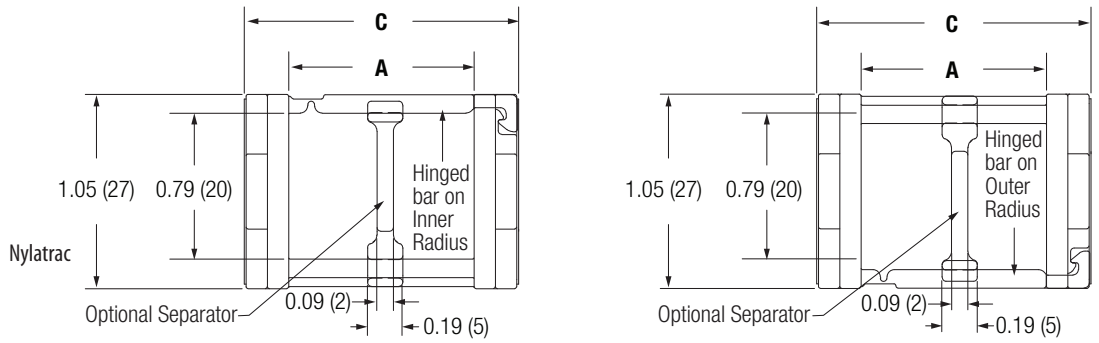
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

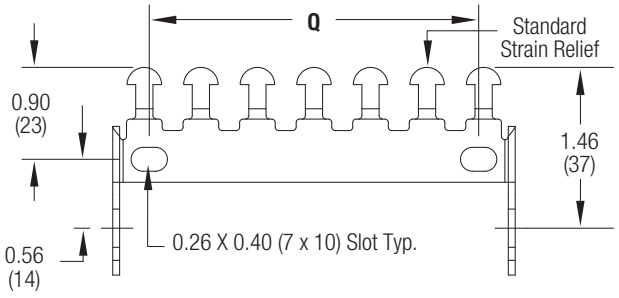
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



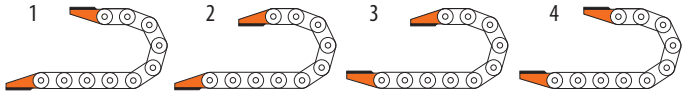
Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS

Standard Mounting Bracket Arrangements



KS SERIES | NYLATRAC® 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

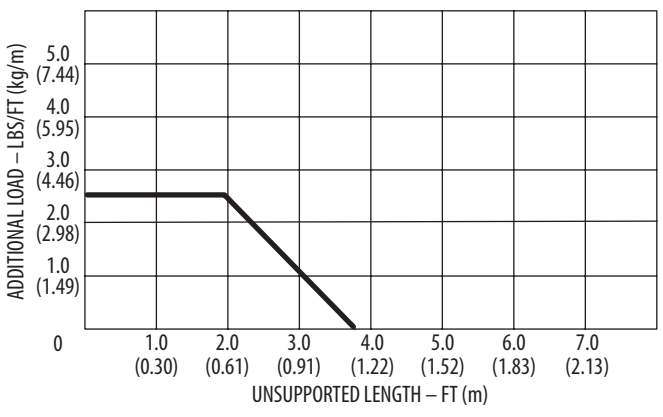
MODEL NO.	A inches (mm)	C inches (mm)	Q inches (mm)	WEIGHT lb/ft (kg/m)
KS100	1.00 (25)	1.52 (39)	0.68 (17)	0.40 (0.60)
KS150	1.50 (38)	2.02 (51)	0.84 (21)	0.44 (0.65)
KS225	2.25 (57)	2.77 (70)	1.66 (42)	0.51 (0.76)
KS300	3.00 (76)	3.52 (89)	2.41 (61)	0.54 (0.80)
KS400	4.00 (102)	4.52 (115)	3.41 (86)	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



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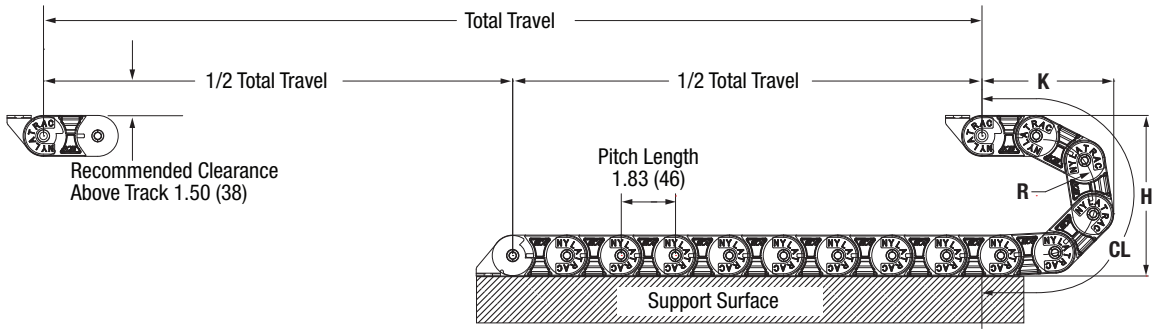
KS SERIES | NYLATRAC® STANDARD (open-style carriers)

CARRIER SIDE VIEW

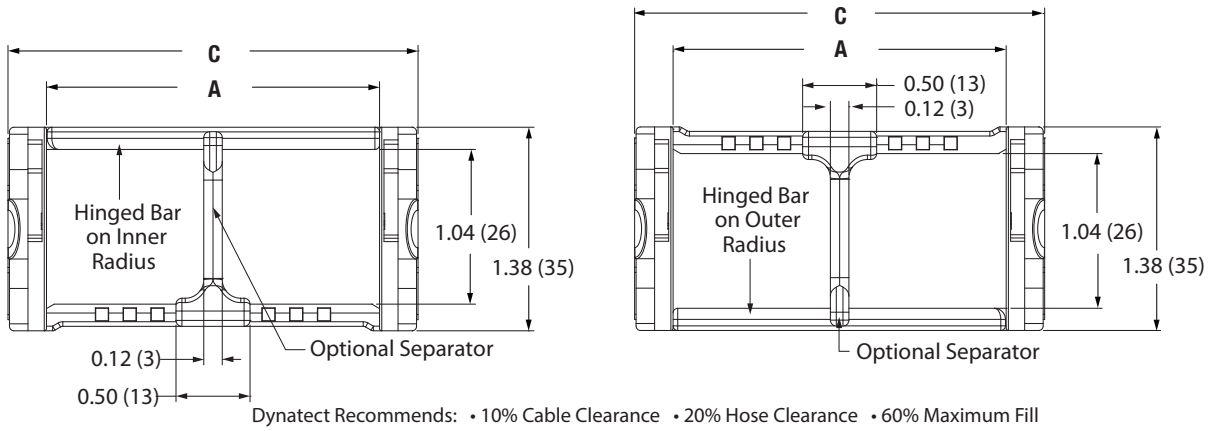
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

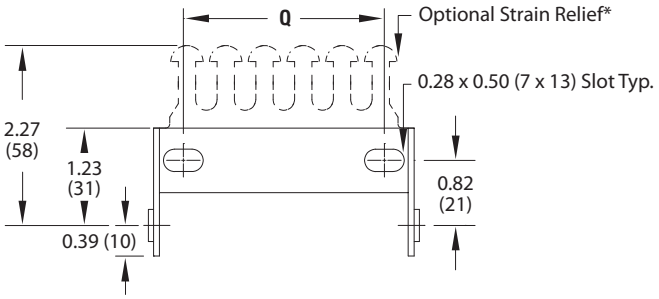
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



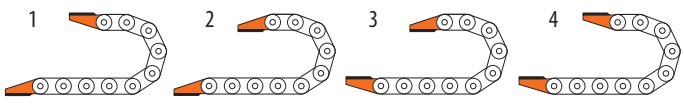
Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET

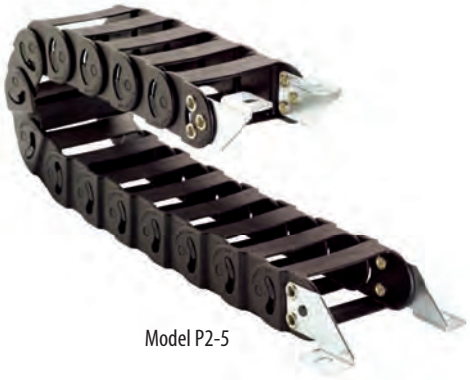


BRACKET ARRANGEMENTS

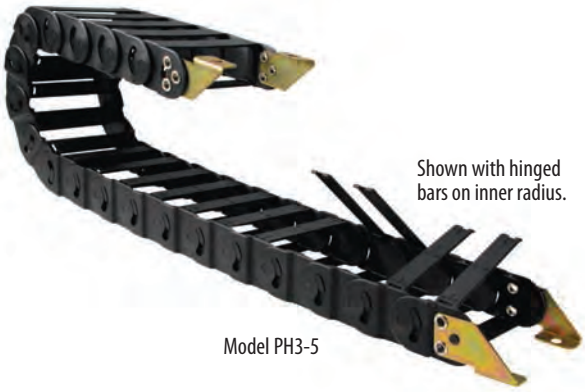
Standard Mounting Bracket Arrangements



P/PH SERIES | NYLATRAC® STANDARD (open-style carriers)



Model P2-5



Shown with hinged bars on inner radius.

Model PH3-5

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"	#1 IN

*Specify bracket flange: inward (IN) or outward (OUT).

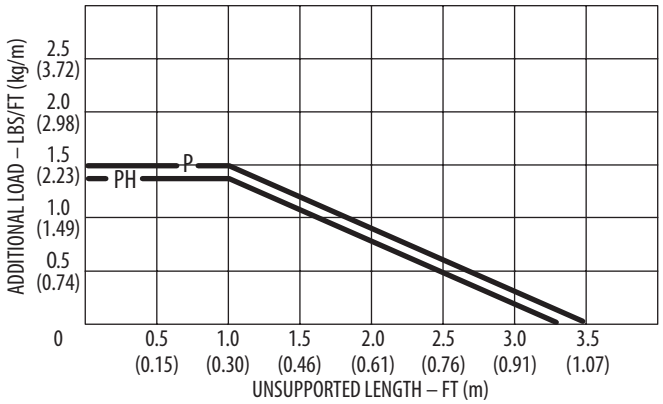
SPECIFICATIONS

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



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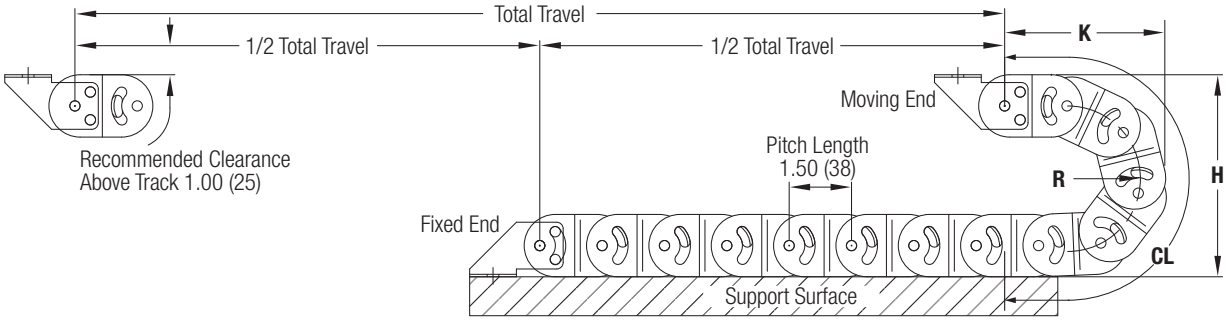
P/PH SERIES | NYLATRAC® STANDARD (open-style carriers)

CARRIER SIDE VIEW

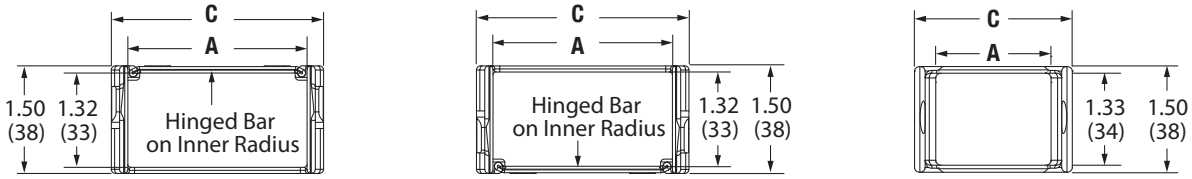
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

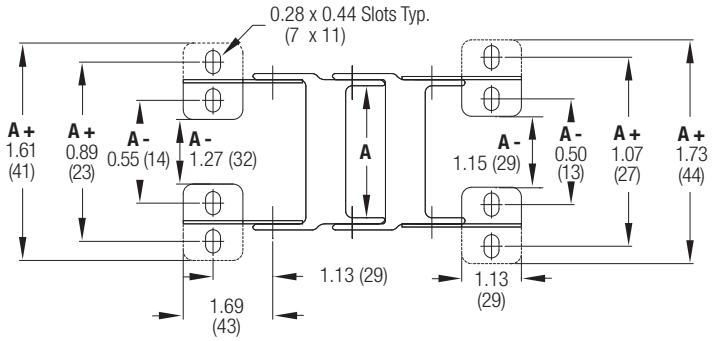
CARRIER CROSS SECTION



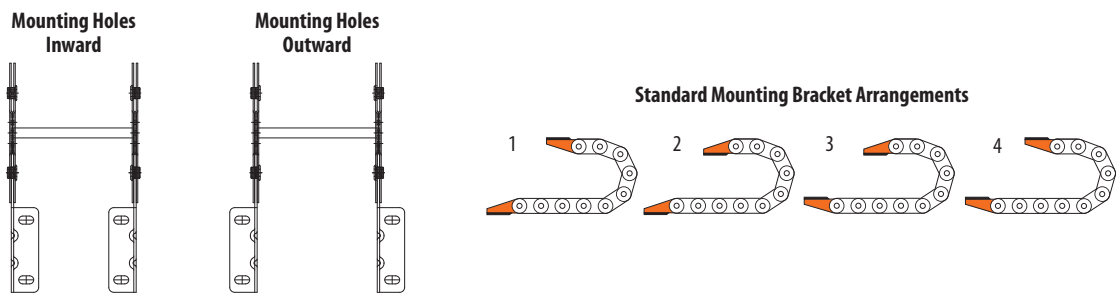
PH Series - Inner Hinged Bar (Standard) | **PH Series - Outer Hinged Bar** | **P Series**

Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



NP SERIES | NYLATRAC® STANDARD (open-style carriers)

Shown with hinged bars on inner radius.

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 #1

*Strain relief brackets are standard.

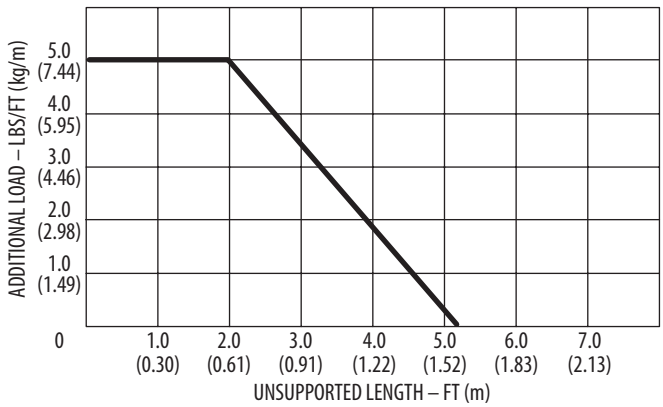
SPECIFICATIONS

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)

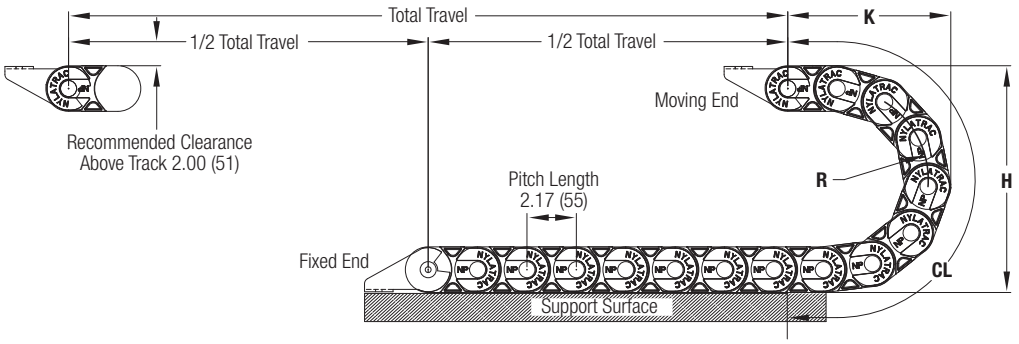
NP SERIES – WEIGHT LOAD



NP SERIES | NYLATRAC® STANDARD (open-style carriers)

CARRIER SIDE VIEW

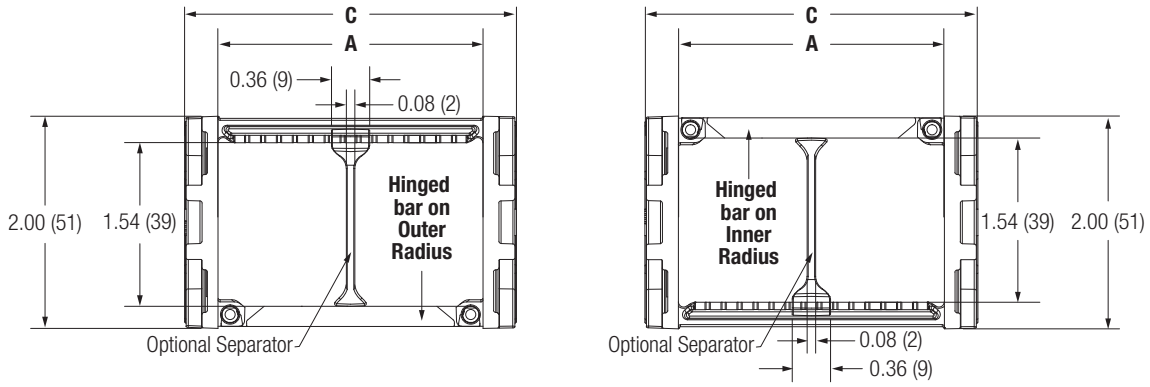
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

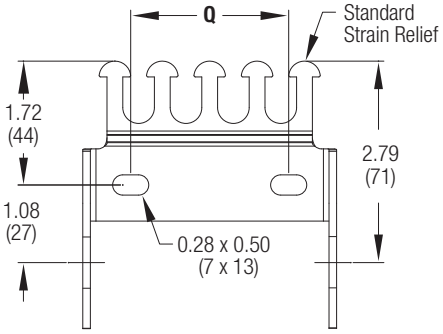
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



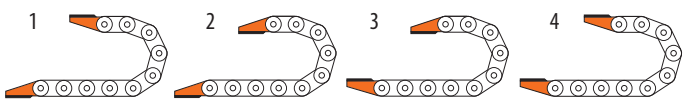
Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



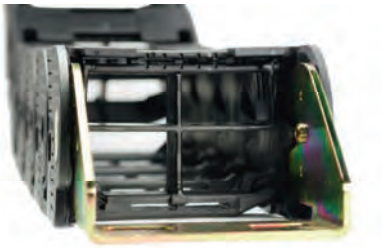
BRACKET ARRANGEMENTS

Standard Mounting Bracket Arrangements



KL SERIES | NYLATRAC® 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

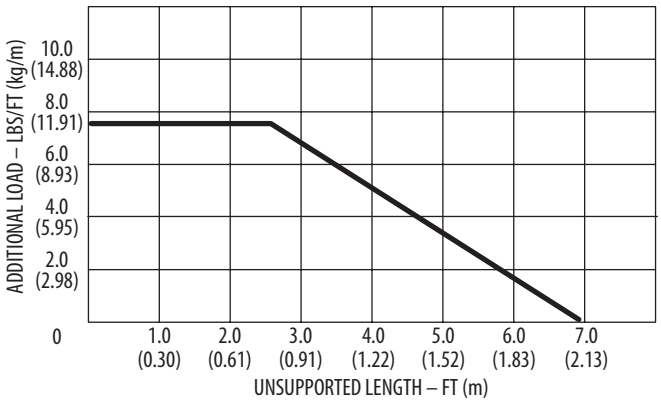
MODEL NO.	A inches (mm)	C inches (mm)	Q inches (mm)	WEIGHT lb/ft (kg/m)
KL200*	2.00 (51)	2.75 (70)	1.05 (27)	1.00 (1.49)
KL1**	3.00 (76)	3.75 (95)	1.88 (48)	0.98 (1.46)
KL2	4.50 (114)	5.25 (133)	3.38 (86)	1.11 (1.65)
KL3	7.00 (178)	7.75 (197)	5.88 (149)	1.48 (2.20)

*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)

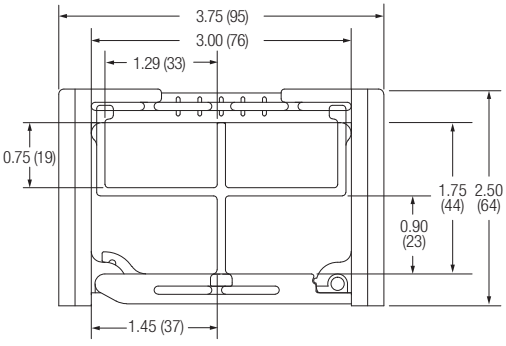
*10 and 15 Height No. with KL200 model only (KL200-10 or KL200-15).

KL SERIES – WEIGHT LOAD



CAVITY DIVIDER CROSS SECTION

Dimensions in inches (mm)



Model KL1 w/ Optional Cavity Divider

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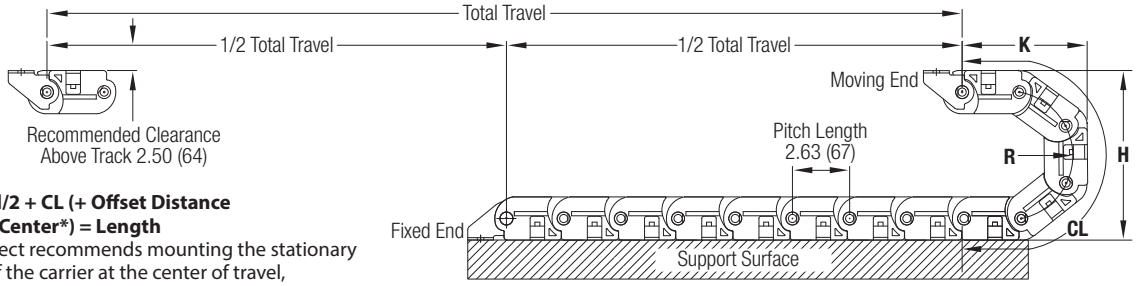
KL SERIES | NYLATRAC® STANDARD (open-style carriers)

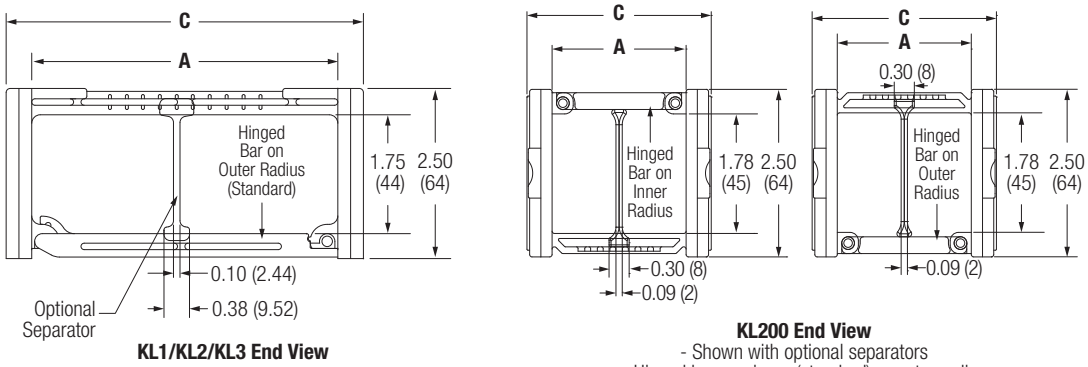
CARRIER SIDE VIEW

Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

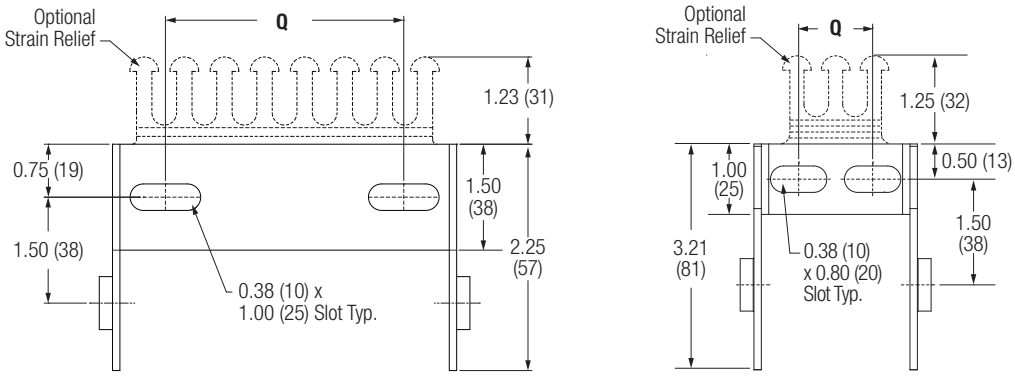


KL1/KL2/KL3 End View

KL200 End View
- Shown with optional separators
- Hinged bars on inner (standard) or outer radius

Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET

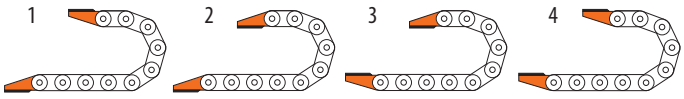


KL1/KL2/KL3 Mounting Bracket

KL200 Mounting Bracket

BRACKET ARRANGEMENTS

Standard Mounting Bracket Arrangements



NSB SERIES | NYLATRAC® 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).

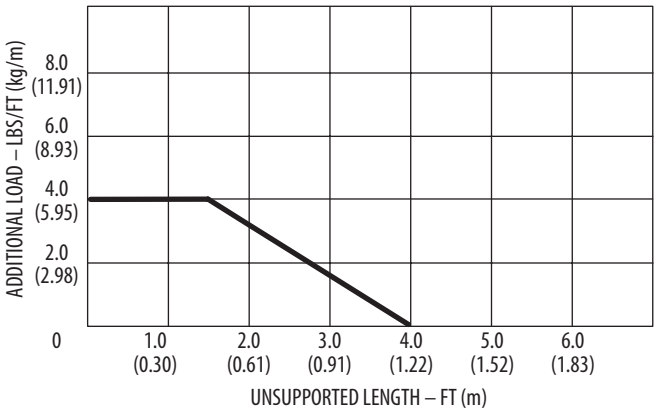
SPECIFICATIONS

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



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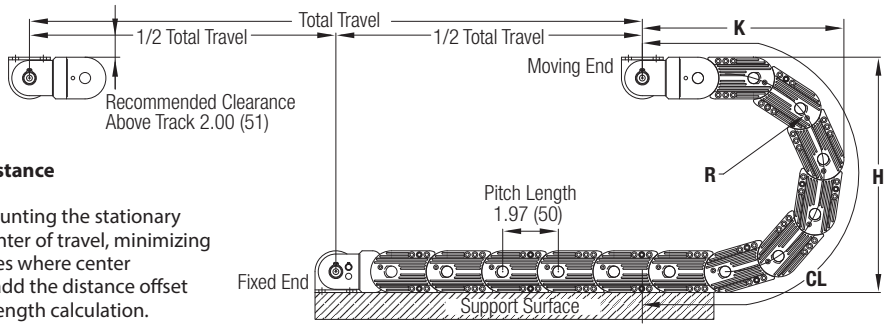
NSB SERIES | NYLATRAC® MODULAR (open-style carriers)

CARRIER SIDE VIEW

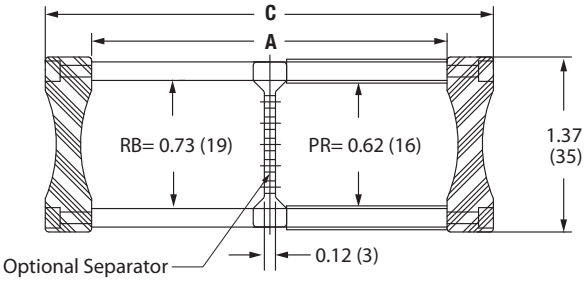
Dimensions in inches (mm)



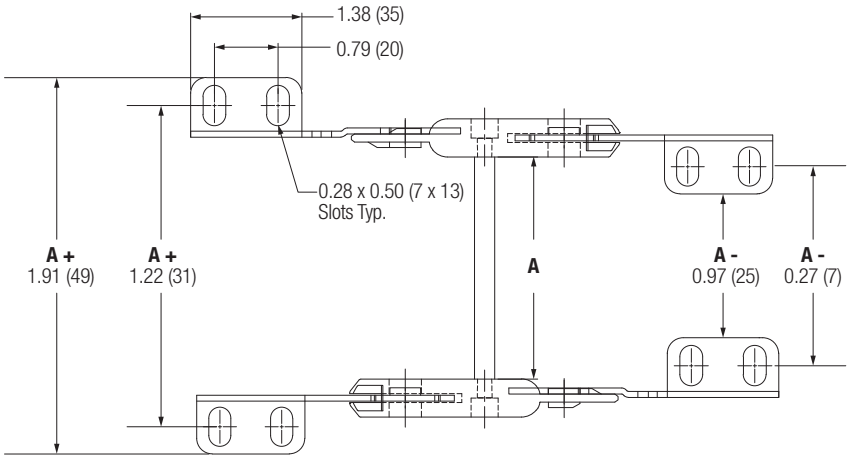
Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

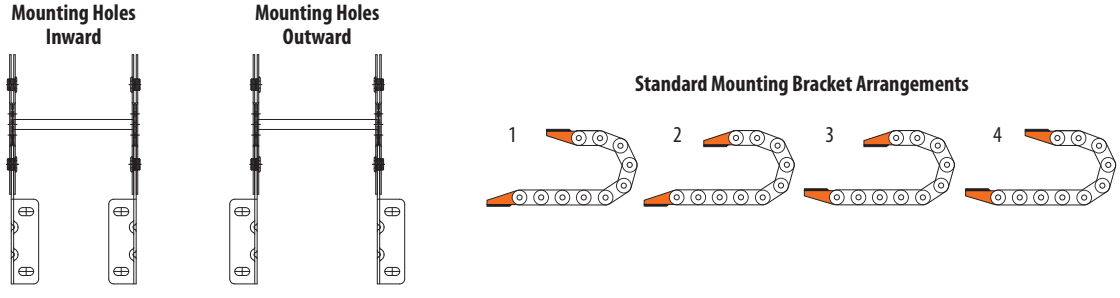
Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill



TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

TSC SERIES | NYLATRAC® 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 Arrange-ment**
	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)
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)

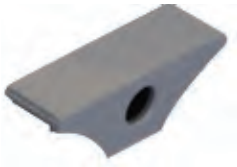
Note: Modular low-friction sliders are optional.

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.

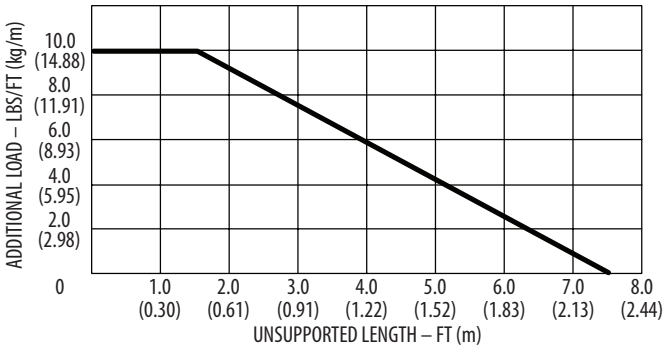
MODULAR LOW-FRICTION SLIDERS



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



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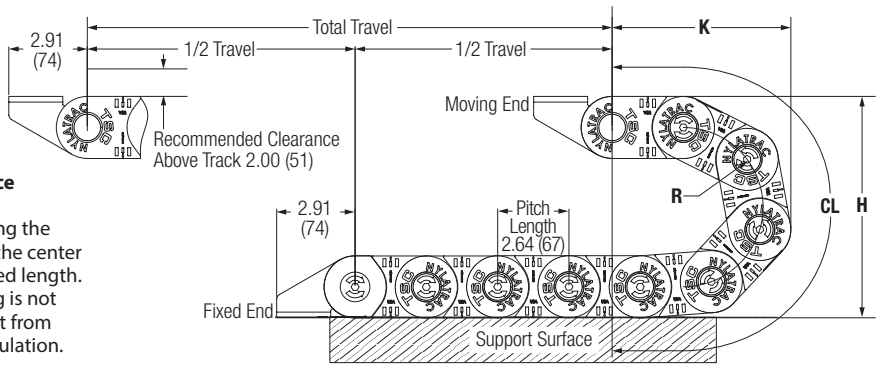
TSC SERIES | NYLATRAC® MODULAR (open- & enclosed-style carriers)

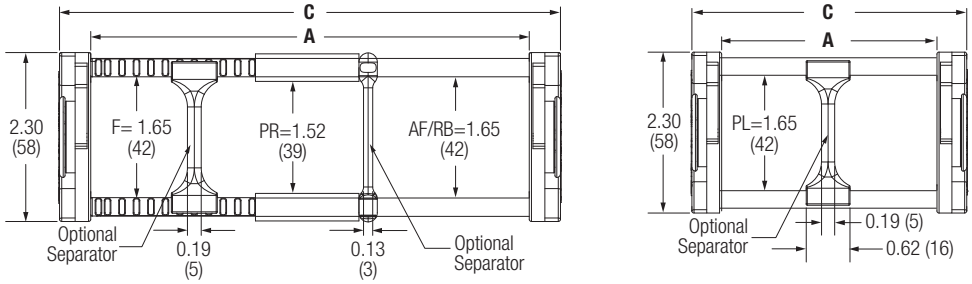
CARRIER SIDE VIEW

Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

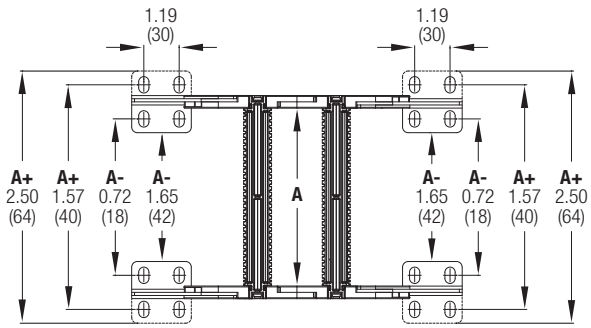


TSC
(Cross bar options: F/PR/RB/AF)

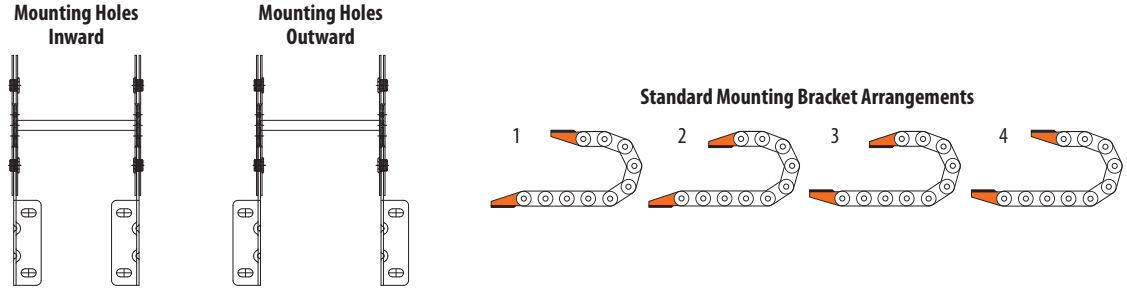
TSCPL
(w/ Plastic Lids)

Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



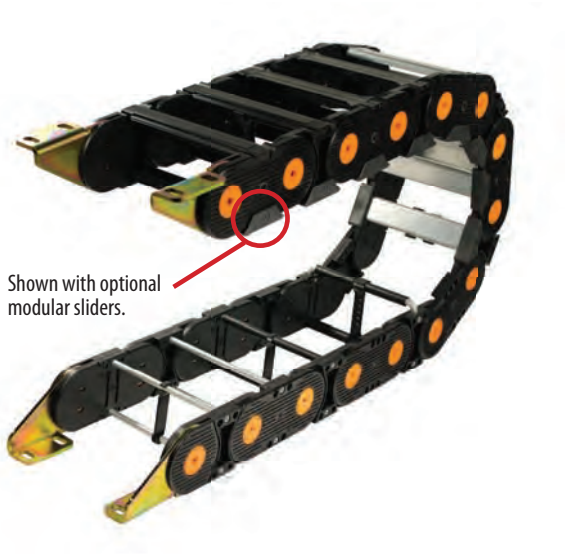
TS SERIES | NYLATRAC® MODULAR (open- & enclosed-style carriers)

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

*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)

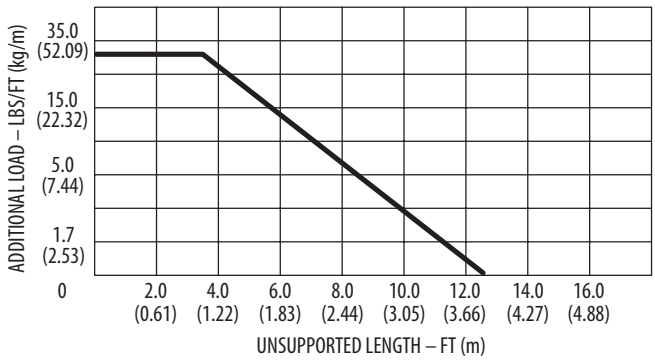
***The following options are not available with 110 and 140 curve heights: modular sliders, aluminum armor plates, plastic lids.

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



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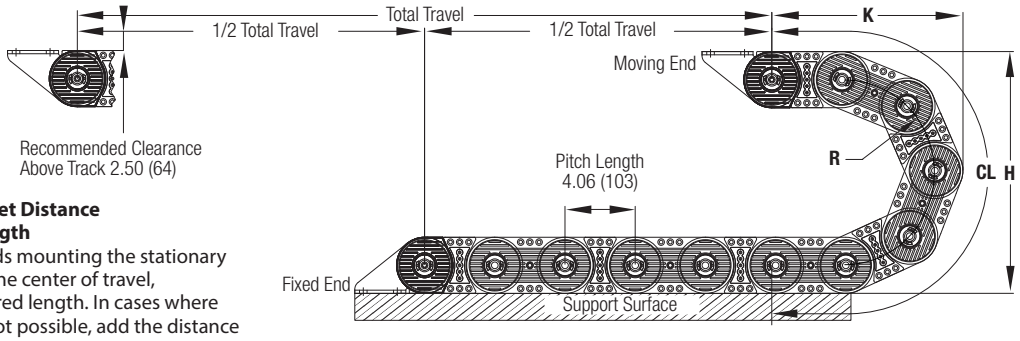
TS SERIES | NYLATRAC® MODULAR (open- & enclosed-style carriers)

CARRIER SIDE VIEW

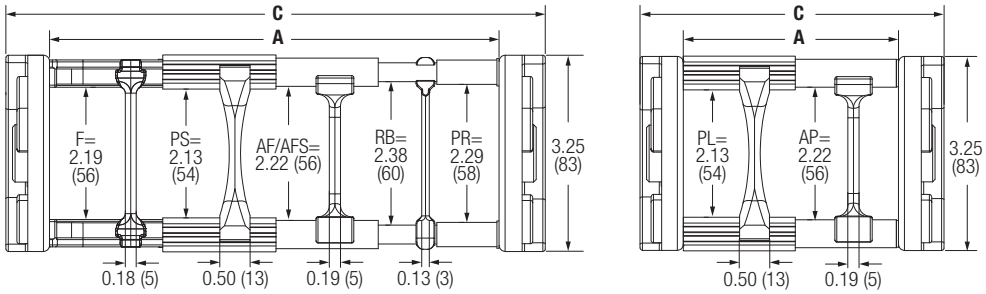
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



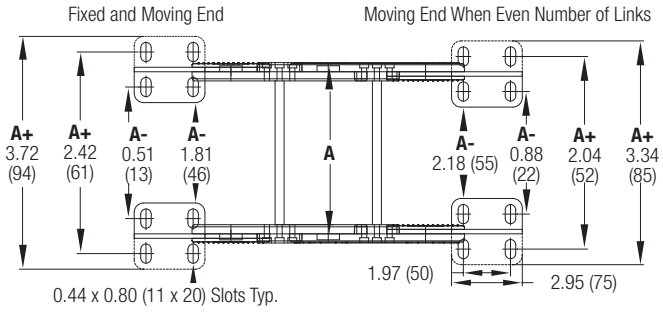
Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill

Note: Cross bars shown with optional separators

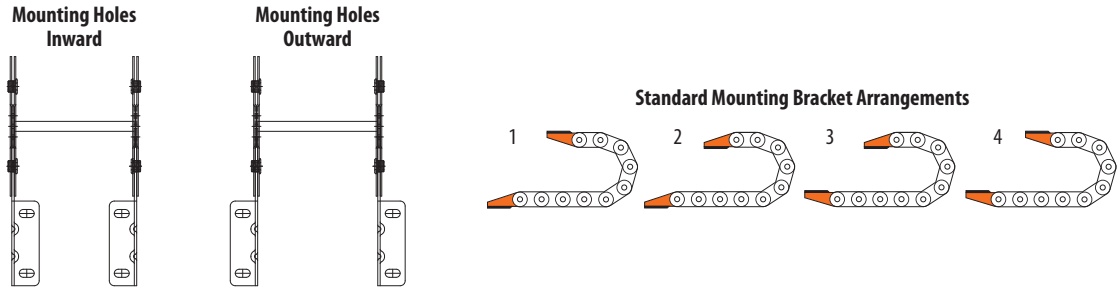
TS
(Cross bar options: F/PS/AF/AFS/RB/PR)

TSPL/TSAP
(w/ Plastic or Aluminum Lids)

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

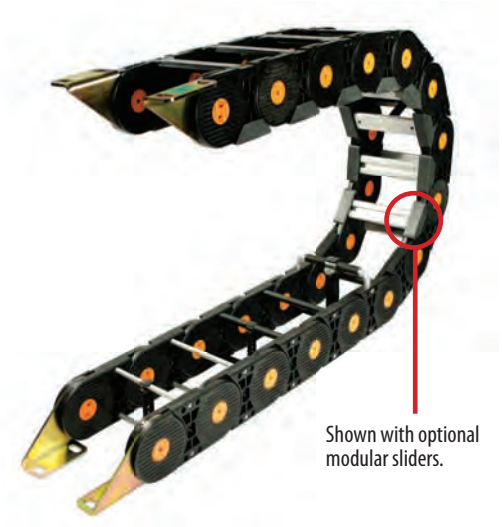
TL SERIES | NYLATRAC® MODULAR (open- & enclosed-style carriers)

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)

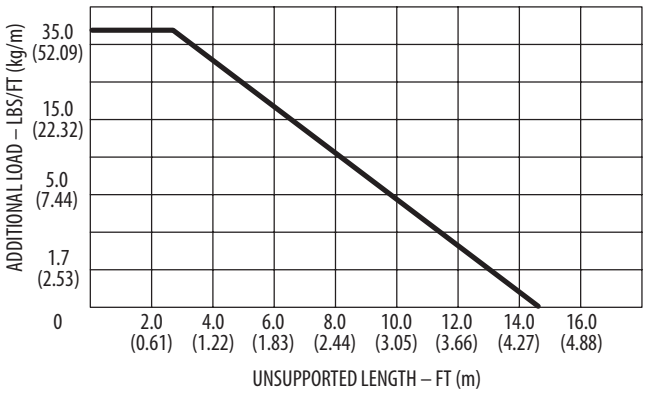
*The following options are not available with the 160 curve height: modular sliders, aluminum armor plates, plastic lids.

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



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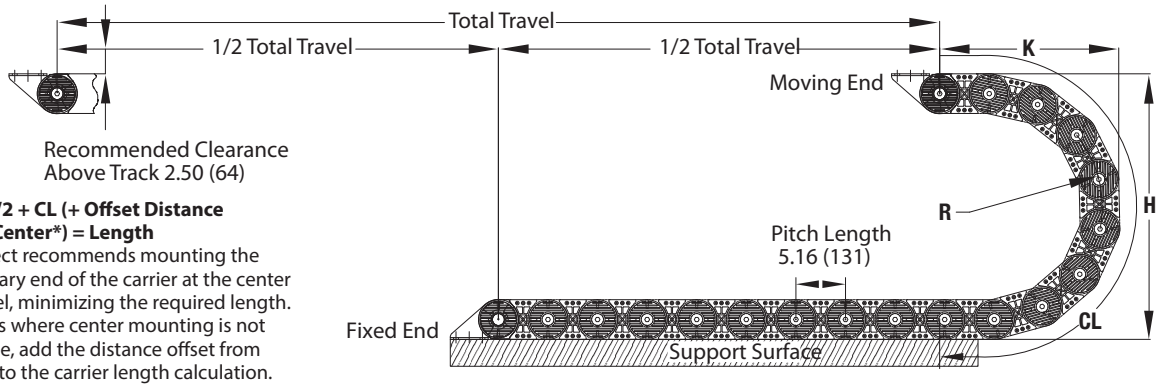
TL SERIES | NYLATRAC® MODULAR (open- & enclosed-style carriers)

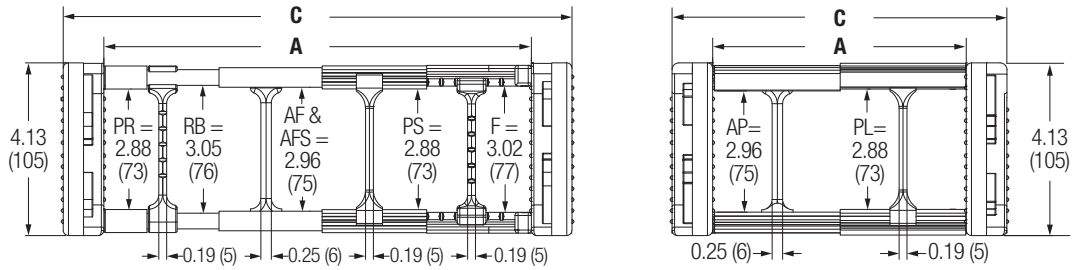
CARRIER SIDE VIEW

Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



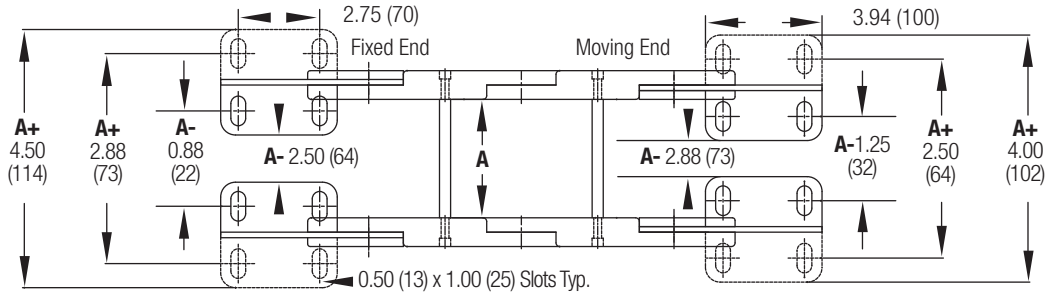
Cross bars shown with optional separators

TL
(Cross bar options: F/PS/AF/AFS/RB/PR)

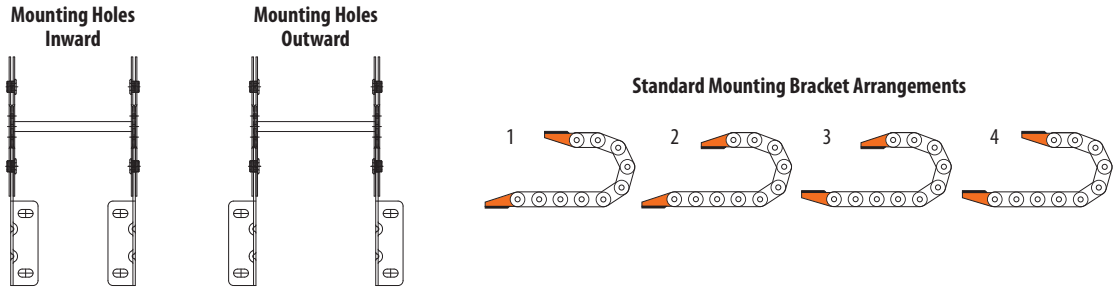
TLPL/TLAP
(w/ Plastic or Aluminum Lids)

Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



NXL SERIES | NYLATRAC® 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

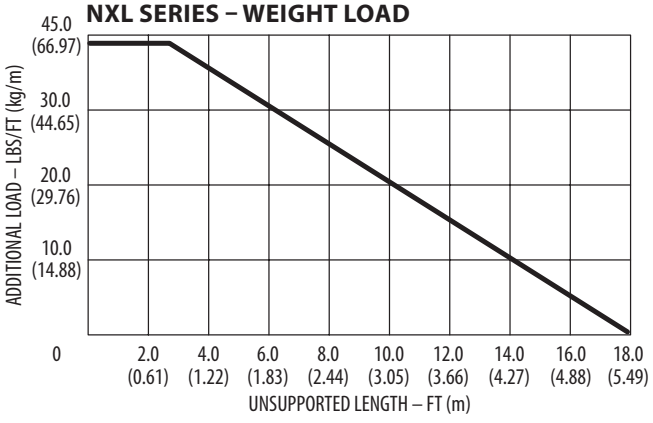
MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
NXL-CC/AF/PR/RB	Customer Specified	A + 2.50 (64)	6.34 (9.43)
NXL-AP	Customer Specified	A + 2.50 (64)	10.40 (––)

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.

NXL SERIES – WEIGHT LOAD



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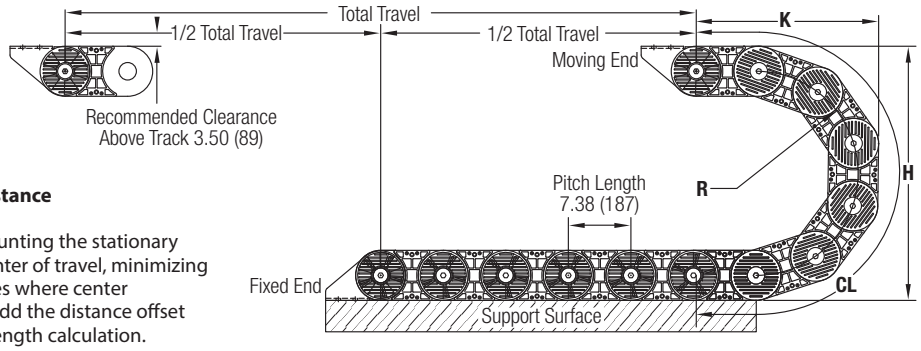
NXL SERIES | NYLATRAC® MODULAR (open- & enclosed-style carriers)

CARRIER SIDE VIEW

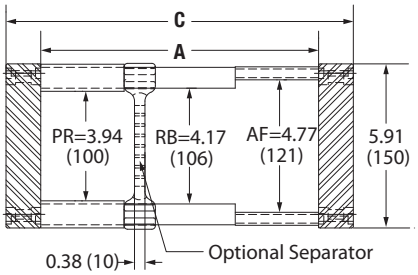
Dimensions in inches (mm)



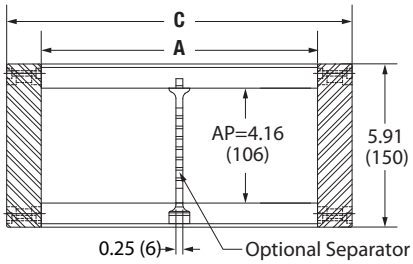
Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill

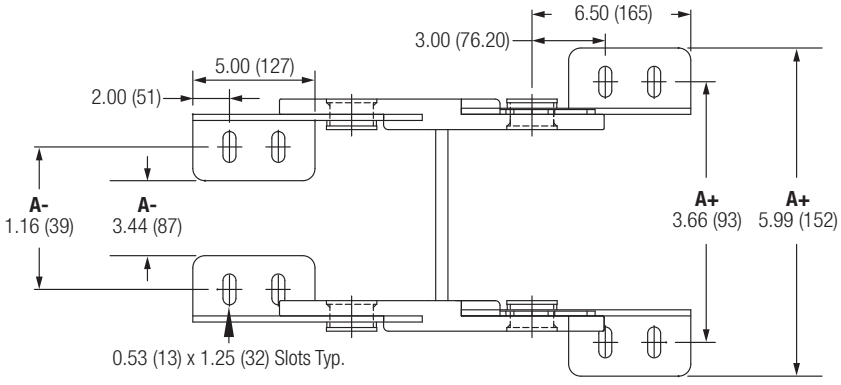


NXL
(Cross bar options: PR/RB/AF)

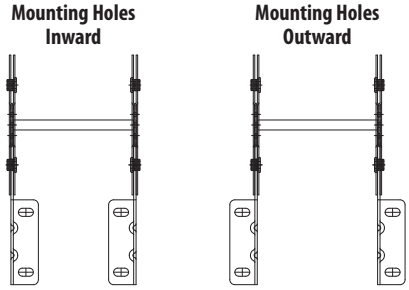


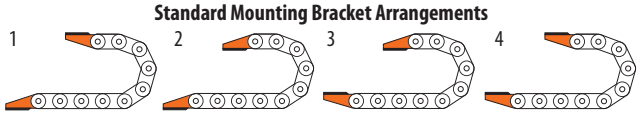
NXLAP
(w/Aluminum Lids)

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS





KOE SERIES | NYLATUBE® STANDARD (enclosed-style carriers)

KOE1-30 KOE5-10

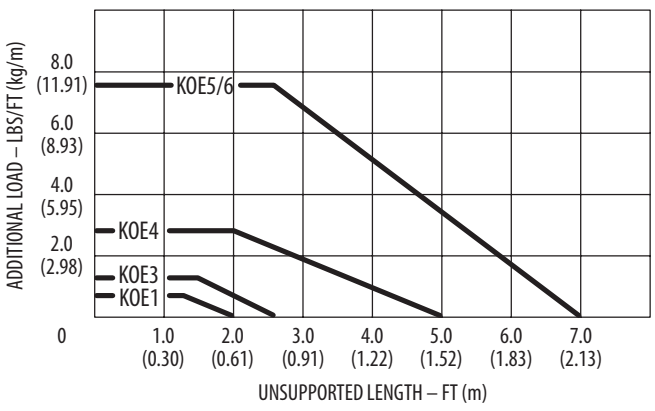
Specify part number with dashes Example: KOE1-30-12	Model	Height	Length
	KOE1	30	12"

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)

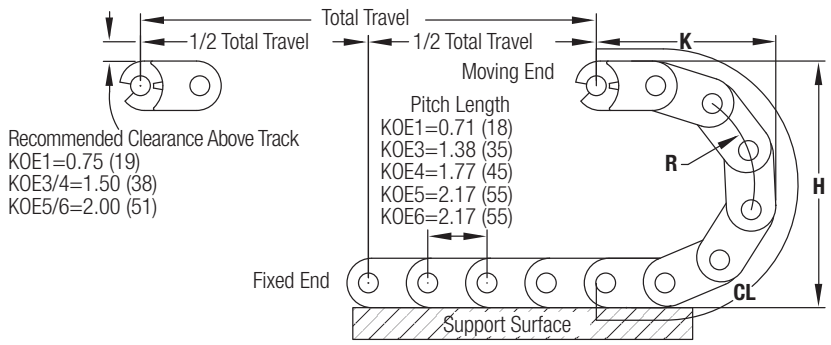
KOE SERIES – WEIGHT LOAD



KOE SERIES | NYLATUBE® STANDARD (enclosed-style carriers)

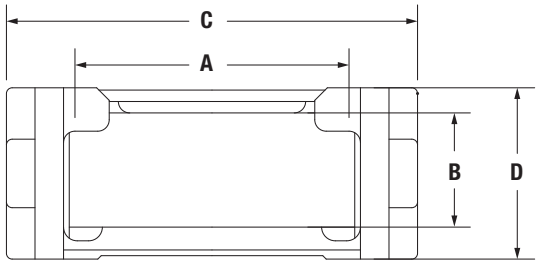
CARRIER SIDE VIEW

Dimensions in inches (mm)



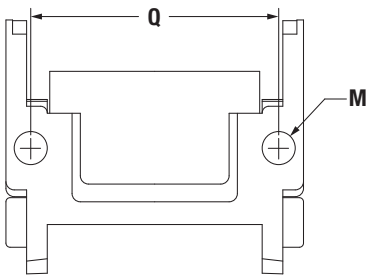
Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length.
In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW: MOUNTING HOLE DIMENSIONS



N SERIES | NYLATUBE® 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.

N3-8 with End Flanges: Type B/Type A

SPECIFICATIONS

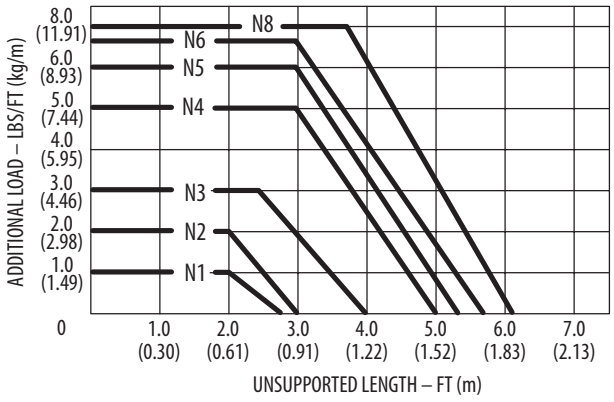
MODEL NO.	A inches (mm)	A1 inches (mm)	B inches (mm)	C inches (mm)	D inches (mm)	WEIGHT lb/ft (kg/m)
N1	0.90 (23)	—	0.90 (23)	1.38 (35)	1.38 (35)	0.50 (0.74)
N2	1.34 (34)	—	0.90 (23)	1.97 (50)	1.38 (35)	0.60 (0.89)
N3-D*	2.48 (63)	1.18 (30)	0.90 (23)	2.95 (75)	1.38 (35)	0.80 (1.19)
N4	1.42 (36)	—	1.34 (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)

*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.

N SERIES – WEIGHT LOAD



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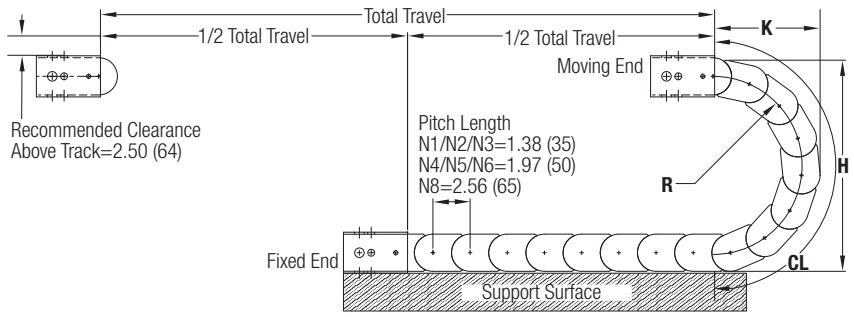
N SERIES | NYLATUBE® STANDARD (enclosed-style carriers)

CARRIER SIDE VIEW

Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

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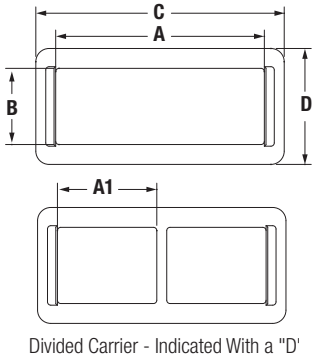
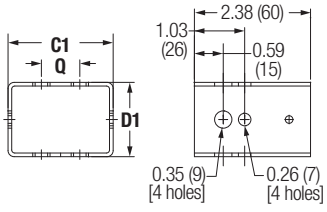
CARRIER CROSS SECTION



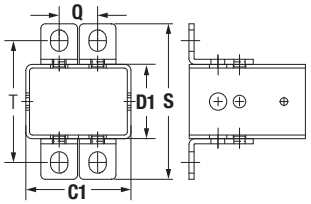
Divided Carrier - Indicated With a "D'

Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill

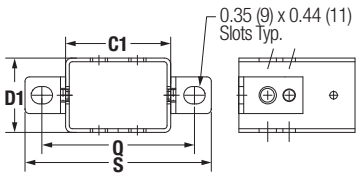
MOUNTING FLANGE OPTIONS



Standard Flange



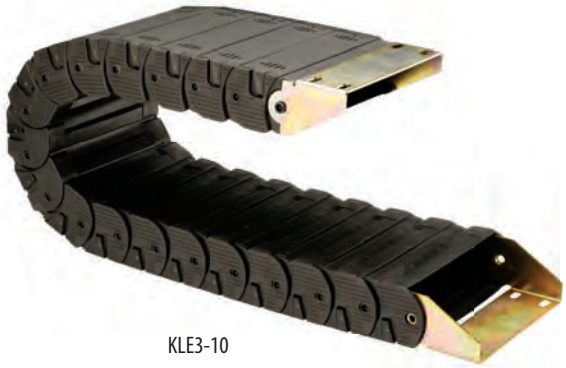
Type A Flange



Type B Flange

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)

KLE SERIES | NYLATUBE® STANDARD (enclosed-style carriers)



KLE3-10

KLE1-10

Specify part number with dashes Example: KLE1-10-36-STD/A	Model	Height	Length	Flange Arrangement*
	KLE1	10	36"	STD/A

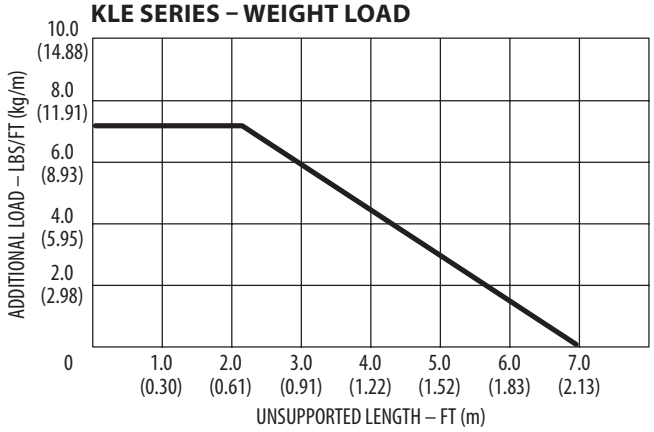
*Specify for each: fixed end/moving end.

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)

KLE SERIES – WEIGHT LOAD



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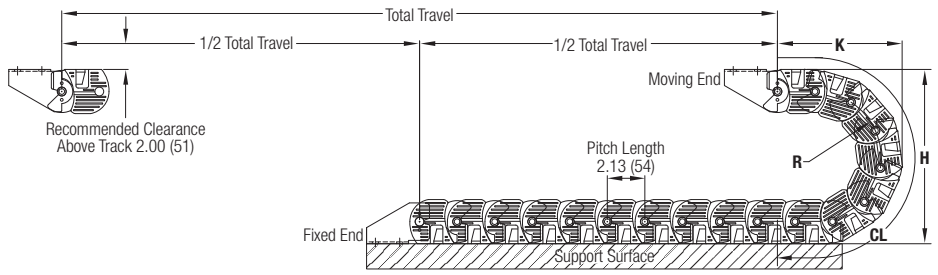
KLE SERIES | NYLATUBE® STANDARD (enclosed-style carriers)

CARRIER SIDE VIEW

Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

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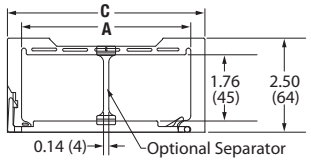
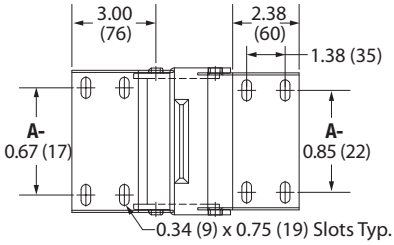
CARRIER CROSS SECTION

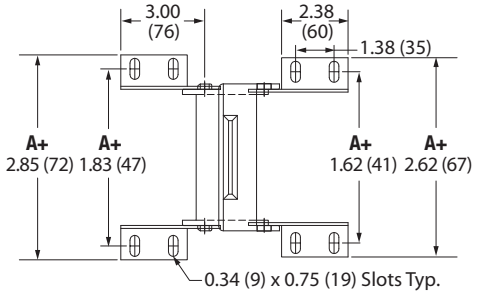


Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill

MOUNTING FLANGE OPTIONS

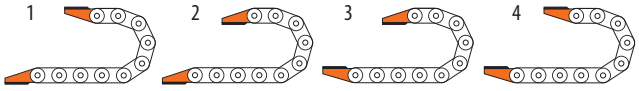


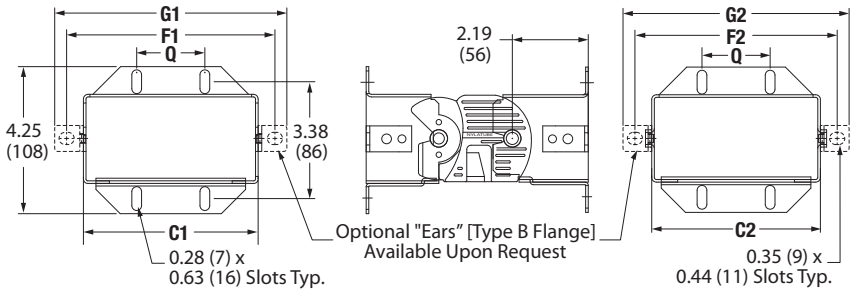
Standard Bracket (Mounting Holes Inward)



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]

				Dimensions for optional Type B Flange with "ears"			
FLANGE DIMENSIONS	**Q** inches (mm)	**C1** inches (mm)	**C2** inches (mm)	**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".

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 102-105)
- 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.

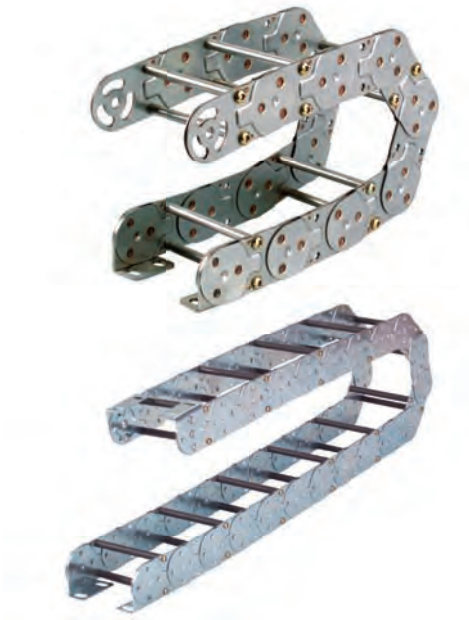
SA SERIES

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)

GORTRAC® STEEL | OPEN- & ENCLOSED-STYLE CARRIERS

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)

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)

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)

GORTRAC® STEEL | OPEN- & ENCLOSED-STYLE CARRIERS

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)

GORTRAC® 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® 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

METAL CARRIERS | QUICK SELECTION GUIDE

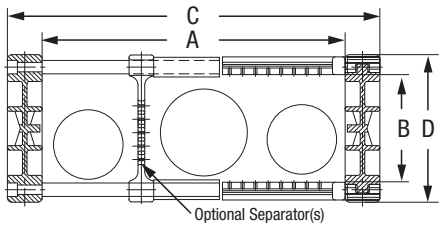
MODEL NO.	INNER HEIGHT Dimension B inches (mm)	INNER WIDTH RANGE Dimension A inches (mm)	OUTER HEIGHT Dimension D inches (mm)	OUTER WIDTH RANGE Dimension C inches (mm)	LINK PITCH inches (mm)
GORTRAC® OPEN-STYLE METAL CARRIERS					
SA	.89 (22)	Customer Specified	1.00 (25)	1.29 (33)	1.25 (32)
SB*	.62 (16) - .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)
MRC*	1.08 (27) - 1.25 (32)	Customer Specified	2.00 (51)	Specified Width + .62 (16)	3.00 (76)
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)
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').					
GORTRAC ENCLOSED-STYLE METAL CARRIERS					
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)
GORTUBE® ENCLOSED-STYLE METAL CARRIERS					
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

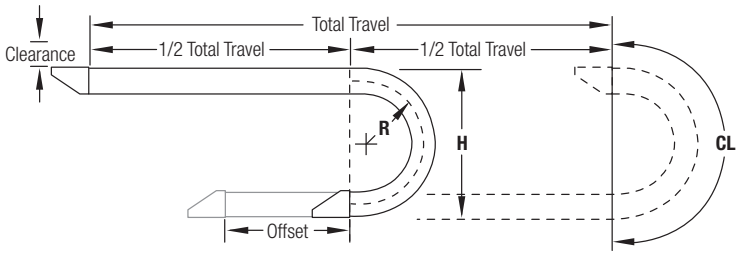
B = Cavity Height (determined by the outer diameter of the largest cable/hose + safety factor)

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

C = Outer Width

D = Outer Height





Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

METAL CARRIERS | QUICK SELECTION GUIDE

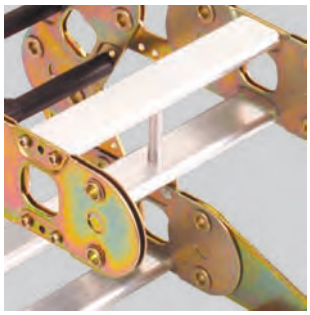
MINIMUM BENDING RADIUS Dimension R inches (mm)	MOUNTING HEIGHT RANGE Dimension H inches (mm)	MAXIMUM UNSUPPORTED SPAN feet	SEPARATORS AVAILABLE	PAGE NUMBER(S)	MODEL NO.
1.25 (32)	3.50 (89)	6.2	No	162-163	SA
2.06 (52)	5.50 (140)	7	✓	164-165	SB*
2.75 (70) - 5.62 (143)	7.50 (191) - 13.25 (337)	10.5	✓	164-165	SC*
2.75 (70) - 7.50 (191	7.50 (191) - 17.00 (432)	15.8	✓	166-167	MRC*
2.00 (51) - 5.63 (143)	6.00 (152) - 13.25 (337)	FB 11.8 / RB 12.75	No	168-169	GX*
3.47 (88) - 12.06 (306)	10.13 (257) - 27.31 (694)	21.25	✓	170-171	SX*
4.00 (102) 12.25 (311)	11.00 (279) - 27.50 (699)	21.75	✓	172-173	SRC*
5.50 (140) - 24.25 (616)	15.00 (381) - 52.50 (1334)	24	✓	172-173	LRC*
10.05 (255) - 29.55 (750)	26.00 (660) - 65.00 (1651)	31.5	✓	176-177	XL6*
10.00 (254) - 27.00 (686)	26.00 (660) - 60.00 (1524)	28	✓	174-175	XX6*
10.57 (268) - 36.07 (916)	29.00 (737) - 80.00 (2032)	35	✓	178-179	XL8*
19.08 (485) - 35.08 (891)	48.00 (1219) - 80.00 (2032)	40	✓	178-179	XL10*
5.25 (133) - 12.25 (311)	13.50 (343) - 27.50 (699)	21.25 ft	✓	172-173	SRC-AP (Aluminum Armor Plate)
8.00 (203) - 24.25 (616)	20.00 (508) - 52.50 (1334)	24 ft	✓	172-173	LRC-AP (Aluminum Armor Plate)
15.80 (401) - 29.55 (750)	37.50 (953) - 65.00 (1651)	31.5 ft	✓	176-177	XL6-AP (Aluminum Armor Plate)
1.80 (46) - 13.80 (351)	4.40 (112) - 30.70 (780)	Varies	No	180-183	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 for 2D and 3D drawings.

CROSSBARS, WINDOW EXTENDERS, ARMOR PLATES

Aluminum round bar

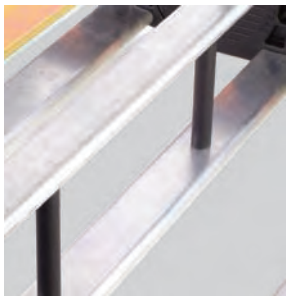


Bolted aluminum flat bar

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

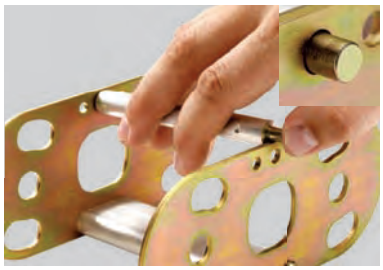


Bolted separator with PVC Poly Roller

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

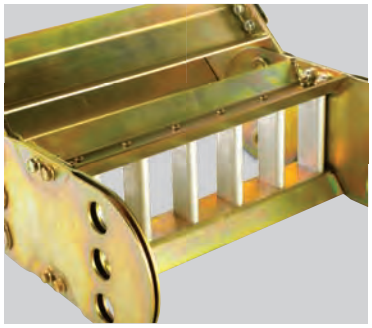
WINDOW EXTENDERS

- 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

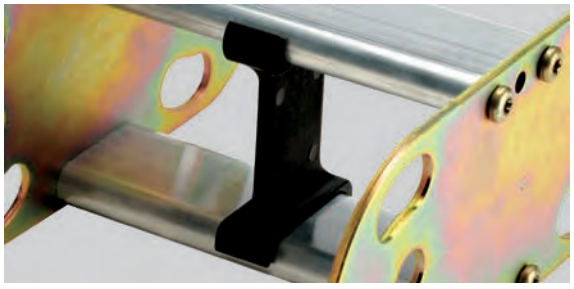
- Offer maximum protection against hot chips and heavy debris
- Ideal for severe and challenging applications (e.g., machine tools, mills, foundries)

SEPARATORS, CABLE/HOSE SLEEVES, MACHINED CABLE/HOSE BARS



CAVITY SEPARATION

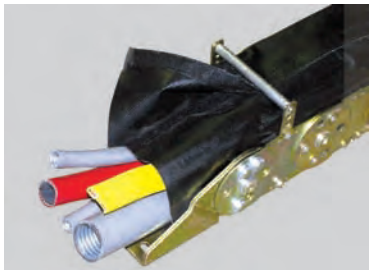
In applications with multiple cables and hoses, cavity separation is a simple, cost-effective method for preventing wear and entanglement. To achieve optimal separation, it is important that each individual compartment be less than twice the height of the cables/hoses inside. This will prevent them from 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.

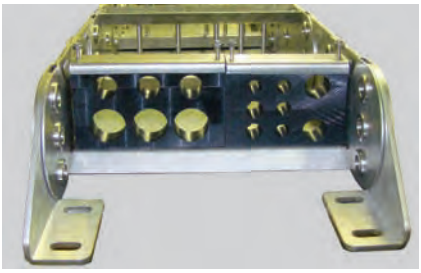


CABLE/HOSE SLEEVES

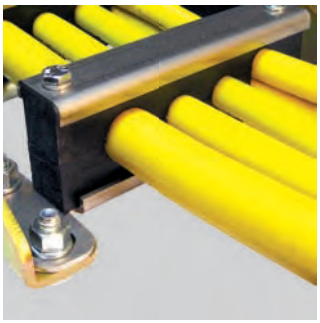
- Simple, reliable and cost-effective method to protect dynamic cables and hoses, either in a carrier or by themselves
- Available with zipper, or hook and loop fasteners
- Wide variety of materials for diverse application requirements
- Provides protection from elements (ozone, heat and liquids)
- Increases 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



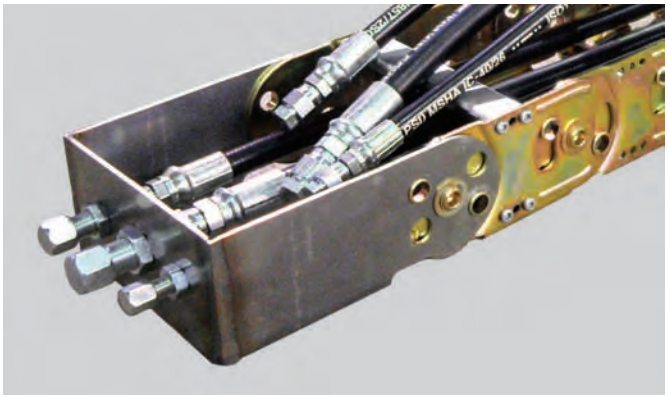
Custom UHMW Clamp

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 96-97 for more information and specifications.

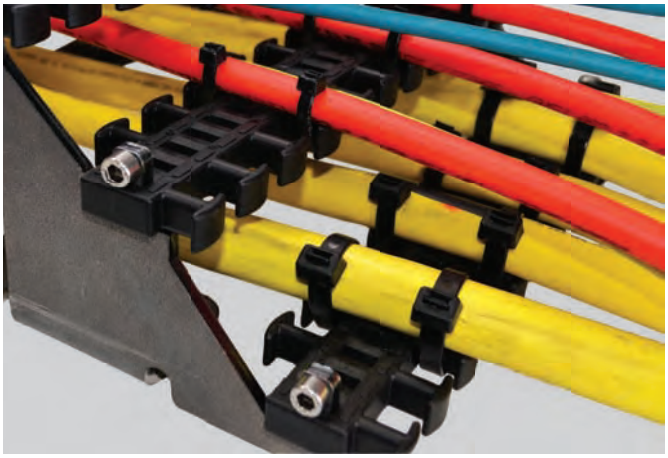


Custom mounting bracket with integrated bulk-head plate

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® 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: SA1-35-15-#1 IN	Model	Height	Length	Bracket Arrangement*
	SA1	35	15"	#1 IN

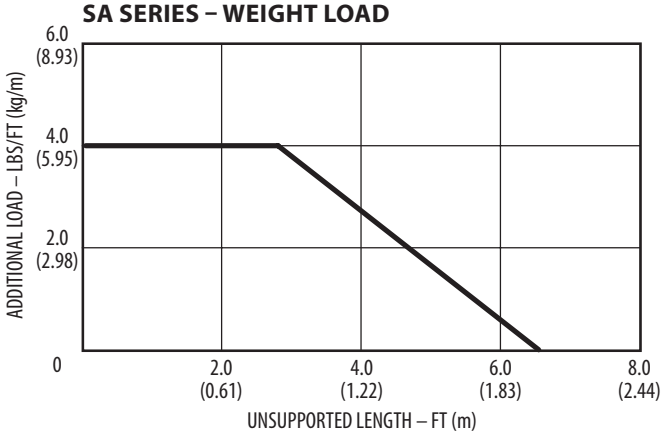
*Specify bracket flange: inward (IN) or outward (OUT).

SPECIFICATIONS

MODEL NO.	A inches (mm)	C inches (mm)	WEIGHT lb/ft (kg/m)
SA1	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)

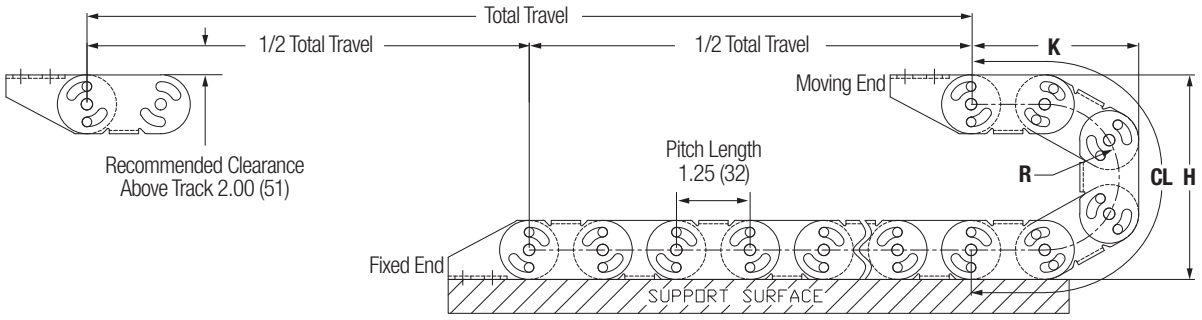
SA SERIES – WEIGHT LOAD



SA SERIES | GORTRAC® STEEL (open-style carriers)

CARRIER SIDE VIEW

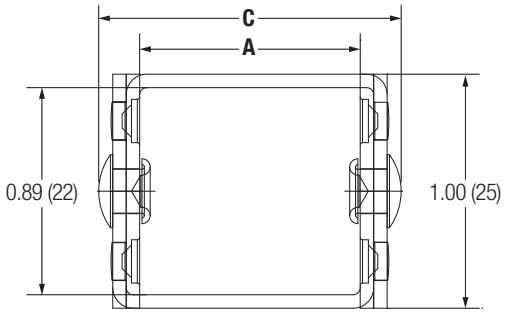
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

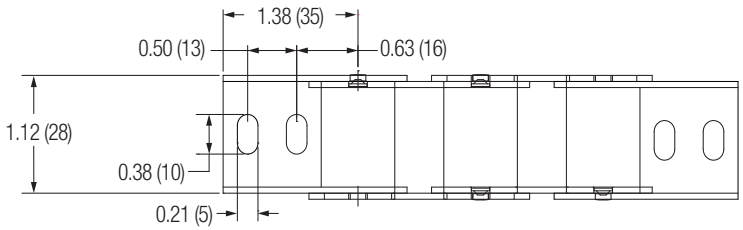
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



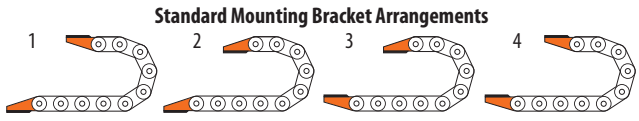
Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



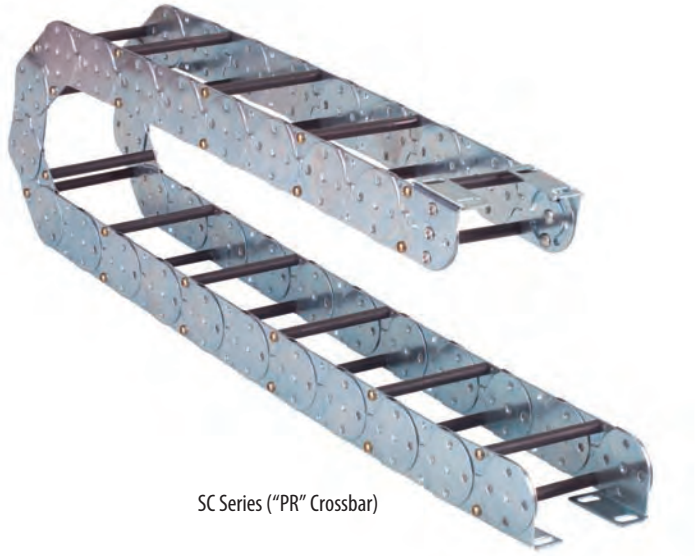
Dimensions Typ. Both Ends

BRACKET ARRANGEMENTS



SB/SC SERIES | GORTRAC® 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"	#1 IN

*Specify bracket flange: inward (IN) or outward (OUT).

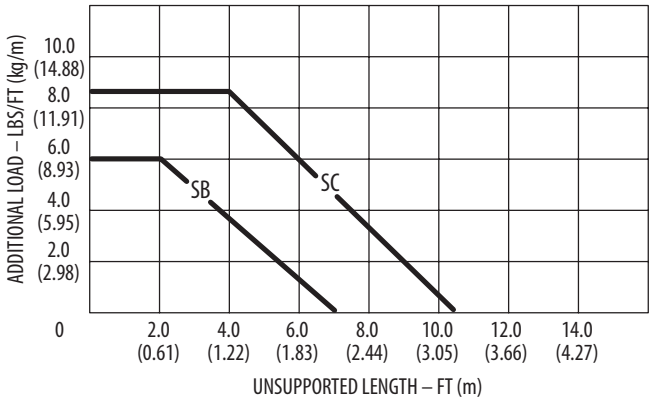
SPECIFICATIONS

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



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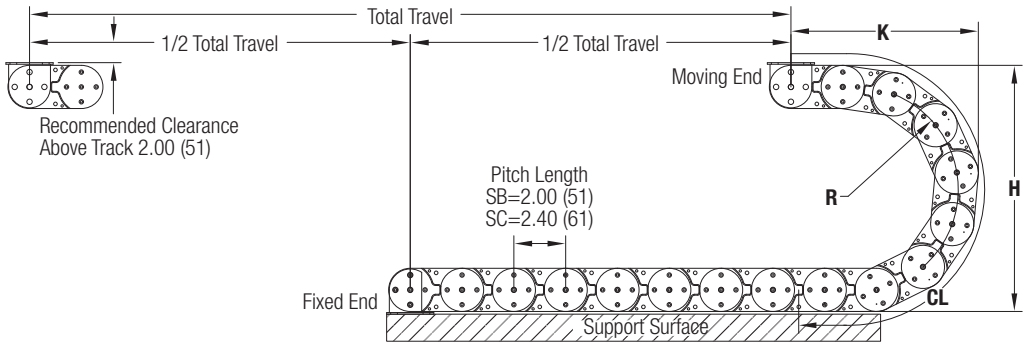
SB/SC SERIES | GORTRAC® STEEL (open-style carriers)

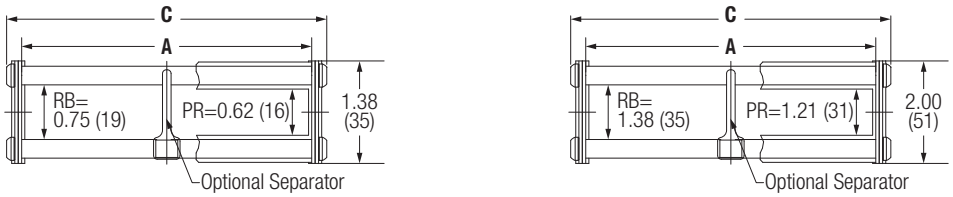
CARRIER SIDE VIEW



Travel/2 + CL (+ Offset Distance From Center*) = Length

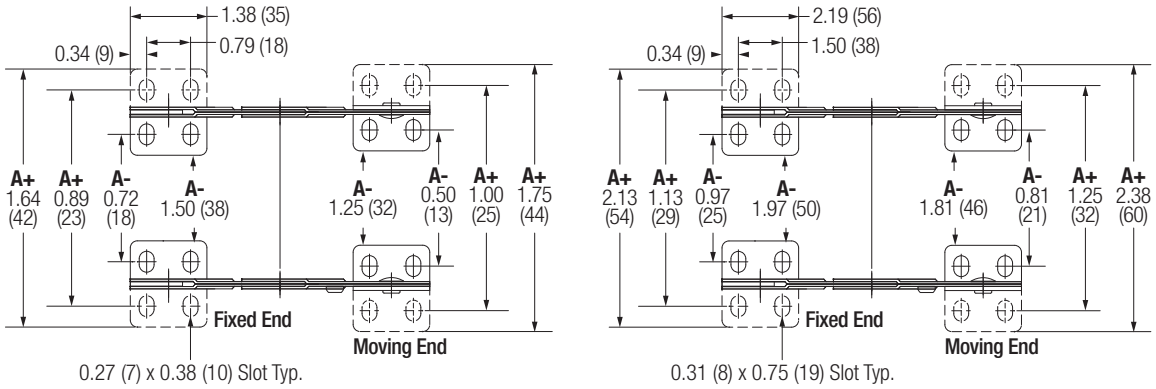
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

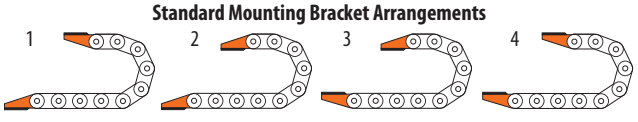


Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

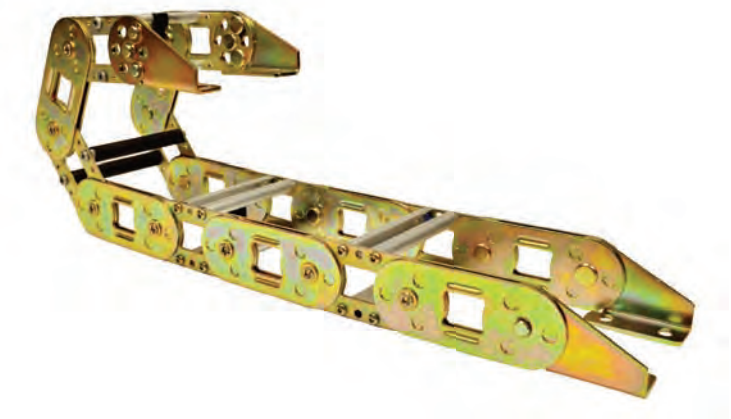
TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



MRC SERIES | GORTRAC® 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).

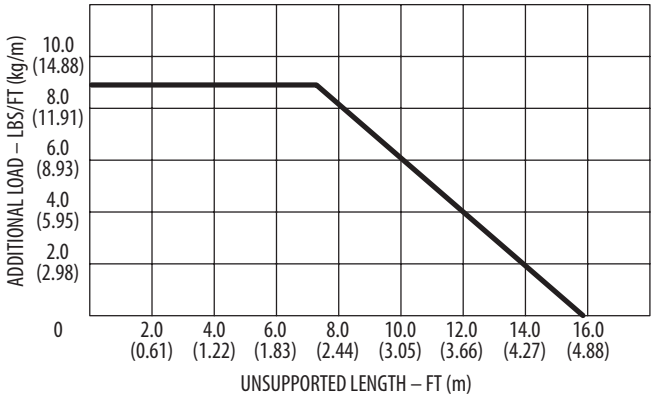
SPECIFICATIONS

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)

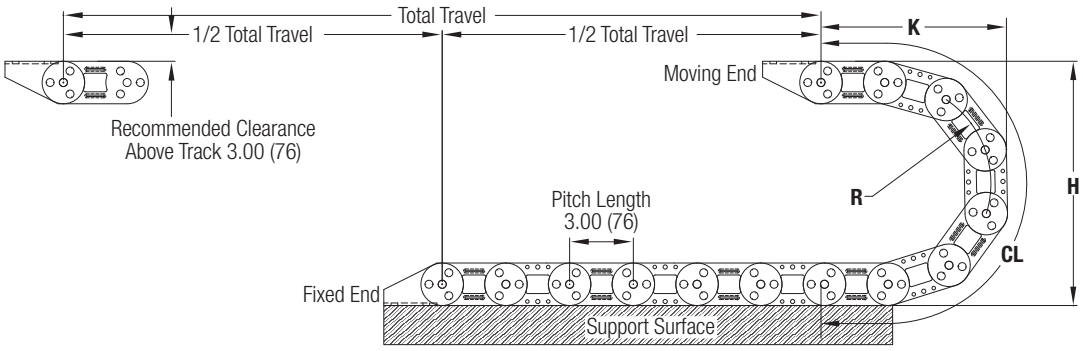
MRC SERIES – WEIGHT LOAD



MRC SERIES | GORTRAC® STEEL (open-style carriers)

CARRIER SIDE VIEW

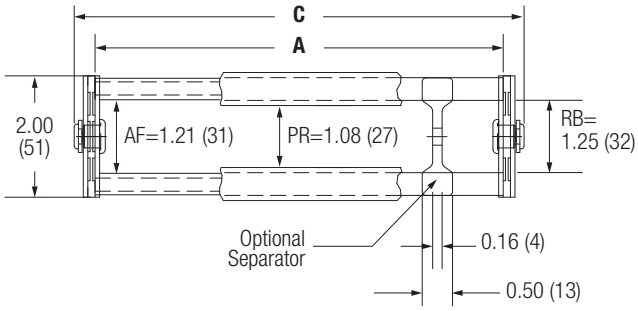
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

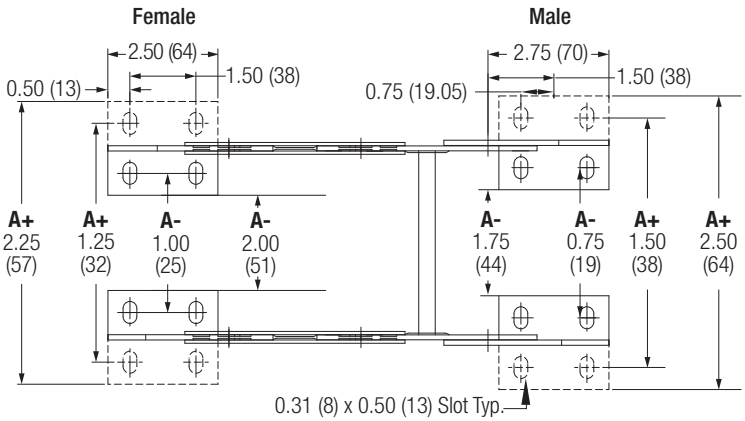
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

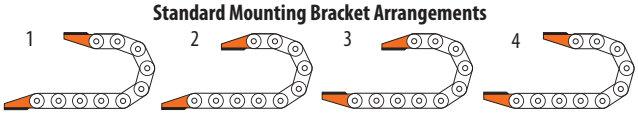


Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



GX SERIES | GORTRAC® 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).

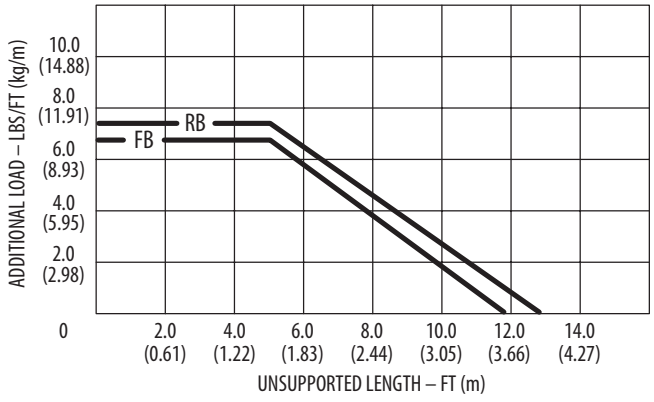
SPECIFICATIONS

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)

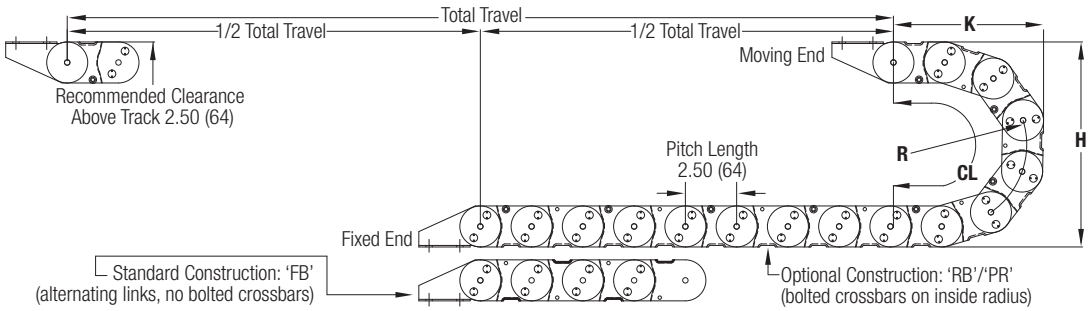
GX SERIES – WEIGHT LOAD



GX SERIES | GORTRAC® STEEL (open-style carriers)

CARRIER SIDE VIEW

Dimensions in inches (mm)

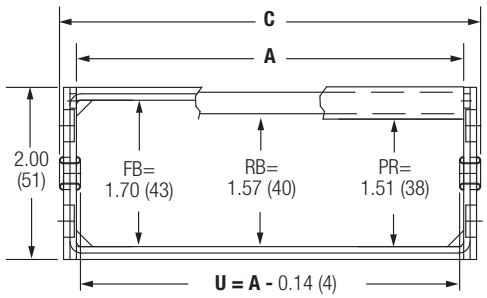


Travel/2 + CL (+ Offset Distance From Center*) = Length

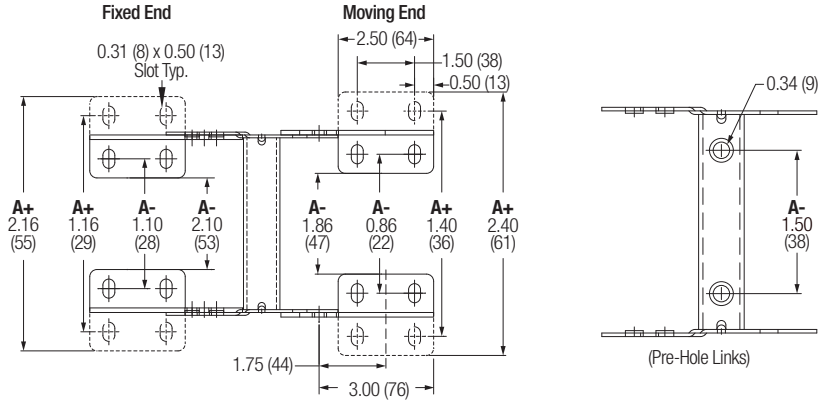
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

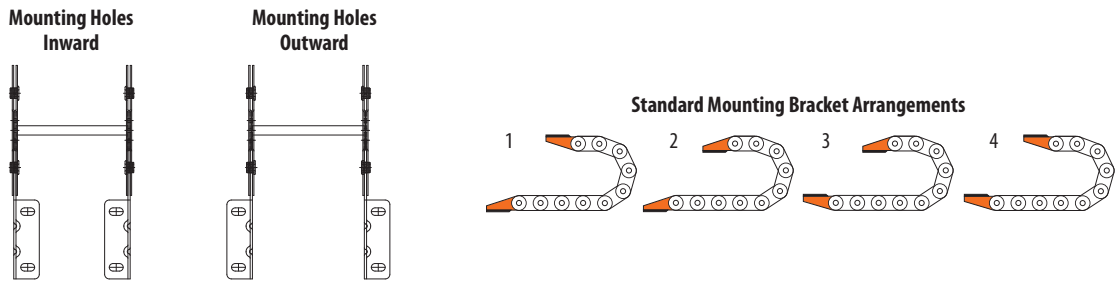
Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill



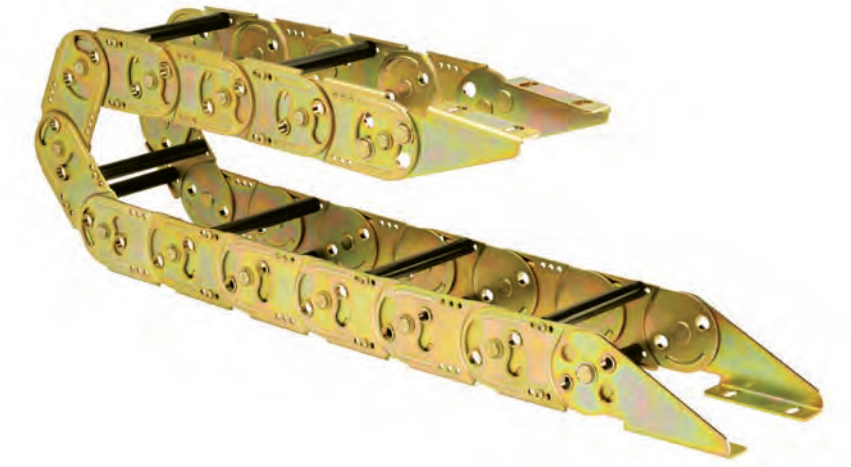
TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



SX SERIES | GORTRAC® 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).

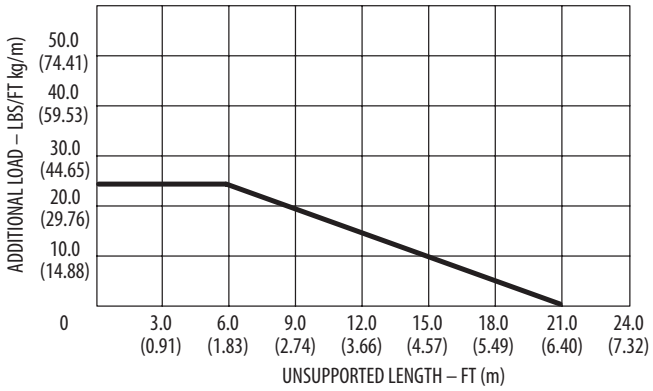
SPECIFICATIONS

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)

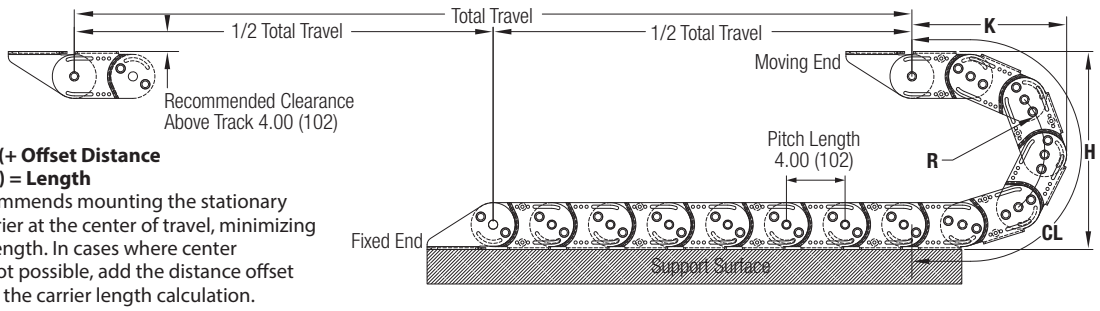
SX SERIES – WEIGHT LOAD



SX SERIES | GORTRAC® STEEL (open-style carriers)

CARRIER SIDE VIEW

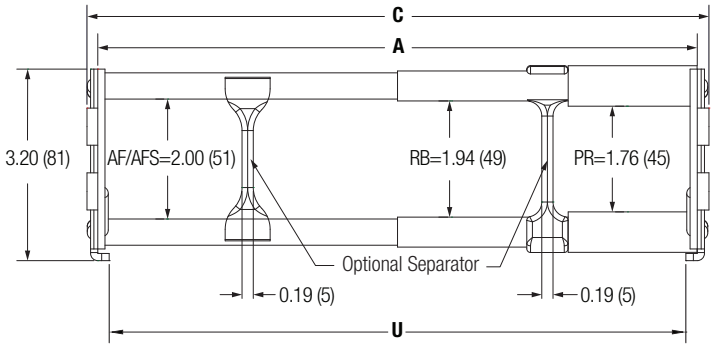
Dimensions in inches (mm)



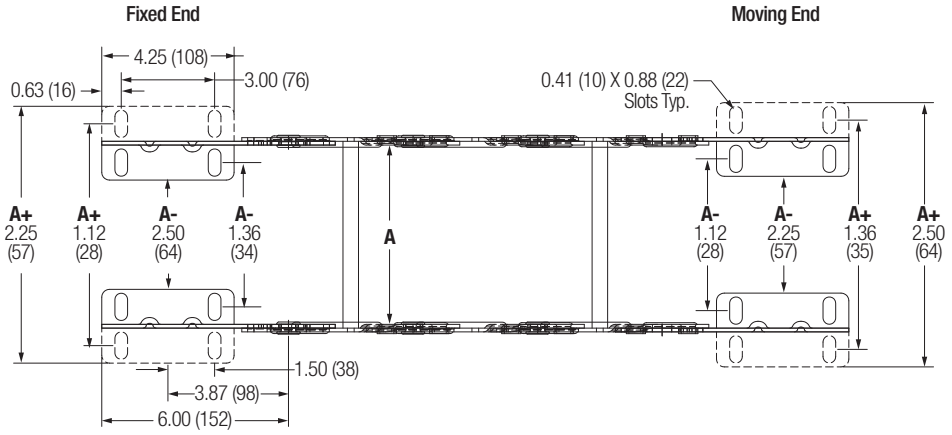
Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

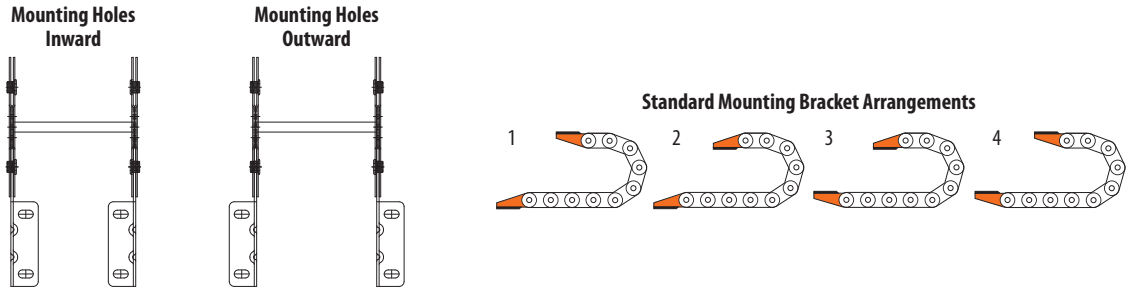
Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill



TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



SRC/LRC SERIES | GORTRAC® 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

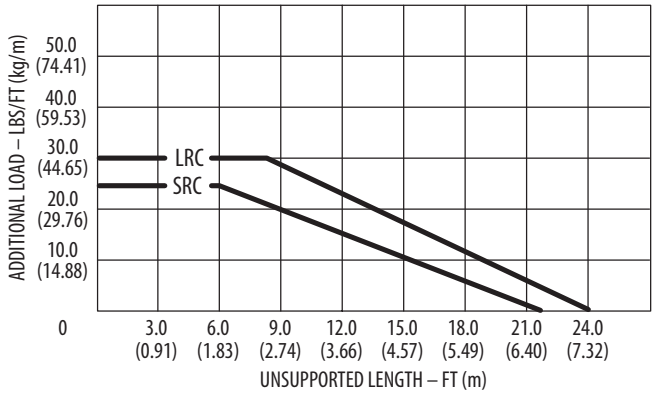
MODEL NO.	A inches (mm)	C inches (mm)	U (USABLE WIDTH) inches (mm)	WEIGHT lb/ft (kg/m)
SRC	Customer Specified	A + 0.69 (17)	A - 0.28 (7)	5.00 (7.44)
LRC	Customer Specified	A + 0.69 (17)	A - 0.40 (10)	6.00 (8.93)

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



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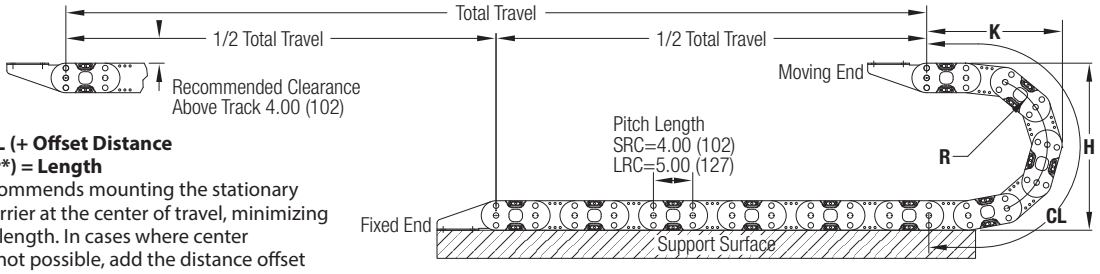
SRC/LRC SERIES | GORTRAC® STEEL (open- & enclosed-style carriers)

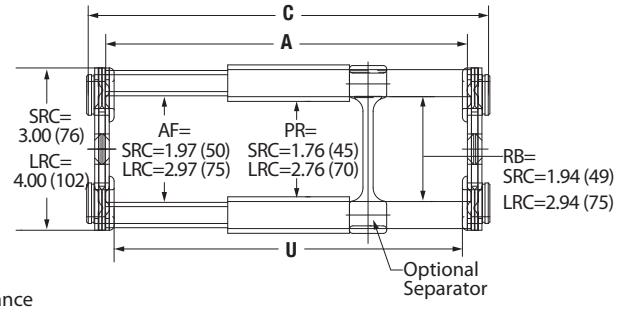
CARRIER SIDE VIEW

Dimensions in inches (mm)

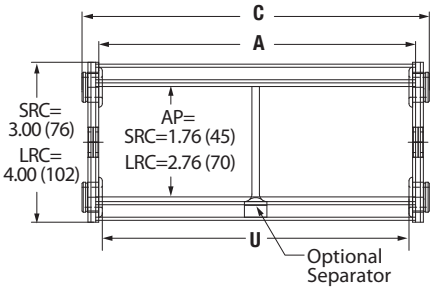


Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION



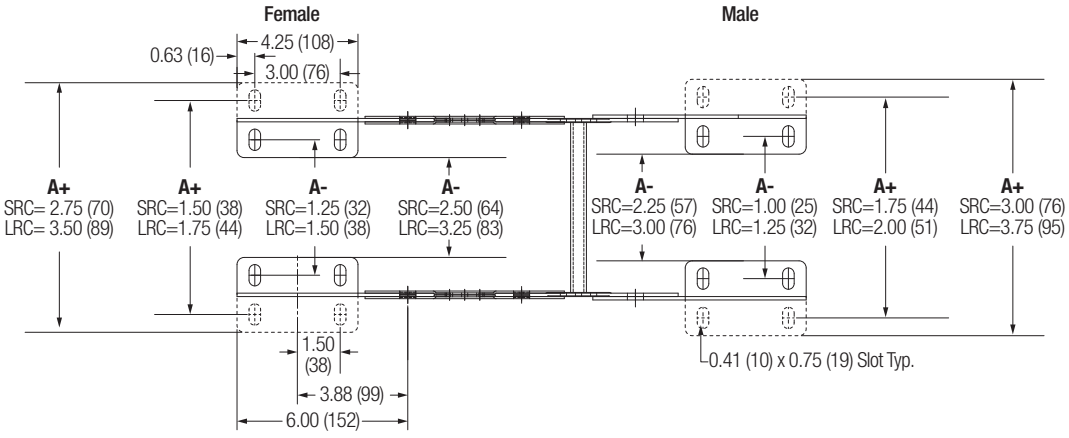
SRC/LRC



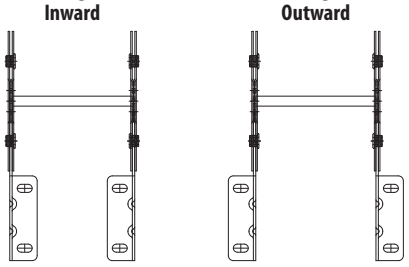
SRCAP/LRCAP
(w/Aluminum Lids)

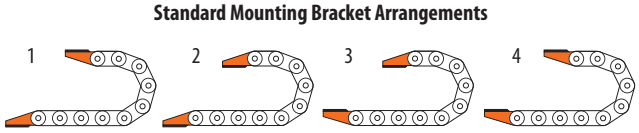
Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS





XX SERIES | GORTRAC® 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).

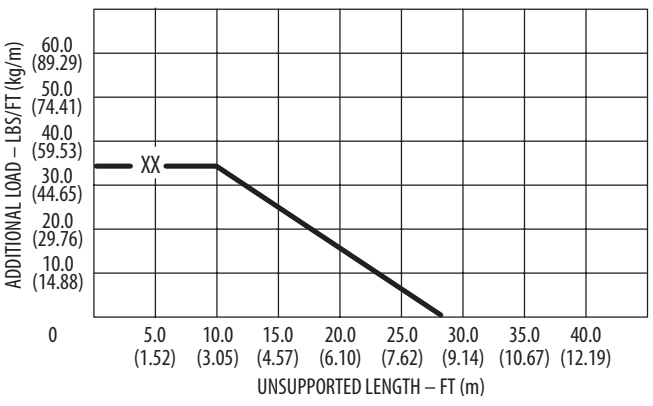
SPECIFICATIONS

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)

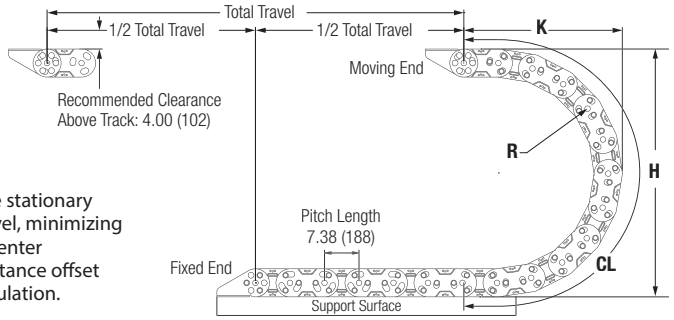
XX SERIES – WEIGHT LOAD



XX SERIES | GORTRAC® STEEL (open-style carriers)

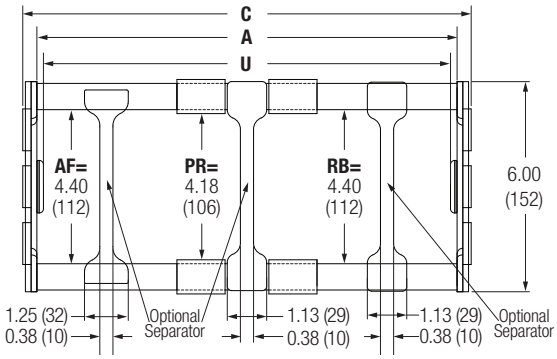
CARRIER SIDE VIEW

Dimensions in inches (mm)



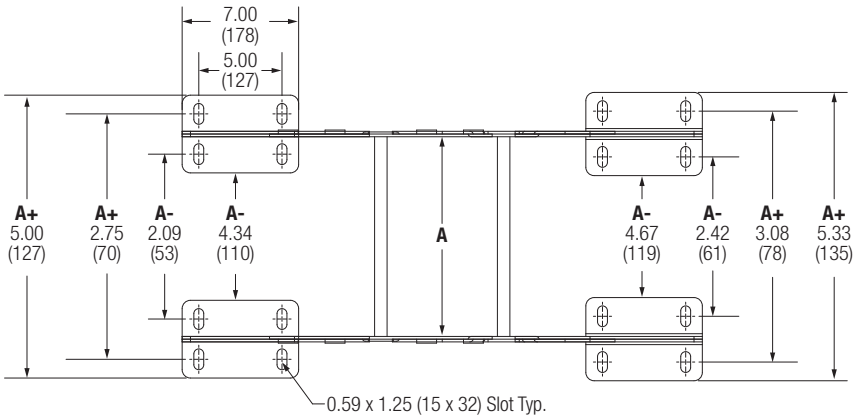
Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

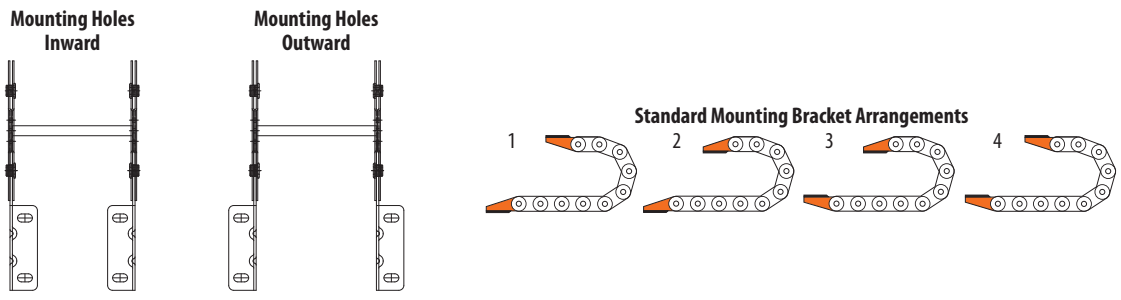


Dynatect Recommends:
- 10% Cable Clearance
- 20% Hose Clearance
- 60% Maximum Fill

TOP VIEW MOUNTING BRACKET

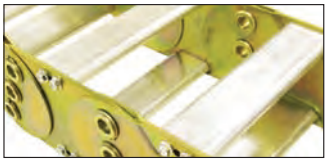


BRACKET ARRANGEMENTS

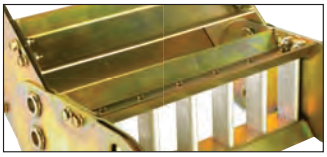


XL SERIES* (XL6) | GORTRAC® STEEL (open- & enclosed-style carriers)

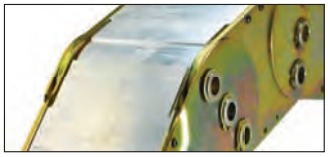
Poly Roller over Aluminum Bar



Aluminum Flat Bar



Custom Formed Channel 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 178-179 for XL8 and XL10 larger cavity heights. **Specify bracket flange: inward (IN) or outward (OUT).

SPECIFICATIONS

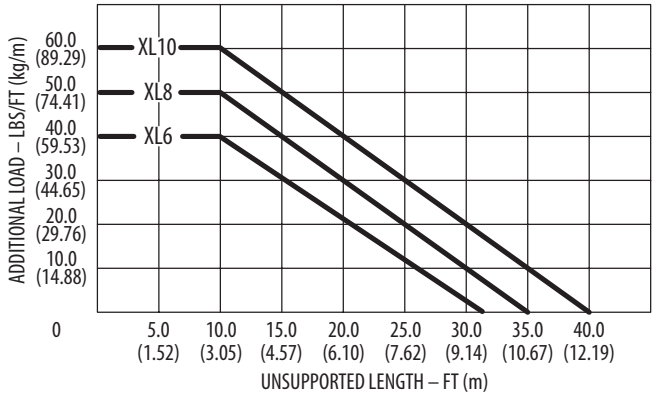
MODEL NO.	A inches (mm)	C inches (mm)	U (USABLE WIDTH) inches (mm)	WEIGHT lb/ft (kg/m)
XL6	Customer Specified	A + 1.25 (32)	A - 0.51 (13)	20.00 (29.76)

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



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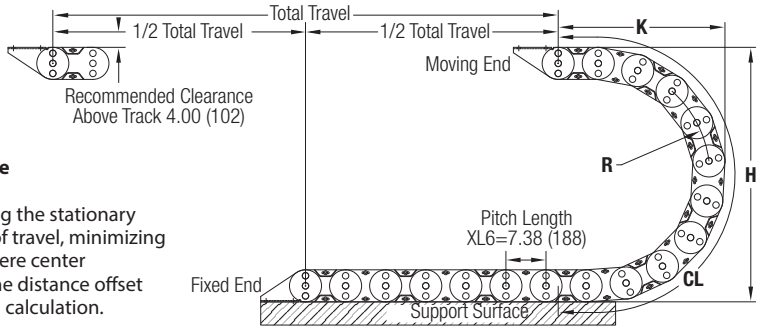
XL SERIES* (XL6) | GORTRAC® STEEL (open- & enclosed-style carriers)

CARRIER SIDE VIEW

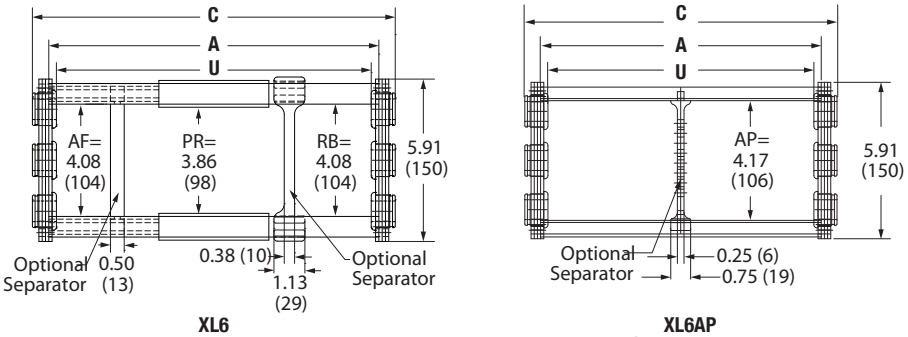
Dimensions in inches (mm)



Travel/2 + CL (+ Offset Distance From Center*) = Length

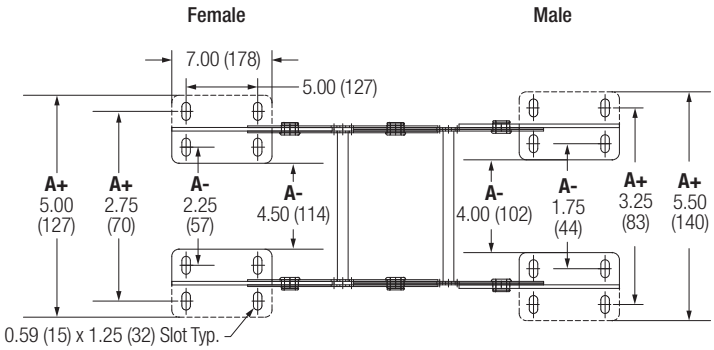
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

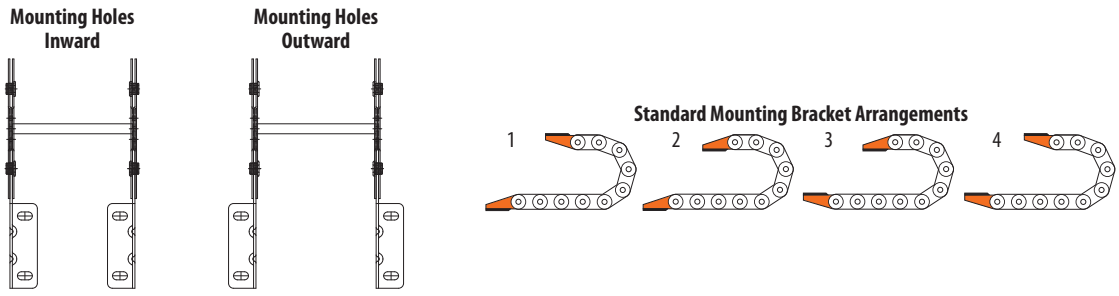


Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



XL SERIES* (XL8/XL10) | GORTRAC® 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 176-177 for XL6 smaller cavity height. **Specify bracket flange: inward (IN) or outward (OUT).

SPECIFICATIONS

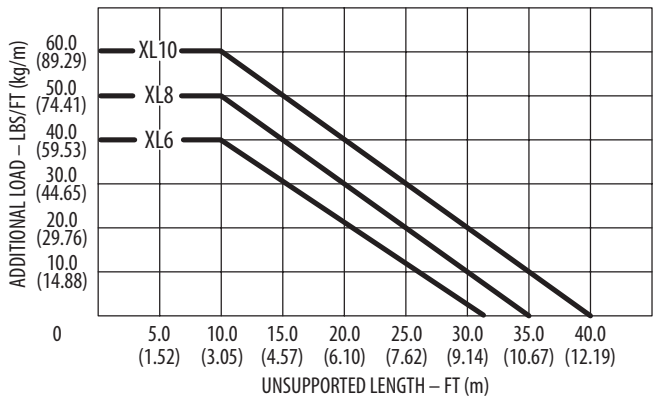
MODEL NO.	A inches (mm)	C inches (mm)	U (USABLE WIDTH) inches (mm)	WEIGHT lb/ft (kg/m)
XL8	Customer Specified	A + 1.25 (32)	A - 0.51 (13)	28.00 (41.66)
XL10	Customer Specified	A + 1.25 (32)	A - 0.51 (13)	32.00 (47.62)

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



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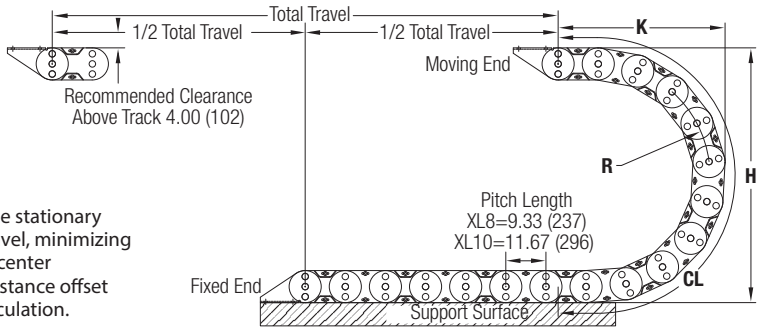
XL SERIES* (XL8/XL10) | GORTRAC® STEEL (open-style carriers)

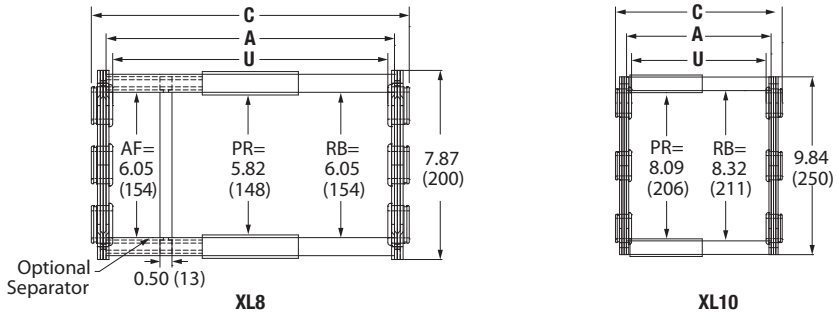
CARRIER SIDE VIEW

Dimensions in inches (mm)



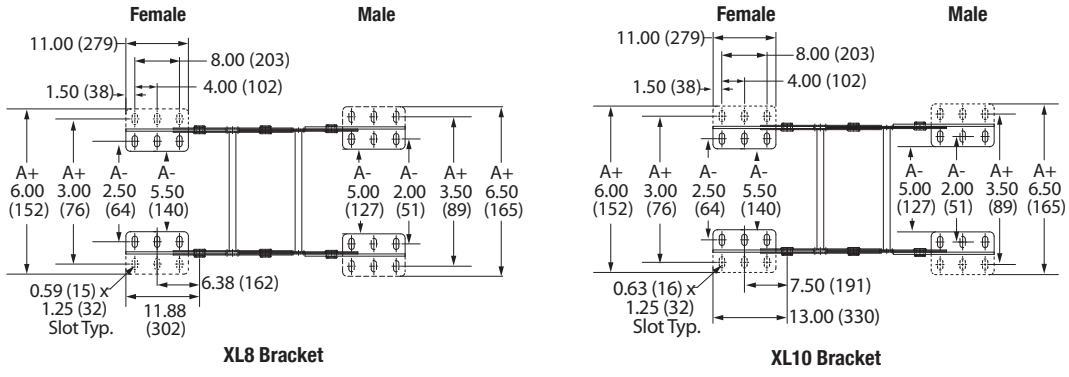
Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length. In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

CARRIER CROSS SECTION

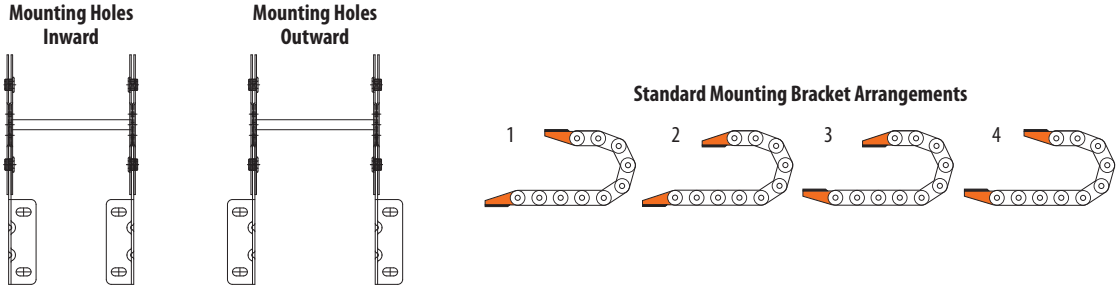


Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

TOP VIEW MOUNTING BRACKET



BRACKET ARRANGEMENTS



GORTUBE® 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

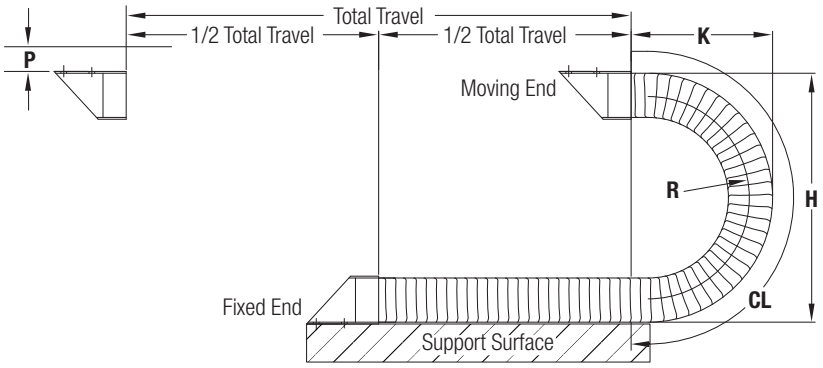
*Specify for each: fixed end/moving end. See pages 182-183 for flange options.

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 (70)	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)

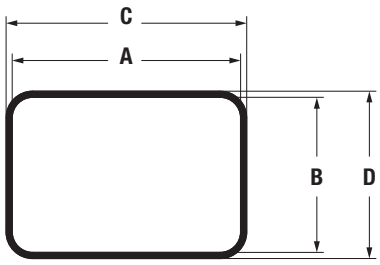
GORTUBE® SERIES | STEEL (enclosed-style carriers)

CARRIER SIDE VIEW



Travel/2 + CL (+ Offset Distance From Center*) = Length
Dynatect recommends mounting the stationary end of the carrier at the center of travel, minimizing the required length.
In cases where center mounting is not possible, add the distance offset from center to the carrier length calculation.

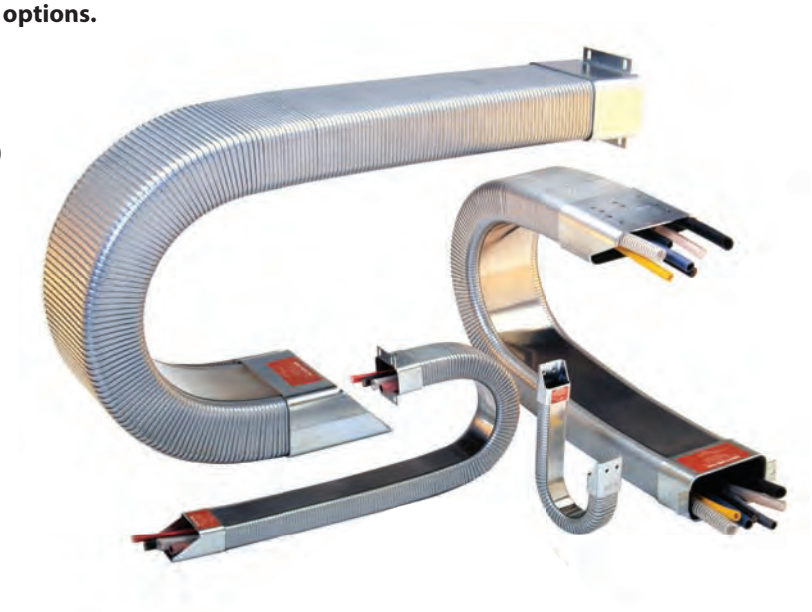
CARRIER CROSS SECTION



Dynatect Recommends: • 10% Cable Clearance • 20% Hose Clearance • 60% Maximum Fill

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

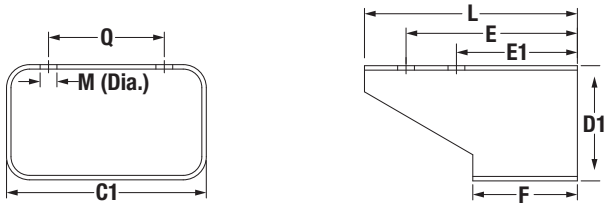


GORTUBE® SERIES | MOUNTING FLANGES (enclosed-style carriers)

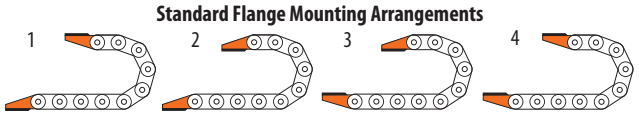
SPECIFICATIONS – STANDARD FLANGE OPTIONS

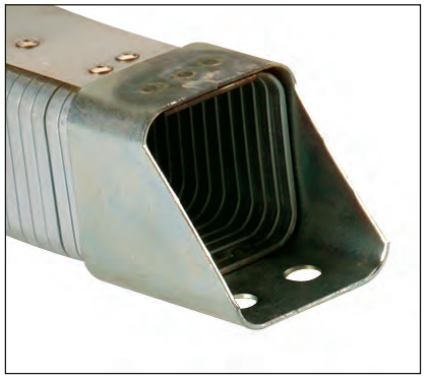
MODEL NO.	C1 inches (mm)	D1 inches (mm)	Q inches (mm)	M inches (mm)	E inches (mm)	E1 inches (mm)	F inches (mm)	L inches (mm)
C0	1.33 (34)	0.94 (24)	0.50 (13)	0.22 (6)	1.63 (41)	-	1.25 (32)	2.00 (51)
C1	2.11 (54)	1.34 (34)	0.88 (22)	0.28 (7)	1.75 (44)	-	1.19 (30)	2.38 (60)
C1A	2.11 (54)	2.12 (54)	0.88 (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

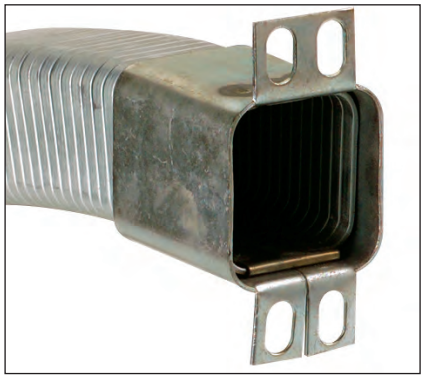


STANDARD FLANGE ARRANGEMENTS – Please specify arrangement when ordering standard flanges





Standard Flange



Type "A" Flange

Type "B" Flange

GORTUBE® SERIES | MOUNTING FLANGES (enclosed-style carriers)

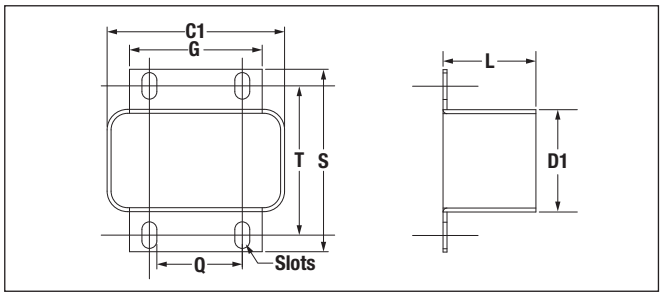
SPECIFICATIONS – TYPE A FLANGE OPTIONS

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)

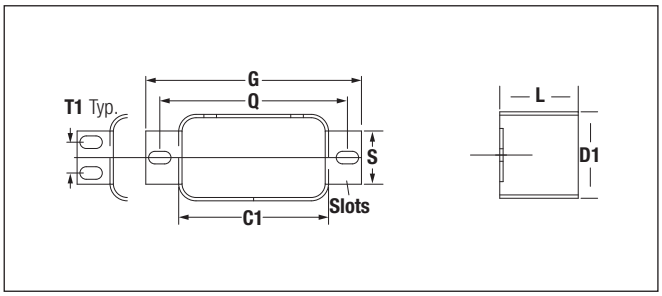
SPECIFICATIONS – TYPE B FLANGE OPTIONS

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



DYNATECT™
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NOTES

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

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LSI PRECISION GROUND BALL SCREWS | PAGES 186-191

- **New ball screws** – from your design specifications or through LSI reverse engineering
- **Full service repair** for nearly all brands of screws
- **Emergency repair service** – with 24-hour emergency reload
- **Precision built to** ANSI CLASS 2, DIN/JIS CLASS 1
- **Larger diameters** – screw diameters from 1/2-inch up to 6 inches
- **Long screw lengths** – our record for longest screw manufactured is 54 feet
- **Designed, manufactured and repaired** in Traverse City, Michigan

POLYCLUTCH® PRECISION SLIP CLUTCHES | PAGES 192-213

- **Mechanical clutches** with smooth breakaway and continuous slip
- **Proven, long life** – 20 to 30 million cycles
- **No break-in required** – our proprietary burn-in process ensures all polyclutch clutches perform consistently right out of the box
- **Fixed, adjustable and custom designs** to accommodate torque capacities from 0.5 to 750 lb-in
- **Designed and manufactured** in North Haven, Connecticut

Polyclutch Product Lines

LSI PRECISION GROUND BALL SCREWS

PRECISION BALL SCREWS FOR REPLACEMENT AND OEM APPLICATIONS

If you need a ball screw for an existing or new application, we can help. We design and manufacture custom ball screw assemblies ranging in size from 0.50" diameter to 6.00" diameter with virtually unlimited lengths. Your choices are not limited to a few ball screw and nut designs in a catalog; we build your screw to your exact specifications. In order to give our customers as many choices as possible, we also work with a wide range of materials.

FULL SERVICE REPAIR AND REVERSE ENGINEERING SERVICES

With over 25 years of experience, we have seen just about every type of screw in every condition. Our expert technicians can repair or rebuild your ball screw, acme screw, lead screw or specialty threads to save you money and extend the life of your old screw before a costly replacement becomes necessary.

IS YOUR BALL SCREW LOSING ACCURACY?

Contact us for a free repair/replace analysis of your precision ball screw assembly.

NEED TO GET BACK UP AND RUNNING IN A HURRY?

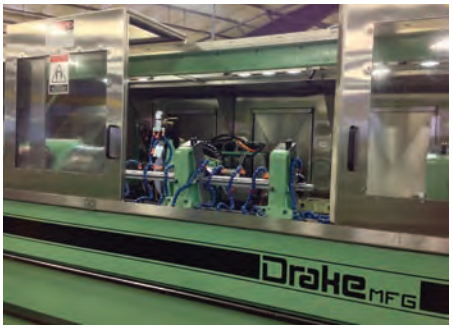
We can reload your screw in 24 hours to get you back up and running.

DON'T HAVE PRINTS?

Our team of engineers will reverse engineer your screw to meet your exact specifications.

RESPONSIVE SUPPORT, WHEN AND WHERE YOU NEED IT

Our network of sales representatives across North America offer technical support at your facility. Design assistance is a phone call away from our expert engineering staff at Dynatect Lead Screws International, Inc. Reach us at (800) 678-0726 or sales@lsitvc.com or find a local representative on our website at: www.dynatect.com.



Drake 4M Thread Grinder

Leistritz High Precision Whirling Machine

Mori Seiki 7-Axis Mill Turn

Hembrug Lathe

DESIGN FEATURES

LSI precision ground ball screws offer distinct advantages over competitive offerings:

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

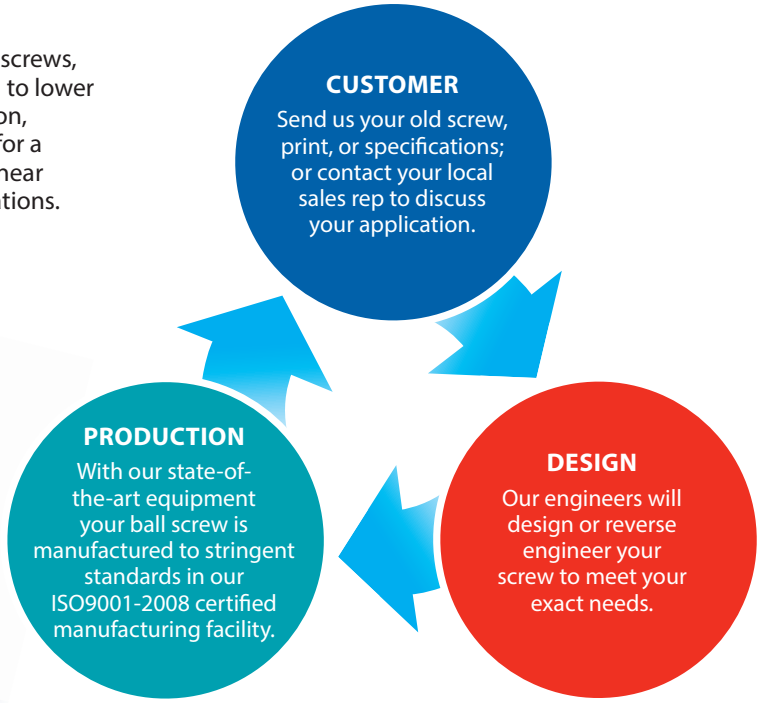
Your ball screw will be configured with the options you specify, and can be further customized for a complete turn-key solution that is quick and easy to install, saving you time and money.

- 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 blocks

*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.

WHY PRECISION GROUND BALL SCREWS?

A ball screw offers greater energy efficiency than acme screws, converting nearly all input torque to thrust. In addition to lower energy consumption, a ball screw offers greater precision, predictability of life and long-term preload. Why settle for a standard design, when the experts at LSI can create a linear motion component precisely matched to your specifications.



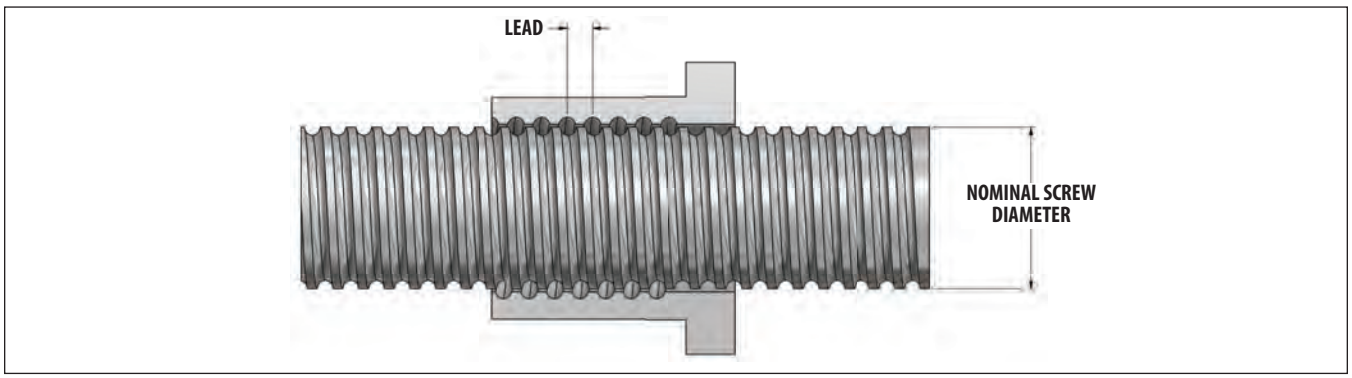
Our Process is Designed Around Your Needs

CAPABILITIES | BALL SCREW DIAMETER AND LEADS

The combinations of ball screw diameter and lead shown below are most common to LSI capabilities. Sizes are offered in both imperial and metric sizes. Additional screw diameters, leads, and combinations are available, including multiple start screws. Please contact Dynatect LSI to evaluate your specific needs.

NORMAL SCREW DIAMETER (inches)	LEAD (inch)										
	0.100	0.125	0.158	0.200	0.250	0.375	0.400	0.500	0.625	0.750	1.000
0.625											
0.750											
0.875											
1.000											
1.125											
1.250											
1.500											
1.625											
1.750											
2.000											
2.250											
2.500											
2.750											
3.000											
3.500											
4.000											
6.000											

NORMAL SCREW DIAMETER (mm)	LEAD (mm)										
	3	4	5	6	8	10	16	18	20	25	40
12											
16											
20											
25											
32											
40											
50											
63											
80											
100											
125											
150											



LSI 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:	_____	☐ in/min	☐ mm/sec
Maximum Load:	_____	☐ lbf	☐ N
Equivalent Load:	_____	☐ lbf	☐ N
Maximum Speed:	_____	☐ ft/min	☐ m/min
Equivalent Speed:	_____	☐ ft/min	☐ m/min
Required Preload:	_____	☐ lbf	☐ Ns
Required Stiffness:	_____	☐ lbf/in	☐ N/mm

Input RPM: _____

Cycle Time: _____ ☐ min. ☐ sec.

Duty Cycle (%): _____

Static Load Rating: _____ ☐ lbf @ 1M inches ☐ N @ 1M revolutions

Dynamic Load Rating: _____ ☐ lbf @ 1M inches ☐ N @ 1M revolutions

Expected Life (L10): _____ ☐ hours ☐ revolutions

---

2. Ball Screw and Nut Material

☐ Carbon Steel ☐ Stainless Steel ☐ Other (please specify) _____

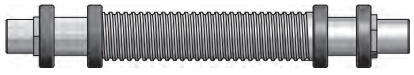
---

3. Ball Screw Mounting Style

☐ Fixed-Free 

☐ Fixed-Support 

☐ Support-Support 

☐ Fixed-Fixed 

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4. Ball Screw Protection

For longer life, we recommend a bellows to protect the screw from contaminants.
Would you like more information on Gortite® bellows? ☐ Yes ☐ No

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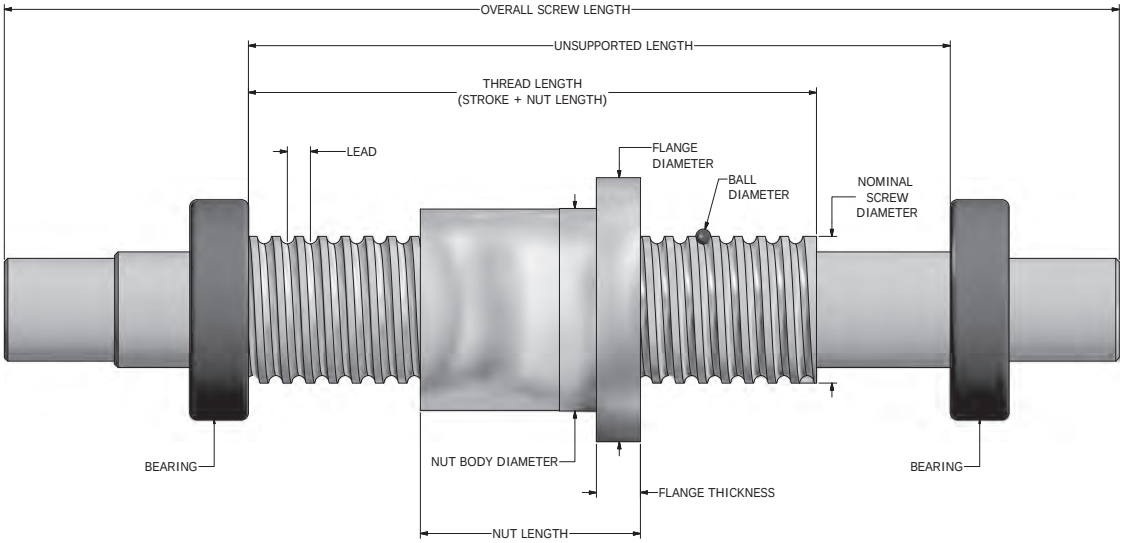
LSI PRECISION GROUND BALL SCREWS | QUOTE REQUEST FORM



5. Ball Screw and Nut Specifications

Ball Diameter: _____ ☐ in ☐ mm
Screw Diameter: _____ ☐ in ☐ mm
Lead: _____ ☐ in ☐ mm

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)

Overall Screw Length: _____ ☐ in ☐ mm
Screw Stroke: _____ ☐ in ☐ mm
Unsupported Screw Length: _____ ☐ in ☐ mm

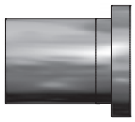
Screw Orientation: ☐ Horizontal ☐ Vertical

Maximum Nut
Body Diameter: _____ ☐ in ☐ mm
Flange Dlameter: _____ ☐ in ☐ mm
Flange Thickness: _____ ☐ in ☐ mm

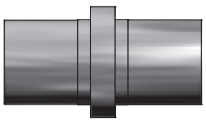
Journal Ends must be specified by customer; please see our website for typical configurations.

6. Ball Nut Style (Note: Internal and external returns can be applied to all styles.)

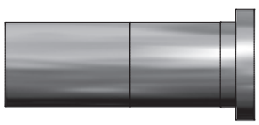
☐ Single Nut (1 pc)



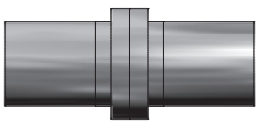
☐ Middle Flange Nut (1 pc)



☐ Double Nut (2 pc)



☐ Flange to Flange Nut (2 pc)



Ball Return Type: _____ ☐ Internal (recommended) ☐ External

7. Additional Design Details

_____

_____

_____

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

LSI PRECISION GROUND BALL SCREWS | SCREW REPAIR EVALUATION

FREE* SCREW REPAIR EVALUATION

Our expert technicians can repair or rebuild your ball screw, acme screw, lead screw or specialty threads to save you money and extend the life of your old screw before a costly replacement becomes necessary. We repair nearly wall brands of screws. Here is how and where to send in your part for evaluation:

Shipping Instructions:

- You do not need an RMA (return material authorization).
- Please call ahead for rush repair orders.
- Please include a packing slip with your company name, address, a contact name and phone number and fax number.
- Also include any information that would be helpful in identifying your machine, such as machine name, part number, model or model number.
- Please ship all items "pre-paid."
- The repair evaluation is free, however all freight costs are the responsibility of the customer.
- No freight collect items will be accepted without prior approval.

Shipping Address:

Dynatect Lead Screws International, Inc. (LSI)
2101 Precision Drive
Traverse City, MI 49686 USA
Toll Free: (800) 678-0726
Phone: (231) 947-4124
Fax: (231) 947-3851

*Please note: You may accrue a disassembly fee if the repair department has to disassemble components that are unrelated to the ball screw/nut assembly (i.e. bearings, housings, etc.). Once the disassembly fee has been received, we will proceed with your free evaluation of the ball screw assembly. The additional components will be shipped back to you disassembled from the ball screw assembly. Please contact sales prior to shipping in any units that will require disassembly of other components.

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

POLYCLUTCH | PRECISION SLIP CLUTCHES

- CONTINUOUS SLIP MECHANICAL CLUTCHES
- PNEUMATIC SLIP CLUTCHES

SERIES 16

SLIPPERS

V-SERIES SLIPPERS

SLIP-EASE

SLIP-AIRE

For Jaw Clutches and One-Way Clutches, visit website for details.

Phone: 262-786-1500 or 800-298-2066 | Fax: 262-786-3280 | Email: sales@dynatect.com | www.dynatect.com

ABOUT PRECISION 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

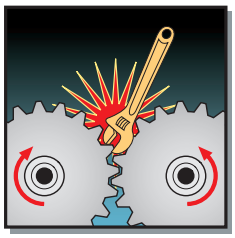
LIMITATIONS:

- 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

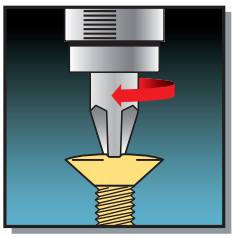
SOLVE MANY DESIGN ENGINEERING PROBLEMS

Polyclutch slip clutches can slip continuously or intermittently for over 30 million cycles. This opens up many design engineering options including…



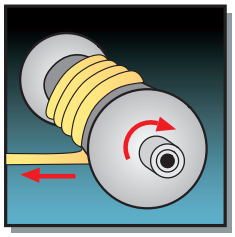
OVERLOAD PROTECTION

Protect machinery and operator. Clutch will slip when mechanism is jammed. Motion will continue when impediment is removed.



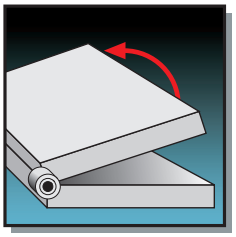
TORQUE CONTROL

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.



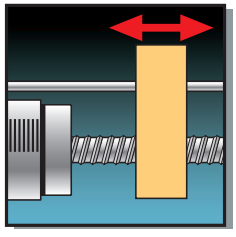
TENSION CONTROL

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.



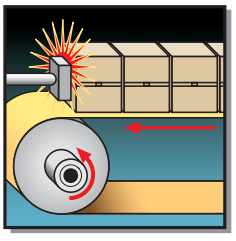
POSITIONING HINGE

Hold lid, cover, door, light fixture, screen, etc., at any position. Fingertip control. Combine with one way clutch for free movement in one direction.



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.



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.

SLIP CLUTCH LINE OVERVIEW

HOW TO DETERMINE THE PERFECT CLUTCH FOR YOU 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 limitations listed below for each type of clutch.

Note: For torque adjustment while clutch is in use (remote torque adjustment), see the SLIP-AIRE clutches.

SERIES 16

- Most compact model
- Can accommodate shaft sizes up to 0.375 inch
- Torque capacity up to 10 lb-in
- Available in a fixed torque or adjustable torque configuration

SLIPPERS

- Our standard-duty clutch
- Can accommodate shaft sizes up to 1 inch
- Torque capacities of up to 100 lb-in
- Available in a fixed torque or adjustable torque configuration

SLIP-EASE

- For applications where space is at a premium and low backlash is required
- Can accommodate shaft sizes up to 1.25 inch
- Torque capacities of up to 500 lb-in
- Available in a fixed torque or adjustable torque configuration

V-SERIES SLIPPERS

- Torque control for driving, capping and other applications where thrust loads are applied
- Can accommodate shaft sizes up to 1 inch
- Horizontal and vertical installation without driveshaft modifications
- Integrated ball bearing allows thrust loads of up to 650 pounds without any effect on torque
- Torque capacities of up to 150 lb-in

SLIP-AIRE

- Pneumatic slip clutch
- Can be adjusted remotely while the machine is in operation to accomplish quick, repeatable, accurate setup
- Can accommodate shaft sizes up to 0.625 inch
- Torque capacities of up to 300 lb-in

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.

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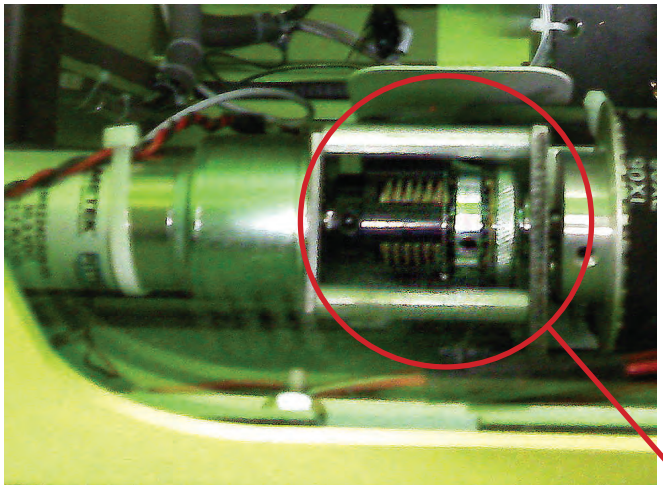
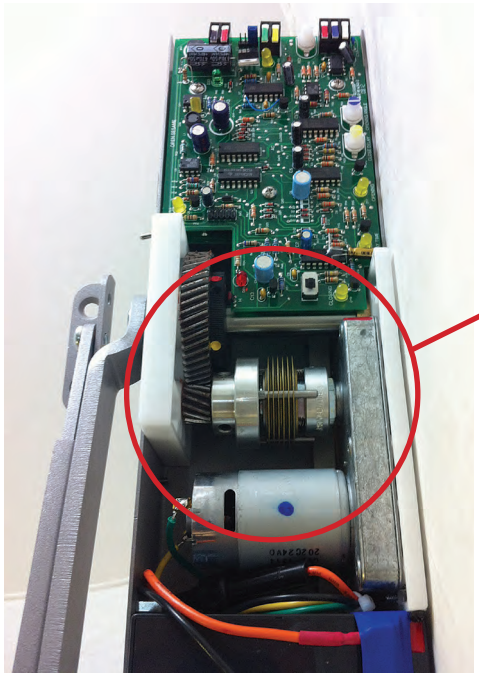
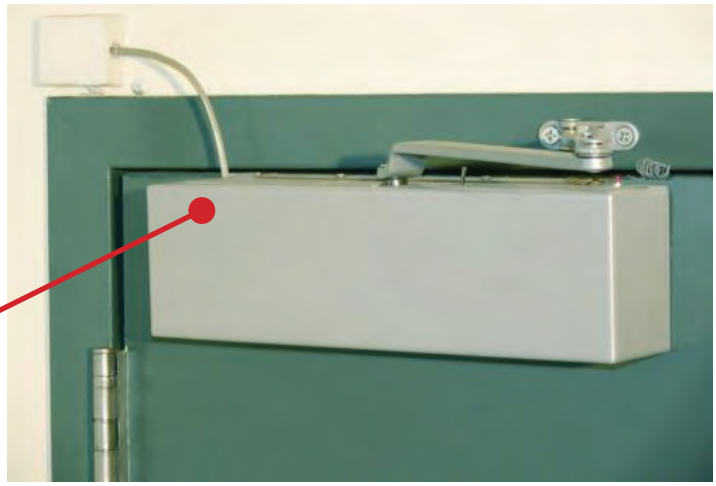
APPLICATION EXAMPLES



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.

DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

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.

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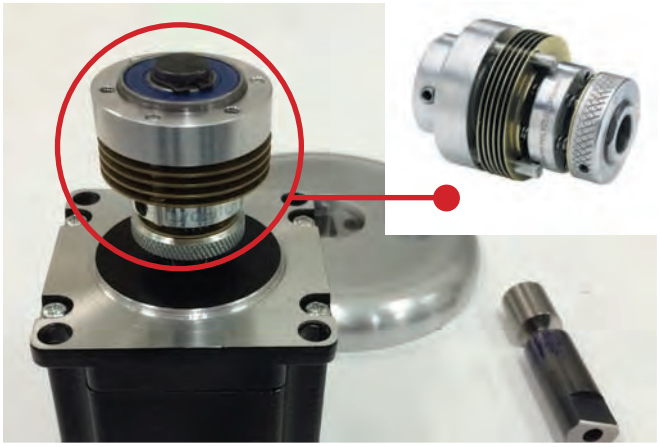
APPLICATION EXAMPLES

Conveyors
Polyclutch slip clutches offer an added level of safety and protection to both the machine and its operators.

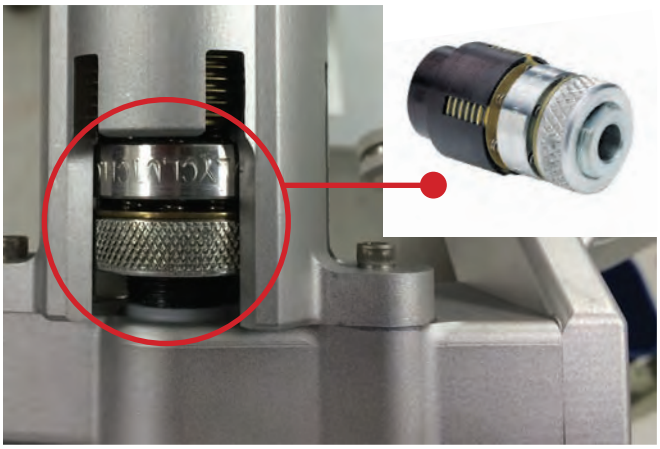
Label Printers
Polyclutch slip clutches are the perfect solution for adding just the right amount of tension to any reel or spool without having to worry about the tension varying over time or wearing out prematurely.

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.

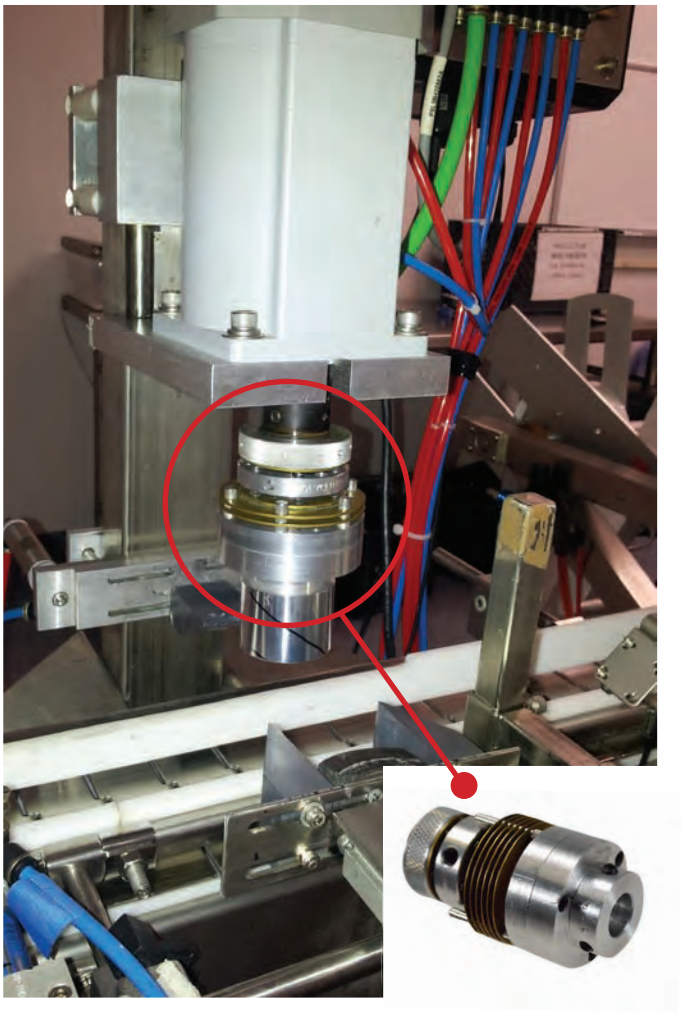
APPLICATION EXAMPLES



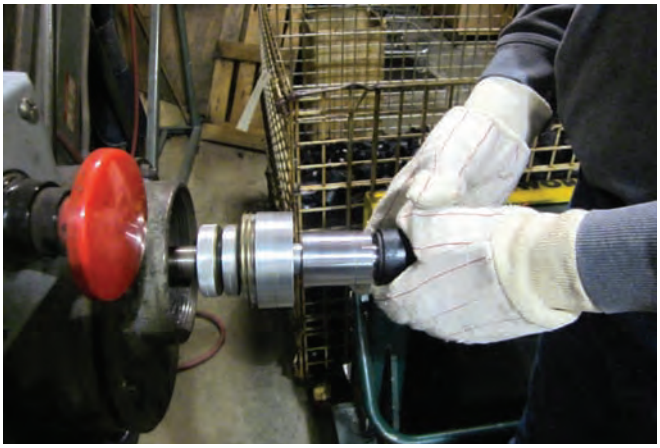
The Polyclutch slipper provides precision torque control during the manufacturing of dental implants.

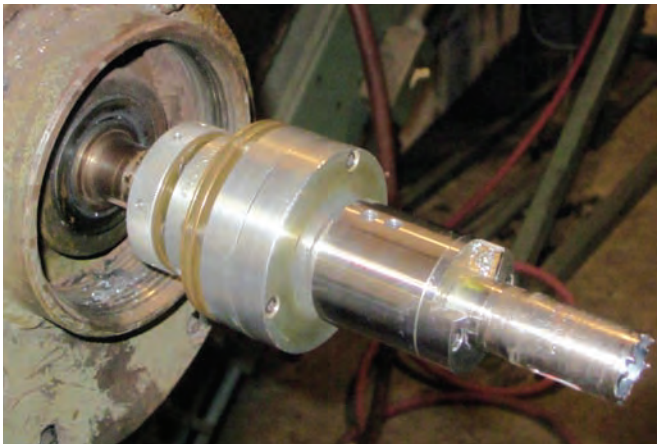


In this medical application, a Slip-Ease clutch is used as a retention hinge on a mounting platform of a surgical device.



The V-Series slipper is the ideal solution for torque control on capping machines.





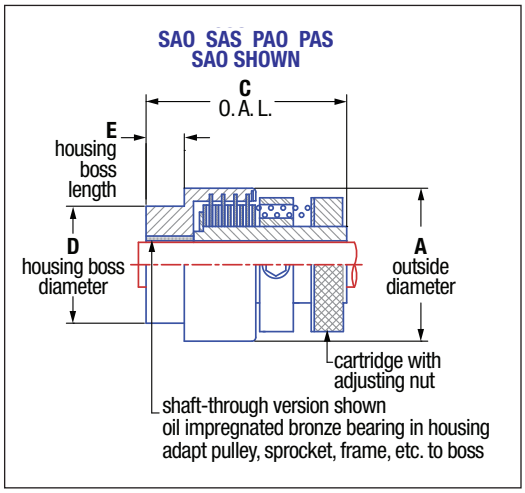
The V-Series slipper provides overload protection and increases operator safety to this manual cutting tool. This mechanical slip clutch limits the amount of torque that is transferred to the cutting tool, making this a safer operation for the user.

SERIES 16 | MECHANICAL SLIP CLUTCHES

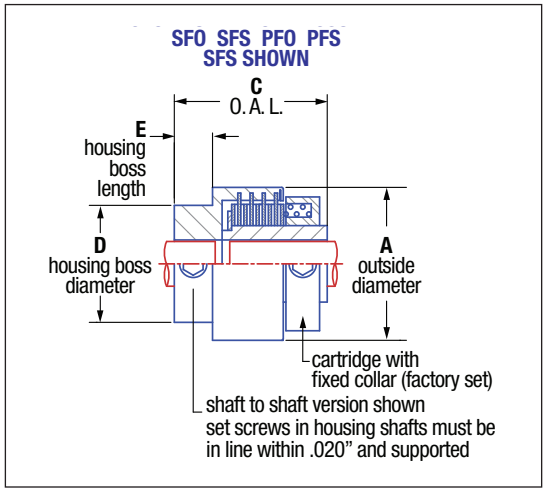
OUR MOST COMPACT MODEL FEATURES BIG TORQUE IN A SMALL PACKAGE

See pages 210-211 for slip clutch operation (construction, installation, capacity) and mounting options.

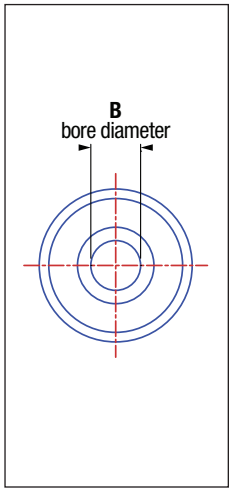
ADJUSTABLE



FIXED FACTORY SET – NON ADJUSTABLE



END VIEW TYPICAL



MODEL NO.	A inches (mm)	B STD. 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	
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 212 for part number identification.

P F S 16 - 4 - 4 T*

1 2 3 4 5 6

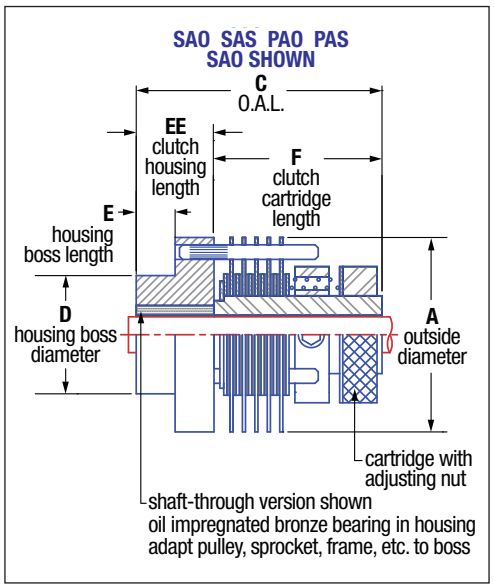
- 6: 4/16 = .250-inch bore dia. in clutch housing
- 5: 4/16 = .250-inch bore dia. in clutch cartridge
- 4: Size 16 = 16/16 (1-inch outside dia.)
- 3: Shaft to shaft installation type
- 2: Fixed torque (factory preset)
- 1: Single-Plate Slipper

*T = Preset Torque Value, customer-specified

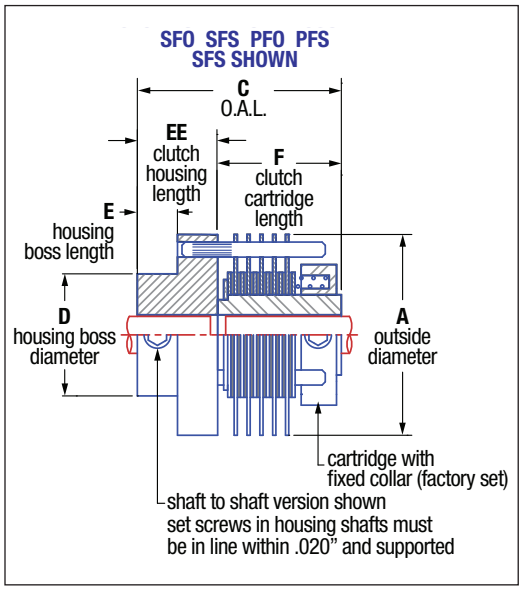
SLIPPER | MECHANICAL SLIP CLUTCHES

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.

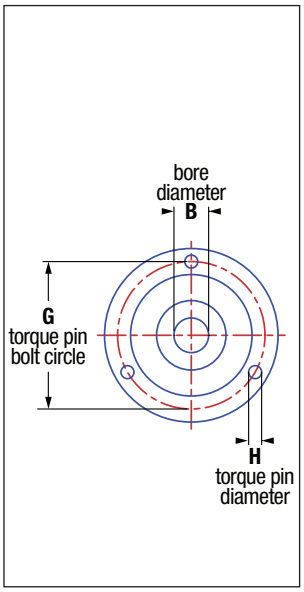
ADJUSTABLE



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 212 for part number identification.

S A O 32 - 10 - 10

1. Multi-Plate Slipper
2. Adjustable torque
3. Shaft-through installation type
4. Size 32 = 32/16 (2-inch outside dia.)
5. 10/16 = .625-inch bore dia. in clutch cartridge
6. 10/16 = .625-inch bore dia. in clutch housing

P F S 44 - 12mm - 14mm T*

1. Single-Plate Slipper
2. Fixed torque (factory preset)
3. Shaft to shaft installation type
4. Size 44 = 44/16 (2.75-inch outside dia.)
5. 12 mm bore dia. in clutch cartridge
6. 14 mm bore dia. in housing

*T = Preset Torque Value, customer-specified

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SLIPPER | SPECIFICATIONS

See pages 210-211 for slip clutch operation (construction, installation, capacity) and mounting options.

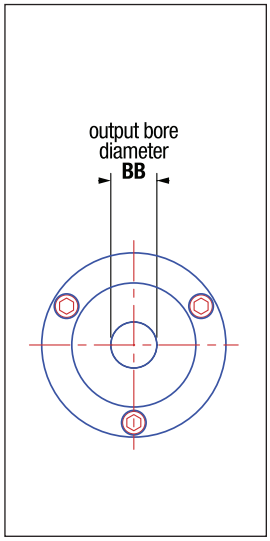
MODEL NO.	A inches (mm)	B* STD. inches (mm)	B MAX. inches (mm)	C inches (mm)	D inches (mm)	E inches (mm)	EE inches (mm)	F inches (mm)	G inches (mm)	H inches (mm)	CAPACITY @ 50 RPM		FRICTION SURFACES
		+.002 / -.000 inches (+.05 / -.00 mm)									lb-in (Nm)	Watts	
SFS 20 & SFO 20	1.25 (31.75)	.250 (8)	.375 (10)	1.19 (30.2)	.760 (19.30)	.25 (6.35)	.50 (12.70)	.69 (17.50)	1.062 (26.97)	.094 (6.35)	12 (1.5)	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 (6.35)	12 (1.5)	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)	1.21 (30.70)	1.312 (33.32)	.125 (6.35)	25 (3)	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 (6.35)	25 (3)	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 (6.35)	50 (6)	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 (6.35)	50 (6)	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 (6.35)	75 (9))	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 (6.35)	75 (9)	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 (11.5)	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 (11.5)	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 (6.35)	2.5 (.3)	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 (6.35)	2.5 (.3)	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 (6.35)	4 (.5)	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 (6.35)	4 (.5)	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 (6.35)	8 (1)	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 (6.35)	8 (1)	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 (6.35)	12 (1.5)	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 (6.35)	12 (1.5)	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 (2.4)	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 (2.4)	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.

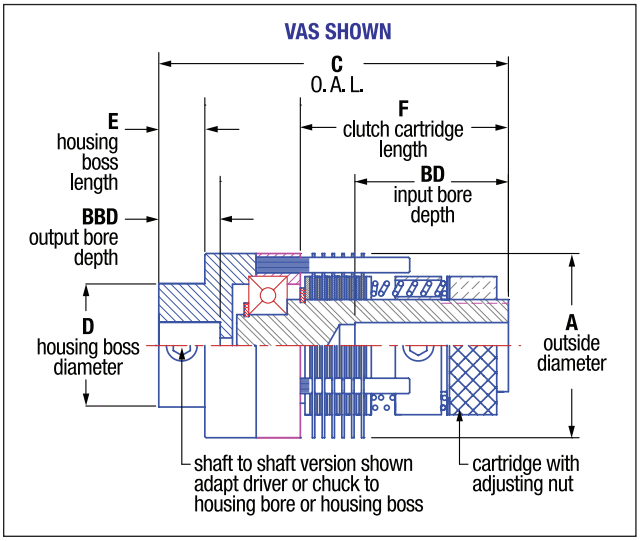
V-SERIES SLIPPER | MECHANICAL SLIP CLUTCHES

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.

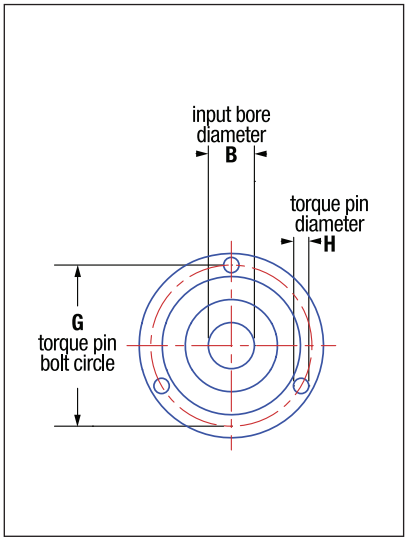
END VIEW TYPICAL



ADJUSTABLE



END VIEW TYPICAL



PART NUMBER EXAMPLE

See page 212 for part number identification.

V A S 20 - 4 - 4

1. V-Series Slipper
2. Adjustable torque
3. Shaft to shaft installation type
4. Size 20 = 20/16 (1.25-inch outside dia.)
5. 4/16 = .250-inch bore dia. in clutch cartridge
6. 4/16 = .250-inch bore dia. in clutch housing

V A S 44 - 12mm - 10mm

1. V-Series Slipper
2. Adjustable torque
3. Shaft to shaft installation type
4. Size 44 = 44/16 (2.75-inch outside dia.)
5. 12 mm bore dia. in clutch cartridge
6. 10 mm bore dia. in housing

V-SERIES SLIPPER | SPECIFICATIONS

HORIZONTAL AND VERTICAL INSTALLATION WITHOUT DRIVESHAFT MODIFICATIONS!

See pages 210-211 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) D inches (mm)	E inches (mm)	F inches (mm)	G inches (mm)	H inches (mm)
		+.002 / -.000 inches (+.05 / -.00 mm)										
VAS 20	1.25 (31.75)	.250 (8)	.375 (10)	.750 (19.05)	.250 (6.35)	.500 (12.07)	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 (12.07)	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 (12.07)	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)	.500 (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)	.500 (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.

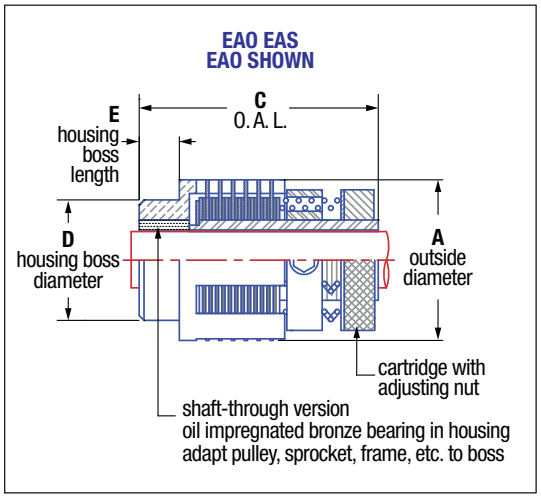
MODEL NO.	THRUST LOAD lbs. (N)	CAPACITY @ 50 RPM		FRICTION SURFACES
		lb-in (Nm)	Watts	
VAS 20	165 (22.8)	12 (1.5)	6	8
VAS 24	255 (35.3)	25 (3)	15	12
VAS 32	300 (41.5)	50 (6)	30	12
VAS 44	400 (55.3)	75 (9)	43	12
VAS 48	665 (91.9)	100 (11.5)	55	12

Please note that torque capacities are only guidelines. Higher torques and speeds are possible depending on operating conditions. Consult factory for details.

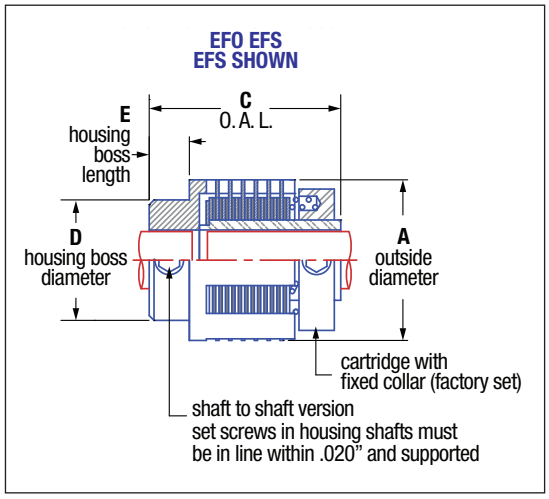
SLIP-EASE | MECHANICAL SLIP CLUTCHES

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



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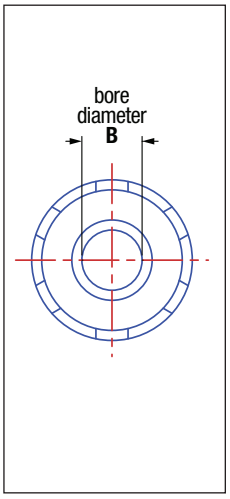

PART NUMBER EXAMPLES

See page 212 for part number identification.

E A S 32 - 8 - 10

1. Slip-Ease
2. Adjustable torque
3. Shaft to shaft installation type
4. Size 32 (relative size) 1.625-inch outside dia.
5. 8/16 = .500-inch bore dia. in clutch cartridge
6. 10/16 = .625-inch bore dia. in housing

E F O 44 - 12mm - 12mm

1. Slip-Ease
2. Fixed torque (factory preset)
3. Shaft-through installation type
4. Size 44 (relative size) 2.25-inch outside dia.
5. 12 mm bore dia. in clutch cartridge
6. 12 mm bore dia. in clutch housing

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SLIP-EASE | SPECIFICATIONS

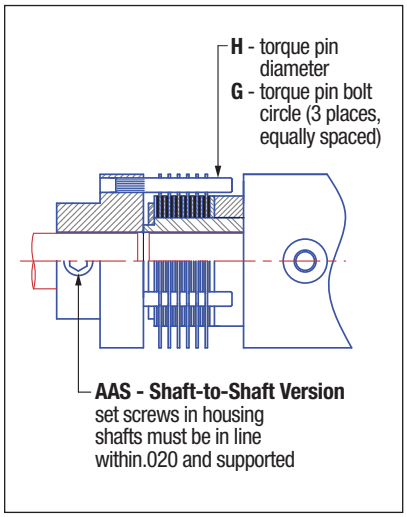
See pages 210-211 for slip clutch operation (construction, installation, capacity) and mounting options.

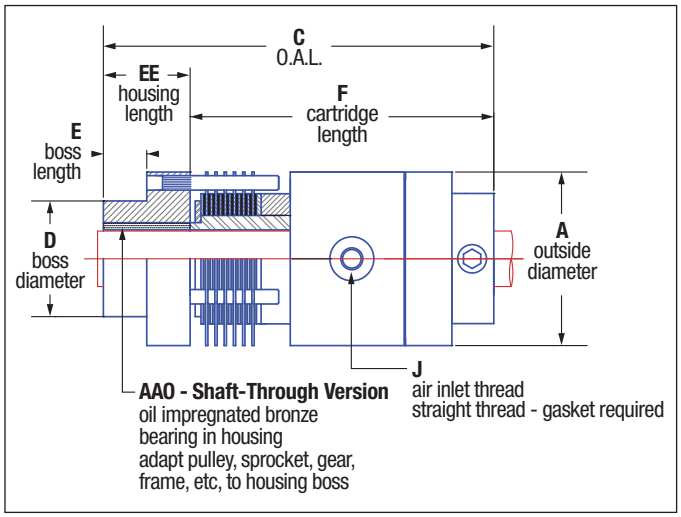
MODEL NO.	A inches (mm)	B* STD. inches (mm)	B MAX. inches (mm)	C inches (mm)	D inches (mm)	E inches (mm)	CAPACITY @ 50 RPM		FRICTION SURFACES
		+.002 / -.000 inches (+.05 / -.00 mm)					lb-in (Nm)	Watts	
EAS 12 & EAO 12	.750 (19.05)	.1875 (5)	.250 (6)	1.25 (31.75)	.562 (14.28)	.188 (4.78)	8.5 (1.0)	4.5	8
EFS 12 & EFO 12	.750 (19.05)	.1875 (5)	.250 (6)	1.00 (25.40)	.562 (14.28)	.188 (4.78)	8.5 (1.0)	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 (2)	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 (2)	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 (3)	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 (3)	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 (6)	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 (6)	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 (9)	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 (9)	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 (17)**	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

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.





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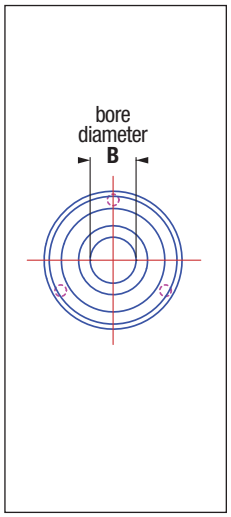

PART NUMBER EXAMPLES

See page 212 for part number identification.

A A S 32 - 12mm - 16mm

1. Slip-Aire
2. Adjustable torque
3. Shaft to shaft installation type
4. Size 32 = 32/16 (2-inch outside dia.)
5. 12 mm bore dia. in clutch cartridge
6. 16 mm bore dia. in clutch housing

A A O 20 - 4 - 4

1. Slip-Aire
2. Adjustable torque
3. Shaft-through installation type
4. Size 20 = 20/16 (1.25-inch outside dia.)
5. 4/16 = .250-inch bore dia. in clutch cartridge
6. 4/16 = .250-inch bore dia. in clutch housing

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SLIP-AIRE | SPECIFICATIONS

See pages 210-211 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)	EE inches (mm)	F inches (mm)	G inches (mm)	H inches (mm)	J inches (mm)
		+.002 / -.000 inches (+.05 / -.00 mm)									
AAS 20 & AAO 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 & AAO 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 & AAO 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 & AAO 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

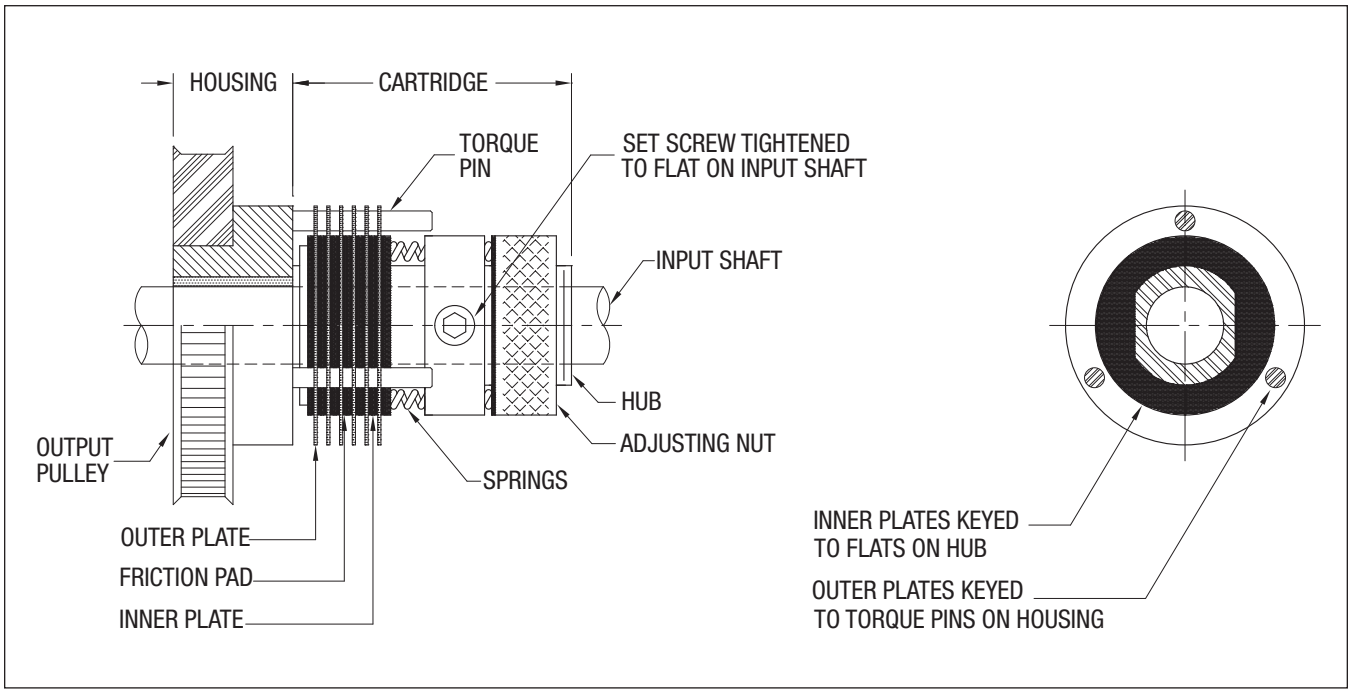
*Bore diameters (Dimension B): other than standards shown are available up to the maximum diameter.

MODEL NO.	CAPACITY CONTINUOUS @ 50 RPM* lb-in (Nm)	CAPACITY MAXIMUM @ 100 RPM** lb-in (Nm)	WATTS	FRICTION SURFACES
AAS 20 & AAO 20	12 (1.5)	20 (2.2)	6	8
AAS 24 & AAO 24	25 (3.0)	50 (6.0)	15	12
AAS 32 & AAO 32	50 (6.0)	100 (12.0)	30	12
AAS 44 & AAO 44	75 (9.0)	300 (34.0)	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).

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 (se**E** *page 211 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 a*ligned.

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 T**he 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:**

Watts = Torque (lb-in) x RPM x Duty Cycle* x 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.

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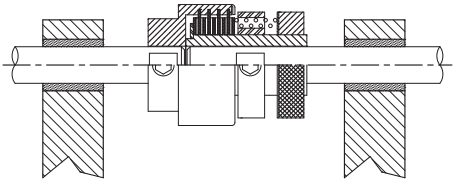
SLIP CLUTCH | TYPICAL MOUNTING FOR MECHANICAL & PNEUMATIC SLIP CLUTCHES

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.

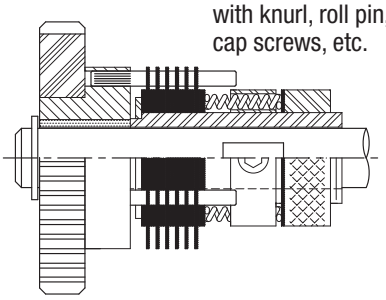
EXAMPLE 1

Shaft to Shaft
Shafts must be supported and aligned within .010-.015



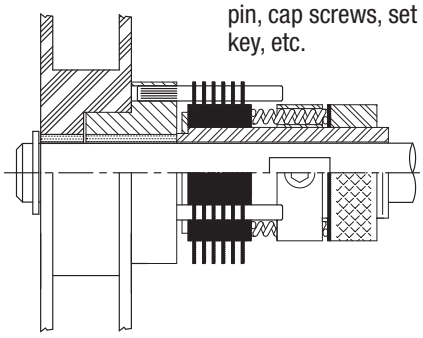
EXAMPLE 2

Gear/Pulley/Sprocket adapted to housing with knurl, roll pin, cap screws, etc.



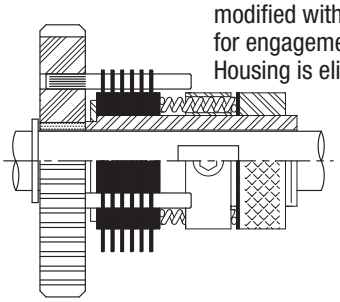
EXAMPLE 3

Supply or rewind spool adapted to housing with knurl, pin, cap screws, set screw, key, etc.



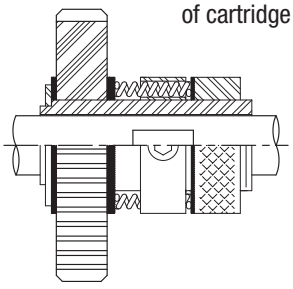
EXAMPLE 4

Gear/Pulley/Sprocket modified with pins for engagement
Housing is eliminated



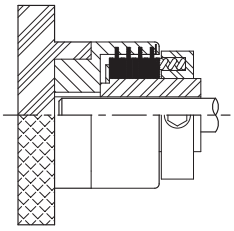
EXAMPLE 5

Gear/Pulley/Sprocket integrated as part of cartridge



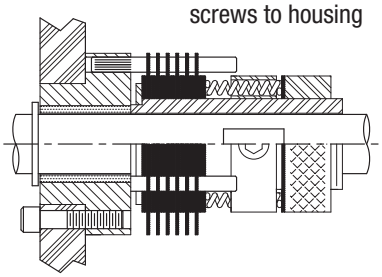
EXAMPLE 6

Knob adapted to housing knurl, set screw, pin, etc.



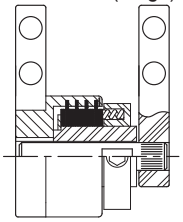
EXAMPLE 7

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

1 2 3 4 5 6

HOUSING BORE SIZE:
Generally represented in sixteenths of an inch. For metric, add MM after bore sizes. (e.g., SAS24-4MM-6MM).

CARTRIDGE BORE SIZE:
Generally represented in sixteenths of an inch. For metric, add MM after bore size (e.g., SAS24-4MM).

OUTER DIAMETER:
Generally represented in sixteenths of an inch, please see specifications for exact dimensions.

INSTALLATION TYPE:
"S" is shaft to shaft
"O" is shaft-through for mounting to pulley, gear, sprocket, etc.
"Y" is cartridge only

TORQUE SETTING:
"A" is adjustable torque
"F" is factory preset (fixed) torque*

TYPE OF SLIP CLUTCH:

S = Multi-Plate Slipper	P = Single-Plate Slipper	V = V-Series Slipper
E = Slip-Ease	A = Slip-Aire (air-actuated)	

*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 ☐ Torque Control (i.e. bottle capping, screwdriver)
☐ Constant Tension/Force ☐ Brake
☐ Soft Start/Cushioned Stop ☐ Positioning Hinge
☐ Other _____

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
Input Shaft Diameter: _____
Output Shaft Diameter: _____

☐ Shaft Through Mounting
Input Shaft Diameter: _____
Output Type: _____
(gear, pulley, frame...)

☐ Other _____
_____
_____

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): _____

NOTES

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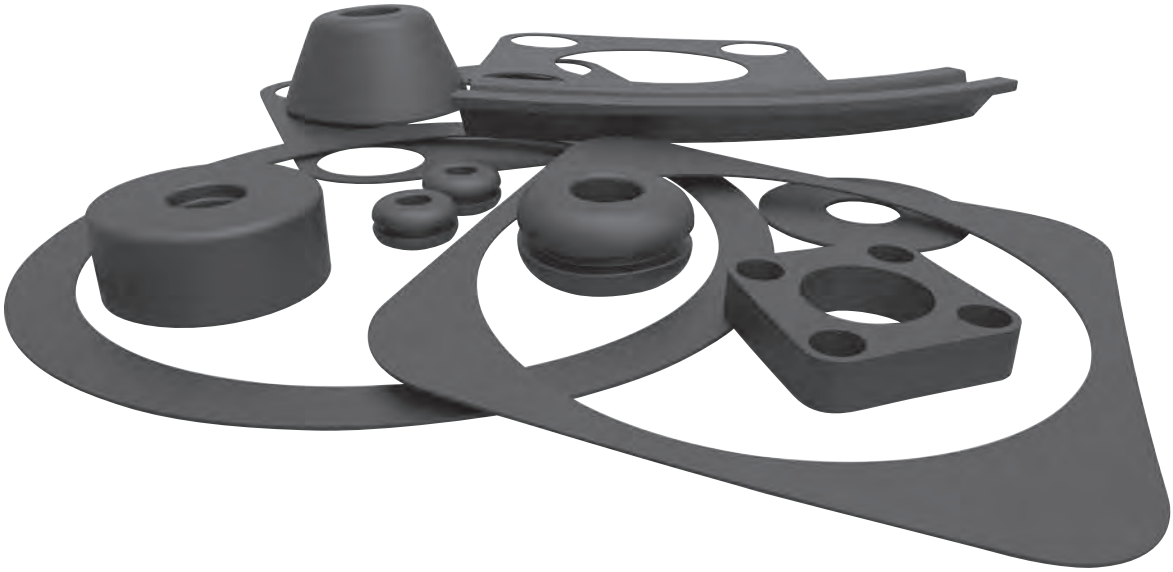
DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

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.

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

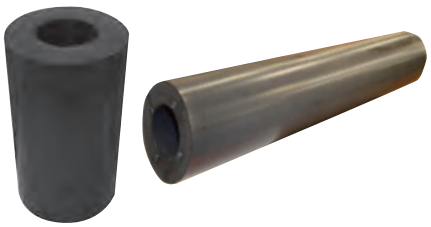
Industrial and Agricultural Rolls

- 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.

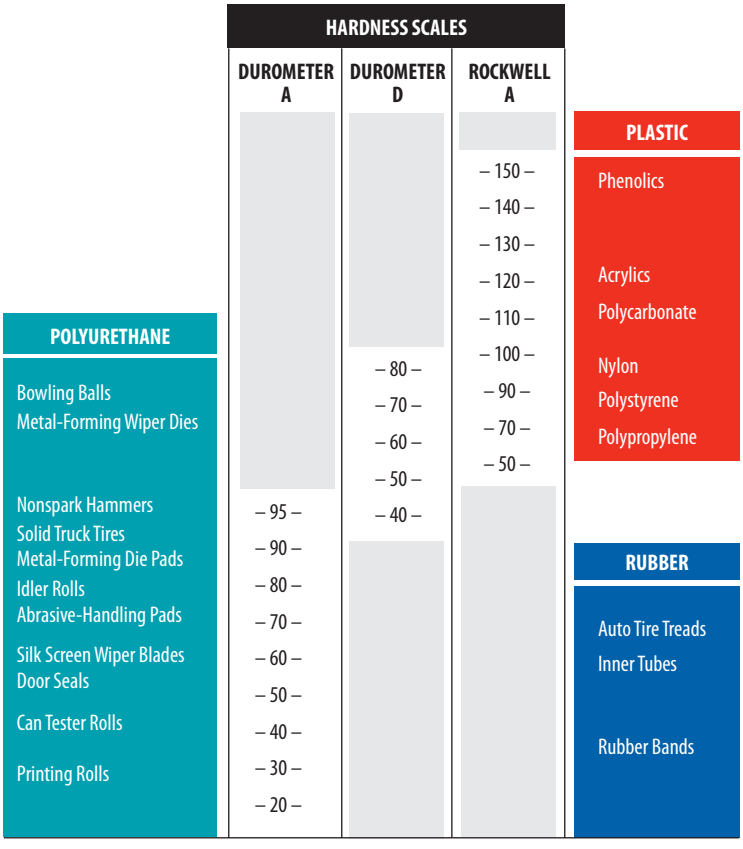
- Effective in forming extremely large products with very light weights
- Able to improve or eliminate secondary operations
- Workable for flexible or rigid products in foams or solids
- Delivers reliable control of components with varying wall thickness



CUSTOM MOLDING | RUBBER AND POLYURETHANE

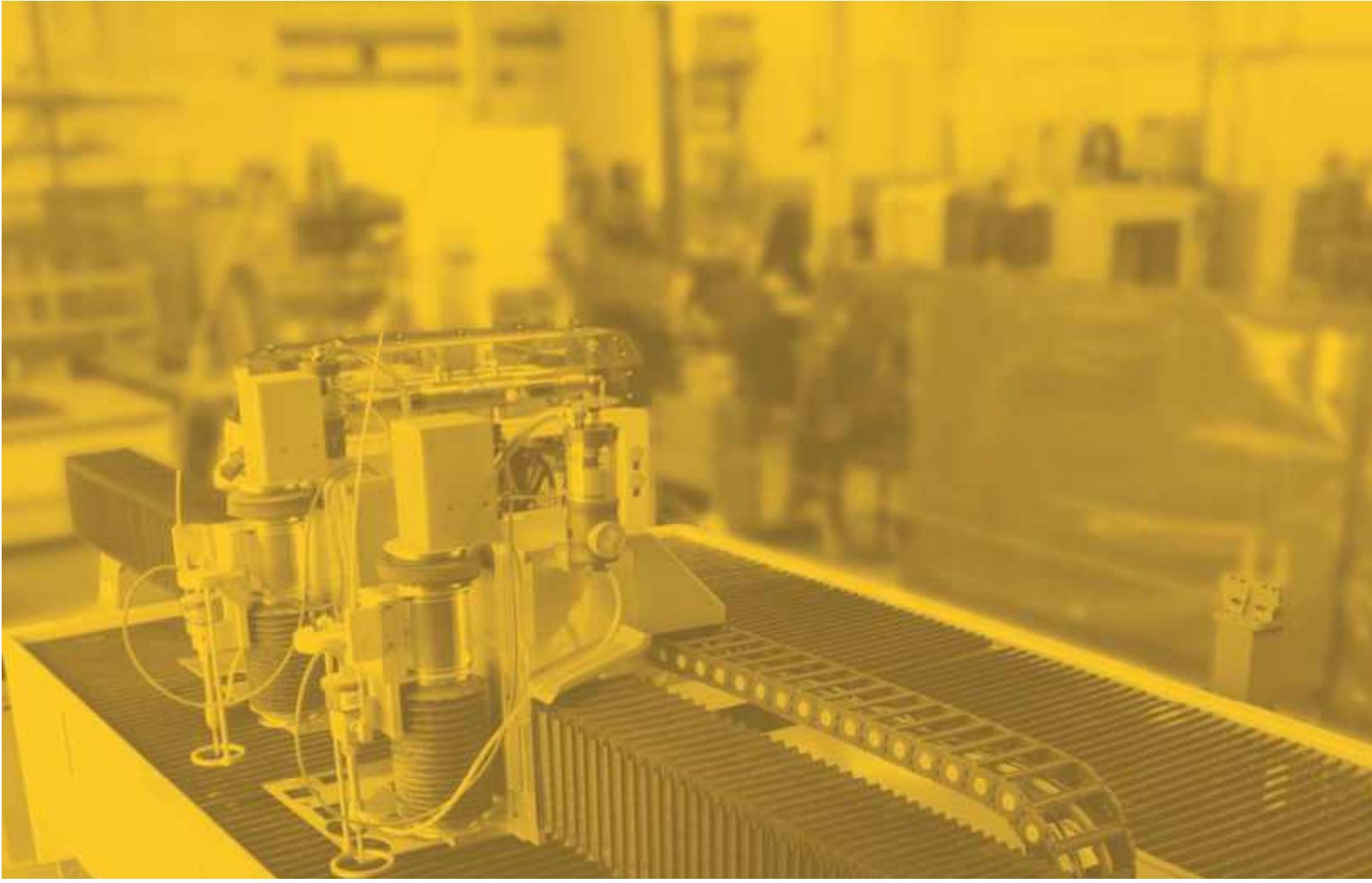
PROPERTIES OF POLYURETHANE AND RUBBER

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



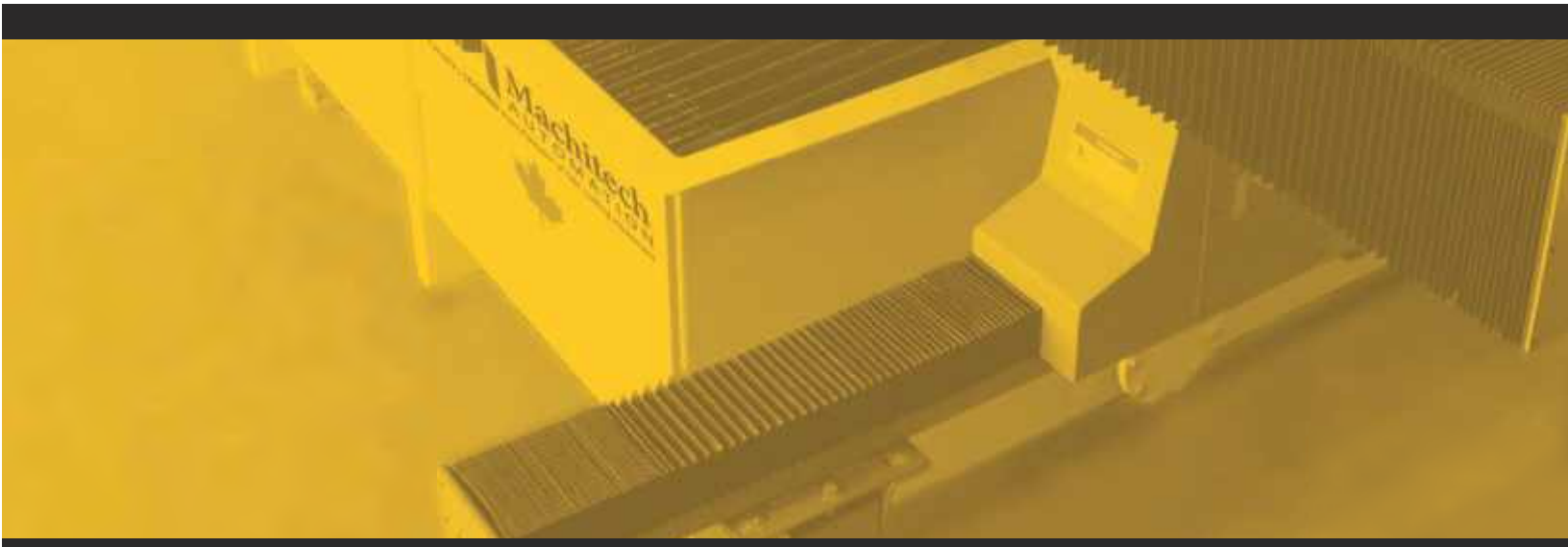
DYNATECT™
DYNAMIC EQUIPMENT PROTECTION

NOTES



DYNATECT™

DYNAMIC EQUIPMENT PROTECTION



HALLTECH

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