

DYNATECT[®]
DYNAMIC EQUIPMENT PROTECTION

DYNATECT.COM

sales@dynatect.com

(262)786-1500

SPACE EXPLORATION



**Manufacturer of Engineered Products
For Extreme Applications**

INTRO | ABOUT

Dynatect has the industry leading reputation for engineering and manufacturing unprecedented dynamic solution that work the first time. Solutions like these are critical in “cannot fail” applications including aerospace, launch infrastructure, radar and satellite communications, military hospitals, bomb-diffusing robots, and more.

Dynatect makes solutions that meet the most extreme conditions including tallest, longest, fastest, coldest, hottest, outdoor, pressurized, and chemical exposure.

Dynatect also has over 75 different manufacturing capabilities to use the right construction method with the right materials to make your unique application successful.



Headquartered in New Berlin, Wisconsin, Dynatect has 9 operations facilities spread throughout United States, China and Germany. With deep application and material science experience, our team of 50+ engineers have developed over 370,000 unique designs of protective solutions.

ENGINEERED CABLE CARRIER ASSEMBLIES

Dynatect makes specialty engineered solutions – things that have never been done before...

Large Cable & Hose Carrier Systems



Largest Cable Carriers:

- Gortrac[®] XL & XX Series
- Nylatrac[®] Modular NXL Series
- Custom sizes designed to application

Specialized in Testing, R&D,
and Engineering Support



ENGINEERED CABLE CARRIER ASSEMBLIES

Long Travel Cable & Hose Carrier Systems



Longest Cable Carriers:

- Long travel lengths
- Travels up to 100' without guide trays

RESEARCH & DEVELOPMENT

Dynatect makes specialty engineered solutions – for Critical Performance Applications

200-ft. Cycle Tester for Cable Carriers



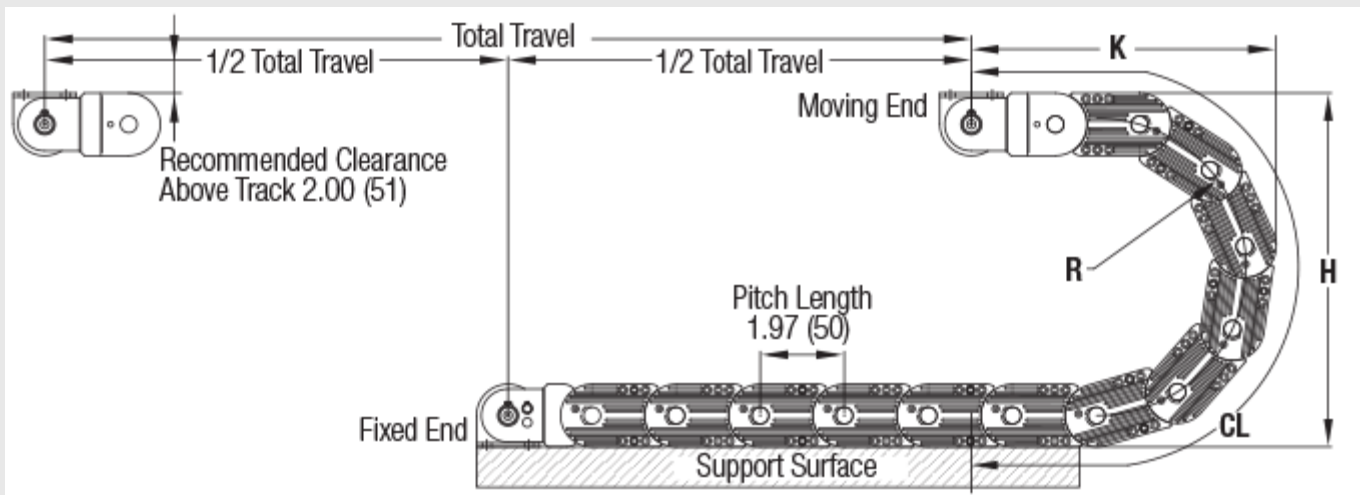
Video

- Custom test setups available per your specific requirements
- Outdoor environments
- High travel speeds
- Long travels
- High cable / hose loading
- Custom materials to suit a variety of applications

KEYS TO A SUCCESSFUL CABLE CARRIER DESIGN

Basic Steps: How to Size Your Cable Carrier

1. List all cables, wires, and hoses
2. Determine minimum cavity height by adding a safety factor to the outer diameter of the largest cable or hose. Safety Factors: Cables: +10% Hoses: +20% Total ideal fill: 60%
3. Determine carrier cavity width by adding the outer diameters and appropriate safety factors (determined in 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.
4. Consult the sizing index of the Quick Selection Guide for pre-selection of appropriate series.
 - [Plastic Carriers Quick Selection Guide](#)
 - [Metal Carriers Quick Selection Guide](#)
5. Check carrier width and carrier height dimensions against potential space restrictions.
6. Select carrier bend radius of carrier by consulting cable/hose manufacturer's specifications for minimum bend radius.
7. Check depot and curve height dimensions against potential space restrictions.
8. Determine total required machine travel (total travel).
9. Consult the Series specifications for the curve length (CL) of the chosen carrier.
10. Calculate Carrier Length = (Total machine travel/2) + curve length (CL) + Offset distance from center of travel (Offset is the dimension between fixed and moving bracket at center of travel.)
11. Now that you have this basic information, you can start specifying the technical detail about your carrier in the Cables & Hoses RFQ.
 - Be sure to include application information: environment, travel orientation, cycles, speed/acceleration.



CONFIGURE & DOWNLOAD CAD FILES

Visit Dynatect's website anytime to get 3D models on your terms, 24/7. Dynatect.com has a dynamic CAD and part number builder to simplify specification. Configure to the length and cable track height you need based on your application parameters. Supports CAD model formats for all major CAD systems. Choose from the largest selection of metal, plastic and hybrid cable carriers available in North America.

Part Number: NSB-PR-5.00-75-1-27.58-#1IN-#1IN

clear all selections

Series
NSB Series

Unit of Measure
Inch

Crossbar Style
PR

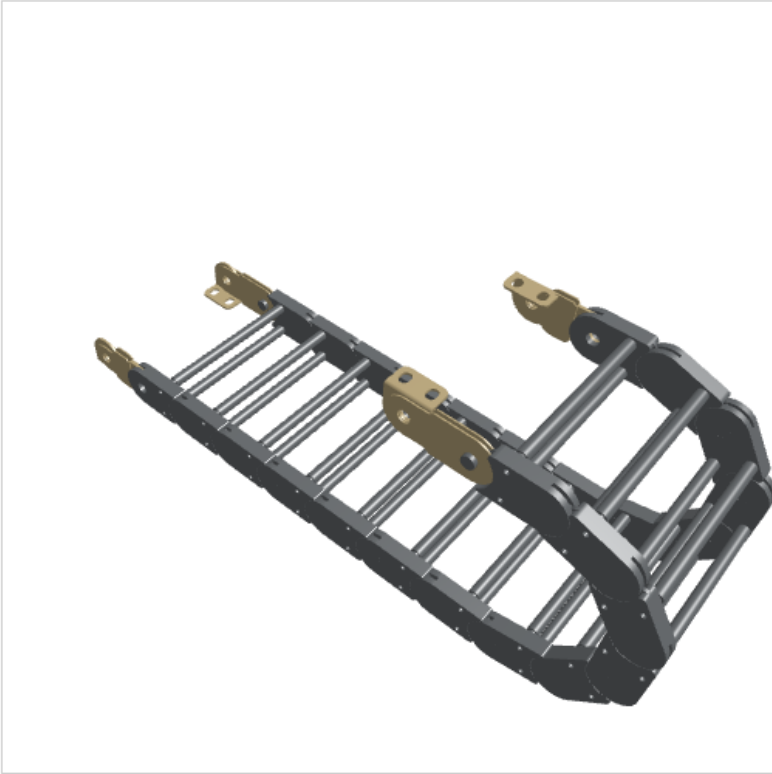
Inner Width 'A' (in)
5

Min. Bend Radius 'R' (in)
3.06

Separator Quantity
1

Calculate Using
Total Travel Distance

Total Travel Distance (in)



Download CAD

Choose a CAD format

Download CAD

Drawing Notes

Enter notes here to include in the 2D Drawing

2D PDF Drawing

Selection Sheet

Request Quote

Attribute	Value
Outer Width 'C' (in)	5.94
Curve Height 'H' (in)	7.50
Actual B.F.(between	27.58

LARGE SCALE PRODUCTS

Dynatect makes specialty engineered solutions – things that have never been done before...

Telescopic Way Cover



⇒ [Video](#) ⇒ [Web Link](#)

Multi-Axis Shields

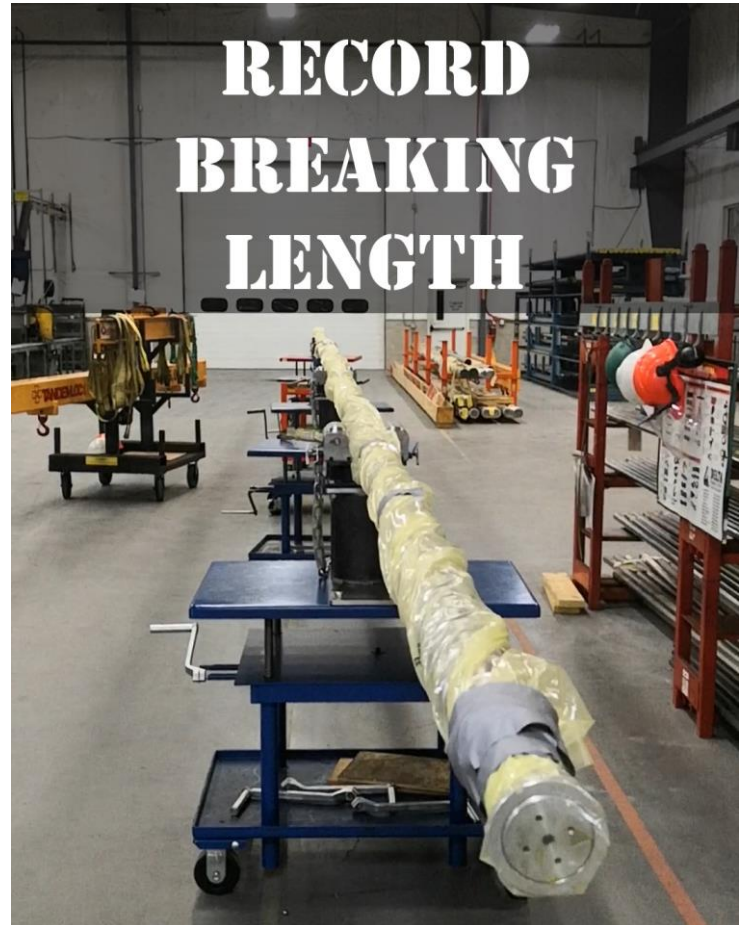


⇒ [Web Link](#)

LONG-LENGTH PRECISION BALL SCREWS

Dynatect manufactures “precision ground” ball screws with a lead accuracy of ± 0.0005 ” cumulative with the best lead times in the industry. We’re experts in custom ball screws, large sizes, and ball screws with high repeatability - offering large sizes not available from catalog suppliers, such as: diameters up to 6” and long shafts over 50 ft.

December 2020: Dynatect LSI shipped a 61- and 67-foot-long precision ground ball screw, breaking a previous record on length. These screws were ground to C5 accuracy with an 80mm diameter. These replace acme screws and are utilized for precise positioning of communications equipment.



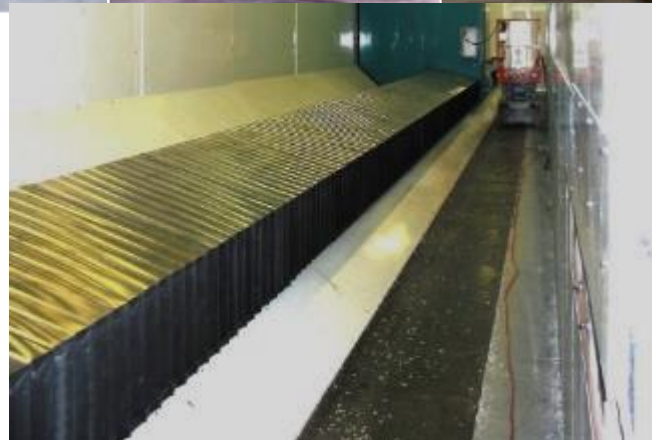
LARGE SCALE PRODUCTS

Dynatect makes specialty engineered solutions – things that have never been done before...

Enormous Sized Bellows



- Expertise in large format - wide widths, long lengths



Way Cover

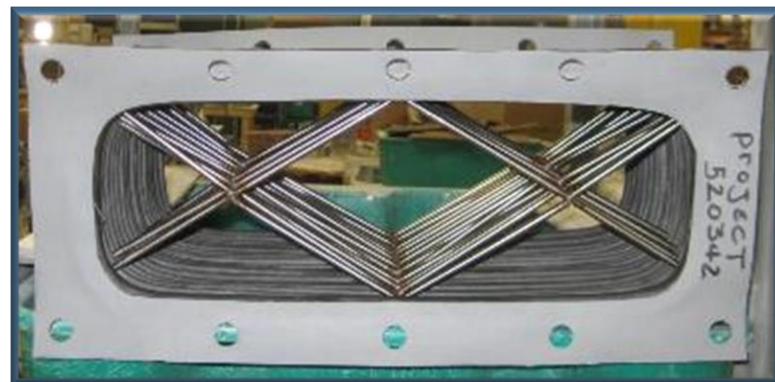
LARGE SCALE BELLOWS

Dynatect makes specialty engineered solutions – things that have never been done before...

Special Purpose Bellows



High Shear/Lateral Movement Bellows

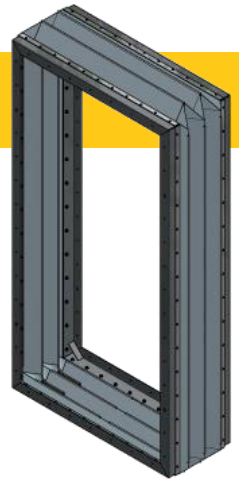


Pressurized/Vacuum Bellows



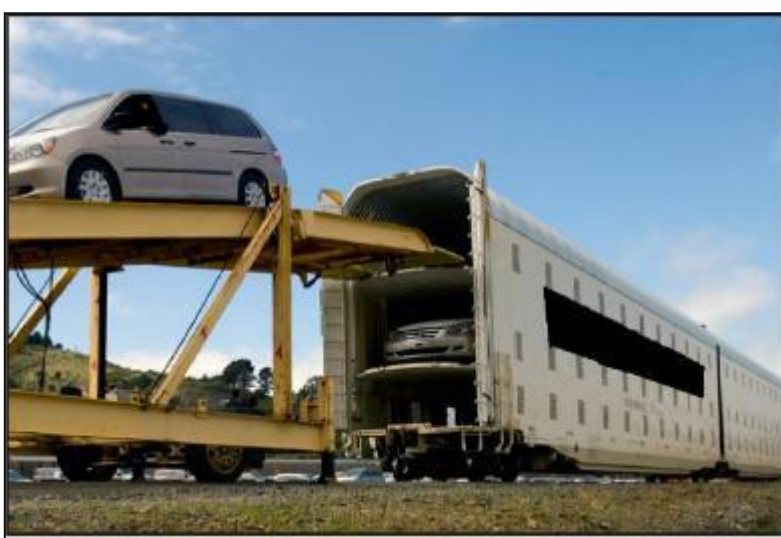
FLEXIBLE PASSAGEWAYS

Rail Security Bellows



Project: Long rail car for triple deck automobile carriage.

Requirements: Needed flexible mid-section secure from vandalism. Must safely move through tight turns and narrow tunnels. **Solution:** Designed and built a complete assembly of molded corrugated rubber - Bonded to stainless wire mesh and attached to a stainless substructure. The assembly is shipped ready to bolt onto production rail cars.



Walkway Bellows

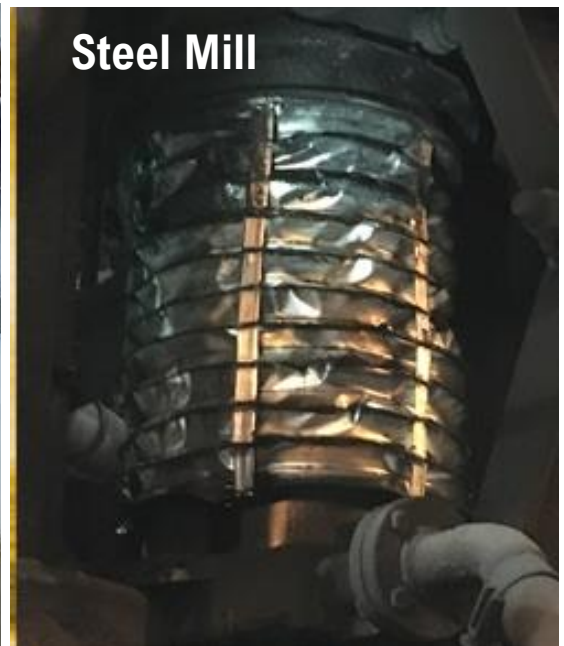
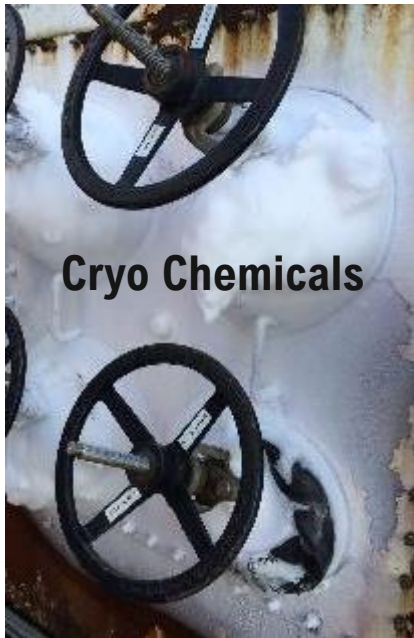
Project: Customized bellows for connecting walkways or modular spaces. **Requirements:** Enclose the gap between modular spaces. Must be flexible to compensate for changing connecting surfaces (like articulated bus bellows).



Passageway Bellows

BELLOWS FOR TEMPERATURE-EXTREME ENVIRONMENTS

Dynatect makes specialty engineered solutions – things that have never been done before...



BELLOWS FOR HARSH, OUTDOOR ENVIRONMENTS

Dynatect makes specialty engineered solutions – things that have never been done before...



Framed Bellows for 26' tall mining trucks



Molded Bellows in Coal
Fired Energy Plant



Bellows for Wind Turbines

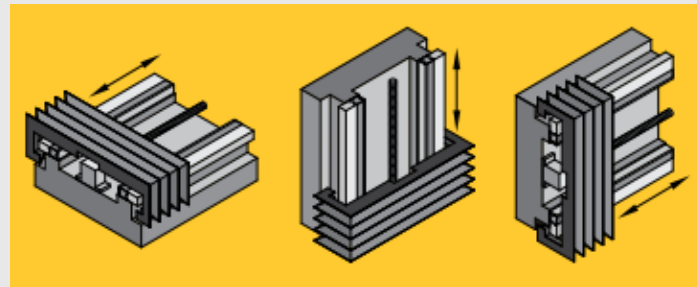
Dynatect has extensive experience with providing bellows subjected to UV, heat, cold, internal pressure, external pressure, grit/sand, and moisture

KEYS TO A SUCCESSFUL BELLOWS DESIGN

What factors does Dynatect consider when recommending and designing a protective cover?

- Operating temperatures including ambient, temporary, and nearby heat sources
- Exposure to environmental threats such as dust, oils, acid, coolant, weld spatter, etc.
- The speed (velocity and acceleration) of the cover and frequency of cycle
- Vacuum or pressure conditions - also consider how air enters and exits the bellows
- Load-support requirements (e.g., heavy chip load, or protection from dropped tools)
- Orientation of cover travel (horizontal, vertical, cross rail/frontal, ceiling/roof cover)
- Space restrictions or obstructions along travel path

Consequently, Dynatect has the most comprehensive quote request forms – they serve as both a questionnaire and a checklist to make sure we cover every aspect up front, to save you time later.



We have a questionnaire for each common shape! Request an RFQ form from your Dynatect Rep or access them online



FILLABLE PDF



ONLINE RFQ



CALL (800) 298-2066

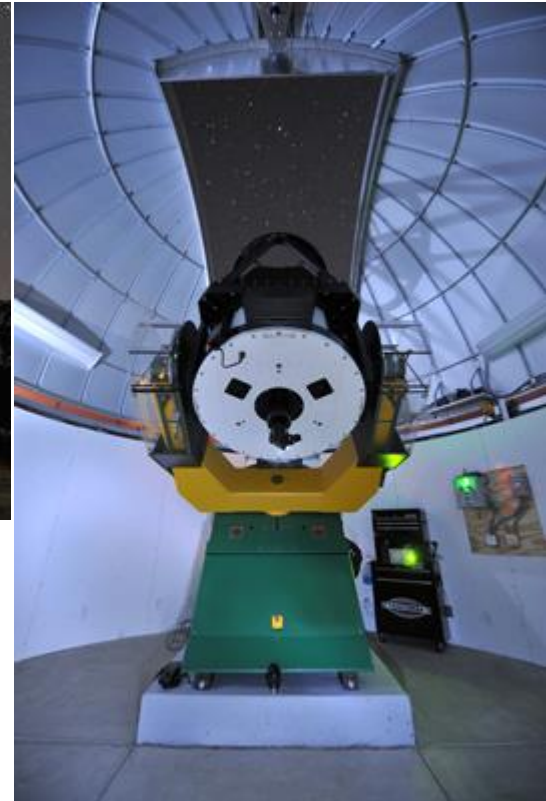


HOW-TO VIDEOS

DYNAMIC SHIELDS & ROLL-UPS

Dynatect makes specialty engineered solutions – things that have never been done before...

Astronomy Telescope Lens Protective Covers



Motorized Metal Shield assembly with two roll-up shades; one shade to protect lens of telescope, and the other shade cut with custom calibration pattern matching the shield.

The Las Cumbres Observatory Global Telescope Network is a private operating foundation, building a global network of telescopes for scientific research and research-based education. Located in Goleta, California, the observatory's network of 1-meter and 2-meter telescopes are mission-critical. The

telescopes are deployed at six sites around the world – three on each hemisphere strategically spaced eight hours apart to search mainly for “EXO” planets and supernovas.

[**View Bellows Online**](#)

INDUSTRIAL HYGIENE

In pursuit of OSHA-compliant machine guarding? Want a cleaner or safer industrial environment? Dynatect can help with your industrial safety goals.

Longest Pit Covers



INDUSTRIAL HYGIENE

In pursuit of OSHA-compliant machine guarding? Want a cleaner or safer industrial environment? Dynatect can help with your industrial safety goals.

Machine Roof Covers for Aerospace Machining



The Machine Roof Cover is applied on a machining center used to mill aerospace components, which generated excessive airborne machining dust.

The objective was to create a semi-enclosed structure that would keep the machining dust and debris out of the air and prevent it from contaminating the rest of the plant.

The roof cover system moves easily with the gantry and still allows light to pass through.

[Machine Roof Cover on Dynatect.com](#)
[YouTube Video](#) **[Application Spotlight](#)**

INDUSTRIAL HYGIENE

In pursuit of OSHA-compliant machine guarding? Want a cleaner or safer industrial environment? Dynatect can help with your industrial safety goals.

Multi-Axis Enclosure for Robotic Plasma Cutter



This custom assembly is a hybrid of a machine rooftop cover and a motorized roll-up door. It was built to contain smoke within a robotic plasma cutting cell. The door covers an opening that is 25 feet wide, 15 feet tall, and 16 feet deep.



[Machine Roof Cover on Dynatect.com](#)
[YouTube Video](#) [Application Spotlight](#)

Let's Talk.

Do you have a project with challenges like the ones we've shown here?



Why Dynatect?

Dynatect (formerly A&A Manufacturing) delivers engineered motion and protection solutions for machines with deep application knowledge, diverse product offering, and a customer responsive sales philosophy.

Our commitment to you: Listen and deliver a practical and cost-effective solution

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

Capabilities

Globally, Dynatect has over 75 different manufacturing capabilities to produce the exact right product in the most efficient way. Consider what any of these capabilities can do to help achieve application success! [View the list here](#)

Find Your Local Representative at
dynatect.com/find-a-representative/