

# SERVICE CAPABILITIES





# TABLE OF CONTENTS

Stretch Forming

pg 4

---

Thermal Improvement

pg 6

---

Flat Sheet

pg 10

---

Linetec Managed Inventory (LMI)

pg 12

---

Transportation

pg 14

---

Architectural Brake Metal

pg 16



# STRETCH FORMING

Stretch forming by Linetec alleviates the worry and hassle of multiple points of contact.

As building projects continue to push the limits in vision and design, Linetec continues to expand its value-added services. Stretch Forming by Linetec alleviates the worry and hassle of multiple points of contact.

## THERMALLY IMPROVED CURVES

For optimal quality and convenience, Linetec provide a single-source solution where stretch forming of curves and radius, thermal improvement and finishing are synchronized and retain the full warranty. The thermal improvement processes may be specified as either a full pour-and-debridge of radius material, both structural and non-structural, or a fully crimped thermal strut system. There are few restrictions to the degree of curvature, and finishes may be specified in paint or anodize.

## BENEFITS OF STRETCH FORMING

### CONVENIENCE AND TIME SAVINGS

Finishing and curving services on one campus

### FULL FINISHING CAPABILITIES

Liquid paint, powder coat, anodize

### REDUCED FREIGHT COSTS

- No freight costs between curving and finishing facilities
- Damage-free material when delivered on Linetec route truck

### Our partner, Southern Stretch Forming, has over 20 years of curving experience

- Ability to finish curved material with the rest of the project, ensuring color consistency
- Full coating warranty benefits for material finished after curving
- Inventory services available for high usage profiles
- Shortened lead time

Pushing the limits in vision and design



## STRETCH FORMING CAPABILITIES

- Maximum arc length of 260 inches (larger lengths reviewed on individual basis)
- Curved shapes up to 10 inches in width
- Full annealing and tempering
- Ability to manufacture and stretch form brake metal
- Custom die/tooling
- Thermal improvement services on curved metal, both thermal strut and poured thermal barriers





# THERMAL IMPROVEMENT

Thermal improvement matters for energy efficiency in both warm and cold climates.



## THERMAL POURED-AND-DEBRIDGED

The three-step pour and debride process, which includes a mechanical lock by either the Azo-Brader™ or Lancer™ method, results in an energy-saving window frame with the advantage of long-term durability that is warranted from structural deterioration.

### PREPARE, POUR AND DEBRIDGE

Pour and Debride thermal barrier systems use a two-part polyurethane that is poured into an engineered structural thermal cavity in the finished aluminum extrusion. After the polyurethane is cured, the aluminum on the backside of the thermal cavity is removed. This creates a thermal break and prevents hot/cold energy from transferring through the extrusion. Prior to the pour and debride process, the thermal cavity can be Azo-Braded or Lanced to improve the mechanical characteristics.

#### THE AZO-BRADER

The Azo-Brader abrades the profile utilizing a carbide tool insert that reciprocates vertically to create raised projections on the thermal barrier pocket. The action of the tool is such that the aluminum is actually displaced under high velocity.

#### THE AZON LANCER

The Azon Lancer provides a unique method of punching the profile material to produce inward curving lanced indentations along the lugs in the pour cavity in such a way as to produce a structural mechanical lock. The Lancer also enhances the shear strength of the resulting polymer and aluminum composite.

Using a thermal barrier system improves performance by separating the aluminum profile into two parts, while maintaining the structural and long-term durability of the unit.



*Thermal Poured-and-Debrided*



*Thermal Lancer Machine*

The Azo-Brader and the Lancer mechanically lock the polyurethane polymer with the finished surface of the aluminum profile to ensure significantly improved adhesion. After the polyurethane has been poured into the cavity and solidified, the metal bridge from the bottom of the channel is removed to produce a true, non metal-to-metal structural thermal barrier.

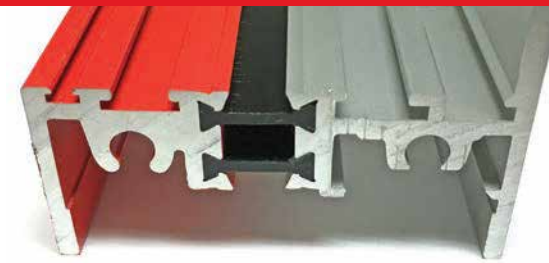
### POUR & DEBRIDGE MATERIAL SIZE & CAVITY GUIDELINES

- Extrusions must be 6 feet or longer to be debrided
- Radius material can be poured by Linetec, but not easily debrided
- Thermal fill cavity must be symmetrical to be abraded
- The opening of the fill cavity must be obstruction-free for the profile to be abraded
- There must be at least .125 inches clearance beyond each of the lugs for the profile to be abraded
- Lance must be open from the top
- Side walls must be .80 inches and able to be supported from a lower support wheel
- Top wall must be at maximum .065 inches



## THERMAL STRUT

Thermal Strut involves two separate extrusions and joins them through the use of engineered structural polyamide plastic strut. Both the inside and outside aluminum profiles are extruded independently with a cavity that will ultimately receive the strut.



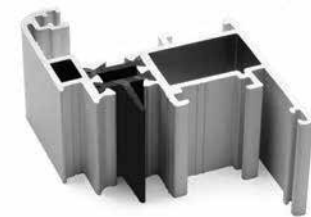
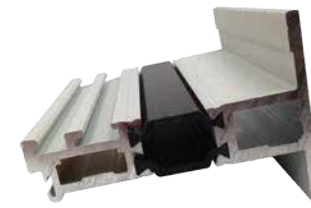
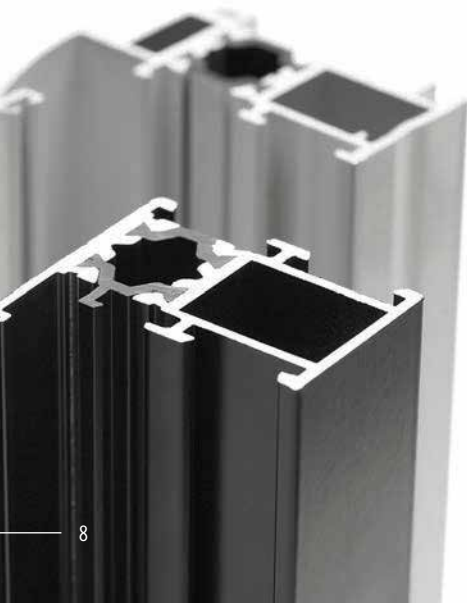
### BENEFITS OF THERMAL STRUT

#### FLEXIBILITY AND VERSATILITY

Thermal strut offers design and aesthetic flexibility and versatility with two-tone finishes. First, the inside and outside aluminum profiles are finished in anodize, liquid paint or powder coating. Different colors and finishes may be used on each profile as the aluminum is extruded independently with a cavity that will receive the strip.

#### GREATER SEPARATION WIDTHS

Linetec has the ability to assemble profiles using polyamide insulating strips (thermal strip) widths ranging from 10mm to 96mm widths. Strip offers increased energy savings with



varying thermal separation widths. Greater widths mean greater separation between the aluminum profiles, which means better thermal performance and efficiency.

#### SINGLE ASSEMBLY

Provides 90-degree thermal strip with a single pass to install the strip simultaneously on two planes of material. This new capability frees up window and curtainwall designers to detail changes in place more efficiently, using a single assembly, rather than multiple pieces – without compromising energy efficiency or condensation resistance.

During the assembly process, knurling produces “teeth” in the aluminum pocket that bite into the strip to ensure appropriate shear strength of the composite profile. As material passes through the knurler, the strip is inserted into the extrusion cavity. The crimping process mechanically locks the aluminum and strip, forming the bond between the two extrusions and the strip.

### STRUT MATERIAL SIZE GUIDELINES

- The first bar of each assembled profile to receive thermal strut must have a 9 inch overage and additional bars thereafter must have a 5 inch overage for testing purposes.
- Material must be at least 6 feet in length.



# FLAT SHEET

Linetec is a full-service, quality source for your flat sheet needs.

## 5-DAY QUICK SHIP PROGRAM

Available in standard sheet sizes

Over 50,000 in-house blendable paint and anodize colors, including micas and metallics

Orders of 25 sheets or less



## LINETEC INNOVATION

### Brake Metal

Linetec has the ability to provide fabrication for small to medium size brake metal projects, in conjunction with finishing.

### Color Selection

Linetec's Select & Spec Tool can aid in finding the perfect color for your project.

### Minimum Rack Marks

Linetec's method for racking flat sheets leaves only two point marks along one edge on both sides of the painted sheet, within a half inch of the outside. Longer sheets may require two to four additional rack marks.



## BENEFITS OF FLAT SHEET PROGRAM

- Over 40 sizes in stock, with the ability to order nearly any size and thickness required
- Order in any quantity needed
- All freight managed by Linetec through common carrier trucking
- Sheet stock available in both paint (3003) and anodize (5005) quality
- Finished in nearly any color required, including custom matches





# LINETEC MANAGED INVENTORY (LMI)



**Linetec's Managed Inventory (LMI) program provides customers with the opportunity to stock mill finish material at our facility, direct from the extruder.**

Linetec's receiving department verifies counts upon delivery, then stores customer material in a cantilever storage system. This "off the floor" storage system eliminates damage to inventoried material. When orders are placed, the selected stock is pulled from inventory and finished per customer specifications.

The LMI program allows the customer to maintain a Lean Inventory and gives Linetec the ability to pull and finish the customers material in any color, any finish, and any quantity.

## BENEFITS OF LINETEC MANAGED INVENTORY

### MATERIAL MANAGEMENT

Reduction of inventory with only one set of mill finish extrusions needed. Linetec will work directly with the extruder providing Lean Inventory, inspection of material, count verification, damage reports, and handling of scrap. Linetec initiated ordering is available to avoid stock-out profiles.

### REPORTING

Linetec monitors the amount of metal on hand and sends periodic inventory reports along with cycle counts, average inventory turns, minimum and maximum inventory levels, and high and low mover reports.

### CUSTOMER PORTAL

Linetec online customer portal gives customers 24/7 real-time visibility of their LMI inventory. The customer portal also provides order status, material turn information, on-time delivery metrics, shipping and tracking information, and more.

### TRUCKING & FREIGHT PROGRAM

Reduce freight costs with all product pulled, finished and shipped from one inventory. Linetec managed trucking presents reduced lead times, coordination of freight, dedicated trucks, customer specific packaging and damage-free deliveries.

*(Contact Linetec for route availability)*

### SAVING POTENTIAL

Linetec's facilities become an extension of the customer's business as a fully-integrated partner. Linetec's customers will see savings with inventory reduction, no double packaging required, less scrap, reduced handling, reduced freight costs, freed-up manufacturing floor space and faster lead times.



# TRANSPORTATION

With tight schedules and limited room at the job site, we understand how important it is for customers to have their finished material arrive as specified and on time.

To provide the greatest convenience and the best possible quality control, at Linetec we operate our own fleet of trucks. As the nation's largest independent architectural finisher and contract hauler, Linetec provides customers with cost-effective, reliable, damage-free shipments. Distribution points, and regular pick-up and delivery routes strategically covering much of the U.S., allow for frequent shipments from Linetec to its customers.

## DEDICATED TRUCK BENEFITS

### **COST**

For partial loads, freight costs are more economical when customers are effectively able to share a truck with other customers in their area. For customers utilizing a dedicated truck for a partial load, this can result in a sizeable savings.

### **RELIABILITY**

With Linetec in control of the truck and the schedule, we can better ensure that material will be picked up and delivered on time to our facility and to yours. Using experienced drivers, we can also ensure material is properly loaded to protect against damage.

### **CONVENIENCE**

No need to spend time finding and scheduling a contracted hauler to make a delivery

Cost-Effective,  
Reliable,  
Damage-Free Shipments



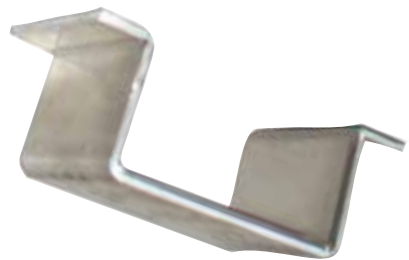


# ARCHITECTURAL BRAKE METAL

Linetec can provide fabrication for small to medium size brake metal jobs, along with the finishing and transportation of architectural metals.

Utilizing Linetec for your brake metal needs allows our customers to have their trim, flashing, coping, fascia and other brake shapes finished along with the rest of the order, guaranteeing the best possible color match throughout the order. Linetec's tracking system and quality control processes ensure every order receives high visibility and individualized attention.

## BENEFITS OF BRAKE METAL



Convenience and time savings with both metal and finish from one supplier

Shortened lead time

Ability to finish brake metal material with the rest of the project

Reduced freight costs

- No freight costs incurred to Linetec
- No freight costs between fabrication and finishing
- Damage-free material when delivered on Linetec route truck

## Fabrication for brake metal jobs

## BRAKE METAL CAPABILITIES

- Aluminum sheet available in:  
.040 .063 .090 .125  
.190 .250
- V-Groove bending
- Splicing
- Custom built crates for shipment of completed material
- Sizes range from 48" x 100" up to 48" x 168" or 60" x 144"
- Brake length capabilities up to 216"
- Additional capabilities available
- Sheet available in anodize quality
- Shear length capabilities up to 168"





[LINETEC.COM](http://LINETEC.COM)

| [SALES@LINETEC.COM](mailto:SALES@LINETEC.COM)

| 888 717 1472