

Tilt-Up Solutions

Industry-leading performance, reliability and safety



Imagine. Model. Make.



We imagine, model and make engineered products and innovative construction solutions that help turn architectural visions into reality and enable our construction partners to build better, safer, stronger and faster.

Leviat is a world leader in connecting, fixing, lifting and anchoring technology.

From the build of new schools, hospitals, homes and infrastructure, to the repair and maintenance of heritage structures, our engineering skills are making a difference around the world. We provide technical design assistance at every stage of a project, from initial planning to installation and beyond.

Our technical support services range from simple product selection through to the development of a fully customized project-specific design solution. Every promise we make locally has the commitment and dedication of our global team behind it. We employ almost 3,000 people at 60 locations across North America, Europe and Asia-Pacific, providing an agile and responsive service worldwide.

Leviat, a CRH company, is part of the world's leading building materials business.









Structural Connections

Systems to form robust, efficient connections, and continuity of concrete reinforcement as necessary, between walls, slabs, columns, beams and balconies, providing structural integrity as well as enhanced thermal and acoustic performance.



Lifting & Bracing

Systems for the safe and efficient transportation, lifting and temporary bracing of cast concrete elements and tilt-up panels before permanent structural connections are made.



Anchoring & Fixing

Systems for fixing secondary fixtures to concrete, including anchor channels, bolts and inserts; also tension rod systems for roofs and canopies.



Formwork & Site Accessories

Non-structural accessories that complement our engineered solutions and help keep your construction environment operating safely and efficiently, including molds for casting standard and special concrete elements and construction essentials such as reinforcing bar spacers.



Industrial Technology

Façade Support & Restraint

efficient fixing of the external

brick and natural stone, insulated

suspended concrete façades, and

sandwich panels, curtain walling and

also the repair and strengthening of existing masonry installations.

building envelope, including

Systems for the safe and thermally-

Mounting channels, pipe clamps and other versatile framing systems that provide safe fixing in a wide range of industrial applications.

Leviat product ranges:

Ancon | Aschwanden | Connolly | Halfen | Helifix | Isedio | Meadow Burke | Modersohn | Moment | Plaka | Scaldex | Thermomass

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Insulating: Thermomass MC/MS Series Connector



Connecting: MB Super Lynk

Leviat is proud to be a sustaining member of the Tilt-Up Concrete Association

As a Sustaining Member of the Tilt-Up Concrete Association (TCA), Leviat is committed to the continual innovation and advancement of the global tilt-up community. We recognize that contributing to the good of the industry is a benefit to our company and our customers.



Tilt-Up Solutions



Reimagining Tilt

By combining over 200 years of industry experience; best-in-class products from trusted brands like **Meadow Burke**, **Thermomass**, and **Halfen**; and custom solutions to meet the challenges and requirements of modern construction; Leviat is reimagining tilt-up construction. Our comprehensive portfolio of lift and bracing systems, insulation products, adjustable channel kits, and reinforcing supports are manufactured to the highest quality standards and are rigorously tested to ensure they meet or exceed applicable industry standards. A world-class engineering team and constant research, development, and innovation allow us to offer high-performance solutions that are safe, reliable, and cost-effective; making Leviat an excellent partner for your next tilt-up project.

Trusted products featuring decades of quality, reliability, and real-world performance. A team of industry experts in tilt-up product design, engineering, and manufacturing. A culture of constant innovation that fosters engineered solutions for projects of any size or complexity.

Leviat

Tilt-Up Lift & Brace Engineering



Leviat's engineering services offer a host of benefits to ensure your tilt-up project is constructed as efficiently, economically and as safely as possible.

Detailed Planning

Leviat's engineering team produces easy-to-read panel drawings with lift and brace locations correctly positioned and indicated to minimize the risk of concrete stress and cracking during erection and bracing.

Custom Solutions

Leveraging state-of-the-art design tools and decades of experience, our engineering and manufacturing teams can customize many of Leviat's designs to meet your project's specific requirements.

Unmatched Experience

Our team is the industry-leader in lift and brace design, with over 200 years of combined experience. We are also active participants in a variety of industry committees, including those for the Tilt-Up Concrete Association. Contact **projectengineering@leviat.us** or visit **https://meadowburke.com/tilt-up-request/** to try the Leviat advantage on your next tilt-up project

We also offer:

- Preliminary material take-offs
- Bill of Materials
- Strongback design and location
- Additional rebar required for lifting purposes only
- PE seals for USA and Canada

Tilt-Up Shop Drawings



Leviat Shop Drawings help optimize tilt-up panel construction, allowing easy coordination between different plans.

More efficiently assemble your plans

Leviat shop drawings are your one-stop source for every detail you need to plan, cast, and erect your next tilt job.

More quickly form panels

Overall panel geometry - including doors, windows, and other opening - are detailed on each drawing.

More accurately place components

Embeds, reveal strips, and other construction accessory locations are clearly dimensioned for quick and precise placement.

More confidently complete your project

Our team of experienced engineers and drafters are an invaluable resource, helping ensure that your architectural, structural, and accessory plans are all aligned for a successful pour.



Tilt-Up Shop Drawing

We also offer:

- Single or side-by-side formats
- Paper doll sets
- Panel casting layout plans
- Bracing layout plans
- 3D model views

Lifting

MB Super Lift III

The MB Super-Lift III insert module is a dependable combination of a two-part sturdy base, a high strength steel anchor, and a two-part, snap-together recess former.

- Made in the USA in material and production
- Insert steel is fully tested and steel heat code in found on every insert
- Utilize a 2.5 to 1 Safety Factor
- 22,400 SWL in Tension and Shear in concrete over 10" thick
- New Recess Member makes the anchor easier to find and remove from the panel

MB Super Lift III Ring Clutch

The MB Super-Lift III Ring Clutch assembly consists of a main clutch body, a curved bolt/handle and bail. Installation is safe, quick and easy; simply rotate the curved bolt/ handle to the open position, drop the main body into the anchor recess and rotate the bolt/handle to the closed position.



- Strong, reliable lifting device
- Clutch can be engaged in SLIII insert in seconds
- Easy installation
- Quick Ground Release using chain and rope
- 112,000 LB ultimate load
- Works on SLIII face and edge lift inserts

The two-piece Recess Former comes attached and fully assembled



The Base is wide to give extra stability and support

UPDATED DESIGN

MB SLIII Void Former



The redesigned SLIII Void Former:

- Is even more effective at keeping concrete away from the anchor head, allowing for a quick clutch connection
- Features an updated perimeter flange that makes locating and accessing the void even easier

MB Super Lift Strongbacks

MB Super Lift Strongbacks provide superior strength for slender elements during lifting.

- With no welded parts, these units can be disassembled for maintenance or part replacement
- Available in 10', 15' and 20' lengths and have full moment splices plate sets to join them.
- Available in mill finish or painted steel to reduce rusting.



MB Super Lift III Edge Lift Anchor

The Super Lift III Edge Lift Anchor is designed for safe edge lifting and rotation of thin wall precast elements.

- Its two 'ear' design restricts the rotation of the ring clutch
- Its design also transmits lateral forces directly to the anchor to mitigate spalling





MB Super Lift Shoes improve the stability and positioning of Super Lift III anchors, especially in insulated panels.



MB Lift-It Plate

The Lift-It Plate provides high pullout strength with a low profile, making it ideal for face and back lifts of thin-wall units and stripping, handling, and erection applications.

- Designed for 2-, 4-, 8-, and 10-ton capacities
- Available in plain and hot dip galvanized finishes.

Leviat

Bracing

MB Super Braces



Available for purchase or rent Contact rental@leviat.us for more information



Super 17

- Variety of sizes to brace panels from 10 ft to 94 ft in height
- Braces can be used on the inside or outside of the structure
- All braces have additional length adjustment to simplify final plumbing
- Complies to ASCE 37-02 and ASCE 7-10 regarding basic wind speeds
- Engineered to be used with Meadow Burke's Badger, Slam Anchor, MB Brace Bolt, MB Rapid Bolt, and Brace Insert.

UPDATED DESIGN

Brace Shoe

New, taller, heavy duty brace shoes can be used on both ends of the brace which simplifies brace assembly and inspection as well as inventories.

All new orders for Super 32 and Super 37 Braces will incorporate the new design.



MB Burke Bar

Available in two different sizes to allow for the best Burke Bar for the job. These are the perfect companion to any construction site or precast plant. Burke bars come in handy when you need to:

- Strip forms
- Remove a stud wall

Unstick panels

Pull nails or spikes Move panels

Adjust a door jam Hundreds of uses

Built for long-lasting heavy-duty use. The handle is made of rigid structural tube. The whole bar is made with 10% more steel than competitors and they're all coated with a thermal polyester finish.



MB B-75 Wall Insert

These solid bolted connections have proven the strength and security of this system on thousands of job sites around the country.

- Strongest brace attachement to panel
- 3/4" x 4" Coil bolt to attach brace
- Easy-see cap makes it easy to locate inserts
- Plastic feet obscure insert on back of panel



Brace Anchoring



MB Brace Bolt (Multi-use)

MB Brace Bolt safely and economically secures tilt-up braces to the slab.

- Multi-use
- High pull-out capacity
- Uses 20mm drill bit



Dual threads don't rely on expansion or displacement to generate strength.

NEW PRODUCT

MB Rapid Bolt (Single-use)

MB Rapid Bolt safely and economically secures tiltup and precast braces to the slab.

- Single-use
- ³/₄ x 6.25" in length
- 8100 lb SWL in 6" concrete



MB Slam Anchor

The MB Slam Anchor was designed to address the shortcomings of existing brace-to-floor connectors.

- The MB Slam Anchor carries a 9,000 lbs. load with a 2:1 safety factor.
- Quick, virtually foolproof installation.
- Unique expansion mechanism is not a threaded connection, and does not have a torque requirement and does not need to be retightened.
- Reusable. Only a small drop-in is expended at each use.



MB Brace Badger Helical Anchor System

MB Brace Badgers offer contractors an economical and efficient alternative when conventional bracing to floor slabs is not possible or desired.

- Eliminates concrete deadmen
- Environmentally friendly
- Offers quick installation and removal
- The strongest brace anchor available
- Verifiable load capacity in all soil conditions
- Works with ALL Meadow Burke braces
- Reusable





Insulating

Thermomass is the original, high-performance insulation system for tilt-up concrete panels.

Thermomass insulation systems pair highperformance fiber-composite connectors and energy-saving rigid insulation to create building envelopes that exceed stringent energy codes while minimizing energy loss and mitigating condensation and mold growth concerns. The result: improved energy-efficiency, reduced maintenance and enhanced durability.

- Edge-to Edge Performance: Non-conductive connectors tie together the entire wall assembly, allowing for a thermally-broken, edge-to-edge insulated building envelope.
- Extensively Tested: Thermomass connectors are fully tested for load bearing, fire, thermal cyclic and longterm durability by independent labs, including ICC.
- Easy Installation: Pre-drilled insulation and threaded connector options allow for simple, easy installation of Thermomass components.
- Structural Options: Connector options are available to cast both structurally non-composite and structurally composite panels.

Thermomass Custom Insulation Offering

Leviat offers a variety of solutions, including engineered systems and fabricated insulation components:

- FAB: Insulation is pre-drilled and fabricated to match available project specifications; window, door and wall openings; and other details.
- Punched: Full 4'x8' insulation sheets are punched with regular hole spacing for easy connector installation.
- Express: full sheets of insulation are provided with threaded MS-T Series connectors to be drilled into insulation.



	FAB	Punched ^{sм}	Express sm
Design Services			
Panel design assistance			
Preliminary thermal/ moisture/R-value analyses	\checkmark		
Pre-design education/ CEUs	\checkmark		
Production Services			
Insulation pre-drilled to accept connectors			(\mathbf{x})
Panel insulation layouts	\checkmark	(\mathbf{x})	(\mathbf{x})
Detailed system manual included	\bigcirc	(\mathbf{x})	(\mathbf{x})
Itemized insulation with optimized connector patterns		(\mathbf{x})	(\mathbf{x})

Thermomass System NC

Thermomass System NC is designed to create a non-composite insulated concrete sandwich wall panel where MC/MS Series or threaded MS-T Series connectors sandwich the structural and cladding wythes of concrete around high-performance rigid insulation board such as XPS, ISO or EPS.

- Independent interior structural and exterior cladding wythes allow for free expansion and contraction of both layers, minimizing the risk of thermally induced bowing and cracking.
- Ideal for high-performance buildings with significant temperature differentials between interior conditioned space and outdoor environment.
- ICC evaluated: ESR 1746



Thermomass System SC

Thermomass System SC optimizes insulation coverage and composite action, providing designers the highest level of insulation value in a composite panel. High-capacity CC Series and X Series connectors to tie the two wythes of concrete and a selection of high-performance rigid insulation board such as XPS, ISO or EPS.

- Specially engineered connectors allow for shear transfer between the concrete layers, allowing them to create a structurally composite assembly and a thinner panel.
- Reduced thermal bowing when compared to traditional composite walls with metal ties or solid concrete sections.





ICC evaluated: ESR 2873



Fabricated Insulation Layout Services



Leviat offers a number of insulation layout services to ensure your tilt-up project meets all of your thermal, moisture, and energyefficiency goals.

Expert Advice

We support your design by providing recommendations on the best insulation systems to meet your project's thermal requirements and composite structural behavior.

Custom Solutions

We offer a number of custom insulation fabrication levels specifically aligned to meet your project requirements and construction schedule.

Insulation Layout Drawing

Easy Installation

Leviat's Thermomass system manual is your guide for a smooth installation on the job site. Detailed layouts provide easy-to-follow instructions for the placement of prefabricated insulation sheets and connector products.

We also offer:

- Detail review
- Thermal analysis
- Composite panel design assistance
- PE seals for USA and Canada

Complete Tilt



Complete Tilt bundles the services and expertise of Leviat's industry-leading lifting, bracing, and insulation products to create one, single-source resource for concrete sandwich panels.

- Dedicated Project Manager: Overseeing all aspects of panel design and construction provides single source responsibility for detailing, analysis, and engineering assistance, resulting in enhanced efficiencies.
- Consolidated Engineering Manuals: Provides easyto-read lift and brace guide and insulation system layouts with references for thermal, moisture and structural design resources.
- Optimal Coordination of Trades: Results in enhanced construction efficiency.



Connecting

MB Super Lynk

Super Lynk is a fast, strong and discrete way to permanently connect concrete panels to footings. It requires only a single bolted connection and is easily concealed within the normal grout line process.

- Saves time and money: The single ³/₄" x 10" MKT bolt (provided) connection is simple to install and eliminates the need for epoxy, grout and in-field welding. Bolting and panel grouting can be done same day as lift.
- Improved performance: The engineered, patented connection system has been developed by Meadow Burke's team of Tilt-Up experts to meet ACI 318-14
- Improved aesthetics: With a profile less than 2½", the Super Lynk is discrete relative to alternative connection systems and can easily be concealed by normal backfill and landscaping.



NEW PRODUCT

MB Super Lynk SR

Super Lynk SR includes all of the benefits and features of the original Super Lynk and resists shear forces through the inclusion of a patented shear key that resists movement of the pivot link.

 Shear Resistance: The advanced Shear Key available with Super Lynk SR is engineered to resist shear loads.





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Halfen Adjustable Bolted Connection





US PATENT 10,577,789

Halfen Adjustable Corner Connection Kits reduce labor cost and provide a simple, non-weldable connection and are available in two standard profiles for minimum wall panel thicknesses of 6" and 8".



- Reduced labor costs: As bolted connections can be installed by the same crew members that erected the panels.
- Non-weldable connection: only a torque wrench is required for installation.
- Adjustable connection: Counteracts construction problems caused by foundation elevation issues or panel placement inconsistencies.
- **Simplified connection:** Channel connections are easily adjustable and can be made in any weather condition.
- Reduced overall construction times: By eliminating traditional weld plates and field welding.

Occasionally, loading on the building envelope requires adjacent wall panels to be connected. Traditionally, this is accomplished through expensive and time-consuming welding operations.

The Halfen Inline Panel-to-Panel Connection Kit delivers an adjustable, non-weldable connection and is available in a standard profile for minimum wall panel thicknesses of 6".



MB Burke Slot

The MX-55 Burke Slot Insert is a high strength slotted insert designed for use with type straps or threaded straps.

- Available in $6\frac{1}{2}$ " lengths in plain or hot dip galvanize finish.
- Can be supplied with ³/₄" NC threaded or ³/₄" coil nut
- Sealed to prevent concrete from leaking into the insert. Removal of the perforated slot-seal exposes the slot for quick connection of the strap.



Accessories

MB Super Lift III Patches

The patented MB Super Lift III Patches provide a quick, cost-effective cover for lifting anchor recesses.

 Precision molded of durable, high-impact plastic the color and texture of concrete.

• Resists assault from manufacturing and environmental chemicals. PATENT US7441375B2



MB B-75 Patches

The Meadow Burke Super Patch is the modern method to permanently and aesthetically cover insert holes on tilt-up panels.

MB Stud Extenders

The MB Stud Extender is designed as an adjustable height support chair for embed/weld plates, eliminating the tedious, labor-intensive wood forming or risky "wet setting" of embed plates in the top-face of a concrete panel.

MB RL 76/77 Ridged Super Shims

Designed to quickly and safely adjust for an uneven footing or panels, these shims provide excellent stability and will not rust or stain the concrete.

- Manufactured by Leviat in the USA with extremely tough, high-impact polystyrene
- Ultimate compressive strength of 8,000 psi per ASTM-D695





MB Tuff Chair

The patented MB Tuff Chairs are designed and manufactured to provide enhanced strength and durability to deliver fast and reliable rebar placement without the rust concerns of common metal chairs.

 Non-corrosive plastic produced in concrete gray coloring to camouflage its appearance

PATENT US8028490B2



MB Mesh Bar Chair with Base

These light-duty composite chairs are used to support the upper layer of reinforcing in an insulated sandwich panel. The flanged base distributes the weight of the rebar while maintaining proper reinforcement layer depth.

- Prevents damage to insulation
- The Mesh Chair with Base is molded in black and available in cover heights from 1" to 6".



UPDATED DESIGN

MB X Tuff Slab Bolster

Manufactured using advanced PC/ABS plastic for bestin-class strength and durability, providing exceptional performance even in extreme temperatures and corrosive environments.

- Engineered, high-performance solution
- Developed to meet ACI 318-14 16.2.4.3 (b) performance requirements



Leviat

Highlighted Tilt-Up Projects



8600 Redstone Gateway Huntsville, Kentucky



Berkeley Electric Cooperative Johns Island, South Carolina



Ben Lomond HS Athletic Center Ogden, Utah



Toho Water Authority Kissimmee, Florida



Mead Hunt Middleton, Wisconsin



Evie Garrett Dennis Campus Denver, Colorado



Rich Products Houston, Texas



ThermoWorks American Fork, Utah



5801 University Research Court College Park, Maryland



Wallis State Bank Houston, Texas



St. Clare Catholic Church O'Fallon, Illinois



Yates Pavilion at Kent Denver Englewood, Colorado

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Contact **projectengineering@leviat.us** or follow the QR Code to try the Leviat advantage on your next tilt-up project

https://meadowburke.com/tilt-up-request/



Leviat.com

For information on certified management systems and standards see www.meadowburke.com | www.halfen.com | www.thermomass.com

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