

**Leviat**<sup>®</sup>  
A CRH COMPANY

## High Rise Solutions

Industry-leading performance, reliability and safety



Featured product brands

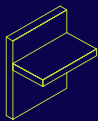
**MB** MeadowBurke<sup>®</sup>

**H**  
HALFEN

**Imagine. Model. Make.**

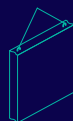
We imagine, model and make engineered products and innovative construction solutions that help turn architectural visions into reality and enable our construction partners to build better, safer, stronger and faster.

## Our areas of expertise:



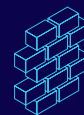
### Structural Connections

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.



### Façade Support & Restraint

Systems for the safe and thermally-efficient fixing of the external building envelope, including brick and natural stone, insulated sandwich panels, curtain walling and suspended concrete façades, and also the repair and strengthening of existing masonry installations.



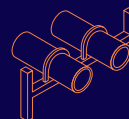
### Anchoring & Fixing

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

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

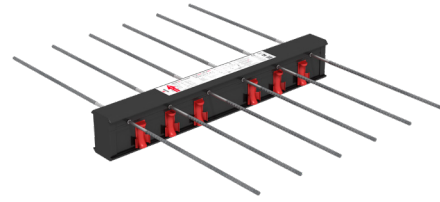
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## Leviat product ranges:

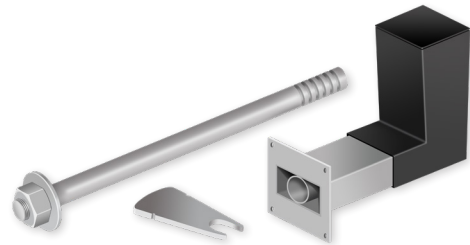
Ancon | Aschwanden | Connolly | Halfen | Helifix | Isedio | Meadow Burke | Modersohn | Moment | Plaka | Scaldex | Thermomass

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**Halfen HIT**  
Thermal break balcony connection



**Halfen HSD-LD Lockable Dowel**  
Engineered connection eliminates pour strips



**Halfen Adjustable Channel**  
Excellent adjustability for simple and quick connections

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## Industry Leadership

Leviat is proud to be a member of a number of leading construction industry associations, including:







**Anchor Channel**

**Slab Joint**

## High Rise Innovation

Leviat, a global leader in construction solutions, offers a broad range of innovative products and services that are integral to high-rise construction projects. One of the key areas where Leviat excels is in providing structural connections that are both robust and adaptable.

Our range of products includes anchoring and anchoring systems,

reinforcing bar couplers, and tension systems designed to ensure the stability and longevity of high-rise buildings.

These solutions are engineered to meet the specific demands of tall structures, where strength, flexibility, and safety are paramount, especially under heavy loads and variable environmental conditions.

Leviat's commitment to sustainability and environmental responsibility is reflected in our offerings for high rise construction - products with a focus on reducing waste, improving energy efficiency.

**Trusted products** featuring decades of quality, reliability, and real-world performance.

**A team of industry experts** in precast product design, engineering, and manufacturing.

**A culture of constant innovation** that fosters engineered solutions for projects of any size or complexity.



## Rebar Splicing

## Balcony Thermal Break

Leviat offers a range of products and services for all aspects of high rise construction.

### 1 Balcony Thermal Breaks

Simple to install, the HIT Insulated connection is designed to optimize structural resistance while not sacrificing thermal efficiency. HIT brings cost savings to a project through energy savings and reduced maintenance over the lifetime of the structure.

### 2 Rebar Splicing

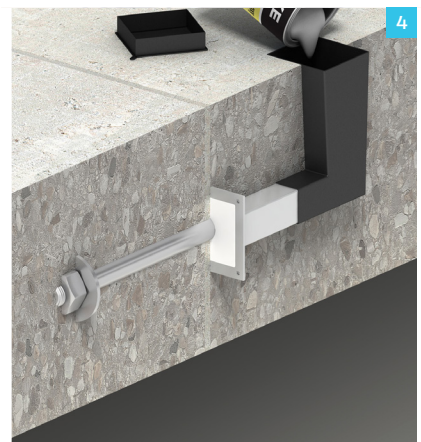
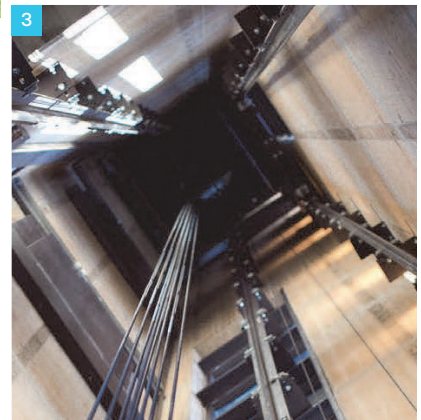
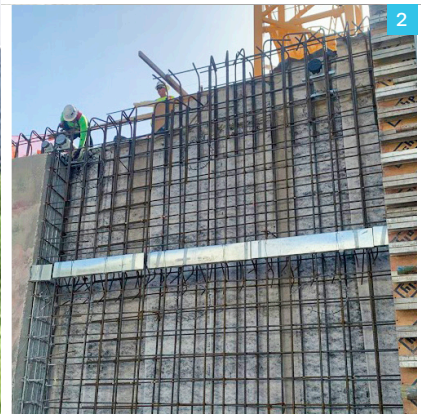
Leviat offers a full range of versatile and robust splicing hardware and rebar continuity systems that provide safe and cost-effective reinforcement options for a variety of applications.

### 3 Anchor Channel

Halfen adjustable channels provide quick, reliable, and economical anchor points for almost any connection. Engineering support is available, as is a variety of form factors, brackets, and bolts.

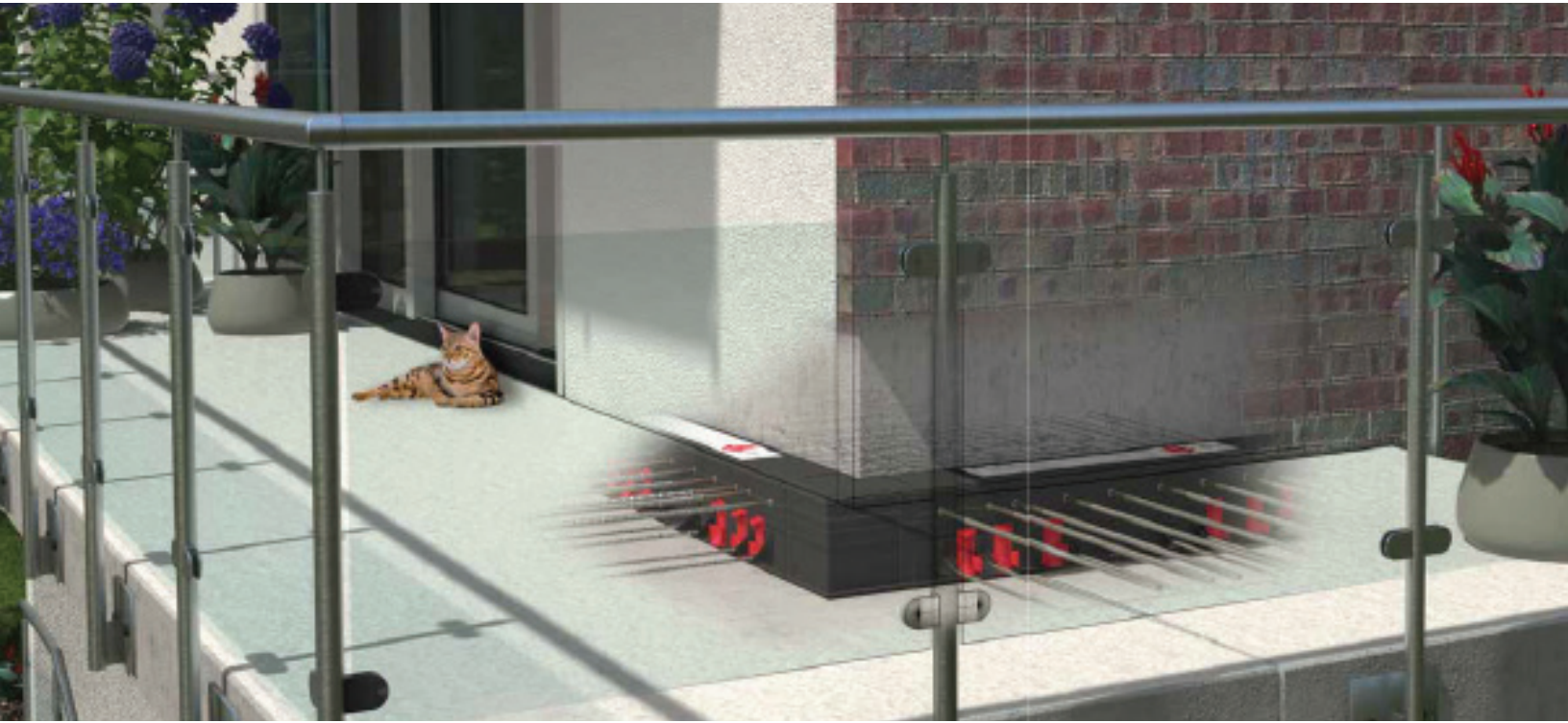
### 4 Slab Joints

Halfen Lockable Dowels improve site access, minimize formwork requirements and accelerate construction. Lockable Dowels reduce the need for slabs to be shored or minimize pour strips, as shear load is transferred by the dowel.





# Halfen HIT Thermal Breaks



Uninsulated balconies, especially those constructed as extensions of interior floor slabs, create thermal bridges that result in energy loss, increased electricity costs, and decreased comfort for occupants. Worse, these conditions often result in condensation, mold growth and a host of health concerns for occupants.

Leviat's Halfen HIT product line offers a portfolio of thermal break solutions specifically designed to eliminate thermal bridging. These solutions include insulating profiles that are placed between structural elements to ensure a continuous insulation layer throughout the building envelope.

## **Ease of Installation**

HIT profiles are lightweight, robust, and easy to handle, making them ideal for a wide range of construction applications, including balconies and parapets.

## **Versatility**

HIT components can be customized to fit the specific requirements of each project, ensuring seamless integration with the overall design.

## **Energy-efficiency**

Structures with HIT units can be 10 to 15 times more thermally efficient than traditional solutions.

## **Durability**

Eliminating damage from condensation and mold growth produces lower maintenance costs. HIT permits thermal expansion and contraction of the balcony with significantly reduced movement-induced cracking to the concrete, exposure of reinforcement, and concrete spalling.

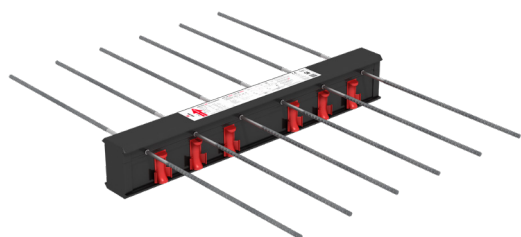
## **Health Benefits**

Eliminating condensation and mold growth produces a healthier environment for building occupants.

## **Engineering Support**

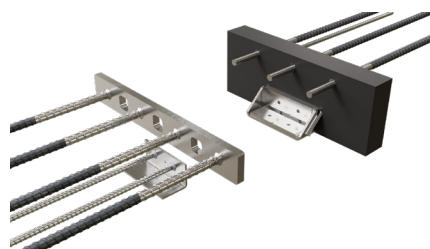
Leviat engineers will be pleased to assist with product selection, detailed design and layout drawings to suit the requirements of each project.





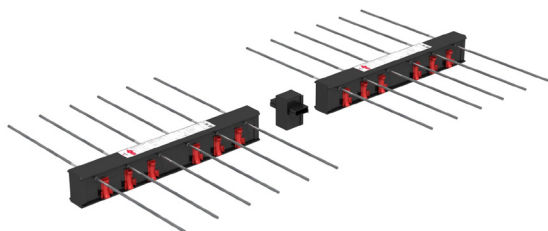
#### **Halfen HIT MVX**

Industry-leading thermal break connection for cantilevered balconies.



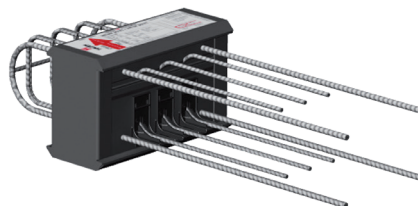
#### **Halfen HIT PI**

Simple-to-install hardware allows for energy-efficient, post-installed balconies.



#### **Halfen HIT TP**

Allows balconies to be cast together with main slab and then simultaneously tensioned.



#### **Halfen HIT FT**

Shear load transfer for parapets, corbels, and other creative accents.



# Halfen HSD-LD Lockable Dowel

As post tensioned concrete slabs cure, chemical reactions and the drying process cause a measurable amount of shrinkage. This was traditionally accommodated by leaving gaps in the slab called “pour strips” or “closure strips.” These strips are filled once shrinkage has stabilized, however until then the gaps create a significant hazard for site workers and delay construction.

By effectively eliminating traditional pour strips, Halfen HSD-LD Lockable Dowels improve site access, minimize formwork requirements and accelerate the rate of construction. These dowels allow initial shrinkage of the concrete to take place and are then locked in position with a mechanical plate and a controlled amount of epoxy resin. The locked dowels continue to transfer shear, but prevent further movement taking place.

## Ease of Installation

Lockable dowels are simple and easy to use, increasing overall efficiency on the job site.

## Fire Resistance

Lockable dowels can be fire resistant when combined with fire protection collars.



## Time Savings

Replacing traditional pour strips removes a significant barrier to construction as work can continue in those areas without delay.

## Improved Safety

The elimination of traditional pour strips also reduces fall hazards on multi-story concrete projects, keeping workers safer.



Traditional Pour Strip

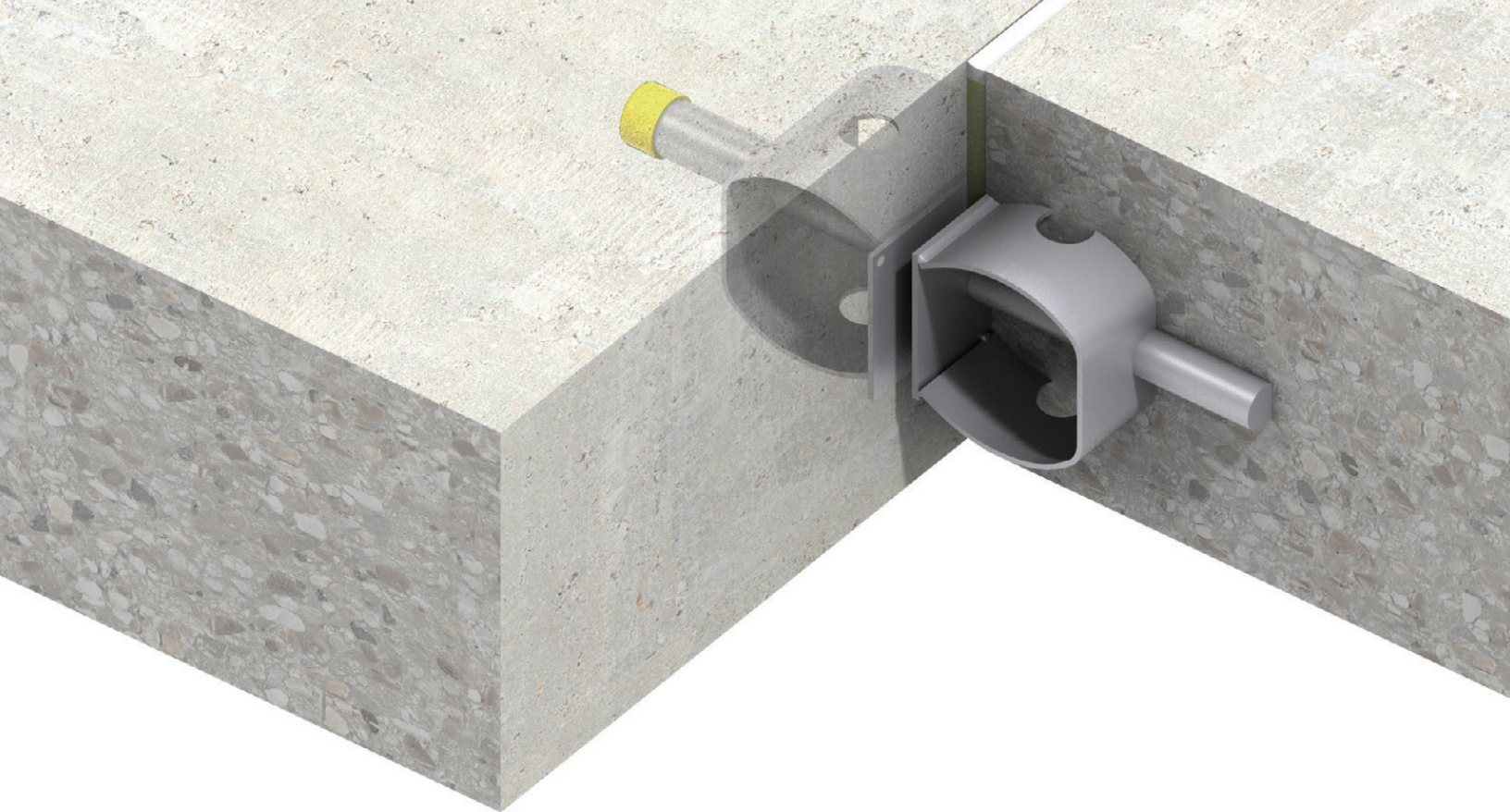


Preliminary pour using the  
**Halfen HSD-LD**



Finished slab using the  
**Halfen HSD-LD**





## Halfen HSD-Ultra Shear Dowel

Consisting of engineered sleeve and high-strength dowels, the Halfen HSD-Ultra Shear Dowel system offers significant advantages over conventional structural movement methods. The two-part assembly allows longitudinal and/or lateral movement in building joints and is available in ten (10) standard sizes with design capacities from approximately 4.5 kips to more than 213 kips.

The HSD-Ultra Shear Dowel easily accommodates joint widths up to 2 inches. Larger joints can be accommodated using special dowels.

### Reduced Cracking

Shear dowels help prevent cracks in concrete by allowing relative displacement and reducing internal stresses.

### Minimized Settlement

Shear dowels help prevent uneven settlement and displacement by transferring shear loads in joints between building components.

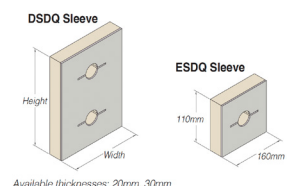
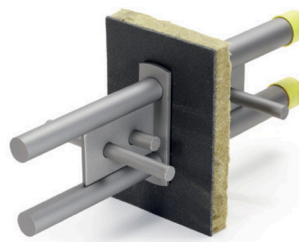
### Simple Installation

Installation is a fast process that eliminates the need for formwork penetration or concrete protrusions. The easy and accurate process ensures proper dowel alignment for effective movement.

### Versatile

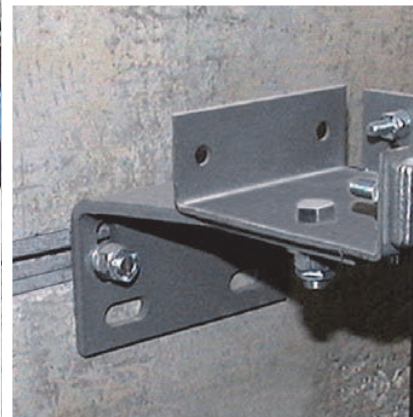
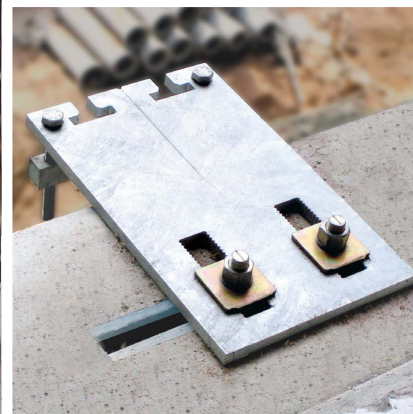
Shear dowels can be a more efficient alternative to corbels, and double columns reducing overall costs and construction time.

Halfen shear connectors can reach a fire rating of 120 minutes using special collars (available separately), manufactured from a fire barrier material which replaces the compressible filler at the connector's position in the joint. This material foams and expands during a fire to protect the connector.





# Halfen Adjustable Channel



Besides offering excellent adjustability, Leviat's Halfen Anchor Channels enable fast-track construction and cost savings through a simple and quick installation.

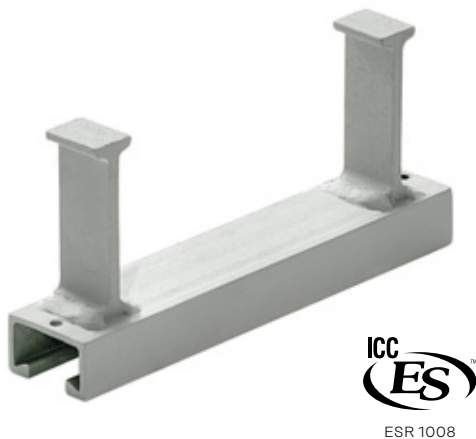
Halfen Anchor Channels offer the ideal solution for easy-to-install, adjustable connections and can be used to create any construction connections: façade, residential construction, and lift construction.

Additionally, our professional engineers work closely with you to ensure your needs are fully covered. We help you during the design and construction phases, and we are always available to answer any of your questions.



### Halfen HTA

Besides offering excellent adjustability, HTA Anchor Channels enable fast-track construction and cost savings through a simple and quick installation.



### Halfen HZA Dynagrip®

HZA Dynagrip® Channels feature a toothed inner surface. Combined with serrated T-bolts, the system guarantees a positive mechanical connection and enhanced longitudinal and dynamic load capacities.



### Halfen HCW Curtain Wall

The Halfen HCW Curtain Wall System is used to attach curtain wall façade elements quickly, securely, and economically to the top or on the edge of concrete slabs.



# MB Keyway Splice Box

The Keyway Splice Box system is a safe and cost effective reinforcement method that also provides time and labor savings in many applications.

The system is custom made to meet each engineer's reinforcement detail, eliminating unnecessary labor on site. After concrete is placed and the formwork is removed, the KSB lid is removed to expose ready-to-use reinforcing bars which are bent out of the case to provide an easy lap splice to the main reinforcing steel and subsequent concrete pours.

- The use of dual spec A615/A706 Q&T rebar provides the required ductility to allow re-bending of the bars
- Highly customizable - only limitation is what can fit in the box
- Faster installation than formsavers or drill/epoxy of rebar
- The "dove tail" keyway assures greater load transfer
- Produces a locked joint with superior pullout strength
- Available for #4, #5 & #6 rebar

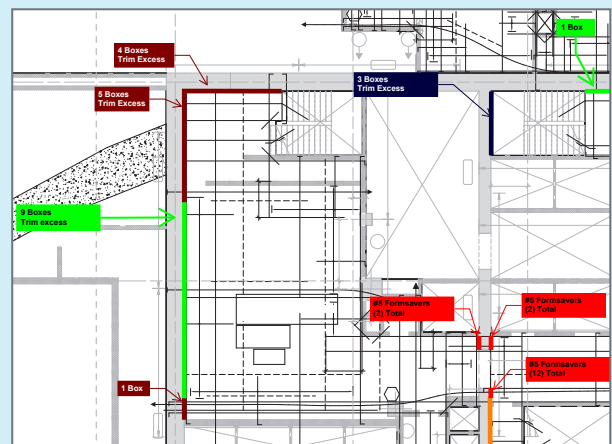
## Applications

Keyway Splice Box systems may be used in most concrete construction joints. The systems are being utilized in high rise residential, hotels, office towers, hospitals, prisons, solar energy, wind towers, water treatment, concrete pavement, bridge construction, and many other types of projects. Typical joint applications include:

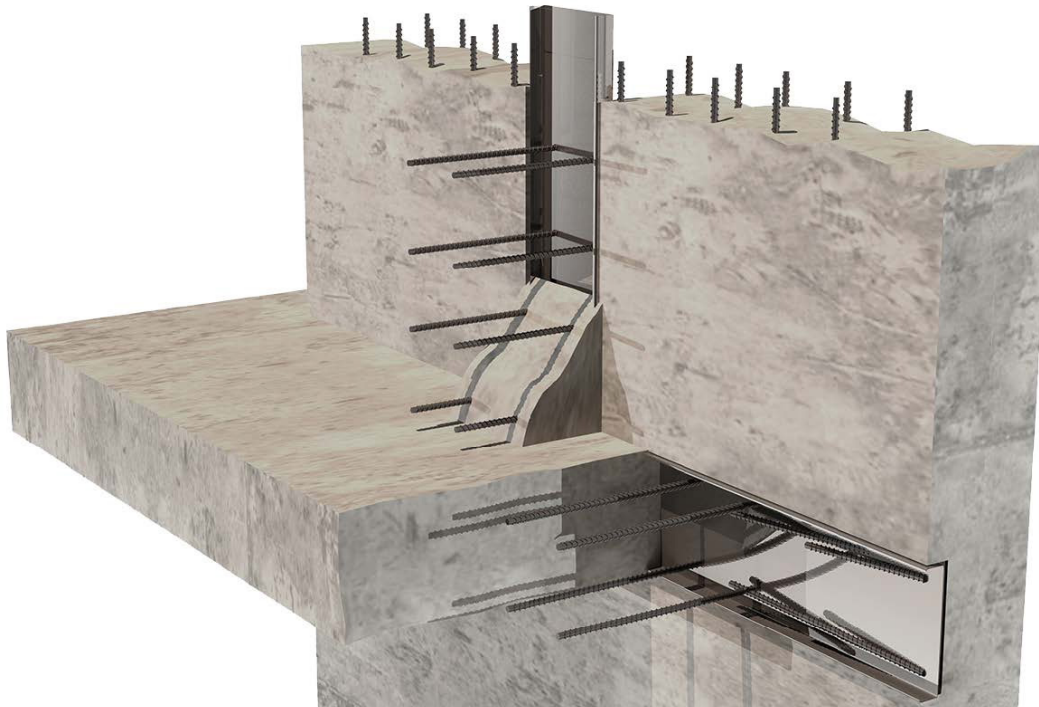
- Floor or Roof Slab to Wall
- Stair Riser & Landing to Wall
- Wall to Foundation
- Precast Elements
- Bridge Elements
- Slab to Slab
- Corbel to Wall

## Engineering Support

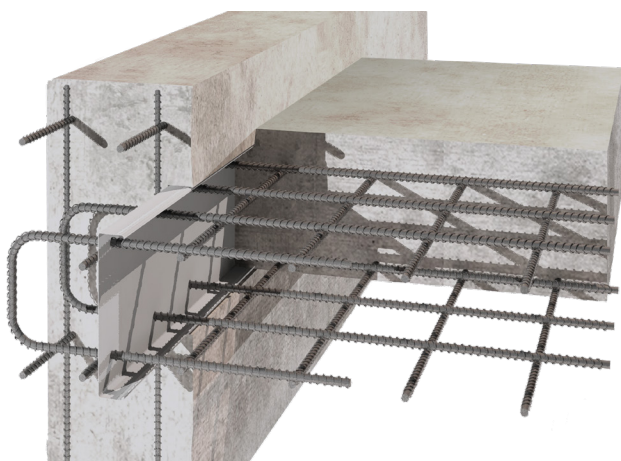
Leviat simplifies the use and installation of the Keyway Splice Box system by providing estimated material take-off, submittal drawings and color-coded layout drawings.







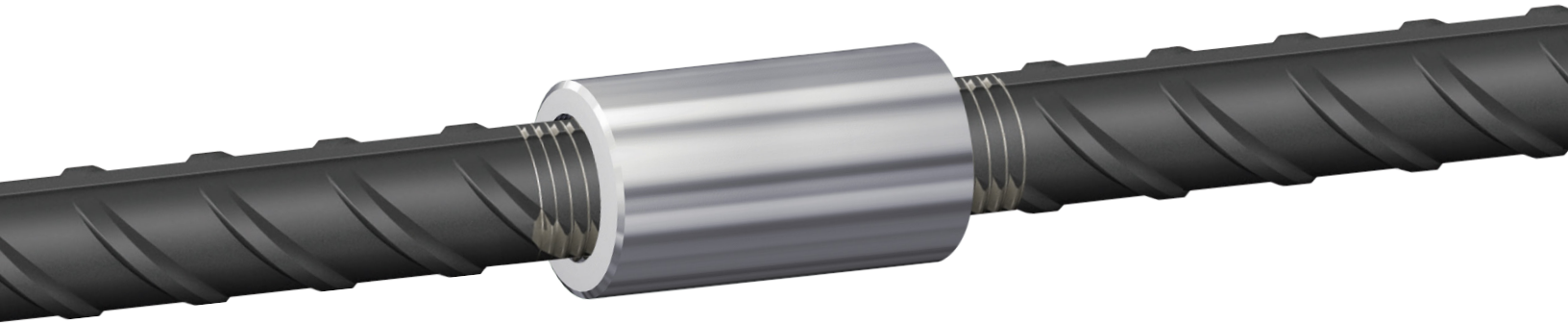
**Left:** MB Keyway Splice Box units are tied to the rebar prior to casting. **Right:** The KSB lid has been removed to reveal continuous reinforcing bars that will be bent outward and tied into the floor slab.



### Benefits

- **Speed:** Keyway Splice Box units are easy-to-use and can be quickly nailed to formwork or tied to the main reinforcement, simplifying complicated construction joints. KSB systems requires little on-site training to carry out installation.
- **Safety:** The Reinforcing Bars are housed in a steel case until ready for use, minimizing potential injury and improving available work space
- **Cost:** KSBs simplify forming designs and allow for larger concrete pours, easing rebar and formwork placement, and improving overall productivity. Formwork does not need to be drilled, damaged or repaired; extending its life.
- **Quality:** Pre-positioned bars ensure precise alignment. This assures full load transfer, increases joint strength and limits the concrete shrinkage between concrete placements.

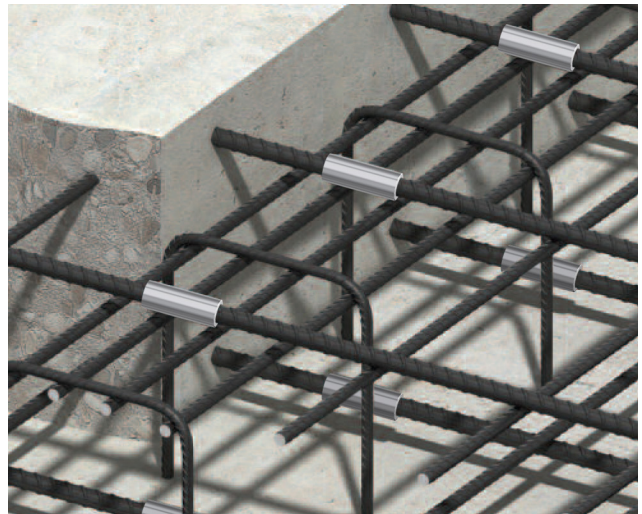
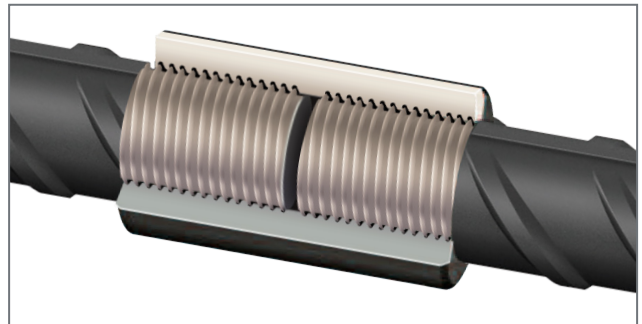
# MB BT Couplers



## Type 1 & Type 2HS Rebar Splicing System

Both the MB BT Type 1 and MB BT Type 2HS Splicing Systems are versatile and robust and used to mechanically connect rebar sections in segmental pours as an alternative to traditional dowel bars. The three-part system consists of a Splice Bar, Coupler and Setting Bar that meets the mechanical splice strength requirements of ACI-318-19 when used to splice grade 60 rebar.

- **Improved performance:** Exceeds ACI-318-19 Type 1 & Type 2HS splice requirements respectively and maintains reinforcing steel continuity independent of concrete cover
- **Saves time and money:** Reduces costly form repairs by eliminating drilling of forms and simplifies form stripping
- Available in standardized lengths (sizes #4 – #11) and configured to order







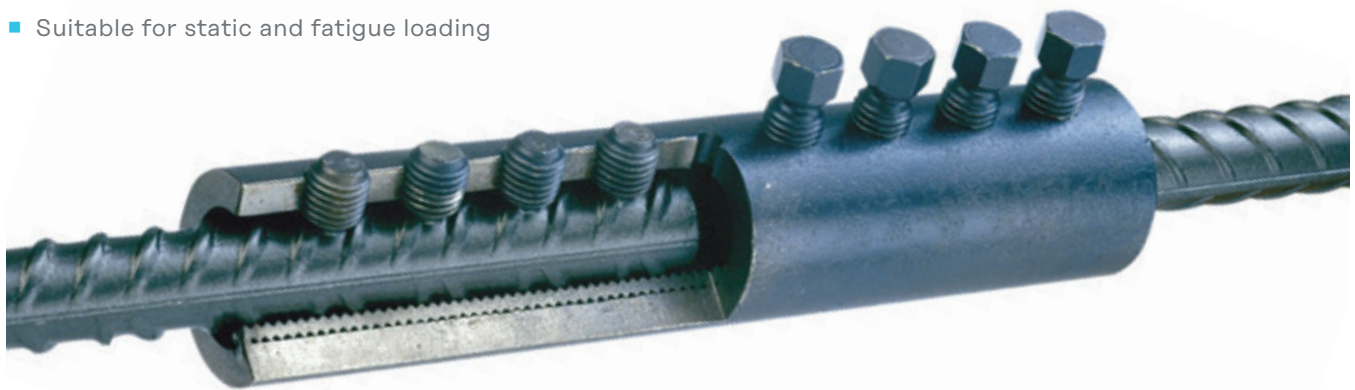
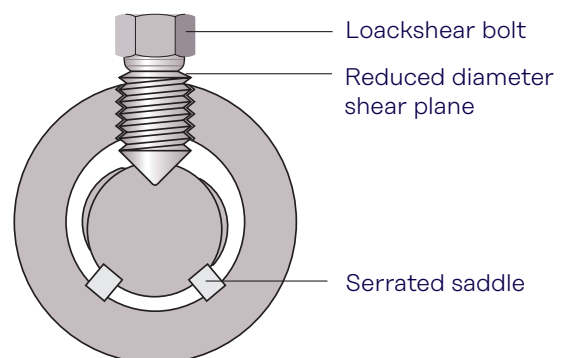
## MB MBT Couplers

### Type 1 & Type 2 Rebar Splicing System

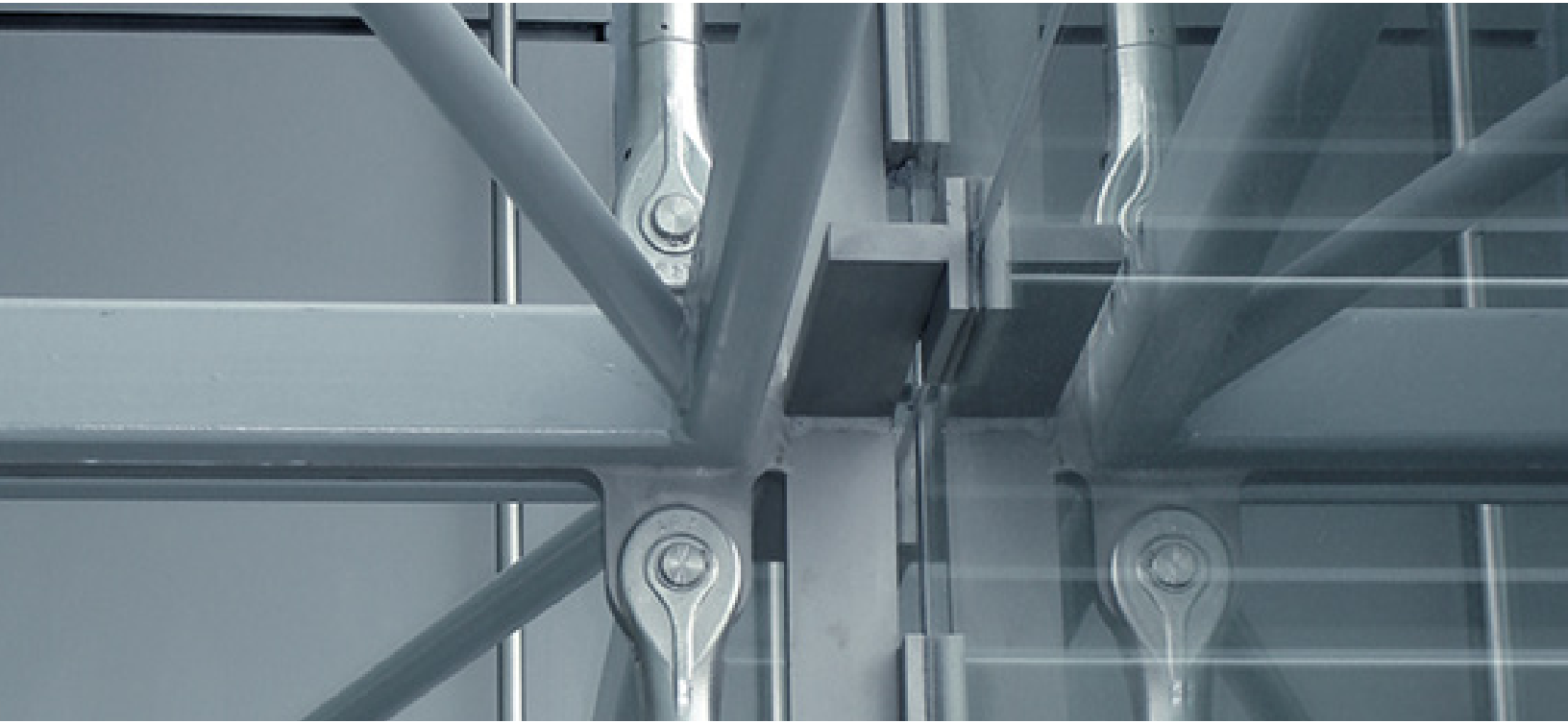
Both the MB MBT Type 1 and MB MBT Type 2 couplers provide an easy to install, cost-effective method of joining reinforcing bars, particularly when the fixed bar is already in place and space is limited.

Tightening of the shear bolts embeds the conical ends into the rebar, securing it against the serrated saddles. When the predetermined tightening torque is reached, the bolt heads shear off, providing an instant visual check of correct installation.

- Coupler performance meets ACI 318-19 Type 1 & 2 splice requirements respectively
- Maintains steel reinforcing continuity, independent of concrete cover
- No bar end preparation required
- No bar rotation required
- Suitable for static and fatigue loading



# Halfen Detan Connection System



Halfen Detan tension and compression connections offer a variety of product solutions that meet the highest aesthetic, safety and quality requirements.

Detan rods are easy to install and can be used for filigree supporting structures as well as for high load applications. In fact, Detan systems are increasingly being implemented as architectural and structural elements.

The Detan system portfolio includes a wide range of accessories and can be designed as tension and compression rod system. Our engineering team can support your design criteria.

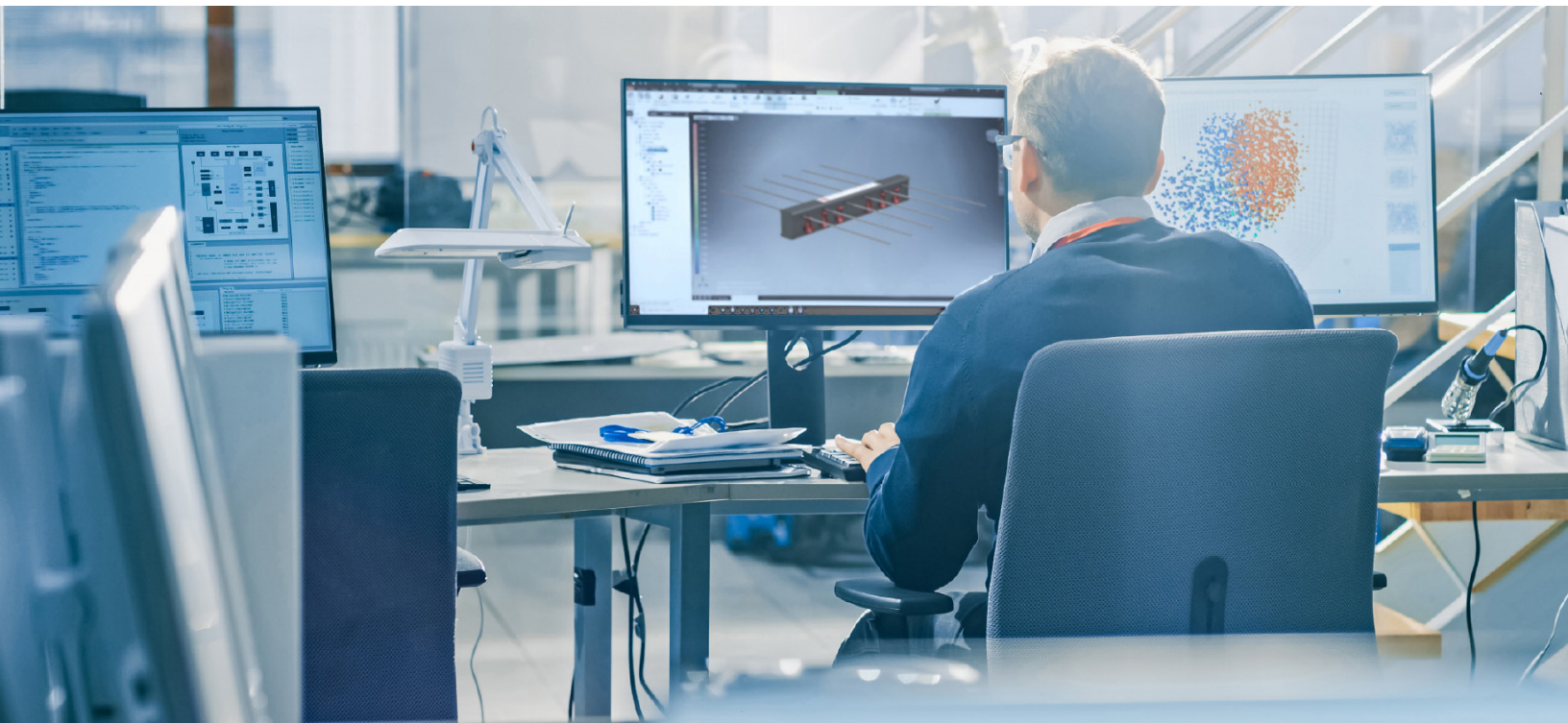
## Features

- Sleek and seamless design
- Elegant visual appearance
- Eliminates turn buckles - concealed length adjustment
- Vast product range
- Effortless installation
- Engineered to withstand high tension and compression





# Engineering



Leviat has a dedicated team of engineers to provide technical and engineering support for all of our products. Whether you have general questions or need assistance with a specific application, our team can be your best partner in finding solutions.

## Design Assistance

Leviat's engineering team is ready to provide design assistance for your next project. Our team can assist in sizing anchors, selection of the right connection solution, and providing CAD details. We are able to include formal calculations that can be included with the design package, and also sign and seal if required.

## Design Software

Leviat offers a variety of free software to help clients find solutions for their next project. All of our software is intuitive and was developed with the end user in mind. Calculation reports are available and can easily be placed into a calculation package. Our engineering team is available to provide tutorials on any of our software.

Contact us at **[engineering support@leviat.us](mailto:engineering support@leviat.us)** to partner with us for your next project.

## Technical Training

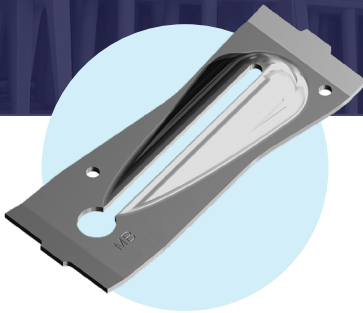
Our team can provide training on any of our products and software. We partner with you to make sure you understand how our products are designed and installed. We also provide support for any issues that may arise. We are your solutions partner from initial planning until final walkthrough.

## We also offer:

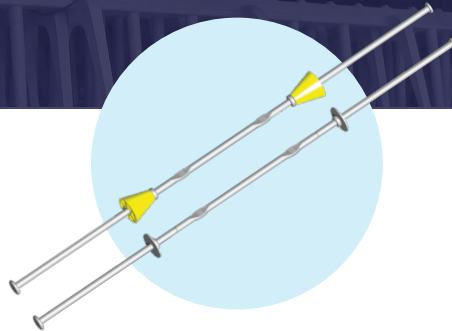
- BIM / CAD models
- PE seals for USA and Canada
- Site support
- Continuing education

# Formwork & Site Accessories

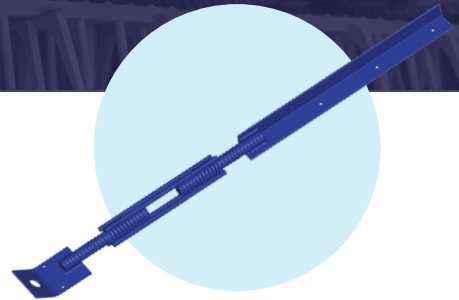
Leviat manufactures a wide range of concrete forming accessories. Whether you need standard or heavy Snap Ties to ensure the integrity of a form, or coil tie products for high load applications, Leviat is your trusted partner.



**MB ST-15 Steel Wedge**



**MB ST-4 Snap Ties**



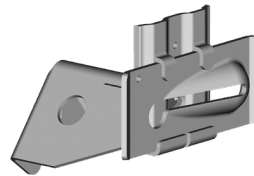
**MB ST-27 Form Aligner**



**MB ST-12 "A" Bracket**



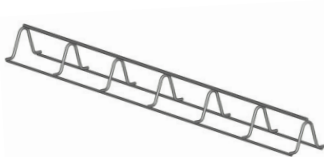
**MB CT2/CT4  
Conefast Coil Ties**



**MB ST-10 Snap Bracket**



**MB CB-4 Adjustable  
Coil Bolts**



**MB Slab Bolster - Upper (SBR)**



**MB Continuous High Chair (CHC)**



**MB Tuff Plus SB - Slab Bolster**



## North American Locations

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Hazle Township PA 18202  
(800) 550-0060

**Florida** Corporate  
6467 S Falkenburg Road  
Riverview FL 33578  
(800) 282-7213

**New Jersey**  
526 US Route 46  
Teterboro NJ 07608  
(800) 207-7778

**Texas**  
7000 Will Rogers Blvd  
Fort Worth TX 76140  
(800) 993-9641

**Georgia**  
3080 N Lanier Parkway  
Decatur GA 30034  
(800) 241-5662

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(888) 232-9991

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www.leviat.com

## Leviat.com

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For information on certified management systems and standards see [www.meadowburke.com](http://www.meadowburke.com) | [www.halfen.com](http://www.halfen.com) | [www.thermomass.com](http://www.thermomass.com)

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L293-A001

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