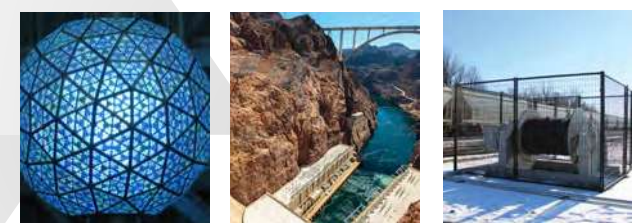


LEAVE THE  
HEAVY LIFTING  
TO US



YOUR **TRUSTED SOURCE** FOR  
PREMIUM LIFTING, PULLING,  
POSITIONING & TENSIONING  
SOLUTIONS FOR

**INDUSTRIAL**  
APPLICATIONS



Times Square Ball Hoover Dam Superior Silica



Optimus Steel 4ocean NASA BP Rinker S.A.F.E.

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These products are not for lifting people or things over people.

BRIN-A-0121

# Maintaining a Steadfast Reputation of Manufacturing Excellence & Customer Satisfaction **SINCE 1948**

## **Our Experienced In-House Engineering Team Delivers Unsurpassed Solutions for Any Industry & Application**

Founded in Winona, Minnesota by Royal G. Thern and his wife Lucille in 1948, Thern Inc. began manufacturing a handful of winches and other tools, which formed the foundation for the cutting-edge lifting, pulling, positioning, and tensioning solutions we offer today.

Upholding a legacy built on innovation, we have leveraged over 70 years of continuous research, development, and testing to establish a worldwide reputation for toughness, versatility, and reliability. Thern winches and cranes are engineered to perform and last, *guaranteed*.

As a family-owned manufacturer, we are dedicated to providing you with the best solutions by carefully listening to all your needs to exceed your expectations. We take pride in offering top-quality products and services, timely responses, and accurate information for every project.

Some of the key industries that we serve include but are not limited to construction, entertainment, bulk material handling, mining, marine, defense/aerospace, energy, manufacturing, and OEMs. Backed by a diverse portfolio of reputable clients, you can rely on Thern to move it all from big to small.

## **WHAT MAKES US DIFFERENT**

### **IN-HOUSE ENGINEERING**

Pooling decades of knowledge, our experienced in-house engineers consult, design, and make modifications as necessary to provide you with unsurpassed solutions for any application.

### **QUALITY STANDARDS**

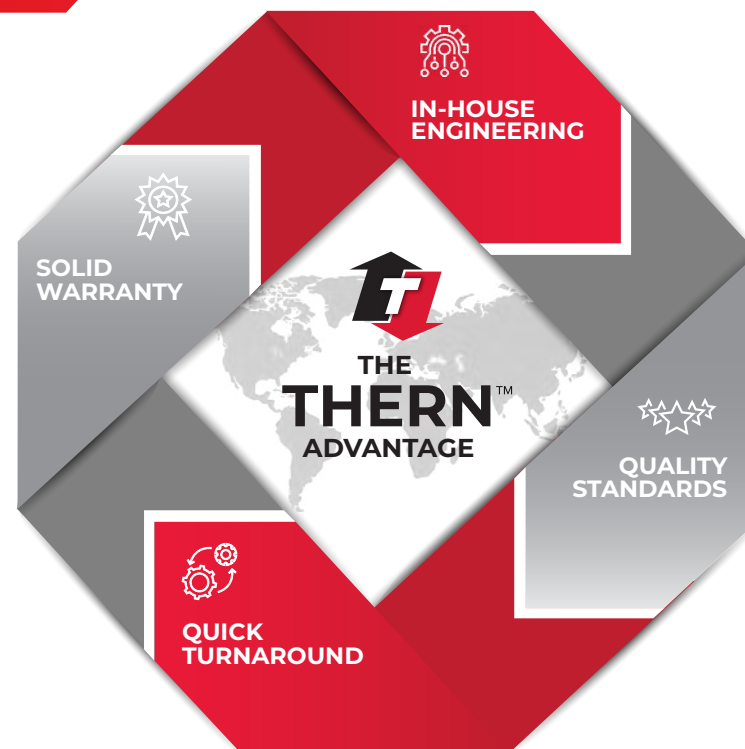
As an ISO 9001:2015 certified company, we ensure that every product we manufacture in the USA meets our strict quality standards and is thoroughly tested for performance and durability.

### **QUICK TURNAROUND**

We take pride in offering exceptional lead times and turnaround that you can count on. For inventoried items, the lead time is two days with a turnaround time of three to five days.

### **SOLID WARRANTY**

You'll have peace of mind because we guarantee consistent service life for your Thern products with a two-year limited warranty to ensure your complete satisfaction.



## **SEE WHAT'S INSIDE**

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# Industry-Leading Winches by Thern

## POWER & PERFORMANCE YOU CAN COUNT ON

Our experience in the winch manufacturing business encompasses over 70 years of American innovation and ingenuity, which is reflected in the products we offer today. Choose from an extensive selection of electric, portable electric, hand, pneumatic, and hydraulic winches built for numerous pulling, lifting, positioning, and tensioning applications across a variety of industries.

Each of our premium winches undergoes rigorous testing to provide you maximum durability, reliability, and safety to keep your business running smoothly, day in and day out. Features and specifications vary depending on the model, so rely on our talented team to help you select or custom engineer the perfect winch for your project.

### High-Level Winch Features:

- Capacities up to 120,000 pounds to handle the toughest jobs
- Powerful stationary options ensure stable, heavy-duty applications
- Economical, compact, and lightweight options available
- Innovative features help reduce maintenance costs
- Modular designs allow for easy customization
- Traverse long distances with rapid line speeds
- Durable steel or cast aluminum construction holds up to years
- Corrosion-resistant finishes withstand the harshest of environments
- Numerous configuration options for maximum design flexibility
- Single-speed, variable-speed, or custom-control systems available
- NEMA, MG1, ANSI, AGMA, ASME, CSA, IEC1, and ABS compliant



# Best-Selling Davit Cranes by Thern

## LEAVE THE HEAVY LIFTING TO US

Time and time again, clients like you turn to Thern for heavy-duty davit cranes to streamline countless applications and save on hefty installation costs. Choose from a wide selection of portable and stationary davit cranes that are engineered to perform efficiently in numerous lifting, lowering, and positioning applications in a variety of industries.

We have you covered with superior equipment that will make your work easier, safer, and more productive. Features and specifications vary depending on the model, so rely on our talented team to help you select the perfect davit crane for your project.

### High-Level Crane Features:

- Capacities up to 4,800 pounds to handle sizable loads
- Fixed or adjustable boom lengths and angles for maximum operation flexibility
- Variety of bases in numerous protective finishes allow for effortless mounting and installation
- Robust, heavy-gauge steel construction provides long service life
- Manual, electric, hydraulic, or pneumatic winch operation to perform lifts of any size
- Extra hook heights for enhanced reach and clearance
- Streamlined set-up and disassembly saves valuable time and effort
- Easy transport and storage for optimal accessibility
- Smooth 360° rotation, even under full load on the job
- Quick-disconnect anchor for easy attachment or removal of wire rope
- Corrosion-resistant finishes to withstand the harshest environments







## Thern Construction Applications

# Overcome Challenging Obstacles with THE RIGHT EQUIPMENT

Construction sites have many uses for electric, pneumatic, and hand winches, as well as davit cranes. In addition, contractors often require lifting equipment at multiple locations. That's why Thern provides innovative solutions that offer the load-handling power you need in portable, transportable, or stationary units. From erecting bridges to installing industrial elevators, even the biggest jobs are manageable if you have professionally engineered equipment that will work as hard as you do.

### Featured Case Study: Hoover Dam Bypass Bridge

**Client:** The Hoover Dam Bypass Bridge is nearly 2,000 feet long and spans the Colorado River canyon between the states of Arizona and Nevada.

**Challenge:** During the construction process, the project contractor needed a solution to position the cable stays during each placement, which counteracted forces over 16,000 pounds.

**Thern's Solution:** Thern supplied six 4HS26M Electric Winches with 26,000-pound load capacity and 15,000-pound line pull, providing the required force and control to lift the stays and position them as each arch segment was advanced.

**Results:** Bypassing the Hoover Dam, this bridge serves as a safe alternative river crossing route that can withstand high traffic volumes. This structure was the first concrete-steel composite arch bridge ever to be erected in the U.S.

### Real-Life Solutions:

- Bridge Cable Stay Tensioning
- Rooftop HVAC Positioning
- Debris Removal
- Bridge Falsework
- Tower Crane Maintenance
- Elevator Installation
- Steel Erection
- Concrete Slab Positioning
- Freeway Lighting Maintenance & Repair



## Thern Entertainment Applications

# Win Over the Crowd with a STANDOUT VENUE

With a full range of load-handling capabilities and features, Thern winches can be found in arenas, stadiums, and high-profile locations around the world. When all eyes are on your venue, we understand that you want your equipment to run flawlessly, so we're here to help.

### Featured Case Study: Times Square Ball

**Client:** Located in New York City on the roof of the One Times Square building, the Times Square Ball is a prominent part of a famous New Year's Eve celebration commonly referred to as the ball drop.

**Challenge:** The ball itself is 12 feet in diameter, weighing in at 11,875 pounds, and consists of 32,256 LED lights. With only one operation per year, the equipment needed to lower the ball had to perform perfectly.

**Thern's Solution:** Thern supplied a 4HPF40M-S8 Electric Winch, which was specially designed for inverted mounting below the platform on which the pole is mounted, with precision-line speed to lower the ball in sync with the countdown clock, a closed-loop line system, and herringbone grooving on the drum.

**Results:** Annually, over a billion sets of eyes focus their attention on the large, illuminated Times Square Ball as it descends during the final minute countdown, coming to rest at the base at midnight to ring in the new year.

### Real-Life Solutions:

- Stadium Seating Controls
- Prop Lifting & Lowering
- Flag Poles
- Tensioning of Safety Netting
- Maintenance & Repair of Scoreboards
- Stadium Reduction System





## Thern Bulk Material Handling Applications

### Power Meets Precision when **MOVING MATERIALS**

In the rail yard, shipyard, or wherever bulk material handling equipment is needed, Thern's electric, pneumatic, and hydraulic winches, control systems, and davit cranes provide the strength and control to position and lift heavy loads with ease. Even the biggest and most complex jobs are no match for powerful equipment that offers reliable, long-lasting service to eliminate downtime, improve efficiency, and reduce costs.

#### Featured Case Study: Superior Silica

**Client:** Superior Silica Sands is located in Barron, WI, and provides high-quality sand for fracking operations around the US.

**Challenge:** Daily movement of train cars was required for loading of the sand. It wasn't cost-effective to have a locomotive on standby all day to position the cars and wait for the next one to be moved into position.

**Thern's Solution:** Thern provided a 4HBP56M-S Pulling Winch and a 4HPF15M Stripping Winch, coated with three-part epoxy paint to resist the harsh Wisconsin climate. A custom-control package was also provided to allow for soft starts and stops for the cars but higher speed travel in between.

**Results:** Since 2015, the system has been in operation through rain, sleet, snow, and mid-day summer sun/humidity, allowing Superior Silica Sands to deliver their product and energy independence to America.

#### Real-Life Solutions:

- Rail Car Pulling
- Barge Positioning
- Conveyor Movement & Tensioning
- Load Out Chutes
- Dumpster Movement
- Exterior Silo, Rooftop, or Tower Operations
- Raise & Lower Radial Stackers



## Thern Mining Applications

### Winches & Cranes Built to Last in **THE HARSHTEST CONDITIONS**

Whether it's on the surface, below ground, or under the water, mining is a vast industry that requires dependable equipment. Thern's power winches and portable davit cranes are built tough to withstand the dust, dirt, grit, grime, moisture, and debris that come with working in and around mines.

Our products will help to keep your conveyors, elevators, and stackers running efficiently and smoothly, 24/7. Seeing is believing; discover the difference in productivity and output for yourself.

#### Featured Case Study: Optimus Steel

**Client:** Optimus Steel, located in Beaumont, Texas, is known for manufacturing high-quality wire rods, coiled rebar, and billets.

**Challenge:** As part of the manufacturing process in their steel mill, Optimus Steel needed a solution to lift the 2,000-pound steel furnace door with a very high level of precision and consistency.

**Thern's Solution:** Thern supplied two 4WS Series Electric Winches to lift and lower the furnace door in an upward motion by operating on both sides, ensuring a tight seal every time. The system has an integrated safety feature, which prevents the winches from over traveling and potentially damaging the structure.

**Results:** Since the winches were installed, Optimus Steel operators have experienced no issues or failures in performance or safety. They plan on purchasing two additional winches for other applications within the mill.

#### Real-Life Solutions:

- Transporting Minerals
- Heavy Shovel Units
- Dragline Wire Rope Operation
- Remote Control of Furnace Doors
- Pumice Rail Car Positioning
- Conveyor Take-Up & Tensioning
- Conveyor Positioning & Maintenance
- Dredge & Barge Positioning/Operation





## Thern Marine Applications

# Corrosion-Resistant Equipment Made to PERFORM IN AN AQUATIC ENVIRONMENT

Marine load handling projects can be challenging due to salt water, currents, wind, and other factors. When you need a reliable solution for jobs such as deploying and receiving underwater sensor equipment or positioning and loading barges at grain terminals, count on Thern to provide solutions that will ensure smooth sailing for your operations—and won't drown you in maintenance costs.

### Featured Case Study: 4ocean

**Client:** 4ocean is an organization that focuses on removing trash from the ocean by hiring boat captains and other workers to clean the water and coastlines full time, in addition to selling bracelets made from recycled plastic that fund their ongoing operations.

**Challenge:** During the cleanup process, 4ocean needed a solution to pull giant bags of plastic off small boats onto a much larger vessel. That ship then returns to shore, bringing tons of plastic waste to be recycled.

**Results:** Rain or shine, 4ocean and Thern's winches and cranes are helping to clean our oceans of millions of pounds of plastic waste.

**Thern's Solution:** Thern provided two safety yellow, epoxy-coated Captain Series 2,200-pound capacity davit cranes to aid cleanup crews with transporting the massive amounts of plastic in harsh offshore operating conditions.

### Real-Life Solutions:

- Ship Board Davits
- Towed Array Sonar
- Barge Positioning Systems
- Launch Way Retrieval
- Accommodation Ladders
- Dredge Positioning
- Bunker Hose Handling
- Artifact Recovery



## Thern Defense/Aerospace Applications

# Dependable Solutions for PERILOUS MILITARY & SPACE MISSIONS

Thern has a long history of providing members of the U.S. Armed Forces with reliable, American-made winches and cranes that allow them to focus on the task at hand. We're also proud to have partnered with NASA and other companies that are responsible for complex missions beyond the confines of earth's gravity.

Whether the job calls for extracting a 68-ton M1 Abrams tank from the desert sand or raising and lowering space shuttle access platforms, Thern has the equipment to carry out the operation without a hitch.

### Featured Case Study: NASA

**Client:** The National Aeronautics and Space Administration, otherwise known as NASA, is an independent agency of the U.S. Federal Government that's responsible for the civilian space program, as well as aeronautics and space research.

**Challenge:** During the years of the shuttle program, NASA needed a solution to securely raise and lower the shuttle access platforms into place when required.

**Thern's Solution:** Thern supplied special 4HW50-75M Electric Winches to be mounted on top of the space shuttle pads 39A and 39B. These winches featured grooved drums, limit switches, redundant braking, and an epoxy coating that was suited for the corrosive salt air environment.

**Results:** NASA now has platforms that become locked into position before supporting personnel, with winches that allow for high-speed movement and low-speed positioning for optimum performance.

### Real-Life Solutions:

- Armored Truck Spare Tire Positioning
- Aerostat Positioning
- Orbiter & Launch Pad Systems
- Communication/Radio Tower
- Missile/Weapons Systems
- Radar System Operation/Maintenance





## Thern Energy Applications (Oil/Gas/Wind/Solar)

### Combat Natural Challenges in the FIELD WITH THE CORRECT EQUIPMENT

Saltwater, sand, debris, and extreme temperatures are just some of the harsh conditions faced by electric, pneumatic, and hydraulic winches in the energy industry. Seasoned professionals rely on the dependable operation of Thern winches and davit cranes to perform their tasks safely and efficiently. No matter which segment of the energy industry you're in, we offer high-quality, American-made products that keep your project moving forward, even in unforgiving environments.

#### Featured Case Study: BP

**Client:** BP is a multinational oil and gas company that's recognized as one of the world's seven "supermajors" in the industry. They provide their customers with fuel for transportation, energy for heat and light, lubricants, and petrochemicals.

**Challenge:** BP needed reliable cranes to help maintain vital equipment on their two Mad Dog floating production platforms in the Gulf of Mexico.

**Thern's Solution:** Thern provided BP with 5PT20 Galvanized Davit Cranes and Custom ATEX-Certified Cranes, which were engineered to withstand hazardous environments and to specifically meet the load and hook reach requirements. These cranes manipulate and position spare parts and equipment on the platforms to ensure smooth daily operations.

**Results:** With the help of Thern's custom cranes, the existing Mad Dog platform can successfully produce up to 80,000 gross barrels of oil and 60 million gross cubic feet of natural gas per day to supply energy resources across the world. The new, second Mad Dog platform is located six miles away and is expected to begin oil production with even larger capacity.

#### Real-Life Solutions:

- Racking Board Winches
- Nacelle/Generator Repair and Maintenance
- Solar Panel Positioning and Installation
- Movement of Power Generation Systems
- Pipe Handling
- Deploy & Position Flare Tips and Booms
- Raise & Lower Personnel on Oil Rigs



## Thern Manufacturing Applications

### Streamline Production & Assembly with RELIABLE WINCHES & CRANES

Manufacturing plants have countless lifting, pulling, positioning, and tensioning needs. From sturdy hand and electric winches to heavy-duty davit cranes, Thern equipment is engineered to handle a wide variety of challenging applications.

We provide solutions for everything from cart pulling and cable tensioning to maintenance/utility lifting and product validation testing. Manufacturing operations are crucial for a thriving economy, so rely on Thern for dependable equipment that'll withstand the test of time and boost user productivity and safety.

#### Featured Case Study: Rinker

**Client:** Rinker is one of the nation's largest and leading manufacturers of concrete pipe and related products.

**Challenge:** During the concrete curing process, Rinker extends and recovers curtains every time they remove the finished product or place new material, which happens every eight hours. They were using manually operated winches that consistently failed, weren't ergonomic, and required a lot of caution from the operators to prevent the curtain from getting damaged.

**Thern's Solution:** Engineered to withstand an extremely wet and dusty environment, Thern provided Rinker with manual, drill-drivable winches featuring high-speed, custom-enclosed gearboxes designed to quickly position the protective curtains.

**Results:** Rinker now has reliable equipment that promotes safety and reduces risk for employees within the working area. They purchased 12 units and are looking forward to buying eight more to replace the remaining old manual winches in their facility.

#### Real-Life Solutions:

- Production/Assembly/Fabrication Testing Equipment
- Cart Pulling
- Tool & Equipment Lifting
- Process Controls
- Cable Manufacturing
- Ship Building
- Material Handling
- Stationary & Portable Workstations
- Mezzanine Storage/Access



## Thern OEM Applications

# Engineering Creative Solutions for UNIQUE PROJECTS

With the ability and knowledge to customize our products to individual customer specifications, our winches and cranes create nearly limitless solutions for any industry and application. By incorporating Thern equipment into their own designs, OEMs can be confident that their products will perform flawlessly for years to come. Let us make your vision a reality.

### Featured Case Study: S.A.F.E. Structure Designs

**Client:** S.A.F.E. Structure Designs is a global leader in the design and manufacturing of custom equipment that provides innovative, ergonomic, and safe maintenance solutions to civilian and military sectors.

**Challenge:** S.A.F.E. Structure Designs required a product that could lift and lower a raised platform or walkway, often known as a gangway, from land onto a ship that would still operate during changing tides and unforeseen events such as a power outage.

**Thern's Solution:** Thern developed a custom dual-drum, pneumatically actuated winch with load-sensing controls to allow for raising and lowering of the platform, as well as back driving of the winch to maintain contact with the ship during tidal changes.

**Results:** S.A.F.E. Structure Designs provided their customer a state-of-the-art solution, incorporating Thern's winch and control technologies, to allow for personnel to safely enter and exit the vessel while in port.

### Real-Life Solutions:

- Accommodation Ramps
- Temporary Shelters
- Communication Towers
- Electrical Enclosures
- Freeway Lighting
- Ship Positioning
- Cooling Towers
- HVAC Systems
- Climbing Structures
- Switchgear
- Logistics Operations



## Professionally Engineered CUSTOM SOLUTIONS

Leveraging decades of combined knowledge, our talented engineering and production teams are adept at modifying existing models or designing custom solutions for your specific industry and application. In fact, nearly half of our business currently involves custom engineering, so don't hesitate to contact us to get a conversation started!