



YOUR **TRUSTED SOURCE** FOR PREMIUM PULLING
& POSITIONING SOLUTIONS FOR

STEEL DUMPSTER APPLICATIONS



The Difference

FOR DUMPSTERS

Every business is different. But what many have in common is a heavy steel “box on wheels” which needs to be pulled or positioned. And that’s where Thern comes in because we recognize every box is different ... whether it’s a dumpster for wastewater sludge or a kiln car for curing lumber. We think outside that box to understand how it affects your business in terms of productivity, efficiency, and safety. Because deep understanding inspires solutions. And that’s the Thern Difference: we’re in the solution business. And if we don’t have it, we’ll design and make it.

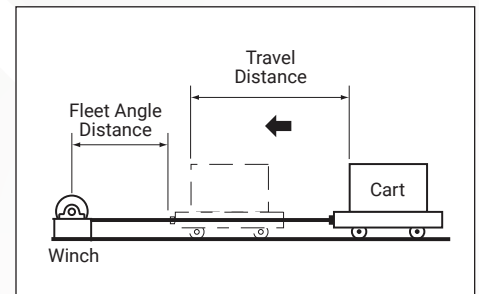
THERN HEAVY-DUTY ELECTRIC WINCH CAPABILITIES

Pulling and Positioning – Your Way

Nobody pulls and positions things better than Thern. We manufacture winches that can pull up to 100,000 pounds. But the sweet spot for steel dumpsters is typically covered by two of our heavy-duty electric power winches: the 4HPF and 4WS. They pull up to 25,200 and 26,200 pounds respectively – and with more capabilities and nuances that make them perfect for almost any application.

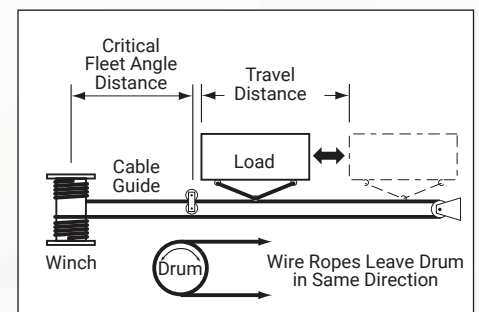
One Direction

Pulling in one direction is a snap for the 4WS or 4HPF. They have similar load ratings, but the 4HPF offers a larger drum capacity and faster line speeds for applications requiring long travel distances. The 4HPF also leverages a helical/parallel gear set boasting 94% efficiency. In contrast, the 4WS, with its direct-drive, heavy-duty spur, and worm gears, enhances load security and positioning accuracy for slightly heavier loads.



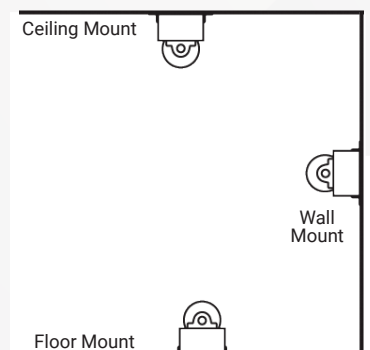
Two Directions – One Winch – Less Money

It only takes one Thern winch to pull in two different directions. Thern can configure your closed-loop winch with two wire ropes anchored to a single drum. During operation, one rope always pays in while the other pays out. You change direction by simply reversing the winch rotation. The wire ropes can leave the drum in the same or opposite directions. Tension is constant in both directions, enhancing control and positioning. And depending on the working space, the winch can be mounted in-line or off to the side. Two directions with one winch also saves money.



Three Different Mounting Options Conserve Space

No two spaces are alike ... and you have to work with what’s available. Thern has designed the 4WS and 4HPF to accommodate almost any space constraint so you can pull and position your steel box in a confined space. One of the most common configurations is a floor mount. Yet, to conserve space, the 4WS and 4HPF can be wall- or ceiling-mounted. Specifying a closed loop, two-rope drum configuration and leveraging the right sheave system allows you to move your steel box in both directions. Thern can help with your design plans or challenges – just let us know.





Timber/Lumber



Waste/Wastewater



Rail Freight/Transportation

THERN HEAVY-DUTY ELECTRIC WINCH CAPABILITIES

Free-Spooling Winch Drum Allows Quick Load Hookups and One-Person Operation

Several versions of the 4WS and 4HPF offer a manual clutch to enhance one-person operation. It allows a single operator to disengage the load from the power train. The free-spooling drum then allows the operator to easily pull the free end of the wire rope to the load. The free-spooling feature is ideal for situations when a building or shed has insufficient vertical height for loading/tilting a dumpster onto a transport.

Performance Suitable for Any Environment

Thern winches are built to last in any environment. When you order, you can specify indoor or outdoor use, the ambient temperature range, and many other environmental specifics. We make winch hardware and coatings (epoxy) suitable for marine use, hazardous environments, corrosive environments, dusty and dirty environments, and any combination thereof. We will build your winch to withstand the most challenging working conditions.



Hand Operation for Unstable Utility Grid or Power Outages

An aging grid and an increase in catastrophic natural events are making power outages more and more common. Don't worry. Some governing bodies require winches to have a failsafe mode which allows manual operation during a power outage. Thern can equip your winches with a manually-operated option to satisfy these mandatory requirements.



Shipping



Recycling



Pulp & Paper

INTELLIGENT DRUM DESIGN ENHANCES LOAD CONTROL AND DURABILITY

The drum on a Thern winch is designed to do more than just hold the cable. It can be accessorized and modified to address specific needs for greater load control, increased wire rope life, and productivity.

Stop Loads at Precise Distances Each and Every Time

When you want to move your receptacle the exact same distance back and forth every time to enhance loading or handling, specify a “grooved” drum and a rotary limit switch (RLS). The grooved drum gives you more uniform rope winding ... and that means more control over the rope behavior. It is paid in and out in a consistent manner. The rotary limit switch counts the drum’s revolutions, automatically stopping the winch at just the right time to promote precise positioning and productivity.

Extend Wire Rope Life

Re-cabling a wire winch is time-consuming and costly. The grooved drum alone helps extend the life of wire rope and gives you added control.

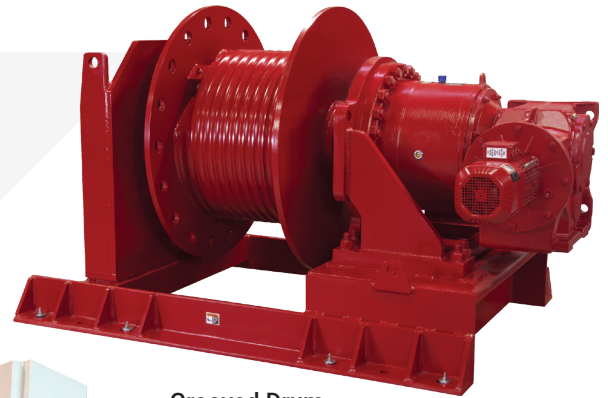
Guard Against Overloading your Steel Receptacles

Identifying an overload condition can prevent costly spills and transit issues, as well as equipment failures. Your Thern winch can be accessorized with an electronic overload control to detect overloads before they become a bigger problem.

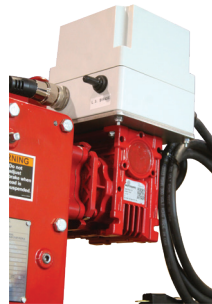
Maximize Load Control Through Cable Control

Cables sometimes seem to have a mind of their own ... and much of that is due to how the load itself behaves. Sudden slack can cause a cable to jump off the drum. To gain additional control, Thern developed a drum cable pressure bar. It applies pressure to the wire rope so it stays on the drum where it belongs, eliminating lost productivity and operator frustration.

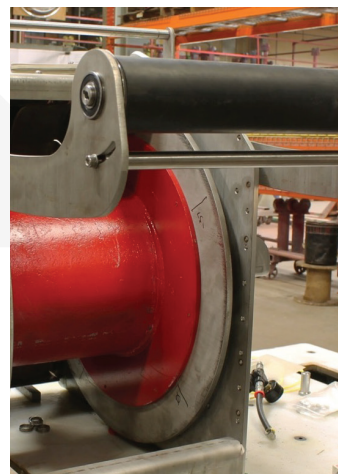
To gain even more cable control, you can specify Thern’s slack line detector, which protects the cable, winch, and load from unnecessary jerks and jolts that can reduce service life and cause spills.



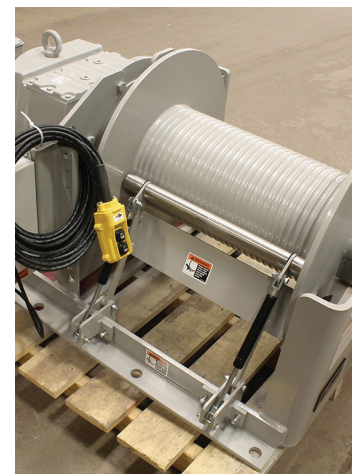
Grooved Drum



Rotary Limit Switch (RLS)



Slack Line Detector



Cable Pressure Bar

INTELLIGENT DRUM DESIGN ENHANCES PRODUCTIVITY AND SAFETY

Thern recognizes safety is the single most important principle guiding commercial and industrial operations. We take safety seriously, too, and our winches offer a variety of safety features to protect your employees and give them confidence on the job.



Wireless Remote Control



Remote Winch Operation to Enhance Safety in Industrial Applications

In some industrial settings, keeping some distance between the load, the winch operator, or other employees is necessary. Thern makes that easier with its wireless remote control option. Operators can move and position a load while viewing it through a protective screen or window.

Add Operator Confidence with Intelligent Drum Rotation Lock

Pairing your cable drum with a Thern-designed drum lock gives you an extra measure of confidence when it comes to drum travel and control. A tandem pin set extends through the frame and drum, serving as a lock-out/prevention of drum rotation. Thern will add an internal "presence" switch to the winch control, prohibiting operation when the lock pin is in place. (Available on the HPF Series only).



Drum Lock

Enhance Operator Safety with Drum Guards

While most operators maintain a safe distance from a spooling cable drum, the unforeseen may happen. The Thern adjustable drum guard protects operators yet allows visibility of the rope winding. The fasteners and drum guards can be epoxy-coated or fabricated from stainless steel for corrosion protection in harsh environments. And the fasteners are secured to prevent loss. The guard also helps protect the drum and winch operation from falling debris to help increase performance and service life.



Drum Guard

4WS Series HEAVY-DUTY ELECTRIC POWER WINCHES

HEAVY-DUTY DIRECT-DRIVE GEARS

Enhance Load Control and Positioning

The 4WS Series of power winches (800 to 26,000 pounds) is designed to lift, lower, pull, or position heavy loads. Heavy-duty spur and worm gears, plus direct-drive gearing enhance load security and positioning accuracy. Sealed cast-iron gear case housing with integral oil bath lubricates rotating gears for long service life. The 4WS is ideal for long-lift or long-pull applications with single-phase power.

Flange-Mounted Premium Motor

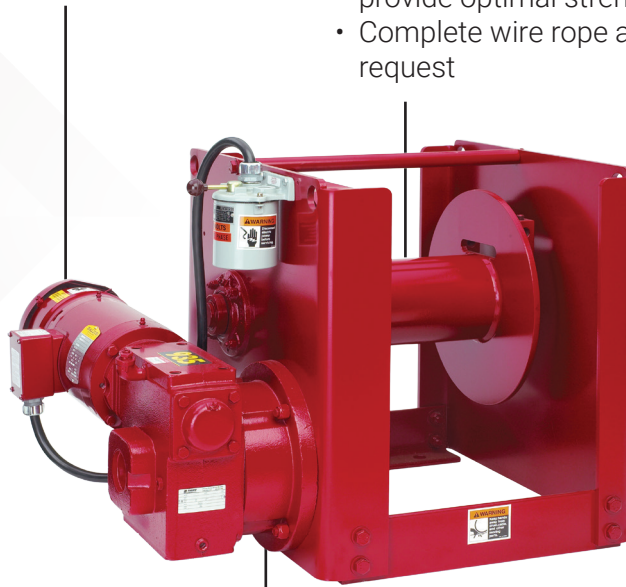
- Reversible, three-phase industrial-grade motor, endures continuous operation
- Single-phase version also available
- A totally enclosed, fan-cooled (TEFC) design, featuring IP44+ and F-Class insulation, resists debris and contamination for long service life
- Standard motors comply with industry standards: UL, CSA, IEC and NEMA MG1

Integral Drum & Shaft Design

- Large-diameter welded-steel drum featuring outside flange anchors promotes uniform winding and life of wire rope
- Anchors allow cable to be over or under wound and provide multiple drum exit angles
- Flange-style, self-aligning roller bearings with cast-iron housing maintain smooth drum rotation
- Continuous, solid-steel drum shaft and steel frame provide optimal strength and security
- Complete wire rope assemblies available upon request

ASME B30.7 Compliance Available

- Contact Them for details



Load-Holding Motor Disk Brake

- Spring-set, electrically-released brake helps control loads and facilitates safe operation

Durable Gears & Gearbox Design

- Heavy-duty spur gears, providing secondary reduction, are guarded with grease zerks for easy lubrication and maintenance
- Large-capacity bearings enhance smooth operation and durability
- Sealed, cast-iron gearbox with integral oil bath for primary gears dissipates heat and provides continuous lubrication for enhanced service life
- Direct-drive gearing featuring spur and worm gears enhances load control and positioning while resisting wear
- Primary speed reducers meet AGMA and/or DIN standards

Series	Load Rating Range		Line Speed Range		Drum Capacity		Voltage/ Phase	Hertz
	lbs	kg	fpm	mpm	ft	m		
4WS	800 - 26,200	362 - 11,885	4 - 44	1 - 13	140 - 1,530	42 - 466.3	115/1, 230/3 & 460/3	50 & 60

4HPF Series HEAVY-DUTY ELECTRIC POWER WINCHES

HELICAL/PARALLEL IN-LINE GEARING For Highly Efficient Load Handling

The 4HPF Series of power winches (5,000 to 25,000 pounds) is designed for applications requiring long travel distances and fast line speeds. The heat-treated helical/parallel gear set provides durability and high efficiency – up to 94%. A modular design allows configuration to meet a variety of customer specifications. These winches are ideal for harsh and hazardous environments, including hard-to-reach locations.

Energy-Efficient Premium Motor

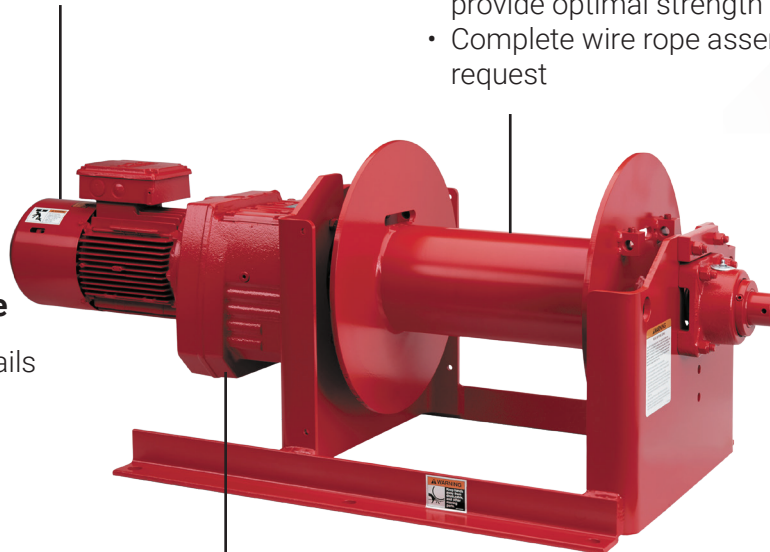
- Energy-efficient 230/460 volt, reversible three-phase, industrial-grade motor ensures continuous use
- A totally enclosed fan-cooled (TEFC) design, featuring IP66 and F-Class insulation resist debris and contamination for long service life
- Standard motors comply with industry standards: UL, CSA, IEC, and NEMA MG1

Integral Drum & Shaft Design

- Large-diameter welded-steel drum featuring outside flange anchors promotes uniform winding and life of wire rope
- Anchors allow cable to be over or under wound and provide multiple drum exit angles
- Flange-style, self-aligning roller bearings with cast-iron housing maintain smooth drum rotation
- Continuous solid-steel drum shaft and steel frame provide optimal strength and security
- Complete wire rope assemblies available upon request

ASME B30.7 Compliance Available

- Contact Them for details



Modular Design

- Common componentry allows the winch to be easily configured to adapt to specific customer requirements

Durable Gears & Gearbox Design

- Fully enclosed direct-drive helical/parallel gear reducers deliver high efficiencies (from 88 to 94%) for applications requiring long travel distances and fast line speeds
- Large-capacity bearings enhance smooth operation and durability
- Sealed cast-iron gearbox with integral oil bath for rotating gears dissipates heat and provides continuous lubrication for enhanced service life
- Primary speed reducers meet AGMA and/or DIN standards

Series	Load Rating Range		Line Speed Range		Drum Capacity		Voltage/ Phase	Hertz
	lbs	kg	fpm	mpm	ft	m		
4HPF	2,100 - 25,200	953 - 11,431	17 - 43	5.2 - 13.1	270 - 2,120	82.3 - 646.2	230/3 & 460/3	50 & 60



Collaborative Engineering and Problem Solving

Thern knows winches and the corresponding design and engineering required to solve challenges. Yet, we may not understand all the nuances of *your* business. That's why we've perfected the art and science of collaboration. We have experience working directly with customers and/or their engineering firms to select winches and accessories to solve a myriad of lifting, moving, and positioning challenges. We can also assist engineering firms with writing and reviewing specifications. We're in the solution business and want to work with you.

Custom Engineering

What makes Thern different from other equipment suppliers? Our on-demand engineering capabilities wherein we design custom solutions. We enjoy good challenges ... and our customers know they can rely on us to solve them. Further, we will not "farm out" the solution. Our in-house engineering team has decades of knowledge and experience. They will collaborate directly with you or your architects, engineers, and other technical staff to design a solution from scratch. It's what we do, and we do it well.

Individualized Customer Service

At Thern, we take customer service to another level – we tailor it to each customer's specific needs. We will also assign a specific individual to your business; one that will develop a deeper understanding of your needs over time. Individualized customer service is a core value and the foundation of our growth and success. When you call Thern, you will talk to a real person who cares and has a vested interest in your future and ours. And, if our representative does not have the answer, they will find a Thern expert that does.

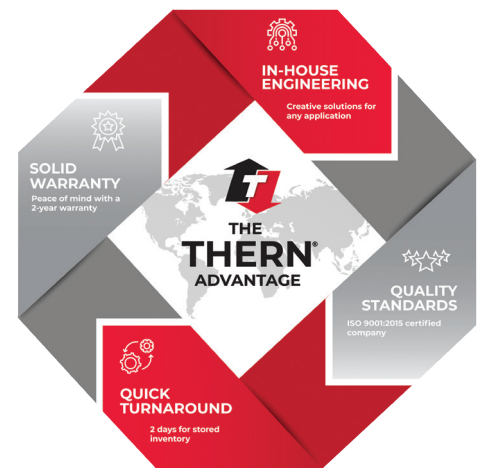
Maintaining a Steadfast Reputation of Manufacturing Excellence & Customer Satisfaction Since 1948

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, positioning, and tensioning solutions we offer today.

Upholding a legacy built on innovation, we have leveraged 75 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 your needs and exceeding all your expectations. We take pride in offering top-quality products and services, timely responses, and accurate information for every project.

Some key industries we serve include water and wastewater, construction, bulk material handling, mining, marine, defense/aerospace, energy, manufacturing, entertainment, and OEMs. Backed by a diverse portfolio of reputable clients, you can rely on Thern to move it all from big to small.



Thern, Incorporated
World Headquarters
5712 Industrial Park Road Winona, MN USA
TF: 1-800-843-7648
Phone: 1-507-454-2996
www.thern.com

Thern, Incorporated
Europe
Siriusdreef 17-27, 2132 WT Hoofddorp
The Netherlands
+31-546-898380
europe@thern.com