

JERGENS' NEW LIFT-CHECK™ HOIST RING LEAVES NO ROOM FOR ERROR

WIRE ROPE EXCHANGE

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SPS, INC:
PART DREAM,
PART DETERMINATION

**TWO AND A HALF
CENTURIES YOUNG**
GUNNEBO INDUSTRIES
SHOWS NO SIGNS OF SLOWING



Atop One Times Square

How the New Year's Eve Ball Drop has evolved, and what makes it happen.



The Times Square Alliance, Landmark Signs and Waterford install 2,688 new crystals onto the New Year's Eve Ball.
Photo by Anthony Quintano.

As the lifting and rigging industry continues to expand and progress, a certain company based in Winona, Minnesota, continues to make a name for itself as one of its most reliable manufacturers. In fact, it's becoming more apparent than ever that if you need something lifted, pulled, or positioned, you call Thern Incorporated.

Founded in 1948 by Royal G. Thern and his wife Lucille, the third-generation family business began with a simple inventory of basic winches and miscellaneous tools during the post-World War II boom. Once the war ended, Royal and his wife moved to the burgeoning town of Winona on the banks of the Mississippi and promptly developed a corn sheller, a lever-operated chain hoist, a cordwood saw frame, and a differential chain hoist. This collection of (advanced for their time) products would be the foundation upon which the modern-day company still prospers—offering up a reputation for some of the industry's most reliable, durable solutions for moving loads of any size.

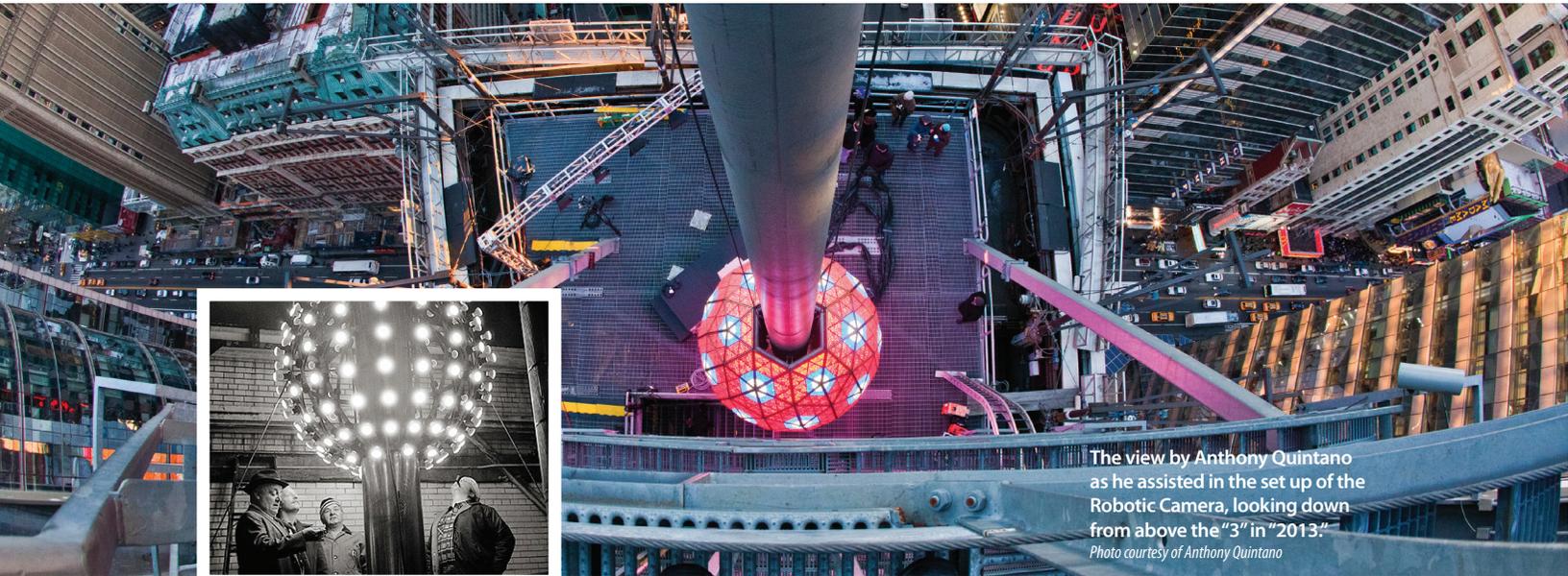
It's one particular load that Thern provided a winch for in 2008 that gets a lot of attention towards

the end (and beginning) of each year. This special, internationally recognized load is the New Year's Eve ball on top of One Times Square in the heart of New York City.

THE CURRENT BALL WEIGHS IN AT NEARLY 12,000 POUNDS, CONTAINS NEARLY 3,000 WATERFORD CRYSTALS, AND IS LIT BY OVER 32,000 LEDS.

Also known as the New York Times Building, the New York Times Tower, or even 1475 Broadway, One Times Square is a 395-foot iconic high-rise originally designed by Cyrus L. W. Eidlitz (HLW International) and built to house *The New York Times* in 1904. However, the *Times* only occupied the building for about a decade—just long enough for the area around the tower to become known as Times Square.

Despite the loss of the *Times*, the building remained a focal point in the city, and eventually around the world, because of the annual Ball Drop on New Year's



The view by Anthony Quintano as he assisted in the set up of the Robotic Camera, looking down from above the "3" in "2013." Photo courtesy of Anthony Quintano

“ABSOLUTELY, THIS IS A CUSTOMIZED WINCH. WE CHANGED THE REDUCER TO MODIFY THE SPEED, WE GROOVED THE DRUM, WE MODIFIED THE DRUM SIZE, WE ADDED A LIMIT SWITCH, AND WE ADDED A SPECIAL DRUM LOCK.”

Eve (first held to honor 1908). Fast-forward a hundred years, and New York City was looking to honor the Ball Drop’s centennial anniversary in 2008 with a new design on the ball and the structure holding it (which would be the ball’s fifth design).

Event organizers, Times Square Alliance and Countdown Entertainment, turned to Hudson Scenic Studio, who had already been involved with dropping the ball at Times Square since 1999—by fabricating the ball and providing the apparatus for lowering it. Hudson, one of the most successful providers in the world of custom scenic fabrication, automation, and painted drops servicing the live entertainment industry, looked to Thern for the custom winch needed to hold and lower the world-famous ball. The city was looking to redesign the entire structure atop One Times Square to accommodate a much larger and more spectacular ball, as well as a more permanent structure. The custom winch would perform the job of lowering the then-1,212-pound ball down the pole on New Year’s Eve, as well as holding it at about the mid-point on the pole every other day of the year. (As part of the redesign, visitors to New York City can look up and see the current New Year’s Eve ball suspended midway up the pole any time of day—any day of the year.)

The 2008 ball was actually used only once, and then placed on display at the Times Square Visitors Center—replaced by a much larger, more extravagant version that adorns the top of One Times Square today. The current ball, fabricated by Hudson (and collaborated on by a host of other companies), weighs in at nearly 12,000 pounds, contains nearly 3,000 Waterford Crystals, and is lit by over 32,000 LEDs. At 12 feet in diameter, and waterproof, the icosahedral

geodesic sphere is twice as large as the 2008 version.

“The ball travels down the pole at seventy-one feet per minute on New Year’s Eve,” said Thern President and CEO Tedd Morgan. “The winch is at the top of the roof, and two wire ropes travel from the winch to the top of the ball tower and then down to the ball. The total travel distance of the winch needed to be a hundred and thirty feet so the ball could be lowered an additional distance to a maintenance location.”

The 4HPPF40M-S8 power winch provided by Thern for the project was specially designed for inverted mounting below the platform on which the pole is mounted. It also boasts precision line speed to lower the ball in sync with the countdown clock, a drum to accommodate two wire ropes, and herringbone grooving on the drum for maximum handling control of the 3/4-inch wire ropes that connect to the ball.

“Absolutely, this is a customized winch,” added Morgan. “The wire rope was supplied by Hudson, and they provided us with the specs, so we knew what to expect.” Typically on a custom job, Thern starts with one of their standard products and adapts from there to suit the application. “For this project, we changed the reducer to modify the speed, we grooved the drum, we modified the drum size, we added a limit switch, and we added a special drum lock.”

Corky Boyd, Hudson’s Senior Vice President, explained that the Thern winch fit nicely into his company’s turnkey solution on the ball-drop project. “As part of that solution, we selected Thern to provide the winch that fit into the



Thern President and CEO Tedd Morgan.

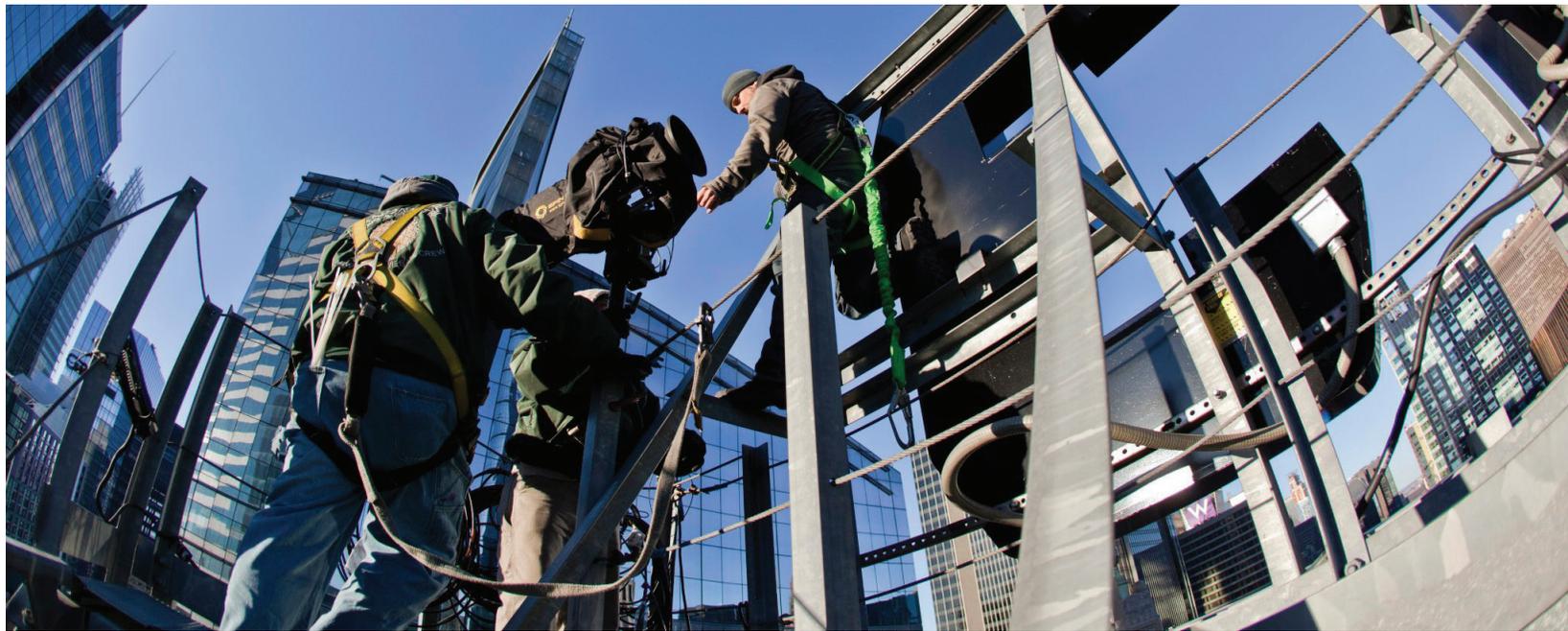
custom control system we designed and installed.” The entire system needed to not only dazzle the millions watching on New Year’s Eve, but it also needs to withstand the elements as it sits exposed halfway up the pole throughout the year. “We built the armature for the ball, as well—fitted with Waterford Crystal and thousands of Phillips LEDs. The ball is up there almost year-round, except for a couple times a year when it’s lowered for routine cleaning and maintenance.”

Thern’s winch for the Ball Drop project was, and certainly is, an integral piece to a unique puzzle of a system that brings great recognition to New York City and the New Year’s holiday around the world every year, but Morgan admits that their contribution to this endeavor was, ultimately, just another day at the office. “This Ball Drop project was challenging in many ways, but it’s the kind of thing we do every day at Thern.” Morgan’s grandfather is literally Royal G. Thern, the founder, so he has an intimate knowledge of the principles that have allowed Thern to survive and prosper for over 65 years. “We take durability, reliability, quality, and service very seriously here—we have since the very beginning—but we also pride ourselves on exceptional lead

But at the end of the day, what keeps Thern at the top of the industry, and distinguishes the company as a world leader in crane and winch manufacturing, is a simple formula. “It’s really just two things,” observed Morgan. “We’re in a wide range of markets, and we have a lot of competitors,



The 4HPF40M-S8 power winch provided by Thern for the project was specially designed for inverted mounting below the platform on which the pole is mounted.



time. And we have a strong engineering staff—which allows us to handle a wide range of challenging projects.”

And quite a range it is—with Thern products and services popping up consistently in noteworthy projects like: the newly finished One World Trade Center (Freedom Tower) in New York City; the Ivanpah Solar Array—the world’s largest solar array, forty miles southwest of Las Vegas in the Mojave Desert; the Hoover Dam Bypass Bridge; the Kennedy Space Center Shuttle Pad; multiple Gulf Coast oil rig operations; and even the recently completed, and new world’s largest, 550-foot-tall High Roller Ferris wheel in Las Vegas.

but none of them offer the variety of products that we do. So we have a deeper relationship with our customers.

“And the second thing—I think it ties back to the family part—we really take our customers seriously ... and I think they respond to that. Not only do we provide a good product, but we want to do it at a good price, and within a good timeframe. It’s the service side—we really care. And we hear that from our customers all the time. I think it separates us from our competition.”

To learn more about Thern Incorporated, and their diverse line of products and services, visit www.thern.com. ■