ENGINEERED RIGGING

YOUR PEOPLE • OUR EQUIPMENT


FAT
FAT
ENERPAC

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YOUR PEOPLE
OUR EQUIPMENT

Engineered Rigging specializes in heavy lifting and machine moving projects by providing equipment rental, sales and service, engineering expertise, custom solutions and technical support. By delivering a collection of cross-functional capabilities beyond bare rental, we offer clients cost-saving synergies and timely solutions.

Our offices are strategically located to quickly deploy our equipment to your jobsite.

OUR MISSION

We strive to exceed expectations in everything we do by combining our expertise with yours to create safe and effective heavy lifting and transport solutions.

KEY PLAYERS

Our team members' collective experience and innovative mindset overcome project challenges, maximize profitability and enhance jobsite safety.

CHRISTOPHER COX, PE
Founder & President

MIKE BERES
Vice President,
Sales & Operations

GREG BOGDANSKI
Sales & Service

TAYLOR BROWN
Technician

NICK DARLAGE
Director of Projects

JESSE FAULCONER
Safety Specialist

ALEJANDRO GUZMAN
Director,
Latin America

MELISSA HICKS
Director, Marketing

JAY HOLT, PE & PMP
Director,
Engineering & Assets

JORN INGEBRIGTSEN
Sales & Service

BRAD JONES
Fabrication

JESS JONES, PE
Lead Engineer

JOHN KUKA
Director,
Business Development

GLEN MAXWELL
Project Director

KAYLA MUNN
Project Controls

DUSTIN REEVES
Technician

RUSTIN REEVES
Technician

DALTON ROBINSON
Project Engineer

ROB SCHLYER
Director,
Internal Affairs

JAMIE SLOTE
Technician

> “Customers appreciate that we approach every project as if it is our own. We wholly commit to your success.”
>
> **MIKE BERES, VICE PRESIDENT**

MARKETS

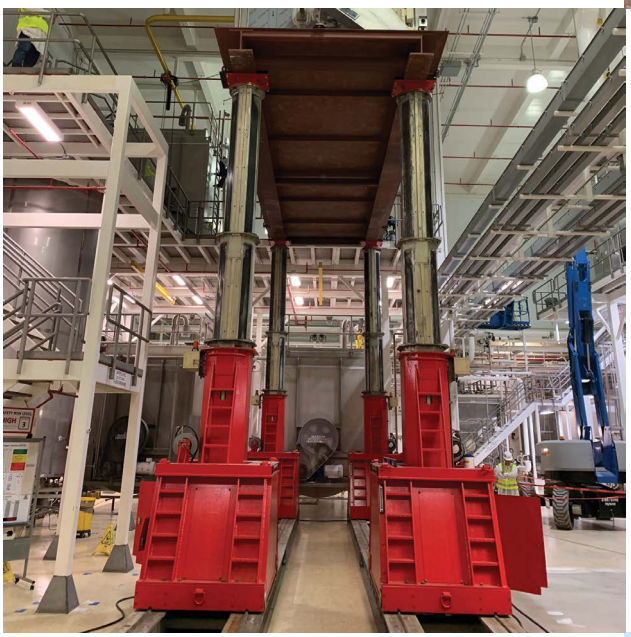
Engineered Rigging provides support for a wide range of heavy lifting and specialized transport projects. While we are always up for a new challenge, our core business focuses on four sectors. We have a proven track record for optimizing the safety and efficiency of projects across the U.S. and beyond as detailed in our case studies featured in Heavy Lifting News at www.EngineeredRiggingGroup.com.

CIVIL CONSTRUCTION

With infrastructure projects being a priority in the U.S. and beyond, civil contractors can fill gaps in their heavy lifting and specialized transport fleet with high-quality bare rentals from Engineered Rigging. When needed, our heavy lifting team can provide detailed engineering plans, custom fabrications, onsite technicians and bespoke lifting solutions tailored to your exact needs. Our equipment has been put to work on bridges, overpasses, ports, tunnels and more.

MACHINERY MOVES

Tight spaces and small clearances present unique challenges when it comes to moving and installing heavy machinery such as power transformers, generators, turbines, motors and other items in an industrial facility, power plant or construction site. Whether you need to push or pull, lift or lower, slide, or rotate a massive component into position, Engineered Rigging's fleet features an array of technologies specifically designed to safely and efficiently move oversized and heavy machinery.



INDUSTRIAL

Engineered Rigging has a proven track record providing equipment, engineering knowledge and technicians for plant maintenance and renovations across a wide range of industries including power and energy, manufacturing, shipping, steel and more. These facilities house some of the largest and most complex machinery in the world. Engineered Rigging's rental fleet helps make the maintenance cycle on these machines more predictable and efficient.

MINING

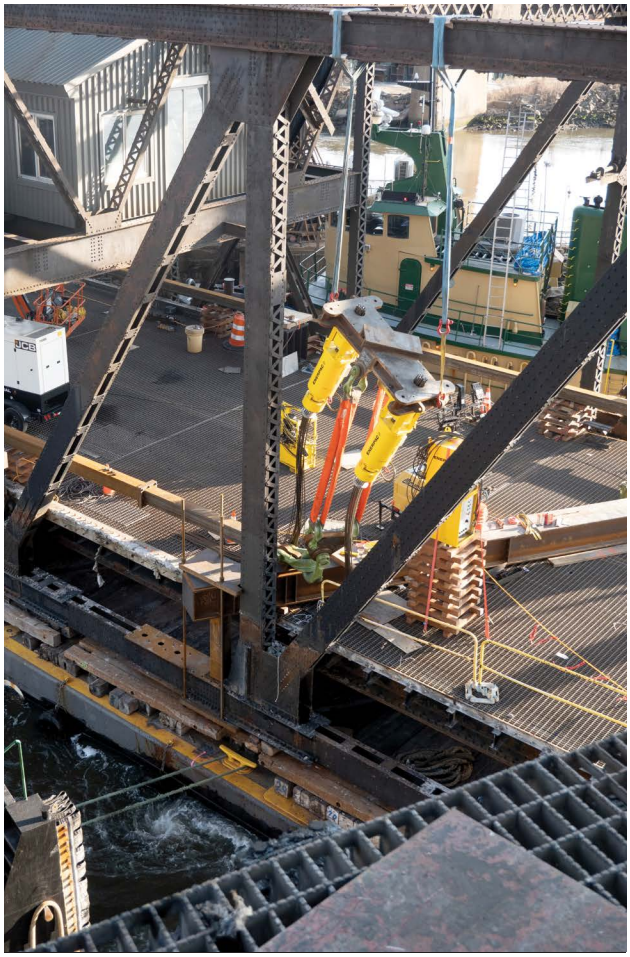
The world's technology-based economy demands more from mines than ever before. As mining sites are developed in remote and inhospitable locations, profitability hinges on equipment efficiency and uptime. Engineered Rigging's rental fleet optimizes safety and expedites maintenance and repair operations for mining equipment, including electric and hydraulic shovels, conveyors, haul trucks and processing machines.

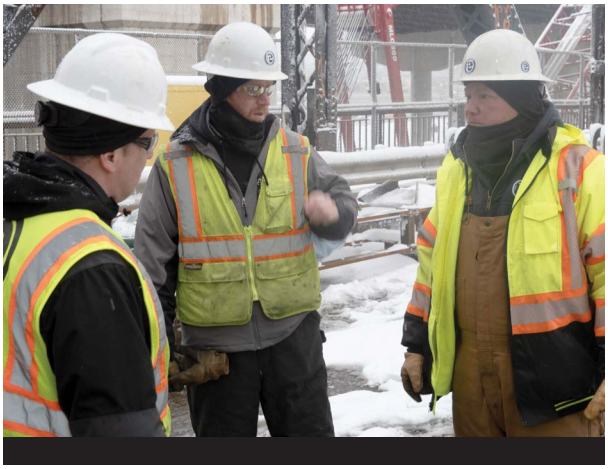
DISMANTLING A LIFT SPAN BRIDGE

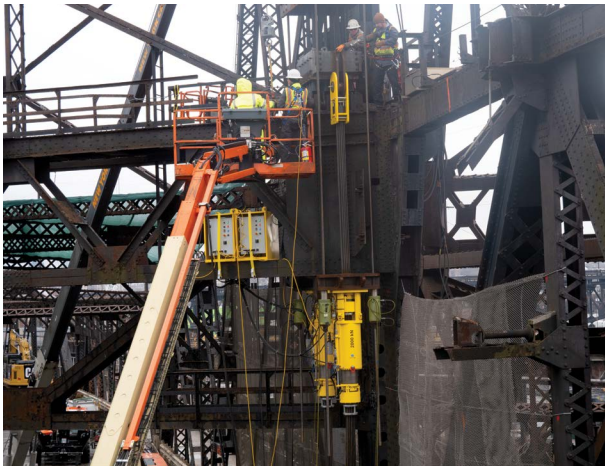
CASE STUDY

OVERVIEW

For the dismantling of the Wittpenn Bridge, a 90-year-old structure, our engineers conducted several studies to identify risks and optimize safety precautions. They analyzed the existing structure using computerized modeling to ensure the forces put on the bridge during the controlled lowering would not damage the structure. Our analysis revealed that the bridge was not strong enough for a simple grab and lower operation. As a result, Engineered Rigging designed two project plans—one to lower the counterweights on the east and west ends of the bridge and another to lower the main span. Custom fabrications were needed to connect the lowering systems to the aging structure, and Engineered Rigging transformed more than 400,000 pounds of steel in just five weeks to keep the project on track. In addition, we provided technicians onsite to support the contractor as needed. This project is a sterling example of the expertise, efficiency and safety optimization that Engineered Rigging delivers to every client.







EQUIPMENT RENTAL & SALES

Engineered Rigging partners with global leaders to offer an extensive collection of innovative and ready to ship heavy lifting, rigging and specialized transport solutions. We rent, sell and service equipment to meet our customers' dynamic needs and overcome project challenges. Unsure which equipment is best suited for your project? Our heavy lifting experts are ready to assist. In addition, we can provide hands-on equipment training and onsite technical support.

We back our extensive fleet of just-in-time, delivery-ready heavy lifting and specialized transport equipment with a deep bench of knowledgeable professionals who provide expert operating guidance, exceptional customer service, and if needed, training and onsite technical support. If you need a solution to withstand a harsh environment or operate within a small footprint, our heavy lifting experts can identify the perfect solution for your specific project. With locations across the world and a well-developed network of logistics providers, we can deliver even our largest systems to remote job sites.

Brands You Trust

We are continually expanding our rental fleet. If you don't see your preferred OEM, please ask!

AmitalUSA · ENERPAC · FASSI · Goldhofer · HILMAN

holmatro mastering power · HYDRAULIC TECHNOLOGIES · JEKKO · PM · SIMPLEX

Rental Equipment Guarantee

When you rent from Engineered Rigging, we supply more than equipment — we deliver peace of mind. Regardless of size, capacity or complexity, every asset in Engineered Rigging's rental fleet is:

- A best-in-class product designed and manufactured by a trusted, world-class company.
- Properly stored and meticulously maintained to ensure it is ready for delivery whenever and wherever you need it.
- Thoroughly cleaned, inspected and rigorously tested to ensure it arrives fully operational and safe to use.

“Our rental equipment arrives on time and ready to work.”

JAY HOLT, PE & PMP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ENGINEERED RIGGING

RENTAL FLEET

In addition to renting equipment, we have new models available for sale. If you are searching for an item that you don't see, please call 844-474-4448 as we continually expand our equipment assortment. We also create custom solutions to meet the specific needs of projects, and our heavy lifting experts can help you identify the best solution for your project.

Cylinders

Ring Climbing
Single- and Double-Acting
Lightweight Aluminum
Locking
Low-Height
Toe Jacks

Hydraulic Gantries

Mini Lift Series
Super Lift Series
Super Boom Lift Series

Jacking Systems

Climbing Jacks
Cube Jacks
Jack-Up Systems

Knuckle Boom Cranes

Custom Mount
Pedestal Mount
Truck Mount

Lateral Moves

Cribbing Timbers
Skates
Electric Trolleys
Hydraulic Turntables
Skidding Systems
Load Stools

Split-Flow Pumps

Synchronous Lift Network Systems

Self-Propelled Modular Transporters (SPMTs)

Electronic Steer Units
4 Axleline
6 Axleline

Strand Jacks

Synchronous Hoists

YOUR PEOPLE • OUR EQUIPMENT

CYLINDERS

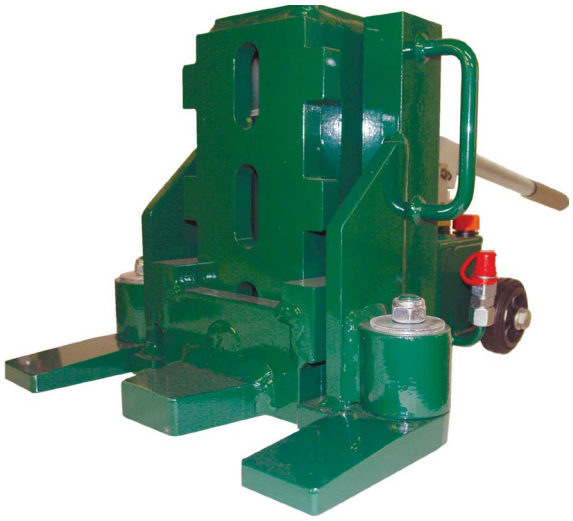
KEY FEATURES:

- Powerful yet portable
- Precise control
- Durable construction for long-lasting performance
- Built-in safety valves to prevent over-pressurization

Hydraulic Cylinders, also called jacks or rams, are ideal for single or multi-point lifting applications in a variety of operations including industrial, power generation, mining, civil construction and offshore including wind and oil and gas. Our cylinders can lift, lower, push, pull and securely hold a load. We rent and sell a wide array of cylinders, including models by Enerpac, Holmatro and others. We welcome the opportunity to discuss your specific needs and identify the best cylinder for you to rent or buy.

MODELS	FEATURES	LOAD CAPACITY	STROKE
HCR Series	High tonnage Double-acting	168-286 tons	7.87”-11.81”
HCL Series	High tonnage Single-acting Locknut	113-286 tons	5.91”
LPL Series	Low height Single-acting Locknut	68 - 450 tons	1.77”-1.97”
RC Series	Single-acting Special attachments	25.8 tons	14.25”
RCS Series	Low height Single-acting	32.4 tons	2.44”
CUSP Series	Extreme Low Height Single-acting	121 tons	0.58”
HARC Series	Aluminum Double-acting	110 tons	4.72”

Toe Jacks



When you need to get under and lift equipment, Hilman HTJ-10D Deluxe Hydraulic Toe Jacks feature a high-quality lifting toe that can be adjusted to several different heights to accommodate different lifting points. With lifting points on both the toe and the top of the jack, these are the perfect complement to skates or dollies.

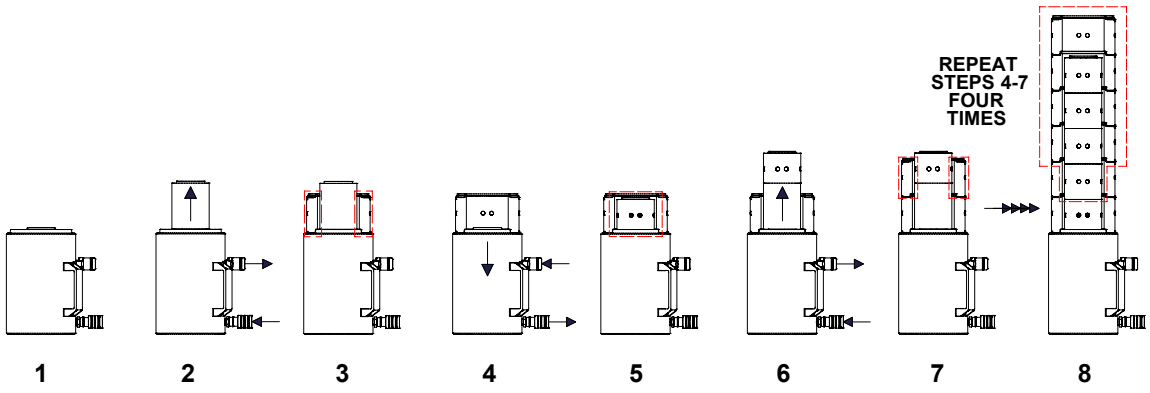
Key Features	▶ Remote or local pump operation depending on lift complexity ▶ Swivel foot ensures safe and stable lifting ▶ On-board manual pump with handle for stand-alone operation ▶ Release valve for smooth lowering of heavy objects
Load Capacity	10 tons
Stroke	5.5”
Toe Height Adjustability	0, 3.2”, 6.4”


holmatro
holmatro
holmatro
MAN

Holmatro Cylinders

MODELS	FEATURES	LOAD CAPACITY	STROKE
Ring Climbing	Incremental lift achieves stroke of 23.6” Small footprint Lightweight aluminum	110 tons	5.11”
Lightweight	Double-acting Lightweight aluminum	110 tons	4.72”

How Ring Climbing Cylinders Work



HYDRAULIC GANTRIES

KEY FEATURES:

- Self-contained hydraulics reduce worksite clutter
- Intelli-Lift Wireless Control System optimizes safety and precision for a controlled lift
- Self-propelled wheels or tank rollers
- Lloyds witness tested

TYPES OF GANTRIES:

- Mini Lift Series
- Super Lift Series
- Super Boom Lift Series

Hydraulic Gantries are a safe, efficient way to lift and position heavy loads in applications where traditional cranes may not fit or capacities of permanent overhead cranes are insufficient. When equipped with skid tracks, header beams and optional side shift, a Hydraulic Gantry can safely move and place a heavy load carefully positioning in the x, y, and z planes in just one pick. With capacities from 45 tons to 1,178 tons and lift heights to more than 39 feet, Engineered Rigging has a gantry to meet your heavy lifting needs. We offer rental and purchase options for Gantries.

GANTRY ACCESSORIES

Engineered Rigging offers a variety of gantry accessories to rent or buy:

- Azobe (Ekki) cribbing timbers
- Header beams
- Lift links
- Side shifts
- Shackles
- Skid track
- Power distribution boxes

Time to Upgrade?

TRADE IN!

MODEL	MAXIMUM LOAD CAPACITY	MAXIMUM LIFT HEIGHT	AVAILABILITY
ML40	45 tons	18’	Buy
SL60	67 tons	11.17’	Rent
SL200	220 tons	21.98’	Buy
SL400	450 tons	29.99’	Buy
SBL500	585 tons	28.27’	Rent
SBL600	674 tons	34.78’	Rent or Buy
SBL900	1,009 tons	37.09’	Rent or Buy
SBL1100	1,178 tons	39.38’	Rent or Buy

Note: load capacity and lifting height vary from stage 1 to stage 2 and stage 3 (when applicable)

JACKING SYSTEMS

Incremental lifts of heavy loads can be complex and challenging. The variables of height, weight, size, and the space available means every lift project is unique. Fortunately, heavy lifting technologies have evolved to keep up with the demands of modern construction methods and plant maintenance. Engineered Rigging has a variety of jacking technologies to fit your needs.

Climbing Jacks

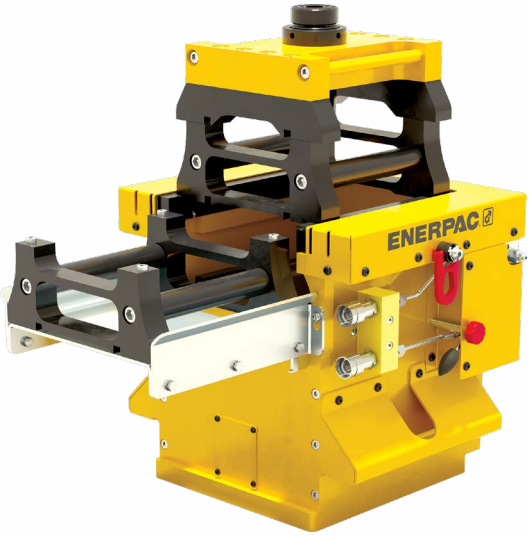
KEY FEATURES

- 25 to 200-ton capacity
- Double-acting, hydraulic-return cylinder
- 10,000 maximum PSI
- 5.94” stroke

Climbing Jacks, also known as step jacks, are a simple solution for incrementally lifting, lowering and holding a heavy load. Large objects, such as oil tanks, can be lifted, held and lowered for maintenance without a crane. When used with cribbing blocks, Climbing Jacks lift up to the height limitations of a cylinder’s plunger stroke length and then reset the jack height onto the cribbing stack. We have Enerpac and Holmatro models available to buy or rent.

We Rent and Sell Azobe & Poly Cribbing Timbers

Cube Jacks



KEY FEATURES

- System automatically locks after the lifting or lowering stroke
- Self-aligning steel cribbing blocks
- End block with adjustable swivel saddle allows fine adjustment during setup
- Lloyds witness tested to 125% of maximum working load

Enerpac Cube Jacks are a safer and more efficient alternative to the jack-and-pack method using wooden cribbing. Their simplified operation sequence has 50% fewer cycles than climbing jacks. The lightweight, self-aligning steel cribbing blocks save time, improve side load and eliminate the need for wooden cribbing materials. This hydraulic jacking system features a lifting height of nearly 10 feet and a small footprint ideal for tight spaces.

ENERPAC MODELS	SCJ-50	SCJ-100
Load Capacity Per Base Unit	56 tons	110 tons
Maximum Lifting Height	81.4”	118.3”
Starting Height	19.4”	21.97”
Lifting Stroke	6.14”	6.14”
Maximum Sideload	1.5% @ 6.5’	1.5% @ 9.8’

Jack-Up Systems

Buy or Rent

EQUIPMENT

KEY FEATURES

- Computer control
- Self-contained hydraulics optimize site safety
- Automatic synchronization of multiple networked lift points
- Emergency stop switch, overload and stroke alarms
- Automatic and manual lifting settings

A Jack-Up System is a multi-point lifting solution. The load is lifted in increments as barrels are slid into the system, lifted and stacked to form lifting towers. The typical setup includes four high-capacity jack-up units, one positioned under each corner of the load. However, the configuration can be expanded to eight towers as needed. The modular design makes it easy to transport and expedites setup and teardown.

The computer control unit manages the synchronous and precise lifting and lowering operations of each tower while maintaining the balance of the load and monitoring the center of gravity. It can be utilized in an array of applications including bridge construction and maintenance, port crane lifting, mining equipment maintenance and machinery moves.

ENERPAC MODELS	JS250	JS500
Load Capacity Per Column	275 tons	550 tons
Maximum Lifting Height	32.8’	49.2’
Maximum Lifting Speed	13’ per hour	14’ per hour
Maximum Sideload	3% @ 32.8’	4% @ 49.2’

KNUCKLE BOOM CRANES

MOUNTING OPTIONS

- Customized
- Pedestal
- Truck

KEY FEATURES

- Ideal for tight spaces
- Heavy load capacity
- Ease of operation
- Precise load control
- Rapid mobilization and setup

Our compact and powerful articulating cranes by Fassi and PM can precisely load, lift and hold heavy loads in a footprint that is a fraction of the size of traditional cranes. The computerized remote control features a high-tech monitoring system that manages millions of operations per second to deliver real-time diagnostics and guarantee immediate response from the machine.

Our Knuckle Boom Cranes can be mounted on steel or concrete platforms to offer an auxiliary hook where you need it most. Custom fabrications can be designed and built to meet your specific needs. We have models available to buy or rent.

LATERAL MOVES

Whether moving a building, a power transformer or a million-pound autoclave, lateral moves of heavy loads require specialized equipment. Engineered Rigging's fleet features skates, skidding systems, trolleys, hydraulic turntables and ground support accessories. Our innovative solutions allow you to push, pull, slide, skid, rotate and launch heavy and large loads into position. We offer rental and purchase options.

SKATES

When it comes to lateral moves of heavy loads across even surfaces, Skates are indispensable. Engineered Rigging rents and sells a variety of models from simple rotational Skates that are intended to be paired with other equipment, to sophisticated, self-propelled solutions.

STYLE	KEY FEATURES	BRANDS	LOAD CAPACITY
Crazy Skates	▶ Unpowered ▶ 360° maneuverability ▶ Low-profile ▶ Rotational, poly wheels ▶ Manual operation	Amital 125 Enerpac GKS RL-6 Hilman Omni-6	3-10 tons
Powered Skates	▶ Wired and wireless models ▶ Remote control ▶ Anti-slip turntable ▶ Can be configured with unpowered rear skates to manage larger loads	Enerpac Hilman Traksporter Hilman TK-EVO	20+ tons
Roller Chain Skates	▶ Low cost ▶ Simple, reliable design ▶ Use with protective steel plates to protect floors from high contact loads	Hilman	15-400 tons




Uncertain which equipment is best suited for your project?

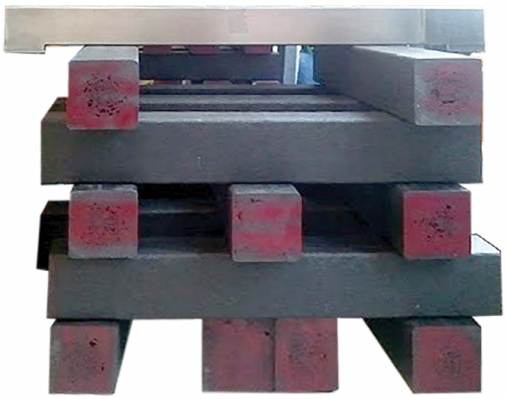
JUST ASK!

LATERAL MOVE ACCESSORIES

Engineered Rigging rents and sells a variety of ground support accessories. In addition to off-the-shelf solutions, we can engineer and fabricate customized accessories to meet your specific project requirements.

AZOBE CRIBBING TIMBERS

Made of dense Azobe or Ekki hardwood, our jacking timbers have a very tight, interlocked grain that helps them maintain their structure over time and withstand harsh elements, including marine environments. Their rugged durability helps optimize jobsite safety. Plus, they are flame-resistant and naturally resistant to rot, decay, pests and splitting. Engineered Rigging rents and sells Azobe Timbers in a variety of sizes to meet your jacking, blocking and cribbing needs.



POLY CRIBBING TIMBERS

Ideal for cribbing, blocking and stabilizing machinery and equipment, our recycled plastic cribbing is the perfect alternative to wood. Made from high-density polyethylene (HDPE) plastic that is reinforced with fiberglass, our Poly Timbers are waterproof and termite-proof. They will not swell, split, crack, splinter or rot. Available for purchase in a variety of lengths.

DRIVE BARS

An economical substitute for a fork lift, the battery-powered Hilman PowerAttack Drive Bar uses leverage and traction to tow or push heavy loads up to 30 tons. Simply attach to a steerable skate with an adaptor (provided). The telescopic extension increases the length of the bar from 65" up to 84". Typical battery life is 4 hours under working conditions, and recharging takes 5 hours. Our rental includes 2 battery packs and a charging unit.

LOAD STOOLS

Fabricated in our Arkansas facility, we have an assortment of heavy-duty, steel Load Stools available for rent. In addition, you can purchase Load Stools customized to your specifications.

Questions?

ASK OUR HEAVY LIFTING EXPERTS!


Which
system is best
for your needs?
LET'S TALK!

SKIDDING SYSTEMS

Moving heavy machinery from Point A to Point B requires special attention. Engineered Rigging has Skidding Systems that can operate on the ground as well as options that can be elevated to load or unload machinery from a trailer.

Lightweight Skidding System

KEY FEATURES

- Height: 2.2”
- 200-ton capacity (qty. 2 x 100-ton slide rail)
- Quickly changes skidding direction
- “No tools” quick-connect slide rails
- Easy to transport, store, setup and operate

Powered by a hydraulic Split-Flow Pump, Holmatro’s Lightweight 200T Skidding System is ideal for moving heavy loads in confined areas. Its modular design can be configured for each load’s exact specifications, making it ideal for a variety of applications including positioning tunnel boring machines and other heavy equipment. The push-pull cylinder provides controlled movement in both directions to maximize efficiency. Rental and purchase options available.

Low-Height Skidding System

KEY FEATURES

- Height: 3.62”
- 400-ton capacity (qty. 2 x 200-ton slide rail)
- Easily reverses skidding direction with latching paws
- Portable design for quick setup with standard tools

The Enerpac LH400 Low-Height Skidding System bridges the gap between lightweight and heavy-duty slide systems allowing slides of heavy loads in restricted spaces. It can be used on a fully supported surface or combined with the track supports to span gaps with additional rigidity as needed. Skidding forces are kept low using special PTFE-coated pads providing a low friction surface between the skid beam and heavy-duty slide rail. Long stroke push-pull cylinders are operated via a Split-Flow Pump, minimizing cycle time and maximizing production. We rent and sell the Enerpac LH400.

Heavy Duty Skidding System

KEY FEATURES

- 500-ton capacity with qty. 2 x 250-ton slide rail
- Modular design with simple setup using forklift or crane
- Easily change direction with unique cylinder latch mechanism

With a load capacity of 500 tons, the ER PS500 Power Slide is ideal for transferring heavy machinery from a trailer or rail car onto foundations or even another heavy mover such as an SPMT. It can be used on a fully supported surface or supported on load stools to span gaps. Its rugged construction is built to withstand daily use and extreme loads such as turbines, generators, transformers, vessels and motors.

The Power Slide System is comprised of skid shoes powered by hydraulic push-pull cylinders over modular high-strength track sections. Low friction is maintained using graphite paint creating a consistent sliding surface between heavy track sections and the slide shoes. Our system includes 120 feet of slide track, four slide shoes with load pins, two push cylinders, two safety load stops and connecting links with pins and is powered by a Split-Flow Pump for quick and accurate load positioning.

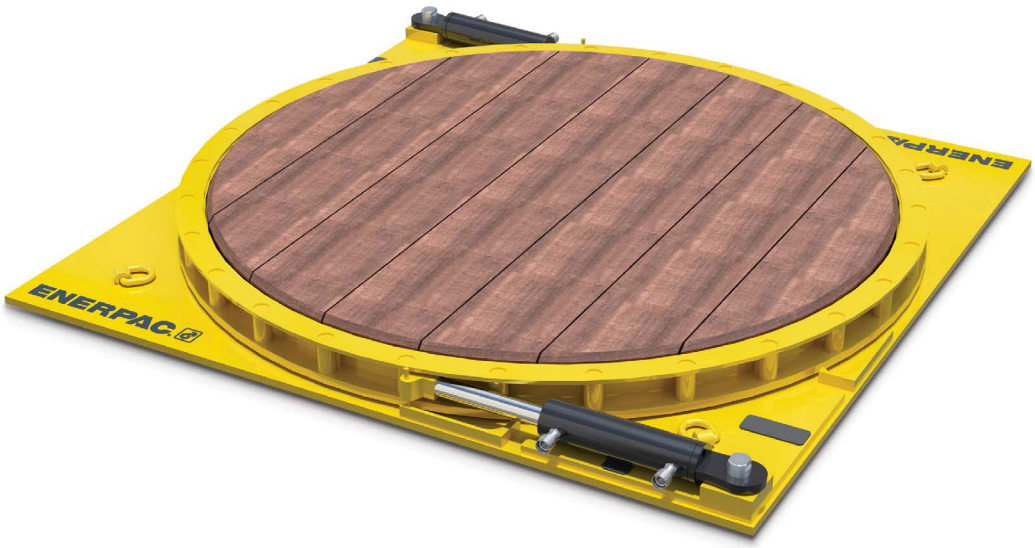
Electric Trolleys

KEY FEATURES

- 55-ton and 110-ton load capacities
- Loaded travel speed up to 164 feet per hour
- Synchronized and continuous movement
- Remote control
- Easy setup
- Compact footprint
- Low profile
- Portable

The Enerpac ETR-Series Trolley System takes the start and stop out of horizontal moves and safely expedites project completion. The system is comprised of synchronized and electrically driven trolleys which precisely carry heavy loads horizontally along a low-profile track at ground level which reduces risk and optimizes safety. Models include lifting and lower capabilities and can be paired with accessories to accommodate Cube Jacks and header beams. The modular design allows up to eight trolley units to be synchronized to meet project needs. Available to buy or rent.

Hydraulic Turntables



KEY FEATURES

- 450-ton load capacity
- Precise rotational control
- Compact footprint enables full functionality in confined spaces

Often used in conjunction with a skidding system, the Enerpac ETT400 Hydraulic Turntable permits the precise rotation of a load before, during or after skidding or lifting operations. It serves as a direct transfer destination for heavy loads and can be used to rotate a large machine during maintenance or repair projects such as installing or removing components. The turntable is driven by two 25-ton hydraulic cylinders. We rent and sell the ETT400.

SPLIT-FLOW PUMPS

KEY FEATURES

- Manual or pendant controlled options
- 10,000 psi
- Up to 2.5 LPM flow per outlet
- 460V 3ph

Split Flow Pumps (SFPs) provide synchronous control for lifting and lowering applications with multiple lift points. This safe, economical solution can be used with single or double-acting cylinders. The pumps deliver even flow to each lift point regardless of differences in the load. We rent and sell Enerpac and Holmatro SFPs.

SYNCHRONOUS LIFT SYSTEMS

When you have a large or heavy object to lift, you need to power multiple lifting points. Turn heavy lifts into light work using Engineered Rigging's Synchronous Lift Systems (see models below) or the Enerpac SFP Network Kit. The kit's plug-and-play technology makes it easy to control up to four SFPs with a single computer.

ENERPAC EVO SYNCHRONOUS LIFT SYSTEM

- Easy setup and control
- Multiple lifting and flow options
- Warning and stop alarms optimize safety
- Control up to 48 lifting points from a single operator control station
- 4, 8 or 12 lifting points per pump

HYDRAULIC TECHNOLOGIES ESYNC

- Battery-operated
- Lightweight, portable
- Expedited setup
- Control up to 16 eSync units to support 64 lifting points
- Microprocessor-controlled for high accuracy
- Stackable workstation available to create a synchronous tower
- Two-man carry provides easy transport and setup

SELF-PROPELLED MODULAR TRANSPORTERS

KEY FEATURES

- Wireless remote control
- Precise maneuverability
- Ideal for challenging routes
- Moves forward, backward and sideways

The heavy-duty, modular design of Self-Propelled Modular Transporters (SPMTs) makes it possible to move even the largest and heaviest loads. The rotating wheel assemblies enable the trailers to move forward, backward and sideways with optimized control and traction. An onboard power source eliminates power cords so the trailer can rotate 360 degrees without changing its midpoint. The SPMT's cylinders act as a suspension to absorb the unevenness of the ground and function to lift and level during travel. Multiple trailers can be linked in a variety of configurations to manage larger loads. Engineered Rigging rents and sells powerful Goldhofer E-steer SPMTs.

Modular Design

Multiple SPMTs can be configured side-by-side or in tandem to support the dimensions of oversized loads. Our in-house engineering team can assist in determining the optimal configuration for your specific needs.

4 AXLELINE

6 AXLELINE

STRAND JACK SYSTEMS

KEY FEATURES

- Powerful lifting capacity
- Compact design
- Smart Cylinder Control System
- Safe mechanically locked lifting operation
- Telescopic strand guide pipes prevent bird caging

Strand Jack Systems provide precise synchronous control of heavy loads in an economical, reliable and compact footprint with capacities from 17 to 1,405 tons per jack. They are often used when a conventional crane is not practical or economical. Strand Jack Systems are widely used in the oil and gas industry and are ideal for industrial plant maintenance projects, ports, bridges, and any construction site with a limited footprint. Up to 60 Strand Jacks can be simultaneously controlled remotely by a single operator which optimizes safety and productivity. Engineered Rigging has a large fleet of Enerpac Strand Jacks available for rental or purchase. Let our team of experts help configure a system for your application.

ENERPAC MODELS AVAILABLE TO RENT	LOAD CAPACITY PER JACK	NUMBER OF STRANDS	WEIGHT
HSL1507	17 tons	1	220 lbs
HSL7006	79 tons	7	1,411 lbs
HSL20006	225 tons	19	2,860 lbs
HSL30006	337 tons	31	4,820 lbs
HSL50006	562 tons	48	6,930 lbs

Additional models available for purchase.

AVAILABLE ACCESSORIES

- Pre-stressed strand coils
- Dispensers
- Strand guides
- Recoilers
- Customized accessories
- Hydraulic power units
- Wedges

SYNCHRONOUS HOISTS

KEY FEATURES

- Load capacities up to 375 tons per point
- Strokes ranging from under 1’ to 5’
- Manual, automatic and wireless models available
- User can pre-program the positioning, tilting and aligning of the load

Enerpac’s Synchronous Hoist (also called a sling adjuster or hydraulic turnbuckle) operates below-the-hook to precisely position heavy and unbalanced loads in a vertical and horizontal plane. The use of one crane, instead of two or more, improves safety, maximizes operating speed and reduces costs. The specialized hydraulic cylinders are mounted in-line with the rigging which provides the operator with the ability to monitor and adjust each lifting point independently. We have Synchronous Hoists available for rental or purchase.

CASE STUDY

MOVING A MILLION POUND MACHINE

While Belger Cartage Service has a century of heavy lifting experience under its belt, a recent project presented an unprecedented challenge. Before construction could proceed on a new manufacturing facility In Tulsa, Oklahoma, a massive autoclave needed to be moved into position. An autoclave is a machine used to carry out industrial and scientific processes requiring elevated temperature and pressure. This particular autoclave was designed to cure composites for airplane parts. It weighs an epic million pounds, is 55 feet long and 25 feet wide.

Upon delivery to the construction site, the autoclave was placed in an out-of-the-way location that would require two separate lateral moves to align the machine to the eight pylons which were the machine's foundation. A total of more than 50 feet of lateral movement was needed, including a portion at elevation over the approximately 5.5 feet deep pit where the pylons were located. Once positioned, the building would be constructed around the massive autoclave. Belger approached Engineered Rigging to design the lift plans, provide equipment rental and deliver onsite technical support.

"Having multifaceted capabilities under one roof, Engineered Rigging was able to fulfill Belger's needs within the required six-week deadline," explained John Kuka, Director of Business Development for Engineered Rigging.

The Engineering Plan

When developing the plan, several factors were considered by ER's engineering team including the load weight, dimensions, lifting points, depth of the pit, center of gravity and site conditions. Ultimately, Engineered Rigging determined that two Enerpac LH400 Low-Height Skidding Systems were the ideal solution for the lateral moves. By doubling the track on each Skidding System, the load capacity was doubled to safely skid the million pound weight of the autoclave. The Skidding Systems were powered by two Enerpac SFP421SJ Split Flow Pumps while Enerpac HCR20010 Double-Acting Hydraulic Cylinders were used to lift and lower the autoclave onto the foundation.

The first lateral move was 21 feet from west to east. After it was completed, Engineered Rigging's technicians lifted the autoclave to reset the skidding systems and track to traverse north to south. The autoclave was then slid another 32 feet.

Once in position above the support foundation, a precise sequence of stage lowering was followed using a combination of the Enerpac 200-ton Cylinders with a 10 inch stroke, load stools and cribbing to jack and crib the autoclave down into its final elevation.

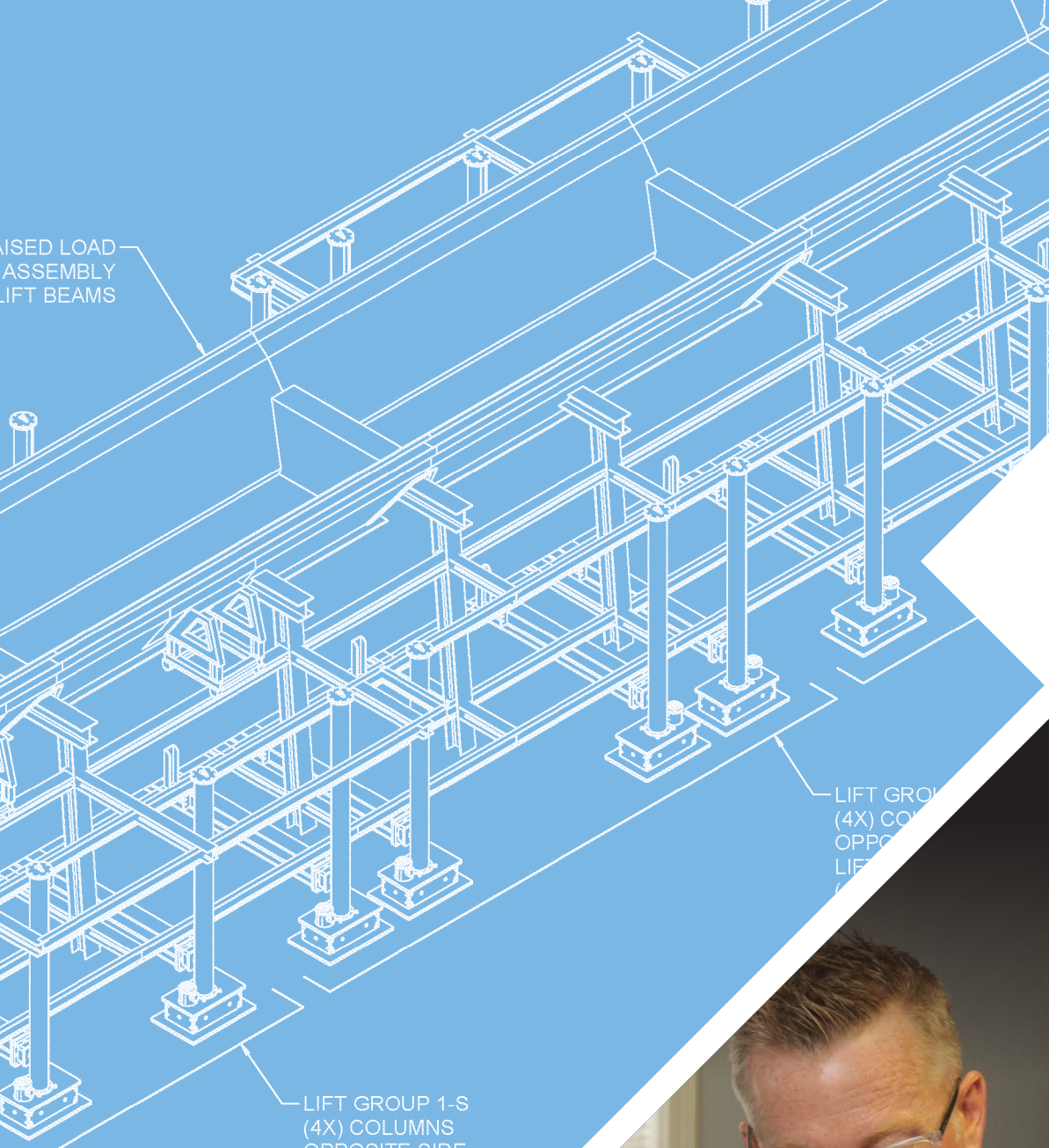
Rapid Response to Unexpected Site Challenges

While the equipment was standard, the site offered its share of challenges. A pre-move site inspection by Engineered Rigging's onsite technicians revealed that the elevation along the transit path was uneven. For the Low-Height Skidding System to operate safely and efficiently, the track must be level. Engineered Rigging provided crane mats to level the track.

Another issue involving ground conditions arose when the first lateral move began atop a concrete parking lot. The weight of the autoclave caused the concrete to buckle.

"Unfortunately, site conditions differed from the design drawings and the reported allowable load-bearing of the concrete was inaccurate. We halted the job and our site team and engineers evaluated the situation. We quickly obtained an emergency load of 16 steel road plates which distributed the weight over a larger area and protected the concrete," explained Kuka.

Once the first lateral move was completed, Engineered Rigging's technicians reset the system and the second lateral move was performed. After 4 days, the autoclave was safely in its final resting position and the construction of the building commenced.


AISED LOAD
ASSEMBLY
LIFT BEAMS
LIFT GROUP 1-S
(4X) COLUMNS
OPPOSITE SIDE
LIFT GROUP 1-N
(4X) COLUMNS

ENGINEERING SERVICES

One distinguishing factor that sets Engineered Rigging apart from other bare rental companies is our in-house engineering team which has experience in civil construction, power & energy, offshore operations, machinery moves, and more. Our engineers take the time to fully understand the unique complexities of your project and apply creative thinking to deliver innovative, safe and cost-effective solutions. We solve complex heavy lifting challenges of all sizes and provide a variety of engineering services including:

- Creating 3-D lift plans, models and animations
- Conducting feasibility studies
- Calculating ground bearing threshold
- Developing implementation processes
- Reviewing and updating historical plans
- Designing purpose-built parts and heavy lifting solutions to exact specifications

“We take pride in being creative problem solvers.”

JESS JONES, PE, LEAD ENGINEER

CUSTOM SOLUTIONS

While an abundance of OEM equipment exists in the marketplace, sometimes off-the-shelf heavy lifting tools do not meet the specific needs of a project. In these situations, our engineers design customized solutions and purpose-built parts to exact specifications, and our fabrication team produces the components in our 40,000 square foot Equipment Depot and Service Center in Russellville, Arkansas. Engineered Rigging's in-house design-build capabilities include:

- Engineering designs
- Feasibility studies
- Robotic and AWS certified welding
- Blast, paint and coating processes
- Equipment load testing up to 1,000 tons
- Full scale mockup and factory acceptance testing
- Design, fabricate and test below the hook lifting BTH devices
- Hydraulic, mechanical and electromechanical heavy lift equipment integration

We're On Your Team

Engineered Rigging has an array of in-house talent with each team member contributing a unique perspective and expertise that drives creative thinking and problem-solving throughout the design-build process. Working collectively, we oversee every element of your project from concept to completion which ensures the highest level of quality, efficiency, safety and innovation. Our staff includes:

PROFESSIONAL ENGINEERS

FABRICATORS

PROJECT MANAGERS

TECHNICAL SUPPORT & TRAINING


VEP 1801-160-03

EQUIPMENT TESTING & SERVICE

Normal wear and tear can lead to equipment malfunctions and defects that cause injuries and unexpected work interruptions. As a result, preventive maintenance and rigorous testing help ensure that high pressure hydraulic equipment is functioning correctly and is safe to use. Engineered Rigging has an Equipment Testing & Service Center at our 40,000 square foot, state-of-the-art facility in Russellville, Arkansas, where our highly trained technicians provide a variety of services to optimize the safety and performance of heavy lifting equipment.

DYNAMIC TESTING

Our dynamic testing process differs from traditional static testing in that we pressurize the cylinder during the full stroke. In contrast, static testing only pressurizes the plunger at three levels, so scratches and damage outside these three levels go unnoticed. Hidden defects that could cause leaking or failure are identified sooner with dynamic testing. Engineered Rigging's dynamic testing process includes four steps:

1. A rigorous, multipoint visual inspection of all system components including pumps, hoses, manifold, etc.
2. A dynamic test which simulates a maximum load and tests the equipment across the entire stroke in a controlled environment. By testing at 105% load capacity, we ensure the over-pressure relief valve properly activates.
3. Repair or replacement of any worn or faulty components.
4. A thorough cleaning of the equipment so it is returned to you looking its best and operating in top condition.

Upon passing our thorough testing process, Engineered Rigging issues a Safety & Performance Tested Certificate for the equipment for your equipment maintenance records.

LOAD TESTS

Engineered Rigging provides load tests for equipment including hydraulic gantry cranes to ensure their safety, reliability and performance. Let our team configure a test of your equipment according to regulatory requirements for your machine.

EQUIPMENT SERVICE

Our technicians are highly skilled heavy lifting experts who provide preventive maintenance and repairs for a variety of equipment brands. Engineered Rigging is proud to be an Authorized Enerpac and Holmatro Service Center.


hoffmatro®

TECHNICAL SUPPORT

Engineered Rigging maintains a team of seasoned technicians who provide a variety of services to provide support to our customers around the globe. From training your crew on how to properly operate heavy lifting equipment, to facilitating complex equipment setups and providing onsite technical support, our technicians have the skills and expertise to elevate the safety and efficiency of your next project and troubleshoot any unexpected challenges. Tap into the knowledge of our technical team when and where you need it!

TECHNICAL SUPPORT

EQUIPMENT TRAINING

SAFETY ASSURANCE

COMPLEX EQUIPMENT SETUP

“Our technical support helps you quickly adapt to unforeseen challenges.”

NICK DARLAGE
DIRECTOR OF PROJECTS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SERVICES

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Your People • Our Equipment

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