Incremental Lifting System

JS-Series, Jack-Up Systems

Synchronously
Lift and
Mechanically Hold

ENERPAC

JS-Series, Jack-Up Systems

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▼ Shown: **JS-250-Series Jack-Up System** (one lifting tower shown)

Incremental Lifting System – Synchronously Lift and Mechanically Hold

- **Self-contained hydraulics in each Jack-Up unit for uncluttered work area**
- **Synchronously lift loads with multiple Jack-Up units. The most common system set-up includes four Jack-Up units but can be expanded to include more**
- **Lifting barrels are stacked together to mechanically hold the load**
- **Up to 5% side load capacity depending on capacity and lift height**
- **Computer controls for operating the Jack-Up System with automatic and manual lifting settings**

Typical Applications

- Bridge construction and demolition
- Port crane lifting
- Shovel undecking
- Top side lifting
- Ship hull block installation

Computer Controls

Enerpac Jack-Up Systems provide precision control suitable for many demanding lifting and lowering applications. The comprehensive self-contained design feature simple to use software.

- Computer control for operating the Jack-Up system with automatic and manual lifting settings
- Automatic synchronization of multiple networked lift points
- Center of Gravity calculation
- Overload and stroke alarms
- Emergency stop switch at Jack-Up units and controls

▼ *Lifting an oil and gas pipe module*

▼ *A load is lifted in increments as barrels are slid into the system, lifted, and stacked; forming 'lifting towers'.*

▼ *The steel barrels are stacked together to mechanically hold the load.*

Enerpac Jack-Up Systems

Enerpac Jack-Up Systems

The Jack-Up system is a custom developed, multi-point lifting system. A typical system setup includes four Jack-Up units, one positioned under each corner of a load.

Example: A four-unit setup with JS250 has a lifting capacity of 1000 tons (250 tons per unit). The lifting frame of a Jack-Up unit contains four hydraulic lifting cylinders, one in each corner, which lift the load using the stacked steel barrels.

A load is lifted in increments as barrels are slid into the system, lifted, and stacked; forming 'lifting towers'. A Jack-Up system is operated and controlled by a computer control unit.

Each unit's lifting and lowering operations occur simultaneously; the computer control unit's synchronous technology maintains the balance of the load.

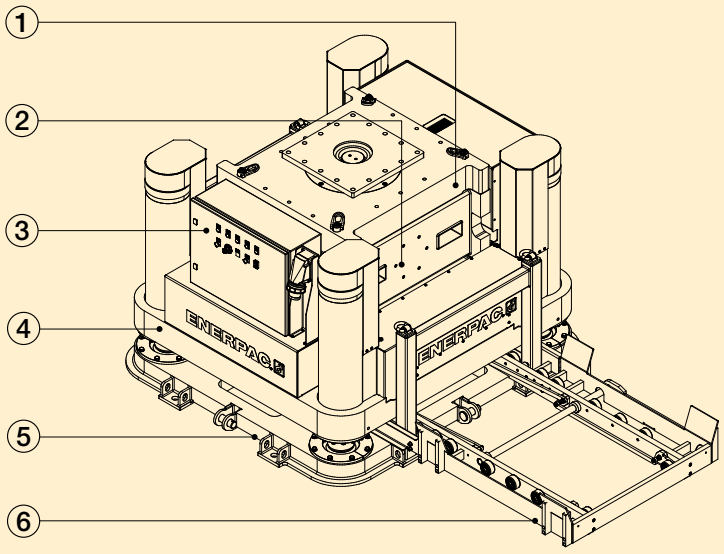
JS Series

Capacity per Lifting Tower:

140 - 840 tons

Lifting Height:

Up to 20 - 66 feet



Enerpac Jack-Up System (one unit shown)

A typical system setup includes 4 Jack-Up units and include:

- 4x Jack-Up legs
- 4x End Barrel with 3D swivel saddle
- 4x Loading system:
  manual for JS125, JS250 and JS500
  automatic for JS750
- 4x 82 feet power cables
- 4x 82 feet data cable
- 1x SBLT1 Laptop
- 1x SBJS-V4 Jack-Up System Smart Box

① **End Barrel**
The top barrel with 3D swivel saddle where the load is placed upon.

② **Steel Barrels**
Barrels are slid into the lifting frame and are lifted up by the hydraulic cylinders.

③ **Electric Powerpack**
The power unit is integrated within each unit's lifting frame.

④ **Lifting Frame**
Contains 4 hydraulic cylinders located in each corner to lift the barrels.

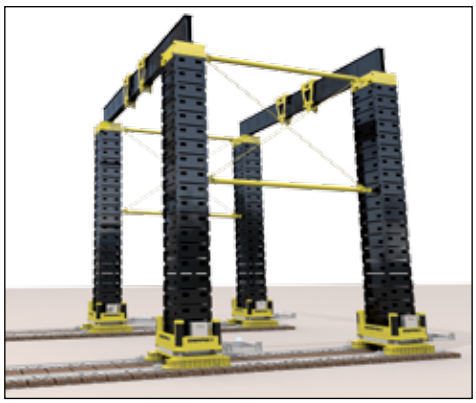
⑤ **Base Frame**
Supports the lifting frame.

⑥ **Barrel Loading System**
With rollers to facilitate easy entry of steel barrels into the lifting frame.

Jack-Up System Options

- Bracings between Jack-Up bases
- Automatic barrel feeding
- Header beams with side-shifts
- Skidding ability
- Custom configurations are available
- Service Kits.

▼ *Custom designed Jack-Up System with options and accessories: barrel sets, bracings between Jack-Up bases, header beams with side-shifts and skid tracks.*



JS-Series Jack-Up Systems

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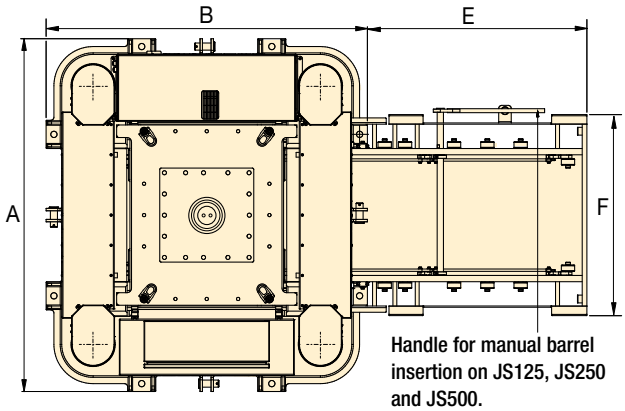
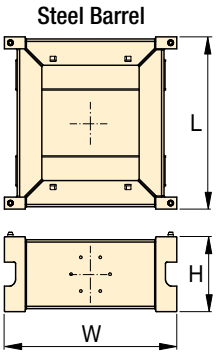
▼ From left to right: **JS-125, JS-250, JS-500, JS-750 Jack-Up System** (one lifting tower shown)





Header Beams

Sold in pairs and includes lifting points and fork pockets for easy positioning on gantry towers.

Available in 26.24 ft., 32.80 ft. and 39.36 ft. lengths.

Powered Side Shift

Electric propulsion controlled by standard gantry controls. Each set consists of 4 units and 2 extension bars.

Lifting Lugs

Designed to transfer the load to the top of the header beam. Can accommodate a 281-ton shackle or attach directly to the lifted load.

Jack-Up Systems

Capacity per Tower (ton)	Model Number	Maximum Sideload	Maximum Lifting Speed * (ft/hr)	Base Frame Dimensions (in) A	B	C	Barrel Loading System (in) E	F	J	Electric Power Pack hp	Weight per Jack-Up Unit ** (lbs)	Weight End Barrel (3D Swivel) (lbs)
140	**JS-125**	3% @ 19.6 ft	5	47.24	43.31	37.40	29.53	27.55	9.17	12	4850	1852
280	**JS-250**	3% @ 32.8 ft	10	88.58	80.70	58.07	55.11	52.79	16.45	20	16535	5291
560	**JS-500**	4% @ 49.2 ft	14	110.23	90.55	66.92	86.61	78.07	21.57	30	28,660	12,346
840	**JS-750**	5% @ 65.6 ft	20	144.48	127.95	93.50	112.20	28.23	29.29	30	52.911	19,842

* Lifting speed approximitely 6 barrels per hour.

Enerpac Jack-Up Systems

JS Series

Capacity per Lifting Tower:
140-840 tons

Lifting Height:
Up to 20-66 feet

Self-Propelled Modular Transporter

The Enerpac SPMT-Series linear drive transport system features a minimized height and slim design.

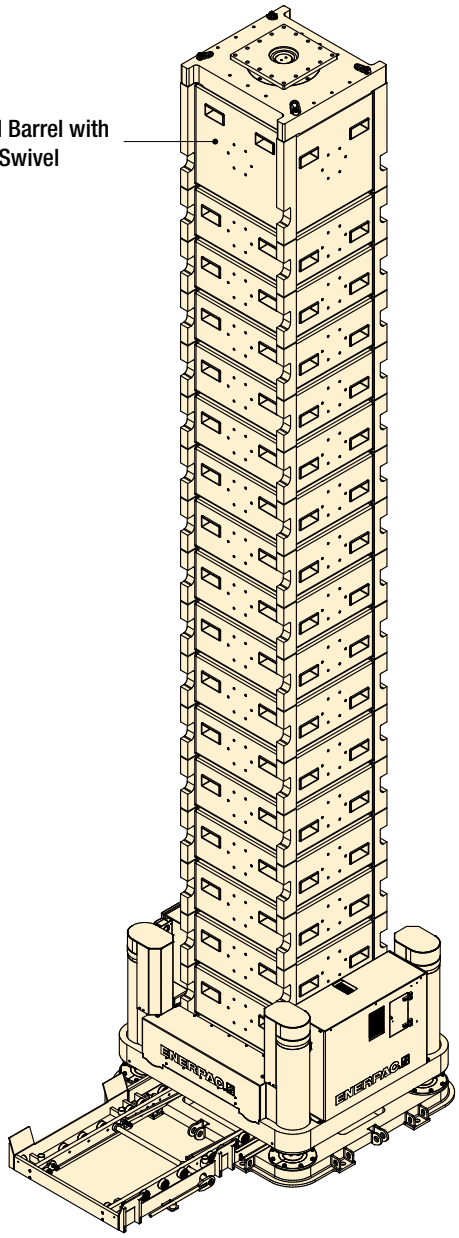
Skidding Systems

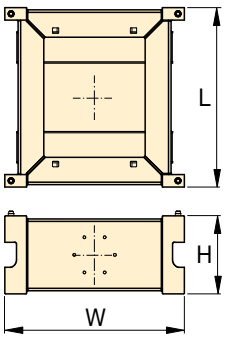
The jack and slide solution. The HSK-Series skidding system is comprised of a series of skid-shoes powered by hydraulic push-pull cylinders, travelling over a pre-constructed track.

Contact Enerpac!

Contact the Enerpac office nearest to you for advice and technical assistance in the layout of your ideal solution or visit us on the web: **www.enerpac.com**.

End Barrel with 3D Swivel





Steel Barrel

One JS-250 Jack-Up Unit with Barrel Sets installed

▼ *Enerpac Jack-Up System Hoists 1500-ton span on Fore River Bridge.*

	Barrel Dimensions (in)			Weight per Barrel	Barrel Set Model Number	Number of Barrels per Set	For use with Jack-Up System
	L	W	H	(lbs)			
	23.62	23.62	9.84	220	**BLJS-125**	4	JS-125
	45.27	45.27	19.69	795	**BLJS-250**	4	JS-250
	66.93	66.93	27.56	2205	**BLJS-500**	4	JS-500
	90.55	90.55	39.37	5180	**BLJS-750**	4	JS-750

Custom Heavy-Lifting Solutions

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JACK-UP SYSTEM REACH TO 118 FEET
Enerpac has been awarded a contract by Burkhalter to extend the height of Enerpac's 2248-ton (562 tons per tower) Jack-Up system from 66 ft to 120 ft. for future projects.

JACK-UP SYSTEM LIFTS 1686-TON SPAN
The bridge span was raised 66 ft. on a barge and floated into place. Safety, as always, was a primary concern, particularly while lifting incredibly heavy loads into place from barges.

JACK-UP FOR HEIGHTENING DOCK CRANES
The Enerpac Jack-Up System holds the key to safely increasing the height of dock cranes to unload these vessels. Based on its proven Jack-Up technology, the multipoint, synchronised lifting system can raise crane height by up to 66 ft. as a complete solution and execute crane lifts.

BRIDGE DECK LIFTING AND POSITIONING
Bridge lifting with Enerpac Jack-Up System on Self-Propelled Modular Transporters SPMT's. The stacked steel boxes are support by bracings as fortification to provide maximum structural integrity.

OFFSHORE GANTRY CRANE
The Enerpac Over Head Travel Crane (OHTC) comprises two pairs of lifting beams, with an overall width of 100 ft, and a lifting capacity of 5400 tons for lifting, moving and lowering the concrete blocks for the offshore highway.

SYNCHOIST SYSTEM - POWER GENERATION
The SyncHoist System allowed operators the freedom to precisely monitor and adjust each lifting point independently, or together in a synchronized manner. The rigging engineers were able to level the 1280-ton nuclear plant module more efficiently and accurately, saving a considerable amount of time.

SYNCHOIST SYSTEM - BRIDGE BUILDING
Positioned below the lattice spreader, the SyncHoist System enabled finite adjustment of the beams during placement on the bearings. The system also helped save up to half a day in downtime. The team only needed to adjust the slings, rather than changing the rigging gear between arrangements.

SELF-ERECTING TOWER
The Enerpac Self-Erecting Tower (ESET) is a self-erecting tower lift system that enables you to build a free standing gantry from ground level. The ESET can be supplied in various capacities and lifting heights and is built with standard modular components, enabling a flexible solution to future project demands.

TRAVEL GANTRY
The Travel Gantry combines the safety and efficiency of a hydraulic gantry with the ease of use of SPMT (Self-Propelled Modular Transporter) technology. The Enerpac travel gantry is a self-folding rubber tire gantry with a 67-ton lifting capacity. It features self-contained hydraulics, telescopic cylinders and wireless controls.

Custom Heavy-Lifting Solutions

When your application requires something other than our standard product offering, look to Enerpac's Heavy Lifting Technology, experience, and expertise.

Our group of engineers, designers, and specialists will work with you to understand your specific application and provide a turn-key solution that will exceed your expectations.

STEEL FABRICATION
Enerpac has a dedicated facility for steel fabrication and welding. We design and manufacture custom structures used in demanding heavy-lifting applications.

ENGINEERING
Enerpac's multi-disciplined, Heavy Lifting Technology team is capable of the design and development of all aspects of an integrated system. Leveraging design and application experience with the latest in methodologies, computer design, rapid prototyping and analysis ensures delivery of the highest quality.

ELECTRONICS
Enerpac designs all control systems in-house. This capability keeps control technology close to the design engineers who are developing the rest of the system. In doing so, we can tailor the control system to match unique project requirements.

MACHINING
Enerpac utilizes the latest in CNC machining technologies and manufactures all large and special hydraulic cylinders in-house.
We can machine diameters up to 3 inches with lengths to 25 inches.

FIELD SUPPORT
Enerpac's Heavy Lifting Technology team is available to provide on-site support including training and troubleshooting of systems. Enerpac also stocks repair parts and consumable items at several locations to ensure fast delivery for minimal downtime.

HYDRAULIC POWER UNITS
Enerpac designs, assembles and tests small to large hydraulic power units in-house. Power units range from 0.5 to 300 hp and are tested with the system they are intended to operate.

MAINTENANCE and REPAIR
Due to the unique nature of Enerpac's Heavy Lifting Technology systems, we offer complete maintenance and repair services. Our M&R group is available to assist customers who do not have access to local service facilities qualified to work on these systems.

JS-Series, Jack-Up Systems

The Industrial Tools Line

Cylinders and Lifting Products
- General Purpose
- Aluminum: Lightweight
- Pancake, Low Height
- Pull
- Hollow Plunger
- Precision
- Long Stroke
- High Tonnage
- Jacks
- Level Lift System
- Pow'R-RISER® Lifting Jacks
- Pow'R-LOCK™ Lifting Jacks
- Extreme Environment Products

Pumps
- Manual
- Cordless and Electric Driven
- Compressed Air Driven
- Petrol Driven

System Components
- Hoses, Couplers, Oil
- Manifolds, Fittings
- Gauges, Adaptors

Valves
- 3-and 4-Way Directional
- Pressure and Flow Control

Presses
- H-Frame, Roll Frame
- C-Clamp and Arbor
- Tension Meters, Load Cells

Pullers
- Master Pullers Sets
- Multi Purpose Puller Sets
- Posi Lock® Pullers

Tools
- Maintenance Sets
- Punches
- Lifting Wedges
- Machine Lifts
- Load Skates
- Wedgie, Spreaders
- Cutters
- Pipe Benders

Bolting Tools
- Multipliers
- Torque Wrenches
- Impact Sockets
- Wrench and Tensioner Pumps
- Twin Safety Hoses
- Nut Cutters / Splitters
- Flange/Wedge Spreaders
- Flange Alignment Tools
- Flange Face Tool

Heavy Lifting Technology
- Synchronized Lifting Systems
- Jack-Up Systems
- Bridge Launching Systems
- Synchronized Hoisting Systems
- Hydraulic Gantries
- Heavy Lifting Strand Jacks
- Skidding Systems
- Self-Erecting Towers
- Self Propelled Modular Transporter
- Chain Pulling Systems
- Climbing Jacks
- Split-Flow Pumps

Enerpac Worldwide Locations

For a complete list of addresses see www.enerpac.com/en-us/enerpac-locations

About Enerpac

Enerpac is the leading global provider of high-pressure hydraulic tools and solutions with a broad range of products, local expertise and worldwide distribution network. With a proven track record in a wide range of markets, Enerpac designs and manufactures high-quality tools and solutions for all industrial applications.

Enerpac has gained unique experience in delivering hydraulic solutions for the controlled movement and positioning of heavy objects. Enerpac supports your business by offering the right solutions and service to help you get your work done efficiently and safely.

www.enerpac.com for latest Enerpac information

Visit the Enerpac Web Site and find out about:
- Learn more about hydraulics
- Promotions
- Online Bolting Calculator
- New products
- Electronic Catalogs
- Trade shows
- Manuals (instruction and repair sheets)
- Nearest Distributors & Service Centers
- Enerpac products in action
- Integrated Solutions

Ordering Products and Catalogs

To find the name of the closest Enerpac distributor or service center, to request literature or technical application assistance, contact Enerpac at: www.enerpac.com.

Hydraulic solutions for controlled movement and positioning of heavy loads

While Enerpac has the world's largest product portfolio for heavy-lifting and load-control applications, we also have the knowledge to put all these programs together or modify them to provide a lift system for your most demanding and unique applications.

- Synchronous Lifting Systems
- Stage Lifting and Climbing Systems
- Bridge Launching Systems
- Synchronous Hoisting Systems
- Hydraulic Gantries
- Heavy-Lifting Strand Jacks
- Skidding Systems
- Self-Erecting Towers
- Self-Propelled Modular Trailer
- Chain Pulling Systems

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