

ENERPAC 

TOOLS FOR BRIDGE CONSTRUCTION AND MAINTENANCE



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Infrastructure construction challenges include labor shortages, rising costs and meeting project timelines. Building, repairing, or replacing concrete and steel bridges is no exception. Technology used in the bridge construction process is one way to offset those challenges and increase safety.

For years, hydraulic lifting equipment and bolting tools have successfully met the challenges of bridge construction and repairs around the world. Explore how our solutions will help you deliver an easier, faster, and safer bridge project.

HYDRAULIC LIFTING



The **CULP/CUSP-Series Cylinders** (up to 1000 ton) have the lowest profile and can lift bridges shorter distances required for bearing replacement, while the **LPL/HCL-Series Cylinders** (up to 1000 ton) provide either low or tall profiles with the additional benefit of a mechanical locking feature that, when engaged, will keep the bridge deck in place in the event of a loss in hydraulic pressure.



BLS-Series Cylinders (up to 200 ton) and **SCJ Series Cube Jacks** (up to 100 ton) have the capability to cover the greater distances by providing the capability to incrementally lift heavy loads up to 2m. After the cylinder extends, blocks are placed beneath the base to support the bridge while the cylinder retracts for the next stage lift.



Jack-Up Systems lift and lower precast bridge spans simultaneously while maintaining balance of the load. In decommissioning, Jack-up Systems support the weight of bridge sections while they are being disconnected from the rest of the structure. They can then lower those sections to the ground safely and efficiently for additional deconstruction.



Hydraulic Gantries are ideal for placing and positioning medium length girders for spans over solid ground. Hydraulic gantries are a safe, efficient way to lift and position heavy loads in applications where traditional cranes will not fit or are not an option.



PILE TESTING AND DE-PROPPING

Pile testing can require tremendous forces, but regardless of the force required Enerpac has a very broad offering of cylinders.

The **HCG/HCR-Series Cylinders** (up to 1000 ton) are our highest capacity tools and are commonly used to apply great force to a single pile. These cylinders are also common in de-propping concrete and steel bridges to and from temporary supports.



CONTROLLED BOLTING

Hydraulic torque wrenches and torque multipliers are used to efficiently loosen and tighten bolts when replacing steel chords and beams. They also loosen bolted connections between bridge sections to assist in demolition and deconstruction.

Enerpac **RSL and S & W Series Hydraulic Torque Wrenches** apply accurate torque load to a mechanical joint to meet specifications. Having the means to measure torque load during or immediately following the bolting process is essential for joint integrity and safety.



ANCHOR BOLT, ROD AND CABLE TENSIONING AND TESTING

Testing and tensioning of bolts, rods and cables requires unique tools. Enerpac offers hollow cylinders that are designed to pull on these objects to create tension.

The **RRH/RCH-Series Cylinders** (up to 150 ton) are hollow cylinders capable of both pushing and pulling objects, and the **RACH-Series Cylinders** (up to 150 ton) offer this same capability in a lightweight design. This is just one of the Enerpac cylinder series that utilize aluminum and composite materials to maximize portability.



HYDRAULIC PUMPS

All hydraulic tools require a pump to generate flow. Enerpac hydraulic pumps are available in over 1000 different configurations. Whatever your high pressure pump needs are, speed, control, intermittent or heavy-duty performance, you can be sure that Enerpac has a hydraulic power unit to suit the application.

ALTERNATIVE RIGGING SOLUTIONS



STRAND JACKS

Utilizing strand jacks, precast bridge segments are lifted from the ground to the required elevation with precise synchronous control. In bridge launching systems, strand jacks are used to pull each bridge segment into position between the piers. In bridge maintenance or demolition, Strand Jacks can also replace mobile cranes to support the weight of bridge sections as they are disconnected from the remaining structure.

HYDRAULIC SKIDDING SYSTEMS

A skidding system is comprised of a series of skid beams moved by hydraulic push-pull cylinders, traveling over a pre-constructed track. The skid beams are then connected by hoses to a pump. In bridge construction, skidding systems provide the ability to slide large segments into place and to push or pull spans into place.

SYNCHRONOUS HOIST SYSTEMS

A SyncHoist System can be used to adjust or properly align box beams and other bridge sections into final position. A SyncHoist System replaces the need for using two separate cranes to manipulate or rotate the sections.

CONTROLLED LIFTING

Precision is essential in bridge placement. Multiple hydraulic cylinders in a bridge launching system push, pull, or lift the segments maintaining accurate positional control. For lifting and lowering applications with multiple points, controlled lifting pumps are a far better alternative than using independently operated pumps. EVO-Series Synchronous Lifting Systems control 4, 8 or 12 lifting points per pump.



YOUR TRUSTED PARTNER IN BRIDGE MAINTENANCE AND CONSTRUCTION

Enerpac products have been used in bridge maintenance, replacement and construction for decades. Enerpac offers complete turn key solutions for complex bridge projects. You can rely on our quality and precision every time, giving you the confidence to deliver a safe, efficient and successful job well done.