THE WORLD CLASS COLLECTION
Enerpac Hydraulic Cylinders:

**SINGLE-ACTING, SPRING RETURN**

**LOW HEIGHT CYLINDERS**
- Compact and portable
- For use where others will not fit
- Maximum power-to-height ratio
- Large plunger contact area with grooved end

**GENERAL PURPOSE CYLINDERS**
- Collar and plunger threads, base mounting holes standard on most models
- For use in all positions
- Hardened removable grooved saddles

### Cylinder Specifications

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Capacity (tons)</th>
<th>Stroke (in)</th>
<th>Collapsed Height (in)</th>
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### Aluminum Cylinders
- Spring return
- Lightweight for maximum portability
- Designed for use in all positions
- Durable steel base plate

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Enerpac cylinders provide force to major industries—construction, shipbuilding, aerospace, manufacturing and more.

Enerpac cylinders lift naval vessels for repair, level heavy bridge sections and pull parts together for welding. They also allow for controlled positioning of heavy loads and provide power and precision as part of specialized hydraulic presses.

Enerpac hydraulic cylinders are available in more than 100 standard configurations. Whatever the application, whatever the needed capacity, size, or stroke, there’s a single- or double-acting, solid or hollow plunger, lightweight or heavy-duty Enerpac cylinder to do the job for you.
HEAVY-DUTY CYLINDERS
- Double-acting operation provides force in both directions for maximum versatility
- Plunger and collar threads, base mounting holes for easy fixturing
- Solid plunger design; built-in safety valve
- For use in industrial, construction and high cycling production applications

PULL CYLINDERS
- Chrome plated plunger
- Replaceable links on BRP models
- Blow-out protection prevents over extending rod

SINGLE-ACTING SPRING RETURN
- For use in industrial, construction and high cycling production applications

TENSION METER AND LOAD CELLS

TM-5 TENSION METER
- Accuracy ±2% of full scale
- Zinc and bronze plated to resist corrosion

LH SERIES LOAD CELLS
- Swivel loading pad reduces eccentric loading for improved accuracy
- Dual-range readout in lbs and kg

Cylinders

Model Number | Cylinder Capacity (tons) | Stroke (in) | Collapsed Height (in)
---|---|---|---
RR-1012 | 10 | 30.5 | 16.13
RR-308 | 30 | 5 | 18.00
RR-3014 | 30 | 5 | 21.50
RR-506 | 50 | 10 | 13.00
RR-5013 | 50 | 10 | 20.00
RR-1006 | 100 | 48 | 14.00
RR-10013 | 100 | 48 | 20.06
RR-1505 | 150 | 74 | 15.19
RR-15013 | 150 | 74 | 20.00
RR-2006 | 200 | 112 | 16.94
RR-20013 | 200 | 112 | 23.94

*Fitted with rubber bellows for rod protection.

SINGLE- OR DOUBLE-ACTING

PRECISION PRODUCTION CYLINDERS
- Double-acting operation provides force in both directions for maximum versatility
- Unique mounting configurations simplify fixturing
- Designed for long life: the best choice for production applications

Model Number | Cylinder Capacity (tons) | Stroke (in) | Collapsed Height (in)
---|---|---|---
RD-41 | 3.93 | 1.72 | 1.13
RD-43 | 3.93 | 1.72 | 1.13
RD-46 | 3.93 | 1.72 | 1.13
RD-91 | 8.84 | 4.91 | 1.13
RD-93 | 8.84 | 4.91 | 1.13
RD-96 | 8.84 | 4.91 | 1.13
RD-910 | 8.84 | 4.91 | 10.13
RD-166 | 15.71 | 8.28 | 6.25
RD-1610 | 15.71 | 8.28 | 10.25
RD-256 | 24.54 | 10.74 | 6.25
RD-2510 | 24.54 | 10.74 | 10.25

Cylinder Accessories

Model Number | Cylinder Capacity (tons) | Stroke (in) | Collapsed Height (in)
---|---|---|---
RCH-120 | 12 | – | 3.1
RCH-121 | 12 | – | 1.63
RCH-1211 | 12 | – | 4.75
RCH-123 | 12 | – | 7.25
RCH-202 | 20 | – | 2.00
RCH-206 | 20 | – | 6.10
RCH-302 | 30 | – | 2.50
RCH-308 | 30 | – | 13.00
RCH-603 | 60 | – | 3.00
RCH-606 | 60 | – | 6.00
RCH-1003 | 100 | – | 3.00
RR-307 | 30 | 23.0 | 7.00
RR-606 | 60 | 41.8 | 6.50
RR-6010 | 60 | 41.8 | 10.12
RR-1001 | 100 | 67.7 | 1.50
RR-1006 | 100 | 67.7 | 6.00

*For use with Cyl. Cap.

*Standard on 5-30 ton RC-cylinders

**Except RC-50

For use with Cylinder Cap.

Model Number | Type | Gauge Capacity (lbs) (kg)
---|---|---
TM-5 | Direct Mounted | 10,000 (4,500)
LH-50 | Direct Load Cell Mounted | 10,000 (4,500)
LH-1002 | Remote Mount w/ 2 ft. hose | 20,000 (9,000)

For use with Cyl. Cap.

Model Number | Mounting Block | Base Plate | Clevis Eyes | Base Plate | Plunger
---|---|---|---|---|---
RB-6 | – | REB-6 | – | REP-6 | –
RB-5 | – | REB-5 | – | REP-5 | –
RB-10 | JBI-10 | REB-10 | – | REP-10 | –
RB-15 | – | – | – | – | –
RB-30 | – | – | – | – | –
RB-1006 | – | – | – | – | –

3
### CLL SERIES HIGH TONNAGE CYLINDERS*
- Single-acting, load return
- Safety Lock Nut for mechanical load holding
- Special synthetic coating for improved corrosion resistance and lower friction for smoother operation
- Withstands sideload forces up to 5% of rated cylinder capacity without scoring
- Interchangeable, hardened grooved saddles

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Cylinder Capacity (tons)</th>
<th>Stroke (in)</th>
<th>Collapsed Height (in)</th>
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* All models available in 2" stroke increments from 2" to 12"

### CLG SERIES HIGH TONNAGE CYLINDERS*
- Double-acting, hydraulic return
- Baked enamel outside finish and plated pistons provide superior corrosion protection
- Safety valve in retract side of cylinder helps to prevent damage in case of accidental over-pressurization
- Interchangeable, hardened grooved saddles are standard
- Plunger wiper reduces contamination ingress, extending cylinder life
- All cylinders meet ANSI B-30.1 and ISO 10100 standards

<table>
<thead>
<tr>
<th>Model Number</th>
<th>Cylinder Capacity (tons)</th>
<th>Stroke (in)</th>
<th>Collapsed Height (in)</th>
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* All models available in 2" stroke increments from 2" to 12"
SAF-T-LITE® ALUMINUM JACKS
- All-directional operation on 7, 15 and 35 ton
- Two-directional operation (vertical and horizontal) on 75 and 150 ton models
- Internal relief valve to prevent overloading
- Includes pumping handle

PREMIUM STEEL JACKS
- Chrome plated plungers
- Machined flat front and bottom surfaces permit flush alignment in tight corners
- Internal relief valve to prevent overloading

INDUSTRIAL BOTTLE JACKS
- Cast pump linkage and beam
- Chrome plating on both plungers
- Wiper seal for extended life
- Fully serviceable
- Meets ASME B30.1 and CE standards

HYDRAULIC MACHINE LIFTS
- For lifting heavy equipment with minimum available access
- Separate hydraulic pump enhances safety
- Adjustable toe starting height
- Precision guided to reduce friction and isolate cylinder from side-loads
- Two extendible support feet provide extra stability
- Includes RC Series Cylinder with CR-400 coupler

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Enerpac Jacks: The Industry Standard

<table>
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<tr>
<th>Model Number</th>
<th>Capacity (tons)</th>
<th>Stroke (in)</th>
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Enerpac’s World Class Collection: The Industry Standard

When it comes to increasing productivity, labor efficiency and speed of operations, Enerpac high-force tools and components provide a significant hydraulic advantage.

With an 80-year history of quality and innovation and the broadest line of hydraulic tools and components in the business, Enerpac leads the industry by setting new standards in design, strength and durability. Strict quality programs, zero tolerance for defects, and ISO-9001 certification are your assurance of safe, trouble-free operation.

With more than 4,000 factory-trained distributors and 400 certified service centers around the world, Enerpac stands ready to tackle your toughest hydraulic challenge.

Enerpacs World

The World Class Collection

Enerpac pumps combine with other Enerpac tools to cut re-bar, reposition heavy manufacturing equipment, drive torque wrenches and nut splitters, and power massive production punches.

From hand pumps to power pumps. Whether electric-, air- or gas-powered, multiple reservoir and valve configurations provide the most comprehensive pump line available to suit your most challenging application.

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**ZU4 ELECTRIC PUMPS**
- Features Z-Class high-efficiency pump design; higher oil flow and bypass pressure, cooler running and requires 18% less current draw than comparable pumps
- Powerful 1.7 hp universal electric motor provides high power-to-weight ratio and excellent low-voltage operating characteristics
- High-strength, molded composite shroud protects motor and electronics
- LCD provides diagnostic and readout capabilities (optional with electric or manual valves)

<table>
<thead>
<tr>
<th>Number</th>
<th>Model</th>
<th>Cylinder Type</th>
<th>Valve Type</th>
<th>Usable Oil Cap. (gal)</th>
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<td>SA = single-acting DA = double-acting</td>
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**ZE ELECTRIC PUMPS**
- Features Z-Class high-efficiency pump design; higher oil flow and by-pass pressure, low-voltage pendant, cooler running and requires 18% less current draw than comparable pumps
- ZE3: 1 hp, 40 cu in/min flow rate; ZE4: 1.5 hp, 60 cu in/min flow rate; ZE5: 3 hp, 120 cu in/min flow rate; ZE6: 7.5 hp, 200 cu in/min flow
- High-strength, molded electrical enclosure protects electronics, power supplies and LCD
- LCD provides diagnostic and readout capabilities (optional with electric or manual valves)

<table>
<thead>
<tr>
<th>Model Number</th>
<th>For Cylinder Type</th>
<th>Valve Type</th>
<th>Usable Oil Cap. (gal)</th>
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<td>S/A Elec. Dump VE-32D</td>
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<td>ZE3208MB</td>
<td>S/A Manual VM-33</td>
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<td>ZE4308MB</td>
<td>S/A Manual VM-33</td>
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<td>ZE4408LB w/LCD</td>
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<td>ZE5410SG</td>
<td>D/A Electric VE-43</td>
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<td>ZE5420SG w/LCD</td>
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<td>ZE6440SG</td>
<td>D/A Electric VE-43</td>
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</tr>
<tr>
<td>ZE6 = single-acting DA = double-acting</td>
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</tbody>
</table>

**TURBO II AIR HYDRAULIC PUMPS**
- Operating air pressure: 25 - 125 psi
- New design, high efficiency cast aluminum air motor
- Quiet, only 76 dba with low air consumption of 12 scfm
- New generation air saver piston with rugged one piece design
- New heavy duty reservoir for tough applications
- Relief valve setting up to 10,000 psi

<table>
<thead>
<tr>
<th>Model Number</th>
<th>For Cylinder Type</th>
<th>Valve Type</th>
<th>Usable Oil Cap. (gal)</th>
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<tbody>
<tr>
<td>ZA4204MX</td>
<td>SA Manual VM-32</td>
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<td>ZA4408MX</td>
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<td>ZA4410MX</td>
<td>DA Manual VM-43</td>
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<td>ZA4440MX</td>
<td>DA Manual VM-43</td>
<td>10.0</td>
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</tr>
<tr>
<td>ZA = single-acting DA = double-acting</td>
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</tbody>
</table>

**GASOLINE HYDRAULIC PUMPS**
- Features Genesis technology; coaxial piston design for high performance

<table>
<thead>
<tr>
<th>Model Number</th>
<th>H</th>
<th>Valve Type</th>
<th>Usable Oil Cap. (gal)</th>
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<td>PGM-2304R</td>
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<td>Manual 3/3</td>
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<td>PGM-2404R</td>
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<td>Manual 4/3</td>
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<td>Manual VM-44</td>
<td>2.5</td>
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<td>ZG5410MX-BCFH</td>
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<td>13.0</td>
<td>Manual VM-44</td>
<td>10.0</td>
</tr>
</tbody>
</table>

**Z4 AIR HYDRAULIC PUMPS**
- Features Z-Class high efficiency pump design; higher oil flow and bypass pressure
- Two speed operation and high by-pass pressure reduces cycle time for improved productivity
- Optional heat exchanger warms exhaust air to prevent freezing and cool oil
- ATEX rated
The World Class Collection highlights some of the most popular products Enerpac offers.

Please refer to the full line catalog or www.enerpac.com for the complete offering of Enerpac products.
**IP SERIES PRESSES**
- H-frame and Roll frame models available from 10 to 200 ton capacity
- Welded steel frames and powerful high-pressure hydraulics
- Presses include single- or double-acting cylinder, pump, hose and gauge

**C-CLAMP PRESS**
- 5, 10 and 20 ton capacity
- Operational in all positions

**BENCH FRAME PRESS**
- Cylinder mounting adapter allows lateral positioning along rails
- Mounting holes for easy mounting to fixed surface

---

**SYSTEM COMPONENTS**

**LX HAND PUMP OIL**
- Specially formulated for hand pumps
- anti-sludge, anti-rust additives
- Reduced handle effort over HF oil
- medium viscosity index
- good low temperature performance
- Not for use in power pumps

**HF POWER PUMP OIL**
- Specially formulated for hand pumps
- anti-sludge, anti-rust additives
- Reduced handle effort over HF oil
- medium viscosity index
- good low temperature performance
- Not for use in power pumps

**PREMOUNTED MANIFOLDS**
- Functions as split-flow valve to control 2 to 4 single-acting cylinders simultaneously
- All ports 3/8"-18 NPTF

---

**FLOW CONTROL VALVES**
- All valves are rated for 10,000 psi operating pressure
- All valves feature NPTF porting to insure against leakage at rated pressure
- All valves are painted, coated, or plated for corrosion resistance

---

**GLYCERINE FILLED PRESSURE GAUGES**
- Dual scale reading in psi and bar
- All pressure sensing parts sealed and dampened by glycerine for long life
- Includes safety blow-out disk and pressure equalizing membrane
- Gauge snubbers or needle valves recommended for high cycle applications
- Gauge adapters available to suit
Enerpac’s hydraulic torque wrench line offers the ultimate versatility for torquing requirements in today’s industrial environment. Available in both square drive and hexagon drive models, Enerpac torque wrenches are designed to meet any challenge.

S and SQD-Series Square Drive Models:
- Square drives from 1/2” to 2 1/2”
- To suit sockets from 11/16” to 10”
- For torque up to 25,000 Ft.lbs
- Allen key drives from 1/2” to 2 1/4”

W and HXD-Series Hexagonal Cassette Models:
- Hex sizes from 1 1/4” to 5”
- For torque up to 17,860 Ft-lbs

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See Bolting Solutions catalog for ordering details.

CONTACT YOUR LOCAL ENERPAC OFFICE FOR APPLICATION ADVICE

SQUARE AND HEXAGON DRIVE TORQUE WRENCHES
- High torque-to-weight ratio
- High repeatability with accuracy ±3%
- High speed, double-acting operation
- Fully corrosion resistant materials
- Never-jam mechanism
- Slim nose radius
- 360° swivel hose connection

TORQUE WRENCH PUMPS
Features Z-Class high-efficiency pump design; higher oil flow and bypass pressure

ZU4T Series
- Powerful 1.7 hp universal electric motor
- LCD readout provides pressure display and a number of diagnostic and readout capabilities

ZA4T Series
- Two-speed operation and high by-pass pressure reduces cycle time for improved productivity
- Heat exchanger warms exhaust air to prevent freezing and cools the oil

TORQUE WRENCH POWER SOURCES

HYDRAULIC AND MECHANICAL INDUSTRIAL SPREADERS
- Integrated wedge concept: Friction-free, smooth parallel wedge movement eliminates flange damage and spreading arm failure
- Lightweight, portable, easy to use, one person operation
- Fewer moving parts means durability and low maintenance

MECHANICAL ALIGNMENT TOOLS
- Rectifies twist and rotational misalignment without additional stress in pipe lines
- For most commonly used ANSI, API, BS and DIN flanges
- No slings, hooks, or lifting gear. Extremely safe, high precision
- Stays stable in position under full load

NUT SPLITTERS
- Crack nuts the safe way
- Compact, ergonomic, lightweight design
- Includes spare chisel, spare set screw and wrench
- Also available in sets including lightweight hand pump and hose

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- Crack nuts the safe way
- Compact, ergonomic, lightweight design
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- Also available in sets including lightweight hand pump and hose

Model Number | Capacity (tons) | Hexagon nut sizes (in) | Weight (lbs) |
--- | --- | --- | --- |
NC-1319 | 5 | .50-.75 | 1.8 |
NC-1924 | 10 | .75-.94 | 4.4 |
NC-2432 | 15 | .94-1.13 | 6.6 |
NC-3241 | 20 | 1.13-1.56 | 9.7 |
NC-4150 | 35 | 1.56-2.00 | 18.0 |
NC-5060 | 50 | 2.00-2.25 | 26.0 |
NC-6075 | 90 | 2.38-2.68 | 75.1 |

Model Number | Maximum Spreading Force (tons) | Tip Clearance (in) | Maximum Spread | Weight (lbs) |
--- | --- | --- | --- | --- |
FSH-14 | 14 | .24 | 3.16 | 15.7 |
FSM-8 | 8 | .24 | 3.16 | 14.3 |

Model Number | Maximum Lifting Force (tons) | Bolt Hole Range (in) | Flange Wall Thickness (in) | Weight (lbs) |
--- | --- | --- | --- | --- |
ATM-1 | 0.3 | 1.0 - 1.13 | 1.19 - 4.50 | 21.4 |
ATM-3 | 3.3 | 1.0 - 2.13 | 1.19 - 4.50 | 21.4 |
ATM-5* | 5.5 | ±1.25 | ±1.13 | 35.7 |

* At 10,000 psi maximum operating pressure.
ATM-5 weight including hydraulic cylinder. Total set weight 62 lbs.

The World Class Collection highlights some of the most popular products Enerpac offers. Please refer to the full line catalog or www.enerpac.com for the complete offering of Enerpac products.
SYNCHRONOUS LIFTING

- Multiple lifting points, 10 to 1000 ton per lifting point
- High accuracy (+/- .040 in.)
- PLC-control, user friendly touch screen
- Automatic data storage, reporting and graphical presentation
- Secure system with warning and stop features

System Options:
- Precise load and force measurement up to 1% of full scale
- Digital sensors provide:
  - load read-out by lifting point and system total
  - two axis differential control to level structures
- Oil heater or heat exchanger for extreme conditions

HYDRAULIC STAGE LIFTING

- Allows heavy-duty lifting over long distances
- PLC-controlled synchronized stage-lifting
- Double-acting jacks with solid plunger design using Enerpac RAR, RR and CLRG-series
- Double-acting jacks with hollow plunger design using Enerpac RRH series
- Lifting capacities from 10 to 1000 ton per lift point

SYNCHRONOUS HOISTING

- High precision load maneuvering, vertically and rotationally - using one crane
- Reduces the risk of damage from oscillations due to sudden crane starts/stops
- Improves operating speed and worker safety
- Optional intelligent hydraulics turn lifting into high accuracy hoisting and load positioning system
- High accuracy (+/- .040 in.)
- 10,000 psi double-acting push/pull cylinders with parachute valves for added safety in case of hose rupture or coupler damage
- May reduce cost when compared to conventional load positioning methods

Contact enerpac with your specialty lifting requirements.
Hydraulic Power for All Applications

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Swing Cylinders • Work Supports • Linear Cylinders
Power Sources • Valves • System Components • Mechanical Clamping

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