V LPL-Series, Low-height Lock Nut Cylinders


- Lock nut provides mechanical load holding for a safe work environment
- Integrated tilt saddle allows for up to 5 degrees of misalignment
- Extreme low-height for use in confined areas
- Side-load resistance 5-10\% of maximum capacity
- Overflow port as stroke limiter to prevent plunger blow-out
- Single-acting, gravity-return


## The Lowest Power Lifter



Integrated Tilt Saddles
All LPL-Series cylinders include integral tilt saddles with maximum tilt angles up to $5^{\circ}$.


## The Summit Edition

Innovation is at the heart of the new Summit Edition cylinders, delivering the high-quality construction that you expect from Enerpac. Their durability ensures your job is done safely and reliably.

- Replaceable plunger support bearing adds support for eccentric loads *
- Nitrocarburization surface treatment for improved load and wear resistance and corrosion protection
- Replaceable composite bearing surrounds the seal, providing support for eccentric loads
- Low-wear, high-pressure seals provide longer service life.
* Eccentric load (or "side-load") is inevitable in heavy lifting. Enerpac's unique Summit Edition features provide the ultimate protection against side load. Increased bearing surface maintains stability, and nitrocarburization treatment prevents scoring on the inside of the cylinder. Side-load poses a real problem.... our new cylinder features are the solution!

V Only the extreme low-height LPL-cylinder fits in this confined area to lift the construction. The lock nut provides positive and safe mechanical load holding over a long period of time.


| Cylinder <br> Capacity | Stroke | Model <br> Number | Maximum <br> Cylinder <br> Cap. at <br> 10,150 psi <br> (ton) | Side-load <br> Resistance <br> of <br> (ton) | Cylinder <br> (in) <br> Capacity |
| :---: | :---: | :--- | :---: | :---: | :---: |
| Effective |  |  |  |  |  |
| Area |  |  |  |  |  |
| (in ${ }^{2}$ ) |  |  |  |  |  |$|$

## Single Acting, Low Height Lock-Nut Cylinders



IMPORTANT!
All LPL-Series cylinders require a solid lifting surface for correct support. The use of these cylinders on surfaces such as sand, mud or dirt, may result in cylinder damage.


For more safety instructions see our 'Learning Center' on www.enerpac.com


LPL
Series


Capacity:
60-500 ton
Stroke:
1.77-1.97 inch

Maximum Operating Pressure:
10,150 psi


Longer Stroke LockNut Cylinders
For longer stroke applications HCL-Series Lock-Nut Cylinders are the perfect choice.

Page:
4


Split-Flow Pumps
SFP-Series pumps with multiple outlets with equal oil flow. For lifting and lowering applications on multiple points these pumps are a far better alternative than using separately operated pumps.

Page:


## Synchronous Lifting

 SystemsPumps for multiple lift-point capabilities. The economical
EVOB-Series for basic applications and the multi-functional EVO-Series lifting system.

Page:

| (in ${ }^{3}$ ) | Collapsed Height <br> A <br> (in) | Extended Height <br> B <br> (in) | Outside Diameter <br> D <br> (in) | Cylinder Bore Diameter E <br> (in) | Plunger Diameter <br> $\stackrel{\mathrm{F}}{(\mathrm{mm})}$ | Base to Advance Port H (in) | Saddle Diameter <br> J <br> (in) | Saddle <br> Protrusion <br> from <br> Plunger <br> $K$ <br> (in) | Saddle Max. Tilt Angle R (degrees) | Lock Nut Height <br> S <br> (in) | Wt. (Ibs) | Model Number |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 26.4 | 4.94 | 6.91 | 5.51 | 4.13 | Tr $105 \times 4$ | 0.75 | 3.78 | 0.26 | $5^{\circ}$ | 1.10 | 33 | LPL-602 |
| 43.7 | 5.39 | 7.36 | 6.81 | 5.31 | Tr $135 \times 6$ | 0.83 | 4.96 | 0.31 | $5^{\circ}$ | 1.22 | 54 | LPL-1002 |
| 62.3 | 5.83 | 7.60 | 8.66 | 6.69 | Tr $170 \times 6$ | 1.06 | 6.30 | 0.35 | $5^{\circ}$ | 1.57 | 94 | LPL-1602 |
| 77.9 | 6.10 | 7.87 | 9.65 | 7.48 | Tr $190 \times 6$ | 1.18 | 7.09 | 0.39 | $5^{\circ}$ | 1.69 | 121 | LPL-2002 |
| 99.7 | 6.24 | 8.01 | 10.83 | 8.46 | Tr $215 \times 6$ | 1.26 | 7.87 | 0.45 | $5^{\circ}$ | 1.69 | 155 | LPL-2502 |
| 157.2 | 7.01 | 8.78 | 13.78 | 10.63 | Tr $270 \times 6$ | 1.56 | 9.84 | 0.45 | $4^{\circ}$ | 2.17 | 284 | LPL-4002 |
| 200.6 | 7.56 | 9.33 | 15.75 | 12.01 | Tr $305 \times 6$ | 1.91 | 11.42 | 0.39 | $3^{\circ}$ | 2.42 | 404 | LPL-5002 |



## RSM-Series, Flat-Jac ${ }^{\circledR}$ Cylinders

- Compact, flat design for use where other cylinders will not fit
- RSM-750, 1000 and 1500 have handles for easy carrying
- Mounting holes permit easy fixturing
- Baked enamel finish for increased corrosion resistance
- CR-400 coupler and dust cap included on all models ${ }^{1)}$
- Hard chrome plated high-quality steel plungers
- Grooved plunger ends require no saddle
- Single-acting spring return


## RCS-Series, Low Height Cylinders

- Lightweight, low profile design for use in confined spaces
- Baked enamel finish for increased corrosion resistance
- Plunger wiper reduces contamination, extending cylinder life
- CR-400 coupler and dust cap included on all models
- Grooved plunger end with threaded holes for mounting tilt saddles
- Integral handle on RCS-1002 for easy carrying
- Plated steel plungers
- Single-acting spring return


## Maximum Power to Height Ratio



Only a couple of inches are needed for an RSM-cylinder to lift this large steel construction.


| Cylinder Capacity <br> (tons) <br> [max.] | Stroke <br> (in) | Model <br> Number | Cyl. Effect. Area (in ${ }^{2}$ ) | Oil Cap. <br> (in ${ }^{3}$ ) |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 5 [4.9] | . 25 | RSM-50 ${ }^{1)}$ | . 99 | . 25 |  |
| 10 [11.2] | . 44 | RSM-100 | 2.24 | . 98 |  |
| 20 [22.1] | . 44 | RSM-200 | 4.43 | 1.94 |  |
| 30 [32.4] | . 50 | RSM-300 | 6.49 | 3.25 |  |
| 50 [48.1] | . 63 | RSM-500 | 9.62 | 6.01 |  |
| 75 [79.5] | . 63 | RSM-750 | 15.90 | 9.94 |  |
| 100[98.1] | . 63 | RSM-1000 | 19.63 | 12.27 |  |
| 150 [153.4] | . 63 | RSM-1500 | 30.68 | 19.17 |  |
| 10 [11.2] | 1.50 | RCS-101* | 2.24 | 3.35 |  |
| 20 [22.1] | 1.75 | RCS-201* | 4.43 | 7.75 |  |
| 30 [32.4] | 2.44 | RCS-302* | 6.49 | 15.82 |  |
| 50 [48.1] | 2.38 | RCS-502* | 9.62 | 22.85 |  |
| 100 [98.1] | 2.25 | RCS-1002* | 19.63 | 44.18 |  |

${ }^{\text {1) }}$ RSM-50 is fitted with an AR-400 coupler.

* Available as a set. See note on next page.


## Single-Acting, Low Height Cylinders



## Pump and Cylinder <br> \section*{Sets}

All cylinders marked with an ** are available as sets (cylinder, gauge, couplers, hose and pump) for your ordering convenience.

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Optional Bolt On Tilt Saddle Dimensions (in)

| For cylinder model: | Model <br> Number | A | B | $\mathrm{C}^{*}$ |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
| RCS-201, -302, -502 | CAT-51 | 1.97 | .59 | 1.14 |  |
| RCS-1002 | CAT-101 | 2.80 | .67 | 1.39 |  |

* "C" dimension equals saddle protrusion from plunger. Mounting screws are included.


RCS-Series**


RSM-Series


Capacity:

## 5-150 tons

Stroke:

## .25-2.44 inches

Maximum Operating Pressure:
10,000 psi

| RSM Cylinder Mounting Hole Dimensions (in) |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Model <br> Number | Hole <br> Pitch <br> U1 | Hole <br> Diam. <br> V | Counter <br> Bore <br> Diam. | Counter <br> Bore <br> Depth |
| RSM-50 | 1.12 | .20 | .312 | .17 |
| RSM-100 | 1.44 | .28 | .422 | .31 |
| RSM-200 | 1.94 | .40 | .594 | .39 |
| RSM-300 | 2.06 | .40 | .625 | .44 |
| RSM-500 | 2.62 | .47 | .750 | .50 |
| RSM-750 | 3.00 | .53 | .812 | .56 |
| RSM-1000 | 3.00 | .53 | .812 | .56 |
| RSM-1500 | 4.62 | .53 | .812 | .56 |

** $5^{\circ}$ angle position of coupler on RCS-101, 201, 302.

| Collapsed Height <br> A <br> (in) | Extended Height <br> B <br> (in) | Outside Diameter <br> D <br> (in) | Cylinder Bore Diameter <br> E <br> (in) | Plunger Diameter <br> F <br> (in) | Base to Advance Port <br> H <br> (in) | Plunger Protrusion from Base <br> K <br> (in) | Plunger to Base L (in) | Plunger to Mtg. Hole M (in) | $\begin{array}{\|c\|} \hline \text { Thread } \\ \\ 0 \\ (\mathrm{~mm}) \end{array}$ | Thread Depth <br> P <br> (in) | Bolt Circle <br> U <br> (in) | Weight <br> (lbs) | Model Number |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.28 | 1.53 | $2.31 \times 1.63$ | 1.13 | 1.00 | . 63 | . 04 | . 81 | . 88 | - | - | - | 2.3 | RSM-50 ${ }^{11}$ |
| 1.69 | 2.13 | $3.25 \times 2.19$ | 1.69 | 1.50 | . 75 | . 04 | 1.09 | 1.34 | - | - | - | 3.1 | RSM-100 |
| 2.03 | 2.47 | $4.00 \times 3.00$ | 2.38 | 2.00 | . 75 | . 04 | 1.56 | 1.56 | - | - | - | 6.8 | RSM-200 |
| 2.31 | 2.81 | $4.63 \times 3.75$ | 2.88 | 2.50 | . 75 | . 08 | 1.88 | 1.75 | - | - | - | 10 | RSM-300 |
| 2.63 | 3.25 | $5.50 \times 4.50$ | 3.50 | 2.75 | . 75 | . 08 | 2.25 | 2.13 | - | - | - | 15 | RSM-500 |
| 3.13 | 3.75 | $6.50 \times 5.50$ | 4.50 | 3.25 | . 75 | . 08 | 2.75 | 2.63 | - | - | - | 25 | RSM-750 |
| 3.38 | 4.00 | $7.00 \times 6.00$ | 5.00 | 3.63 | . 75 | . 08 | 3.00 | 2.94 | - | - | - | 32 | RSM-1000 |
| 3.94 | 4.56 | $8.50 \times 7.50$ | 6.25 | 4.50 | . 94 | . 08 | 3.75 | 3.25 | - | - | - | 58 | RSM-1500 |
| 3.47 | 4.97 | 2.75 | 1.69 | 1.50 | . 69 | . 20 | - | - | M4 | . 32 | 1.03 | 6 | RCS-101* |
| 3.88 | 5.63 | 3.63 | 2.38 | 2.00 | . 69 | . 13 | - | - | M5 | . 32 | 1.57 | 11 | RCS-201* |
| 4.63 | 7.06 | 4.00 | 2.88 | 2.62 | . 75 | . 13 | - | - | M5 | . 32 | 1.57 | 15 | RCS-302* |
| 4.81 | 7.19 | 4.88 | 3.50 | 2.75 | . 94 | . 08 | - | - | M5 | . 32 | 1.57 | 22 | RCS-502* |
| 5.56 | 7.81 | 6.50 | 5.00 | 3.63 | 1.25 | . 06 | - | - | M8 | . 40 | 2.17 | 46 | RCS-1002* |

