The Enerpac Lightweight Aluminum Cylinders

▼ Shown: **RAC, RACL, RACH, and RAR**

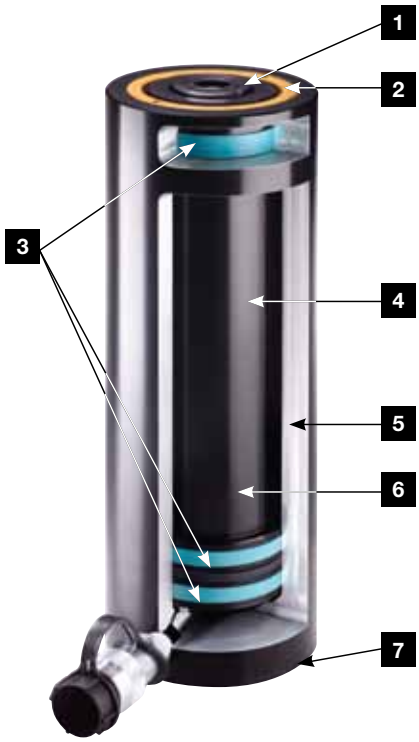
RA Series

Capacity:
20-150 tons

Stroke:
1.97-7.87 inches

Maximum Operating Pressure:
10,000 psi

- **Lightweight, easy to carry and position to allow a higher cylinder capacity-to-weight-ratio**
- **Non-corrosive by design, aluminum has always been a good material for use in many caustic environments**
- **Composite bearings on all moving surfaces guarantee NO metal-to-metal contact, to resist side loads and increase cylinder life**



1. **Removable Hardened Saddle** protects plunger from being damaged by abrasive surface contact.
2. **Stop Ring** on all models absorbs eccentric loading and prevents plunger over-extension.
3. **Composite Bearing** material to prevent metal-to-metal contact, reducing side-load issues and increasing life.
4. **Hard-coated Plunger and Base** resist wear and prevent galling.
5. **7075-T6 Aluminum Alloy Components** for maximum strength and minimum weight.
6. **Plunger Return Spring** on all single-acting models for prompt cylinder return.
7. **Standard Steel Base Plate** protects cylinder base from abrasive surfaces.

Think Safety

Manufacturer's rating of load and stroke are maximum safe limits.

Good practice encourages using only 80% of these ratings!

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RAC-Series, Single-Acting Cylinders

The lightweight general purpose spring return aluminum cylinders.

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RACL-Series, Lock Nut Cylinders

The lightweight spring return aluminum cylinders for mechanical load holding.

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RACH-Series, Hollow Plunger Cylinders

For both push and pull forces with a single-acting cylinders.

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RAR-Series, Double-Acting Cylinders

The lightweight aluminum cylinders for lifting and lowering.

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▼ Shown from left to right: **RAC-508, RAC-1506, RAC-304, and RAC-206**

Lightweight for Maximum Portability

Saddles

All RAC cylinders are equipped with bolt-on removable saddles of hardened steel.

Lightweight Hand Pumps

Enerpac hand pumps **P-392** or **P-802** make the optimal lightweight set.

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Aluminum Lock Nut Cylinders

When positive mechanical load holding is required, the lightweight RACL-Series Aluminum Lock Nut cylinders are the ideal choice.

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- **Composite bearings prevent metal-to-metal contact, increasing cylinder life and resistance to side-loads of up to 10%**
- **Hard coat finish on all surfaces resists damage and extends cylinder life**
- **Handles included on all models**
- **Steel baseplate and saddle for protection against load-induced damage**
- **Integral stop ring prevents plunger over-travel and is capable of withstanding the full cylinder capacity**
- **High-strength return spring for rapid cylinder retraction**
- **CR-400 coupler and dustcap included on all models**
- **All cylinders meet ASME B-30.1 and ISO 10100 standards**

Cylinder Capacity (tons) [maximum]	Stroke* (in)	Model Number	Cylinder Effective Area (in^2)
20 [24.1]	1.97	**RAC-202**	4.83
	3.94	**RAC-204**	4.83
	5.91	**RAC-206**	4.83
30 [34.2]	1.97	**RAC-302**	6.85
	3.94	**RAC-304**	6.85
	5.91	**RAC-306**	6.85
50 [54.9]	1.97	**RAC-502**	10.99
	3.94	**RAC-504**	10.99
	5.91	**RAC-506**	10.99
100 [110.9]	3.94	**RAC-1004**	22.19
	5.91	**RAC-1006**	22.19
	7.87	**RAC-1008**	22.19
150 [175.9]	5.91	**RAC-1506**	35.18

* Custom strokes available.

◀ *Enerpac lightweight aluminum RAC-506 cylinders are ideal for wet environments such as this tunnel under the river (Holland High-Speed Train Line).*

Aluminum vs. Steel

Aluminum cylinders, while offering the most lightweight solution for many lifting, stressing and lowering applications, also have some unique limitations due to material properties.

Aluminum differs from steel in that it has a lower finite fatigue life. This means aluminum cylinders should NOT be used in high-cycle applications such as production.

The Enerpac line of aluminum cylinders are designed to provide 5,000 cycles at their recommended pressure. **This limit should not be exceeded.** In normal lifting and many maintenance applications, this should provide a lifetime of use.

RAC Series

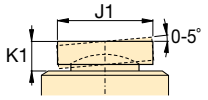
Capacity:
20-150 tons

Stroke:
1.97-7.87 inches

Maximum Operating Pressure:
10,000 psi

Optional Bolt Tilt Saddle Dimensions (in)

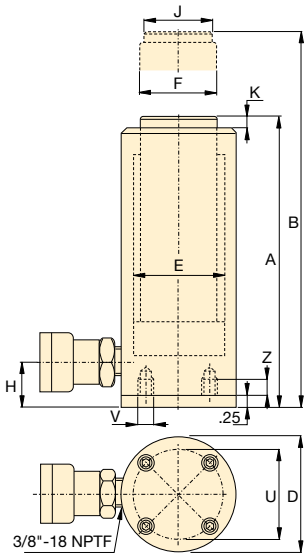
Cylinder Model / Capacity (ton)	Model Number	Saddle Diameter J1	Saddle Protrusion from Base K1
RAC-50	CATG-50	1.95	1.02
RAC-100	CATG-150	3.57	1.30
RAC-150	CATG-200	4.64	1.44



Steel Base Plate Mounting Holes

Cylinder Model / Capacity (ton)	Bolt Circle U (in)	Thread V (mm)	Thread Depth [1] Z (in)
RAC-20	2.76	M6	.47
RAC-30	3.15	M6	.47
RAC-50	4.33	M6	.47
RAC-100	6.30	M6	.47
RAC-150	7.87	M6	.47

[1] Including Base Plate Height of .25 inches.
Four (4) base plate bolts: M6



Steel Base Plate

The steel base plate protects the cylinder base from damage, it should not be removed.

The base holes in these aluminum cylinders are designed for securing the steel base plate. **They will not withstand the capacity of the cylinder.**

Do not use the base holes in these aluminum cylinders to attach any device to the cylinder.

Oil Capacity (in³)	Collapsed Height A (in)	Extended Height B (in)	Outside Diameter D (in)	Cylinder Bore Diameter E (in)	Plunger Diameter F (in)	Base to Advance Port H (in)	Saddle Diameter J (in)	Saddle Protrusion from Plunger K (in)	Weight (lbs)	Model Number
9.51	6.85	8.82	3.35	2.48	1.97	1.07	1.57	.12	7.9	RAC-202
19.02	8.82	12.76	3.35	2.48	1.97	1.07	1.57	.12	9.0	RAC-204
28.52	10.79	16.69	3.35	2.48	1.97	1.07	1.57	.12	10.1	RAC-206
13.48	7.13	9.09	3.94	2.95	2.36	1.31	1.57	.12	9.9	RAC-302
26.97	9.09	13.03	3.94	2.95	2.36	1.31	1.57	.12	11.5	RAC-304
40.45	11.06	16.97	3.94	2.95	2.36	1.31	1.57	.12	13.0	RAC-306
21.63	7.32	9.29	5.12	3.74	3.15	1.19	1.97	.12	18.7	RAC-502
43.27	9.29	13.23	5.12	3.74	3.15	1.19	1.97	.12	21.6	RAC-504
64.90	11.26	17.17	5.12	3.74	3.15	1.19	1.97	.12	24.5	RAC-506
87.36	10.67	14.61	7.09	5.31	4.33	1.82	3.70	.12	43.2	RAC-1004
131.04	12.64	18.54	7.09	5.31	4.33	1.82	3.70	.12	48.3	RAC-1006
174.72	14.61	22.48	7.09	5.31	4.33	1.82	3.70	.12	53.4	RAC-1008
207.76	13.49	19.40	9.06	6.69	5.51	2.02	4.45	.12	73.4	RAC-1506