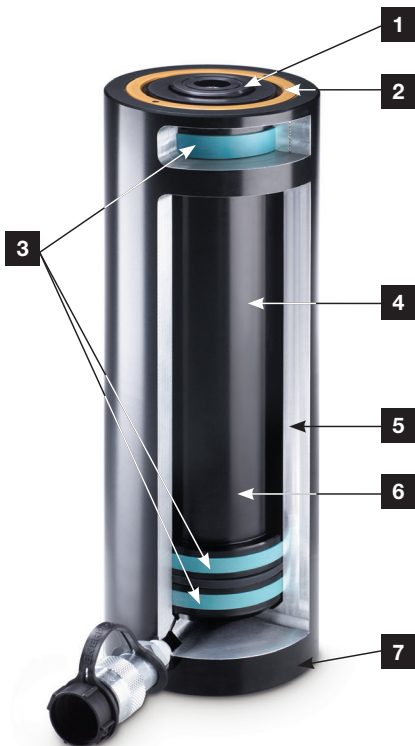


# The Enerpac Lightweight Aluminum Cylinders

▼ Shown: RAC, RACL, RACH, and RAR



- 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. **Steel Base Plate** protects cylinder base from abrasive surfaces.

## RA Series

Capacity:

**10-150 tons**

Stroke:

**1.97-9.84 inches**

Maximum Operating Pressure:

**10,000 psi**



Think Safety

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

Good practice encourages using only 80% of these ratings!

Page: 274



### Aluminum vs. Steel

Aluminum cylinders, while offering the most lightweight solution also have some unique limitations due to material properties. It differs from steel in that it has a lower finite fatigue life. Aluminum cylinders should NOT be used in high-cycle applications such as production.

These cylinders are designed to provide 5000 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.

▼ 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.

Page: **70**

- 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 30 tons and above
- For protection against load-induced damage, a saddle is standard on all models and a steel baseplate is standard on models 20-ton and above. The steel baseplate is optional only on 10- and 15-ton models
- 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 dust cap included on all models
- All cylinders meet ASME B-30.1 standards



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

Cylinder Capacity	Stroke*	Model Number	Cylinder Effective Area
tons (maximum)	(in)		(in <sup>2</sup> )
<b>10</b> (9.9)	1.97	<b>RAC-102</b>	1.95
	3.94	<b>RAC-104</b>	1.95
	5.91	<b>RAC-106</b>	1.95
<b>15</b> (15.4)	1.97	<b>RAC-152</b>	3.03
	3.94	<b>RAC-154</b>	3.03
	5.91	<b>RAC-156</b>	3.03
<b>20</b> (24.2)	1.97	<b>RAC-202</b>	4.83
	3.94	<b>RAC-204</b>	4.83
	5.91	<b>RAC-206</b>	4.83
	7.87	<b>RAC-208</b>	4.83
	9.84	<b>RAC-2010</b>	4.83
<b>30</b> (34.2)	1.97	<b>RAC-302</b>	6.85
	3.94	<b>RAC-304</b>	6.85
	5.91	<b>RAC-306</b>	6.85
	7.87	<b>RAC-308</b>	6.85
	9.84	<b>RAC-3010</b>	6.85
<b>50</b> (54.9)	1.97	<b>RAC-502</b>	10.99
	3.94	<b>RAC-504</b>	10.99
	5.91	<b>RAC-506</b>	10.99
	7.87	<b>RAC-508</b>	10.99
	9.84	<b>RAC-5010</b>	10.99
<b>100</b> (110.9)	1.97	<b>RAC-1002</b>	22.19
	3.94	<b>RAC-1004</b>	22.19
	5.91	<b>RAC-1006</b>	22.19
	7.87	<b>RAC-1008</b>	22.19
	9.84	<b>RAC-10010</b>	22.19
<b>150</b> (175.9)	1.97	<b>RAC-1502</b>	35.18
	3.94	<b>RAC-1504</b>	35.18
	5.91	<b>RAC-1506</b>	35.18
	7.87	<b>RAC-1508</b>	35.18
	9.84	<b>RAC-15010</b>	35.18

\* Custom strokes available.

# Single-Acting, Spring Return Cylinders



## 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.

Capacity:  
**10-150 tons**

Stroke:  
**1.97-9.84 inches**

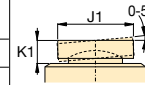
Maximum Operating Pressure:  
**10,000 psi**

## RAC Series



### Optional Bolt-on Tilt Saddle Dimensions (in)

Cylinder Model / Capacity (ton)	Model Number*	Saddle Diameter J1	Saddle Protrusion from Plunger 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

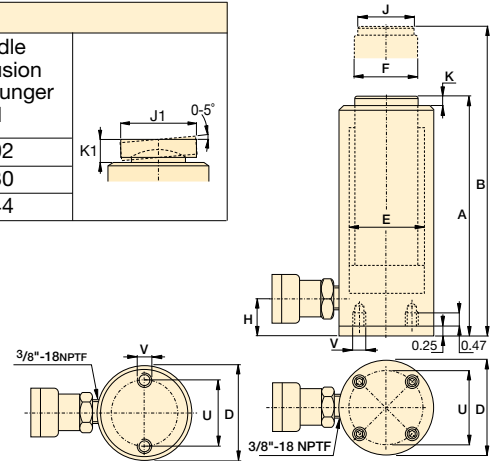


\* Tilt saddle not available for less than 50 ton.

### Optional Steel Base Plate

Cylinder Model / Capacity (ton)	Model Number
RAC-10	JBA10
RAC-15	JBA15

\* Steel base plates come standard on models 20 tons and above.



RAC-102 to RAC-156 RAC-202 to RAC-15010

Oil Capacity (in <sup>3</sup> )	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)	Bolt Circle U (in)	Thread V (mm)	Weight (lbs)	Model Number
3.66	6.06	7.91	2.28	1.57	1.26	0.91	0.94	0.12	1.54	M6	2.6	RAC-102
7.93	8.03	11.97	2.28	1.57	1.26	0.91	0.94	0.12	1.54	M6	3.1	RAC-104
11.59	10.00	15.91	2.28	1.57	1.26	0.91	0.94	0.12	1.54	M6	4.0	RAC-106
6.10	6.34	8.31	2.76	1.97	1.57	0.91	1.14	0.12	1.89	M6	4.0	RAC-152
12.20	8.31	12.24	2.76	1.97	1.57	0.91	1.14	0.12	1.89	M6	4.2	RAC-154
17.69	10.28	16.18	2.76	1.97	1.57	0.91	1.14	0.12	1.89	M6	6.6	RAC-156
9.52	6.85	8.83	3.35	2.48	1.97	1.07	1.58	0.12	2.76	M6	7.9	RAC-202
19.03	8.82	12.76	3.35	2.48	1.97	1.07	1.58	0.12	2.76	M6	9.0	RAC-204
28.55	10.79	16.70	3.35	2.48	1.97	1.07	1.58	0.12	2.76	M6	10.1	RAC-206
38.01	12.76	20.64	3.35	2.48	1.97	1.07	1.58	0.12	2.76	M6	11.2	RAC-208
47.53	14.73	24.58	3.35	2.48	1.97	1.07	1.58	0.12	2.76	M6	12.3	RAC-2010
13.49	7.13	9.10	3.94	2.95	2.36	1.31	1.58	0.12	3.15	M6	9.9	RAC-302
26.99	9.09	13.04	3.94	2.95	2.36	1.31	1.58	0.12	3.15	M6	11.5	RAC-304
40.48	11.06	16.98	3.94	2.95	2.36	1.31	1.58	0.12	3.15	M6	13.0	RAC-306
53.91	13.04	20.91	3.94	2.95	2.36	1.31	1.58	0.12	3.15	M6	14.5	RAC-308
67.40	15.01	24.85	3.94	2.95	2.36	1.31	1.58	0.12	3.15	M6	16.1	RAC-3010
21.65	7.32	9.90	5.12	3.74	3.15	1.19	1.97	0.12	4.33	M6	18.7	RAC-502
43.30	9.29	13.24	5.12	3.74	3.15	1.19	1.97	0.12	4.33	M6	21.6	RAC-504
64.95	11.26	17.17	5.12	3.74	3.15	1.19	1.97	0.12	4.33	M6	24.5	RAC-506
86.49	13.24	21.11	5.12	3.74	3.15	1.19	1.97	0.12	4.33	M6	27.3	RAC-508
108.14	15.21	25.05	5.12	3.74	3.15	1.19	1.97	0.12	4.33	M6	30.2	RAC-5010
43.71	8.71	10.68	7.09	5.32	4.33	1.82	3.70	0.12	5.91	M10	38.1	RAC-1002
87.43	10.67	14.61	7.09	5.32	4.33	1.82	3.70	0.12	5.91	M10	43.2	RAC-1004
131.14	12.64	18.55	7.09	5.32	4.33	1.82	3.70	0.12	5.91	M10	48.3	RAC-1006
174.64	14.61	22.49	7.09	5.32	4.33	1.82	3.70	0.12	5.91	M10	53.4	RAC-1008
218.35	16.58	26.43	7.09	5.32	4.33	1.82	3.70	0.12	5.91	M10	58.4	RAC-10010
69.30	9.56	11.53	9.06	6.69	5.51	2.02	4.45	0.12	7.87	M10	55.8	RAC-1502
138.61	11.53	15.47	9.06	6.69	5.51	2.02	4.45	0.12	7.87	M10	64.6	RAC-1504
207.91	13.49	19.41	9.06	6.69	5.51	2.02	4.45	0.12	7.87	M10	73.4	RAC-1506
276.87	15.47	23.34	9.06	6.69	5.51	2.02	4.45	0.12	7.87	M10	82.2	RAC-1508
346.17	17.44	27.28	9.06	6.69	5.51	2.02	4.45	0.12	7.87	M10	91.1	RAC-15010



▼ Shown from left to right: RACL-1006, RACL-504 and RACL-506



## To Secure Loads Mechanically



### Saddles

All RACL cylinders are equipped with bolt-on removable saddles of hardened steel. For tilt saddles see next page.

Page: 15



### Hoses

Enerpac offers a complete line of high-quality hydraulic hoses. To ensure the integrity of your system, specify only Enerpac hydraulic hoses.

Page: 132

- Aluminum Lock Nut provides mechanical load holding for extended periods
- Hardened steel stop ring increases cylinder life and resistance to side-loads of up to 5%
- Hard coat finish on all surfaces resists damage and extends cylinder life
- Composite bearings increase cylinder life and side load resistance
- Handles included on all models
- Steel base plate 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 dust cap included on all models
- All cylinders meet ASME B-30.1 and ISO 10100 standards



◀ The portable Lock Nut cylinder RACL-1506 used for extended load support during epoxy injection for bridge reinforcement.

Cylinder Capacity	Stroke*	Model Number	Cylinder Effective Area
ton (maximum)	(in)		(in <sup>2</sup> )
20 (24.2)	1.97	RACL-202	4.83
	3.94	RACL-204	4.83
	5.91	RACL-206	4.83
	7.87	RACL-208	4.83
	9.84	RACL-2010	4.83
30 (34.2)	1.97	RACL-302	6.85
	3.94	RACL-304	6.85
	5.91	RACL-306	6.85
	7.87	RACL-308	6.85
	9.84	RACL-3010	6.85
50 (54.9)	1.97	RACL-502	10.99
	3.94	RACL-504	10.99
	5.91	RACL-506	10.99
	7.87	RACL-508	10.99
	9.84	RACL-5010	10.99
100 (110.9)	1.97	RACL-1002	22.19
	3.94	RACL-1004	22.19
	5.91	RACL-1006	22.19
	7.87	RACL-1008	22.19
	9.84	RACL-10010	22.19
150 (175.9)	1.97	RACL-1502	35.18
	3.94	RACL-1504	35.18
	5.91	RACL-1506	35.18
	7.87	RACL-1508	35.18
	9.84	RACL-15010	35.18

\* Custom strokes available.

# Single-Acting, Spring Return, Lock Nut Cylinders



## 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.

Capacity:  
**20-150 tons**

Stroke:  
**1.97-9.84 inches**

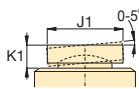
Maximum Operating Pressure:  
**10,000 psi**

## RACL Series



### Optional Bolt-on Tilt Saddle Dimensions (in)

Cylinder Model / Capacity (ton)	Model Number*	Saddle Diameter	Saddle Protrusion from Plunger K1
		J1	
<b>RACL-50</b>	<b>CATG-50</b>	1.95	1.02
<b>RACL-100</b>	<b>CATG-150</b>	3.57	1.30
<b>RACL-150</b>	<b>CATG-200</b>	4.64	1.44

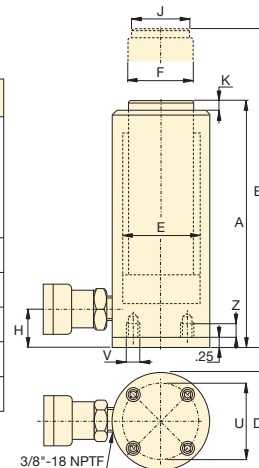


\* Tilt saddle not available for less than 50 ton.

### Steel Base Plate Mounting Holes

Cylinder Model / Capacity (ton)	Bolt Circle U (in)	Thread V (mm)	Thread Depth <sup>1)</sup> Z (in)
<b>RACL-20</b>	2.76	M6	.47
<b>RACL-30</b>	3.15	M6	.47
<b>RACL-50</b>	4.33	M6	.47
<b>RACL-100</b>	5.91	M10	.47
<b>RACL-150</b>	7.87	M10	.47

<sup>1)</sup> Including Base Plate Height of .25 inches. Four (4) base plate bolts included.



Oil Capacity	Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter (Threaded)	Base to Advance Port	Saddle Diameter	Saddle Protrusion from Plunger	Lock Nut Height	Weight	Model Number
(in <sup>3</sup> )	A (in)	B (in)	D (in)	E (in)	F (in)	H (in)	J (in)	K (in)	S (in)	(lbs)	
9.52	8.83	10.80	3.35	2.48	2.17	1.07	1.58	0.12	1.97	8.8	<b>RACL-202</b>
19.03	10.80	14.73	3.35	2.48	2.17	1.07	1.58	0.12	1.97	10.1	<b>RACL-204</b>
28.55	12.76	18.67	3.35	2.48	2.17	1.07	1.58	0.12	1.97	11.4	<b>RACL-206</b>
38.01	14.73	22.61	3.35	2.48	2.17	1.07	1.58	0.12	1.97	12.7	<b>RACL-208</b>
47.53	16.70	26.54	3.35	2.48	2.17	1.07	1.58	0.12	1.97	14.1	<b>RACL-2010</b>
13.49	9.10	11.07	3.94	2.95	2.36	1.31	1.58	0.12	1.97	11.9	<b>RACL-302</b>
26.99	11.07	15.01	3.94	2.95	2.36	1.31	1.58	0.12	1.97	13.4	<b>RACL-304</b>
40.48	13.04	18.95	3.94	2.95	2.36	1.31	1.58	0.12	1.97	14.9	<b>RACL-306</b>
53.91	15.01	22.88	3.94	2.95	2.36	1.31	1.58	0.12	1.97	16.5	<b>RACL-308</b>
67.40	16.98	26.82	3.94	2.95	2.36	1.31	1.58	0.12	1.97	18.0	<b>RACL-3010</b>
21.65	9.29	11.27	5.12	3.74	3.15	1.19	1.97	0.12	2.95	20.5	<b>RACL-502</b>
43.30	11.26	15.21	5.12	3.74	3.15	1.19	1.97	0.12	2.95	23.4	<b>RACL-504</b>
64.95	13.23	19.14	5.12	3.74	3.15	1.19	1.97	0.12	2.95	26.2	<b>RACL-506</b>
86.49	15.20	23.08	5.12	3.74	3.15	1.19	1.97	0.12	2.95	29.1	<b>RACL-508</b>
108.14	17.17	27.02	5.12	3.74	3.15	1.19	1.97	0.12	2.95	31.9	<b>RACL-5010</b>
43.71	11.65	13.63	7.09	5.32	4.33	1.82	3.70	0.12	2.95	48.2	<b>RACL-1002</b>
87.43	13.62	17.57	7.09	5.32	4.33	1.82	3.70	0.12	2.95	53.3	<b>RACL-1004</b>
131.14	15.59	21.50	7.09	5.32	4.33	1.82	3.70	0.12	2.95	58.4	<b>RACL-1006</b>
174.64	17.57	25.44	7.09	5.32	4.33	1.82	3.70	0.12	2.95	63.4	<b>RACL-1008</b>
218.35	19.54	29.38	7.09	5.32	4.33	1.82	3.70	0.12	2.95	68.5	<b>RACL-10010</b>
69.30	12.72	14.68	9.06	6.69	5.51	2.02	4.45	0.12	3.15	71.0	<b>RACL-1502</b>
138.61	14.69	18.62	9.06	6.69	5.51	2.02	4.45	0.12	3.15	79.8	<b>RACL-1504</b>
207.91	16.65	22.56	9.06	6.69	5.51	2.02	4.45	0.12	3.15	88.6	<b>RACL-1506</b>
276.87	18.62	26.49	9.06	6.69	5.51	2.02	4.45	0.12	3.15	97.4	<b>RACL-1508</b>
346.17	20.59	30.43	9.06	6.69	5.51	2.02	4.45	0.12	3.15	106.3	<b>RACL-15010</b>

▼ Shown from left to right: RACH-1508, RACH-304 and RACH-208



## The Lightweight Solution for Tensioning and Testing



### Saddles

All RACH-cylinders are equipped with bolt-on removable hardened steel hollow saddles.



### Lightweight Hand Pumps

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

Page: 70

- Hollow plunger design allows for both pull and push forces
- Composite bearings increase cylinder life and side load resistance
- Hard coat finish on all surfaces resists damage and extends cylinder life
- Handles included on all models
- Floating center tube increases seal life
- 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 dust cap included on all models
- All cylinders meet ASME B-30.1 and ISO 10100 standards

Cylinder Capacity	Stroke*	Model Number	Cylinder Effective Area
tons (maximum)	(in)		(in <sup>2</sup> )
20 (25.4)	1.97	RACH-202	5.07
	3.94	RACH-204	5.07
	5.91	RACH-206	5.07
	7.87	RACH-208	5.07
	9.84	RACH-210	5.07
30 (39.6)	1.97	RACH-302	7.92
	3.94	RACH-304	7.92
	5.91	RACH-306	7.92
	7.87	RACH-308	7.92
	9.84	RACH-3010	7.92
60 (65.6)	1.97	RACH-602	13.13
	3.94	RACH-604	13.13
	5.91	RACH-606	13.13
	7.87	RACH-608	13.13
	9.84	RACH-6010	13.13
100 (127.5)	1.97	RACH-1002	25.51
	3.94	RACH-1004	25.51
	5.91	RACH-1006	25.51
	7.87	RACH-1008	25.51
	9.84	RACH-10010	25.51
150 (175.0)	1.97	RACH-1502	35.00
	3.94	RACH-1504	35.00
	5.91	RACH-1506	35.00
	7.87	RACH-1508	35.00
	9.84	RACH-15010	35.00

\* Custom strokes available.



◀ An RACH-306, powered by a P-392 hand pump, is used to extract corroded carriage pins from refuse collection vehicles.

# Single-Acting, Spring Return, Hollow Plunger Cylinders



## Steel Base Plate

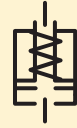
The steel base plate protects the cylinder base from damage, it should not be removed.

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.

## RACH Series



Capacity:

**20-150 tons**

Stroke:

**1.97-9.84 inches**

Center Hole Diameter:

**1.06-3.11 inches**

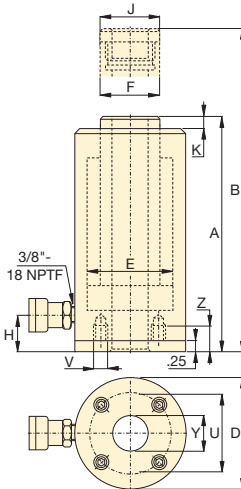
Maximum Operating Pressure:

**10,000 psi**

### Steel Base Plate Mounting Holes

Cylinder Model / Capacity (ton)	Bolt Circle U (in)	Thread V (mm)	Thread Depth <sup>1)</sup> Z (in)
RACH-20	3.15	M6	.47
RACH-30	4.33	M6	.47
RACH-60	6.30	M6	.47
RACH-100	8.66	M10	.47
RACH-150	9.65	M10	.47

<sup>1)</sup> Including Base Plate Height of .25 inches. Four (4) baseplate bolts included.



Oil Capacity (in <sup>3</sup> )	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)	Center Hole Diameter Y (in)	Weight (lbs)	Model Number
9.98	7.41	9.38	3.93	2.95	2.17	1.14	2.17	0.40	1.06	11.5	RACH-202
19.96	9.89	13.83	3.93	2.95	2.17	1.14	2.17	0.40	1.06	13.5	RACH-204
29.94	12.41	18.32	3.93	2.95	2.17	1.14	2.17	0.40	1.06	15.6	RACH-206
39.87	14.89	22.76	3.93	2.95	2.17	1.14	2.17	0.40	1.06	17.7	RACH-208
49.90	17.41	27.25	3.93	2.95	2.17	1.14	2.17	0.40	1.06	19.8	RACH-210
15.59	8.20	10.17	5.12	3.74	2.76	1.14	2.76	0.40	1.34	17.6	RACH-302
31.18	10.52	14.46	5.12	3.74	2.76	1.14	2.76	0.40	1.34	20.9	RACH-304
46.77	13.12	19.02	5.12	3.74	2.76	1.14	2.76	0.40	1.34	24.6	RACH-306
62.35	15.56	23.43	5.12	3.74	2.76	1.14	2.76	0.40	1.34	28.4	RACH-308
77.94	18.04	27.88	5.12	3.74	2.76	1.14	2.76	0.40	1.34	31.9	RACH-3010
25.84	9.89	11.86	7.09	5.12	3.94	2.41	3.94	0.47	2.13	35.6	RACH-602
51.69	12.41	16.35	7.09	5.12	3.94	2.41	3.94	0.47	2.13	42.8	RACH-604
77.53	14.97	20.87	7.09	5.12	3.94	2.41	3.94	0.47	2.13	50.3	RACH-606
103.37	17.52	25.40	7.09	5.12	3.94	2.41	3.94	0.47	2.13	57.2	RACH-608
129.21	20.09	29.93	7.09	5.12	3.94	2.41	3.94	0.47	2.13	65.1	RACH-6010
50.21	10.16	12.13	9.84	7.28	5.71	2.41	5.71	0.55	3.11	74.6	RACH-1002
100.43	12.80	16.74	9.84	7.28	5.71	2.41	5.71	0.55	3.11	87.8	RACH-1004
150.64	15.40	21.31	9.84	7.28	5.71	2.41	5.71	0.55	3.11	101.9	RACH-1006
200.85	18.08	25.95	9.84	7.28	5.71	2.41	5.71	0.55	3.11	115.7	RACH-1008
251.07	20.76	30.60	9.84	7.28	5.71	2.41	5.71	0.55	3.11	129.3	RACH-10010
66.08	11.03	13.00	10.83	8.07	5.91	2.41	5.71	0.55	3.11	107.7	RACH-1502
132.17	14.18	18.12	10.83	8.07	5.91	2.41	5.71	0.55	3.11	122.8	RACH-1504
206.72	16.93	22.84	10.83	8.07	5.91	2.41	5.71	0.55	3.11	138.9	RACH-1506
275.62	19.69	27.57	10.83	8.07	5.91	2.41	5.71	0.55	3.11	154.5	RACH-1508
344.53	22.45	32.29	10.83	8.07	5.91	2.41	5.71	0.55	3.11	170.2	RACH-15010



▼ Shown from left to right: RAR-506, RAR-508, RAR-302



## The Lightweight Solution for Double-Acting Applications



### Saddles

All RAR-cylinders are equipped with bolt-on removable hardened steel saddles. For tilt saddles see next page.

Page: **19**



### Hoses

Enerpac offers a complete line of high-quality hydraulic hoses. To ensure the integrity of your system, specify only Enerpac hydraulic hoses.

Page: **132**

- Double-acting for rapid retraction, regardless of hose lengths and system losses
- Composite bearings increase cylinder life and side load resistance
- Hard coat finish on all surfaces resists damage and extends cylinder life
- Handles included on all models
- Steel base plate and saddle for protection against load-induced damage
- Integral stop ring prevents plunger over-travel and is capable of withstanding the full cylinder capacity
- Built-in safety valve prevents accidental over-pressurization



◀ An RAR-506 was easy to position under a bulldozer for repair of frame member.

Cylinder Capacity (ton)	Stroke* (in)	Model Number	Maximum Cylinder Capacity	Cylinder Effective Area		Oil Capacity	
			(ton)	Push (in <sup>2</sup> )	Pull (in <sup>2</sup> )	Push (in <sup>3</sup> )	Pull (in <sup>3</sup> )
20 (24.2)	1.97	RAR-202	24.2	4.83	2.88	9.52	5.67
	3.94	RAR-204	24.2	4.83	2.88	19.03	11.34
	5.91	RAR-206	24.2	4.83	2.88	28.55	17.02
	7.87	RAR-208	24.2	4.83	2.88	38.01	22.66
	9.84	RAR-2010	24.2	4.83	2.88	47.53	28.34
30 (34.2)	1.97	RAR-302	34.2	6.85	3.80	13.49	7.49
	3.94	RAR-304	34.2	6.85	3.80	26.99	14.97
	5.91	RAR-306	34.2	6.85	3.80	40.48	22.46
	7.87	RAR-308	34.2	6.85	3.80	53.91	29.91
	9.84	RAR-3010	34.2	6.85	3.80	67.40	37.39
50 (54.9)	1.97	RAR-502	55	10.99	3.54	21.65	6.97
	3.94	RAR-504	55	10.99	3.54	43.30	13.95
	5.91	RAR-506	55	10.99	3.54	64.95	20.92
	7.87	RAR-508	55	10.99	3.54	86.49	27.86
	9.84	RAR-5010	55	10.99	3.54	108.14	34.83
100 (110.9)	1.97	RAR-1002	111	22.19	12.33	43.71	24.29
	3.94	RAR-1004	111	22.19	12.33	87.43	48.58
	5.91	RAR-1006	111	22.19	12.33	131.14	72.87
	7.87	RAR-1008	111	22.19	12.33	174.64	97.04
	9.84	RAR-10010	111	22.19	12.33	218.35	121.33
150 (175.9)	1.97	RAR-1502	176	35.18	20.45	69.30	40.29
	3.94	RAR-1504	176	35.18	20.45	138.61	80.57
	5.91	RAR-1506	176	35.18	20.45	207.91	120.86
	7.87	RAR-1508	176	35.18	20.45	276.87	160.94
	9.84	RAR-15010	176	35.18	20.45	346.17	201.23

\* Custom strokes available.



# Double-Acting, Aluminum Cylinders



## 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.

Capacity:  
**20-150 tons**

Stroke:  
**1.97-9.84 inches**

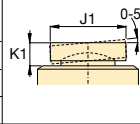
Maximum Operating Pressure:  
**10,000 psi**

**RAR Series**



## Optional Bolt Tilt Saddle Dimensions (in)

Cylinder Model / Capacity (ton)	Model Number*	Saddle Diameter	Saddle Protrusion from Plunger K1
		J1	K1
RAR-50	CATG-50	1.95	1.02
RAR-100	CATG-100	2.81	1.22
RAR-150	CATG-150	3.57	1.30

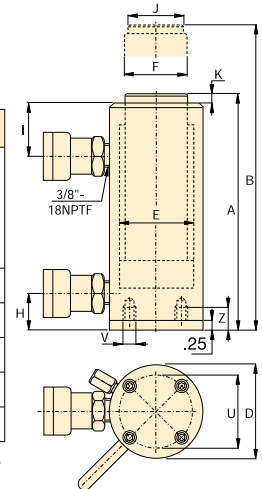


\* Tilt saddle not available for less than 50 ton.

## Steel Base Plate Mounting Holes

Cylinder Model / Capacity (ton)	Bolt Circle U (in)	Thread V (mm)	Thread Depth <sup>1)</sup> Z (in)
RAR-20	3.66	M6	.47
RAR-30	4.13	M6	.47
RAR-50	4.33	M6	.47
RAR-100	6.10	M10	.47
RAR-150	7.87	M10	.47

<sup>1)</sup> Including Base Plate Height of .25 inches. Four (4) base plate bolts included.



Collapsed Height	Extended Height	Outside Diameter	Cylinder Bore Diameter	Plunger Diameter	Base to Advance Port	Top to Retract Port	Saddle Diameter	Saddle Protrusion from Plunger	Weight	Model Number
A (in)	B (in)	D (in)	E (in)	F (in)	H (in)	I (in)	J (in)	K (in)	(lbs)	
7.45	9.42	4.45	2.48	1.58	1.19	1.97	1.18	0.12	16.3	RAR-202
9.42	13.35	4.45	2.48	1.58	1.19	1.97	1.18	0.12	17.6	RAR-204
11.29	17.29	4.45	2.48	1.58	1.19	1.97	1.18	0.12	19.0	RAR-206
13.35	21.23	4.45	2.48	1.58	1.19	1.97	1.18	0.12	20.3	RAR-208
15.32	25.17	4.45	2.48	1.58	1.19	1.97	1.18	0.12	21.6	RAR-2010
7.92	9.89	4.92	2.95	1.97	1.19	2.17	1.58	0.12	19.0	RAR-302
9.89	13.83	4.92	2.95	1.97	1.19	2.17	1.58	0.12	20.9	RAR-304
11.86	17.76	4.92	2.95	1.97	1.19	2.17	1.58	0.12	22.9	RAR-306
13.83	21.70	4.92	2.95	1.97	1.19	2.17	1.58	0.12	24.9	RAR-308
15.80	25.64	4.92	2.95	1.97	1.19	2.17	1.58	0.12	26.9	RAR-3010
7.92	9.89	5.71	3.74	2.95	1.19	2.21	1.97	0.12	24.5	RAR-502
9.89	13.83	5.71	3.74	2.95	1.19	2.21	1.97	0.12	28.0	RAR-504
11.86	17.76	5.71	3.74	2.95	1.19	2.21	1.97	0.12	31.5	RAR-506
13.83	21.70	5.71	3.74	2.95	1.19	2.21	1.97	0.12	35.1	RAR-508
15.80	25.64	5.71	3.74	2.95	1.19	2.21	1.97	0.12	38.6	RAR-5010
9.89	11.86	7.28	5.32	3.54	1.70	3.15	2.95	0.12	36.2	RAR-1002
11.86	15.80	7.28	5.32	3.54	1.70	3.15	2.95	0.12	42.6	RAR-1004
13.83	19.73	7.28	5.32	3.54	1.70	3.15	2.95	0.12	48.9	RAR-1006
15.80	23.67	7.28	5.32	3.54	1.70	3.15	2.95	0.12	55.3	RAR-1008
17.76	27.61	7.28	5.32	3.54	1.70	3.15	2.95	0.12	61.7	RAR-10010
9.77	11.74	9.06	6.70	4.33	1.50	2.95	3.70	0.12	53.4	RAR-1502
11.74	16.68	9.06	6.70	4.33	1.50	2.95	3.70	0.12	63.7	RAR-1504
13.71	19.61	9.06	6.70	4.33	1.50	2.95	3.70	0.12	73.2	RAR-1506
15.68	23.55	9.06	6.70	4.33	1.50	2.95	3.70	0.12	83.6	RAR-1508
17.64	29.46	9.06	6.70	4.33	1.50	2.95	3.70	0.12	93.9	RAR-15010