

▼ Shown from left to right: RR-10013, RR-1502, RR-20013, RR-1010, RR-7513



## Most Versatile Performers

Rugged enough for the toughest job site uses and precision designed for high-cycle industrial uses.



### Pump Selection

A double-acting cylinder must be powered by a pump with a 4-way valve.

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### Saddles

RR-Series cylinders up to 75-ton have plunger thread for installation of CAT-Series tilt saddles.

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### Optimum Performance

Enerpac's range of Z-Class electric pumps, fitted with manual or solenoid operated 4-way valves, offer optimum combinations with RR cylinders.

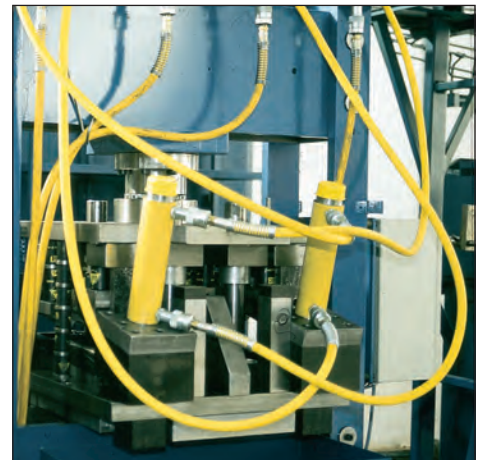
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- Collar threads, plunger threads and base mounting holes for easy fixturing (on most models)
- Baked enamel finish for increased corrosion resistance
- Removable hardened saddles protect plunger during lifting and pressing
- Built-in safety valve prevents accidental over-pressurization
- CR-400 couplers included on all models
- Plunger wiper reduces contamination, extending cylinder life

▼ These long stroke RR-cylinders are attached to a sliding and guiding system pulling the arched roof assembly of Athen's Olympic Stadium step-by-step into the final position.



▼ RR-cylinders provide power and precision in a special hydraulic press.



# Double-Acting Long Stroke Cylinders

## ▼ QUICK SELECTION CHART

For complete technical information see next page.

Cylinder Capacity (tons)	Stroke (in)	Model Number	Cylinder Effective Area (in <sup>2</sup> )		Oil Capacity (in <sup>3</sup> )		Collap. Height (in)
			Push	Pull	Push	Pull	
			10	10.00	RR-1010*	2.23	
	12.00	RR-1012*	2.23	.80	26.80	9.00	18.00
30	8.25	RR-308*	6.51	3.00	53.67	25.00	15.25
	14.50	RR-3014*	6.51	3.00	92.70	43.00	21.63
50	6.13	RR-506	11.06	3.40	67.77	21.00	13.06
	13.13	RR-5013	11.06	3.40	145.17	44.00	20.06
	20.13	RR-5020	11.06	3.40	222.56	68.00	28.88
75	6.13	RR-756	15.92	4.90	97.58	29.00	13.69
	13.13	RR-7513	15.92	4.90	209.00	64.00	20.69
100	6.63	RR-1006	20.65	9.60	136.93	63.00	14.06
	13.13	RR-10013	20.65	9.60	271.17	126.00	20.63
	18.13	RR-10018	20.65	9.60	374.44	174.00	27.06
150	2.25	RR-1502	30.71	14.80	69.11	33.00	7.19
	6.13	RR-1506	30.71	14.80	188.28	91.00	15.19
	13.13	RR-15013	30.71	14.80	403.27	194.00	22.20
	32.13	RR-15032	30.71	14.80	986.84	475.00	43.94
200	6.00	RR-2006	44.21	22.50	265.28	135.00	16.94
	13.00	RR-20013	44.21	22.50	574.78	293.00	23.94
	18.00	RR-20018	44.21	22.50	795.85	396.00	30.13
	24.00	RR-20024	44.21	22.50	1,061	528.00	36.13
	36.00	RR-20036	44.21	22.50	1,592	792.00	48.13
	48.00	RR-20048	44.21	22.50	2,122	1,056	60.13
300	6.00	RR-3006	70.93	38.00	425.56	228.00	19.13
	12.00	RR-30012	70.93	38.00	851.12	456.00	25.13
	18.00	RR-30018	70.93	38.00	1,277	684.00	31.13
	24.00	RR-30024	70.93	38.00	1,702	912.00	37.13
	36.00	RR-30036	70.93	38.00	2,553	1,368	49.13
	48.00	RR-30048	70.93	38.00	3,405	1,824	61.13
400	6.00	RR-4006	95.09	51.00	570.51	306.00	21.19
	12.00	RR-40012	95.09	51.00	1,141	612.00	27.19
	18.00	RR-40018	95.09	51.00	1,712	918.00	33.19
	24.00	RR-40024	95.09	51.00	2,282	1,224	39.19
	36.00	RR-40036	95.09	51.00	3,423	1,836	51.19
	48.00	RR-40048	95.09	51.00	4,564	2,448	63.19
500	6.00	RR-5006	113.15	63.00	678	378.00	22.75
	12.00	RR-50012	113.15	63.00	1,358	756.00	28.75
	18.00	RR-50018	113.15	63.00	2,037	1,134	34.75
	24.00	RR-50024	113.15	63.00	2,716	1,512	40.75
	36.00	RR-50036	113.15	63.00	4,074	2,264	52.75
	48.00	RR-50048	113.15	63.00	5,431	3,024	64.75

## RR Series



Capacity:

**10-500 tons**

Stroke:

**2.25-48.00 inches**

Maximum Operating Pressure:

**10,000 psi**



### Energpac HCR-Series

If you do not have a high-cycle application, Energpac **HCR-Series** cylinders may be the right alternative.

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### Speed Chart

See the Energpac Cylinder Speed Chart in our "Yellow Pages"

to determine your approximate cylinder speed. Page: 283



### Optional Snap-in Saddles

Optional snap-in saddles for RR-Series double-acting cylinders:

Saddle Type	Cylinder Model Number	Saddle Model Number
Flat	RR-1010, 1012	A-102F
Tilt	RR-1010, 1012	CAT-10
	RR-308, 3014	CAT-50
	RR-506, 5013	CAT-100
	RR-5020, 756	
	RR-7513	

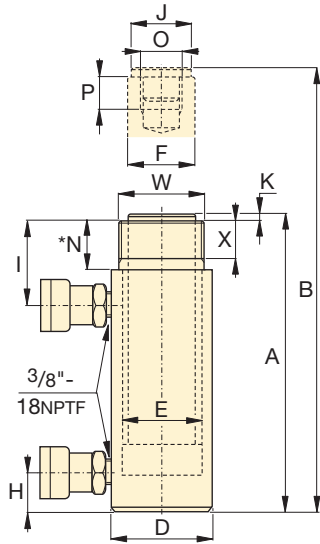
### Standard Saddles

Grooved	RR-1010, 1012	A-102G
	RR-308, 3014	A-252G

For additional information on saddles:

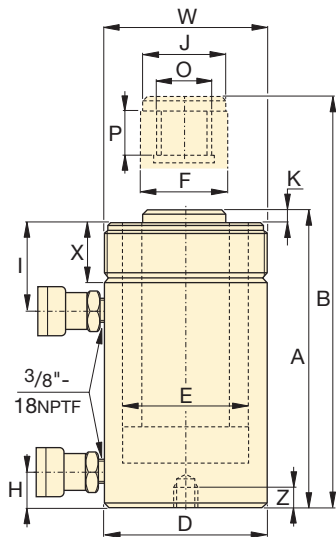
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# RR-Series, Double-Acting Cylinders

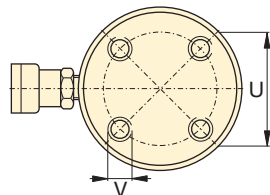


### RR-1010 to RR-3014 models

\* For RR-1010 and RR-1012:  
N = 1.26 inch; for RR-308 and  
RR-3014: N = 2.20 inch.



### RR-506 to RR-50048 models



### RR-1006 to RR-30048

No mounting holes:  
RR-506, 5013  
RR-756, 7513  
RR-1502, 15032



Cylinder retract capacity for certain RR cylinders may be less than theoretical values, as a result of reduced relief valve pressure settings:

RR-308/3014: 4000 psi  
RR-506/5013/5020: 6950 psi  
RR-756/7513: 7200 psi

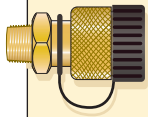
◀ For full features see page 32.

Cylinder Capacity (ton)	Stroke (in)	Model Number	Max. Cylinder Capacity (tons)		Cylinder Effective Area (in <sup>2</sup> )		Oil Capacity (in <sup>3</sup> )		Collap. Height	Ext. Height	Outside Diam.
			Push	Pull	Push	Pull	Push	Pull	A (in)	B (in)	D (in)
10	10.00	RR-1010*	11.1	4.0	2.23	.80	22.33	8.00	16.13	26.13	2.88
	12.00	RR-1012*	11.1	4.0	2.23	.80	26.80	9.00	18.00	30.00	2.88
30	8.25	RR-308*	32.5	6.0	6.51	3.00	53.67	25.00	15.25	23.50	4.00
	14.50	RR-3014*	32.5	6.0	6.51	3.00	92.70	43.00	21.63	36.13	4.00
50	6.13	RR-506	55.3	11.8	11.06	3.40	67.77	21.00	13.06	19.19	5.00
	13.13	RR-5013	55.3	11.8	11.06	3.40	145.17	44.00	20.06	33.19	5.00
	20.13	RR-5020	55.3	11.8	11.06	3.40	222.56	68.00	28.88	49.00	5.00
75	6.13	RR-756	79.6	17.6	15.92	4.90	97.58	29.00	13.69	19.81	5.75
	13.13	RR-7513	79.6	17.6	15.92	4.90	209.00	64.00	20.69	33.81	5.75
100	6.63	RR-1006	103.2	48.0	20.65	9.60	136.93	63.00	14.06	20.69	7.00
	13.13	RR-10013	103.2	48.0	20.65	9.60	271.17	126.00	20.63	33.75	7.00
	18.13	RR-10018	103.2	48.0	20.65	9.60	374.44	174.00	27.06	45.19	7.00
150	2.25	RR-1502	153.5	74.0	30.71	14.80	69.11	33.00	7.19	9.44	8.00
	6.13	RR-1506	153.5	74.0	30.71	14.80	188.28	91.00	15.19	21.31	8.00
	13.13	RR-15013	153.5	74.0	30.71	14.80	403.27	194.00	22.20	35.31	8.00
	32.13	RR-15032	153.5	74.0	30.71	14.80	986.84	475.00	43.94	76.06	8.00
200	6.00	RR-2006	221.0	112.5	44.21	22.50	265.28	135.00	16.94	22.94	9.75
	13.00	RR-20013	221.0	112.5	44.21	22.50	574.78	293.00	23.94	36.94	9.75
	18.00	RR-20018	221.0	112.5	44.21	22.50	795.85	396.00	30.13	48.13	9.75
	24.00	RR-20024	221.0	112.5	44.21	22.50	1,061	528.00	36.13	60.13	9.75
	36.00	RR-20036	221.0	112.5	44.21	22.50	1,592	792.00	48.13	84.13	9.75
300	48.00	RR-20048	221.0	112.5	44.21	22.50	2,122	1,056	60.13	108.13	9.75
	6.00	RR-3006	354.6	190.0	70.93	38.00	425.56	228.00	19.13	25.13	12.25
	12.00	RR-30012	354.6	190.0	70.93	38.00	851.12	456.00	25.13	37.13	12.25
	18.00	RR-30018	354.6	190.0	70.93	38.00	1,277	684.00	31.13	49.13	12.25
	24.00	RR-30024	354.6	190.0	70.93	38.00	1,702	912.00	37.13	61.13	12.25
400	36.00	RR-30036	354.6	190.0	70.93	38.00	2,553	1368	49.13	85.13	12.25
	48.00	RR-30048	354.6	190.0	70.93	38.00	3,405	1824	61.13	109.13	12.25
	6.00	RR-4006	475.4	255.0	95.09	51.00	570.51	306.00	21.19	27.19	14.13
	12.00	RR-40012	475.4	255.0	95.09	51.00	1,141	612.00	27.19	39.19	14.13
	18.00	RR-40018	475.4	255.0	95.09	51.00	1,712	918.00	33.19	51.19	14.13
500	24.00	RR-40024	475.4	255.0	95.09	51.00	2,282	1224	39.19	63.19	14.13
	36.00	RR-40036	475.4	255.0	95.09	51.00	3,423	1836	51.19	87.19	14.13
	48.00	RR-40048	475.4	255.0	95.09	51.00	4,564	2448	63.19	111.19	14.13
	6.00	RR-5006	565.7	315.0	113.15	63.00	678.92	378.00	22.75	28.75	15.63
	12.00	RR-50012	565.7	315.0	113.15	63.00	1,358	756.00	28.75	40.75	15.63
500	18.00	RR-50018	565.7	315.0	113.15	63.00	2,037	1134	34.75	52.75	15.63
	24.00	RR-50024	565.7	315.0	113.15	63.00	2,716	1512	40.75	64.75	15.63
	36.00	RR-50036	565.7	315.0	113.15	63.00	4,074	2268	52.75	88.75	15.63
48.00	RR-50048	565.7	315.0	113.15	63.00	5,431	3024	64.75	112.75	15.63	

\* For RR-1010 and RR-1012: N = 1.26 inch; for RR-308 and RR-3014: N = 2.20 inch.



# Double-Acting Long Stroke Cylinders



### Couplers Included!

CR-400 couplers included on all models. Fits all HC-Series hoses.

Capacity:  
**10-500 tons**

Stroke:  
**2.25-48.00 inches**

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

## RR Series



Cylinder Bore Diameter	Plunger Diameter	Base to Adv. Port	Top to Return Port	Saddle Diameter	Saddle Protrusion from Plngr.	Plunger Internal Thread	Plunger Thread Length	Base Mounting Holes			Collar Thread	Collar Thread Length	Weight (lbs)	Model Number
								Bolt Cir. Diam.	Thread	Thread Depth				
E (in)	F (in)	H (in)	I (in)	J (in)	K (in)	O (in)	P (in)	U (in)	V (in)	Z (in)	W (in)	X (in)		
1.69	1.38	1.44	2.25	1.38	.24	1-8	1.00	-	-	-	2 1/4-14	1.06	28	RR-1010*
1.69	1.38	1.44	2.25	1.38	.24	1-8	1.00	-	-	-	2 1/4-14	1.06	31	RR-1012*
2.88	2.13	1.44	3.19	2.00	.41	1 1/2-16	1.00	-	-	-	3 5/16-12	1.94	40	RR-308*
2.88	2.13	1.56	3.19	2.00	.41	1 1/2-16	1.00	-	-	-	3 5/16-12	1.94	64	RR-3014*
3.75	3.13	1.13	3.00	2.81	.11	1-12	1.00	-	-	-	5-12	2.00	67	RR-506
3.75	3.13	1.13	3.00	2.81	.11	1-12	1.00	-	-	-	5-12	2.00	115	RR-5013
3.75	3.13	2.25	3.00	2.81	.11	1-12	1.00	3.00	-	-	5-12	2.00	150	RR-5020
4.50	3.75	1.19	3.00	2.81	.25	1-12	1.50	-	-	-	5 3/4-12	1.50	92	RR-756
4.50	3.75	1.19	3.19	2.81	.25	1-12	1.50	-	-	-	5 3/4-12	1.50	150	RR-7513
5.13	3.75	1.50	2.81	3.00	.13	1 3/4-12	1.38	5.50	3/4-10	1.00	6 7/8-12	2.00	135	RR-1006
5.13	3.75	1.50	2.81	3.00	.13	1 3/4-12	1.38	5.50	3/4-10	1.00	6 7/8-12	2.00	205	RR-10013
5.13	3.75	1.63	3.63	3.00	.13	1 3/4-12	1.38	5.50	3/4-10	1.00	6 7/8-12	2.00	260	RR-10018
6.25	4.50	.88	2.63	3.67	.06	-	-	-	-	-	-	-	110	RR-1502
6.25	4.50	1.94	3.31	4.49	.75	3 3/8-16	1.38	6.25	3/4-16	1.00	8-12	2.36	205	RR-1506
6.25	4.50	1.94	3.31	4.49	.75	3 3/8-16	1.38	6.25	3/4-16	1.00	8-12	2.36	275	RR-15013
6.25	4.50	3.31	3.31	4.49	.75	3 3/8-16	1.38	-	-	-	8-12	2.36	525	RR-15032
7.50	5.25	2.25	3.81	5.25	.88	-	-	5.00	1-8	1.00	-	-	325	RR-2006
7.50	5.25	2.25	3.81	5.25	.88	2 1/2-12	2.50	5.00	1-8	1.00	9 3/4-12	2.13	440	RR-20013
7.50	5.25	3.38	4.00	5.25	.88	2 1/2-12	2.50	5.00	1-8	1.00	9 3/4-12	2.13	450	RR-20018
7.50	5.25	3.38	4.00	5.25	.88	2 1/2-12	2.50	5.00	1-8	1.00	9 3/4-12	2.13	616	RR-20024
7.50	5.25	3.38	4.00	5.25	.88	2 1/2-12	2.50	5.00	1-8	1.00	9 3/4-12	2.13	845	RR-20036
7.50	5.25	3.38	4.00	5.25	.88	2 1/2-12	2.50	5.00	1-8	1.00	9 3/4-12	2.13	1065	RR-20048
9.50	6.50	3.50	4.50	6.50	1.13	2 1/2-12	3.25	6.25	1 1/4-7	1.75	12 1/4-12	2.31	441	RR-3006
9.50	6.50	3.50	4.50	6.50	1.13	2 1/2-12	3.25	6.25	1 1/4-7	1.75	12 1/4-12	2.31	608	RR-30012
9.50	6.50	3.50	4.50	6.50	1.13	2 1/2-12	3.25	6.25	1 1/4-7	1.75	12 1/4-12	2.31	776	RR-30018
9.50	6.50	3.50	4.50	6.50	1.13	2 1/2-12	3.25	6.25	1 1/4-7	1.75	12 1/4-12	2.31	1034	RR-30024
9.50	6.50	3.50	4.50	6.50	1.13	2 1/2-12	3.25	6.25	1 1/4-7	1.75	12 1/4-12	2.31	1385	RR-30036
9.50	6.50	3.50	4.50	6.50	1.13	2 1/2-12	3.25	6.25	1 1/4-7	1.75	12 1/4-12	2.31	1720	RR-30048
11.00	7.50	4.25	5.25	7.50	1.13	3-12	3.75	8.00	1 1/2-6	2.00	14 1/8-8	2.56	670	RR-4006
11.00	7.50	4.25	5.25	7.50	1.13	3-12	3.75	8.00	1 1/2-6	2.00	14 1/8-8	2.56	880	RR-40012
11.00	7.50	4.25	5.25	7.50	1.13	3-12	3.75	8.00	1 1/2-6	2.00	14 1/8-8	2.56	1000	RR-40018
11.00	7.50	4.25	5.25	7.50	1.13	3-12	3.75	8.00	1 1/2-6	2.00	14 1/8-8	2.56	1317	RR-40024
11.00	7.50	4.25	5.25	7.50	1.13	3-12	3.75	8.00	1 1/2-6	2.00	14 1/8-8	2.56	1746	RR-40036
11.00	7.50	4.25	5.25	7.50	1.13	3-12	3.75	8.00	1 1/2-6	2.00	14 1/8-8	2.56	2162	RR-40048
12.00	8.00	4.75	6.00	8.00	1.13	3 1/4-12	4.25	8.00	1 3/4-5	2.12	15 5/8-8	3.13	953	RR-5006
12.00	8.00	4.75	6.00	8.00	1.13	3 1/4-12	4.25	8.00	1 3/4-5	2.12	15 5/8-8	3.13	1300	RR-50012
12.00	8.00	4.75	6.00	8.00	1.13	3 1/4-12	4.25	8.00	1 3/4-5	2.12	15 5/8-8	3.13	1500	RR-50018
12.00	8.00	4.75	6.00	8.00	1.13	3 1/4-12	4.25	8.00	1 3/4-5	2.12	15 5/8-8	3.13	1800	RR-50024
12.00	8.00	4.75	6.00	8.00	1.13	3 1/4-12	4.25	8.00	1 3/4-5	2.12	15 5/8-8	3.13	2210	RR-50036
12.00	8.00	4.75	6.00	8.00	1.13	3 1/4-12	4.25	8.00	1 3/4-5	2.12	15 5/8-8	3.13	2700	RR-50048