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Spring Return Model Shown

## SIMPLEX CYLINDER PRODUCT LINE OVERVIEW

### ✓ Wide Variety

Simplex offers the widest selection of cylinder styles, tonnages and strokes to match your specific requests.

### ✓ Built for Rugged Industrial/Construction Use

All Simplex cylinders meet ANSI/ASME B30.1 SAFETY STANDARDS. Stop rings, plated pistons and heavy duty construction provide trouble free operation and long life.

### ✓ Standard Design Elements

Cylinders are designed for 10,000 psi operating pressure which offers a smaller footprint and greater force.

### ✓ Versatile Fixturing

Threaded collars and internal plunger threads withstand full loading for maximum flexibility in fixturing.

### ✓ Piston Blow-Out Protection

All Simplex cylinders (*excluding CLP Series*) incorporate a positive piston stop to limit piston travel at the end of the stroke, and allows the cylinder to be operated at full stroke. Piston stops add strength and safety to your cylinder.

### ✓ Protection from Contamination

Polyurethane wipers clean the rod surface during retraction, protecting the inner cylinder assembly from dirt, moisture and other contaminants.

## SINGLE ACTING



Single acting cylinders are hydraulically driven in one direction. These cylinders are used in many general purpose applications when retract speed is not a requirement. This cylinder type requires a pump source with a single acting valve for proper operation.

Both Spring Return and Load Return cylinders are constructed and operated in a similar manner, but function differently on the return.

- Spring Return cylinders are hydraulically extended, but utilize a spring for retraction assistance.
- Load Return cylinders are hydraulically extended and retracted by the load or other external forces.
- Simplex 3 Way, 3 Position Suc-O-Matic valve can draw hydraulic oil out of any single acting cylinder. In the retract position, the valve generates enough suction to fully retract any single acting load return cylinder automatically.

## DOUBLE ACTING



Double acting cylinders are hydraulically driven in both directions. These cylinders are used in many general purpose applications where retraction speed is required or the mechanical forces required for return is not available. This cylinder type requires a pump source with a 4 way valve for proper operation.

How they operate:

- Oil entering the advance port exerts pressure on the bottom plunger face raising the piston upward and oil on the retract side exits the retract port.
- When oil is pumped into the retract port, it exerts pressure on the top plunger face causing the plunger to retract and oil exits the advance port.
- A safety relief is installed on the retract side of all Simplex double acting cylinders to prevent over-pressurization in the event the retract line has been blocked.

## CENTER HOLE



Center hole cylinders are available in both single and double acting styles. These cylinders are primarily used for pushing and pulling applications. Both styles have a center tube that allows a rod or cable to pass through the cylinder and assist in tensioning / pulling applications.

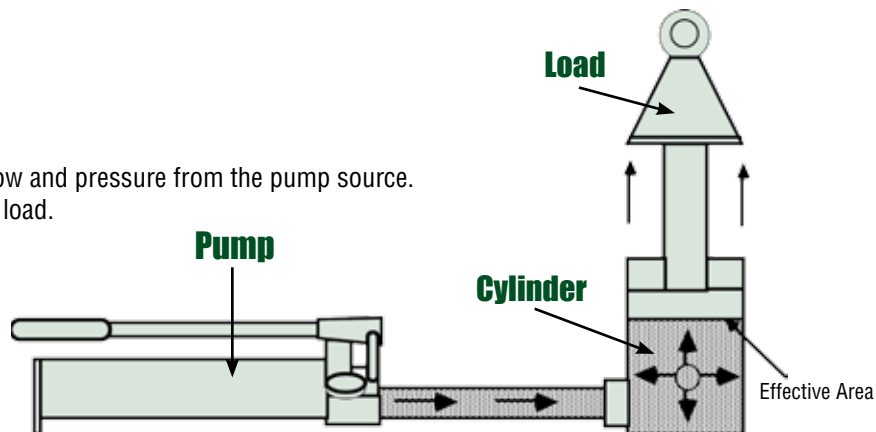
Both single acting and double acting center-hole cylinders are constructed and operated in a similar manner to their standard counterparts.

- Single acting center-hole cylinders utilize a spring for retraction. This cylinder type requires a pump source with a single acting valve for proper operation.
- Double acting center-hole cylinders are hydraulically extended and retracted. This cylinder type requires a pump source with a 4 way valve for proper operation.

## Force & Speed Calculations

**Flow:** Created by the pump source.

**Pressure:** Generated by resistance to flow and pressure from the pump source. This resistance is usually the result of a load.



**Force:** The amount of force a hydraulic cylinder can generate is equal to hydraulic pressure times the effective area of the cylinder. (**Effective area is the surface area of the piston face in square inches.**) For multiple cylinder systems, multiply the effective area times the number of cylinders times pressure to determine system force.

### Formula for Calculation of Output Force:

$$\frac{\text{psi} \times \text{Cylinder Effective Area} \times \text{No. of Cylinders}}{2,000} = \text{TONS}$$

**Speed:** When using a “power pump” the speed at which your cylinder will lift is determined by dividing the pump’s flow by the cylinder’s effective area.

### Formula for Calculation of Lifting Speed:

$$\frac{\text{Pump Flow Per Minute}}{\text{Cylinder Effective Area} \times \text{No. of Cylinders}} = \frac{\text{in./min.}}{\text{Piston Travel}}$$

## SIMPLEX CYLINDERS AT A GLANCE CHART

Cylinder Series	Description/Applications	Cylinder Type	Plunger Type	Capacity (Tons)	Strokes (in.)	Page No.(s)
R	General Purpose Spring Return For Fast Retraction	Single Acting	Solid	5 - 100	5/8 - 14 1/4	10-11
RAS	Lightweight, General Purpose Spring Return			30 - 150	2 - 10	26
RAL	Lightweight Load Holding Locknut Spring Return			50 - 150	2 - 10	27
CLP	Low Profile Locknut			60 - 500	1 31/32 - 1 15/19	24
RAC	Lightweight Center Hole Spring Return			Double Acting	Center Hole	30 - 60
RACD	Lightweight Center Hole	30 - 150	2 - 10			29
RLS	Low Height Spring Return	Single Acting	Solid	10 - 100	1 1/2 - 2 1/4	12
RFS	Very Low Height Spring Return			5 - 150	7/16 - 5/8	13
RP	Pull Cylinder Spring Return			2 - 5	5 - 5 1/2	14
RLR	Jacking Cylinder Load Return			30 - 1,000	2 - 12	18-19
RLN	Mechanical Load Holding / Locknut Load Return			30 - 1,000	2 - 12	20-21
RC	Single Acting Center Hole			Double Acting	Center Hole	12 - 100
RCD	Double Acting Center Hole	30 - 646	1 - 10			17
RDP	Double Acting Pull Cylinder	Solid	10 - 100			6
RDA	Double Acting Controlled Retraction / Fast Cycling		10 - 1,000	2 - 24	22-23	

# STEEL CYLINDERS

Spring Return  
5-100 Tons



This R10010 is used to press the drive shaft into a large industrial fan during standard maintenance. When combined with a Simplex power pump, this job was completed quickly and safely.

## SIMPLEX ADVANTAGES

- ✓ HD internal spring for fast retract assistance.
- ✓ Heat treated, load caps are standard.
- ✓ Stop ring for piston blow-out protection.
- ✓ Plated piston resists scoring & corrosion.
- ✓ High flow couplers are plated to resist corrosion.
- ✓ Rod wiper protects inner cylinder from dirt.



R1006 Shown  
See table for additional models

### HAND PUMPS



For manual portable power on demand, Simplex offers an extensive line of heavy duty, easy to transport Hand Pumps. - Pg. 30

### HOSES



Large selection of standard, heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor. - Pg. 82-83

### GAUGES



Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit. - Pg. 81

### MANIFOLDS



Simplex manifolds are the ideal solution in obtaining precise control when operating multiple cylinders. - Pg. 77

## Design Construction

### SPRING



High tensile strength material and spring rate ensures fast and reliable retraction.

### COLLAR THREADS



Standard collar threads on all models for easy fixturing.

### R SERIES CYLINDERS



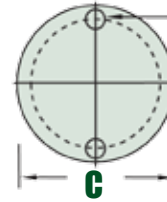
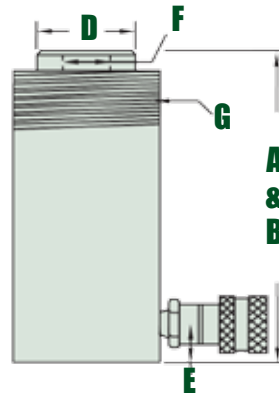
Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.

# STEEL CYLINDERS

Spring Return  
5-100 Tons

## Standard Base Mounting Holes R51 through R10010 Cylinders

Model	Bolt Circle (in)	Thread (in)	Thread Depth (in)
5 Ton*	1	1/4 - 20 UNC	.56
10 Ton	1.56	5/16 - 18 UNC	.50
15 Ton	1.88	3/8 - 16 UNC	.50
25 Ton	2.31	1/2 - 13 UNC	.75
55 Ton	3.75	1/2 - 13 UNC	.75
100 Ton	5.50	3/4 - 10 UNC	1.00



Refer to Base Mounting Table

### Product Ordering & Dimensional Specifications

Model	Cap. (Tons)	Stroke (in)	Oil Cap. Req'd (cu in)	Ram Bore Dia. (in)	Effect Area. (sq.in.)	Pres. @ Cap (psi)	A	B	C	D	E	F		G		Wgt. (lbs)
							Min Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Base to Port C/L (in)	Piston I.D. Thrds (in)	Piston Thrds Depth (in)	Collar Thrds (in)	Collar Thru Lgth (in)	
R50	5	5/8	.6	1 1/8	.99	10,000	1 5/8	2 1/4	2 9/16	1	3/4	----	----	----	----	2.5
R51	5	1.13	.99	1.13	.99	10,000	4.37	5.31	1.5	1.0	.75	3/4 --16	3/4	1 1/2 -- 16	1 1/8	2.3
R53	5	3.13	2.98	1.13	.99	10,000	6.55	9.49	1.5	1.0	.75	3/4 --16	3/4	1 1/2 -- 16	1 1/8	3.3
R55	5	5.25	4.97	1.13	.99	10,000	8.55	13.61	1.5	1.0	.75	3/4 --16	3/4	1 1/2 -- 16	1 1/8	4.1
R57	5	7.13	6.96	1.13	.99	10,000	10.78	17.72	1.5	1.0	.75	3/4 --16	3/4	1 1/2 -- 16	1 1/8	5.3
R59	5	9.13	9.07	1.13	.99	10,000	12.78	21.72	1.5	1.0	.75	3/4 --16	3/4	1 1/2 -- 16	1 1/8	6.1
R101	10	1.06	2.3	1.69	2.24	8,945	3.66	4.59	2.25	1.5	.75	----	----	2 1/4 -- 14	1 1/8	4
R102	10	2.13	4.18	1.69	2.24	8,945	5.03	6.91	2.25	1.5	.75	1 -- 8	3/4	2 1/4 -- 14	1 1/8	5.1
R104	10	4.13	9.2	1.69	2.24	8,945	6.70	10.88	2.25	1.5	.75	1 -- 8	3/4	2 1/4 -- 14	1 1/8	7.2
R106	10	6.0	13.7	1.69	2.24	8,929	9.78	15.59	2.25	1.5	.75	1 -- 8	3/4	2 1/4 -- 14	1 1/8	9.8
R108	10	8.0	17.89	1.69	2.24	8,929	11.78	19.59	2.25	1.5	.75	1 -- 8	3/4	2 1/4 -- 14	1 1/16	12
R1010	10	10.0	22.65	1.69	2.24	8,929	13.78	23.59	2.25	1.5	.75	1 -- 8	3/4	2 1/4 -- 14	1 1/8	14
R1012	10	12.0	26.84	1.69	2.24	8,929	15.59	27.59	2.25	1.5	.75	1 -- 8	3/4	2 1/4 -- 14	1 1/16	15
R1014	10	14.0	31.31	1.69	2.24	8,929	17.78	31.59	2.25	1.5	.75	1 -- 8	3/4	2 1/4 -- 14	1 1/16	18
R152	15	2.13	6.28	2.0	3.14	9,554	5.83	7.71	2.75	1.63	.75	1 -- 8	1	2 3/4 -- 16	1 3/16	9
R154	15	4.13	12.57	2.0	3.14	9,554	7.83	11.71	2.75	1.63	.75	1 -- 8	1	2 3/4 -- 16	1 3/16	11
R156	15	6.38	19.0	2.0	3.14	9,554	11.03	17.16	2.75	1.63	1	1 -- 8	1	2 3/4 -- 16	1 3/16	15
R1510	15	10.38	31.4	2.0	3.14	9,554	15.03	25.16	2.75	1.63	1	1 -- 8	1	2 3/4 -- 16	1 3/16	21
R1514	15	14.38	44.0	2.0	3.14	9,554	19.03	33.16	2.75	1.63	1	1 -- 8	1	2 3/4 -- 16	1 3/16	26
R251	25	1.0	5.16	2.56	5.16	9,690	5.47	6.22	3.5	1.63	1	1 1/2 -- 16	1 1/8	3 5/16 -- 12	1 15/16	13
R252	25	2.0	10.31	2.56	5.16	9,690	6.47	8.22	3.5	1.63	1	1 1/2 -- 16	1 1/8	3 5/16 -- 12	1 15/16	14
R254	25	4.0	20.63	2.56	5.16	9,690	8.47	12.22	3.5	1.63	1	1 1/2 -- 16	1 1/8	3 5/16 -- 12	1 15/16	18
R256	25	6.25	32.23	2.56	5.16	9,690	10.73	16.73	3.5	1.63	1	1 1/2 -- 16	1 1/8	3 5/16 -- 12	1 15/16	22
R258	25	8.25	42.55	2.56	5.16	9,690	12.73	20.73	3.5	1.63	1	1 1/2 -- 16	1 1/8	3 5/16 -- 12	1 15/16	27
R2510	25	10.25	52.86	2.56	5.16	9,690	14.73	24.73	3.5	1.63	1	1 1/2 -- 16	1 1/8	3 5/16 -- 12	1 15/16	31
R2512	25	12.25	63.18	2.56	5.16	9,690	16.73	28.73	3.5	1.63	1	1 1/2 -- 16	1 1/8	3 5/16 -- 12	1 15/16	36
R2514	25	14.25	73.49	2.56	5.16	9,690	18.73	32.73	3.5	1.63	1	1 1/2 -- 16	1 1/8	3 5/16 -- 12	1 15/16	39
R308	30	8 1/4	53.6	2 7/8	6 1/2	9,245	15 1/4	23 1/2	4	2 1/4	2 1/4	1 1/2 -- 16	1	3 5/16 -- 12	1 15/16	40
R552	55	2.0	22.08	3.75	11.04	9,960	6.94	8.81	5	3.13	1.38	----	----	5 -- 12	2 13/16	33
R554	55	4.0	44.16	3.75	11.04	9,960	8.94	12.81	5	3.13	1.38	----	----	5 -- 12	2 13/16	42
R556	55	6.25	69.0	3.75	11.04	9,960	11.13	17.25	5	3.13	1.38	----	----	5 -- 12	2 13/16	51
R5513	55	13.25	146.34	3.75	11.04	9,960	18.26	31.38	5	3.13	1.38	----	----	5 -- 12	2 13/16	83
R756	75	6.0	95.4	4.5	15.9	9,430	11.63	17.38	5.75	3.75	1 3/16	----	----	5 3/4 -- 12	1 3/4	65
R7513	75	13.06	208.0	4.5	15.9	9,430	18.63	31.44	5.75	3.75	1 3/16	----	----	5 3/4 -- 12	1 3/4	130
R1006	100	6 5/8	137.0	5 1/8	20 5/8	9,695	13 1/4	20 11/16	7	4 1/8	5/8	----	----	6 7/8 -- 12	1 3/4	90
R10010	100	10 1/4	212.0	5 1/8	20 5/8	9,695	16 7/8	27 15/16	7	4 1/8	5/8	----	----	6 7/8 -- 12	1 3/4	110

\* R50 Base Mounting hole 7/32 through x 23/64 C bore (1/4" depth).

# STEEL CYLINDERS

Low Profile Spring Return  
10-100 Tons



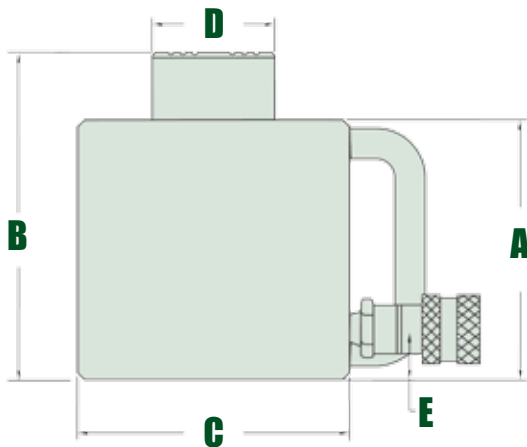
Simplex RLS Series provides the ideal fit and force required for most bridge lifting and pier cap maintenance jobs. Compact, light weight and tough as nails, Simplex cylinders are at home on any construction site.

## SIMPLEX ADVANTAGES

- ✓ Compact low-profile design.
- ✓ HD spring for fast retraction.
- ✓ Grooved plunger to stabilize the load.
- ✓ Stop ring for piston blow-out protection.
- ✓ Rod wiper protects inner cylinder from dirt.
- ✓ Plated piston to resist scoring & corrosion.



RLS201 Shown  
See table for additional models



### PUMPS

Simplex offers a wide variety of lightweight power pumps to fit any application.

- Pg. 42



### HOSES

Large selection of standard, heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor.

- Pg. 82-83



### GAUGES

Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit.

- Pg. 81



### RLS SERIES CYLINDERS

Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.

## Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd (cu in)	Ram Bore Dia. (in)	Effect Area (sq in)	Pressure @ Cap. (psi)	A	B	C	D	E	Wgt. (lbs)
							Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Base to Port C/L (in)	
RLS101	10	1 1/2	3.4	1 1/16	2.24	8,940	3 15/32	4 31/32	2 3/4	1 1/2	1/16	9
RLS201	20	1 3/4	7.8	2 3/8	4.43	9,030	3 7/8	5 5/8	3 5/8	2	1/16	11
RLS302	30	2 7/16	15.8	2 7/8	6.49	9,250	4 5/8	7 1/16	4	2 5/8	3/4	15
RLS502	50	2 3/8	22.8	3 1/2	9.62	10,400	4 13/16	7 3/16	4 7/8	2 3/4	15/16	24
RLS1002	100	2 1/4	44.2	5	19.63	10,200	5 1/16	7 13/16	6 1/2	3 5/8	1 1/4	50

# STEEL CYLINDERS

Flat Jack Spring Return  
5-150 Tons



Simplex RFS Series are designed specifically for near impossible lifting, clamping or positioning jobs where space is at a premium. Ideal for break outs or start up spreading jobs. These mini-monsters pack up to 150 tons of force into a portable package.

## SIMPLEX ADVANTAGES

- ✓ Plated piston to resist scoring & corrosion.
- ✓ Steel piston for protection against load damage.
- ✓ Mounting holes in 5, 10 & 20 ton models.
- ✓ Low profile, high tonnage design.
- ✓ High flow coupler.
- ✓ Rod wiper protects inner cylinder from dirt.



RFS20 Shown  
See table for additional models

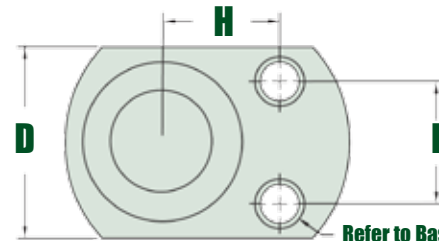


**LIGHTWEIGHT HAND PUMPS**  
Built for industrial use, Simplex carries the widest variety of Hand Pumps for specific applications.

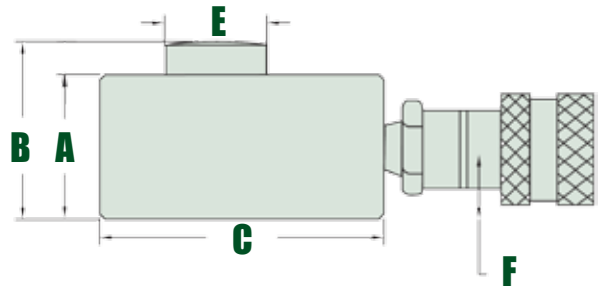
- Pg. 30



**RFS SERIES CYLINDERS**  
Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.



Refer to Base Mounting Table



## Base Mounting Table

Model	H (in)	I (in)	Base Mounting Hole Dimensions (in)
5 Ton	1	1 1/8	7/32 through x 23/64 C'Bore (1/4 Deep)
10 Ton	1 1/32	1 13/32	9/32 through x 27/64 C'Bore (5/16 Deep)
20 Ton	1 1/16	1 15/16	25/64 through x 19/22 C'Bore (25/64 Deep)

## Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd (cu in)	Ram Bore Dia. (in)	Effect Area (sq in)	Pressure @ Cap. (psi)	A	B	C	D	E	F	Wgt. (lbs)
							Min. Ht. (in)	Ext. Ht. (in)	Body Length (in)	Body Width (in)	Piston O.D. (in)	Base to Port C/L (in)	
R50	5	5/8	0.6	1 1/8	.99	10,000	1 5/8	2 1/4	2 3/16	1 5/8	1	3/4	2.5
RFS10	10	7/16	1.0	1 11/16	2.24	8,940	1 11/16	2 5/8	3 1/4	2 3/16	3/4	3/4	3.3
RFS20	20	7/16	1.9	2 3/8	4.43	9,030	2 1/32	2 19/32	4	3	1 1/8	3/4	6
RFS30	30	1/2	3.2	2 7/8	6.49	9,250	2 5/16	2 13/16	4 1/2	3 3/4	1 3/8	3/4	8.5
RFS50	50	5/8	6.0	3 1/2	9.62	10,400	2 5/8	3 3/4	5 1/2	4 1/2	1 3/4	3/4	14.3
RFS75	75	5/8	10.0	4 1/2	15.90	9,440	3 1/8	3 3/4	6 1/2	5 1/2	2 1/8	3/4	24.5
RFS100	100	5/8	12.3	5	19.63	10,200	3 3/8	4	7	6	2 1/2	3/4	31
RFS150	150	9/16	17.2	6 1/4	30.66	9,785	3 15/16	4 1/2	8 1/2	7 1/2	3	15/16	50.5





# STEEL CYLINDERS

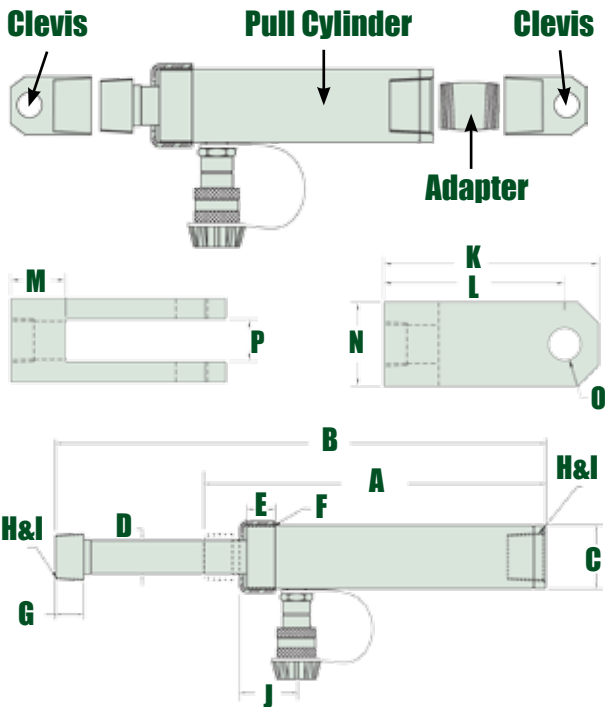
Pull Cylinder Single Acting  
2-5 Tons



The RP55A pull cylinder and a G5 Air Pump was needed to position structural I-Beams for welding. "Simplex products are used for a variety of tough jobs on our site".



RP55A Shown  
See table for additional models



## SIMPLEX ADVANTAGES

- ✓ Designed for pulling & tensioning applications.
- ✓ High strength, all steel construction.
- ✓ Chrome plated piston rod resists corrosion.
- ✓ Spring loaded piston rod automatically extends when pressure is released.
- ✓ Rod wiper protects inner cylinder from dirt.

### LIGHTWEIGHT HAND PUMPS

Built for industrial use, Simplex carries the widest variety of Hand Pumps for specific applications.

- Pg. 30



### HOSES

Large selection of standard, heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor.

- Pg. 82-83



### RP SERIES CYLINDERS

Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.



### Clevis Dimensions

Model Number	K (in)	L (in)	M (in)	N (in)	O (in)	P (in)
RPC25	5 1/8	4 9/16	1 1/8	2	3/4	1
RPC55	6	5	1 1/2	2 1/2	7/8	1 1/2

Both models include adapter and clevis.

### Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd. (cu in)	Pres. @ Cap. (psi)	A	B	C	D	E	F	G	H	I	J	Wgt. (lbs)
					Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Collar Thread (in)	Collar Thread Length (in)	Piston Adapter (in)	NPTF Thread (in)	NPTF Thread (in)	Cylinder To Port (in)	
RP25A	2	5	2.8	7,250	9 9/16	14 9/16	1 3/4	3/4	1 1/2-16	1	1	3/4-14	3/4-14	1 1 1/16	4
RP55A	5	5 1/2	6.2	8,850	11 7/8	17 7/8	2 1/4	1 1/16	2 1/4-14	1	1 3/8	1 1/4-11 1/2	1 1/4-11 1/2	1 1 1/16	11

# STEEL CYLINDERS

Pull Cylinder Double Acting  
10-100 Tons



The Simplex RDP506 is used by this manufacturer of heavy steel cables. "We do numerous pull tests everyday; the Simplex equipment is fast and reliable".



RDP506 Shown  
See table for additional models

## SIMPLEX ADVANTAGES

- ✓ High strength steel construction for long cylinder life.
- ✓ Hard chrome plated steel piston rods resist corrosion.
- ✓ Piston rod wiper reduces contamination.
- ✓ Ideal for joining steel plates for welding.
- ✓ Useful for the fabrication industry as well as cable tensioning.
- ✓ Double acting cylinder provides quick & full retraction.



### PUMPS

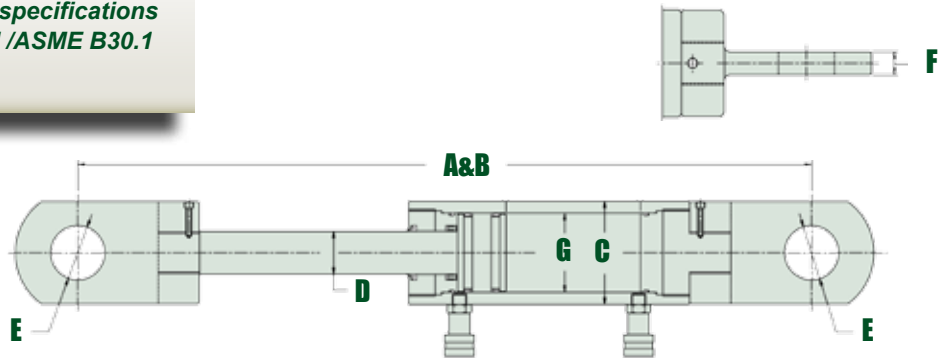
Simplex offers a wide variety of lightweight power pumps to fit any application.

- Pg. 42



### RDP SERIES CYLINDERS

Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.



## Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd. (cu.in.)	Effect Area (sq in)	A	B	C	D	E	F	G	Wgt. (lbs)
					Closed Dimensions (in)	Open Dimensions (in)	Body O.D. (in)	Piston O.D. (in)	Clevis Hole Dia. (in)	Clevis Width (in)	Bore Dia. (in)	
RDP106	10	6	14.39	2.4	21.1	27.1	2.4	1.6	1.2	0.8	2.4	30.8
RDP306	30	6	39.04	6.6	26.3	32.3	6.6	1.9	2.4	2.4	3.5	63.8
RDP506	50	6	69.25	11.7	25.2	31.2	11.7	2.4	2.8	2.8	4.5	99
RDP1006	100	6	131.33	22.2	29.1	35.1	22.2	2.6	3.2	3.2	5.9	193.6



# STEEL CYLINDERS

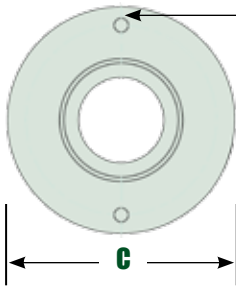
Center Hole Single Acting  
12-100 Tons



Due to damage caused by earthquakes and age, the roof of the Mission San Juan Capistrano was in need of repair. Twenty - four Simplex RC121 cylinders were used to transfer the load so four repairs could be made.



RC302 Shown  
See table for additional models

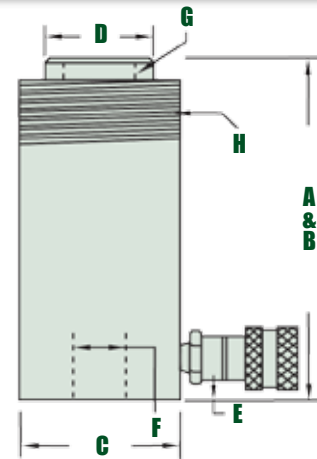


### Base Mounting Hole Dimensions

Model	Bolt Circle (in)	Thread (in)	Thread Depth (in)
12 Ton	2.00	5/16 - 18 UNC	5/16
20 Ton	3.25	3/8 - 16 UNC	7/16
30 Ton	3.63	3/8 - 16 UNC	3/8
60 Ton	5.13	1/2 - 13 UNC	7/16
100 Ton	----	----	---

## SIMPLEX ADVANTAGES

- ✓ Double wipers protect against contamination.
- ✓ Large center hole for greater flexibility.
- ✓ Heavy Duty spring for fast retraction.
- ✓ Designed for both push & pull forces.
- ✓ Collar threads for easy fixturing.
- ✓ Precision construction that prevents seal extrusion.



### Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd. (cu.in)	Effect Area (sq. in.)	Pres. @ Cap. (psi)	A	B	C	D	E	F	G		H		Wgt. (lbs)
						Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Base to Port C/L (in)	Center Hole Dia. (in)	Piston I.D. Threads (in)	Piston Thrd. Depth (in)	Collar Thrds. (in)	Collar Thrd. Lgth. (in)	
RC120	12	5/16	.90	2.36	10,185	2 3/16	2 1/2	2 3/4	1 3/8	7/16	49/64	3/4-16	5/8	2 3/4-16	1 13/16	3.5
RCQ120	12	5/16	.90	2.36	10,185	2 3/16	2 1/2	2 3/4	1 3/8	7/16	49/64	3/4-10	5/8	2 3/4-16	1 13/16	3.5
RC121	12	1 5/8	4.5	2.36	10,185	4 3/4	6 3/8	2 3/4	1 3/8	25/32	49/64	---	---	2 3/4-16	1 13/16	6.5
RC1211	12	1 5/8	4.5	2.36	10,185	4 3/4	6 3/8	2 3/4	1 3/8	25/32	49/64	3/4-16	5/8	2 3/4-16	1 13/16	6.5
RC123	12	3	8.3	2.36	10,185	7 1/4	10 1/4	2 3/4	1 3/8	25/32	49/64	---	---	2 3/4-16	1 13/16	10
RC202	20	2	11	5.30	7,545	6 3/16	8 3/16	4	2 1/8	51/64	1 1/16	1 9/16-16	3/4	3 7/8-12	1 1/2	17
RC206	20	6	32	5.30	7,545	11 3/16	17 3/16	4	2 1/8	51/64	1 1/16	1 9/16-16	3/4	3 7/8-12	1 1/2	31
RC302	30	2 1/2	22	8.64	6,950	7	9 1/2	5	2 1/2	13/16	1 5/16	1 13/16-16	7/8	4 1/2-12	1 3/4	26
RC306	30	6 1/8	64	8.64	6,950	12 1/4	18 3/8	5	2 1/2	13/16	1 5/16	1 13/16-16	7/8	4 1/2-12	1 3/4	52
RC603	60	3	44	14.58	8,230	8 21/32	11 21/32	6 3/4	4	13/16	2 1/8	2 3/4-16	3/4	6 1/4-12	2	68
RC606	60	6	88	14.58	8,230	12 21/32	18 21/32	6 3/4	4	13/16	2 1/8	2 3/4-16	3/4	6 1/4-12	2	80
RC1003	100	3	62	20.60	9,700	9	12	8 1/4	5	1	3 1/8	4-16	1	---	---	99

# STEEL CYLINDERS

Center Hole Double Acting  
30-500 Tons



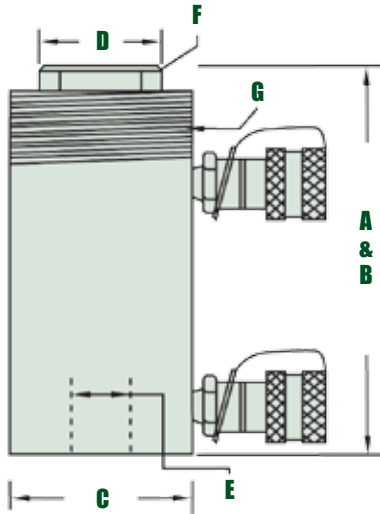
These 100 ton RCD cylinders are being used to construct grid sections for a bridge being built over the Susquehanna River at the mouth of the Chesapeake Bay.

## SIMPLEX ADVANTAGES

- ✓ Relief valve prevents damage in case of over pressurization.
- ✓ Stop ring for piston blow-out protection.
- ✓ Design allows for both push & pull forces.
- ✓ Double rod wiper protects against contamination.

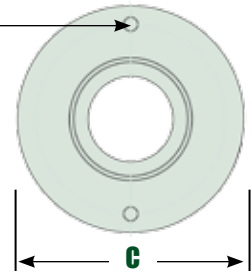


RCD1006 Shown  
See table for additional models



### Base Mounting Hole Dimensions

Model	Bolt Circle (in)	Thread (in)	Thread Depth (in)
30 Ton	3.63	3/8 - 16 UNC	.375
60 Ton	5.12	1/2 - 13 UNC	.438
100 Ton	7	5/8 - 11 UNC	.75



## Product Ordering & Dimensional Specifications

Model	Push Cap. (tons)	Pull Cap. (tons)	Stroke (in)	Oil Cap. Req'd. (cu in)	Push Effect Area (sq in)	Pres. @ Cap. (psi)	A	B	C	D	E	F		G		Wgt. (lbs)
							Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Center Hole Dia. (in)	Piston I.D. Thrds. (in)	Piston Thrd. Depth (in)	Collar Thrds. (in)	Collar Thrd. Lgth. (in)	
RCD302	30	17.7	2	8.6	8.6	6,950	7	9	5	2 1/2	1 5/16	4 1/2-12	1 3/4	1 13/16-16	7/8	48
RCD307	30	17.7	7	24.75	8.6	6,950	12 1/4	19 1/4	5	2 1/2	1 5/16	4 1/2-12	1 3/4	1 13/16-16	7/8	50
RCD6010	60	45	10	55	14.5	8,230	15 1/2	25 1/2	6 3/4	4	2 1/8	---	---	---	---	95
RCD1001	100	68	1	9.0	20.6	9,700	7	9	8 1/4	5	3 1/8	---	---	---	---	85
RCD1003	100	68	3	21.1	20.6	9,700	9	12	8 1/4	5	3 1/8	---	---	---	---	100
RCD1006	100	68	6	42.3	20.6	9,700	12	18	8 1/4	5	3 1/8	---	---	---	---	115
RCD10010	100	68	10	70.5	20.6	9,700	16	26	8 1/4	5	3 1/8	---	---	---	---	150
RCD1505	150	---	5	78	31.60	9,491	13 1/8	18 1/8	10	6	3 1/8	---	---	---	---	240
RCD2006	246	---	6	172	49.30	10,000	16 1/4	22 1/4	12	8	4 1/8	---	---	---	---	385
RCD3006C	434	---	6	296	91.50	10,000	18 3/4	24 3/4	15	9 1/2	4 1/4	---	---	---	---	720
RCD5006C	646	--	6	463	129.30	10,000	21 1/2	27 1/2	17 3/4	12	5 1/4	---	---	---	---	1230



# STEEL CYLINDERS

Load Return  
30-1000 Tons



RLR1006 Shown  
See table for additional models

A ten cylinder system, using RLR40012 cylinders, is used to lift the bed of this dragline so that maintenance can be performed on the rollers. "The Simplex gasoline power pump equipped with the Suc-O-Matic valve made retracting the jacks quick and easy."

## SIMPLEX ADVANTAGES

- ✓ Large bearings resist side load.
- ✓ Plated piston to resist scoring & corrosion.
- ✓ Stop ring for piston blow-out protection.
- ✓ Domed pistons on 150-1,000 ton capacities help resist side load.
- ✓ 5° swivel load caps on 30-100 ton models help stabilize the load.



### SWIVEL EYE BOLTS

100 - 1000 ton models feature swivel eye bolts for transporting and positioning.



### IN-LINE VALVES

Simplex offers a wide selection of In-Line Valves such as flow control, check and pressure relief.

- Pg. 76



### GAUGES

Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit.

- Pg. 81



### PUMPS

Simplex offers a wide variety of lightweight power pumps to fit any application.

- Pg. 42

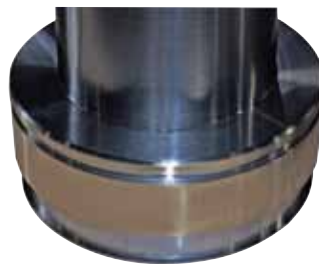
## Design Construction

### BRONZE INLAY



Thick bronze inlay on the inner diameter of the retaining nut protects the piston rod from scoring and minimizes the effect of damaging side loads.

### PISTON FLANGE



A thick bronze inlay on the piston flange virtually eliminates scoring of cylinder bore while offering the best protection against accidental side loading. (150 Tons and up)

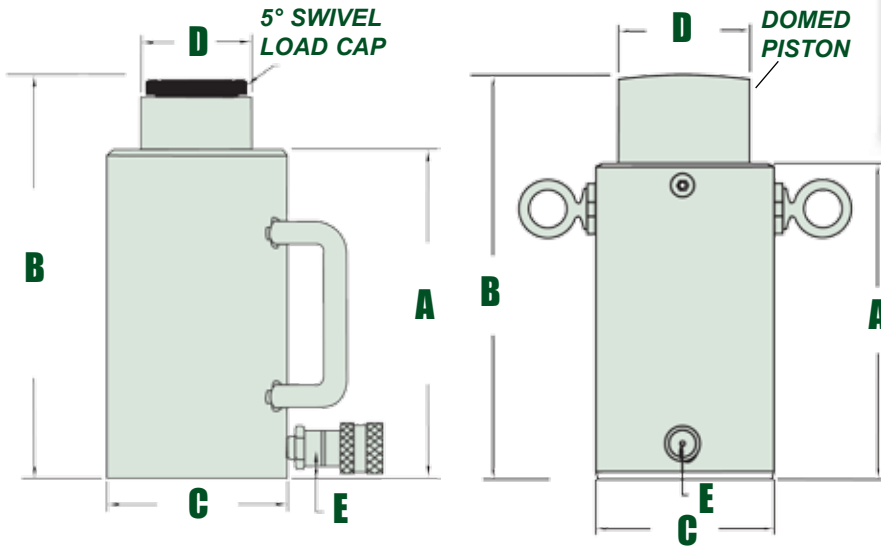


### RLR SERIES CYLINDERS

Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.

**30 - 100 TONS**

**150 - 1000 TONS**



**STEEL CYLINDERS**

**Load Return  
30-1000 Tons**

**CUSTOM STROKES AND CAPACITIES UP TO 1,500 TONS AVAILABLE. CONTACT FACTORY**

**\* Swivel Eye Bolts are installed on 100 tons and up.**

**Product Ordering & Dimensional Specifications**

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd. (cu. in.)	Ram Bore Dia. (in)	Effect Area (sq in)	Pres. @ Cap. (psi)	A	B	C	D	E	Wgt. (lbs)
							Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Base to Port C/L (in)	
RLR306	30	6	38.9	2 7/8	6.49	9,240	9 3/8	15 3/8	4	2	3/4	32
RLR502	50	2	22.1	3 3/4	11.05	9,054	5 7/16	7 7/16	5	3	25/32	30
RLR506	50	6	66.3	3 3/4	11.05	9,054	9 7/16	15 7/16	5	3	25/32	55
RLR5010	50	10	133.0	3 3/4	11.05	9,054	13 7/16	23 7/16	5	3	25/32	92
RLR1006	100	6	118.0	5	19.63	10,200	10 9/16	16 9/16	6 3/8	3 3/8	1 1/4	90
RLR10010	100	10	196.0	5	19.63	10,200	14 9/16	24 9/16	6 3/8	3 3/8	1 1/4	126
RLR1502	150	2	66.4	6 1/4	30.68	9,778	7	9	9	5 5/16	1 15/16	117
RLR1506	150	6	199.0	6 1/4	30.68	9,778	11	17	9	5 5/16	1 15/16	189
RLR15012	150	12	398.0	6 1/4	30.68	9,778	17	29	9	5 5/16	1 15/16	297
RLR2002	200	2	88.4	7 1/4	41.28	9,054	8	10	10	6 1/16	2 1/16	184
RLR2006	200	6	265.0	7 1/4	41.28	9,054	12	18	10	6 1/16	2 1/16	282
RLR20012	200	12	530.0	7 1/4	41.28	9,054	18	30	10	6 1/16	2 1/16	429
RLR3002	300	2	120.0	8 3/4	60.13	9,978	11 1/2	13 1/2	12	7 13/16	2 7/16	277
RLR3006	300	6	361.0	8 3/4	60.13	9,978	13 3/4	19 3/4	12	7 13/16	2 7/16	405
RLR30012	300	12	722.0	8 3/4	60.13	9,978	19 3/4	31 3/4	12	7 13/16	2 7/16	597
RLR4002	400	2	174.0	10 1/2	86.59	9,238	11 1/2	13 1/2	14	6 1/16	3	455
RLR4006	400	6	520.0	10 1/2	86.59	9,238	15 1/2	21 1/2	14	6 1/16	3	612
RLR40012	400	12	1040.0	10 1/2	86.59	9,238	21 1/2	33 1/2	14	6 1/16	3	842
RLR5002	500	2	208.0	11 1/2	103.87	9,628	12 5/8	14 5/8	16	10 5/16	3 3/16	627
RLR5006	500	6	623.0	11 1/2	103.87	9,628	16 5/8	22 5/8	16	10 5/16	3 3/16	855
RLR50012	500	12	1246.0	11 1/2	103.87	9,628	22 5/8	34 5/8	16	10 5/16	3 3/16	1197
RLR6002	600	2	246.0	12 1/2	122.71	9,778	13 1/2	15 1/2	17 1/2	11 9/16	3 1/2	655
RLR6006	600	6	738.0	12 1/2	122.71	9,778	17 1/2	23 1/2	17 1/2	11 9/16	3 1/2	902
RLR60012	600	12	1476.0	12 1/2	122.71	9,778	23 1/2	35 1/2	17 1/2	11 9/16	3 1/2	1273
RLR8002	800	2	330.0	14 1/2	165.13	9,690	14 7/16	16 7/16	18	13 3/16	4 1/8	997
RLR8006	800	6	991.0	14 1/2	165.13	9,690	18 7/16	24 7/16	18	13 3/16	4 1/8	1256
RLR80012	800	12	1982.0	14 1/2	165.13	9,690	24 7/16	36 7/16	18	13 3/16	4 1/8	1644
RLR10002	1000	2	402.0	16	201.06	9,950	16 1/8	18 1/8	21	14 15/16	4 1/4	1523
RLR10006	1000	6	1206.0	16	201.06	9,950	20 1/8	26 1/8	21	14 15/16	4 1/4	1883
RLR100012	1000	12	2412.0	16	201.06	9,950	26 1/8	38 1/8	21	14 15/16	4 1/4	2423

# STEEL CYLINDERS

Locknut Load Return  
30-1000 Tons



Simplex RLN1006 cylinders are used to lift and hold this large generator for routine maintenance during an annual outage at this power plant.

## SIMPLEX ADVANTAGES

- ✓ Lock nuts offer extended load holding.
- ✓ Grease fitting for added weather protection.
- ✓ Stop ring for piston blow-out protection.
- ✓ Plated piston to resist scoring & corrosion.
- ✓ 5° swivel load caps on 30-50 ton models for side load protection.



RLN1006 Shown  
See table for additional models



### SWIVEL EYE BOLTS

100 - 1000 ton models feature swivel eye bolts for transporting and positioning.



### HOSES

Large selection of standard, heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor. - Pg. 82-83



### MANIFOLDS

Simplex manifolds are the ideal solution in obtaining precise control when operating multiple cylinders. - Pg 77

## Design Construction

### ACME SCREW



Class 2 ACME Thread offers high strength & ease to move lock-nut into position for load holding.

### PISTON FLANGE



A thick bronze inlay on the piston flange virtually eliminates scoring of cylinder bore while offering the best protection against accidental side loading. (150 Tons and up)

### Advisory



Please refer to pages 4 & 5 for a complete list of safety tips and recommendations to ensure that your Simplex equipment will perform to its full potential.



### RLN SERIES CYLINDERS

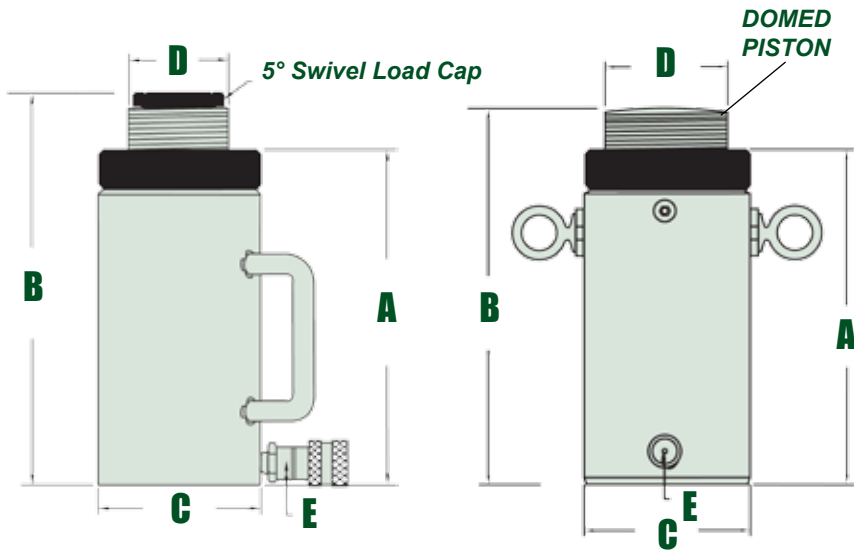
Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.

**30 - 50 TONS**

**100 - 1000 TONS**

# STEEL CYLINDERS

**Locknut Load Return  
30-1000 Tons**



**CUSTOM STROKES AND CAPACITIES UP TO 1,500 TONS AVAILABLE. CONTACT FACTORY**

\* Swivel Eye Bolts are installed on 100 tons and up.

## Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd. (cu.in.)	Ram Bore Dia. (in)	Effect Area (sq in)	Pressure @ Cap. (psi)	A	B	C	D	E	Wgt. (lbs)
							Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Base to Port C/L (in)	
RLN302	30	2	13.0	2 7/8	6.49	9,240	6 3/8	8 3/8	4	2 7/16	3/4	21
RLN306	30	6	38.9	2 7/8	6.49	9,240	10 3/8	16 3/8	4	2 7/16	3/4	35
RLN502	50	2	22.1	3 3/4	11.05	9,054	6 3/4	8 3/4	5	3 3/16	25/32	38
RLN506	50	6	66.2	3 3/4	11.05	9,054	10 3/4	16 3/4	5	3 3/16	25/32	63
RLN5010	50	10	133.0	3 3/4	11.05	9,054	14 3/4	24 3/4	5	3 3/16	25/32	100
RLN1002	100	2	40.0	5	19.63	10,200	8	10	6 3/8	4 5/16	1 1/4	87
RLN1006	100	6	118.0	5	19.63	10,200	12	18	6 3/8	4 5/16	1 1/4	132
RLN10010	100	10	196.0	5	19.63	10,200	16	26	6 3/8	4 5/16	1 1/4	202
RLN1502	150	2	66.4	6 1/4	30.68	9,780	8	10	8 1/2	5 9/16	1 15/16	149
RLN1506	150	6	199.0	6 1/4	30.68	9,780	12 1/4	18	8 1/2	5 9/16	1 15/16	221
RLN15012	150	12	398.0	6 1/4	30.68	9,780	18	30	8 1/2	5 9/16	1 15/16	311
RLN2002	200	2	88.4	7 1/4	41.28	9,054	9 1/2	11 1/2	10	6 9/16	2 1/16	233
RLN2006	200	6	265.0	7 1/4	41.28	9,054	13 1/2	19 1/2	10	6 9/16	2 1/16	332
RLN20012	200	12	530.0	7 1/4	41.28	9,054	19 1/2	31 1/2	10	6 9/16	2 1/16	479
RLN3002	300	2	120.0	8 3/4	60.13	9,978	11 1/2	13 1/2	12	7 13/16	2 7/16	357
RLN3006	300	6	361.0	8 3/4	60.13	9,978	15 1/2	21 1/2	12	7 13/16	2 7/16	485
RLN30012	300	12	722.0	8 3/4	60.13	9,978	21 1/2	33 1/2	12	7 13/16	2 7/16	677
RLN4002	400	2	174.0	10 1/2	86.59	9,238	13 13/16	15 13/16	14	9 5/16	3	520
RLN4006	400	6	520.0	10 1/2	86.59	9,238	17 13/16	23 13/16	14	9 5/16	3	675
RLN40012	400	12	1040.0	10 1/2	86.59	9,238	23 13/16	25 13/16	14	9 5/16	3	905
RLN5002	500	2	208.0	11 1/2	103.87	9,628	14 3/4	16 3/4	16	10 9/16	3 3/16	927
RLN5006	500	6	623.0	11 1/2	103.87	9,628	18 3/4	24 3/4	16	10 9/16	3 3/16	1041
RLN50012	500	12	1246.0	11 1/2	103.87	9,628	24 3/4	36 3/4	16	10 9/16	3 3/16	1383
RLN6002	600	2	246.0	12 1/2	122.79	9,778	15 5/8	17 5/8	17 1/2	11 3/16	3 1/2	985
RLN6006	600	6	738.0	12 1/2	122.79	9,778	19 5/8	25 5/8	17 1/2	11 3/16	3 1/2	1232
RLN60012	600	12	1476.0	12 1/2	122.79	9,778	27 5/8	39 5/8	17 1/2	11 3/16	3 1/2	1603
RLN8002	800	2	330.0	14 1/2	165.13	9,690	16 15/16	18 15/16	18	13 3/16	4 1/8	1148
RLN8006	800	6	991.0	14 1/2	165.13	9,690	21 15/16	27 15/16	18	13 3/16	4 1/8	1407
RLN80012	800	12	1982.0	14 1/2	165.13	9,690	27 15/16	39 15/16	18	13 3/16	4 1/8	1795
RLN10002	1000	2	402.0	16	201.06	9,950	19 5/8	21 5/8	21	14 13/16	4 1/4	1818
RLN10006	1000	6	1206.0	16	201.06	9,950	23 5/8	29 5/8	21	14 13/16	4 1/4	2178
RLN100012	1000	12	2412.0	16	201.06	9,950	29 5/8	41 5/8	21	14 13/16	4 1/4	2718



# STEEL CYLINDERS

Double Acting  
10-1000 Tons



Maintenance crews relied on Simplex RDA15018 cylinders to help lift, transport and launch a U.S. Navy research ship from dry dock to the ship's launch site. "Simplex cylinders were key to a fast and successful operation."



RDA10006 Shown - with o/c valve  
See table for additional models

## SIMPLEX ADVANTAGES

- ✓ Collar threads designed for full load.
- ✓ Removable load cap for flexibility and safety.
- ✓ Stop ring for piston blow-out protection.
- ✓ Plated piston to resist scoring & corrosion.
- ✓ Large bearings resist side load.
- ✓ Rod wiper protects inner cylinder from dirt.



### RELIEF VALVE

Safety pressure relief valve feature protects from over pressurization.



### SWIVEL EYE BOLTS

100 - 1000 ton models feature swivel eye bolts for transporting and positioning.



### PUMPS

Simplex offers a wide variety of lightweight power pumps to fit any application.

- Pg. 42



### GAUGES

Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit.

- Pg. 81

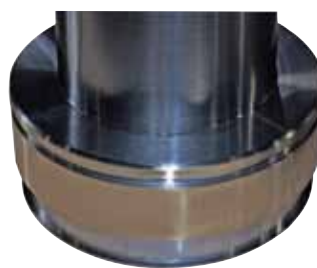
## Design Construction

### BRONZE INLAY



Thick bronze inlay on the inner diameter of the retaining nut protects the piston rod from scoring and minimizes the effect of damaging side loads.

### PISTON FLANGE



Thick bronze inlay on the piston flange virtually eliminates scoring of cylinder bore while offering the best protection against accidental side loading. (150 Tons and up)



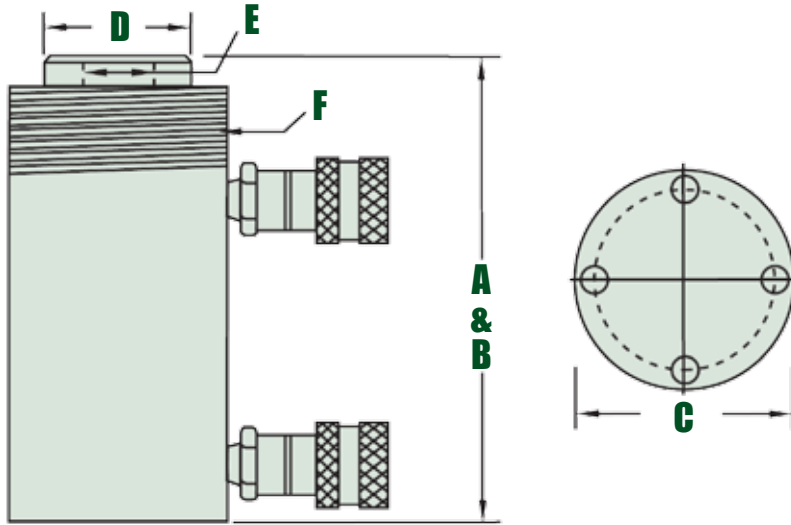
### RDA SERIES CYLINDERS

Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.

# STEEL CYLINDERS

Double Acting  
10-1000 Tons

CUSTOM STROKES AND CAPACITIES UP TO 1,500 TONS AVAILABLE. CONTACT FACTORY



### Base Mounting Hole Dimensions

Model	Thread		Bolt Circle Dia. (in)
	Size (in)	Depth (in)	
55 Ton	5/8-11	3/4	3 3/4
100 Ton	5/8-11	1	4 1/4
150 Ton	1-8	1 3/8	5
200 Ton	1-8	1 1/8	5

10 & 30 ton cylinders do not include mounting holes.

### Product Ordering & Dimensional Specifications

Model	Push Cap. (tons)	Pull Cap. (tons)	Stroke (in)	Oil Cap. Req'd. (cu.in.)	Ram Bore Dia. (in)	Push Effect Area (sq. in)	Pull Effect Area (sq.in)	Pres. @ Cap. (psi)	A		B		C		D		E		Wgt. (lbs)
									Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Piston I.D. Thrds. (in)	Piston Thrd. Depth (in)	Collar Thrds. (in)	Collar Thrd. Lgth. (in)			
RDA1010	10	4	10	22	1 11/16	2.23	.80	8,960	16 3/8	26 1/8	2 7/8	1 3/8	1-8	1	2 1/4-14	1 1/16	28		
RDA308	30	12.5	8 1/8	34	2 7/8	6.51	3	9,250	15 3/4	23 3/4	4	2 1/2	1 1/2-16	1	3 5/16-12	1 15/16	40		
RDA3014	30	12.5	14 1/2	91	2 7/8	6.51	3	9,250	21 3/8	36 1/8	4	2 1/2	1 1/2-16	1	3 5/16-12	1 15/16	64		
RDA556	55	17	6 3/8	46	3 3/4	11.05	3.40	9,955	13 3/8	19 1/4	5	3 3/8	1-12	1 1/2	5-12	1 3/4	68		
RDA5512	55	17	12	92	3 3/4	11.05	3.40	9,955	19 3/8	31 1/8	5	3 3/8	1-12	1 1/2	5-12	1 3/4	114		
RDA5524	55	17	24	184	3 3/4	11.05	3.40	9,955	31 5/8	55 5/8	5	3 3/8	1-12	1 1/2	5-12	1 3/4	201		
RDA1006	100	45	6 1/16	77	5 1/4	21.65	9.08	9,239	13 3/8	19 15/16	7	4	3 3/4-12	2 1/2	7-12	2 1/2	140		
RDA10012	100	45	12	151	5 1/4	21.65	9.08	9,239	19 3/8	31 3/8	7	4	3 3/4-12	2 1/2	7-12	2 1/2	187		
RDA1506	150	67	6 1/16	120	6 1/2	33.18	13.55	9,041	15 3/16	21 1/2	8 1/2	5	3 1/2-12	2 3/4	8 1/2-12	2 3/16	218		
RDA15012	150	67	12	236	6 1/2	33.18	13.55	9,041	21 1/2	33 1/2	8 1/2	5	3 3/4-12	2 3/4	8 1/2-12	2 3/16	295		
RDA2002	200	72	2	66	7 1/2	44.18	15.91	9,054	11 7/16	13 3/16	10	6	---	---	9 3/4-12	1 7/8	232		
RDA2006	200	72	6	170	7 1/2	44.18	15.91	9,054	15 3/16	21 3/16	10	6	---	---	9 3/4-12	1 7/8	315		
RDA20013	200	72	13	368	7 1/2	44.18	15.91	9,054	22 7/16	35 3/16	10	6	---	---	9 3/4-12	1 7/8	440		
RDA3002	335	51.55	2	101	9 1/2	70.9	20.62	10,000	13 3/4	15 1/4	12	8	---	---	---	---	277		
RDA3006	335	51.55	6	302	9 1/2	70.9	20.62	10,000	17 3/4	23 1/4	12	8	---	---	---	---	441		
RDA30012	335	51.55	12	605	9 1/2	70.9	20.62	10,000	23 3/4	35 1/4	12	8	---	---	---	---	688		
RDA4002	565	123	2	127	12	113	49.48	10,000	12 3/8	14 3/8	14 1/2	9	---	---	---	---	530		
RDA4006	565	123	6	382	12	113	49.48	10,000	16 3/8	22 3/8	14 1/2	9	---	---	---	---	670		
RDA40012	565	123	12	762	12	113	49.48	10,000	22 7/8	34 3/8	14 1/2	9	---	---	---	---	880		
RDA5002	664	135	2	156	13	132	54.19	10,000	16 1/2	18 1/2	16	10	---	---	---	---	722		
RDA5006	664	135	6	471	13	132	54.19	10,000	20 1/2	26 1/2	16	10	---	---	---	---	953		
RDA50012	664	135	12	942	13	132	54.19	10,000	26 1/2	38 1/2	16	10	---	---	---	---	1300		
RDA6002	600	110	2	158	12 1/2	122.71	44.17	10,000	15	17	17	10	---	---	---	---	917		
RDA6006	600	110	6	472	12 1/2	122.71	44.17	10,000	19	25	17	10	---	---	---	---	1188		
RDA60012	600	110	12	944	12 1/2	122.71	44.17	10,000	25	37	17	10	---	---	---	---	1595		
RDA8002	800	130	2	226	14 1/2	165.13	52.03	9,690	16	18	18 1/2	10	---	---	---	---	1166		
RDA8006	800	130	6	991	14 1/2	165.13	52.03	9,690	21 1/2	27 1/2	18 1/2	10	---	---	---	---	1461		
RDA80012	800	130	12	1,360	14 1/2	165.13	52.03	9,690	26	38	18 1/2	10	---	---	---	---	1776		
RDA10002	1000	75	2	354	17	227	50.27	8,810	16	18	21	15	---	---	---	---	1558		
RDA10006	1000	75	6	1,071	17	227	50.27	8,810	20	26	21	15	---	---	---	---	2058		
RDA100012	1000	75	12	2,142	17	227	50.27	8,810	27	39	21	15	---	---	---	---	2808		

# STEEL CYLINDERS

Pancake Locknut  
60-500 Tons



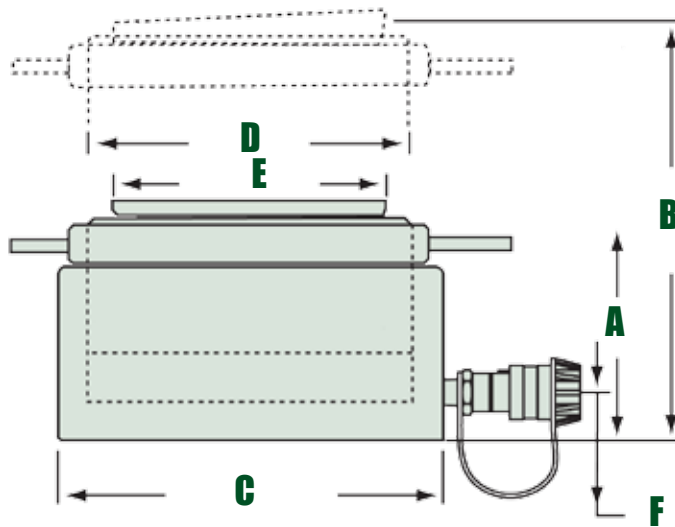
Simplex CLP Series cylinders are designed specifically for lifting and load holding where space is at a minimum. They are ideal for bridge maintenance & shipyards where heavy lifting and tight clearances are common.



CLP-1002 Shown  
See table for additional models

## SIMPLEX ADVANTAGES

- ✓ Extra low profile to fit into tight spaces.
- ✓ Locknut design provides positive mechanical load hold.
- ✓ 5° swivel load caps on all models.
- ✓ Single acting load return with overload protection port.
- ✓ Carrying handles & eye bolts on all models.



**WEEP HOLE**  
Added protection against over extension.



**GAUGES**  
Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit.

- Pg. 81

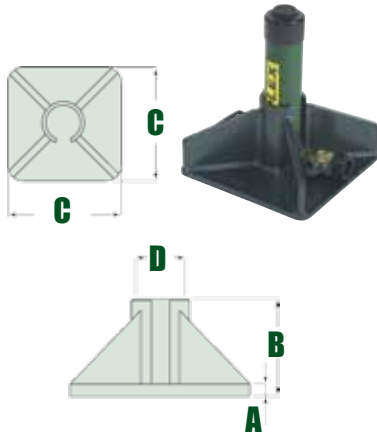


**CLP SERIES CYLINDERS**  
Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.

### Product Ordering & Dimensional Specifications

Model	Cap. Tons	Stroke (in)	Oil Cap. Required (cu.in.)	Ram Bore Dia. (in)	Effective Area (sq.in.)	A	B	C	D	E	F	Wgt. (lbs)
						Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. Thrd (mm)	Saddle Dia. (in)	Base to Port (in)	
CLP-602	60	1.97	26.4	4.1	13.4	4.9	6.7	5.5	105X6	3.8	.8	33
CLP-1002	100	1.97	43.7	5.3	22.2	5.4	7.2	6.9	135X6	5	.8	57
CLP-1502	150	1.77	58.7	6.5	33.1	5.8	7.8	8.7	165X6	5.9	1.1	97
CLP-2002	200	1.77	77.8	7.5	49.9	6.1	8.1	9.6	190X6	7.1	1.2	125
CLP-2502	250	1.77	99.7	8.5	56.3	6.3	8.3	10.8	215X6	7.9	1.3	165
CLP-4002	400	1.77	157.1	10.6	88.7	7	9	13.8	270X8	9.9	1.5	297
CLP-5002	500	1.77	194	11.8	109.6	7.6	9.6	15.8	300X8	11.2	1.9	418

## Cylinder Bases



Model	A	B	C	D
BA10	.39	4.72	9.06	2.28
BA25	.63	4.96	11.02	3.39

BA10 for R102 through R1014  
BA25 for R252 through R2514

## Cylinder Load Caps



Model	Type of Cylinder
18347	Used on R5 Series
18348	Used on R10 & R15 Series
85525	Used on R25 Series
85525	Used on R30 Series
85546	Used on R55 Series
85546	Used on R75 Series
85546	Used on R100 Series
18348	Used on RDA10 Series
85525	Used on RDA30 Series
88390	Used on RDA55 Series
18323	Used on RDA100 Series
18326	Used on RDA150 Series
87721	Used on RDA200 Series

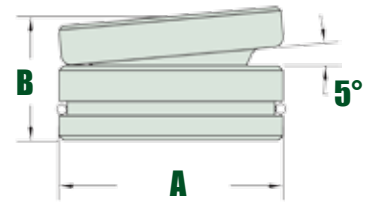
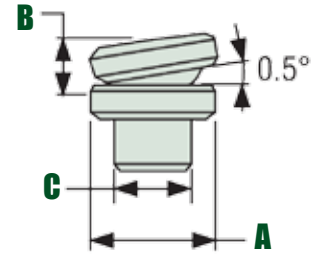
## Tilt Saddles



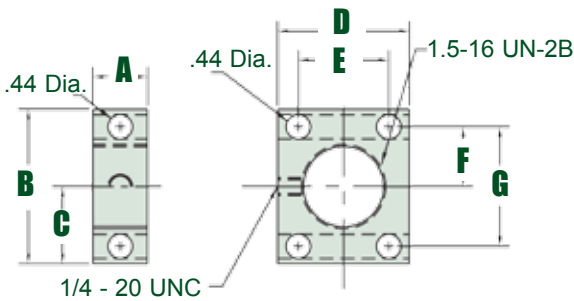
Model	A	B	C
ATS10	1.38	.59	.88
ATS25	1.97	.83	1.40
ATS100	2.82	1.55	----

ATS10 for R102 through R1014  
ATS25 for R251 through R2514

ATS100 for R-Series 55, 75 and 100 ton cylinders



## Mounting Blocks For R5 Series Cylinders

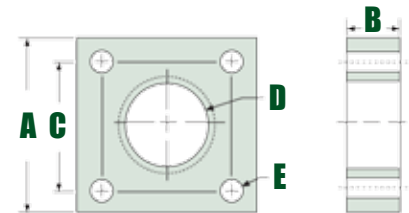


Model	A	B	C	D	E	F	G
BR5	.99	2.75	1.38	2.36	1.62	1.06	2.12

## Mounting Blocks



## Mounting Blocks For R10, R15 & R25 Series Cylinders

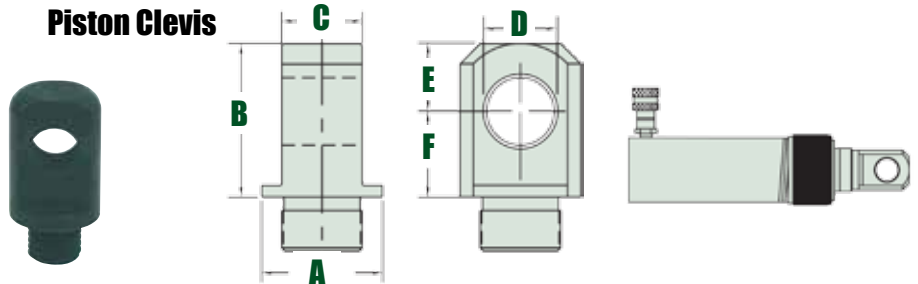


Model	A (in)	B (in)	C (in)	D (in)	E (in)
BR10	3.50	1	2.63	2 1/4 -14 UNS-2B	0.34
BR15	3.50	1	2.63	2 3/4 -16 UN-2B	0.34
BR25	5	2	3.66	3 5/16 -12 UN-2B	0.66

## For R-Series 5, 10, 15 & 25 ton cylinders

Model	A	B	C	D	E	F
BCR5	1.13	1.62	.56	.63	.63	.75
BCR10	1.69	2.31	1.00	.88	1.00	1.31
BCR15	1.69	2.31	1.00	.88	1.00	1.31
BCR25	2.25	2.93	1.50	1.25	1.25	1.38

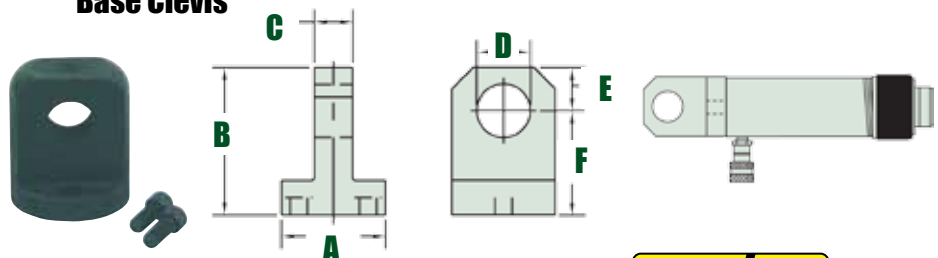
## Piston Clevis



## For R-Series 5, 10, 15 & 25 ton cylinders

Model	A	B	C	D	E	F
BC5	1.75	1.88	.56	.63	.63	1.00
BC10	2.50	2.63	1.00	.88	1.00	1.38
BC15	2.50	2.63	1.00	.88	1.00	1.38
BC25	3.75	3.13	1.50	1.25	1.25	1.63

## Base Clevis



# ALUMINUM CYLINDERS

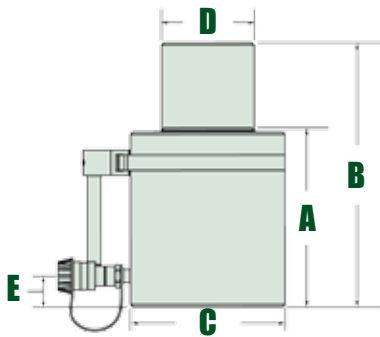
Spring Return  
30-150 Tons



The aft section of a vacuum pump used to extract sludge is being lifted for weld repairs. The Simplex RAS302B spring return cylinder along with a Simplex P32 aluminum hand pump are easy to carry and position in tight places.



**RAS306B Shown**  
See table for additional models



## SIMPLEX ADVANTAGES

- ✓ Half the weight of steel cylinders.
- ✓ Heavy duty spring for fast & full retraction.
- ✓ Large bearing surfaces for side load protection.
- ✓ Carrying handles standard on all models.
- ✓ Technical coating reduces wear & corrosion.
- ✓ Stop rings for piston blow-out protection.
- ✓ Rod wiper protects inner cylinder from dirt.

### HOSES



Large selection of standard, heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor. - Pg. 82-83



### RAS SERIES CYLINDERS

Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.

## Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd (cu. in.)	Effect Area (sq. in)	A	B	C	D	E	Wgt. (lbs)
					Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Piston O.D. (in)	Base to Port C/L (in)	
RAS302B	30	2	13	6.5	6 ½	8 ½	4 ½	2 ½	1 ½	14
RAS306B	30	6	39	6.5	10 ½	16 ½	4 ½	2 ½	1 ½	18
RAS502B	50	2	22.1	11	6 ½	8 ½	5 ½	3 ⅜	1 ½	13
RAS504B	50	4	44.2	11	8 ½	12 ½	5 ½	3 ⅜	1 ½	17
RAS506B	50	6	66.2	11	10 ½	16 ½	5 ½	3 ⅜	1 ½	28
RAS5010B	50	10	110.4	11	14 ½	24 ½	5 ½	3 ⅜	1 ½	36
RAS1002B	100	2	41.2	20.7	6 ½	8 ½	8	4 ¼	1 ½	40
RAS1004B	100	4	82.4	20.7	8 ½	12 ½	8	4 ¼	1 ½	45
RAS1006B	100	6	123.7	20.7	10 ½	16 ½	8	4 ¼	1 ½	50
RAS10010B	100	10	206	20.7	14 ½	24 ½	8	4 ¼	1 ½	68
RAS1502B	150	2	61.4	30.7	6 ½	8 ½	10	4 ⅞	1 ½	58
RAS1506B	150	6	184.1	30.7	10 ½	16 ½	10	4 ⅞	1 ½	86
RAS15010B	150	10	306.8	30.7	14 ½	24 ½	10	4 ⅞	1 ½	110

# ALUMINUM CYLINDERS

Locknut Spring Return  
50-150 Tons



Simplex 150 ton aluminum locknut spring return cylinders are used to lift this large crane for routine maintenance on bearings.

## SIMPLEX ADVANTAGES

- ✓ Half the weight of steel cylinders.
- ✓ Locknuts offer extended load holding.
- ✓ Large bearing surfaces for side load protection.
- ✓ Technical coating reduces wear & corrosion.
- ✓ Carrying handles standard on all models.
- ✓ Stop rings for piston blow-out protection.
- ✓ Heavy duty spring for full and fast retraction.



### MANIFOLDS

Simplex manifolds are the ideal solution in obtaining precise control when operating multiple cylinders.

- Pg. 77

### Advisory



Please refer to pages 4 & 5 for a complete list of safety tips and recommendations to ensure that your Simplex equipment will perform to its full potential.

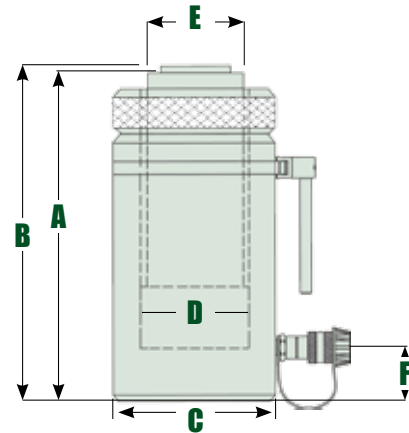


### RAL SERIES CYLINDERS

Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.



RAL502 Shown  
See table for additional models



## Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Required (cu.in.)	Effect Area (sq.in.)	A	B	C	D	E	F	Wgt. (lbs)
					Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Cyl. Bore Dia. (in)	Piston O.D. (in)	Base to Port C/L (in)	
RAL502	50	2	21.65	11.04	8 ½	10 ½	5 ½	3 ¾	3 ⅝	1 ½	20
RAL504	50	4	43.30	11.04	10 ½	14 ½	5 ½	3 ¾	3 ⅝	1 ½	25
RAL506	50	6	64.92	11.04	12 ½	18 ½	5 ½	3 ¾	3 ⅝	1 ½	30
RAL5010	50	10	108.20	11.04	16 ½	26 ½	5 ½	3 ¾	3 ⅝	1 ½	40
RAL1002	100	2	40.51	20.68	8 ¾	10 ¾	8	5 ½	4 ¼	1 ½	45
RAL1004	100	4	81.00	20.68	10 ¾	14 ¾	8	5 ½	4 ¼	1 ½	55
RAL1006	100	6	121.50	20.68	12 ¾	18 ¾	8	5 ½	4 ¼	1 ½	64
RAL10010	100	10	202.50	20.68	16 ¾	26 ¾	8	5 ½	4 ¼	1 ½	82
RAL1502	150	2	60.60	30.68	8 ¾	10 ¾	10	6 ¼	5	1 ½	65
RAL1506	150	6	181.80	30.68	12 ¾	18 ¾	10	6 ¼	5	1 ½	101
RAL15010	150	10	303.00	30.68	16 ¾	26 ¾	10	6 ¼	5	1 ½	156

# ALUMINUM CYLINDERS

Center Hole Single Acting  
30-60 Tons



The Simplex RAC306 30 ton single acting aluminum center hole cylinder is used to pull pins from off road equipment. "The Simplex Silver Lite cylinders give us the power we need and is light enough to transport effortlessly."



RAC303 Shown  
See table for additional models

## SIMPLEX ADVANTAGES

- ✓ Half the weight of steel cylinders.
- ✓ Heavy duty spring for fast & full retraction.
- ✓ Chrome plated center hole for extra protection.
- ✓ Carrying handles standard on all models.
- ✓ Technical coating reduces wear & corrosion.
- ✓ Stop rings for piston blow-out protection.
- ✓ Rod wiper protects inner cylinder from dirt.



### HAND PUMPS

For manual portable power on demand, Simplex offers an extensive line of heavy duty, easy to transport Hand Pumps. - Pg. 30



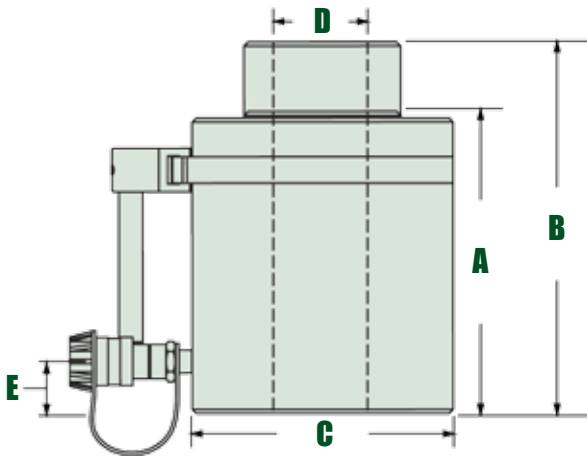
### HOSES

Large selection of standard, heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor. - Pg. 82-83



### RAC / RACD SERIES CYLINDERS

Our Cylinder design specifications meet or exceed ANSI /ASME B30.1 Safety Standards.



## Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd (cu in)	Effect Area (sq. in)	A	B	C	D	E	Wgt. (lbs)
					Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Center Hole (in)	Base to Port C/L (in)	
RAC303	30	3	22	7.21	8 3/4	11 3/4	5 1/2	1 3/16	1	22
RAC306	30	6	44	7.21	11 3/4	17 3/4	5 1/2	1 3/16	1	30
RAC603	60	3	37	12.3	10 1/8	13 1/8	7 1/2	2 1/8	1	42
RAC606	60	6	74	12.3	13 1/4	19 1/4	7 1/2	2 1/8	1	55

# ALUMINUM CYLINDERS

Center Hole Double Acting  
30-150 Tons



This RACD cylinder was the perfect solution for pulling tube bundles from large heat exchangers. "With half the weight of steel cylinders, positioning the RACD506 cylinder over the rod made the job easier and safer for our maintenance crew."

## SIMPLEX ADVANTAGES

- ✓ Half the weight of steel cylinders.
- ✓ Technical coating reduces wear & corrosion.
- ✓ Steel piston for protection against load damage.
- ✓ Chrome plated center sleeve for extra protection.
- ✓ Carrying handles standard on all models.
- ✓ Stop rings for piston blow-out protection.
- ✓ Rod wiper protects inner cylinder from dirt.



**RACD306 Shown**  
See table for additional models



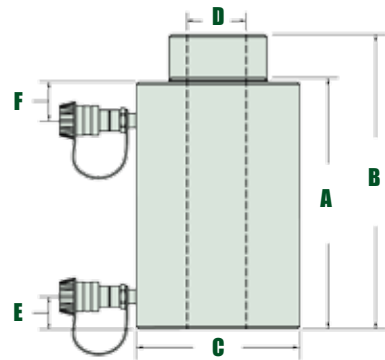
**PUMPS**  
Simplex offers a wide variety of lightweight power pumps to fit any application.

- Pg. 42



**GAUGES**  
Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit.

- Pg. 81



## Product Ordering & Dimensional Specifications

Model	Cap. (tons)	Stroke (in)	Oil Cap. Req'd (cu.in.)		Effect Area (sq.in.)		A		B		C		D		E		F	Wgt. (lbs)
			Push	Pull	Push	Pull	Min. Ht. (in)	Ext. Ht. (in)	Body O.D. (in)	Center Hole Dia. (in)	Base to Port C/L (in)	Collar to Port C/L (in)						
RACD302	30	2	14.34	6.50	6.35	3.25	7	9	5 1/2	1 1/2	1 3/4	1 3/4	20					
RACD306	30	6	43.02	19.50	6.35	3.25	11	17	5 1/2	1 1/2	1 3/4	1 3/4	28					
RACD3010	30	10	71.70	32.50	6.35	3.25	15	25	5 1/2	1 1/2	1 3/4	1 3/4	35					
RACD502	50	2	21.71	6.86	10.30	3.43	7	9	7 1/2	2 1/8	1 3/4	1 3/4	33					
RACD504	50	4	43.44	13.72	10.30	3.43	9	13	7 1/2	2 1/8	1 3/4	1 3/4	41					
RACD506	50	6	65.16	20.58	10.30	3.43	11	17	7 1/2	2 1/8	1 3/4	1 3/4	49					
RACD5010	50	10	108.60	34.30	10.30	3.43	15	25	7 1/2	2 1/8	1 3/4	1 3/4	65					
RACD1002	100	2	41.52	15.60	20.28	7.8	10	12	11	3 1/2	2 1/2	2 1/2	85					
RACD1004	100	4	83.04	31.20	20.28	7.8	12	16	11	3 1/2	2 1/2	2 1/2	93					
RACD1006	100	6	124.56	46.80	20.28	7.8	14	20	11	3 1/2	2 1/2	2 1/2	102					
RACD10010	100	10	206.60	78.00	20.28	7.8	18	28	11	3 1/2	2 1/2	2 1/2	132					
RACD1502	150	2	61.26	17.96	31.47	9	10	12	12	3 1/2	2 1/2	2 1/2	109					
RACD1506	150	6	183.73	53.98	31.47	9	14	20	12	3 1/2	2 1/2	2 1/2	132					
RACD15010	150	10	306.30	89.82	31.47	9	18	28	12	3 1/2	2 1/2	2 1/2	156					

