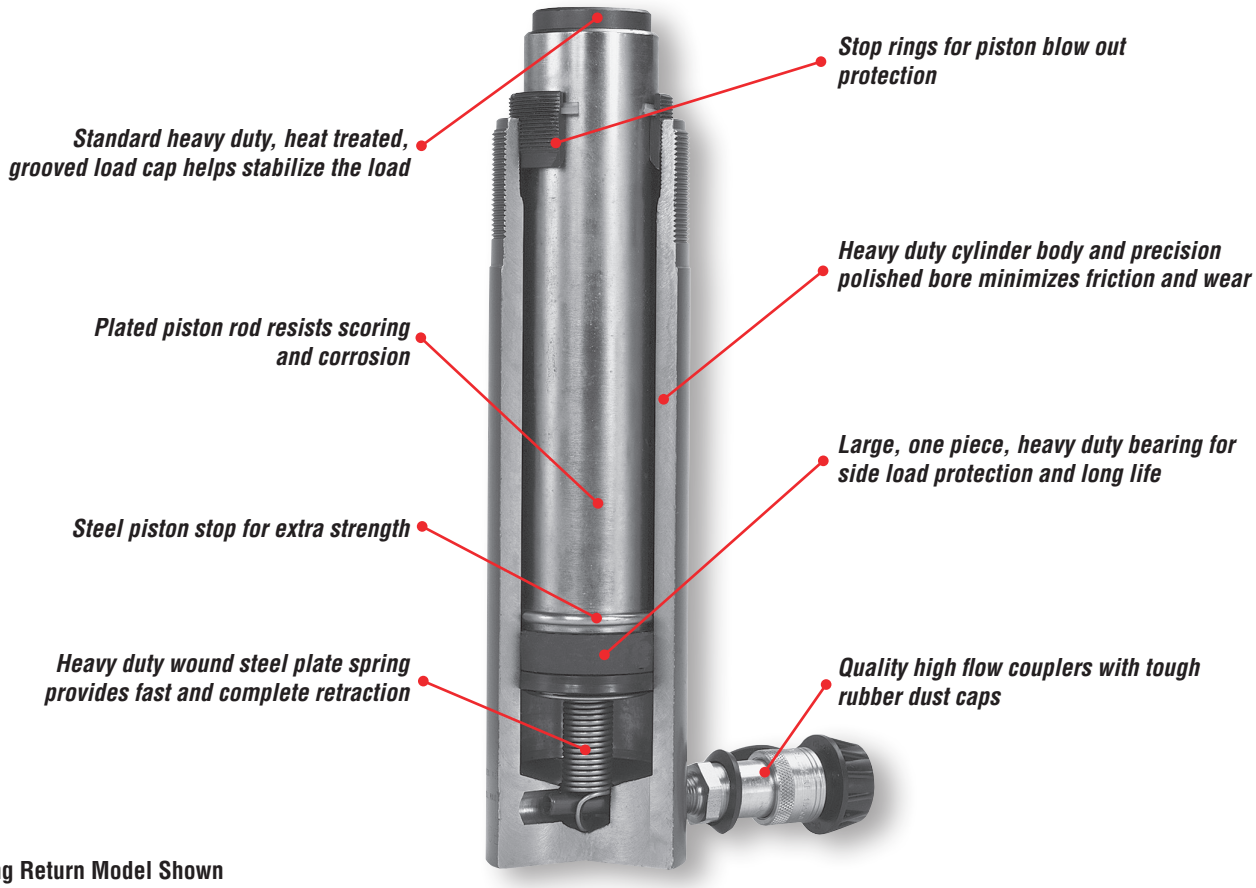
CYLINDERS



Spring Return Model Shown

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 700 bars 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.

- ***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.

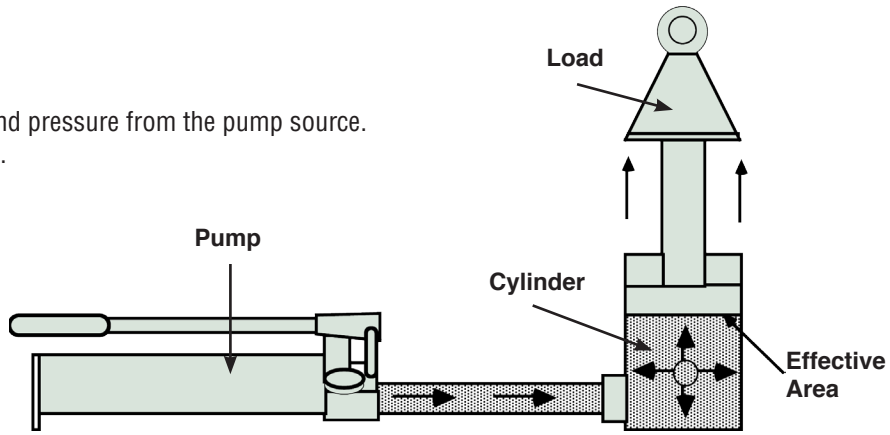
Both single acting and double acting center-hole cylinders are constructed and operated in a similar manner to their standard counterparts.

- ***Single acting center-hole cylinders utilize a spring for retraction. This cylinder type requires a pump source with a 3 way 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 cm².**) 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:

$$\frac{\text{bar x cylinder effective area x no. of cylinders}}{907{,}18} = \text{kN}$$

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:

$$\frac{\text{pump flow per minute (cm}^3\text{/min)}}{\text{cylinder effective area x no. of cylinders}} = \frac{\text{cm/min.}}{\text{Piston Travel}}$$

Simplex Cylinders At A Glance Chart

Cylinder Series	Description/Applications	Cylinder Type	Plunger Type	Capacity (kN)	Strokes (mm)	Page No.(s)
R	General Purpose Spring Return For Fast Retraction	Single Acting	Solid	44.5-889.6	15.7-365.3	10-11
RAS	Lightweight, General Purpose Spring Return			266.9-1334.5	50.8-254.0	26
RAL	Lightweight Load Holding Locknut Spring Return			444.8-1334.5	50.8-254.0	27
CLP	Low Profile Locknut			533.8-4448.2	45.0-50.0	24
RAC	Lightweight Center Hole Spring Return		Center Hole	266.9-533.8	76.2-152.4	28
RACD	Lightweight Center Hole	Double Acting		266.9-1334.5	50.8-254.0	29
RLS	Low Height Spring Return	Single Acting	Solid	89.0-889.6	38.1-57.2	12
RFS	Very Low Height Spring Return			44.5-1334.5	11.2-15.7	13
RP	Pull Cylinder Spring Return			17.8-44.5	127.0-139.7	14
RLN	Mechanical Load Holding / Locknut Load Return			266.9-8896.4	50.8-304.8	20-21
RLR	Single Acting Load Return			266.9-8896.4	50.8-304.8	18-19
RC	Single Acting Center Hole		Center Hole	106.8-889.6	7.9-155.7	16
RCD	Double Acting Center Hole	Double Acting		266.9-5747.1	76.2-254.0	17
RDP	Double Acting Pull Cylinder		Solid	89.0-889.6	152.4	15
RDA	Double Acting Controlled Retraction / Fast Cycling			89.0-8896.4	50.8-609.6	22-23

R556 Shown

Capacity ▶ 44.5 - 889.6 kN
Stroke ▶ 15.7 - 365.3 mm
Maximum Pressure ▶ 616 - 700 bar

- ▶ 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.

HOSES - *pages 78 - 79*
Heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor.

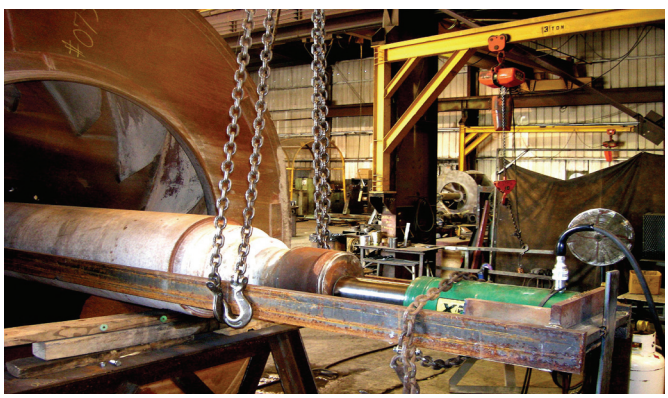
GAUGES - *page 77*
Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit.

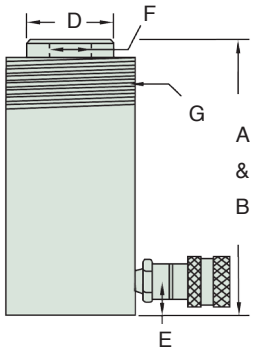
POWER PUMPS - *pages 43 - 65*
Simplex offers a wide variety of lightweight power pumps to fit any application.

THINK SAFETY
Please refer to pages 4&5 for a complete list of safety tips and recommendations.

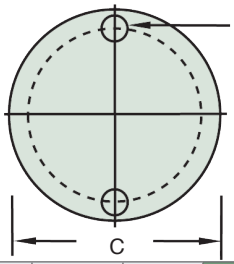
MANIFOLDS - *page 73*
The ideal solution in obtaining precise control when operating multiple cylinders.

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. ▼





** R50 Base Mounting hole 5.56 mm through x 9.13 mm "C" bore (10.64 mm depth).*



Refer to Base Mounting Table

Standard Base Mounting Holes R51 through R10010 Cylinders

Model (kN)	Bolt Circle (mm)	Thread (in)	Thread Depth (mm)
5/44.5	25.4	.25 - 20 UNC	14.2
10/89.0	39.6	.31 - 18 UNC	12.7
15/133.4	47.8	.38 - 16 UNC	12.7
25/222.4	58.7	.5 - 13 UNC	19.1
30/266.9	----	----	----
55/489.3	95.3	.5 - 13 UNC	19.1
75/667.2	----	----	----
100/889.6	139.7	.75 - 10 UNC	25.4

Model	Cap. (kN)	Stroke (mm)	Oil Cap. Req'd (cm^3)	Ram Bore Dia. (mm)	Effect Area (cm^2)	Pres. @ Cap. (bar)	A	B	C	D	E	F		G		Wgt. (kg)
							Min. Height (mm)	Ext. Height (mm)	Body O.D. (mm)	Piston O.D. (mm)	Base to Port C/L (mm)	Piston I.D. Thrds (in)	Piston Threads Depth (mm)	Collar Threads (in)	Collar Threads Lgth (mm)	
R50	44.5	15.7	9.8	28.7	6.4	700	41.1	56.9	64.9	25.4	19.1	----	----	----	----	1.1
R51	44.5	28.7	16.2	28.7	6.4	700	111.0	139.7	38.1	25.4	19.1	.75 --16	19.1	1.5 -- 16	28.7	1.0
R53	44.5	79.5	48.8	28.7	6.4	700	165.6	245.1	38.1	25.4	19.1	.75 --16	19.1	1.5 -- 16	28.7	1.5
R55	44.5	130.3	81.4	28.7	6.4	700	216.4	346.7	38.1	25.4	19.1	.75 --16	19.1	1.5 -- 16	28.7	1.9
R57	44.5	182.4	114.1	28.7	6.4	700	273.1	455.4	38.1	25.4	19.1	.75 --16	19.1	1.5 -- 16	28.7	2.4
R59	44.5	233.2	148.6	28.7	6.4	700	325.9	559.1	38.1	25.4	19.1	.75 --16	19.1	1.5 -- 16	28.7	2.8
R101	89.0	26.2	37.7	42.9	14.5	617	88.9	115.1	57.2	38.1	19.1	----	----	2.25 -- 14	28.7	1.8
R102	89.0	55.6	68.5	42.9	14.5	617	121.4	177.0	57.2	38.1	19.1	1 -- 8	19.1	2.25 -- 14	28.7	2.3
R104	89.0	106.4	150.8	42.9	14.5	617	172.2	278.6	57.2	38.1	19.1	1 -- 8	19.1	2.25 -- 14	28.7	3.3
R106	89.0	152.4	224.5	42.9	14.5	616	248.4	400.8	57.2	38.1	19.1	1 -- 8	19.1	2.25 -- 14	28.7	4.4
R108	89.0	203.2	293.2	42.9	14.5	616	299.2	502.4	57.2	38.1	19.1	1 -- 8	19.1	2.25 -- 14	28.7	5.4
R1010	89.0	254.0	371.2	42.9	14.5	616	350.0	604.0	57.2	38.1	19.1	1 -- 8	19.1	2.25 -- 14	28.7	6.4
R1012	89.0	304.8	439.8	42.9	14.5	616	400.8	705.6	57.2	38.1	19.1	1 -- 8	19.1	2.25 -- 14	26.9	6.8
R1014	89.0	355.6	513.1	42.9	14.5	616	451.6	807.2	57.2	38.1	19.1	1 -- 8	19.1	2.25 -- 14	26.9	8.2
R152	133.4	54.1	102.9	50.8	20.3	659	148.1	202.2	69.9	41.4	19.1	1 -- 8	25.4	2.75 -- 16	30.2	4.1
R154	133.4	104.9	206.0	50.8	20.3	659	198.9	303.8	69.9	41.4	19.1	1 -- 8	25.4	2.75 -- 16	30.2	5.0
R156	133.4	162.1	311.4	50.8	20.3	659	271.5	433.6	69.9	41.4	25.4	1 -- 8	25.4	2.75 -- 16	30.2	6.8
R1510	133.4	263.7	514.6	50.8	20.3	659	373.1	636.8	69.9	41.4	25.4	1 -- 8	25.4	2.75 -- 16	30.2	9.5
R1514	133.4	365.3	721.0	50.8	20.3	659	474.7	840.0	69.9	41.4	25.4	1 -- 8	25.4	2.75 -- 16	30.2	11.8
R251	222.4	25.4	84.6	65.0	33.3	668	139.7	165.1	91.9	57.2	25.4	1.5 -- 16	28.7	3.31 -- 12	49.0	5.9
R252	222.4	50.8	169.0	65.0	33.3	668	165.1	215.9	91.9	57.2	25.4	1.5 -- 16	28.7	3.31 -- 12	49.0	6.4
R254	222.4	101.6	338.1	65.0	33.3	668	215.9	317.5	91.9	57.2	25.4	1.5 -- 16	28.7	3.31 -- 12	49.0	8.2
R256	222.4	157.2	528.2	65.0	33.3	668	273.1	430.3	91.9	57.2	25.4	1.5 -- 16	28.7	3.31 -- 12	49.0	10.0
R258	222.4	208.0	697.3	65.0	33.3	668	323.9	531.9	91.9	57.2	25.4	1.5 -- 16	28.7	3.31 -- 12	49.0	12.2
R2510	222.4	258.8	866.2	65.0	33.3	668	374.7	633.5	91.9	57.2	25.4	1.5 -- 16	28.7	3.31 -- 12	49.0	14.1
R2512	222.4	309.6	1035.3	65.0	33.3	668	425.5	735.1	91.9	57.2	25.4	1.5 -- 16	28.7	3.31 -- 12	49.0	16.3
R2514	222.4	360.4	1204.3	65.0	33.3	668	476.3	836.7	91.9	57.2	25.4	1.5 -- 16	28.7	3.31 -- 12	49.0	17.7
R308	266.9	209.6	878.3	73.2	41.9	637	387.4	596.9	101.6	57.2	57.2	1.5 -- 16	25.4	3.31 --12	49.0	18.1
R552	489.3	50.8	361.8	95.3	71.2	687	176.3	227.1	127.0	79.5	35.1	----	----	5 -- 12	71.4	15.0
R554	489.3	101.6	723.7	95.3	71.2	687	227.1	328.7	127.0	79.5	35.1	----	----	5 -- 12	71.4	19.1
R556	489.3	157.2	1130.7	95.3	71.2	687	280.9	438.2	127.0	79.5	35.1	----	----	5 -- 12	71.4	23.1
R5513	489.3	336.6	2397.4	95.3	71.2	687	463.8	800.4	127.0	79.5	35.1	----	----	5 -- 12	71.4	37.6
R756	667.2	153.9	1563.3	114.3	102.6	650	287.3	441.2	146.1	95.3	30.2	----	----	5.75 -- 12	44.5	29.5
R7513	667.2	331.7	3408.5	114.3	102.6	650	492.3	824.0	146.1	95.3	30.2	----	----	5.75 -- 12	44.5	59.0
R1006	889.6	168.4	2245.0	130.3	133.1	668	357.1	525.5	177.8	104.9	41.1	----	----	6.87 -- 12	44.5	40.8
R10010	889.6	260.4	3474.1	130.3	133.1	668	449.3	709.7	177.8	104.9	41.1	----	----	6.87 -- 12	44.5	49.9

RLS201 Shown

Capacity ..... ▶ **89 - 889.6 kN**
Stroke ..... ▶ **38.1 - 62 mm**
Maximum Pressure ..... ▶ **616 - 717 bar**

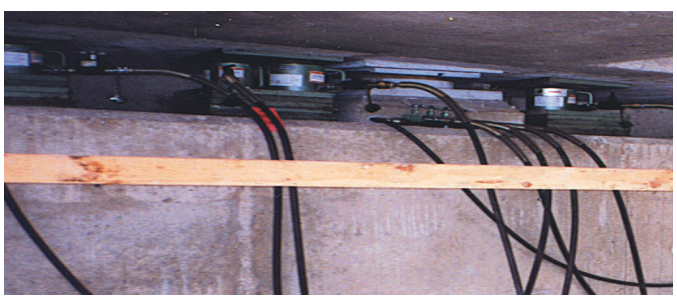
- ▶ Compact low-profile design.
- ▶ HD spring for fast retraction.
- ▶ Grooved plunger to stabilize the load.
- ▶ Stop ring for piston blow-out protection.
- ▶ Rod wiper protects inner cylinder from dirt.
- ▶ Plated piston to resist scoring & corrosion.

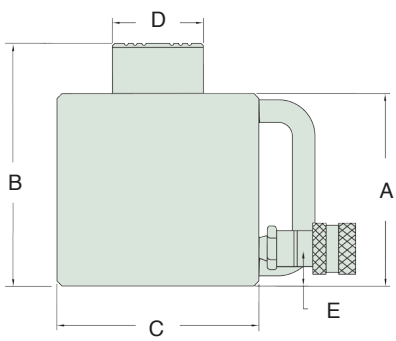
GAUGES - ***page 77***
Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit.

IN-LINE VALVES - ***page 72***
Maximize control and safety with our in-line valves.

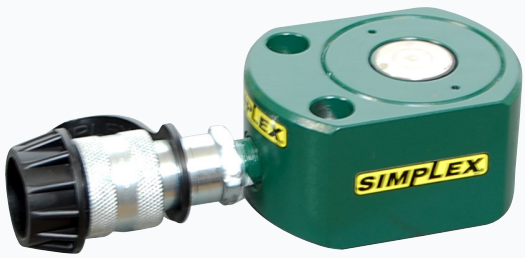
POWER PUMPS - ***pages 43 - 65***
Simplex offers a wide variety of lightweight power pumps to fit any application.

Simplex RLS Series provides the ideal fit and force required for most bridge lifting and pier cap maintenance jobs.▼





Model	Cap. (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Ram Bore Diameter (mm)	Effect Area (cm^2)	Pressure @ Capacity (bar)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Piston O.D. (mm)	E Base to Port C/L (mm)	Wgt. (kg)
RLS101	89.0	38.1	55.7	42.7	14.5	616	88.1	126.2	69.9	38.1	17.3	4.1
RLS201	177.9	44.5	127.8	60.5	28.6	623	98.3	142.7	91.9	50.8	17.3	5.0
RLS302	266.9	62.0	258.9	72.9	41.9	638	117.3	179.3	101.6	66.5	19.1	6.8
RLS502	444.8	60.5	373.6	88.9	62.1	717	122.2	182.6	123.7	69.9	23.6	10.9
RLS1002	889.6	57.2	724.3	127.0	126.6	703	141.2	198.4	165.1	91.9	31.8	22.7



RFS20 Shown

Capacity ..... ▶ 44.5 - 1334.5 kN

Stroke ..... ▶ 11.2 - 15.7 mm

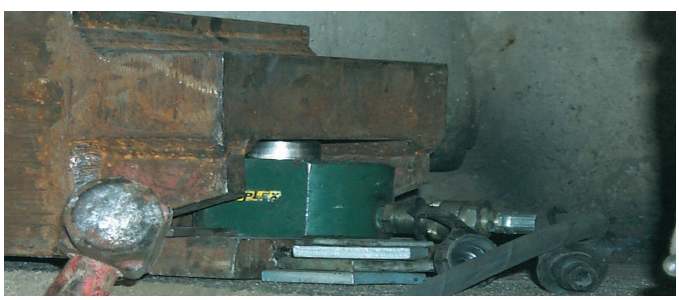
Maximum Pressure ..... ▶ 616 - 717 bar

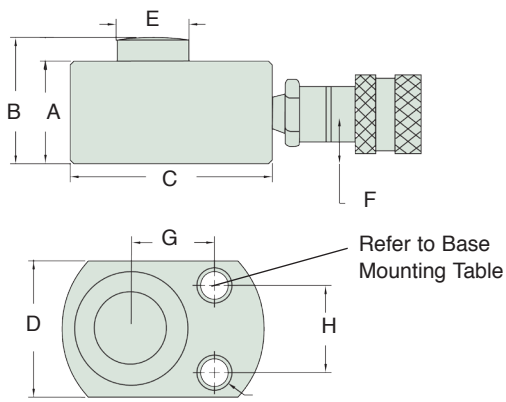
- ▶ Plated piston to resist scoring & corrosion.
- ▶ Low profile, high tonnage design.
- ▶ Rod wiper protects inner cylinder from dirt.

HAND PUMPS - *pages 31 - 41*
Simplex carries the widest variety of Hand Pumps for specific applications.

Model	Base Mounting Hole Dimensions (mm)
R50	5.6 through x 9.1 C' Bore (6.4 Deep)
RFS10	7.1 through x 10.7 C' Bore (7.9 Deep)
RFS20	9.9 through x 15.7 C' Bore (9.9 Deep)

Simplex RFS Series cylinders provide the ideal fit and force required for most bridge lifting and pier cap maintenance jobs. ▼





Model	Cap. (kN)	Stroke (mm)	Oil Cap. Req'd (cm^3)	Ram Bore Dia. (mm)	Effective Area (cm^2)	Pressure @ Cap. (bar)	A	B	C	D	E	F	G	H	Wgt. (lbs)
							Minimum Height (mm)	Extended Height (mm)	Body Length (mm)	Body Width (mm)	Piston O.D. (mm)	Base to Port C/L (mm)	Width (mm)	Width (mm)	
R50	44.5	15.7	9.8	28.7	6.4	700	41.1	57.2	65.0	41.1	25.4	19.1	25.4	28.7	1.1
RFS10	89.0	11.2	16.4	42.7	14.5	616	42.7	54.1	82.6	55.6	19.1	19.1	34.0	35.8	1.5
RFS20	177.9	11.2	31.1	60.5	28.6	623	51.6	62.7	101.6	76.2	28.7	19.1	39.6	49.0	2.7
RFS30	266.9	12.7	52.4	72.9	41.9	638	58.7	71.4	114.3	95.3	35.1	19.1	------	-----	3.9
RFS50	444.8	15.7	98.3	88.9	62.1	717	66.5	82.6	139.7	114.3	44.5	19.1	------	-----	6.5
RFS75	667.2	15.7	163.9	114.3	102.6	651	79.5	95.3	165.1	139.7	54.1	19.1	------	-----	11.1
RFS100	889.6	15.7	201.6	127.0	126.6	703	85.9	101.6	177.8	152.4	63.5	19.1	------	-----	14.1
RFS150	1334.5	14.2	281.9	158.8	197.8	675	99.8	114.3	215.9	190.5	76.2	23.6	-----	-----	22.9

RP55A Shown

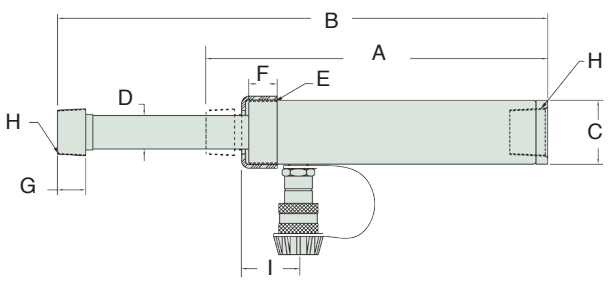
Capacity Range ▶ 17.8 - 44.5 kN
Stroke Range ▶ 127 - 139.7 mm
Maximum Pressure ▶ 610 - 627 bar

- ▶ 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.

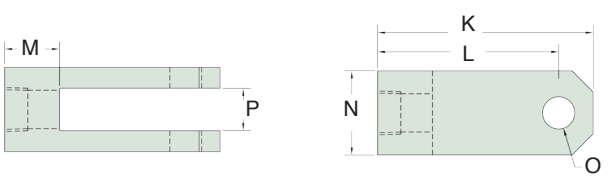
THINK SAFETY
Please refer to pages 4&5 for a complete list of safety tips and recommendations.

POWER PUMPS - *pages 43 - 65*
Simplex offers a wide variety of lightweight power pumps to fit any application.

Pull Cylinder Dimensions



Clevis Dimensions



The RP55A pull cylinder and a G5 Air Pump was needed to position structural I-Beams for welding. ▼

Optional Accessories

Model	K (mm)	L (mm)	M (mm)	N (mm)	O (mm)	P (mm)
RPC25	130.3	109.5	33.3	50.8	19.1	25.4
RPC55	152.4	127.0	38.1	63.5	22.1	38.1

Both models include adapter and clevis.

Model	Capacity (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Pressure @ Capacity (bar)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Piston O.D. (mm)	E Collar Thread (mm)	F Collar Thread Length (mm)	G Piston Adapter (mm)	H NPT Thread (mm)	I Cylinder To Port (mm)	Wgt. (kg)
RP25A	17.8	127.0	45.9	627	265.2	392.2	47.5	19.1	25.4	25.4	28.7	25.4	45.0	1.8
RP55A	44.5	139.7	101.6	610	301.8	441.5	57.2	30.2	25.4	26.9	31.8	25.4	42.7	4.5

RDP506 Shown

Capacity Range ▶ 89 - 889.6 kN
Stroke Range ▶ 152.4 mm
Maximum Pressure ▶ 627 bar

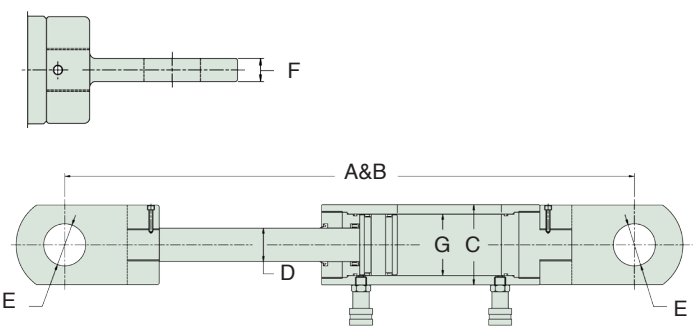
- ▶ Hard chrome plated steel piston rods resist corrosion.
- ▶ Ideal for joining steel plates for welding.
- ▶ Useful for the fabrication industry as well as cable tensioning.
- ▶ Double acting cylinder provides quick & full retraction.

COUPLERS - *pages 74 - 75*
High flow quick disconnect couplers provide a quick change to a variety of pumps.

IN-LINE VALVES - *page 72*
Maximize control and safety with our in-line valves.

HOSES - *pages 78 - 79*
Heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor.

The Simplex RDP506 is used by this manufacturer of heavy steel cables.▼



Model	Capacity (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Effect Area (cm^2)	Pressure @ Capacity (psi)	A Closed Dimensions (mm)	B Open Dimensions (mm)	C Body O.D. (mm)	D Piston O.D. (mm)	E Clevis Hole Diameter (mm)	F Clevis Width (mm)	G Bore Diameter (mm)	Wgt. (kg)
RDP106	89.0	152.4	188.5	15.5	575	535.9	688.3	84.8	39.9	30.0	19.8	59.9	14.0
RDP306	266.9	152.4	271.4	42.6	627	668.0	820.4	115.1	48.0	59.9	24.9	87.9	28.9
RDP506	444.8	152.4	424.4	75.5	589	640.1	792.5	154.9	59.9	69.9	45.0	115.1	44.9
RDP1006	889.6	152.4	497.8	143.2	621	739.1	891.5	198.1	65.0	80.0	50.0	150.1	87.8

RC603A Shown

Capacity Range ▶ 106.8 - 889.6 kN
Stroke Range ▶ 7.9 - 155.7 mm
Maximum Pressure ▶ 573 - 668 bar

- ▶ Induction hardened piston rod for added strength eliminating the need for a loadcap.
- ▶ Collar threads for easy fixturing.
- ▶ Design allows for both push & pull forces.
- ▶ Large center hole for greater flexibility.

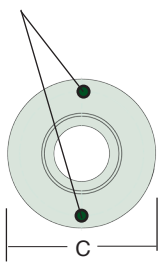
POWER PUMPS - *pages 43 - 65*
Simplex offers a wide variety of lightweight power pumps to fit any application.

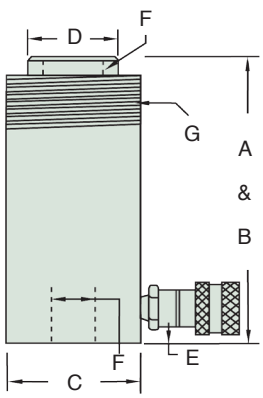
CENTER HOLE
Corrosion resistant technology on the piston rod and retaining nut extends cylinder life.

Base Mounting Hole Dimensions

Model	Bolt Circle (mm)	Thread (in)	Thread Depth (mm)
RC120A	50.8	5/16 - 18 UNC	6.4
RC121A	NO TAPPED HOLES		
RC123A	50.8	5/16 - 18 UNC	12.7
177,9 kN	82.6	3/8 - 16 UNC	9.4
266,9 kN	92.2	3/8 - 16 UNC	15.7
533,8 kN	130.3	1/2 - 13 UNC	14.0
RC1003A	177.8	5/8 - 11 UNC	19.1

• Refer to Base Mounting Table





Model	Cap. (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Effect Area (cm^2)	Pres. @ Cap. (bar)	A	B	C	D	E	F	G		Wgt. (kg)
						Minimum Height (mm)	Extended Height (mm)	Body O.D. (mm)	Piston O.D. (mm)	Base to Port C/L (mm)	Center Hole Diameter (mm)	Collar Threads (in)	Collar Thread Length (mm)	
RC120A	106.8	7.9	14.1	17.8	599	55.9	63.5	69.9	35.1	9.7	19.6	2 3/4-16	30.2	1.6
RC121A	106.8	41.4	73.7	17.8	599	120.7	162.1	69.9	35.1	24.9	19.6	2 3/4-16	30.2	2.9
RC123A	106.8	76.2	136.0	17.8	599	184.2	260.4	69.9	35.1	24.9	19.6	2 3/4-16	30.2	4.5
RC202A	177.9	50.8	155.0	30.5	583	163.1	213.9	98.6	53.8	19.1	26.9	3 7/8-12	38.1	7.7
RC206A	177.9	154.9	469.8	30.5	583	307.1	459.5	98.6	53.8	19.1	26.9	3 7/8-12	38.1	14.1
RC302A	266.9	63.5	295.8	46.6	573	178.6	242.1	114.3	63.5	21.6	33.3	4 1/2-12	42.2	10.9
RC306A	266.9	155.7	724.8	46.6	573	330.2	485.9	114.3	63.5	25.4	33.3	4 1/2-12	42.2	21.8
RC603A	533.8	76.2	627.5	82.1	650	247.7	336.6	159.0	91.9	31.8	53.8	6 1/4-12	48.5	28.1
RC606A	533.8	152.4	1252.1	82.1	650	323.9	476.3	159.0	82.8	31.8	53.8	6 1/4-12	48.5	35.4
RC1003A	889.6	76.2	1016.0	132.9	668	254.0	330.2	212.9	127.0	38.1	79.0	8 3/8-12	60.5	59.9

RCD307A Shown

Capacity Range ▶ 320.3 - 5747.1 kN

Stroke Range ▶ 213.5 - 605 mm

Maximum Pressure ▶ 573 - 700 bars

- ▶ Design allows for both push & pull forces.
- ▶ Induction hardened piston rod for added strength eliminating the need for a loadcap.
- ▶ Performance Nitride/QPQ corrosion resistant technology on the piston rod and retaining nut for extended cylinder life.

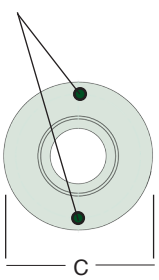
RELIEF VALVE
Relief valve prevents damage in case of over pressurization.

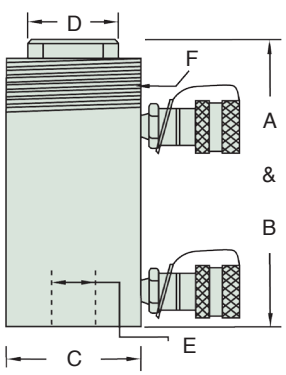
HOSES - *pages 78 - 79*
Heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor.

Base Mounting Hole Dimensions

Model	Bolt Circle (mm)	Thread (in)	Thread Depth (mm)
320.3 kN	92.2	3/8 - 16 UNC	15.7
569.4 kN	130.0	1/2 - 13 UNC	14.0
916.3 kN	177.8	5/8 - 11 UNC	19.1

• Refer to Base Mounting Table





Model	Push Capacity (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Push Effect Area (cm^2)	Pres. @ Cap. (bar)	A	B	C	D	E	F		Wgt. (kg)
						Minimum Height (mm)	Extended Ht. (mm)	Body O.D. (mm)	Piston O.D. (mm)	Center Hole Dia. (mm)	Collar Threads (mm)	Collar Threads Length (mm)	
RCD307A	320.3	177.8	828.4	46.6	573	330.2	508.0	114.3	63.5	33.3	4 1/2-12	42.2	21.8
RCD6010A	569.4	257.0	2112.9	82.1	650	438.2	695.2	159.0	91.9	54.1	6 1/4-12	48.5	45.8
RCD1003A	916.3	76.2	1014.0	133.1	668	254.0	330.2	212.9	127.0	79.5	8 3/8-12	60.5	61.2
RCD1006A	916.3	152.4	2028.1	133.1	668	342.9	495.3	212.9	127.0	79.5	8 3/8-12	60.5	79.4
RCD10010A	916.3	257.3	3422.3	133.1	668	460.2	717.6	212.9	127.0	79.5	8 3/8-12	60.5	106.6
RCD1505	1334.5	127.0	1278.2	203.9	654	333.5	460.5	254.0	152.4	79.5	---	---	108.9
RCD2006C	2188.5	152.4	2818.6	318.1	700	412.8	565.2	304.8	203.2	104.9	---	---	174.6
RCD3006C	3861.1	152.4	4850.6	590.3	700	476.3	628.7	381.0	241.3	108.0	---	---	326.6
RCD5006C	5747.1	152.4	7587.2	834.2	700	546.1	698.5	450.9	304.8	133.4	---	---	557.9

RLR1006 Shown

Capacity Range ▶ 266.9 - 8896.4 kN

Stroke Range ▶ 50.8 - 304.8 mm

Maximum Pressure ▶ 624 - 703 bar

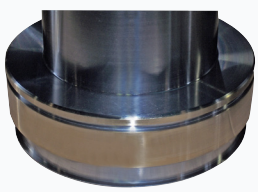
- ▶ Large bearings resist side load.
- ▶ Plated piston to resist scoring & corrosion.
- ▶ Stop ring for piston blow-out protection.
- ▶ Custom strokes and capacities up to 13345 kN available, contact factory.
- ▶ Swivel Eye Bolts are used 889,6 kN and up.

THINK SAFETY
Please refer to pages 4&5 for a complete list of safety tips and recommendations.

POWER PUMPS - *pages 43 - 65*
Simplex offers a wide variety of lightweight power pumps to fit any application.

SWIVEL LOAD CAP
5° swivel load caps on 266.9 - 889.6 kN models help stabilize the load.

DESIGN CONSTRUCTION
1334.5+ kN

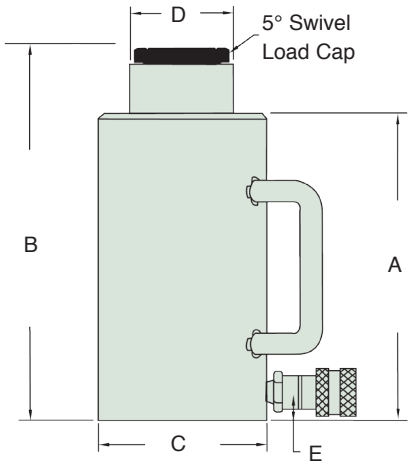


Piston Flange
A thick bronze inlay on the piston flange virtually eliminates scoring of cylinder bore while offering the best protection against accidental side loading. (1334.5 kN and up)

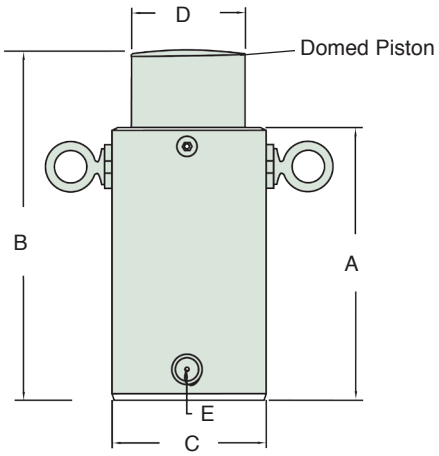
A ten cylinder system, using RLR40012 cylinders, is used to lift the bed of this dragline so that maintenance can be performed on the rollers.▼

• *Note: 889.6 kN Models Have Eyebolts For Positioning*

266.9 & 889.6 kN



1334.5 & 8896.4 kN



Model	Cap. (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Ram Bore Diameter (mm)	Effective Area (cm^2)	Pressure @ Capacity (bar)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Piston O.D. (mm)	E Base to Port C/L (mm)	Wgt. (kg)
RLR306	266.9	152.4	637.5	72.9	41.9	637	238.3	390.7	101.6	50.8	19.1	14.5
RLR502	444.8	50.8	362.2	95.3	71.3	624	138.2	189.0	127.0	76.2	19.8	13.6
RLR506	444.8	152.4	1086.5	95.3	71.3	624	239.8	392.2	127.0	76.2	19.8	24.9
RLR5010	444.8	254.0	2179.5	95.3	71.3	624	341.4	595.4	127.0	76.2	19.8	41.7
RLR1006	889.6	152.4	1933.7	127.0	126.6	703	268.2	420.6	162.1	85.9	31.8	40.8
RLR10010	889.6	254.0	3211.9	127.0	126.6	703	369.8	623.8	162.1	85.9	31.8	57.2
RLR1502	1334.5	50.8	1088.1	158.8	197.9	674	177.8	228.6	228.6	141.2	31.8	53.1
RLR1506	1334.5	152.4	3261.0	158.8	197.9	674	279.4	431.8	228.6	141.2	49.0	85.7
RLR15012	1334.5	304.8	6522.1	158.8	197.9	674	431.8	736.6	228.6	141.2	49.0	134.7
RLR2002	1779.3	50.8	1448.6	184.2	266.3	624	203.2	254.0	254.0	166.6	52.3	83.5
RLR2006	1779.3	152.4	4342.6	184.2	266.3	624	304.8	457.2	254.0	166.6	52.3	127.9
RLR20012	1779.3	304.8	8685.1	184.2	266.3	624	457.2	762.0	254.0	166.6	52.3	194.6
RLR3002	2668.9	50.8	1966.4	222.3	387.9	688	292.1	342.9	304.8	198.4	62.0	125.6
RLR3006	2668.9	152.4	5915.7	222.3	387.9	688	349.3	501.7	304.8	1798.6	62.0	183.7
RLR30012	2668.9	304.8	11831.5	222.3	387.9	688	501.7	806.5	304.8	198.4	62.0	270.8
RLR4002	3558.6	50.8	2851.3	266.7	558.6	637	292.1	342.9	355.6	166.6	76.2	206.4
RLR4006	3558.6	152.4	8521.3	266.7	558.6	637	393.7	546.1	355.6	166.6	76.2	277.6
RLR40012	3558.6	304.8	17042.5	266.7	558.6	637	546.1	850.9	355.6	166.6	76.2	381.9
RLR5002	4448.2	50.8	3408.5	292.1	670.1	664	320.5	371.3	406.4	261.9	81.0	284.4
RLR5006	4448.2	152.4	10209.1	292.1	670.1	664	422.1	574.5	406.4	261.9	81.0	387.8
RLR50012	4448.2	304.8	20418.3	292.1	670.1	664	574.5	879.3	406.4	261.9	81.0	543.0
RLR6002	5337.9	50.8	4031.2	317.5	791.7	674	342.9	393.7	444.5	287.3	88.9	297.1
RLR6006	5337.9	152.4	12093.7	317.5	791.7	674	444.5	596.9	444.5	287.3	88.9	409.1
RLR60012	5337.9	304.8	24187.3	317.5	791.7	674	596.9	901.7	444.5	287.3	88.9	577.4
RLR8002	7117.2	50.8	5407.7	368.3	1065.4	668	366.8	417.6	457.2	338.1	104.9	452.2
RLR8006	7117.2	152.4	16239.6	368.3	1065.4	668	468.4	620.8	457.2	338.1	104.9	569.7
RLR80012	7117.2	304.8	32479.2	368.3	1065.4	668	620.8	925.6	457.2	338.1	104.9	745.7
RLR10002	8896.4	50.8	6587.6	406.4	1297.2	686	409.7	460.5	533.4	379.2	108.0	690.8
RLR10006	8896.4	152.4	19762.8	406.4	1297.2	686	511.3	663.7	533.4	379.2	108.0	854.1
RLR100012	8896.4	304.8	39525.6	406.4	1297.2	686	663.7	968.5	533.4	379.2	108.0	1099.1

RLN1006 Shown

Capacity Range ▶ 266.9 - 8896.4 kN
Stroke Range ▶ 50.8 - 304.8 mm
Maximum Pressure ▶ 624 - 703 bar

- ▶ Lock nuts offer extended load holding.
- ▶ Stop ring for piston blow-out protection.
- ▶ 5° swivel load caps on 266.9 - 889.6 kN models for side load protection.
- ▶ Custom strokes and capacities up to 13345 kN available, contact factory.

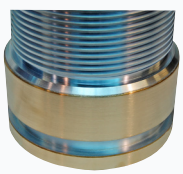
HOSES - ***pages 78 - 79***
Heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor.

POWER PUMPS - ***pages 43 - 65***
Simplex offers a wide variety of lightweight power pumps to fit any application.

SWIVEL EYE BOLTS
Swivel Eye Bolts are used on 889.6 kN and up.

DESIGN CONSTRUCTION
1779.3+ kN

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

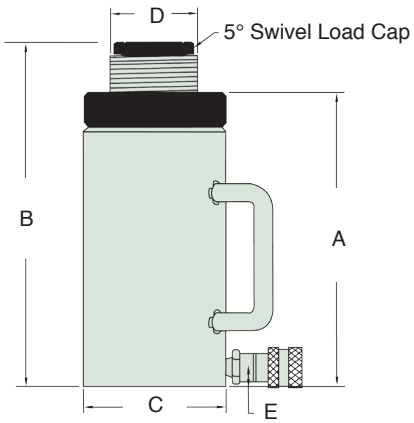


Piston Flange
A thick bronze inlay on the piston flange virtually eliminates scoring of cylinder bore while offering the best protection against accidental side loading. (1779.3 kN and up)

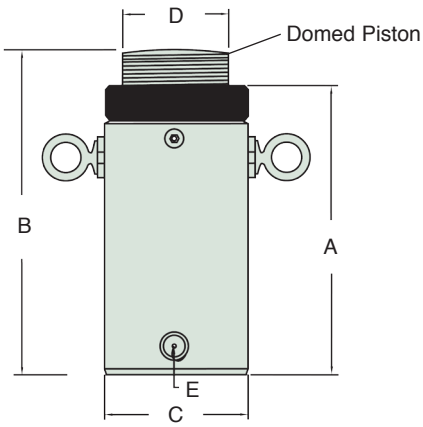
Simplex RLN Series cylinders are used to lift and hold this large platform for maintenance at this shipyard. ▼

• *Note: 889.6 kN Models Have Eyebolts For Positioning*

266.9 & 889.6 kN



1334.5 & 8896.4 kN



Model	Cap. (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Ram Bore Diameter (mm)	Effect Area (cm^2)	Pressure @ Capacity (bar)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Piston O.D. (mm)	E Base to Port C/L (mm)	Wgt. (kg)
RLN302	266.9	50.8	213.0	72.9	41.9	637	162.1	212.9	101.6	62.0	19.1	9.5
RLN306	266.9	152.4	637.5	72.9	41.9	637	263.7	416.1	101.6	62.0	19.1	15.9
RLN502	444.8	50.8	362.2	95.3	71.3	624	171.5	222.3	127.0	81.0	19.8	17.2
RLN506	444.8	152.4	1084.8	95.3	71.3	624	273.1	425.5	127.0	81.0	19.8	28.6
RLN5010	444.8	254.0	2179.5	95.3	71.3	624	374.7	628.7	127.0	81.0	19.8	45.4
RLN1002	889.6	50.8	655.5	127.0	126.6	703	203.2	254.0	162.1	109.5	31.8	39.5
RLN1006	889.6	152.4	1933.7	127.0	126.6	703	304.8	457.2	162.1	109.5	31.8	59.9
RLN10010	889.6	254.0	3211.9	127.0	126.6	703	406.4	660.4	162.1	109.5	31.8	91.6
RLN1502	1334.5	50.8	1088.1	158.8	197.9	674	203.2	254.0	215.9	141.2	49.0	67.6
RLN1506	1334.5	152.4	3261.0	158.8	197.9	674	311.2	457.2	215.9	141.2	49.0	100.2
RLN15012	1334.5	304.8	6522.1	158.8	197.9	674	457.2	762.0	215.9	141.2	49.0	141.1
RLN2002	1779.3	50.8	1448.6	184.2	266.3	624	241.3	292.1	254.0	166.6	52.3	105.7
RLN2006	1779.3	152.4	4342.6	184.2	266.3	624	342.9	495.3	254.0	166.6	52.3	150.6
RLN20012	1779.3	304.8	8685.1	184.2	266.3	624	495.3	800.1	254.0	166.6	52.3	217.3
RLN3002	2668.9	50.8	1966.4	222.3	387.9	688	292.1	342.9	304.8	198.4	62.0	161.9
RLN3006	2668.9	152.4	5915.7	222.3	387.9	688	393.7	546.1	304.8	198.4	62.0	220.0
RLN30012	2668.9	304.8	11831.5	222.3	387.9	688	546.1	850.9	304.8	198.4	62.0	307.1
RLN4002	3558.6	50.8	2851.3	266.7	558.6	637	350.8	401.6	355.6	236.5	76.2	235.9
RLN4006	3558.6	152.4	8521.3	266.7	558.6	637	452.4	604.8	355.6	236.5	76.2	306.2
RLN40012	3558.6	304.8	17042.5	266.7	558.6	637	604.8	655.6	355.6	236.5	76.2	410.5
RLN5002	4448.2	50.8	3408.5	292.1	670.1	664	374.7	425.5	406.4	261.9	81.0	420.5
RLN5006	4448.2	152.4	10209.1	292.1	670.1	664	476.3	628.7	406.4	261.9	81.0	472.2
RLN50012	4448.2	304.8	20418.3	292.1	670.1	664	628.7	933.5	406.4	261.9	81.0	627.3
RLN6002	5337.9	50.8	4031.2	317.5	792.2	674	396.7	447.5	444.5	287.3	88.9	446.8
RLN6006	5337.9	152.4	12093.7	317.5	792.2	674	498.3	650.7	444.5	287.3	88.9	558.8
RLN60012	5337.9	304.8	24187.3	317.5	792.2	674	701.5	1006.3	444.5	287.3	88.9	727.1
RLN8002	7117.2	50.8	5407.7	368.3	1065.4	668	430.0	480.8	457.2	338.1	104.9	520.7
RLN8006	7117.2	152.4	16239.6	368.3	1065.4	668	557.0	709.4	457.2	338.1	104.9	638.2
RLN80012	7117.2	304.8	32479.2	368.3	1065.4	668	709.4	1014.2	457.2	338.1	104.9	814.2
RLN10002	8896.4	50.8	6587.6	406.4	1297.2	686	498.3	549.1	533.4	376.2	108.0	824.6
RLN10006	8896.4	152.4	19762.8	406.4	1297.2	686	599.9	752.3	533.4	376.2	108.0	987.9
RLN100012	8896.4	304.8	39525.6	406.4	1297.2	686	752.3	1057.1	533.4	376.2	108.0	1232.9

RDA10006 Shown -
with optional o/c valve (sold separately)

Capacity Range ▶ 89 - 8896.4 kN
Stroke Range ▶ 50.8 - 609.6 mm
Maximum Pressure ▶ 607 - 700 bars

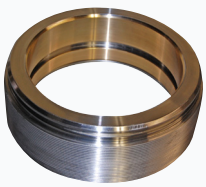
- ▶ Collar threads designed for full load (89 - 1779.3 kN).
- ▶ Removable load cap for flexibility and safety.
- ▶ Stop ring for piston blow-out protection.
- ▶ Plated piston to resist scoring & corrosion.
- ▶ Large bearings resist side load.
- ▶ Rod wiper protects inner cylinder from dirt.
- ▶ Custom strokes and capacities up to 13345 kN available, contact factory.

GAUGES - *page 77*
Improve your system visibility and safety by adding an inline hydraulic gauge to your circuit.

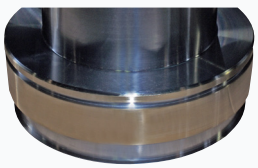
POWER PUMPS - *pages 43 - 65*
Simplex offers a wide variety of lightweight power pumps to fit any application.

MANIFOLDS - *page 73*
The ideal solution in obtaining precise control when operating multiple cylinders.

DESIGN CONSTRUCTION
1779.3+ kN

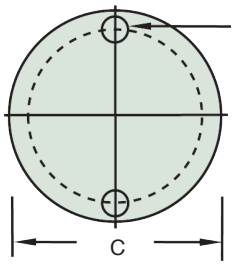


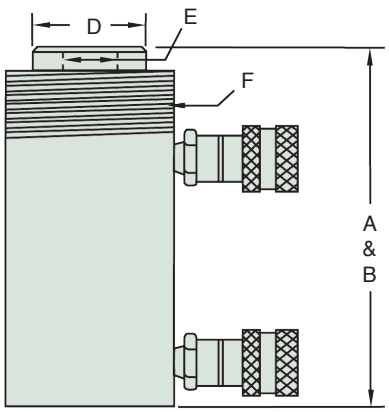
Bronze Inlay
Thick bronze inlay on the inner diameter of the retaining nut protects the piston rod.



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. (1779.3 kN and up)

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. ▼





Base Mounting Hole Dimensions

Model	Thread		Bolt Circle Diameter (mm)
	Size (in)	Depth (mm)	
489.3 kN	.62 -11	19.1	95.3
889.6 kN	.62 -11	25.4	108.0
1334.4 kN	1-8	35.1	127.0
1779.3 kN	1-8	28.7	127.0

Model	Push Cap. (kN)	Pull Cap. (kN)	Stroke (mm)	Oil Cap. Req'd. (cm^3)	Ram Bore Dia. (mm)	Push Effect Area (cm^2)	Pull Effect. Area (cm^2)	Pres. @ Cap. (bar)	A	B	C	D	E		F		Wgt. (kg)
									Min. Ht. (mm)	Ext. Ht. (mm)	Body O.D. (mm)	Piston O.D. (mm)	Piston I.D. Thrds. (in)	Piston Thrd. Depth (mm)	Collar Thrds. (in)	Collar Thrd. Lgth. (mm)	
RDA1010	89.0	35.6	254.0	360.5	42.7	14.4	5.2	618	409.7	663.7	72.9	35.1	1-8	25.4	2.25-14	26.9	12.7
RDA308	266.9	111.2	206.5	557.2	72.9	42.0	19.4	638	400.1	603.3	101.6	54.1	1.5 -16	25.4	3.31-12	49.0	18.1
RDA3014	266.9	111.2	368.3	1491.2	72.9	42.0	19.4	638	549.1	917.7	101.6	54.1	1.5 -16	25.4	3.31-12	49.0	29.0
RDA556	489.3	151.2	155.7	753.8	95.3	71.3	21.9	686	333.5	489.0	127.0	79.5	1-12	38.1	5-12	44.5	30.8
RDA5512	489.3	151.2	304.8	1507.6	95.3	71.3	21.9	686	485.9	790.7	127.0	79.5	1-12	38.1	5-12	44.5	51.7
RDA5524	489.3	151.2	609.6	3015.2	95.3	71.3	21.9	686	803.1	1412.7	127.0	79.5	1-12	38.1	5-12	44.5	91.2
RDA1006	889.6	400.3	153.9	1261.8	133.4	139.7	58.6	637	352.3	506.2	177.8	101.6	3.25 -12	63.5	7-12	63.5	63.5
RDA10012	889.6	400.3	304.8	2474.4	133.4	139.7	58.6	637	504.7	809.5	177.8	101.6	3.25 -12	63.5	7-12	63.5	84.8
RDA1506	1334.5	596.1	153.9	1966.4	165.1	214.1	87.4	623	392.2	546.1	215.9	127.0	3.5 -12	69.9	8.5-12	55.6	98.9
RDA15012	1334.5	596.1	304.8	3867.3	165.1	214.1	87.4	623	546.1	850.9	215.9	127.0	3.5-12	69.9	8.5-12	55.6	133.8
RDA2002	1779.3	640.5	50.8	1081.5	190.5	285.0	102.6	624	290.6	341.4	254.0	152.4	2.5-12	63.5	9.75-12	47.5	105.2
RDA2006	1779.3	640.5	152.4	2785.8	190.5	285.0	102.6	624	392.2	544.6	254.0	152.4	2.5-12	63.5	9.75-12	47.5	142.9
RDA20013	1779.3	640.5	330.2	6030.4	190.5	285.0	102.6	624	570.0	900.2	254.0	152.4	2.5-12	63.5	9.75-12	47.5	199.6
RDA3002	3158.2	----	50.8	1655.1	241.3	457.4	133.0	700	336.6	387.4	304.8	203.2	---	---	---	---	125.6
RDA3006	3158.2	----	152.4	4948.9	241.3	457.4	133.0	700	438.2	590.6	304.8	203.2	---	---	---	---	200.0
RDA30012	3158.2	----	304.8	9914.2	241.3	457.4	133.0	700	590.6	895.4	304.8	203.2	---	---	---	---	312.1
RDA4002	5026.5	----	50.8	2081.2	304.8	729.0	319.2	700	314.5	365.3	368.3	228.6	---	---	---	---	240.4
RDA4006	5026.5	----	152.4	6259.9	304.8	729.0	319.2	700	422.1	574.5	368.3	228.6	---	---	---	---	303.9
RDA40012	5026.5	----	304.8	12486.9	304.8	729.0	319.2	700	580.9	885.7	368.3	228.6	---	---	---	---	399.2
RDA5002	5907.2	----	50.8	2556.4	330.2	851.6	349.6	700	419.1	469.9	406.4	254.0	---	---	---	---	327.5
RDA5006	5907.2	----	152.4	7718.3	330.2	851.6	349.6	700	520.7	673.1	406.4	254.0	---	---	---	---	432.3
RDA50012	5907.2	----	304.8	15436.6	330.2	851.6	349.6	700	673.1	977.9	406.4	254.0	---	---	---	---	589.7
RDA6002	5337.9	----	50.8	2589.2	317.5	791.7	285.0	700	381.0	431.8	431.8	254.0	---	---	---	---	415.9
RDA6006	5337.9	----	152.4	7734.7	317.5	791.7	285.0	700	482.6	635.0	431.8	254.0	---	---	---	---	538.9
RDA60012	5337.9	----	304.8	15469.4	317.5	791.7	285.0	700	635.0	939.8	431.8	254.0	---	---	---	---	723.5
RDA8002	7117.2	----	50.8	3703.5	368.3	1065.4	335.7	668	406.4	457.2	469.9	254.0	---	---	---	---	528.9
RDA8006	7117.2	----	152.4	16239.6	368.3	1065.4	335.7	668	546.1	698.5	469.9	254.0	---	---	---	---	662.7
RDA80012	7117.2	----	304.8	22286.4	368.3	1065.4	335.7	668	660.4	965.2	469.9	254.0	---	---	---	---	805.6
RDA10002	8896.4	----	50.8	5801.0	431.8	1464.5	324.3	607	406.4	457.2	533.4	381.0	---	---	---	---	706.7
RDA10006	8896.4	----	152.4	17550.5	431.8	1464.5	324.3	607	508.0	660.4	533.4	381.0	---	---	---	---	933.5
RDA100012	8896.4	----	304.8	35101.1	431.8	1464.5	324.3	607	685.8	990.6	533.4	381.0	---	---	---	---	1273.7

CLP-1002 Shown

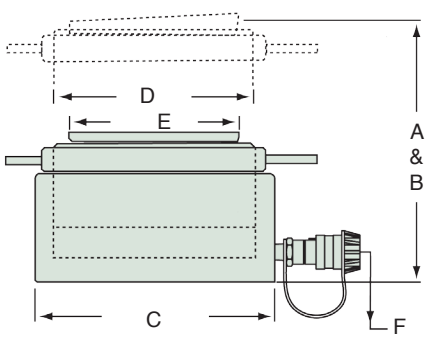
Capacity Range ▶ 533.8 - 4448.2 kN
Stroke Range ▶ 45 - 50 mm
Maximum Pressure ▶ 553 - 629 bar

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

POWER PUMPS - ***pages 43 - 65***
Simplex offers a wide variety of lightweight power pumps to fit any application.

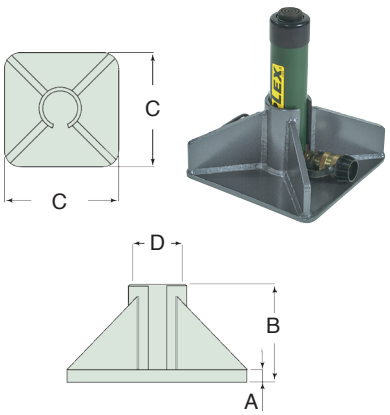
HOSES - ***pages 78 - 79***
Heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor.

Simplex CLP Series cylinders are designed specifically for lifting and load holding where space is at a minimum. ▼



Model	Capacity (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Ram Bore Diameter (mm)	Effective Area (cm^2)	Pressure @ Capacity (bar)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Piston O.D. Thread (mm)	E Saddle Diameter (mm)	F Base to Port (mm)	Wgt. (kg)
CLP-602	533.8	50.0	432.6	104.1	86.5	617	124.5	170.2	139.7	105 X 6	96.5	20.3	15.0
CLP-1002	889.6	50.0	716.1	134.6	143.2	621	137.2	182.9	175.3	135 X 6	127.0	20.3	25.9
CLP-1502	1334.5	45.0	961.9	165.1	213.5	625	147.3	198.1	221.0	165 X 6	149.9	27.9	44.0
CLP-2002	1779.3	45.0	1274.9	190.5	321.9	553	154.9	205.7	243.8	190 X 6	180.3	30.5	56.7
CLP-2502	2224.1	45.0	1633.8	215.9	363.2	612	160.0	210.8	274.3	215 X 6	200.7	33.0	74.8
CLP-4002	3558.6	45.0	2574.4	269.2	572.3	622	177.8	228.6	350.5	270 X 8	251.5	38.1	134.7
CLP-5002	4448.2	45.0	3179.1	299.7	707.1	629	193.0	243.8	401.3	300 X 8	284.5	48.3	189.6

Cylinder Bases



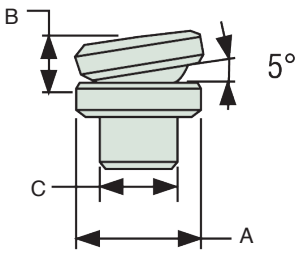
Model	A (mm)	B (mm)	C (mm)	D (mm)
BA10	9.9	119.9	230.1	57.9
BA25	16.0	126.0	279.9	86.1

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

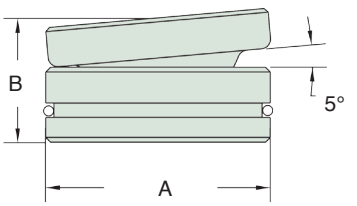
Tilt Saddles



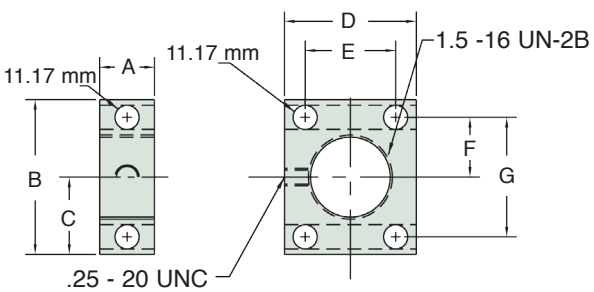
Model	A (mm)	B (mm)	C (mm)
ATS10	35.1	15.0	22.4
ATS25	50.0	21.1	35.6
ATS100	71.6	39.4	----

ATS10 for R102 through R1014
ATS25 for R251 through R2514

ATS100 for Series R55, R756, R7513, R1006 and R10010

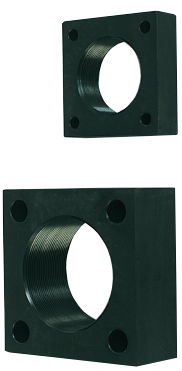


Mounting Blocks For R5 Series Cylinders

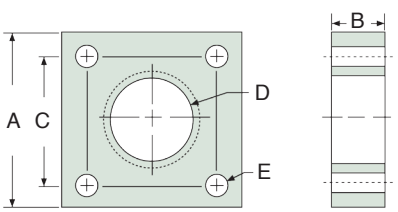


Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
BR5	25.1	69.9	35.1	59.9	41.1	26.9	53.8

Mounting Blocks



Mounting Blocks For R10, R15 & R25 Series Cylinders

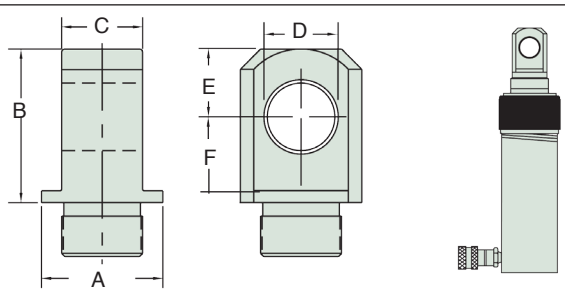


Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
BR10	88.9	25.4	66.8	2.25 -14 UN-2B	8.6
BR15	88.9	25.4	66.8	2.75 -16 UN-2B	8.6
BR25	127.0	50.8	93.0	3.31 -12 UN-2B	16.8

Piston Clevis

For R-Series 44,5, 89, 133,4 & 222,4 kN cylinders

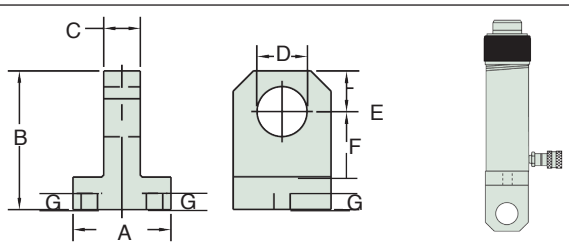
Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)
BCR5	28.4	44.2	14.2	16.0	15.7	19.3
BCR10	42.9	62.0	25.4	22.4	25.4	28.4
BCR15	42.9	62.0	25.4	22.4	25.4	28.4
BCR25	57.2	71.6	38.1	32.0	31.8	34.8



Base Clevis

For R-Series 89, 133,4 & 222,4 kN cylinders

Model	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (under cut)
BC10	63.5	73.2	25.4	22.4	25.4	35.1	6.4
BC15	76.2	73.2	25.4	22.4	25.4	35.1	6.4
BC25	95.3	85.9	38.1	32.0	31.8	38.9	6.4



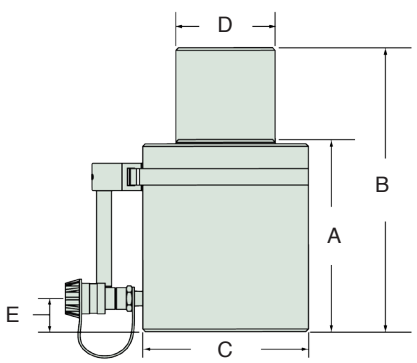
RAS306B Shown

Capacity Range ..... ▶ 266.9 - 1334.5 kN
Stroke Range ..... ▶ 50.8 - 254 mm
Maximum Pressure ..... ▶ 627 - 674 bar

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

POWER PUMPS - ***pages 43 - 65***
Simplex offers a wide variety of lightweight power pumps to fit any application.

The RAS302B spring return cylinder along with a P32 aluminum hand pump is easy to carry and position in tight places. ▼



Model	Capacity (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Effect Area (cm^2)	Pressure @ Capacity (bar)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Piston O.D. (mm)	E Base to Port C/L (mm)	Wgt. (kg)
RAS302B	266.9	50.8	213.0	41.9	636	165.1	215.9	114.3	63.5	38.1	6.4
RAS306B	266.9	152.4	639.1	41.9	636	266.7	419.1	114.3	63.5	38.1	8.2
RAS502B	444.8	50.8	362.2	71.0	627	165.1	215.9	139.7	79.5	38.1	5.9
RAS504B	444.8	101.6	724.3	71.0	627	215.9	317.5	139.7	79.5	38.1	7.7
RAS506B	444.8	152.4	1084.8	71.0	627	266.7	419.1	139.7	79.5	38.1	12.7
RAS5010B	444.8	254.0	1809.1	71.0	627	368.3	622.3	139.7	79.5	38.1	16.3
RAS1002B	889.6	50.8	675.1	133.5	666	165.1	215.9	203.2	108.0	38.1	18.1
RAS1004B	889.6	101.6	1350.3	133.5	666	215.9	317.5	203.2	108.0	38.1	20.4
RAS1006B	889.6	152.4	2027.1	133.5	666	266.7	419.1	203.2	108.0	38.1	22.7
RAS10010B	889.6	254.0	3375.7	133.5	666	368.3	622.3	203.2	108.0	38.1	30.8
RAS1502B	1334.5	50.8	1006.2	198.1	674	165.1	215.9	254.0	123.7	38.1	26.3
RAS1506B	1334.5	152.4	3016.9	198.1	674	266.7	419.1	254.0	123.7	38.1	39.0
RAS15010B	1334.5	254.0	5027.6	198.1	674	368.3	622.3	254.0	123.7	38.1	49.9

RAL502 Shown

Capacity Range ▶ 444.8 - 1334.5 kN

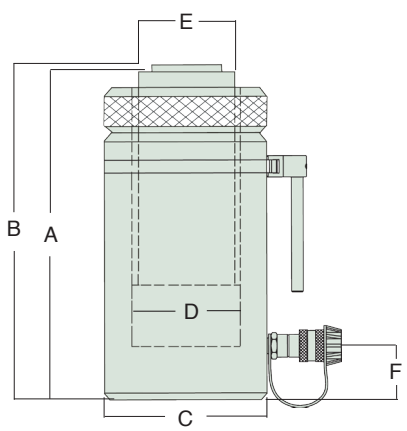
Stroke Range ▶ 50.8 - 254 mm

Maximum Pressure ▶ 625 - 674 bar

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

COUPLERS - *pages 74 - 75*
High flow quick disconnect couplers provide a quick change to a variety of pumps.

HOSES - *pages 78 - 79*
Heavy duty and thermo plastic hydraulic hoses to meet your requirements and safety factor.



Model	Capacity (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Effect Area (cm^2)	Pressure @ Capacity (bar)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Cylinder Bore Diameter (mm)	E Piston O.D. (mm)	F Base to Port C/L (mm)	Wgt. (kg)
RAL502	444.8	50.8	354.8	71.2	625	206.5	257.3	139.7	95.3	79.5	38.1	9.1
RAL504	444.8	101.6	709.6	71.2	625	257.3	358.9	139.7	95.3	79.5	38.1	11.3
RAL506	444.8	152.4	1063.8	71.2	625	308.1	460.5	139.7	95.3	79.5	38.1	13.6
RAL5010	444.8	254.0	1773.1	71.2	625	409.7	663.7	139.7	95.3	79.5	38.1	18.1
RAL1002	889.6	50.8	663.8	133.4	667	212.9	263.7	203.2	130.3	108.0	38.1	20.4
RAL1004	889.6	101.6	1327.4	133.4	667	263.7	365.3	203.2	130.3	108.0	38.1	24.9
RAL1006	889.6	152.4	1991.0	133.4	667	314.5	466.9	203.2	130.3	108.0	38.1	29.0
RAL10010	889.6	254.0	3318.4	133.4	667	416.1	670.1	203.2	130.3	108.0	38.1	37.2
RAL1502	1334.5	50.8	993.1	197.9	674	212.9	263.7	254.0	158.8	127.0	38.1	29.5
RAL1506	1334.5	152.4	2979.2	197.9	674	314.5	466.9	254.0	158.8	127.0	38.1	45.8
RAL15010	1334.5	254.0	4965.3	197.9	674	416.1	670.1	254.0	158.8	127.0	38.1	70.8

ALUMINUM CYLINDERS

RAC Series - Single Acting Center Hole

RAC303 Shown

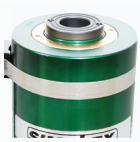
Capacity Range ▶ 266.9 - 533.8 kN

Stroke Range ▶ 76.2 - 152.4 mm

Maximum Pressure ▶ 574 - 673 bar

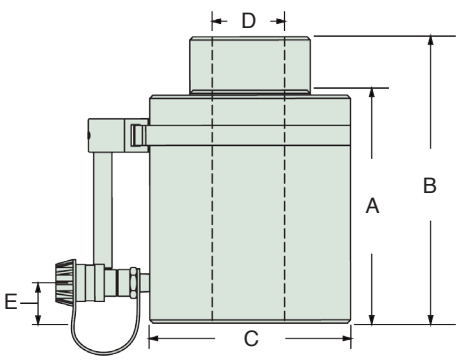
- ▶ Half the weight of steel cylinders.
- ▶ Heavy duty spring for fast & full retraction.
- ▶ Technical coating reduces wear & corrosion.
- ▶ Stop rings for piston blow-out protection.
- ▶ Rod wiper protects inner cylinder from dirt.

POWER PUMPS - *pages 43 - 65*
Simplex offers a wide variety of lightweight power pumps to fit any application.



CENTER HOLE
Chrome plated center hole for extra protection.

The Simplex RAC306A 266.9 kN single acting aluminum center hole cylinder is used to pull pins from off road equipment. ▼



Model	Capacity (kN)	Stroke (mm)	Oil Capacity Required (cm^3)	Effect Area (cm^2)	Pressure @ Capacity (bar)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Center Hole (mm)	E Base to Port C/L (mm)	Wgt. (kg)
RAC303	266.9	76.2	360.5	46.5	574	222.3	298.5	139.7	30.2	25.4	10.0
RAC306A	266.9	152.4	721.0	46.5	574	298.5	450.9	139.7	30.2	25.4	13.6
RAC603	533.8	76.2	606.3	79.4	673	257.3	333.5	190.5	54.1	25.4	19.1
RAC606	533.8	152.4	1212.6	79.4	673	336.6	489.0	190.5	54.1	25.4	24.9

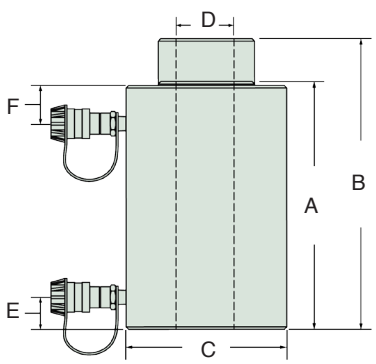
RACD306 Shown

Capacity Range ▶ 266.9 - 1334.5 kN
Stroke Range ▶ 50.8 - 254 mm
Maximum Pressure ▶ 651 - 680 bar

- ▶ Technical coating reduces wear & corrosion.
- ▶ Steel piston for protection against load damage.
- ▶ Chrome plated sleeve for extra protection.
- ▶ Stop rings for piston blow-out protection.
- ▶ Rod wiper protects inner cylinder from dirt.

RELIEF VALVE
Relief valve prevents damage in case of over pressurization.

CARRYING HANDLES
2 Carrying handles on models RACD1002 & RACD15010 for ease of mobility.



Model	Capacity (kN)	Stroke (mm)	Oil Cap. Required (cm^3) Push	Effect Area (cm^2)	Pressure @ Capacity (bars)	A Minimum Height (mm)	B Extended Height (mm)	C Body O.D. (mm)	D Center Hole Diameter (mm)	E Base to Port C/L (mm)	F Collar to Port C/L (mm)	Wgt. (kg)
RACD302	266.9	50.8	235.0	41.0	651	177.8	228.6	139.7	38.1	44.5	44.5	9.1
RACD306	266.9	152.4	705.0	41.0	651	279.4	431.8	139.7	38.1	44.5	44.5	12.7
RACD3010	266.9	254.0	1175.0	41.0	651	381.0	635.0	139.7	38.1	44.5	44.5	15.9
RACD502	444.8	50.8	355.8	66.5	669	177.8	228.6	190.5	54.1	44.5	44.5	15.0
RACD504	444.8	101.6	711.9	66.5	669	228.6	330.2	190.5	54.1	44.5	44.5	18.6
RACD506	444.8	152.4	1067.8	66.5	669	279.4	431.8	190.5	54.1	44.5	44.5	22.2
RACD5010	444.8	254.0	1779.6	66.5	669	381.0	635.0	190.5	54.1	44.5	44.5	29.5
RACD1002	889.6	50.8	680.4	130.8	680	254.0	304.8	279.4	88.9	63.5	63.5	38.6
RACD1004	889.6	101.6	1360.8	130.8	680	304.8	406.4	279.4	88.9	63.5	63.5	47.6
RACD1006	889.6	152.4	2041.2	130.8	680	355.6	508.0	279.4	88.9	63.5	63.5	54.4
RACD10010	889.6	254.0	3385.6	130.8	680	457.2	711.2	279.4	88.9	63.5	63.5	70.3
RACD1502	1334.5	50.8	1003.9	203.0	657	254.0	304.8	304.8	88.9	63.5	63.5	45.8
RACD1506	1334.5	152.4	3010.8	203.0	657	355.6	508.0	304.8	88.9	63.5	63.5	64.0
RACD15010	1334.5	254.0	5019.4	203.0	657	457.2	711.2	304.8	88.9	63.5	63.5	81.6