

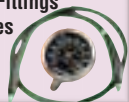
# General Purpose Cylinders (C Series)

## Single-Acting, Spring-Return — 5-100 Ton Capacity

Rugged, high quality all purpose cylinder used for lifting and pressing.



**Hoses, Fittings & Gauges**  
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**Cylinder Accessories**  
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**Cylinder/Pump Speed/Selection Chart**  
Page 178




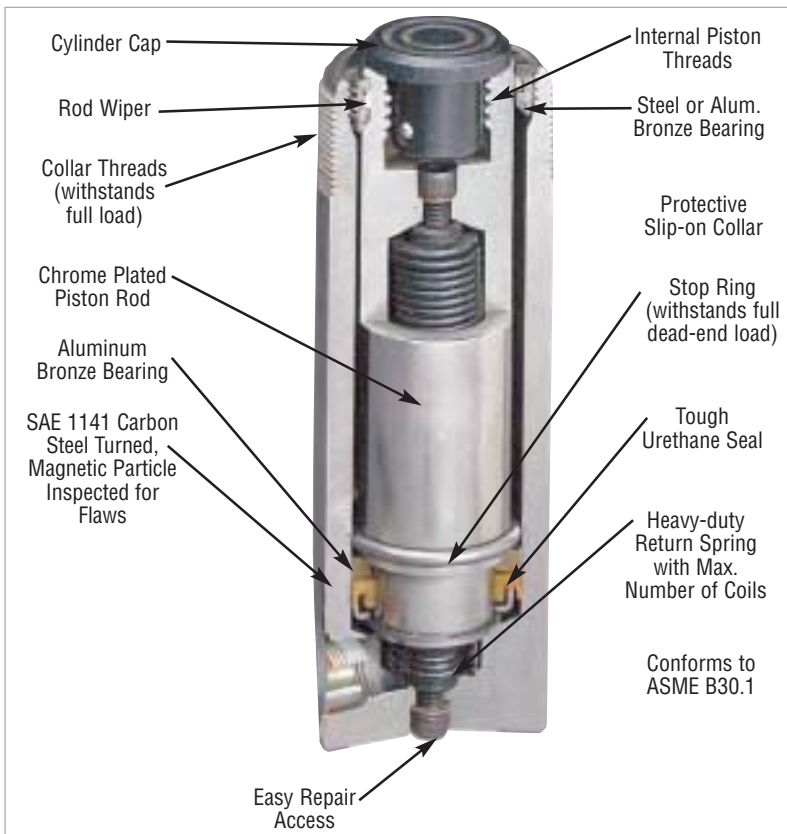
**Cylinder/Pump Sets**  
Page 25



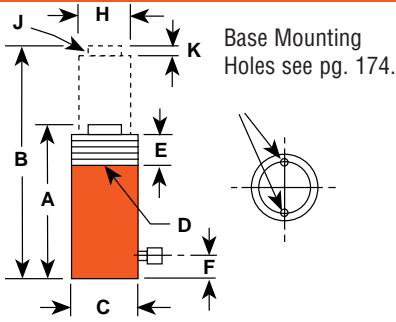
**Cylinder Repair Kits**  
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- Fully comply with ASME B30.1 standards. Have a 2 to 1 safety factor on material yield.
- Aluminum bronze bearing reduces scoring caused by off-center loads.
- Maximum sized springs speed piston return and increase spring life.
- Chrome plated piston rod resists wear and corrosion.
- Wide range of accessories available to thread onto piston rod, collar, or into cylinder base. Base mounting holes standard on 5 through 55 ton cylinders; optional on 75 and 100 ton cylinders.
- A 9796 3/8" NPTF female half coupler is standard with each cylinder. Oil ports are 3/8" NPTF.



### ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm)	A	B	C	D	E	F	H	J	K	Bore Dia. (mm)	Cylinder Effective Area (sq. cm)	Internal Press. at Cap. (bar)	Metric Tons at 700 bar	Prod. Wt. (kg)
				Re-tracted Height (mm)	Ex-tended Height (mm)	Outside Dia. (mm)	Collar Thread (in.)	Collar Thread Length (mm)	Base to Port (mm)	Piston Rod Dia. (mm)	Piston Rod Int. Thread and Depth (mm)	Piston Rod Protru-sion (mm)					
5	25.4	C51C	18.0	110.3	138.1	38.1	1½-16	28.6	19.1	25.4	¾-16 x 15.9	6.4	28.6	6.4	694	4.5	1.0
5	82.6	C53C	52.4	165.1	247.7	38.1	1½-16	28.6	19.1	25.4	¾-16 x 15.9	6.4	28.6	6.4	694	4.5	1.5
5	133.4	C55C	85.2	215.9	349.3	38.1	1½-16	28.6	19.1	25.4	¾-16 x 15.9	6.4	28.6	6.4	694	4.5	1.8
5	184.2	C57C	118.0	273.1	457.2	38.1	1½-16	28.6	19.1	25.4	¾-16 x 15.9	6.4	28.6	6.4	694	4.5	2.3
5	235.0	C59C	150.8	323.9	558.8	38.1	1½-16	28.6	19.1	25.4	¾-16 x 15.9	6.4	28.6	6.4	694	4.5	2.6
10	25.4	C101C	36.1	92.1	117.5	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	1.8
10	54.0	C102C	78.7	120.7	174.6	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	2.3
10	104.8	C104C	150.8	171.5	276.2	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	3.0
10	155.6	C106C	224.5	247.7	403.2	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	4.3
10	206.4	C108C	326.2	298.5	504.8	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	5.0
10	257.2	C1010C	370.4	349.3	606.4	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	5.9
10	308.0	C1012C	444.2	400.1	708.0	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	6.6
10	358.8	C1014C	517.9	450.9	809.6	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	7.3
10	406.4	C1016C	592.0	520.7	927.1	57.2	2¼-14	28.6	19.1	38.1	1-8 x 19.1	6.4	42.8	14.4	617	10.2	8.4
15	25.4	C151C	50.8	123.8	149.2	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	3.4
15	54.0	C152C	109.8	149.2	203.2	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	4.0
15	104.8	C154C	211.4	200.0	304.8	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	5.2
15	155.6	C156C	314.7	271.4	427.0	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	6.9
15	206.4	C158C	417.9	322.2	528.6	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	8.1
15	257.2	C1510C	521.2	373.0	630.2	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	9.4
15	308.0	C1512C	624.5	423.8	731.8	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	10.5
15	358.8	C1514C	727.7	474.6	833.4	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	11.8
15	406.4	C1516C	824.4	522.3	928.7	69.9	2¼-16	28.6	19.1	44.5	1-8 x 19.1	6.4	50.8	20.3	659	14.2	12.8
25	25.4	C251C	83.6	139.7	165.1	85.7	3¾-12	49.2	25.4	57.2	1½-16 x 25.4	9.5	65.1	33.2	669	23.4	5.4
25	50.8	C252C	168.8	165.1	215.9	85.7	3¾-12	49.2	25.4	57.2	1½-16 x 25.4	9.5	65.1	33.2	669	23.4	6.3
25	101.6	C254C	337.6	215.9	317.5	85.7	3¾-12	49.2	25.4	57.2	1½-16 x 25.4	9.5	65.1	33.2	669	23.4	8.0
25	158.8	C256C	527.8	273.1	431.8	85.7	3¾-12	49.2	25.4	57.2	1½-16 x 25.4	9.5	65.1	33.2	669	23.4	9.8
25	209.6	C258C	696.6	323.9	533.4	85.7	3¾-12	49.2	25.4	57.2	1½-16 x 25.4	9.5	65.1	33.2	669	23.4	11.6
25	260.4	C2510C	865.4	374.7	635.0	85.7	3¾-12	49.2	25.4	57.2	1½-16 x 25.4	9.5	65.1	33.2	669	23.4	13.3
25	311.2	C2512C	1,035.8	425.5	736.6	85.7	3¾-12	49.2	25.4	57.2	1½-16 x 25.4	9.5	65.1	33.2	669	23.4	15.0
25	362.0	C2514C	1,204.7	476.3	838.2	85.7	3¾-12	49.2	25.4	57.2	1½-16 x 25.4	9.5	65.1	33.2	669	23.4	16.7
55	50.8	C552C	362.2	174.6	225.4	127.0	5-12	55.6	34.9	79.4	None	3.2	95.3	71.2	687	50.1	14.7
55	108.0	C554C	768.7	231.8	339.7	127.0	5-12	55.6	34.9	79.4	None	3.2	95.3	71.2	687	50.1	18.7
55	158.8	C556C	1,130.9	282.6	441.3	127.0	5-12	55.6	34.9	79.4	None	3.2	95.3	71.2	687	50.1	23.1
55	260.4	C5510C	1,855.3	384.2	644.5	127.0	5-12	55.6	34.9	79.4	None	3.2	95.3	71.2	687	50.1	30.4
55	336.6	C5513C	2,397.9	460.4	796.9	127.0	5-12	55.6	34.9	79.4	None	3.2	95.3	71.2	687	50.1	35.3
75	155.6	C756C	1,596.4	314.3	469.9	146.1	5¾-12	44.5	31.8	95.3	None	3.2	114.3	102.6	651	72.1	33.3
75	333.4	C7513C	3,420.6	492.1	825.5	146.1	5¾-12	44.5	31.8	95.3	None	3.2	114.3	102.6	651	72.1	49.6
100	50.8	C1002C	675.3	219.1	269.9	158.8	6¾-12	57.2	41.3	104.8	None	3.2	130.2	133.0	669	93.6	28.5
100	168.3	C1006C	2,245.4	336.6	504.8	158.8	6¾-12	57.2	41.3	104.8	None	3.2	130.2	133.0	669	93.6	41.2
100	260.4	C10010C	3,466.5	428.6	689.0	158.8	6¾-12	57.2	41.3	104.8	None	3.2	130.2	133.0	669	93.6	51.2

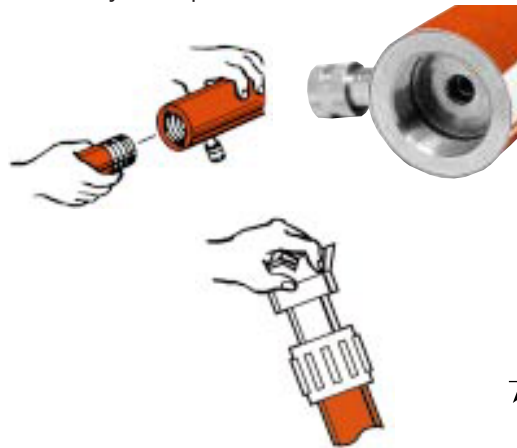
# Threaded End Cylinders (CBT Series)

## Single-Acting, Spring-Return — 5-25 Ton Capacity

Cylinder comes standard with threaded piston rod end and internal base threads to accommodate special accessories and adapters.



- Same superior internal construction as “C” series cylinders on pages 6-7.
- Comply fully with ASME B30.1 standard. Have a 2 to 1 safety factor on material yield.
- Threaded cylinder collars, piston rod ends, and internal base threads simplify mounting.
- Accessories thread onto cylinder piston rod, collar, or into cylinder base. See pages 156-157 for accessory listings.
- A 9796 3/8" NPTF female half coupler is standard with each cylinder; oil port threads are 3/8" NPTF.
- Cylinders have threaded bases to accommodate a variety of adapters.



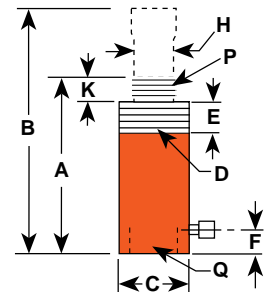
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**Cylinder/Pump Sets**  
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**Cylinder Repair Kits**  
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### ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm)	A	B	C	D	E	F	H	K	P	Q	Bore Dia. (mm)	Cyl. Eff. Area (sq. cm)	Internal Press. at Cap. (bar)	Metric Tons at 700 bar	Prod. Wt. (kg)
				Re-tracted Height (mm)	Ex-tended Height (mm)	Outside Dia. (mm)	Collar Thread (in.)	Collar Thread Length (mm)	Base to Port (mm)	Piston Rod Dia. (mm)	Piston Rod Protrusion (mm)	Piston Rod Thread* (NPT)	Internal Base Thread (NPSM) (in.)					
5	133.4	C55CBT	85.2	266.7	400.1	38.1	1½-16	28.6	47.6	25.4	28.6	¾-14	¾-14	28.6	6.4	694	4.5	2.0
10	155.6	C106CBT	227.8	292.1	447.7	57.2	2¼-14	28.6	42.9	38.1	27.0	1¼-11½	1¼-11½	42.9	14.4	617	10.2	4.7
10	257.2	C1010CBT	375.3	393.7	650.9	57.2	2¼-14	28.6	42.9	38.1	27.0	1¼-11½	1¼-11½	42.9	14.4	617	10.2	6.3
25	158.8	C256CBT	527.8	339.7	498.5	85.7	3¾-12	49.2	47.6	57.2	47.6	2-11½	2-11½	65.1	33.3	669	23.4	11.1
25	362.0	C2514CBT	1,204.7	542.9	904.9	85.7	3¾-12	49.2	47.6	57.2	47.6	2-11½	2-11½	65.1	33.3	669	23.4	18.2

\* For complete dimensions, see item 7a in chart on page 157.

# Aluminum Cylinders (RA Series)

## Single-Acting, Spring-Return — 20-100 Ton Capacity

Half the weight of equal capacity steel cylinders.

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Cylinder Accessories  
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Cylinder/Pump Speed/Selection Chart Page 178



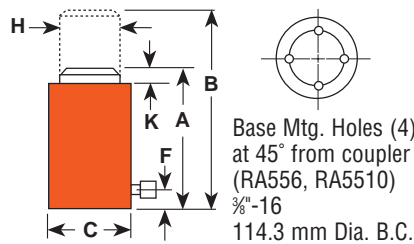
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Cylinder Repair Kits Page 159



- Designed for jacking and other non-production operations.
- Fully comply with ASME B30.1 standard.
- Aluminum body resists sparking in explosive environments.
- Hard coated aluminum piston rod and cylinder bore resist wear and corrosion.
- Grooved piston top helps keep the load from sliding on top of piston.



### ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm.)	A	B	C	F	H	K	Bore Dia. (mm)	Cylinder Effective Area (sq. cm.)	Internal Pressure at Cap. (bar)	Metric Tons at 700 bar	Product Wt. (kg)
				Retracted Ht. (mm)	Extended Ht. (mm)	Outside Dia. (mm)	Base to Port (mm)	Piston Rod Dia. (mm)	Piston Rod Protrusion (mm)					
20	54	RA202	154.3	161.9	215.9	95.3	31.8	50.8	7.9	60.3	28.6	623	20.1	3.5
20	104.8	RA204	299.6	212.7	317.5	95.3	31.8	50.8	7.9	60.3	28.6	623	20.1	4.2
20	155.6	RA206	444.9	263.5	419.1	95.3	31.8	50.8	7.9	60.3	28.6	623	20.1	5.1
30	54	RA302	226.2	187.3	241.3	108.0	31.8	63.5	9.5	73.0	41.9	638	29.4	5.0
30	104.8	RA304	439.0	238.1	342.9	108.0	31.8	63.5	9.5	73.0	41.9	638	29.4	5.9
30	155.6	RA306	651.9	288.9	444.5	108.0	31.8	63.5	9.5	73.0	41.9	638	29.4	6.8
55	54	RA552	385.4	171.5	225.4	133.4	34.9	79.4	6.4	95.3	71.2	687	50.1	7.3
55	104.8	RA554	746.2	222.3	327.0	133.4	34.9	79.4	6.4	95.3	71.2	687	50.1	8.9
55	155.6	RA556*	1,108.6	273.1	428.6	133.4	34.9	79.4	6.4	95.3	71.2	687	50.1	10.9
55	254	RA5510*	1,810.6	384.2	638.2	133.4	34.9	79.4	6.4	95.3	71.2	687	50.1	14.4
100	54	RA1002	718.3	196.9	250.8	187.3	30.2	104.8	3.2	130.2	133.0	669	93.5	15.1
100	158.8	RA1006*	2,115.6	298.5	457.2	187.3	30.2	104.8	3.2	130.2	133.0	669	93.5	22.6

\* Cylinders equipped with carrying handle. **NOTE:** Aluminum cylinders are designed for jacking and other non-production applications.

# “Low Profile” Cylinders (RLS Series)

## Single-Acting, Spring-Return — 5-150 Ton Capacity

Ideal for confined areas from 41.3 to 101.6 mm clearance.



- Couplers on all cylinders, except RLS50, are angled upward for extra clearance.
- A 9796 3/8" NPTF female half coupler is standard with each cylinder. Oil ports are 3/8" NPTF.
- Unique heavy duty spring provides fast piston return.
- Standard domed piston rod (on 5-30 ton) or swivel cap (on 50-150 ton) minimize effects of off-center loading.
- Fully comply with ASME B30.1 standard.
- Cylinder bodies, pistons and gland nuts have “Power Tech” surface treatment for corrosion and abrasion resistance (see page 176).

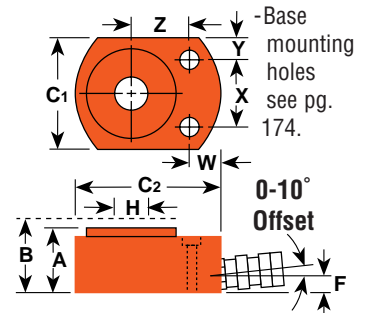
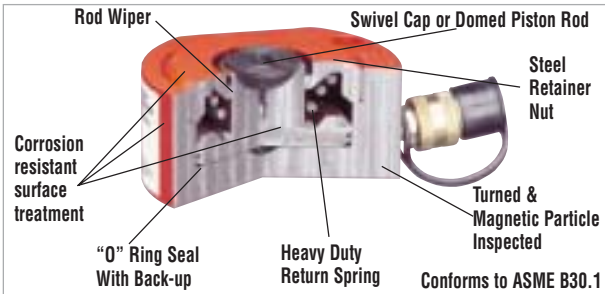
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Cylinder/Pump Speed/Selection Chart Page 178

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### ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm.)	A	B	C1 & C2	F	H	W	X	Y	Z	Bore Dia. (mm)	Cyl. Eff. Area (sq. cm.)	Int. Press. at Cap. (bar)	Metric Tons at 700 bar	Prod. Wt. (kg)
				Re-tracted Height (mm)	Ex-tended Height (mm)												
5	14.3	RLS50	10.2	41.3	55.6	41.3 x 65.1	19.1	15.9	19.1	28.6	6.4	25.4	28.6	6.4	694	4.5	1.0
10	11.1	RLS100	16.4	44.5	55.6	55.6 x 82.6	15.9	19.1	17.5	36.5	9.5	33.3	42.9	14.4	617	10.1	1.5
20	11.1	RLS200	32.8	50.8	61.9	76.2 x 101.6	16.7	28.6	18.3	49.2	13.5	39.7	60.3	28.6	623	20.1	2.5
30	12.7	RLS300	52.5	58.7	71.4	95.3 x 114.3	18.3	34.9	20.6	52.4	21.4	44.5	73.0	41.9	638	29.5	3.9
50	15.9	RLS500S	98.4	66.7	82.6	114.3 x 139.7	21.4	44.5	23.8	66.7	23.8	54.0	88.9	62.1	717	43.6	6.3
75	15.9	RLS750S	162.4	79.4	95.3	140.5 x 165.1	25.4	54.0	23.8	76.2	32.1	65.9	114.3	102.6	651	72.2	10.6
100	15.9	RLS1000S	201.7	85.7	101.6	152.4 x 177.8	25.4	63.5	20.6	76.2	38.1	71.4	127.0	126.6	703	89.1	13.6
150	14.3	RLS1500S	282.1	101.6	115.9	190.5 x 215.9	33.3	76.2	33.3	117.5	36.5	79.4	158.8	197.9	675	139.2	23.6

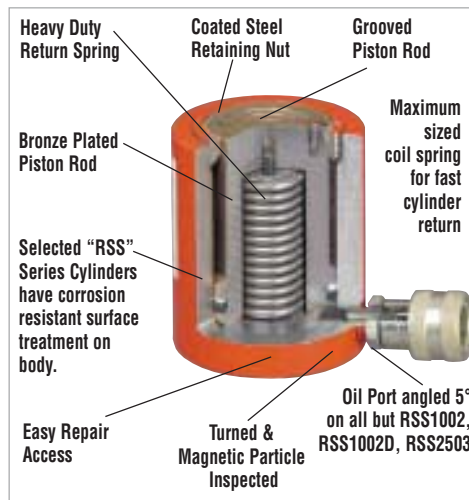
See pages 74-80 & 156-161 for hydraulic accessories.

# “Shorty” Cylinders (RSS Series) Single-Acting, Spring-Return & Double-Acting — 10-250 Tons Capacity

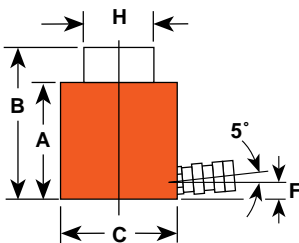
**Ideal for confined areas from 88.9 to 290.5 mm clearance.  
Unique accessory, cribbing block sets page 160.**



- Heavy duty return spring (except for double-acting models) provides fast piston return & low collapsed height.
- Coupler on 10 thru 50 ton models is angled upward 5° for added clearance.
- Grooved piston top keeps load from sliding.
- Fully comply with ASME B30.1 standard.
- Bronze plated piston rods and gland nuts resist scoring and corrosion.
- Cylinders can be “dead-ended” at full capacity.
- Removable carrying handles on 100 ton and 250 ton models.
- Selected “RSS” series cylinders have the exclusive “Power Tech” surface treatment, providing corrosion and abrasion resistance. See page 176 for details.



Cribbing blocks are shown here in use with a 30 ton RSS302 “Shorty” cylinder. For more information see pg. 160.



## ORDERING INFORMATION

See current price list for shipping weights

Cylinder Capacity (Tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm.)		A	B	C	F	H	Bore Dia. (mm)	Cylinder Effective Area (sq. cm.)	Internal Press. at Cap. (bar)	Metric Tons at 700 bar	Prod. Wt. (kg)
			Push	Return	Retracted Height (mm)	Extended Height (mm)	Outside Dia. (mm)	Base to Port (mm)	Piston Rod Dia. (mm)					
10	38.1	RSS101	55.8	—	88.9	127.0	69.9	15.9	38.1	42.9	14.4	617	10.2	2.7
20	44.5	RSS202	126.3	—	95.3	139.7	90.5	15.9	54.8	60.3	28.6	623	20.0	4.5
30	61.9	RSS302	259.1	—	117.5	179.4	101.6	15.9	63.5	73.0	41.9	638	29.5	6.7
50	60.3	RSS502	373.9	—	127.0	187.3	123.8	19.1	79.4	88.9	62.0	717	43.6	10.5
100	57.2	RSS1002	724.9	—	139.7	196.9	168.3	23.8	111.1	127.0	126.6	703	89.1	21.4
100	38.1	RSS1002D	482.2	211.6	144.5	182.6	174.6	23.8*	95.3	127.0	126.6	703	89.1	24.7
250	76.2	RSS2503	2,469	—	290.5	366.7	250.8	46.0	139.7	203.2	323.9	687	227.8	99.7

\*Cylinder top to port is 39.7 mm  
See pages 74-80 & 156-161 for hydraulic accessories.

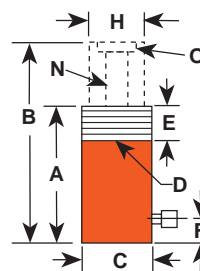
# Center Hole Cylinders (RH Series)

## Single-Acting, Spring-Return — 10-100 Ton Capacity

Ideal for pulling and tensioning of cables, anchor bolts, forcing screws, etc.



- Interchangeable piston head inserts (see page 161) provide versatility of application
- Cylinders comply with ASME B30.1 standard.
- Withstands full “dead-end” loads.
- Corrosion resistant standpipe has “Power Tech” surface treatment (see page 176).
- Aluminum cylinder body and piston rod are featured on the RHA306 cylinder. Nearly half the weight of a steel cylinder of comparable capacity!
- All cylinders except RH120 are furnished with a 9796 3/8" NPT female half coupler.



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Cylinder/Pump Speed/Selection Chart  
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Cylinder Repair Kits  
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### ORDERING INFORMATION

See current price list for shipping weights

Cylinder Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm.)	A	B	C	D	E	F	H	N	O	Mounting Holes and Bolt Circle (mm)	Cylinder Effective Area (sq. cm.)	Internal Press. at Cap. (bar)	Metric Tons at 700 bar	Prod. Wt. (kg)
				Re-tracted Height (mm)	Ex-tended Height (mm)	Outside Dia. (mm)	Collar Thread (mm)	Collar Thread Length (mm)	Base to Port (mm)	Piston Rod Dia. (mm)	Center Hole Dia. (mm)	Insert Thread Size (in.)					
10	63.5	RH102	90.5	134.9	198.4	76.2	None	None	25.4	52.4	19.4	1 1/4-12	1/2-20 x 60.3	14.3	624	10.0	4.1
10	203.2	RH108	290.0	287.3	490.5	76.2	None	None	25.4	52.4	19.4	1 1/4-12	1/2-20 x 60.3	14.3	624	10.0	8.5
12	7.9	RH120**	14.3	55.6	63.5	69.9	2 1/4-16	31.8	9.5	34.9	17.5	3/8-16	5/8-18 x 50.8	17.8	599	12.5	1.4
12	41.3	RH121	73.6	122.2	163.5	69.9	2 1/4-16	31.8	25.4	34.9	20.2	None	None	17.8	599	12.5	3
12	41.3	RH121T**	73.6	122.2	163.5	69.9	2 1/4-16	31.8	25.4	34.9	17.5	3/8-16	None	17.8	599	12.5	3
12	76.2	RH123	136.0	184.2	260.4	69.9	2 1/4-16	20.6	25.4	34.9	20.6	None	None	17.8	599	12.5	4.0
20	50.8	RH202	155.0	155.6	206.4	98.4	3/8-12	38.1	25.4	54.0	27.4	1 1/8-16	3/8-16 x 82.6	30.4	583	21.4	9.1
20	76.2	RH203	192.9	154.0	230.2	101.6	None	None	25.4	69.9	26.6	2 1/4-12	3/8-16 x 82.6	25.3	702	17.8	7.3
20	152.4	RH206	465.0	308.0	460.4	98.4	3/8-12	38.1	25.4	54.0	27.4	1 1/8-16	3/8-16 x 82.6	30.4	583	21.4	13.7
30	63.5	RH302	260.0	158.8	222.3	120.7	4/8-12	38.1	29.4	82.6	32.9	2 1/4-12	7/8-20 x 92.1	40.9	652	28.8	11.6
30	149.2	RHA306	624.9	283.4	432.6	130.2	None	None	31.8	82.6	32.5	2 1/8-8	None	40.9	652	28.8	9.9
30	152.4	RH306	624.9	247.7	400.1	120.7	4/8-12	38.1	29.4	82.6	32.5	2 1/4-12	7/8-20 x 92.1	40.9	652	28.8	17.7
50	76.2	RH503	534.3	181.0	257.2	152.4	6-12	50.8	31.8	104.8	42.5	3/4-12	5/8-18 x 120.7	70.0	634	49.3	21.2
60	76.2	RH603*	606.8	235.0	311.2	158.8	6 1/4-12	63.5	25.4	91.3	54.0	3-12	1/2-13 x 130.2	79.4	672	55.9	27.2
60	152.4	RH606*	1,211.3	311.2	463.6	158.8	6 1/4-12	63.5	25.4	91.3	54.0	3-12	1/2-13 x 130.2	79.4	672	55.9	35.4
100	76.2	RH1003*	1,013.5	254.0	330.2	212.7	None	None	31.8	127.0	79.4	4 1/2-12	None	133.0	668	93.5	52.2

\*These cylinders supplied with carrying handles.

Aluminum

\*\* RH120 and RH121T do not have an internal threaded insert, but do have a 3/8-16 internal thread. The RH120 inlet port is 1/4" NPTF.

# Center Hole Cylinders (RH Series) Double-Acting, Hydraulic-Return — 30-200 Ton Capacity

Ideal for pulling & tensioning of cables, anchor bolts, forcing screws, etc.

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Cylinder Accessories Pages 158, 161



Cylinder/Pump Speed/Selection Chart Page 178



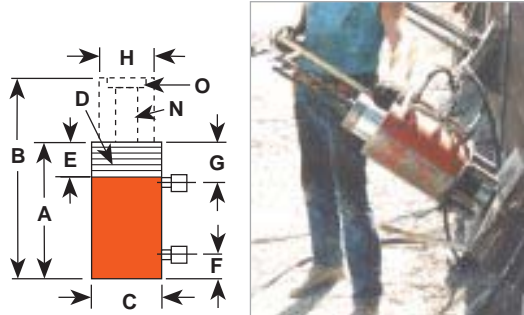
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Cylinder Repair Kits Page 159



- Built-in safety feature prevents over-pressurization of the retract circuit.
- Cylinders withstand full “dead-end” loads; comply with ASME B30.1 standard.
- Interchangeable piston head inserts (see page 161) provide versatility of application.
- Plated piston rod resists wear; superior packings provide high cycle life without leakage.
- Corrosion-resistant standpipe has “Power Tech” surface treatment (see page 176).
- Each cylinder has two 9796 3/8" NPTF female half couplers. The 60 ton thru 200 ton models are equipped with removable carrying handles.



## ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm.)		A Re-tracted Height (mm)	B Ex-tended Height (mm)	C Outside Dia. (mm)	D Collar Thread (in.)	E Collar Thread Length (mm)	F Base to Port (mm)	G Cylinder Top to Port (mm)	H Piston Rod Dia. (mm)	N Center Hole Dia. (mm)	O Insert Thread Size (mm)	Mounting Holes and Bolt Circle (mm)	Cylinder Effective Area (sq. cm.)		Internal Pressure at Cap. (bar)		Metric Tons at 700 bar		Prod. Wt. (kg)
			Push	Pull												Push	Pull	Push	Pull	Push	Pull	
30	15	RH303	288.6	167.3	179.4	255.6	120.7	None	None	25.4	41.3	63.5	32.5	2-12	3/16-16 x 92.1	38.0	21.8	703	612	26.8	15.3	13.5
30	15	RH306D	579.6	332.6	281.0	433.4	120.7	None	None	25.4	41.3	63.5	32.5	2-12	3/16-20 x 92.1	38.0	21.8	703	612	26.8	15.3	20.4
30	20	RH3010	1,082.4	672.4	438.2	695.3	114.3	4 1/2-12	41.28	44.5	81.0	60.3	33.3	1 1/2-16	None	42.2	26.1	632	682	29.7	18.3	27.7
60	25	RHA604D	806.9	337.8	241.3	342.9	177.8	None	None	39.7	57.2	101.6	54.0	3-12	1/2-13 x 130.2	79.4	33.2	672	669	55.8	25.1	16.2
60	25	RH605*	1,009.4	422.6	241.3	368.3	165.9	None	None	25.4	44.5	101.6	54.0	3-12	1/2-13 x 130.2	79.4	33.2	672	669	55.8	25.1	33.1
60	40	RH6010*	2,181.2	1,426.8	458.8	716.0	158.8	6 1/2-12	47.63	54.0	81.8	92.1	54.4	3-16	None	84.8	55.4	639	642	59.6	38.9	54.5
100	45	RH1001*	526.4	232.9	165.1	203.2	212.7	None	None	31.8	58.7	127.0	79.8	4-16	3/8-11 x 177.8	138.0	60.8	644	658	97.0	42.7	38.6
100	50	RH1006*	1,971.3	1,075.8	314.3	466.7	184.2	None	None	37.3	59.1	111.1	52.4	None	1/2-13 x 139.7	129.2	70.5	688	630	90.8	49.6	43.1
100	45	RH10010*	3,552.2	1,566.2	495.3	752.5	215.9	8 1/2-12	57.15	63.5	91.7	139.7	79.8	4 1/2-12	None	138.0	60.8	644	658	97.0	42.7	109.0
150	70	RH1505*	2,474.8	1,207.0	311.2†	438.2	215.9	None	None	37.3	68.3	139.7	65.1	None	None	194.1	94.8	685	656	136.9	66.8	67.2
150	75	RH1508*	3,929.4	2,086.1	349.3	552.5	247.7	None	None	39.3	61.1	152.4	80.2	5-12	None	193.2	102.6	690	650	135.9	72.1	103.1
200	75	RH2008*	5,307.0	2,092.6	408.0	611.2	273.1	None	None	57.2	81.8	190.5	103.2	6-12	1 1/4-12 x 198.1	260.9	102.9	681	648	183.5	72.4	142.0

\* These cylinders supplied with carrying handles.  
† Measured with 19 mm high serrated insert installed.



# Center Hole Power-Twin® Cylinders (RT Series)

## Single- Acting, Spring-Return & Double-Acting — 17½-100 Ton Capacity

Ideal for pulling and pressing applications.



- A proven design; used throughout industry for over 40 years.
- Cylinders fully comply with ASME B30.1 standard.
- Cylinders will withstand full “dead-end” loads.
- Twin-cylinder design permits compact size; ideal for applications in which space is limited.
- Basic head allows you to change from a tapped hole to a plain hole by simply changing the head insert. (See page 161)
- Pistons have “Power Tech” surface treatment for corrosion and abrasion resistance. See page 176.



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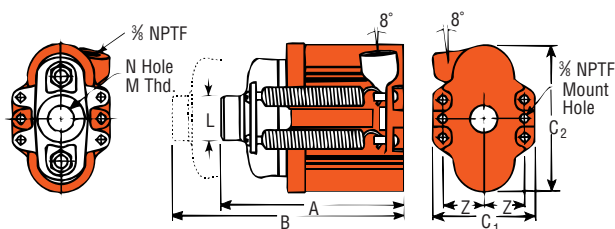
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### ORDERING INFORMATION

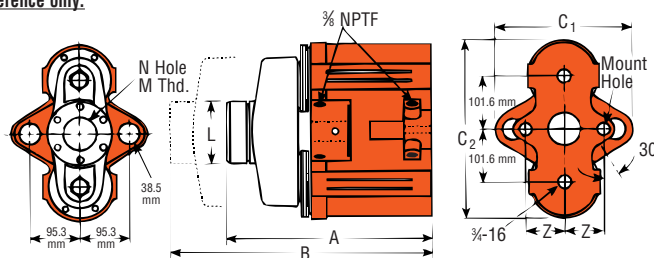
See current price list for shipping weights

#### Single-Acting, Spring-Return Cylinders



Dimensions for reference only.

#### Double-Acting Cylinder (RT1004)



Cylinder Capacity (Tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm.)		A Retracted Height (mm)	B Extended Height (mm)	C1 Outside Dia. (mm)	C2 Outside Dia. (mm)	L Load Cap Dia. (mm)	M Load Cap Thread (in.)	N Center Hole Dia. (mm)	Z Mounting Hole Location (mm)	Mounting Hole (mm)	Cyl. Eff. Area (sq. cm.)	Int. Press. at Cap. (bar)	Metric Tons at 700 bar	Prod. Wt. (kg)
			Push	Return													
17½	50.8	RT172	115.8	—	174.6	225.4	95.3	146.1	44.5	1"–8	27.0	38.1	8.7	22.8	683	16.1	6.6
30	63.5	RT302	257.5	—	214.3	277.8	108.0	190.5	57.2	1¼"–7	32.9	46.0	11.9	40.5	658	28.5	12.8
50	76.2	RT503	482.2	—	268.3	344.5	149.2	238.1	73.0	1½"–5½	42.5	60.3	16.7	63.3	702	44.5	25.4
100	123.8**	RT1004	1,582.6	1,036.5	384.2	508.0	266.7	336.6	120.7	2½"–8	65.1	73.0	19.8	124.1*	716	87.3	72.6

\* Push side only.

\*\* The RT1004 has a bypass when full stroke is reached, preventing over-pressurization of the cylinder.

NOTE: Each cylinder complete with threaded cylinder head insert, cylinder half coupler and cylinder attaching screws.

# Pull Cylinders (RP Series)

## Single-Acting, Spring-Return — 2 & 5 Ton Capacity

Designed for pulling and tensioning applications.



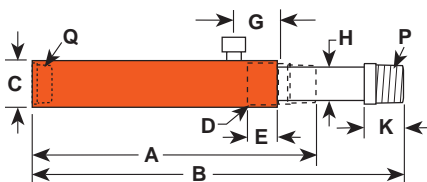
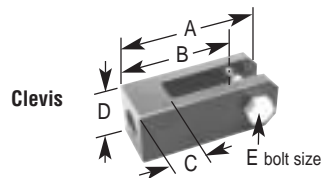
- Designed for pulling and tensioning applications.
- Heavy duty compression spring provides long cycle life and rapid extension of piston.
- Spring automatically extends piston rod when pump pressure is released.



### CLEVIS ORDERING INFORMATION

Use with Cyl No.	Order No.	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
RP25	421057*	130.3	109.5	33.3	50.8	19.1
RP55	421056**	152.4	127.0	38.1	63.5	22.4

\* For base mounting, extension rod 351106 is required.  
 \*\* For base mounting, extension rod 351075 is required.



### CYLINDER ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (Tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm.)	A	B	C	D	E	G	H	K	P	Q	Bore Dia. (mm)	Cyl. Eff. Area (sq. cm.)	Internal Pressure at. Cap. (bar)	Metric Tons at 700 bar	Prod. Wt. (kg)
				Re-tracted Height (mm)	Ex-extended Height (mm)	Outside Dia. (mm)	Collar Thread (in.)	Collar Thread Length (mm)	Cylinder Top to Port (mm)	Piston Rod Dia. (mm)	Piston Rod Protrusion (mm)	Piston Rod Thread (NPTF)	Base Thread (NPTF)					
2	127.0	RP25	45.3	242.9	379.9	44.5	1½-16	25.4	42.9	19.1	25.4	¾-14	¾-14	28.6	3.5	500	2.5	1.8
5	139.7	RP55	102.0	301.6	441.3	57.2	2¼-14	25.4	42.9	30.2	34.9	1¼-11½	1¼-11½	42.9	7.3	610	5.1	5

## Double-Acting Cylinders (RD Series)

Double-Acting, Hydraulic-Return — 10-500 Ton Capacity

High tonnage, with premium design and quality for high cycle life. Ideal for rapid or controlled return of piston such as pressing or fixturing applications.



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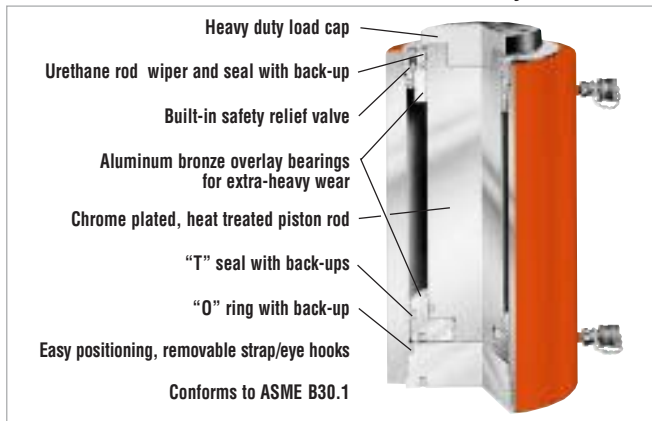


- “RD” series cylinders are perfect for bridge lifting, building reconstruction, shipyard, utility and mining equipment maintenance.
- Aluminum bronze overlay bearings provide long life, chrome plated piston rods resist corrosion.
- Comply fully with ASME B30.1 standard.
- Load cap snaps out to expose internal piston rod threads for pulling applications; threads withstand full tonnage.
- Grooved ring pattern in load cap helps guard against load slippage.
- Each cylinder has two 9796 3/8" NPTF female half couplers.
- Built-in safety relief valve prevents accidental over-pressurization of the retract circuit.
- Cylinder comes with base mounting holes and collar threads.

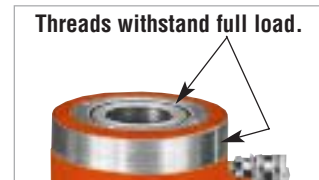
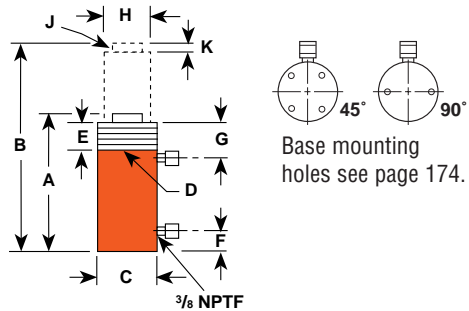
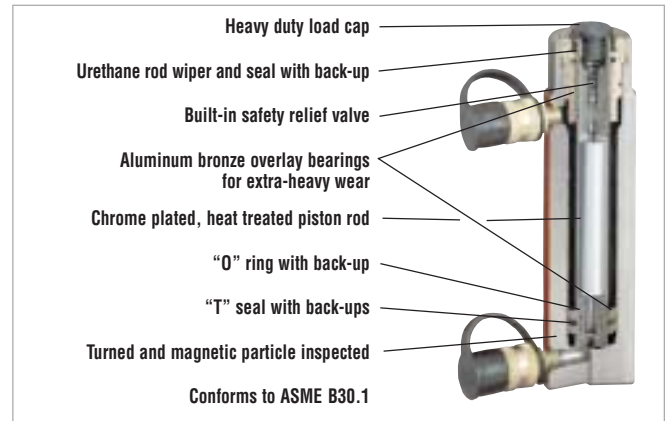


Four special order 500 ton, 609 mm stroke cylinders used in a swaging press for crimping 89 mm wire rope.

### Features of RD300, RD400 and RD500 Series Cylinders



### Features of RD10 thru RD200 Series Cylinders



### ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Capacity (cu. cm)		A Retracted Height (mm)	B Extended Height (mm)	C Outside Dia. (mm)	Collar Thread Size (in.)	Collar Thread Length (mm)	F Base to Port (mm)	G Cylinder Top to Port (mm)	H Piston Rod Dia. (mm)	J Piston Rod Int. Thread and Depth (mm)	K Piston Rod Protrusion (mm)	Load Cap Dia. (mm)	Bore Dia. (mm)	Cyl. Eff. Area (sq. cm)		Int. Press. at Cap. (bar)		Metric Tons at 700 bar		Prod. Wt. (kg)	
			Push	Pull													Push	Pull	Push	Pull	Push	Pull		Push
10	4	158.8	RD106	228.0	90.2	296.9	455.6	76.2	2-1/2-12	41.3	25.4	63.5	33.3	1-8 x 25.4	6.4	34.9	42.9	14.4	5.7	616	624	10.2	4.0	10.0
10	4	254.0	RD1010	365.7	144.3	398.5	652.5	76.2	2-1/2-12	41.3	25.4	63.5	33.3	1-8 x 25.4	6.4	34.9	42.9	14.4	5.7	616	624	10.2	4.0	12.7
25	8	158.8	RD256	528.1	165.6	314.3	473.1	101.6	4-12	41.3	25.4	63.5	54.0	1-1/2-16 x 25.4	9.5	54.0	65.1	33.2	10.4	668	684	23.4	7.3	18.1
25	8	362.0	RD2514	1,205.4	375.6	517.5	879.5	101.6	4-12	41.3	25.4	63.5	54.0	1-1/2-16 x 25.4	9.5	54.0	65.1	33.2	10.4	668	684	23.4	7.3	29.5
55	28	158.8	RD556	1,131.6	577.3	329.4	488.2	127.0	5-12	41.3	33.3	63.5	66.7	1-1/2-8 x 30.2	15.9	66.7	95.3	71.2	36.3	686	685	50.1	25.6	27.9
55	28	333.4	RD5513	2,376.4	1,212	504.0	837.4	127.0	5-12	41.3	33.3	63.5	66.7	1-1/2-8 x 30.2	15.9	66.7	95.3	71.2	36.3	686	685	50.1	25.6	40.9
55	28	460.4	RD5518	3,280	1,672.8	657.2	1,117.6	127.0	5-12	41.3	33.3	63.5	66.7	1-1/2-8 x 30.2	15.9	66.7	95.3	71.2	36.3	686	685	50.1	25.6	64.5
80	44	333.4	RD8013	3,421	1,900.8	517.5	850.9	146.1	5-1/2-12	41.3	38.1	63.5	76.2	2-4-1/2 x 38.1	14.3	73.0	114.3	102.6	57.0	693	686	72.1	40.1	53.6
100	44	168.3	RD1006	2,241.9	959.4	350.0	518.3	174.6	6-1/2-12	41.3	38.1	63.5	98.4	2-1/2-12 x 29.4	15.9	98.4	130.2	133.1	57.0	668	686	93.5	40.1	57.2
100	44	333.4	RD10013	4,439.5	1,902.4	515.1	848.5	174.6	6-1/2-12	41.3	38.1	63.5	98.4	2-1/2-12 x 29.4	15.9	98.4	130.2	133.1	57.0	668	686	93.5	40.1	82.2
100	44	511.2	RD10020	6,809.3	2,919.2	718.3	1,229.5	174.6	6-1/2-12	41.3	38.1	63.5	98.4	2-1/2-12 x 29.4	15.9	98.4	130.2	133.1	57.0	668	686	93.5	40.1	118.0
150	73	168.3	RD1506	3,334.1	1,605.6	377.8	546.1	209.6	8-1/2-12	41.3	50.8	63.5	114.3	3-1/2-8 x 38.1	20.6	114.3	158.8	197.9	95.3	674	681	139.1	66.9	85.4
150	73	333.4	RD15013	6,604.3	3,180	542.9	876.3	209.6	8-1/2-12	41.3	50.8	63.5	114.3	3-1/2-8 x 38.1	20.6	114.3	158.8	197.9	95.3	674	681	139.1	66.9	123.5
150	73	460.4	RD15018	9,131.5	4,391.9	673.9	1,134.3	209.6	8-1/2-12	41.3	50.8	63.5	114.3	3-1/2-8 x 38.1	19.1	114.3	158.8	197.9	95.3	674	681	139.1	66.9	170.7
200	113	168.3	RD2006	4,485.4	2,456.7	406.4	574.7	241.3	9-1/2-12	41.3	63.5	68.3	123.8	3-1/2-8 x 57.1	27.0	114.3	184.2	266.3	145.9	668	688	187.2	102.6	118.9
200	113	333.4	RD20013	8,885.5	4,869.2	571.5	904.9	241.3	9-1/2-12	41.3	63.5	68.3	123.8	3-1/2-8 x 57.1	27.0	114.3	184.2	266.3	145.9	668	688	187.2	102.6	161.6
200	113	460.4	RD20018	12,270	6,722.4	723.9	1,184.3	241.3	9-1/2-12	41.3	63.5	68.3	123.8	3-1/2-8 x 57.1	27.0	114.3	184.2	266.3	145.9	668	688	187.2	102.6	200.7
300	147	152.4	RD3006	5,920.4	2,902.8	438.9	591.3	273.1	10-1/2-12	60.3	85.7	85.7	158.8	2-1/2-12 x 82.5	28.6	174.6	222.3	387.8	190.0	687	689	272.7	133.6	172.5
300	147	330.2	RD30013	12,825	6,281.2	630.2	960.4	273.1	10-1/2-12	60.3	85.7	85.7	158.8	2-1/2-12 x 82.5	28.6	174.6	222.3	387.8	190.0	687	689	272.7	133.6	296.9
400	186	152.4	RD4006	7,724.4	4,050.8	489.7	642.1	320.7	12-1/2-8	69.9	97.6	97.6	184.2	3-12 x 92.2	31.8	198.4	254.0	506.6	240.3	702	689	356.2	169.0	265.6
400	186	330.2	RD40013	16,744	8,790.4	667.5	997.7	320.7	12-1/2-8	69.9	97.6	97.6	184.2	3-12 x 92.2	31.8	198.4	254.0	506.6	240.3	702	689	356.2	169.0	349.6
500	245	152.4	RD5006	9,774.4	4,838	522.3	674.7	374.7	14-1/2-8	79.4	105.6	105.6	203.2	3-1/2-12 x 107.9	38.1	215.9	285.8	641.1	317.0	693	689	450.8	222.8	371.8
500	245	330.2	RD50013	21,189	10,480	700.1	1,030.3	374.7	14-1/2-8	79.4	105.6	105.6	203.2	3-1/2-12 x 107.9	38.1	215.9	285.8	641.1	317.0	693	689	450.8	222.8	495.8

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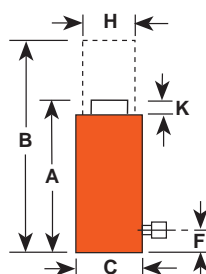
# High Tonnage Cylinders (R Series)

## Single-Acting, Load-Return — 150-565 Ton Capacity

High-tonnage, low cycle, gravity return, economy cylinders.



- Fully comply with ASME B30.1 standard.
- Visible indicator band alerts operator when stroke limit is reached; overflow port (“weep hole”) stroke limiter prevents piston from being inadvertently overextended.
- Alloy heat treated piston and body for exceptional reliability and strength.
- Plated piston rods greatly increase corrosion resistance and give superior bearing qualities.



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### ORDERING INFORMATION

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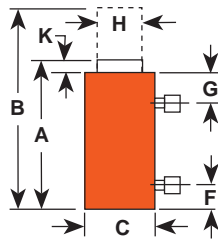
Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm.)	A	B	C	F	H	K	Bore Dia. (mm)	Cylinder Effective Area (sq. cm.)	Internal Pressure at Cap. (bar)	Metric Tons at 700 bar	Product Wt. (kg)
				Retracted Ht. (mm)	Extended Ht. (mm)	Outside Dia. (mm)	Base to Port (mm)	Piston Rod Dia. (mm)	Piston Rod Protrusion (mm)					
55	50.8	R552C <b>NEW</b>	362.4	125.4	176.2	127	25.4	95.3	3.2	95.3	71.2	686.2	50.1	12.3
55	152.4	R556C <b>NEW</b>	1,087.3	227	379.4	127	25.4	95.3	3.2	95.3	71.2	686.2	50.1	22.7
55	254	R5510C <b>NEW</b>	1,810.6	328.6	582.6	127	25.4	95.3	3.2	95.3	71.2	686.2	50.1	32.7
100	50.8	R1002C <b>NEW</b>	677.3	139.7	190.5	165.1	25.4	130.2	3.2	130.2	133.1	668.0	93.6	23.6
100	152.4	R1006C <b>NEW</b>	2,030.3	241.3	393.7	165.1	25.4	130.2	3.2	130.2	133.1	668.0	93.6	40.4
100	254	R10010C <b>NEW</b>	3,383.3	342.9	596.9	165.1	25.4	130.2	3.2	130.2	133.1	668.0	93.6	57.7
150	50.8	R1502C	1,007	161.9	212.7	204.8	31.8	158.8	3.2	158.8	197.9	673.7	139.1	41.8
150	152.4	R1506C	3,019.2	263.5	415.9	204.8	31.8	158.8	3.2	158.8	197.9	673.7	139.1	68.6
150	254	R15010C	5,031.5	365.1	619.1	204.8	31.8	158.8	3.2	158.8	197.9	673.7	139.1	95.3
200	50.8	R2002C	1,354.6	190.5	241.3	235.0	41.3	184.2	3.2	184.2	266.3	667.6	187.2	65.8
200	152.4	R2006C	4,062.3	292.1	444.5	235.0	41.3	184.2	3.2	184.2	266.3	667.6	187.2	100.3
200	254	R20010C	6,769.9	393.7	647.7	235.0	41.3	184.2	3.2	184.2	266.3	667.6	187.2	134.8
280	50.8	R2802C	1,861.4	190.5	241.3	276.2	41.3	215.9	3.2	215.9	366.0	680.0	257.3	91.3
280	152.4	R2806C	5,582.6	292.1	444.5	276.2	41.3	215.9	3.2	215.9	366.0	680.0	257.3	136.2
280	254	R28010C	9,305.4	393.7	647.7	276.2	41.3	215.9	3.2	215.9	366.0	680.0	257.3	182.1
355	50.8	R3552C	2,325.5	231.8	282.6	298.5	54.0	241.3	3.2	241.3	457.2	690.2	321.4	137.1
355	152.4	R3556C	6,974.9	333.4	485.8	298.5	54.0	241.3	3.2	241.3	457.2	690.2	321.4	197.0
355	254	R35510C	11,624.3	435.0	689.0	298.5	54.0	241.3	3.2	241.3	457.2	690.2	321.4	256.5
430	50.8	R4302C	2,840.5	263.5	314.3	330.2	63.5	266.7	3.2	266.7	558.5	684.3	392.7	199.8
430	152.4	R4306C	8,519.8	365.1	517.5	330.2	63.5	266.7	3.2	266.7	558.5	684.3	392.7	276.5
430	254	R43010C	14,200.8	466.7	720.7	330.2	63.5	266.7	3.2	266.7	558.5	684.3	392.7	353.2
565	50.8	R5652C	3,709.7	292.1	342.9	377.8	69.9	304.8	3.2	304.8	729.5	688.4	512.9	289.7
565	152.4	R5656C	11,129	393.7	546.1	377.8	69.9	304.8	3.2	304.8	729.5	688.4	512.9	389.5
565	254	R56510C	18,548.4	495.3	749.3	377.8	69.9	304.8	3.2	304.8	729.5	688.4	512.9	489.4

# High Tonnage Cylinders (R Series) Double-Acting, Hydraulic-Return — 100-565 Ton Capacity

High-tonnage low cycle, hydraulic return, economy cylinders. (Similar to “Load Return” cylinders with hydraulically powered return.)



- Cylinders come standard with swivel caps to reduce the effects of off-center loading.
- Cylinders may be “dead-ended” without damage.
- Hard chrome plated, heat treated piston rod provides reduced wear on both piston and gland nut.
- Built-in safety relief valve prevents accidental over-pressurization of the retract circuit.
- Each cylinder has two 9796 3/8" NPTF female half couplers.
- In full compliance with ASME B30.1 standard.
- Integral swivel cap is a standard component on this series of cylinder.



## ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Capacity (cu. cm)		A	B	C	F	G	H	K	Bore Dia. (mm)	Cylinder Effective Area (sq. cm)	Internal Press. at Cap. (bar)	Metric Tons at 700 bar	Prod. Wt. (kg)
			Push	Return	Re-tracted Height (mm)	Ex-tended Height (mm)	Outside Dia. (mm)	Base to Port (mm)	Cylinder Top to Port (mm)	Piston Rod Dia. (mm)	Piston Rod Protrusion (mm)					
100	50.8	R1002D	676	315	168.7	219.5	165.1	25.4	56.0	95.3	7.1	130.2	132.9	668	93.4	24.5
100	152.4	R1006D	2,027	945	270.3	422.7	165.1	25.4	56.0	95.3	7.1	130.2	132.9	668	93.4	36.8
100	254	R10010D	3,378	1,574	371.9	625.9	165.1	25.4	56.0	95.3	7.1	130.2	132.9	668	93.4	49.0
150	50.8	R1502D	1,007	485	188.9	239.7	204.8	31.8	57.2	114.3	7.5	158.8	198.0	674	139.1	43.1
150	152.4	R1506D	3,021	1,456	290.5	442.9	204.8	31.8	57.2	114.3	7.5	158.8	198.0	674	139.1	61.7
150	254	R15010D	5,035	2,427	392.1	646.1	204.8	31.8	57.2	114.3	7.5	158.8	198.0	674	139.1	80.4
200	50.8	R2002D	1,355	643	206.8	257.6	235.0	41.3	58.7	133.4	8.7	184.2	266.4	668	187.2	61.7
200	152.4	R2006D	4,064	1,929	308.4	460.8	235.0	41.3	58.7	133.4	8.7	184.2	266.4	668	187.2	84.9
200	254	R20010D	6,773	3,214	410.0	664.0	235.0	41.3	58.7	133.4	8.7	184.2	266.4	668	187.2	108.5
280	50.8	R2802D	1,860	774	233.8	284.6	276.2	47.6	65.5	165.1	10.3	215.9	365.7	680	257.3	99.4
280	152.4	R2806D	5,579	2,322	335.4	447.8	276.2	47.6	65.5	165.1	10.3	215.9	365.7	680	257.3	134.8
280	254	R28010D	9,299	3,870	437.0	691.0	276.2	47.6	65.5	165.1	10.3	215.9	365.7	680	257.3	170.7
355	50.8	R3552D	2,326	777	288.9	339.7	298.5	54.0	69.9	196.9	11.1	241.3	457.3	690	321.4	147.0
355	152.4	R3556D	6,977	2,332	390.5	542.9	298.5	54.0	69.9	196.9	11.1	241.3	457.3	690	321.4	191.1
355	254	R35510D	11,628	3,887	492.1	746.1	298.5	54.0	69.9	196.9	11.1	241.3	457.3	690	321.4	234.7
430	50.8	R4302D	2,840	977	312.7	363.5	330.2	63.5	75.0	215.9	11.9	266.7	558.6	684	392.7	199.3
430	152.4	R4306D	8,521	2,932	414.3	566.7	330.2	63.5	75.0	215.9	11.9	266.7	558.6	684	392.7	253.3
430	254	R43010D	14,202	4,887	515.9	769.9	330.2	63.5	75.0	215.9	11.9	266.7	558.6	684	392.7	305.5
565	50.8	R5652D	3,710	1,260	345.3	396.1	377.8	69.9	81.4	247.7	13.9	304.8	729.5	688	512.9	281.0
565	152.4	R5656D	11,129	3,779	446.9	599.3	377.8	69.9	81.4	247.7	13.9	304.8	729.5	688	512.9	350.4
565	254	R56510D	18,548	6,298	548.5	802.5	377.8	69.9	81.4	247.7	13.9	304.8	729.5	688	512.9	420.4

# Locking Collar Cylinders (Aluminum) (RL Series)

## Single-Acting, Spring-Return — 55 & 100 Ton Capacity

CYLINDERS

Locking collar provides positive mechanical lock to support load. Aluminum cylinders are half the weight of equal capacity steel locking collar cylinders.



- Comply fully with ASME B30.1 standard.
- Support lifted load for extended periods of time with hydraulic pressure released.
- At half the weight of steel cylinders of comparable capacity, aluminum cylinders are ideal when portability is a key factor.
- **NOTE:** Supported loads not to exceed the rated capacity of the cylinders. Not intended to support additional dynamic loads, such as those applied by moving vehicles.



Locking collar feature permits non-hydraulic support of load.



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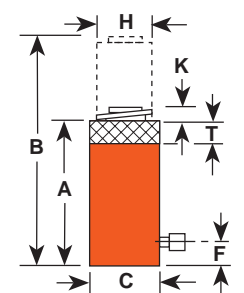
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### ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm)	A	B	C	F	H	K	T	Bore Dia. (mm)	Cylinder Effective Area (sq. cm)	Internal Pressure at Cap. (bar)	Metric Tons at 700 bar	Product Wt. (kg)
				Retracted Ht. (mm)	Extended Ht. (mm)	Outside Dia. (mm)	Base to Port (mm)	Piston Rod Dia. (mm)	Piston Rod Protrusion (mm)	Nut Thickness (mm)					
55	155.5	RA556L*	1,108.6	317.5	473.1	133.4	34.9	82.6	12.7	38.1	95.3	71.2	686	50.1	13.4
100	158.8	RA1006L*	2,115.6	339.7	498.5	187.3	30.2	114.3	6.4	38.1	130.2	133.0	668	93.5	29.1

\* Cylinders equipped with carrying handle. **NOTE:** Aluminum cylinders are designed for jacking and other non-production applications.

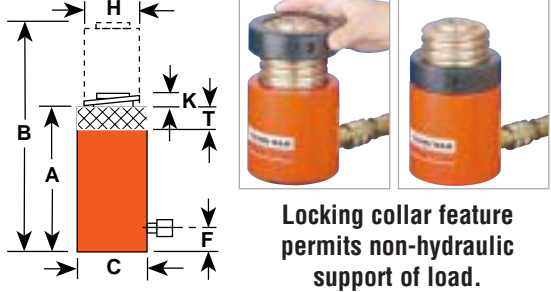
# Locking Collar Cylinders (RL Series)

## Single-Acting, Load-Return — 55-565 Ton Capacity

High tonnage, low cycle, gravity return, locking collar economy cylinders. Locking collar provides positive mechanical lock to support load.



- Support lifted load for extended periods of time with hydraulic pressure released.
- Visible indicator band alerts operator when stroke limit is reached; overflow port (“weep hole”) stroke limiter prevents piston from being inadvertently overextended.
- All cylinders feature coated pistons to resist corrosion and abrasion.
- Cylinders fully comply with ASME B30.1 standard.
- **NOTE:** Supported loads not to exceed the rated capacity of the cylinders. Not intended to support additional dynamic loads, such as those applied by moving vehicles.



### ORDERING INFORMATION

See current price list for shipping weights

Cyl. Cap. (tons)	Stroke (mm)	Order No.	Oil Cap. (cu. cm)	A		B		C		F		H		K		T		Bore Dia. (mm)	Cylinder Effective Area (sq. cm)	Internal Pressure at Cap. (bar)	Metric Tons at 700 bar	Product Wt. (kg)
				Retracted Ht. (mm)	Extended Ht. (mm)	Outside Dia. (mm)	Base to Port (mm)	Piston Rod Dia. (mm)	Piston Rod Protrusion (mm)	Nut Thickness (mm)												
55	50.8	R552L	362.4	161.9	212.7	125.4	25.4	95.3	3.2	36.5	95.3	71.2	687	50.1	15.3							
55	152.4	R556L	1,087.3	263.5	415.9	125.4	25.4	95.3	3.2	36.5	95.3	71.2	687	50.1	26.3							
55	254	R5510L	1,810.5	365.1	619.1	125.4	25.4	95.3	3.2	36.5	95.3	71.2	687	50.1	36.3							
100	50.8	R1002L	677.3	184.2	235.0	165.1	25.4	130.2	3.2	44.5	130.2	133.1	668	93.4	30.0							
100	152.4	R1006L	2,030.3	285.8	438.2	165.1	25.4	130.2	3.2	44.5	130.2	133.1	668	93.4	46.8							
100	254	R10010L	3,383.3	387.4	641.4	165.1	25.4	130.2	3.2	44.5	130.2	133.1	668	93.4	64.5							
150	50.8	R1502L	1,007	206.4	257.2	204.8	31.8	158.8	3.2	44.5	158.8	197.9	674	139.1	53							
150	152.4	R1506L	3,019.2	308.0	460.4	204.8	31.8	158.8	3.2	44.5	158.8	197.9	674	139.1	80.4							
150	254	R15010L	5,031.5	409.6	663.6	204.8	31.8	158.8	3.2	44.5	158.8	197.9	674	139.1	106.7							
200	50.8	R2002L	1,354.6	241.3	292.1	235.0	41.3	184.2	3.2	50.8	184.2	266.3	668	187.2	83.1							
200	152.4	R2006L	4,062.3	342.9	495.3	235.0	41.3	184.2	3.2	50.8	184.2	266.3	668	187.2	117.6							
200	254	R20010L	6,769.9	444.5	698.5	235.0	41.3	184.2	3.2	50.8	184.2	266.3	668	187.2	152.1							
280	50.8	R2802L	1,861.4	247.7	298.5	276.2	41.3	215.9	3.2	57.2	215.9	366.0	680	257.3	118.5							
280	152.4	R2806L	5,582.6	349.3	501.7	276.2	41.3	215.9	3.2	57.2	215.9	366.0	680	257.3	163.0							
280	254	R28010L	9,305.4	450.9	704.9	276.2	41.3	215.9	3.2	57.2	215.9	366.0	680	257.3	208.1							
355	50.8	R3552L	2,325.5	292.1	342.9	298.5	54.0	241.3	3.2	60.3	241.3	457.2	690	321.4	173.0							
355	152.4	R3556L	6,975	393.7	546.1	298.5	54.0	241.3	3.2	60.3	241.3	457.2	690	321.4	232.5							
355	254	R35510L	11,624.3	495.3	749.3	298.5	54.0	241.3	3.2	60.3	241.3	457.2	690	321.4	291.5							
430	50.8	R4302L	2,840.5	333.4	384.2	330.2	63.5	266.7	3.2	69.9	266.7	558.5	684	392.7	252.4							
430	152.4	R4306L	8,519.8	435.0	587.4	330.2	63.5	266.7	3.2	69.9	266.7	558.5	684	392.7	329.2							
430	254	R43010L	14,200.8	536.6	790.6	330.2	63.5	266.7	3.2	69.9	266.7	558.5	684	392.7	405.9							
565	50.8	R5652L	3,709.7	371.2	422.3	377.8	69.9	304.8	3.2	79.4	304.8	729.5	688	512.9	368.2							
565	152.4	R5656L	11,129	473.1	625.5	377.8	69.9	304.8	3.2	79.4	304.8	729.5	688	512.9	468.0							
565	254	R56510L	18,548.4	574.7	828.7	377.8	69.9	304.8	3.2	79.4	304.8	729.5	688	512.9	568.0							