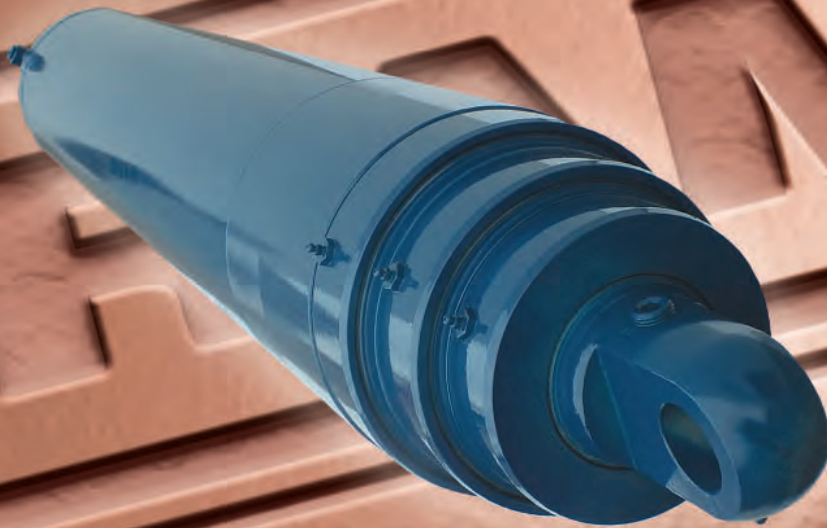




STANDARD TELESCOPIC CYLINDERS



OEM HYDRAULIC CYLINDER SPECIALISTS



SINGLE ACTING TELESCOPIC

RAM is pleased to offer a full line of standard telescopic designs for your equipment. These designs are pre-engineered using in stock material and internal components for quick order turnaround. With 36 base designs to select from, all you need to do is pick the configuration, stroke and mounting option that works best for your application. RAM offers both Single and Double Acting designs with up to 5 stages, and a wide selection of standard mount configurations. Not sure what is the fit best for you? Contact the RAM engineering team and let them help you select the best design for your equipment needs.

The Single Acting Telescopic cylinder is the simplest of telescopic designs. A Single Acting Telescopic cylinder is extended using hydraulic pressure, but is retracted using external forces (i.e. gravity or mechanical load) once the pressure is removed. Single Acting cylinders offer a more compact design than a Double Acting design. RAM's standard design includes specially prepared chrome tubing, high quality seals and high strength internal components that can be easily serviced and replaced.

STANDARD FEATURES

Intended Use: Single acting extension

Rated Pressure: 3000 PSI

Rod Material: High tensile SAE C1026/St2.3 DOM, hard chrome plated

Barrel Material: High tensile SAE C1026/St52.3 cold drawn tube precision honed for extended seal life

Gland Material: High strength steel glands and stops (1045 Q&T)

Piston Material: Ductile iron 65-45-12 (ASTM A536)

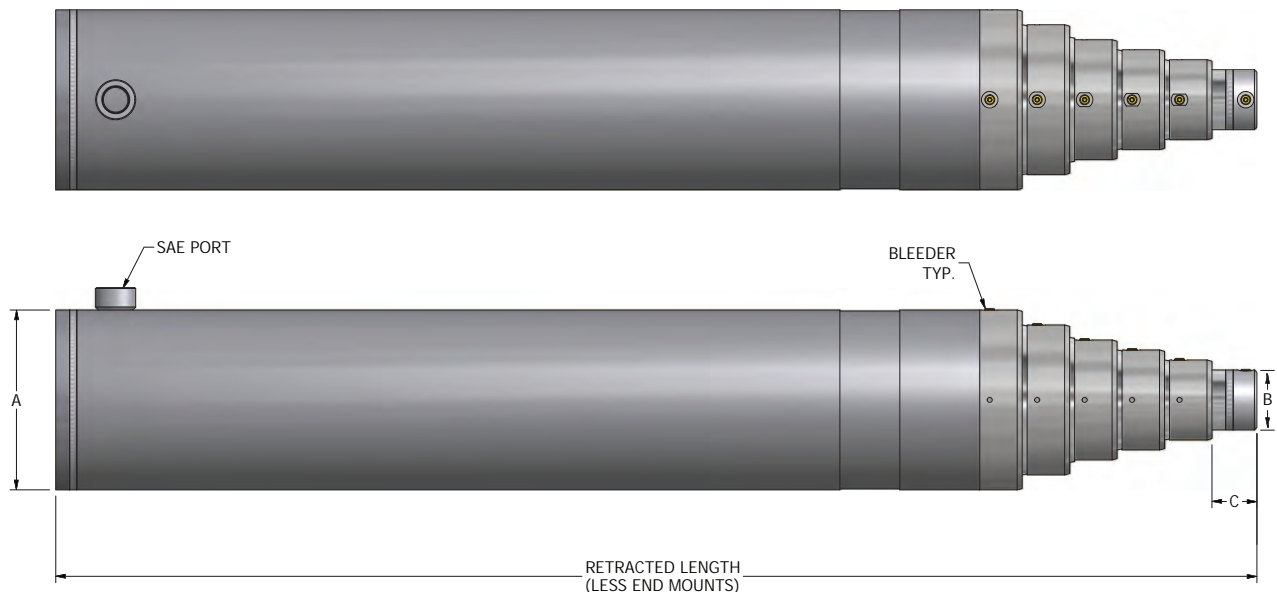
Ports: SAE standard; NPTF also available

Port Plugs: High quality steel

Internal Seals: North American

Paint Finish: 2 part urethane black

Testing: 100% full cycle tested



**STANDARD SINGLE ACTING
TELESCOPIC CYLINDERS**

2 Stage Model	Bore (inches)	Rod Diameter (inches)	Maximum Load (lbf)	Closed Length (Less End Mounts) (inches)	A (inches)	B (inches)	C (inches)	Extended Port
CT-3.50-XX-2SA	3.50/2.50	3.00/2.00	14,700	(STROKE/2) + 12.25	4.00	2.00	2.00	#8 ORB
CT-4.50-XX-2SA	4.50/3.50	4.00/3.00	28,800	(STROKE/2) + 13.00	5.00	3.00	2.00	#10 ORB
CT-5.50-XX-2SA	5.50/4.50	5.00/4.00	47,700	(STROKE/2) + 13.75	6.00	4.00	2.00	#12 ORB
CT-6.75-XX-2SA	6.75/5.50	6.25/5.00	71,200	(STROKE/2) + 14.25	7.50	5.00	2.00	#16 ORB
CT-8.25-XX-2SA	8.25/6.75	7.50/6.25	107,300	(STROKE/2) + 14.50	9.00	6.25	2.00	#20 ORB
CT-9.75-XX-2SA	9.75/8.25	9.00/7.50	160,300	(STROKE/2) + 15.00	10.75	7.50	2.00	#20 ORB

3 Stage Model	Bore (inches)	Rod Diameter (inches)	Maximum Load (lbf)	Closed Length (Less End Mounts) (inches)	A (inches)	B (inches)	C (inches)	Extended Port
CT-4.50-XX-3SA	4.50/3.50/2.50	4.00/3.00/2.00	14,700	(STROKE/3) + 15.00	5.00	2.00	2.00	#8 ORB
CT-5.50-XX-3SA	5.50/4.50/3.50	5.00/4.00/3.00	28,800	(STROKE/3) + 15.75	6.00	3.00	2.00	#10 ORB
CT-6.75-XX-3SA	6.75/5.50/4.50	6.25/5.00/4.00	47,700	(STROKE/3) + 16.25	7.50	4.00	2.00	#12 ORB
CT-8.25-XX-3SA	8.25/6.75/5.50	7.50/6.25/5.00	71,200	(STROKE/3) + 16.50	9.00	5.00	2.00	#16 ORB
CT-9.75-XX-3SA	9.75/8.25/6.75	9.00/7.50/6.25	107,300	(STROKE/3) + 17.00	10.75	6.25	2.00	#20 ORB

4 Stage Model	Bore (inches)	Rod Diameter (inches)	Maximum Load (lbf)	Closed Length (Less End Mounts) (inches)	A (inches)	B (inches)	C (inches)	Extended Port
CT-5.50-XX-4SA	5.50/4.50/3.50/2.50	5.00/4.00/3.00/2.00	14,700	(STROKE/4) + 16.75	6.00	2.00	2.00	#8 ORB
CT-6.75-XX-4SA	6.75/5.50/4.50/3.50	6.25/5.00/4.00/3.00	28,800	(STROKE/4) + 17.25	7.50	3.00	2.00	#10 ORB
CT-8.25-XX-4SA	8.25/6.75/5.50/4.50	7.50/6.25/5.00/4.00	47,700	(STROKE/4) + 17.50	9.00	4.00	2.00	#12 ORB
CT-9.75-XX-4SA	9.75/8.25/6.75/5.50	9.00/7.50/6.25/5.00	71,200	(STROKE/4) + 18.00	10.75	5.00	2.00	#16 ORB

5 Stage Model	Bore (inches)	Rod Diameter (inches)	Maximum Load (lbf)	Closed Length (Less End Mounts) (inches)	A (inches)	B (inches)	C (inches)	Extended Port
CT-6.75-XX-5SA	6.75/5.50/4.50/3.50/2.50	6.25/5.00/4.00/3.00/2.00	14,700	(STROKE/5) + 18.25	7.50	2.00	2.00	#8 ORB
CT-8.25-XX-5SA	8.25/6.75/5.50/4.50/3.50	7.50/6.25/5.00/4.00/3.00	28,800	(STROKE/5) + 18.50	9.00	3.00	2.00	#10 ORB
CT-9.75-XX-5SA	9.75/8.25/6.75/5.50/4.50	9.00/7.50/6.25/5.00/4.00	47,700	(STROKE/5) + 19.00	10.75	4.00	2.00	#12 ORB

* When ordering provide model number, stroke and mounts required.

All specifications are subject to change without notice.

* Actual load may be limited based on final configuration.

**STANDARD SINGLE ACTING
TELESCOPIC CYLINDERS**

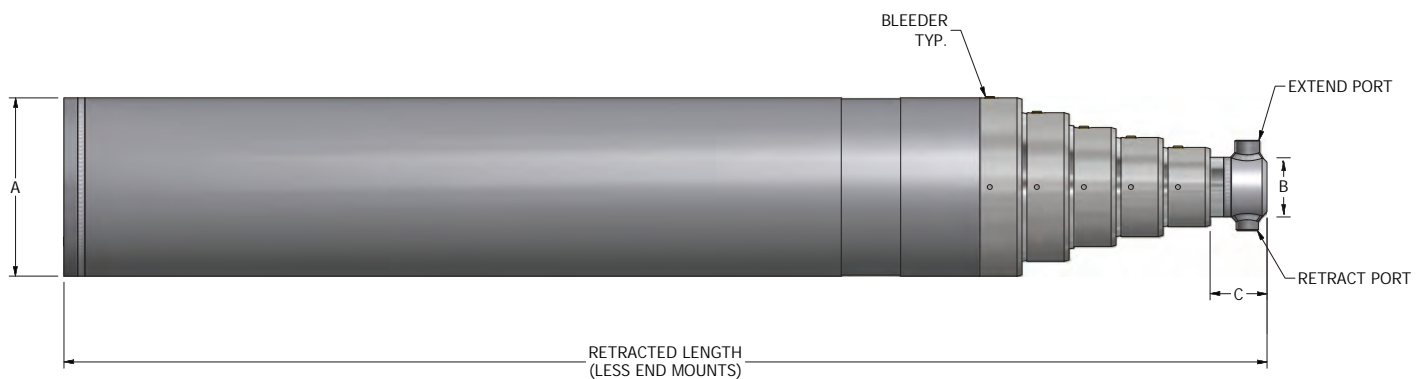
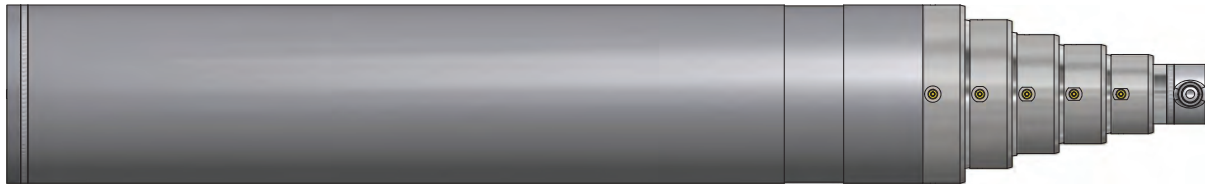


DOUBLE ACTING TELESCOPIC

Double Acting Telescopic cylinders are characterized as cylinders that are both extended and retracted with hydraulic pressure. A Double Acting Telescopic cylinder is a more complex design and involves additional sealing within the internal body of the cylinder to seal off the different stages. Passageways are machined into the internal components of the cylinder to allow for proper staging. These cylinders are usually specified when there is no external force to retract the cylinder. RAM's standard Double Acting Telescopic design includes specially prepared chrome tubing, high quality seals and high strength internal components that can be easily serviced and replaced when required.

STANDARD FEATURES

Intended Use:	Double acting extension & retraction	Gland Material:	High strength steel glands and stops (1045 Q&T)
Rated Pressure:	3000 PSI	Piston Material:	Ductile iron 65-45-12 (ASTM A536)
Rod Material:	High tensile SAE C1026/St2.3 DOM, hard chrome plated	Ports:	SAE ports; NPTF also available
Barrel Material:	High tensile SAE C1026/St52.3 cold drawn tube precision honed for extended seal life	Shipping Plugs:	High quality steel
		Internal Seals:	North American made
		Paint Finish:	2 part urethane black
		Testing:	100% full cycle tested



**STANDARD DOUBLE ACTING
TELESCOPIC CYLINDERS**

2 Stage Model	Bore (inches)	Rod Diameter (inches)	Maximum Load (lbf)	Closed Length (Less End Mounts) (inches)	A (inches)	B (inches)	C (inches)	Extended Port	Retracted Port
CT-3.50-XX-2DA	3.50/2.50	3.00/2.00	14,700	(STROKE/2) + 13.25	4.00	2.00	2.63	#8 ORB	#6 ORB
CT-4.50-XX-2DA	4.50/3.50	4.00/3.00	28,800	(STROKE/2) + 14.00	5.00	3.00	2.63	#10 ORB	#8 ORB
CT-5.50-XX-2DA	5.50/4.50	5.00/4.00	47,700	(STROKE/2) + 14.75	6.00	4.00	2.88	#12 ORB	#10 ORB
CT-6.75-XX-2DA	6.75/5.50	6.25/5.00	71,200	(STROKE/2) + 15.50	7.50	5.00	3.38	#16 ORB	#12 ORB
CT-8.25-XX-2DA	8.25/6.75	7.50/6.25	107,300	(STROKE/2) + 16.50	9.00	6.25	3.88	#20 ORB	#16 ORB
CT-9.75-XX-2DA	9.75/8.25	9.00/7.50	160,300	(STROKE/2) + 17.00	10.75	7.50	3.88	#20 ORB	#16 ORB

3 Stage Model	Bore (inches)	Rod Diameter (inches)	Maximum Load (lbf)	Closed Length (Less End Mounts) (inches)	A (inches)	B (inches)	C (inches)	Extended Port	Retracted Port
CT-4.50-XX-3DA	4.50/3.50/2.50	4.00/3.00/2.00	14,700	(STROKE/3) + 16.00	5.00	2.00	2.63	#8 ORB	#6 ORB
CT-5.50-XX-3DA	5.50/4.50/3.50	5.00/4.00/3.00	28,800	(STROKE/3) + 16.75	6.00	3.00	2.63	#10 ORB	#8 ORB
CT-6.75-XX-3DA	6.75/5.50/4.50	6.25/5.00/4.00	47,700	(STROKE/3) + 17.50	7.50	4.00	2.88	#12 ORB	#10 ORB
CT-8.25-XX-3DA	8.25/6.75/5.50	7.50/6.25/5.00	71,200	(STROKE/3) + 18.50	9.00	5.00	3.38	#16 ORB	#12 ORB
CT-9.75-XX-3DA	9.75/8.25/6.75	9.00/7.50/6.25	107,300	(STROKE/3) + 19.50	10.75	6.25	3.88	#20 ORB	#16 ORB

4 Stage Model	Bore (inches)	Rod Diameter (inches)	Maximum Load (lbf)	Closed Length (Less End Mounts) (inches)	A (inches)	B (inches)	C (inches)	Extended Port	Retracted Port
CT-5.50-XX-4DA	5.50/4.50/3.50/2.50	5.00/4.00/3.00/2.00	14,700	(STROKE/4) + 17.75	6.00	2.00	2.63	#8 ORB	#6 ORB
CT-6.75-XX-4DA	6.75/5.50/4.50/3.50	6.25/5.00/4.00/3.00	28,800	(STROKE/4) + 18.00	7.50	3.00	2.63	#10 ORB	#8 ORB
CT-8.25-XX-4DA	8.25/6.75/5.50/4.50	7.50/6.25/5.00/4.00	47,700	(STROKE/4) + 19.00	9.00	4.00	2.88	#12 ORB	#10 ORB
CT-9.75-XX-4DA	9.75/8.25/6.75/5.50	9.00/7.50/6.25/5.00	71,200	(STROKE/4) + 20.00	10.75	5.00	3.38	#16 ORB	#12 ORB

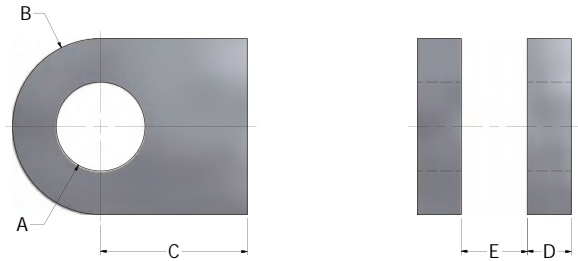
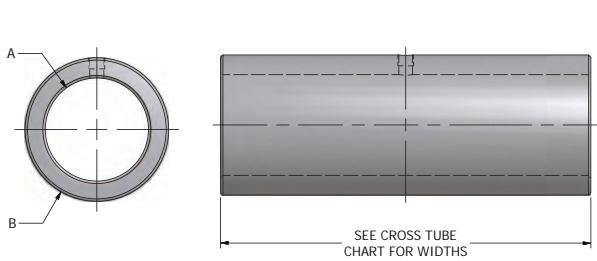
5 Stage Model	Bore (inches)	Rod Diameter (inches)	Maximum Load (lbf)	Closed Length (Less End Mounts) (inches)	A (inches)	B (inches)	C (inches)	Extended Port	Retracted Port
CT-6.75-XX-5DA	6.75/5.50/4.50/3.50/2.50	6.25/5.00/4.00/3.00/2.00	14,700	(STROKE/5) + 20.00	7.50	2.00	2.63	#8 ORB	#6 ORB
CT-8.25-XX-5DA	8.25/6.75/5.50/4.50/3.50	7.50/6.25/5.00/4.00/3.00	28,800	(STROKE/5) + 20.50	9.00	3.00	2.63	#10 ORB	#8 ORB
CT-9.75-XX-5DA	9.75/8.25/6.75/5.50/4.50	9.00/7.50/6.25/5.00/4.00	47,700	(STROKE/5) + 21.00	10.75	4.00	2.88	#12 ORB	#10 ORB

* When ordering provide model number, stroke and mounts required.
 * Actual load may be limited based on final configuration.

All specifications are subject to change without notice.



STANDARD TELESCOPIC MOUNTS



Cross Tube				
Bore	A	B	Width Base End	Minimum Recommended Length
3.50	1.015	1.75	4.25	Equal to the smallest cylinder shaft diameter + 0.25
4.50	1.265	2.00	5.25	
5.50	1.515	2.25	6.25	
6.75	2.015	3.00	7.75	
8.25	2.515	3.50	9.25	
9.75	3.030	4.00	11.00	

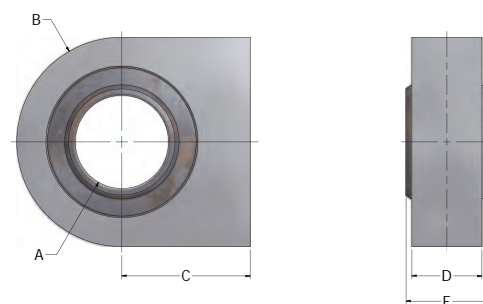
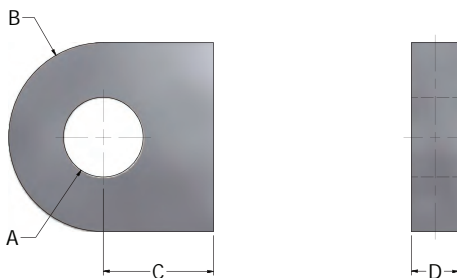
* All measurements are in inches.

All specifications are subject to change without notice.

Clevis					
Bore	A	B	C	D	E
3.50	1.015	1.25	2.38	0.50	1.13
4.50	1.265	1.25	2.50	0.63	1.38
5.50	1.515	1.50	2.75	0.75	1.63
6.75	2.015	2.00	3.00	1.00	2.13
8.25	2.515	2.25	3.25	1.25	2.38
9.75	3.030	2.50	3.50	1.50	2.63

* All measurements are in inches.

All specifications are subject to change without notice.



Tang				
Bore	A	B	C	D
3.50	1.015	1.00	1.75	1.00
4.50	1.265	1.25	2.00	1.50
5.50	1.515	1.50	2.25	1.75
6.75	2.015	2.00	2.75	2.00
8.25	2.515	2.25	3.00	2.50
9.75	3.03	2.50	3.25	3.00

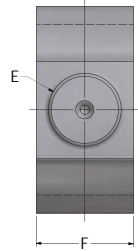
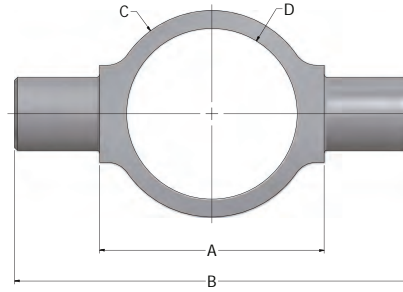
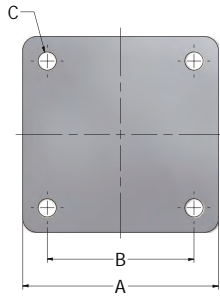
* All measurements are in inches.

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Tang with Bearing					
Bore	A	B	C	D	E
3.50	1.00	1.375	2.00	1.38	0.88
4.50	1.25	1.875	2.50	1.88	1.09
5.50	1.50	2.375	3.00	2.38	1.31
6.75	2.00	2.875	3.50	2.88	1.75
8.25	2.50	3.313	4.25	3.31	2.19
9.75	3.00	3.750	4.50	3.75	2.63

* All measurements are in inches.

All specifications are subject to change without notice.



Flange				
Bore	A	B	C	D
3.50	5.50	4.00	0.53	0.75
4.50	7.00	5.25	0.66	1.00
5.50	8.00	6.00	0.78	1.25
6.75	9.50	7.25	1.03	1.50
8.25	11.25	8.50	1.28	1.75
9.75	13.50	10.00	1.53	2.00

* All measurements are in inches.

All specifications are subject to change without notice.

Trunnion						
Bore	A	B	C	D	E	F
3.50	5.00	8.00	4.75	4.00	1.75	2.00
4.50	6.00	10.00	5.75	5.00	2.25	2.50
5.50	7.00	11.00	6.75	6.00	2.50	3.00
6.75	9.00	14.00	8.50	7.50	3.00	3.50
8.25	10.50	15.50	10.00	9.00	3.00	3.50
9.75	12.50	18.50	12.00	10.75	3.50	4.00

* All measurements are in inches.

All specifications are subject to change without notice.

CUSTOM TELESCOPIC MOUNTS

In addition to standard mounting options, RAM will design and/or manufacture custom mounts in a wide array of styles and materials.

We can also offer unique mounting locations, mid barrel or on each stage, for additional support.

Contact the RAM Engineering team today and let them help select the best option for your application.



TELESCOPIC
CYLINDERS





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