



QHTM CYLINDRES / CYLINDERS

HYDRAULIQUE / HYDRAULIC

TÉLESCOPIQUE / TELESCOPIC

STANDARD & CUSTOM





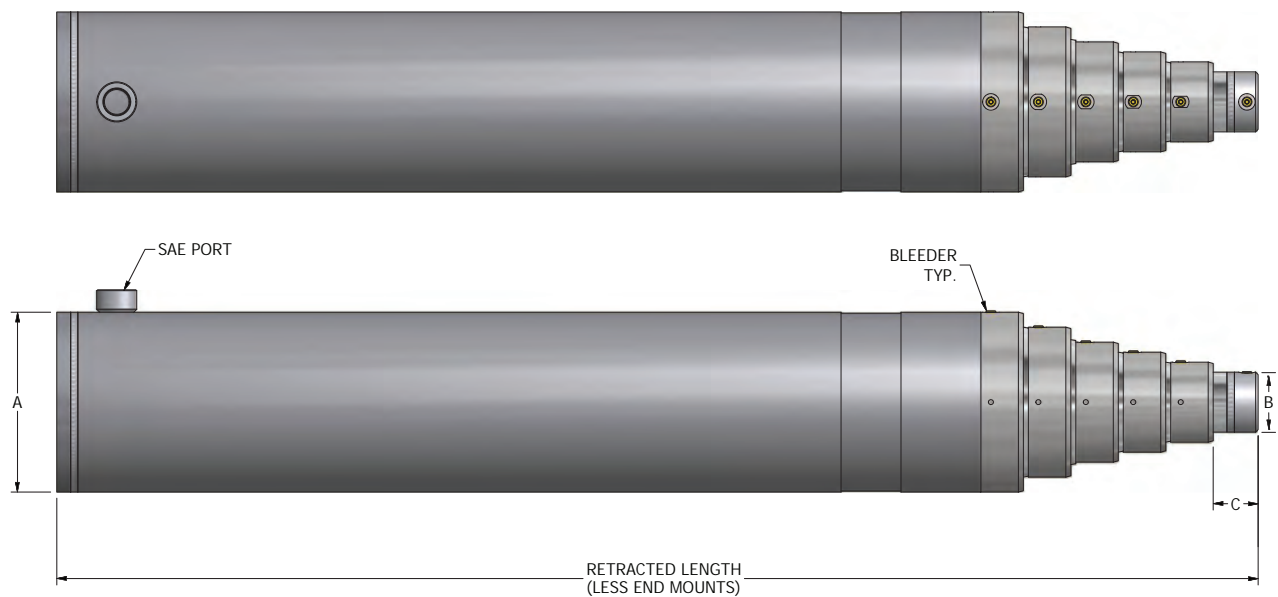
SINGLE ACTING TELESCOPIC

QH™ 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. QH™ 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?

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. QH™ 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





CYLINDRES / 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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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.



CYLINDERS / 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. QH™ 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

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)

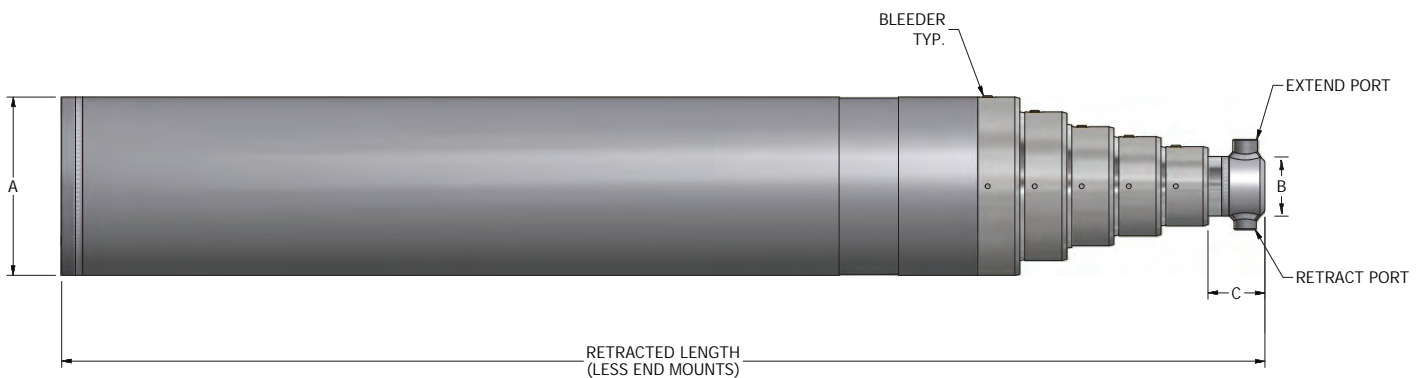
Ports: SAE ports; NPTF also available

Shipping Plugs: High quality steel

Internal Seals: North American made

Paint Finish: 2 part urethane black

Testing: 100% full cycle tested





CYLINDRES / 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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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
QHCT-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

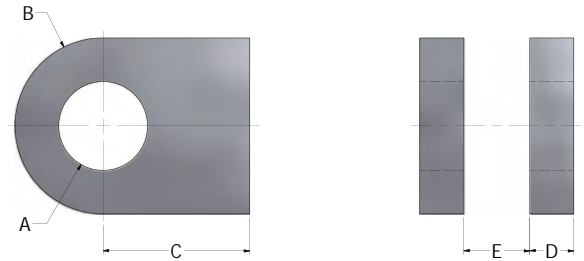
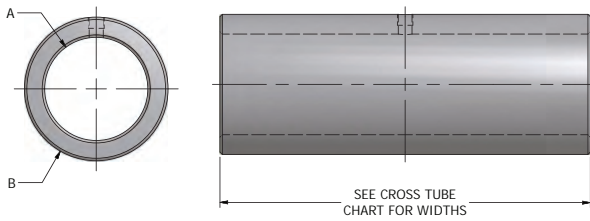
* When ordering provide model number, stroke and mounts required.
 * Actual load may be limited based on final configuration.

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CYLINDRES / CYLINDERS

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 + 0.2
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	

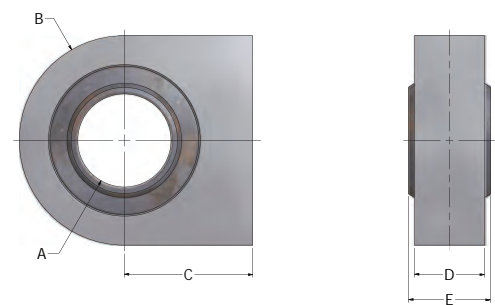
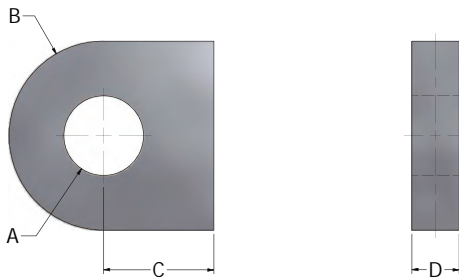
* All measurements are in inches.

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Clevis					
Bore	A	B			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		
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.

All specifications are subject to change without notice.

Tang with Bearing					
Bore	A	B			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.



CUSTOM TELESCOPIC

QH™ Custom Telescopic cylinders give you the flexibility to work with our engineering experts to determine the cylinder design requirements that perfectly fit your equipment performance requirements. We have the expertise working with OEM customers to either modify a standard design or create a new prototype for their equipment.

SINGLE ACTING

Single Acting Telescopic cylinders are the simplest telescopic design. A Single Acting cylinder is extended using hydraulic pressure but is retracted using external forces (usually gravity), once the hydraulic pressure is removed.

SINGLE/DOUBLE COMBINATION

Single/Double Combination Telescopic cylinders are a Single Acting Telescopic cylinder where one or more of the smaller stages are Double Acting. A typical application is a mast raising design on a drilling rig where the load must be pulled over center until gravity can take over to retract the cylinder.

DOUBLE ACTING

Double Acting Telescopic cylinder designs are extended and retracted using 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. This type of design is usually utilized when gravity is not available to retract the cylinder.





CYLINDRES / CYLINDERS

BUILT TO YOUR SPECIFICATIONS

- Rated Pressure:** Up to 5000 PSI
- Stages:** 2 to 5 working sections
- Rod Material:** High tensile SAE C1045, ground and polished hard chrome plated
- Barrel Size:** Up to 20" diameter
- Barrel Material:** High tensile SAE C1026/St52.3 cold drawn tube precision honed for extended seal life
- Gland Material:** Ductile iron 65-45-12 (ASTM A536) or Steel (AISI 1026) internally threaded
- Piston Material:** Integrated machined piston design option
- Valves:** Optional integrated valves
- Ports:** Custom arrangements for size, type and location options
- Seal Options:** Urethane wiper seals, modern urethane lipped shaft seal, modern urethane one piece static seals, glass filled nylon gland bearing rings, glass filled nylon piston bearing rings, cast iron piston rings, interlocking step-cut reinforced heat stabilized thermoplastic zero leak piston rings, and custom sealing arrangements for high or low temperature, high cycle or continuous duty
- Paint Finish:** 2 part urethane black or custom colors

CUSTOM TELESCOPIC MOUNTS

QH™ can 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.

