



SHEFFER™

PNEUMATIC & HYDRAULIC CYLINDERS



THE SHEFFER ADVANTAGE

The Sheffer Advantage is Your Advantage

Sheffer makes cylinders. Period! Since 1952, we've manufactured nothing else because it allows us to focus on our primary goal: To remain at the forefront of our industry by producing cylinders of unparalleled excellence. As cylinder specialists, Sheffer has earned the reputation for high quality, lasting performance, minimal downtime and lower operating costs.

The reason we remain focused on cylinders is because *we put the end user first*. We fully understand the critical role our cylinders play in the successful operations of those who use our products. From common use to custom applications, and from high-volume orders to a single



Our advanced manufacturing capabilities deliver unequalled precision in production.

unit, we are committed to producing precision cylinders that perform as expected — or better.

Our sights remain set on being nothing less than the benchmark by which all other cylinder manufacturers are measured. More important, our mission is to continually achieve new heights of customer satisfaction and service.

At Sheffer, there's an advantage to making only cylinders. And *that advantage is yours!*

Sheffer Cylinders are Better Cylinders!

The performance you expect from a quality cylinder

- ▶ Longer lifetime of service
- ▶ Minimal downtime
- ▶ Fast and easy installation
- ▶ Simple, affordable repairs
- ▶ No special tools required to make repairs
- ▶ Lower operating cost
- ▶ More options available
- ▶ Industry's longest warranty



Quality assurance is evident in all facets of the Sheffer organization.

Our Cylinders are Designed with the End User in Mind

Studded Rod End

(Standard, except on C20 Series)

Sheffer's rod end design virtually eliminates rod end breakage! The rod ends of many competitive cylinders are cut from the piston rod, creating a weak point at the threads. Our studed connection routes stress factors away from this weak point, so rod-end failure is nearly impossible. Also, rod ends can be replaced without changing the entire piston rod, thereby reducing downtime and repair costs.



Four Full Wrench Flats

(Standard on all Sheffer cylinders)

For convenience, time and money savings during cylinder installation or replacement, Sheffer cylinders are produced with four full wrench flats. With our design, a flat is always positioned for a good wrench hold with normal tools. Our cylinders come this way because unconventional tools and methods are often used when a wrench flat isn't convenient — possibly marring the rod surface which can damage seals and cause leaks.

Removable Rod Gland

(Not available on select small bore cylinders)

The wiper and pressure seals on Sheffer cylinders are encapsulated behind a removable rod gland that is bolted to the front of the cylinder. "On line" changing of seals is fast and easy using normal tools, without disturbing torque settings, removing the rod bearing or tearing down the cylinder. This feature dramatically increases productivity by reducing downtime and repair costs.

Separate Rod Bearing

(Standard on most Sheffer cylinders)

On Sheffer cylinders, the rod bearing is a hydrodynamic "flooded bearing", which greatly reduces wear and extends part life. It's also inboard from the seals and a separate component, so if changeout is needed, the seals need not be replaced — and vice

versa. No special tools are required. Moreover, the rod bearing can be removed and replaced without having to loosen tie rods or tear down the cylinder. That saves downtime, plus the cost of parts and labor.

Chamfered Tube Ends

(Standard on most Sheffer cylinders)

A small angle, or chamfer, is machined into the end of each Sheffer piston tube for quick, easy and reliable repairs. If the piston and rod have been removed (to replace seals for example), when the piston is pushed back in, the chamfer physically compresses the seal into the piston like a built-in funnel. Special compression tools aren't needed during assembly and chances of seal damage are minimized. The chamfer design also prohibits extrusion of the O-ring once the tie rods are tightened. This forms a superior seal and diminishes the chance of leakage at the head and cap joint.

Slipper Piston Seal & Bearing

(Standard on all hydraulic cylinders)

The slipper piston seal and bearing on Sheffer cylinders are a standard option, not a cost-additive feature other manufacturers offer when their designs are inadequate. Our Teflon®-based surfaces are an excellent lubricant, demonstrating a very low coefficient of friction with low heat. As the cylinder moves back and forth, the Teflon also migrates into the pores of the cylinder tube, creating an even better lubricating surface. Slipper seals and bearings are another reason Sheffer cylinders reduce costs and downtime while increasing productivity.



MH SERIES
Medium-Duty Hydraulic



Bore: 1 1/8" through 8"
catalog standards

Ratings: 800 to 2,000 PSI

Mountings: 20 catalog standards
Specials available

- ANSI, NFPA, JIC **interchangeable dimensions**
- Hydrodynamic in-board rod bearing for low friction and long life
- Unique slipper seal piston for low friction, breakaway and long life
- Abrasion resistant rod seal and wiper
- Studded rod end with 4 wrench flats
- Adjustable cushions available



HH SERIES
Heavy-Duty Hydraulic



Bore: 1 1/8" through 24"
catalog standards
Up to 50" as special

Ratings: 3,000 PSI working
pressure standard
5,000 PSI non-shock
pressure standard
Higher pressure available

Mountings: 22 catalog standards
Specials available

- ANSI, NFPA, JIC **interchangeable dimensions**
- Hydrodynamic in-board rod bearing for low friction and long life
- Unique slipper seal piston for low friction, breakaway and long life
- Abrasion resistant rod seal and wiper
- Studded rod end with 4 wrench flats
- Adjustable cushions available



UH SERIES
Ultra High Pressure
Hydraulic



Bore: 2" through 14"

Ratings: 5,000 PSI working
pressure
8,000 PSI non-shock
pressure

Mountings: 8 standard mounts
available
Specials available

- Non-interchangeable dimensions
- Will modify to suit your needs

A SERIES
Heavy-Duty Pneumatic



Bore: 1 1/8" through 14"
catalog standards
Up to 42" as special

Ratings: 250 PSI catalog standard
Higher pressures
available

Mountings: 20 catalog standards
Specials available

- ANSI, NFPA, JIC **interchangeable dimensions**
- **Steel head and cap construction**
- Aluminum tube standard
Steel tube available
- Studded rod end with 4 wrench flats
- Hard chrome plated, case hardened piston rods
- Lubed for life
- Fast response adjustable cushions available
- Ideal for demanding applications

MA SERIES
Medium-Duty Pneumatic



Bore: 1 1/2" through 8"
Rating: 200 PSI
Mountings: 14 catalog standards

- ANSI, NFPA, JIC **interchangeable dimensions**
- High tensile, special hard anodized aluminum tube
- Aluminum head and cap for weight reduction
- Lubed for life
- Cushioned front, rear or both ends available
- Economical OEM cylinder

AA SERIES
Light-Duty Aluminum Pneumatic



Bore: 1 1/2", 2" and 2 1/2" only
Rating: 200 PSI
Mountings: Universal mount,
mounting kits available

- Aluminum alloy body, head and cap
- Hard chrome plated piston rod standard
- Lubed for life
- Modified U-cup seals for low friction, long life
- Cushioned front, rear and both ends available

C20 SERIES
Cast Iron Pneumatic



Bore: 1 1/2" through 10"
catalog standards
Specials available

Rating: 200 PSI
Mountings: 5 catalog standards

- Hard chrome plated piston rod standard
- Lubed for life
- Aluminum tube standard, steel & fiberglass available
- Cushioned front, rear and both ends available
- Extremely compact for limited space applications
- Very economically priced

Electronic Positioning Cylinders



Rod Sizes: 1 3/8" and above
Rating: To 3,000 PSI
Mountings: All catalog standards
 Clevis mount with special housing

- Internal position sensing, using probe of your specification
- Available on hydraulic and pneumatic cylinders
- Manifold mounting and piping available
- Special heads for direct valve mounting
- Quick delivery up to 48" stroke

CL SERIES Heavy-Duty Clamp



Bore: 3/4" and 1 1/8" only
Ratings: CLA - 150 PSI Pneumatic
 CLH - 250 PSI Pneumatic
 CLH - 1,500 PSI Hydraulic
Mountings: Universal mount
 Stud mount

- Double acting and single acting spring return/extend
- Accessories for additional mountings
- Lubed for life
- Modified U-cup seals for low friction, long life
- Very economical
- Ideal for all types of clamping and tooling applications

Custom

Sheffer has manufactured cylinders within the specifications listed below, but they do not represent the limits to our capabilities.

Bore: 0" - 54"
Stroke - Gross Stroke: 0 - 100'
Dual Piston/Stop Tube: as required
Mounting Styles: as required
Extra Rod Extension: as required
Port Size: as required

- Stainless Steel/Exotic Metals
- Pressure Boosters to 40,000 PSI
- Operating Pressures to 10,000 PSI
- Operating Temperatures to 800°F
- Electrically Insulated
- Electronic Feedback
- Valve Package Installation
- Metric Dimensions
- Special Platings
- Water Powered Cylinders
- Mill Type Cylinders
- Non-Rotate Options
- Severe Duty Cylinders



Accessories



- Limit switch actuators available:
 - Mechanical
 - Magnetic
 - Proximity
- Electronic positioning devices
- Valve mounting blocks available
- S.A.F.E. — Self Aligning Flange End
- Uni-Lign — Universal alignment mounting accessory
- Clevis and pivot mounting brackets
- Clevises and pins
- Jam nuts
- Front head spacer bars
- Rod clevis and pins
- Pin and retainer assemblies
- Rod aligning coupler
- Rod eyes

Piston Accumulators



Sizes: 1 pint to 50 gallon catalog standards
Other sizes available

Ratings: 3,000 and 5,000 PSI models standard
Other pressures available

- Repairable design
- ASME and other code compliance available
- In stock delivery on many sizes

Engineering



- Go to www.sheffercorp.com for 2D and 3D drawings

Complete technical support including:

- Temperatures and fluids
- Theoretical forces
- Mounting information
- Special variations
- Long stroke cylinders
- Stop tube - dual piston chart
- Mounting classes
- Column strength chart



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