



Your Partner in Trusted Performance
USA Engineered and Manufactured

Star Hydraulics Custom Cylinders

Key Features

High-Pressure Capability: Delivers robust performance for hydraulic pressures up to 10,000 PSI, with load capacity tailored to your specific application.

Versatile System Compatibility: Functions with motor-driven or manual pump systems in single- or double-acting modes.

General Construction: Carbon steel or corrosion-resistant materials with bronze, ductile-iron, or glass-filled nylon piston and rod bearings. Features a polished, hard chrome-plated piston rod or ram sliding surfaces, and a precision-honed bore (10–16 RMS) for optimum seal life.

100% Hydrostatic Testing: All units are hydrostatically tested to 1.5 times the rated operating pressure, ensuring consistent leakproof operation.

Application-Specific Design: Offers piston and displacement cylinder machining up to 6½" dia. by 12' stroke, large-bore machining up to 24" dia. by 20" stroke, and telescopic machining up to 24" dia. by 20" stage length, with alternate sizes available upon review.

Configuration Options

Bolted Cap: Ideal for high-pressure applications requiring durable construction and easy maintenance.

Threaded Cap: Offers a compact, reliable design for applications with limited space.

Double End Rod: Designed for balanced operation, delivering equal force and speed in both directions.

Hollow Rod: Features a central passage, supporting cable or rod tensioning applications.

End of Stroke Cushioning: End of stroke cushioning available in both directions of travel.

Seal Compatibility: Seal materials are available for compatibility with fluid type and operating temperature.

Ram Displacement Type: Single acting ram displacement cylinders for simple powered extend and gravity return applications.

Telescopic Design: Extends through multiple stages to provide long strokes from a compact retracted length.

When off-the-shelf cylinders fall short, custom hydraulic designs deliver high-performance solutions. Each design is optimized with the right materials, seals, and corrosion protection for long-lasting operation.



THE ALKON
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Scan to Explore
Your Custom
Solution



CONTACT US

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Required Application Information

Supplying these details ensures an accurate quotation.

(Piston or Displacement Style Cylinders)

BORE

Diameter _____ inches/mm

STROKE _____ inches/mm

ROD

Diameter _____ inches/mm

TYPE

☐ Double Acting ☐ Single Acting ☐ Displacement

If Applicable:

Push Load (lbs.) _____ Positive Ram Stop _____

Pull Load (lbs.) _____ No Ramp Stop _____

Spring Return _____

ORIENTATION

☐ Vertical ☐ Horizontal
☐ Rod Up ☐ Rod Down

FLUID

☐ Petroleum Base ☐ Phosphate Ester
☐ Water Glycol ☐ _____

OPERATING PRESSURE _____ PSI

☐ Shock ☐ No Shock

MOUNTING

☐ None ☐ Clevis ☐ Single Lug ☐ Trunnion
☐ Cross Tube ☐ Foot ☐ Front Flange ☐ Rear Flange
☐ _____

ROD END

☐ Male Thread ☐ Female Thread ☐ Swivel ☐ None

FINISH

☐ Star Standard (2-Part Epoxy / RAL 5010 (Gentian Blue))
☐ Paint-Color _____ ☐ Primer Only ☐ No Paint

PORTS

Size _____ (Example: NPTF, SAE O-Ring, SAE 4-BOLT)

FREQUENCY

_____ Cycles Per _____ (Example: Hour, Day, Month)

SPACE LIMITATIONS

_____ (Example: Max OD, Max Length, Interchangeability)

(Telescopic Style Cylinders)

NUMBER OF MOVING STAGES _____

STROKE LENGTH _____ inches/mm

MOVING STAGES (Largest to Smallest)

Diameter 1 _____ inches/mm

Diameter 2 _____ inches/mm

Diameter 3 _____ inches/mm

Diameter 4 _____ inches/mm

Diameter 5 _____ inches/mm

Diameter 6 _____ inches/mm

TYPE

☐ Double Acting ☐ Single Acting
Push Load (lbs.) _____ Pull Load (lbs.) _____

FLUID

☐ Petroleum Base ☐ Phosphate Ester ☐ Water Glycol
☐ _____

OPERATING PRESSURE _____ PSI

MOUNTING

☐ None ☐ Clevis ☐ Single Lug ☐ Cross Tube
☐ Trunnion ☐ _____

ROD END

☐ Male Thread ☐ Female Thread ☐ Swivel ☐ None

FINISH

☐ Star Standard (2-Part Epoxy / RAL 5010 (Gentian Blue))
☐ Paint-Color _____ ☐ Primer Only ☐ No Paint

PORTS

Size _____ (Example: NPTF, SAE O-Ring, SAE 4-BOLT)

FREQUENCY

_____ Cycles Per _____ (Example: Hour, Day, Month)

SPACE LIMITATIONS

_____ (Example: Max OD, Max Length, Interchangeability)

DESCRIBE APPLICATION:

(Environmental Conditions, Operating Conditions, etc.)

Please send a drawing of the cylinder and the apparatus to which it mounts, if available.

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