

# CONSTRUCTION GRADE HYDRAULIC CYLINDERS

## ENGINEERED BY TEXAS HYDRAULICS



Texas Hydraulics Construction Grade Cylinders are engineered for OEMs who need dependable, extreme duty actuation in construction, demolition, mining, and forestry environments where downtime is not an option.

## Product Overview:

Texas Hydraulics Construction Grade Cylinders are designed for high duty cycle, high shock applications and maintain performance in the harshest operating conditions. Forged construction, robust sealing systems, and hardened wear surfaces work together to extend service life and reduce total cost of ownership across the machine lifecycle.

## Core Features:

- **High cycle fatigue resistance** for thousands of duty cycles in demanding construction and demolition equipment.
- **Forged end mounts** that deliver superior strength and toughness under shock loads and extreme stresses.
- **Chrome plated, induction hardened rod** for extended rod life, corrosion resistance, and resistance to wear, abrasion, and foreign object damage.
- **Bolted head design** that simplifies field maintenance by allowing access to internal components without removing the entire cylinder.
- **Buffer seals** that protect primary sealing elements from pressure spikes, extending rod seal life and reducing maintenance costs.
- **Base and rod end cushions** with fast start cushioning to reduce shock loads and deliver smooth, controlled motion at end of stroke.
- **Precision wear rings** on piston and rod that prevent metal to metal contact, control extrusion gaps, and maintain consistent performance.
- **Four-piece high-pressure piston sealing system** that maintains reliable pressure containment under extreme operating conditions.
- **Standard porting options**, including SAE 4-bolt flange or Stecko porting, for reliable, leak-free service in the presence of hose whip.
- **Friction welded rod mounts** providing 100% penetration & connectivity for applications requiring extreme toughness under high shock loading.

## Optional Configurations:

- **Application specific** cushions tailored to machine dynamics and deceleration profile requirements.
- **Integrated stroke sensor**, sensing position, providing real time position, velocity and acceleration feedback for advanced controls and diagnostics.

## Key Advantages:

- **Extreme Duty Design** tested and proven in construction, demolition, earthmoving, mining, and forestry applications worldwide.
- **Extended Service Life** through forged construction, heavy-duty seals, and superior surface hardening, driving lower total cost of ownership.
- **Consistent, repeatable performance** in high cycle environments, maintaining machine productivity over time.
- **Easy Field Serviceability** via bolted head design, reducing downtime and maintenance labor.

Market Segment	Primary Applications
Construction & Demolition	Equipment actuation, boom extend, bucket controls, breaker operation
Mining & Quarrying	Shovels, conveyors, material handling mechanisms
Forestry & Logging	Grapples, harvesters, boom actuation
Earth Moving	Blade positioning, ripper controls, grader systems

Performance Envelope	
<i>These cylinders are designed and manufactured for demanding, continuous operation in construction grade environments.</i>	
Continuous Pressure Rating:	5,000 psi (350 bar)
Intermittent Pressure Rating:	6,000 psi (420 bar)
Rod Speed Capability:	Up to 100 ft/min (30 m/min), supporting dynamic machine functions.
Operating Temperature Range:	-40°F to 210°F (-40°C to 100°C) continuous, suitable for seasonal extremes.
Standard Bore Range:	2-inch to 16-inch (50mm-400mm) with corresponding rod options; custom sizes and space constrained configurations available on request.

## Design Features:

- Bolted head for serviceability
- Forged end mounts
- Chrome plated, induction hardened rod
- Precision wear rings on piston and rod
- Four-piece high pressure piston sealing system
- Base and rod end cushions with fast start, reduce shock loads
- Buffer seals for extended rod seal life
- SAE 4-bolt flange or Stecko porting

## Available Bore & Rod Combinations:

Standard sizes available from 2-inch through 16-inch bore with corresponding rod options. Please consult Texas Hydraulics for specific size availability, custom configurations, or space constrained applications.

## Why Choose Texas Hydraulics Construction Grade Cylinders?

For over 40 years, equipment manufacturers and end-users have specified Texas Hydraulics cylinders for applications where performance is non-negotiable. Our Construction Grade line reflects our commitment to engineering excellence, proven reliability, and customer satisfaction. We don't just build cylinders—**we build solutions that solve problems**, keeping your equipment running and your operations profitable.

## Ordering & Support

Whether you need standard configurations, customized solutions, or technical expertise for your specific application, our team is here to help. Contact Texas Hydraulics for custom solutions, technical specifications, delivery timelines, and application engineering support. **Email:** [inquiry@texashyd.com](mailto:inquiry@texashyd.com) | **Website:** [www.texashydraulics.com](http://www.texashydraulics.com)

