



## 3TH Series

Heavy Duty Hydraulic  
1.50 through 20.00 bore  
NFFPA Tie Rod Hydraulic Service  
3000 psi Pressure Rating

The 3TH series cylinders anticipate the ever increasing demands of industry for cylinders with higher pressure ratings, longer service life, and reduced maintenance. The 3TH robust design incorporates our exclusive Uni Cartridge Rod Gland, a retainer held rod bearing for quick and easy replacement without dis-assembly of the cylinder body.

### Basic Product Offers

- ◆ 100,000 PSI min yield Chromed Rod
- ◆ 100,000 PSI min yield Tie Rods
- ◆ Steel Honed Barrel
- ◆ Precision Machined Heads and Caps
- ◆ Uni Cartridge Bolted Rod Bearing
- ◆ 18 NFFPA/JIC Mounting Styles
- ◆ 7 Standard Rod End Styles
- ◆ NPTF Ports
- ◆ Multiple Rod Diameters per Bore Size

### Available Constructions

- ◆ Single Rod End
- ◆ Double Rod End
- ◆ Cap End Cover Stroke Adjustment
- ◆ Tandem - Single Rod End
- ◆ Back-to-Back
- ◆ Spring Extend
- ◆ Spring Return
- ◆ Multiple-Stage

### Max Operation Pressures

- ◆ Heavy Duty - 3000 psi
- ◆ Non-Shock - 5000 psi

### Standard 2 Year Warranty

- ◆ Standard defect two (2) year or 4,000 hrs of normal application usage
- ◆ Electronics per it's factory warranty

### Inspection and Test

- ◆ All cylinders are fully inspected for order accuracy and bench pressure tested before painting and shipping.
- ◆ All 3TH series are bench pressure tested to 5000 psi

### Basic Mounting Offers

- ◆ A - Cap Rectangular Flange (MF2)
- ◆ AA - Cap Square Flange (MF6)
- ◆ B - Head Rectangular Flange (MF1)
- ◆ BB - Head Square Flange (MF5)
- ◆ CC - End Foot Lugs (MS7)
- ◆ E - Intermediate Trunnion (MT4)
- ◆ EB - Cap End Trunnion (MT2)
- ◆ ER - Head End Trunnion (MT1)
- ◆ G - Fixed Clevis (MP1)
- ◆ H - Side Tapped (MS4)
- ◆ J - Side Lugs (MS2)
- ◆ K - Centerline Lugs (MS3)
- ◆ L - Extended Tie Rods Both Ends (MX1)
- ◆ M - Extended Tie Rods Head End (MX3)
- ◆ N - Extended Tie Rods Cap End (MX2)
- ◆ O - Basic No Mount (MX0)
- ◆ P - Rectangular Cap (ME6)
- ◆ PP - Square Cap (ME4)\*
- ◆ Q - Rectangular Head (ME5)
- ◆ QQ - Square Head (ME3)\*

### Additional Mounting Offers

- ◆ D - Fixed Pivot (MP3)
- ◆ SP - Spherical Pivot
- ◆ R - Detachable Pivot (MP4)
- ◆ Z - Detachable Clevis (MP2)

### Optional Offers

- ◆ Porting
  - SAE Straight Threads
  - British Parallel
  - British Tapered
  - Flanged SAE-Code 61
  - Flanged SAE-Code 62
  - Undersized-NPTF and SAE
  - Oversized Couples-NPT and SAE
  - Special Requested Ports

### Optional Offers

- ◆ End of Stroke Cushions
- ◆ Seal Materials
  - Polyurethane
  - Viton
  - Ethylene-Propylene
  - Teflon
  - Metallic-Step Cut Rings
- ◆ Bore Materials
  - Chromed Bore - Type I
  - Chromed Bore - Type II
- ◆ Rod Materials
  - 17-4 Stainless Steel
- ◆ Tierod Materials
  - ETD150 Steel
- ◆ Special Requested Rod Ends
- ◆ Multiple Wrench Flats
- ◆ Full Face Cartridge Retainers
- ◆ Extended Key Retainers
- ◆ Rod Gland Drains
- ◆ Special Fluid Applications
  - Water Fitted
  - Water Glycol
  - Special Requested Mediums
- ◆ Air Bleeds
- ◆ Coatings
  - Primer
  - Epoxy
  - Nickel-Plating
  - Cadmium Plating
  - Special Requested Coatings
- ◆ Metallic Scraper
- ◆ Rod Boots
- ◆ 5000 psi non-shock operation
- ◆ Cylinder Accessories
  - Rod End
  - Base Mounts
  - Electronics - Switches
  - Flanged End of Stroke
  - Dyna Style End of Stroke

\* Available with the 10.00" thru 20.00" bore sizes