

LEH - Limitorque Electro-Hydraulic Actuation Systems

Flowserve Limitorque makes valve control easier in ways as diverse as the applications in which its products are used. LEH electro-hydraulic actuators provide the ease and simplicity of electric power supply with the performance and safety of hydraulic actuators in one optimally engineered package.

Limitorque LEH actuators can deliver up to 550 kNm (405 659 ft-lb) of precisely controlled torque on quarter turn applications, and in excess of 1.000.000N (225000 lbf) of thrust on linear applications, safely automating all types of valves in the most critical services.

Today's energy industry is more demanding than ever before, with attention to safety, environmental issues and cost-efficiency driving the need for increasingly advanced products. Limitorque has addressed these rigorous market requirements in the design of our product ranges from day one, and incorporates the exceptional technical performance and first-in-class regulatory compliance of our flagship Limitorque Fluid Power actuators into the LEH integrated electro-hydraulic actuation systems

System Specifications

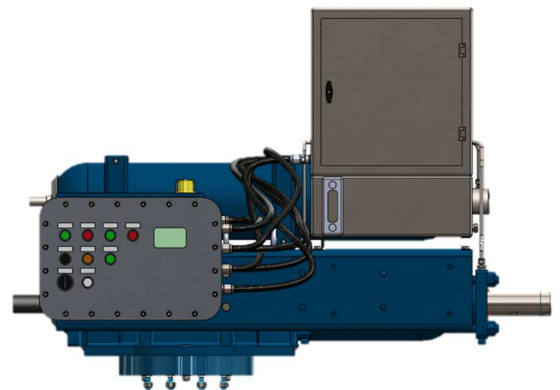
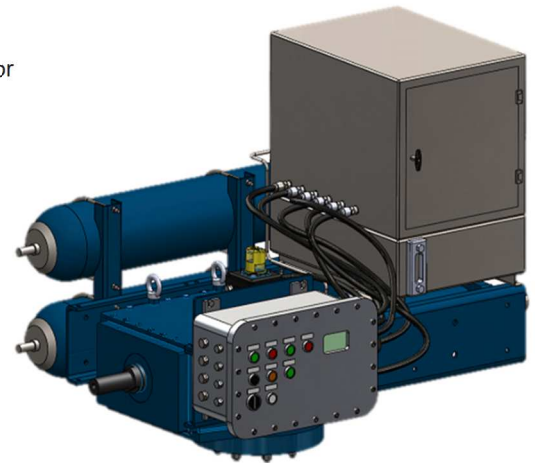
- Available in spring return and double-acting configurations or with back-up accumulator
- System hydraulic pressure defined based on application operating conditions
- -20°C to 100°C (-4°F to 212°F) standard operating temperature range
- Low temperature option to -40°C (-40°F)
- Certified according to ATEX 2014/34/EU Ex II 2GD c IIB T4-T5-T6
- Available in compliance with PED 2014/68/EU
- IP65 standard configuration according to EN 60529
- Manufactured and tested in compliance with ISO 9001 and EN 15714-3

Features - Actuator

- Torque / Thrust provided by Limitorque **LHS**, **LHC** or **LHL** actuator.
- Spring return, double acting or fail-safe through hydraulic accumulator
- High torque / High speed capability
- Industry leading 25 year design life
- Industry leading 6 year (5 for LHC) maintenance interval
- Symmetric or canted scotch yokes to perfectly fit valve torque requirement
- Customizable stroke lengths on linear actuator
- ENP lined cylinders with chrome plated piston rod for smooth operation and long life.
- Actuator spring design in compliance with EN 13906
- Epoxy coating to ISO 12944 category C5 M/I allows maximum corrosion protection
- IP66/IP66M and IP67/IP67M configurations per EN 60529
- Valve mounting interface in compliance with ISO 5211

Features – Hydraulic Power Unit

- Electric motor/pump group, suitable for 3ph, 1 ph or DC power supply
- Manifold mount for main hydraulic components, reducing external piping thereby limiting leak paths and improving resistance to vibrations.
- On-board electric control panel including upon request local/remote control selector, indicator leds and pushbutton control interface.
- Mechanical and hydraulic components in carbon or stainless steel according to customer request
- Hydraulic tubing and double ferrule fittings in SS316L.
- Oil tank in Stainless steel
- Control cabinet in Stainless Steel
- Multiple customization options available





Limatorque Options

Limatorque Fluid Power Systems offers a wide range of control packages and configuration options, with a solution for every application

- HPU Electronic Controllers
- ESD / PST functions for HPU
- Valve open, closed or sealed type mounting adaptors
- Complete range of manual overrides
- Limit Switch Boxes
- Standard and Smart Position Transmitters
- Fast-acting actuators including integral dump valves and damping solutions
- High-cycle actuators
- Regulating or Modulating duty actuators
- **LPS** series pneumatic scotch yoke actuators and relevant controls
- **LPC** series compact pneumatic scotch yoke actuators
- **LHS/LHH** series hydraulic actuators and relevant controls
- **LHC** series compact hydraulic scotch yoke actuators
- **LDG** gas-powered actuators and relevant controls
- **LRP** pneumatic rack and pinion actuators
- **LPL** (pneumatic) and **LHL** (hydraulic) linear actuators
- Custom actuators for any application requirement

Limatorque Additional Products and Services

Electric Actuators and Controls

MX, QX - Non Intrusive Electronic actuators

Master station & multiple bus network protocols available

L120, SMB - Electro Mechanical actuators (L120), for nuclear and severe duty service

Other products and accessories

V, WG, SR - Gearboxes for manual or motorized operation

PMV - Limit switch boxes and digital positioners

Logix - Digital positioners

Flowserve Solutions

In addition to providing actuators and controls, Flowserve and Limatorque lead the industry with all the solutions that our customers need to maintain efficiency and productivity.

- Aftermarket Parts and Services
- Field and application assessments
- Actuator inspection, maintenance and repair
- Engineering and technical services, including application engineering support
- Education and training, including on-site and on-line



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