

# Limitorque



# FLowsERVE

**MXb**  
Quarter/Multi Turn Electric  
Non-Intrusive



**L120/210**  
Legacy Multi Turn Electric  
Intrusive



**QXb**  
Quarter Turn Electric  
Non-Intrusive



# LIMITORQUE

## MXb Series Electric Actuator



### Wide Variety of Configurations

Torque Only  
Thrust-based  
Linear Thrust  
Rising Stem

### Superior Reliability & Service Life

Higher-rated Components  
Input/Output Isolation

### Enhance User Interface

Simplified Menu Structure  
50% Faster Commissioning from previous

### Improved Screen Legibility

2X in Size  
8X Resolution  
30' Viewing Distance

### Excellent Feedback

Four standard 5A relays for status and alarms  
One 5A monitor relay for remote operation feedback

### Easier Maintenance

Enhanced Electronic Connector Design  
No need for Brackets & Hold-downs



<Play>

### Key Competitors

Rotork  
Auma  
Bettis [formerly Biffi]  
EIM

### Higher Process Control Visibility

500X Storage Capacity  
Superior Visualization of Trends & Logs

### Interchangeability

MXb Display & Control Electronics  
Backwards Compatible to prior MXb models

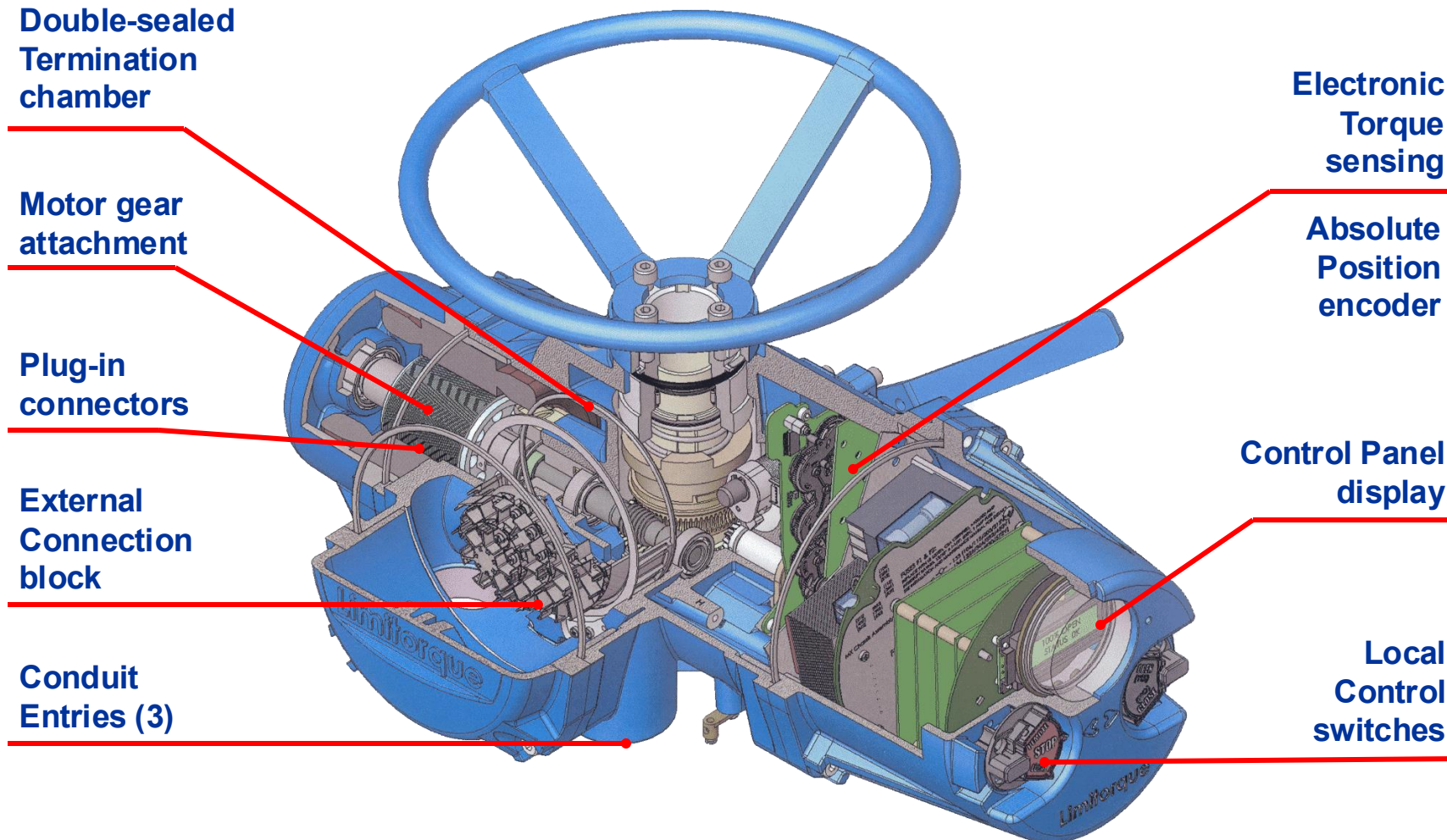
### Advanced Diagnostics

Tracks Environment & Performance  
Numerous Sensors  
Monitors any deviations



# LIMITORQUE

## MX Multiturn Actuator Cutaway



# LIMITORQUE MXb Display



## Torque

Blinks: Over T  
Solid: TS

Real Time Clock

100.0% 2020/02/04 11:11:05

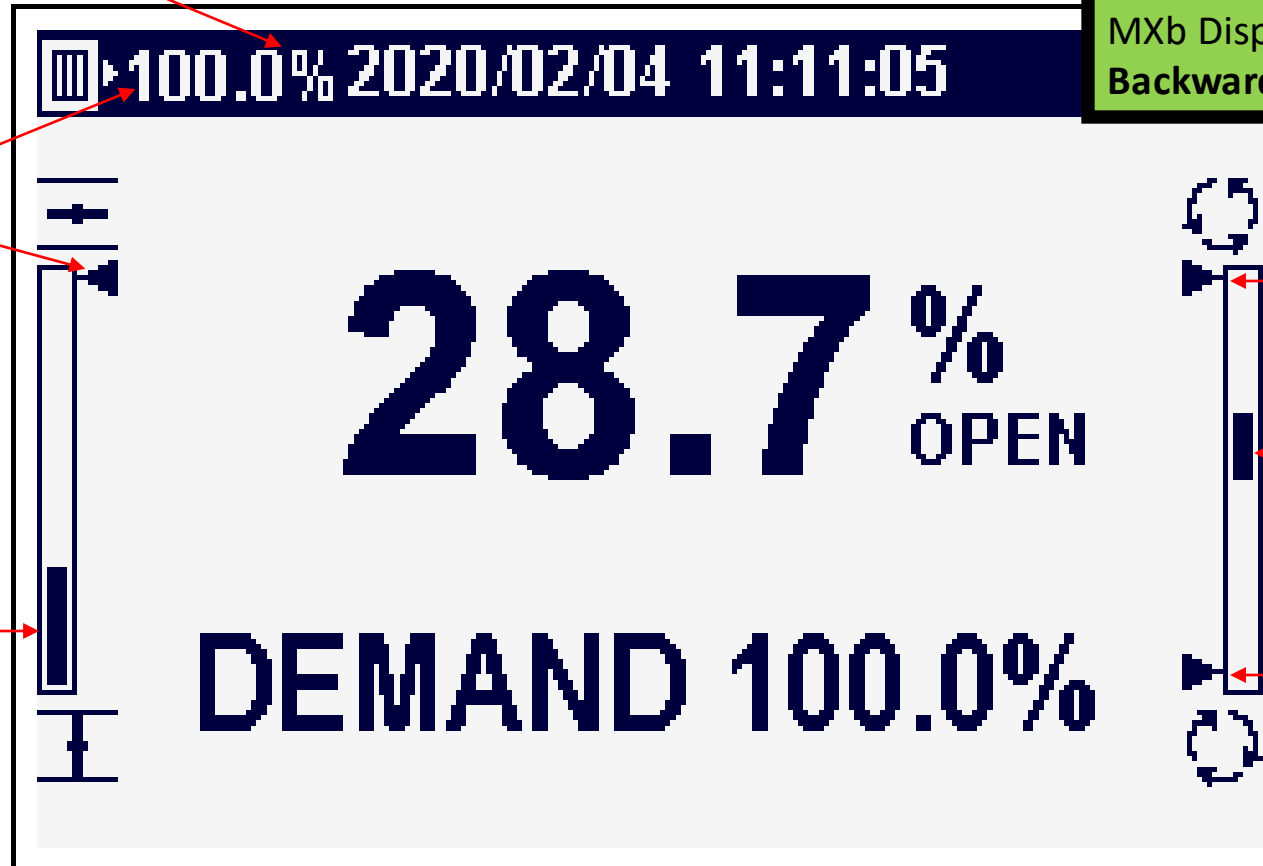
## Interchangeability

MXb Display & Control Electronics

Backwards Compatible to prior MXb models

Demand

Current  
Position



Torque Upper Limit

Current Torque

Torque Lower Limit

# LIMITORQUE

## L120 Series Multi-Turn Electric Actuator



### 3-Phase, 1-Phase & DC Motors

#### Heavier Duty

Aluminum & Ductile Iron Housings  
Metallic Lubricated Steel-on-Bronze Gearing  
Shaft-supported Anti-friction Bearings

#### Most Demanding Environments

Available in Weatherproof, Submersible, Explosion Proof  
Resistant to Lightning, EMI, Fire, High Pressure Steam

#### Manual Declutching

Disconnects Motor from Handwheel  
To Protect Personnel

#### Torque Overload Protection

In Both Directions

#### Torque Ratings

60,000 ft-lb Output Torque  
600,000 lb Output Thrust

Can Be Coupled to Quarter Turn Manual Worm Gear  
For Butterfly, Ball & Plug Valves and Dampers

#### Three Configurations

No Controls Unit  
BIC Control Package  
UEX Electronic Controls

#### Manual Bevel Gear Option

More Competitive Pricing  
For Linear, Rotary Gate, Globe & Pinch Valves

#### UEX Electronic Controls

Network Integration



#### High Vibration, High Severity

Minimal Electronics  
Simplicity of Switches  
No Digital Display  
Hardwired, No Circuit Board like MXb



### Fits Inside Control Compartment

#### Basic Functionality

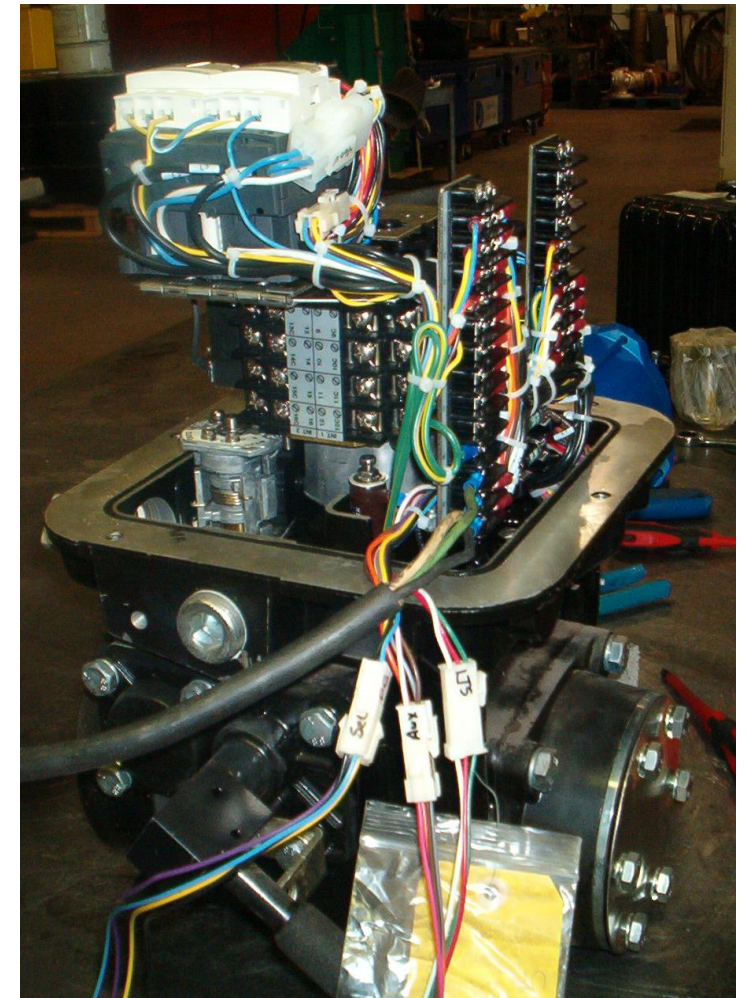
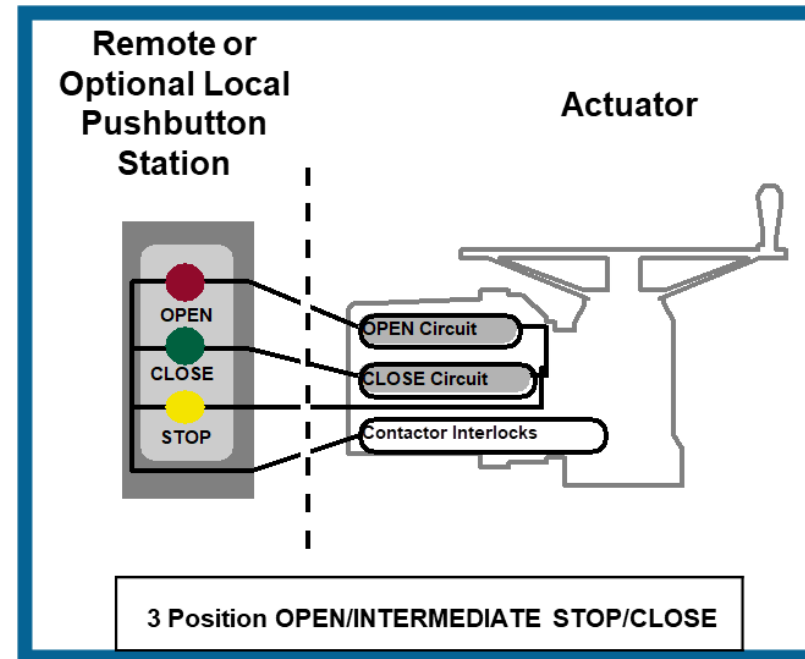
Reversing Contactor  
Transformer  
Overload Relays  
Heater  
Terminal Strip  
Secondary Fuse

#### Modulating & Feedback Capable

Analog Control  
Remote Position Indication

#### Optional Functionality

Remote Hardware Control  
Local Pushbutton Control



### UEC -3 Controls Upgrade

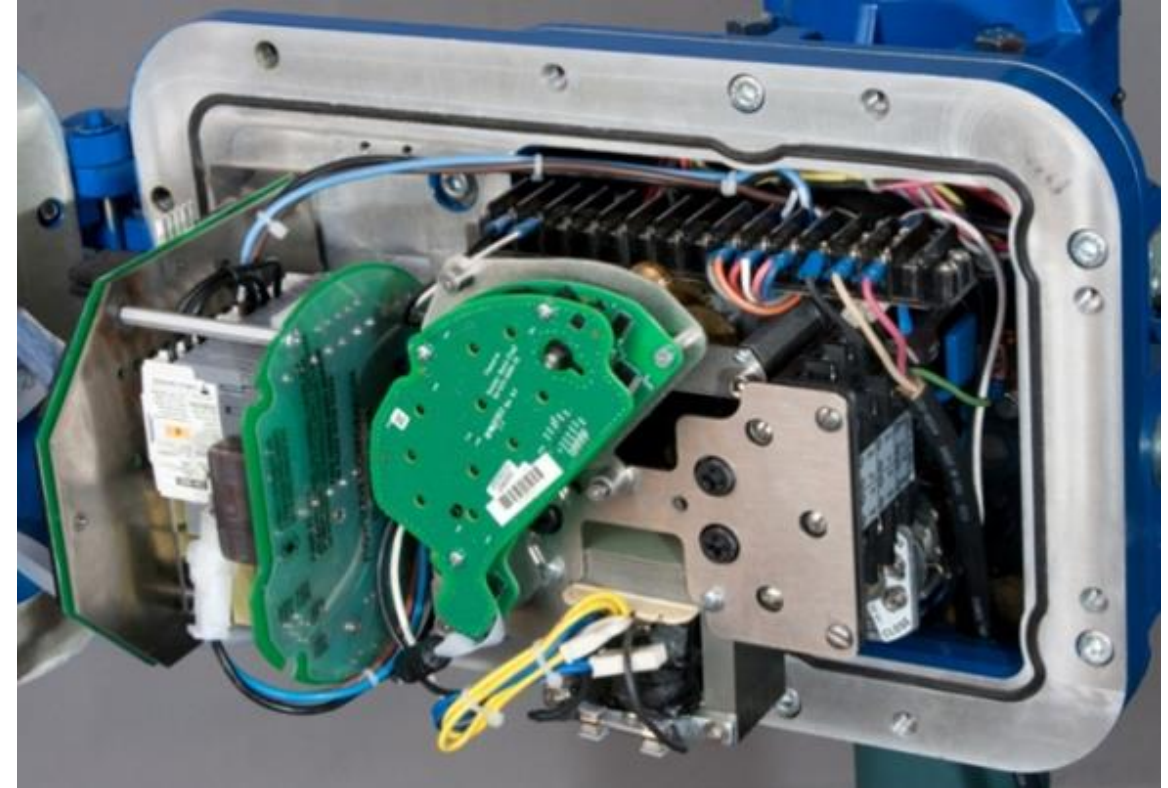
Compatible w L120-10 thru 85 Actuators  
No modifications needed  
to Integral Compartment Backplate

### Leverages MX Technology

MX Main Board Stack  
LCD Display  
Absolute Encoder for  
LCD Position Indication  
Modulating Control  
MX Software Code  
Modified for UEX

### Options

Digital Communications Board  
Modbus [Available Today]  
Foundation Fieldbus [coming]  
Profibus DP & PA [coming]  
DeviceNet [coming]  
APT Board  
Remote Position Indication





# LIMITORQUE

## QXb Series Quarter-Turn Electric Actuator



### Improved Reliability

- Double-sealed IP68 Enclosure
- Separate Terminal Compartment
- No need for Heater

### More Accurate Positioning

- Advanced Brushless DC Motors
- Improved Accuracy & Safety
- 1-Phase, 3-Phase, DC Without Modification

### Enhance User Interface

- Simplified Menu Structure
- 50% Faster Commissioning from previous

### Improved Screen Legibility

- 2X in Size
- 8X Resolution
- 30' Viewing Distance

### Enhanced Safety

- Independent Handwheel Operation
- Disconnects the Motor during Operation

### Reduced Maintenance Costs

- Oil Bath Lubrication
- Eliminates re-greasing
- Mounting/Storage in any Direction

### Higher Process Control Visibility

- 500X Storage Capacity
- Superior Visualization of Trends & Logs

### Advanced Diagnostics

- Tracks Environment & Performance
- Numerous Sensors
- Monitors any deviations

### Configurations

- QXMb: Non-intrusive, Multi-turn, Electric
- QX: Non-intrusive Electric
- QXM: Non-intrusive, limited Multi-turn Electric
- Short stroke, Light Torque Rising Stem apps



# LIMITORQUE

## QXb Series Quarter-Turn Electric Actuator



### Key Features

- Absolute encoder – resolution to 0.1%
- Brushless DC Motor
- Solid State motor control
- Suitable for 1200 Motor starts per hour

### Operational Flexibility

- Adjustable cycle speed for QX models
- Open / Close or Modulation service
- Torque sensing method – no moving parts

### Other Details

- Hall effect devices in lieu of reed switches
- IP68 to 15m for 96 hours
- Configurable digital inputs
  - ESD, Inhibits, User defined
- Up to 8 Hours of reserve power
  - To update the contact status & view LCD

### QX Quik

- QX-1 thru 5 Quarter turn w/ torque to 1500 lb.ft.
- QXM up to 20 output turns

