

EH-Series Electro-hydraulic Actuator



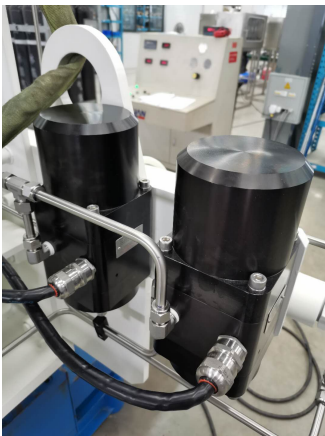
Coretech Flow America INC

Applications



- Environmental friendly/Zero emission pipeline actuator
- Electric powered motor driven hydraulic actuator
- Pipeline emergency shutdown valve
- Station blowdown valve
- River-crossing valve
- Station bypass valve
- Replacement of large torque/expensive pneumatic actuator
- Pipeline line break protection
- Pipeline high/low pressure automatic protection
- Partial stoke test (PST) for critical valves

Features



- Double acting as the standard, spring return optional
- High pressure hydraulic accumulator to enable fast cycle time on large bore ball valves
- Compact design/profile save time, space and project costs
- Fabricated drive module housing for durability
- Torque range up to 450,000 Nm / 4,000,000 Lb-In
- Working pressure: up to 3,000 PSI
- Low temperature to -67 F or -55 C
- Open and closed position can be adjusted ± 5 degrees
- Tandem sealing in oil cylinder for superior performance
- Set bolt to limit actuator stroke for easy adjustment
- Actuator output torque curve matching the ball valve torques with stable opening/closing cycles
- Scotch Yoke mechanism with easy online maintenance
- Symmetrical and canted yoke structure to meet the requirements of various specifications

Actuator Design



Scotch Yoke Actuator Mechanism

EH Series electro-hydraulic actuator utilizes scotch yoke mechanism to deliver versatility and reliability for pipeline valve automation

Control Features



Hydraulic Control Module

- Bubble tight control block to achieve zero gas leakage over 24-hour period in the pressure range of 70 to 2,175 psi (0.5-15 Mpa)
- Explosion-proof/low Power consumption solenoid with protection level: Ex d IIC T6/IP65

Programmable Line Break Protection (LBP)

- Electronic line break detection and protection system for real-time pipeline pressure monitoring
- Piezoelectric pressure transducer with 0.2% accuracy in measuring and detecting exceptional high/low pressures, and pressure drop rate (PDR)
- When pipeline breaks, LBP will automatically detect the pressure drops in the pipeline. When preset low pressure or PDR is reached, automatic ESD (emergency shutdown) will be triggered on the main line valves (MLV)s closest to the line-break point
- Static low power assumption of 0.18W, applicable for solar or 24VDC power
- OLED display technology supporting low temperature display as low as -40 F
- Local communication through USB/PC software; remote through 24VDC or RS485/ MODBUS-RTU protocol



Partial Stroke Test (PST)

The critical ESD valve equipped with EH actuator along with PST function, could be partially closed <30 degrees and then automatically re-opened to a fully open position, without interrupting pipeline gas flow. The PST will validate ESD integrity and functionality and prevent potential risks of ESD valve's malfunction when it is called upon to close at an emergency, improving the safety of pipelines. PST is programmable by local setup with remote feedback to the control room. PST setup tools include timer, alarm and diagnostics. Low power consumption is suitable for solar panel or 24VDC

Quality Control

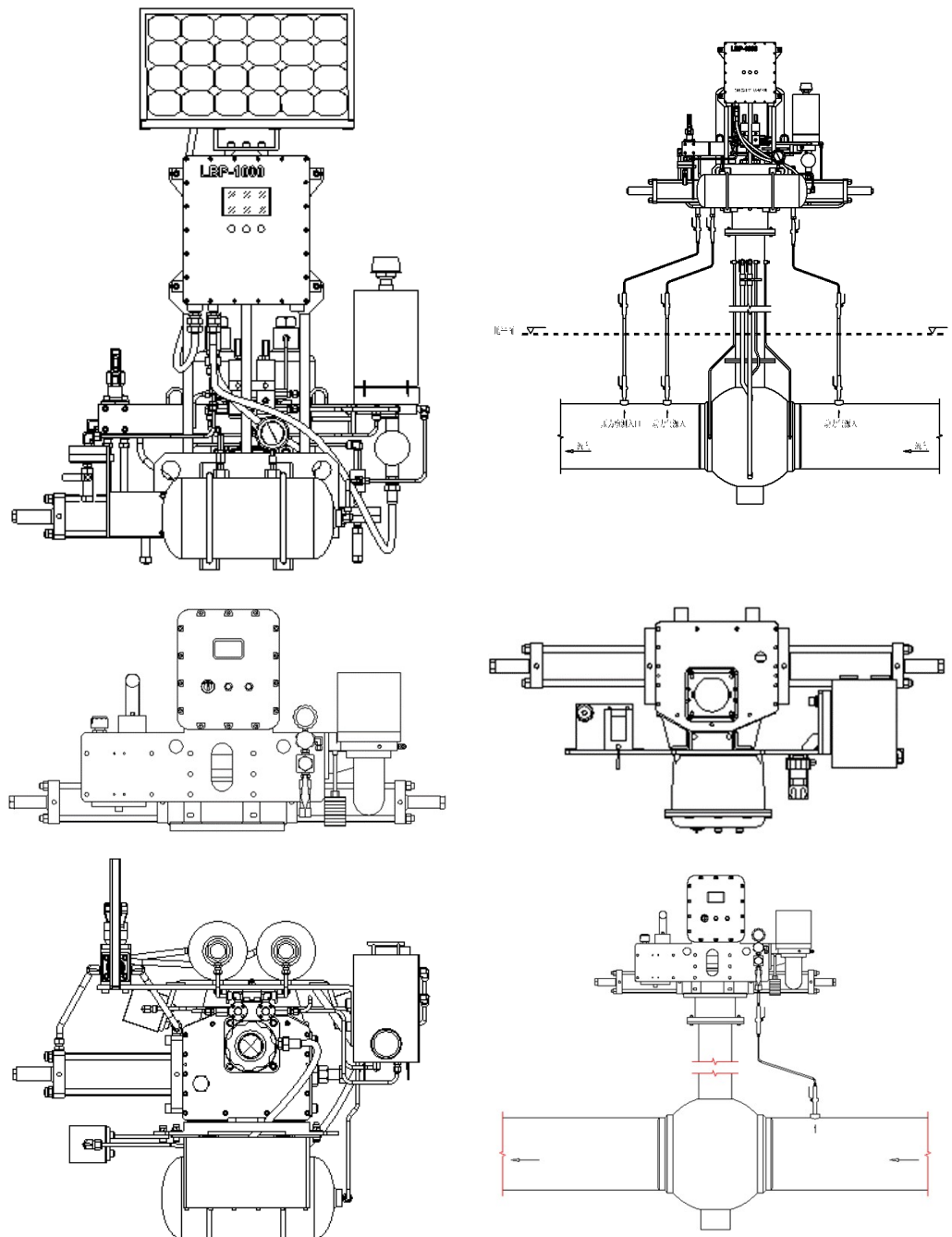
- All manufacturing is conducted under ISO 9001/API Q1 certified quality management system
- Each actuator is torque tested before shipment to validate the committed torques to cycle valves
- Products are stringently manufactured in accordance with applicable industry standards and to specific Design Specifications.
- Material Test Reports per EN 10204-1991 3.1.B & EN10204 3.1 available for each actuator
- Full delta pressure hydro test on automated valve packages could be conducted at factory upon request



Engineering & Consulting

Project Engineering Support

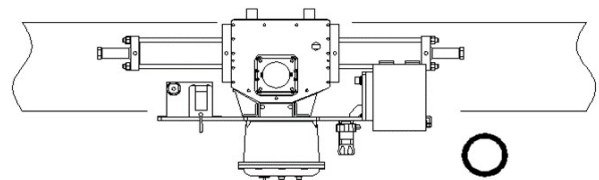
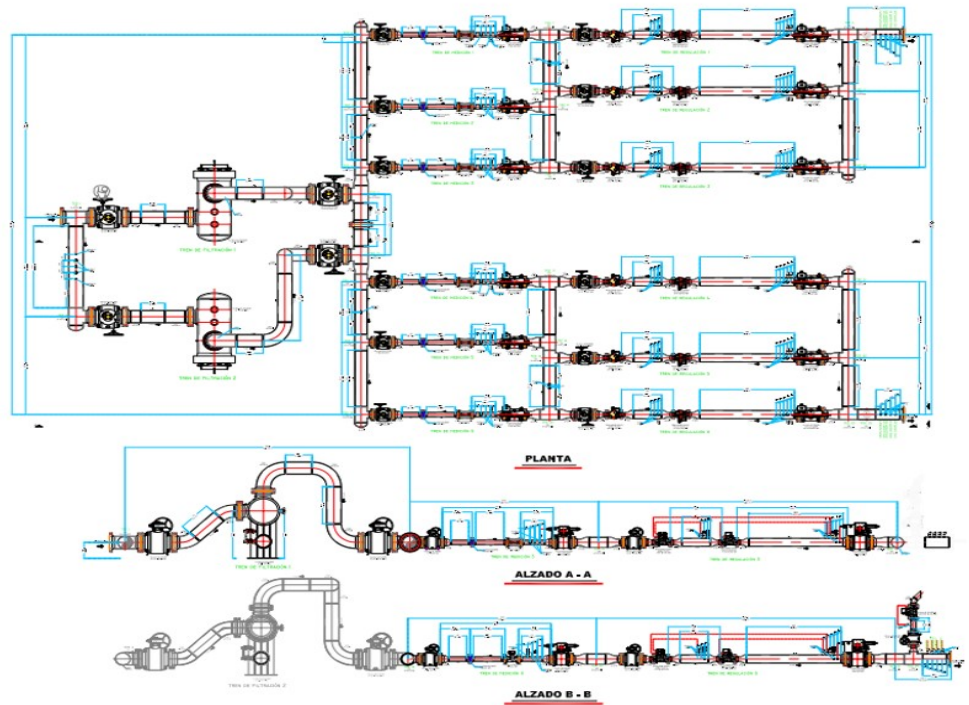
- Actuator technology selection based on pipeline pressure range for best cost and technology fit for the application
- 3D drawing and dimension data provided in FEED stage for best space utilization



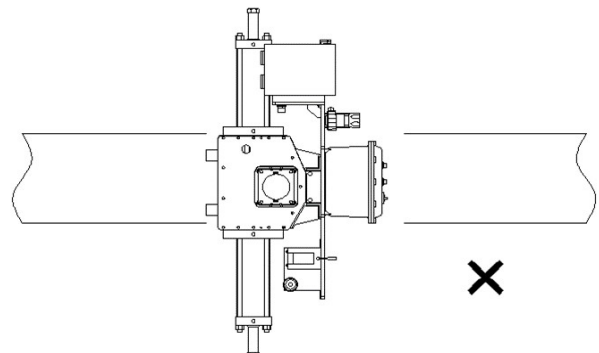
Engineering & Consulting

Project Engineering Support

- Actuator orientation to the pipeline
- Valve + actuator GA drawing
- Control selection for partial stroke test, fail safe mode, line break protection based on applications' criticality and customer budgets
- Draft actuation datasheets for engineering



Actuator Orientation



Field Installation & Commission



- On site survey before valve and actuation installation
 - On site commissioning support
 - Field installation issue diagnostics
 - Retrofit/upgrade high pressure actuator automated ESD valves
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- Service oriented support team for your projects
 - Be your project execution partner from the beginning to the end
 - One stop service for both valve, actuator and controls

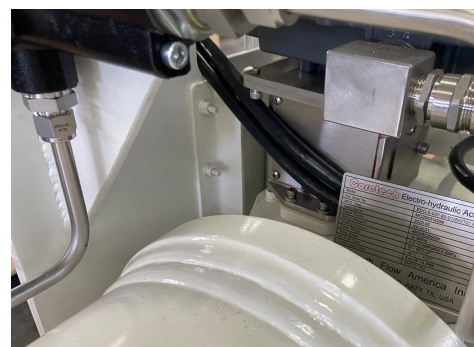


How To Order Guide

Coretech Pipeline Acuator Model Selection Rev2- 2019/12					
Example:		EH-EDO-H-S-06Y-90-S1/7721P FO			
Product Series	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">HP- High Pressure Gas</td> </tr> <tr> <td>EH- High Pressure ElectroHydraulic</td> </tr> </table>			HP- High Pressure Gas	EH- High Pressure ElectroHydraulic
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Product Line					
GDO	Gas over oil actuator				
GDO-H	Direct gas actuator				
EDO	ElectroHydraulic Actuator				
Acuator Configuration					
S	Spring return				
	Double acting				
Acuator Drive Module	03Y				
	06Y				
	09Y				
	15Y				
	30Y				
	60Y				
	100Y				
Cylinder Diameter	200Y				
	70				
	90				
	100				
	140				
	180				
	220				
240					
280					
Control Systems					
Gas over oil/ Direct gas	Gas actuator		EH Acuator		
ZH6615/6815	Local pneumatic	ZH7715	Local control		
ZH6616/6816	Line break protection	ZH7716	Line break protection		
ZH6617/6817	LBP+ remote open/close	ZH7717	LBP+ remote control		
ZH6618/6818	LBP+ESD	ZH7718	LBP+ESD		
ZH6619/6819	LBP+ remote open/close+ESD	ZH7719	LBP+ remote control+ESD		
ZH6620/6820	Remote open/close+ESD	ZH7720	Local/Remote+ESD		
ZH6621/6821	Remote open/close	ZH7721	Local/Remote		
ZH6622/6822	ESD	ZH7722	Local+ESD		
Partial Stroke Test					
P	Partial Stroke Test				
Fail Safe Configuration					
FC	Fail Close				
FO	Fail Open				
FL	Fail Last				

Spring Module
S1
S2
S3

Photo Gallery





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