

ЕНО

Технические характеристики

По вопросам продаж и поддержки обращайтесь:

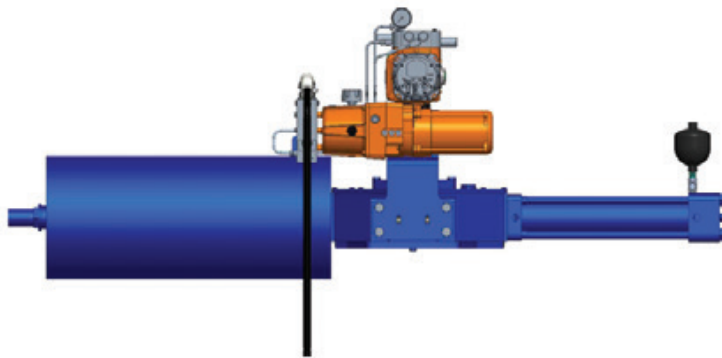
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Biffi™ Smart EHO is your reliable ESD valve actuation solution



Using time-proven, final control innovation and combining it with the best in critical shutdown and process shutdown reliability, the Biffi SMART EHO for modulating applications are an affordable and effective way to maintain and operate shutdowns in severe, inaccessible and remote locations.

Seconds matter in isolating failures that can adversely impact people, environment and communities. The EHO utilizes a quick, dependable spring-return actuator for the fail safe stroke combined with an integral hydraulic power pack and electronic control module ideal for ESD valve operation.





Emerson's Biffi EHO product line offers reliable ESD actuation solutions. Complex and hazardous applications with limited power sources in remote, unmanned areas need uncompromising reliability. The EHO operates responsibly and effectively to help preserve and protect assets, personnel and the environment.

Keep personnel safe

Designed with the mindset of mitigating system risk, personnel injuries, and reducing negative environmental impacts, the Smart EHO's spring design, status alarms and various safety features ensure problems are detected and reported well in advance of them becoming an issue.

Prevent costly damage

Reliable ESD solutions prevent bigger problems from developing into reputation damaging, expensive, emergency clean-up efforts. Reliable ESD solutions also help in reducing the interruption of production. The Smart EHO utilizes the Biffi OLGAS-H series hydraulic actuator for a quick, dependable spring-return actuator for the fail-safe stroke.

Low power usage

Remote and offshore ESD systems are typically designed for low power sourcing requiring maximum uptime. The EHO is built for low power design requirements, spring fail safe, low power motors, and optimally designed electronic circuitry.

Modulation designed for efficiency

Modulation capability is key to keeping a system running at peak capacity. In large systems, even small adjustments to a valve's position can help maximize efficiency and reduce costs, which can lead to an increase in profitability. The Smart EHO is designed for your valve modulation needs requiring less than 1% accuracy.



Avoid reduced downtime and revenue with reliable ESD safety you can trust

Reliability is paramount to Emerson's emergency shutdown solutions. The Smart EHO is designed to protect people, equipment, and the environment. It stops process flow as soon as a command signal is received or on loss of power. With over fifteen built-in alerts and alarms, the EHO continually monitors any abnormalities in your system and will alert you if one arises. It's all about minimizing downtime and preventing loss of assets and revenue.

As part of Emerson's commitment to safety, the Biffi EHO product line should be an integral part to your system's safety initiatives.

The Biffi Electro-Hydraulic Operator is available in Smart version.

- **Safety:** Certifications to worldwide hazardous zone safety standards
- **Ease of Use:** Field-proven hydraulic hand pump local control and display panel with clear indication of valve position
- **Easy Installation:** Self-contained and designed for compactness and is readily adaptable to new or existing valves
- **Convenience:** Fewer worries in hazardous environments, versatility regarding power options, and reliability directed for hostile environments with strict ESD requirements

What's your challenge?



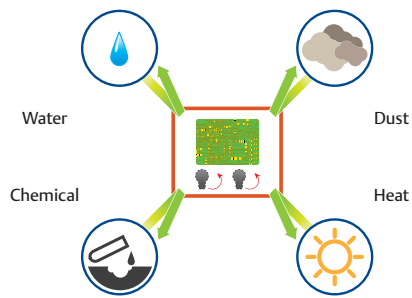
"Safety and environmental issues impact how we do business. We must follow strict federal and state regulations so we need to custom fit our ESD solutions."



What's your opportunity?

"Emerson's Biffi EHO™ is designed to protect people, assets, and the environment by stopping the process flow as soon as it detects dangerous conditions. It's preventative."

Operate efficiently while protecting employees and the environment



Non-intrusive design allows device configuration to be modified without exposing the electronics to the adverse elements and conditions.



No internal or external hydraulic leakage ensures the valve is held in its seated position without drifting.

Optimize space



Compact hydraulic power unit (HPU); integrated into the actuator eliminating the need for a remotely located hydraulic power source.

25% Smaller



Built for limited space applications with a 25% smaller envelope compared to most competitive offerings.

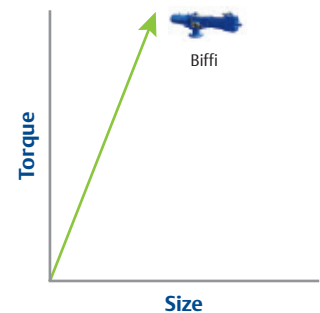
Energy source flexibility



Self-contained operating power supply; allows for installation in remote locations where no external pneumatic or hydraulic power sources are available. Solar panels are available for areas without electrical power.

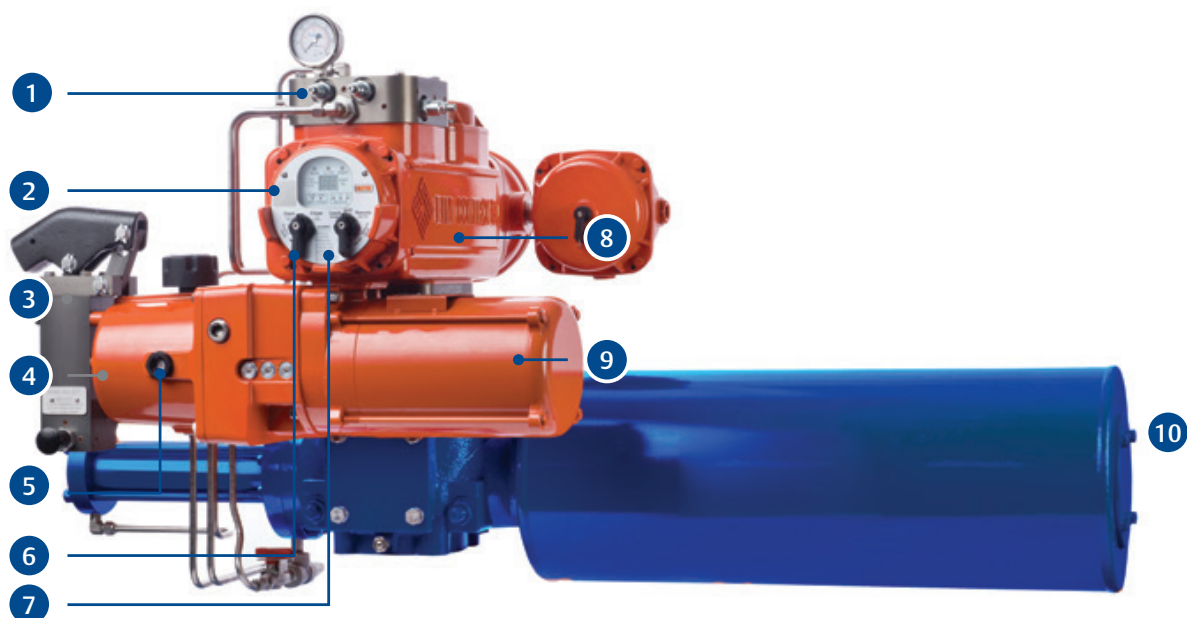


Low power motors; specifically designed for remote and power scarce environments.



High torque efficiency hydraulic actuators; based on proven technology of the Biffi Olgas hydraulic actuators, the Biffi EHO provides full direct power to the valve stem.

Biffi™ Smart EHO



No.	Description
1	Hydraulic Manifold
2	Open/Close Selector Switch
3	Hand Pump
4	Reservoir
5	Sight Level Gauge

No.	Description
6	Local/Off/Remote Selector Switch
7	Digital Display and LED Alarm Indicators
8	Control Enclosure
9	Electric Motor
10	OLGAS-H Hydraulic Spring Return Actuator

Product Specifications:

Quarter Turn Torque Output:

Spring Return:

- approx 8,000 to 700,000 lbf-in (approx 900 Nm to 80,000 Nm)

Operation Temperature:

- -20°F to +140°F (-29°C to +60°C)
- -40°F to +140°F (-40°C to +60°C) (optional)

Input Power:

- Multiple AC available

Remote Operation:

Input:

- Discreet: open, close, stop, PST, and ESD
- Analog: 4-20mA positioning (1% accuracy)

Output:

- Discreet: 4 configurable, 1 ESD monitor
- Analog: 4-20mA hydraulic pressure feedback and position feedback

Communication Protocols:

- ModBus, HART™ and FOUNDATION™ Fieldbus
- DCMLink configuration and monitoring software compatibility

Certifications:

- CSA - Class I, Division I, Groups B (optional), C, and D
- FM - Class I, Division I, Groups B (optional), C, and D
- ATEX - EExd IIB T4
- IECEx - Ex d IIB T4
- IEC 61508-1÷7:2010) - Suitable for use in SIL3 application

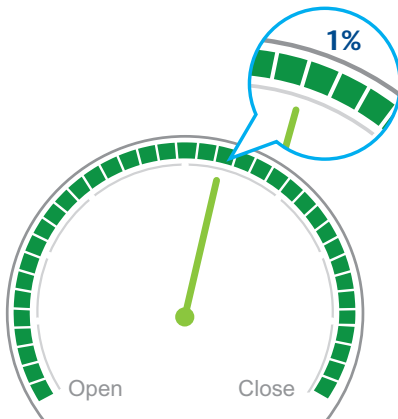
Limit Switches:

- 2 SPDT - 4A @ 120VAC, 3A @ 24VDC
- 4 SPDT - 4A @ 120VAC, 3A @ 24VDC (optional)

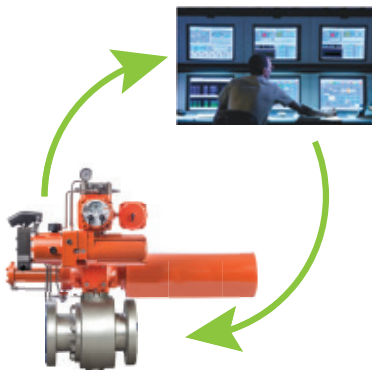
Designed for demanding modulation requirements and remote locations



Solenoids, speed controls, pressure transducers and pressure switches are integrated in a compact manifold block eliminating external tubing and connections.



≤1% guaranteed accuracy when the valve needs to be precisely positioned. 4-20mA analog input and output to provide both precise control and instantaneous feedback. Precise Hall-Effect position encoder; provides consistent and accurate position feedback with no loss of calibration during power failures.



Configurable to integrate into your existing communication system. Partial stroke ensures rarely operated ESD valves function properly during an emergency situation.

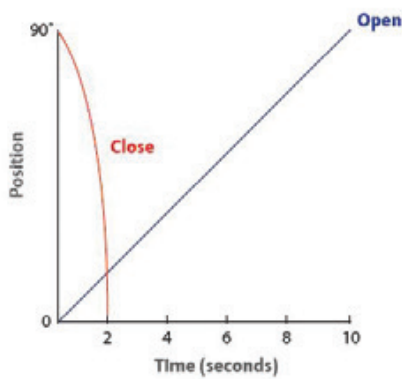


Optimize reliability, energy efficiency, lower operational cost and safety

The Biffi™ EHO Electro-Hydraulic Operator is designed for the toughest environments and critical emergency shutdown applications. With the EHO, you have a field-proven ESD system with one single source of accountability.



Provides intelligent ESD system data



Fast-closing or precise speed control is obtained through field-adjustable flow control valves to meet application requirements.



With the dual-sealed Separate Terminal Chamber (STC), installation wiring can be terminated and fuses can be replaced without exposing the internal control components to hostile environmental conditions.



Over fifteen alerts and alarms to keep you informed on failures and abnormal conditions.

Environmental Protection:

- Control enclosure: IP68
- Hydraulic actuator: (IEC 60529) - IP66, IP66M, IP67M and NEMA 4, 4x, 6
- Motor: IP68
- Reservoir: IP54(IP66 optional)

Local Operation:

- Open/Close selector switch
- Lockable Remote/Off/Local selector switch
- Hydraulic hand pump manual override
- Manual emergency fail-safe switch

Diagnostics/Safety

- 15+ different alarms and alerts
- Self-calibration
- Pressure versus position profiling
- Partial stroke test
- Log jam
- Integral overpressure protection

Local Display

- 2 digit LED display
- LED alarm and alerts display
- Mechanical dial position indicator
- Sight level gauge
- Hydraulic pressure gauge

Optional Features

- Accumulators
- Remote Display Module (RDM)
- Circuit breakers (close-coupled or remote mounted)
- Solar panels
- 4-20mA pressure transmitter
- Auxiliary internal pressure switches
- Low power solenoids
- Redundant emergency shutdown

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