

# E<sup>2</sup>H90 SERIES

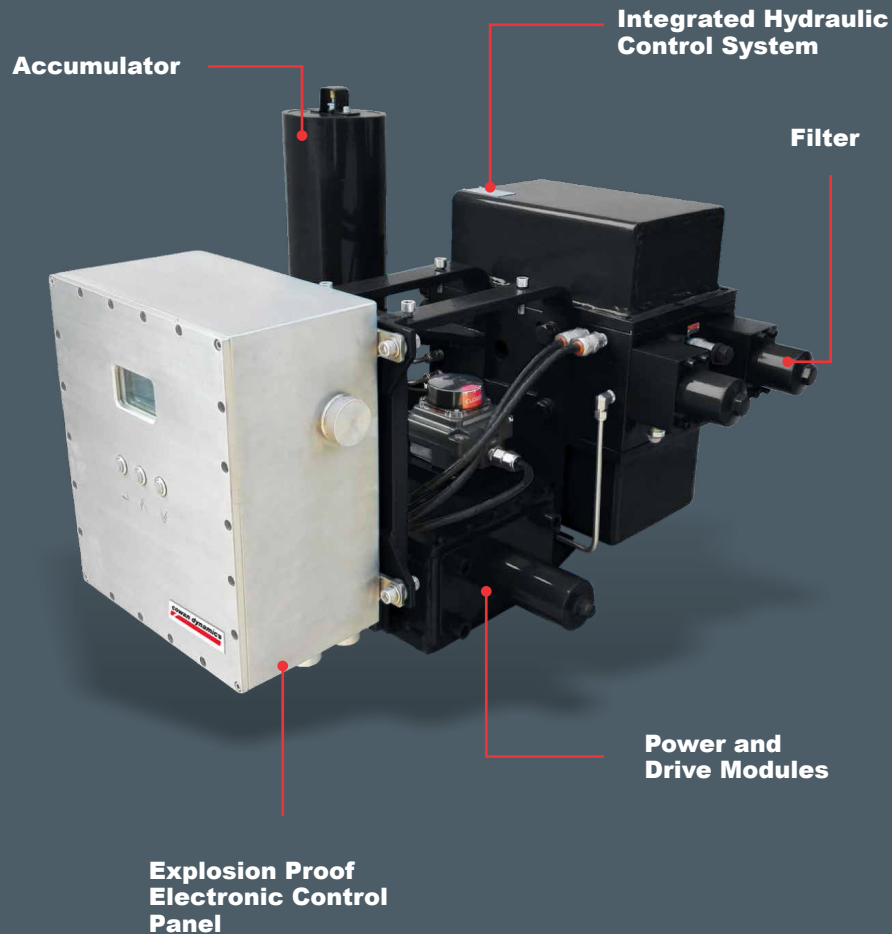
## Self-Contained Electro-Hydraulic Rotary Actuator

Designed & engineered for severe-service applications

- Torques up to 4,000,000 in-lbs
- On/Off Service
- Fail Last, Fail Close or Fail Open



## Design & Materials

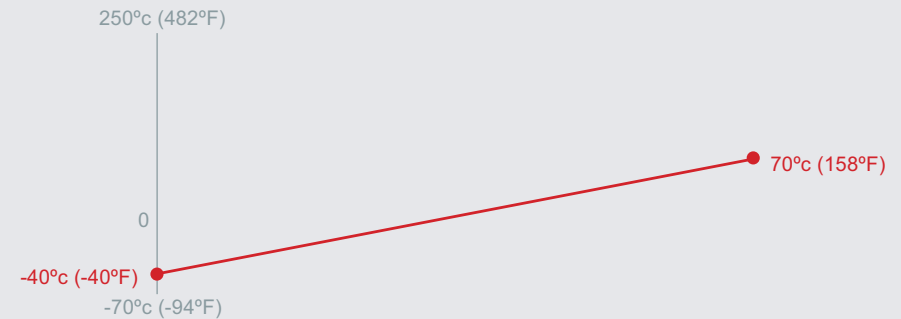


### Power and Drive Module

- Quarter turn stroke: -5° to 95° adjustable
- The cylinder features dual seals to guarantee zero leakage
- Symmetric and canted yokes are available to satisfy various valve torque profiles

## Specifications

Cowan E<sup>2</sup>H90 Series Self-Contained Electro-Hydraulic Rotary Actuators are used for industrial fields where highly reliable controlled valves are required. They are used to drive angular-stroke valves, linear-stroke valves, and lifting-lever-type ball valves.



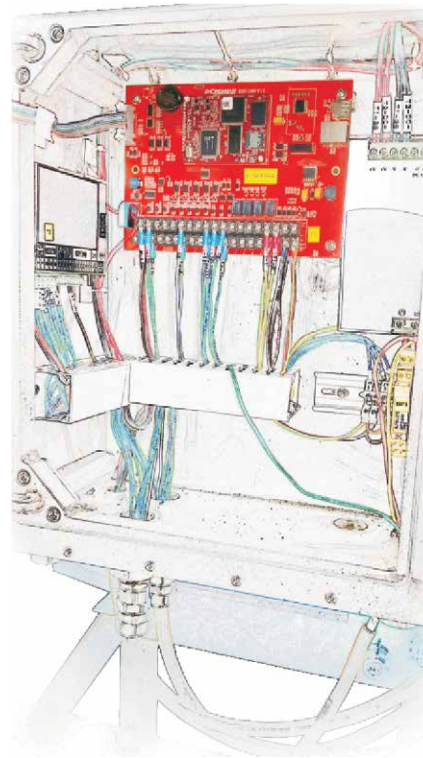
- **Operating Pressure: 3000 psi**
- **Operating Voltage: 220 VAC, and any global 3-Phase voltage ratings (Solar Power optional)**
- **Rated Power Consumption: *Static: 5W Pump Motor Start: 240 W, 160 W***
- **Explosion Proof Level: Ex d IIB T4**
- **Ingress Protection Level: IP65**
- **S5 Category duty cycle motor (15-minute duty)**
- **ESD, LBP, PST functions available**
- **Manual override is standard**
- **Dual Hydraulic Filtering System: allows ease of maintenance**

## Electronic Control System

The electronic control system of the electro-hydraulic actuator monitors the hydraulic pressure of the system in real time and automatically controls the starting and stopping of the pump.

### Advantages

- All-weather OLED display screen, operates at temperatures below -40°C
- Ten-channel surge prevention and isolation design for increased stability and safety
- Partial stroke testing (PST) function
- Remote control RS485 valve or remote D0 directive
- Optional line break protection (LBP) function available
- PID automatic control of electric motor rotation speed and pressure contributing to stability of the system's operation
- System self-diagnosis and alarm: smart management technology
- EXCEL file directly generated after alarm, and data recorded to a U disc for easy management
- Precision calibration of pressure signals by curve-fitting with a control precision degree of up to 0.3%



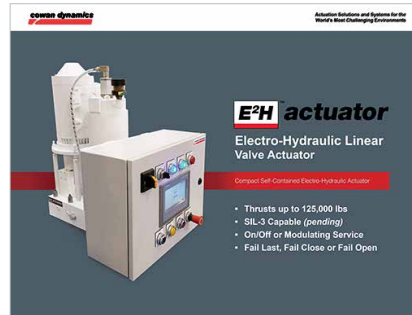
## Independent and Adjustable Open/Close Time

The system flow rate is designed to be 20L/min. For example, the measured ESD time of a size 09 electro-hydraulic actuator is less than three seconds. By independently setting an open/close adjustment valve in the hydraulic control system, the time to operate the valve can be strictly controlled. For example it can close or open the valve in a natural gas pipeline quickly (less than 10s) to block it, or slowly close (more than 120s) the valve to avoid the water hammer effect in a production oil pipeline.

TORQUE OUTPUT								
Actuator Model	03	06	09	15	30	60	100	200
Maximum Output Torque (in-lb)	39,828	79,657	119,485	199,142	398,284	796,567	1,327,612	2,655,224

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