cowan dynamics

Actuation Solutions and Systems for the
World's Most Challenging Environments

CGO SERIES

Gas/Oil Rotary Actuator

Designed & engineered for severe-service applications

- Electronic Line Break Protection
- Torques up to 4,000,000 in-lb
- SIL 2 Capable

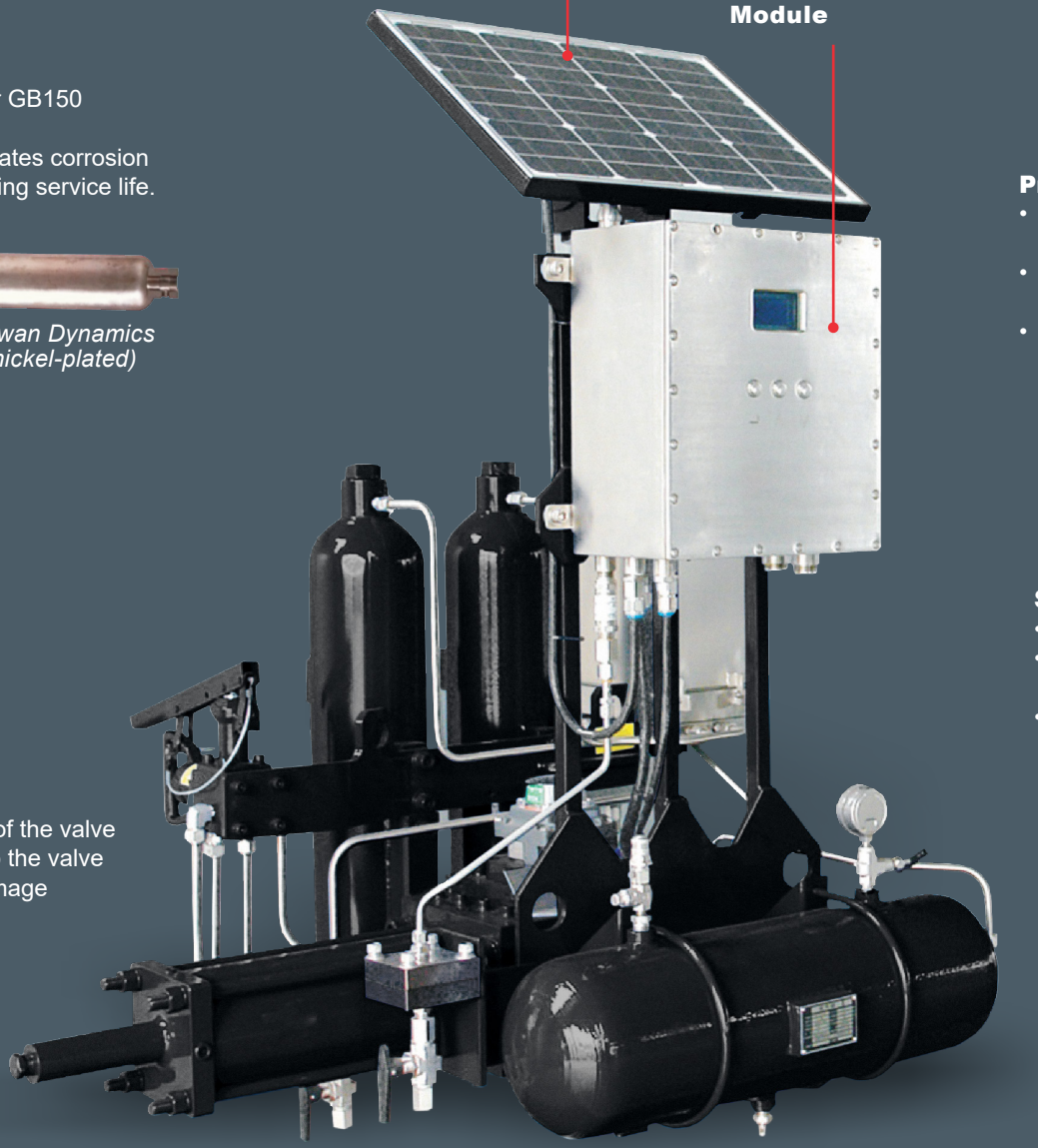
Design & Materials

Pressure Vessels
- Complies with ASME VIII or GB150
- Heat shrink technology
- Nickel plated inside - eliminates corrosion and contamination, prolonging service life.

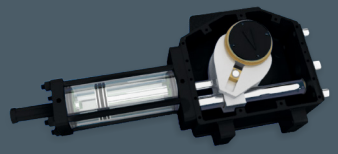
Other Manufacturers

Cowan Dynamics (nickel-plated)

Torque Limiter
- Ensures reliable operating of the valve while preventing damage to the valve stem and actuator from damage



Pneumatic Control Manifold
- Zero leakage within 5 to 150 Bar, especially suitable for nitrogen gas application.
- The specifically designed muffler is used for venting noise reduction.
- Solenoid valves are SIL 3 capable



Scotch-Yoke Mechanism
- 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

Hydraulic Hand Pump
- Integrated with a four-position directional control valve for open, closed, automatic and bypassed operation shifting.
- Hydraulic outlet is consistent for every stroke operation.

Line Break Protection

The CGO Series is an electronic line break detection and protection system for real time monitoring of pipeline pressure, pressure drop rate, etc..

Low Power Consumption

- Power requirement of 0.8W

Intelligent

- Records high-pressure, low-pressure and pressure drop rate extremes
- Analyses line pressure recorded data to improve pipeline pressure fluctuation predictions at the CGO location

OLED

- Supports a low temperature display down to -40°C

Communication

- Local communication: USB, with PC software
- Remote communication: RS485, with standard MODBUS-RTU protocol.

FOUNDATION · PROFIBUS · WiFi · HART COMMUNICATION PROTOCOL · PROFINET

Trending and Monitoring to precision down to 1%

Specifications

Cowan CGO Series Gas-Over-Oil Actuators uses natural gas or nitrogen gas as the motive power and hydraulic oil as the driving medium to actuate the pipeline valve to a fully open or fully closed position.

- **Explosion-Proof Level: Ex d IIB T4 (Ex d IIC T6 available)**
- **Ingress Protection Level: IP 65 (IP 68 available)**
- **Safety Integrity Level: SIL 2**
- **Air Supply Pressure: 5 – 150 Bar**
- **Suitable for Rotary (Quarter-Turn) valves. Linear design also available.**
- **Nitrogen Gas Application: High-sulfur natural gas and oil pipelines can use nitrogen gas as a power supply. With the bubble tight pneumatic control manifold, the nitrogen bottles only need to be replaced once or twice a year.**

PERFORMANCE									
Actuator Model	**03**	**06**	**09**	**15**	**30**	**60**	**100**	**200**	**300**
Maximum Output Torque (in-lb)	39,828	79,657	119,485	199,142	398,284	796,567	1,327,612	2,655,224	3,982,836

Standard Configuration

Gas/Oil tanks, Scotch-yoke actuator, Manual override, Control Manifold, Gas Storage Tank, Shuttle Valve, filter, muffler, etc.

Electronic LBP vs Mechanical LBP

Item	Electronic LBP	Mechanical LBP
Components	Controller, transmitter, solenoid valve	Rate tank, time delay valves, differential pilot
Precision	High, 0.1%	Low, less than 0.1%
Setting & Testing	Easy and measurable	Very difficult and unmeasurable, special tools required
Even Record	Yes, query-able and traceable	No, not query-able and untraceable
Power Supply	Direct 24VDC, Solar + battery (optional) Internal battery (optional)	N/A

Related materials

Visit our website to download or request a printed catalogue.

Solutions Include:

Valve Actuators

Fail-Safe Systems

Digital Process Control Panels

Pneumatic Process Control Panels

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