

Actuator Experts

Engineering Precision For Global Flow Control

Discover GREATORK



Intelligent Control. Precise Every Degree



Pipeline Gas In. Hydraulic Force Out



Hydraulic Power. Electric Precision



COMPLETELY REPLACEMENTABLE

- Non-Intrusive Setting
- Protection & Safety
- Communication & Control
- Pipeline control
- Emergency Shutdown (ESD)





Discover GREATORK 

ABOUT US

Tefulong Group Co., Ltd

Tefulong Group Co., Ltd. is a leading intelligent electric valve actuator manufacturer in China with the brand name of Greatork.

Tefulong Group Co., Ltd., established in 1987, covers an area of 40,000 square meters, and owns modern management style, first-class factory and advanced production equipments. With more than 300 employees, Tefulong produces about 50,000 pcs of electric actuators per year. At present, actuators have been supplied GREATORK into more than 20 countries. The intelligent electric actuators are our key products and widely applied in oil & gas, petrochemical, refinery, power plant, water process, wastewater treatment, pulp & paper, and other major industries. THE WORLD LEADER IN ACTUATION SOLUTION

Tefulong has obtained many certificates for international market, such as **CE, ATEX, IP68, GOST, ISO14001, ISO9001, GB/T 28001**, Profibus communication certificate and so on.

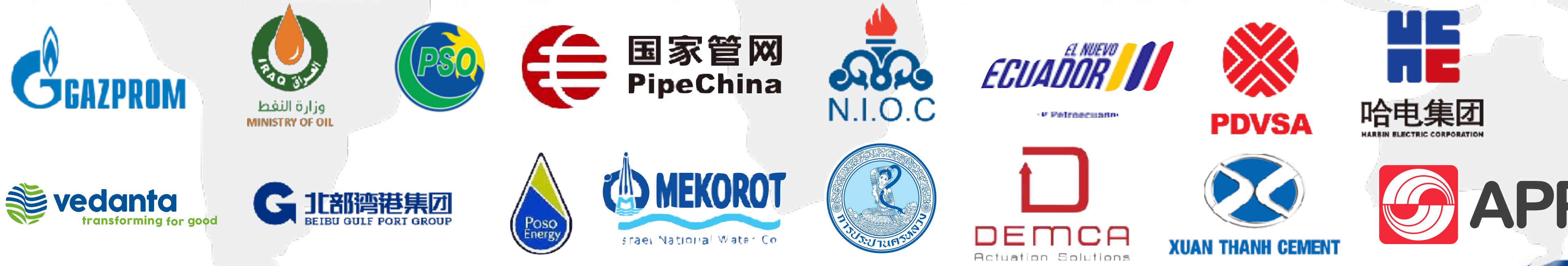
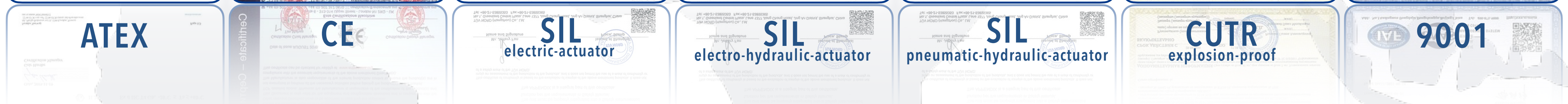
Meanwhile, Greatork has unique Industrial Design Patent which is recognized and protected around the world. We have a team of qualified, experienced and talented researchers & engineers with wide variety of backgrounds in R&D centre. We are committed to keeping efforts to ensure that our actuators are the simplest to operate and the highest reliable to work with.

Our mission is to provide the industry with high-quality and cost-effective electric actuators and maximize customer's value. We persist on continuous improvement and product innovation to keep our competitiveness.



Quality First, Users First

GREATORKPARTNERS



At present, products have been supplied into more than **80** countries



GREATORK TECHNOLOGY

INNOVATION IN AUTOMATION

Start Exploring [➤](#)

30+

Engineers
Full Lifecycle
Technical Support

300+

Professional Employees
Efficient Production
& Close Collaboration

50000+

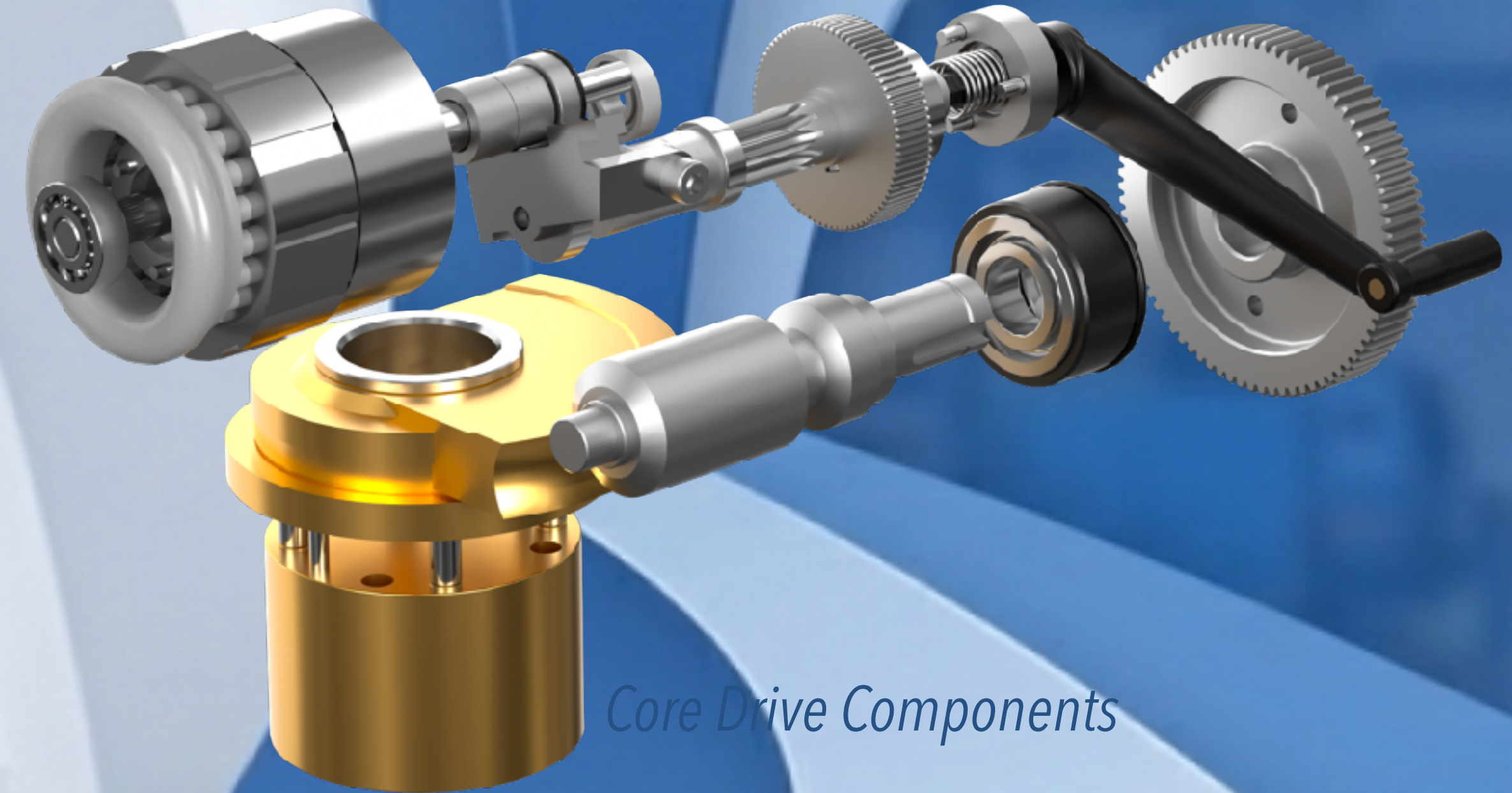
Annual Production Capacity
Strict Quality Control System

80+

Global Market
Coverage in 80+ Countries

GREATORK Electric Actuator Product Family

Intelligent Control Precise Every Degree



Core Drive Components

AVAMD Linear



AVA Multi-turn



AVAT Quarter-turn



AVAR Smart Quarter-turn



GREATORK Electro-Hydraulic Actuator

Hydraulic Power Electric Precision



GREATORK® Partner



GREATORK Electro-Hydraulic Actuator Product Overview

The intelligent electro-hydraulic actuator is an integrated smart device combining a hydraulic source and control components. With a compact structure and small size, no need of external hydraulic station. This series of products offers two action modes: on-off type and modulating type, suitable for various control valves, including those with linear and quarter-turn actuation requirements. It is widely applied to multiple control valves such as ball valves and butterfly valves.



Equipped with a large-screen OLED display, the actuator intuitively shows valve opening, operating status, and fault alarm information in real time, facilitating monitoring and operation. In case of power failure, it supports effective control of valve opening through a manual pump or accumulator, ensuring continuous and stable operation of the system.

Intelligent electro-hydraulic actuators have been widely used in fields such as power plants, metallurgy, coking, petrochemicals, pipeline transportation, mining, and environmental protection industries, providing high-quality actuation and control solutions for various automation systems.

Electro-Hydraulic Actuator features:

Torque Range: **150Nm - 450000Nm, (3kN - 700kN).**

Speed Range: **0.5s - 240s.**

Control Signals: **On-off control, 4-20mA analog, bus.**

Control Precision: < 0.5%

Repeatability: **0.5%**

Power: **500W(24V)/1kW(220V)/2kW(380V)**

Temperature Range: **-50 °C ~ 70°C.**

Protection Grade: **IP66/IP68**, the highest grade for waterproof and dustproof performance.

Explosion-proof classification: **ExdIIBT4 Gb / ExdIICT4 Gb.**

Key Features

Fault Safety: Open, close or hold position.

SIL2 Safety Integrity Level Certification.

Anti-pipeline Electric Leakage Performance: For applications of valves in pipelines with cathodic protection, all internal electrical component wirings and grounding wires are insulated from the outer shell. Two grounding terminals are provided on the wiring terminals, and a dedicated grounding cable entry is set in the terminal compartment box.



GREATORK Electro-Hydraulic Actuator Product Applications



▷ Finished Oil Pipeline

Valve actuation for finished oil pipelines

▷ Long Distance Pipeline

Long-distance pipelines, valve chambers, and station control

▷ Sea Port Oil Storage

Terminal and tank farm storage/transfer applications

▷ Petrochemical

Valve automation for petrochemical units and hazardous services

▷ Terminal Oil Tank

Tank terminal loading/unloading and isolation valve control

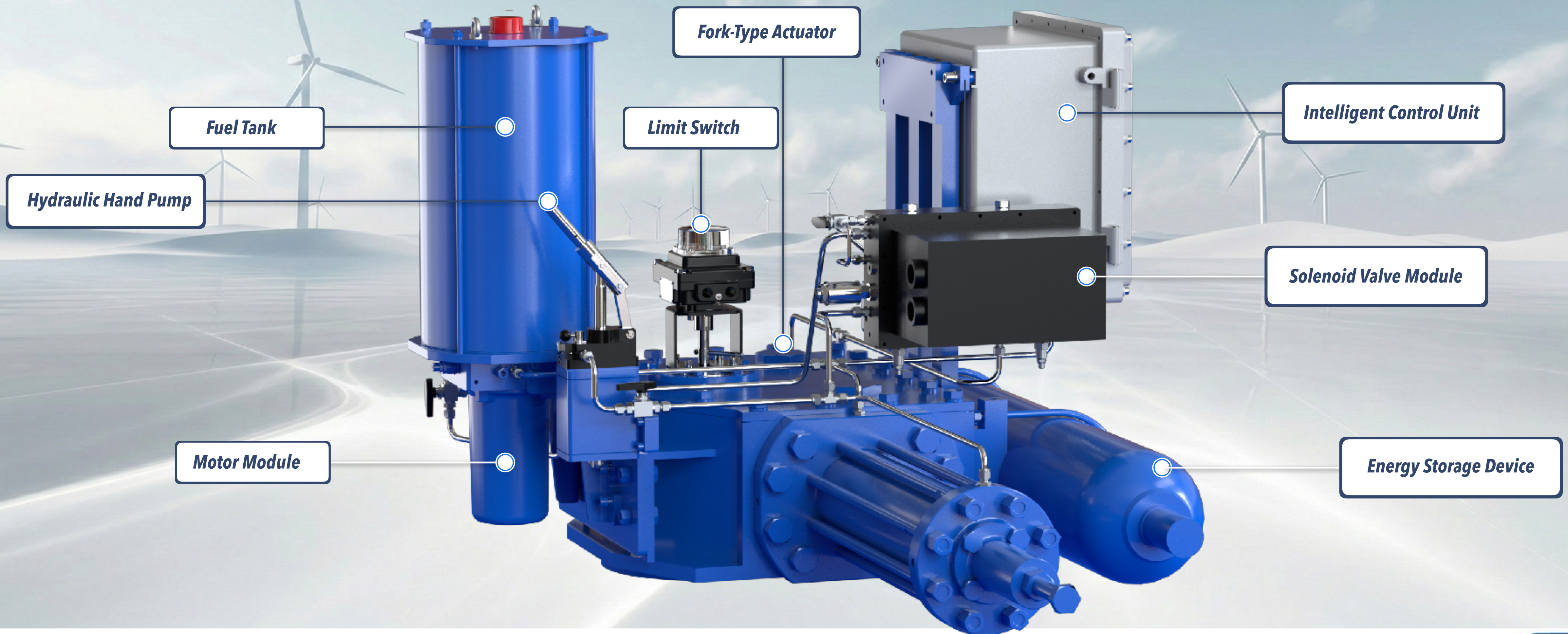
▷ Oil Storage and Transportation

On-off and emergency action requirements in oil storage and transportation systems

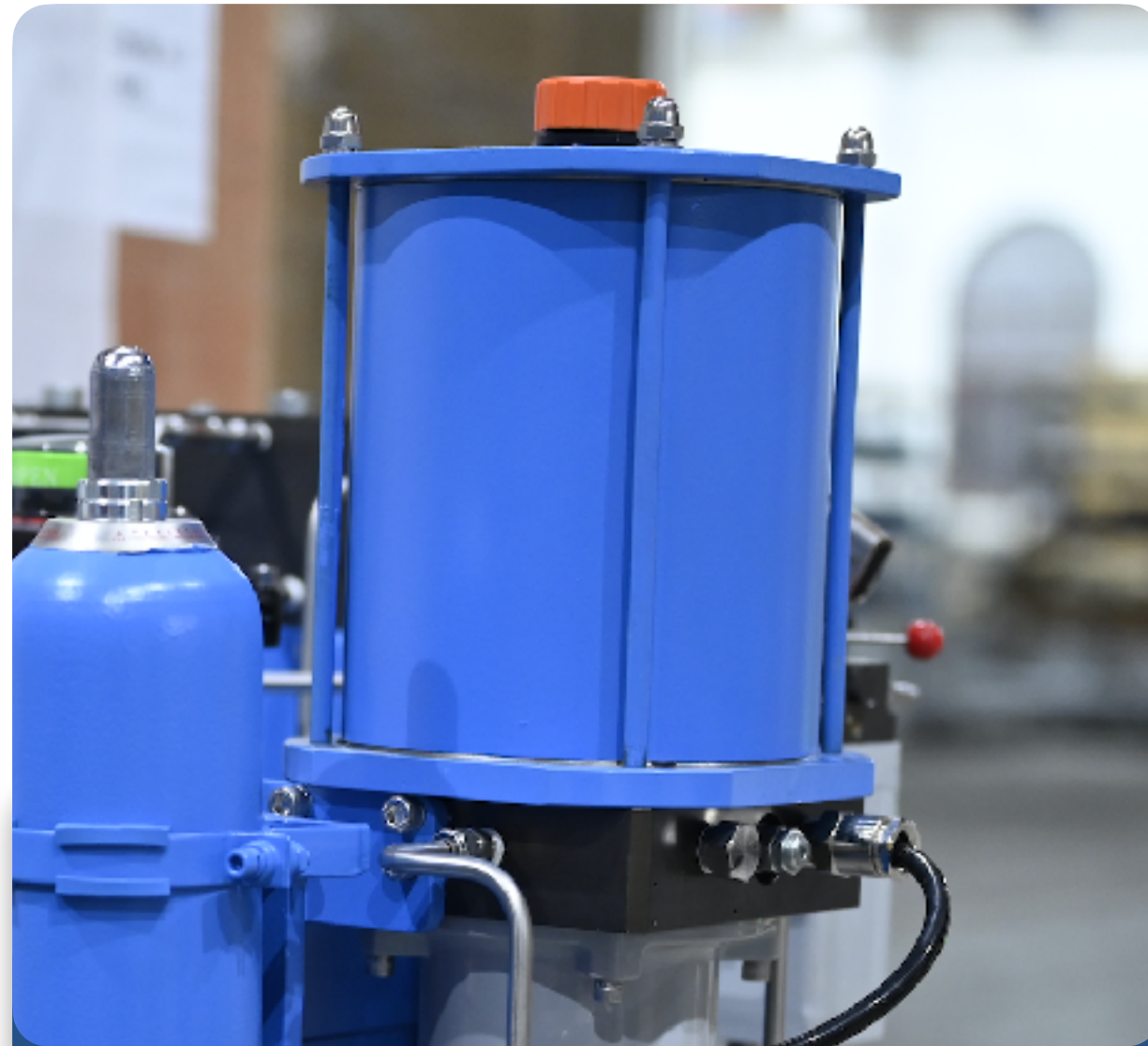


GREATORK Electro-Hydraulic Actuator Product Series

Main Functions



GREATORK Electro-Hydraulic Actuator Product Structure



Fuel Tank



Stores Hydraulic Oil With the Hydraulic Unit Immersed Inside; the Oil and Air Are Separated by a Piston To Reduce Oxidation and Acidification and Extend Service Life.



Fork-Type Actuator



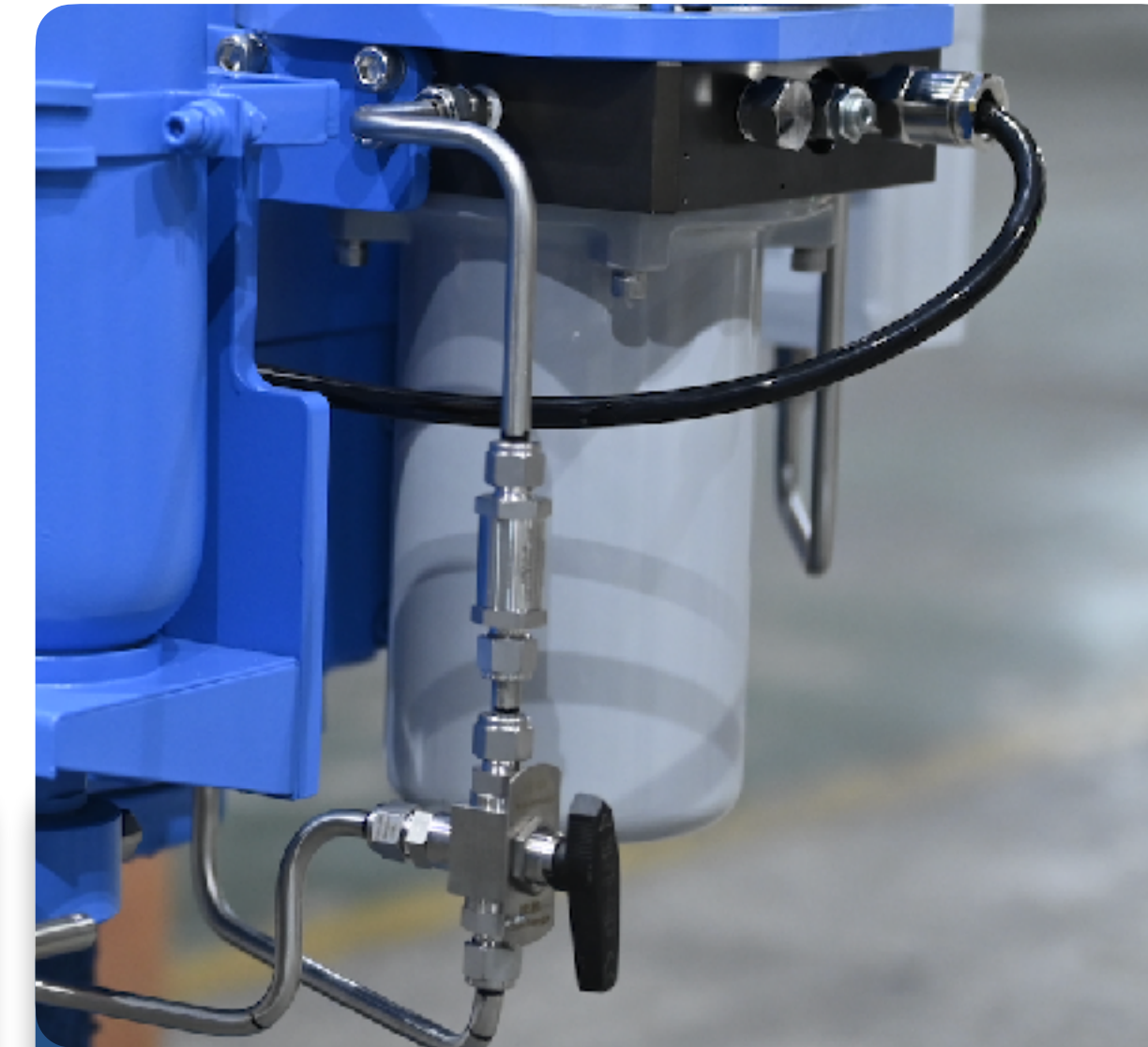
Scotch Yoke Mechanism: Converts the Linear Thrust of the Hydraulic Cylinder Into Rotary Torque on the Valve Stem for Quarter-Turn Valve Operation.



Hydraulic Hand Pump



Integrates the Directional Valve and Hand Pump, Allowing Manual Valve Operation During Power Loss or Emergency Conditions.

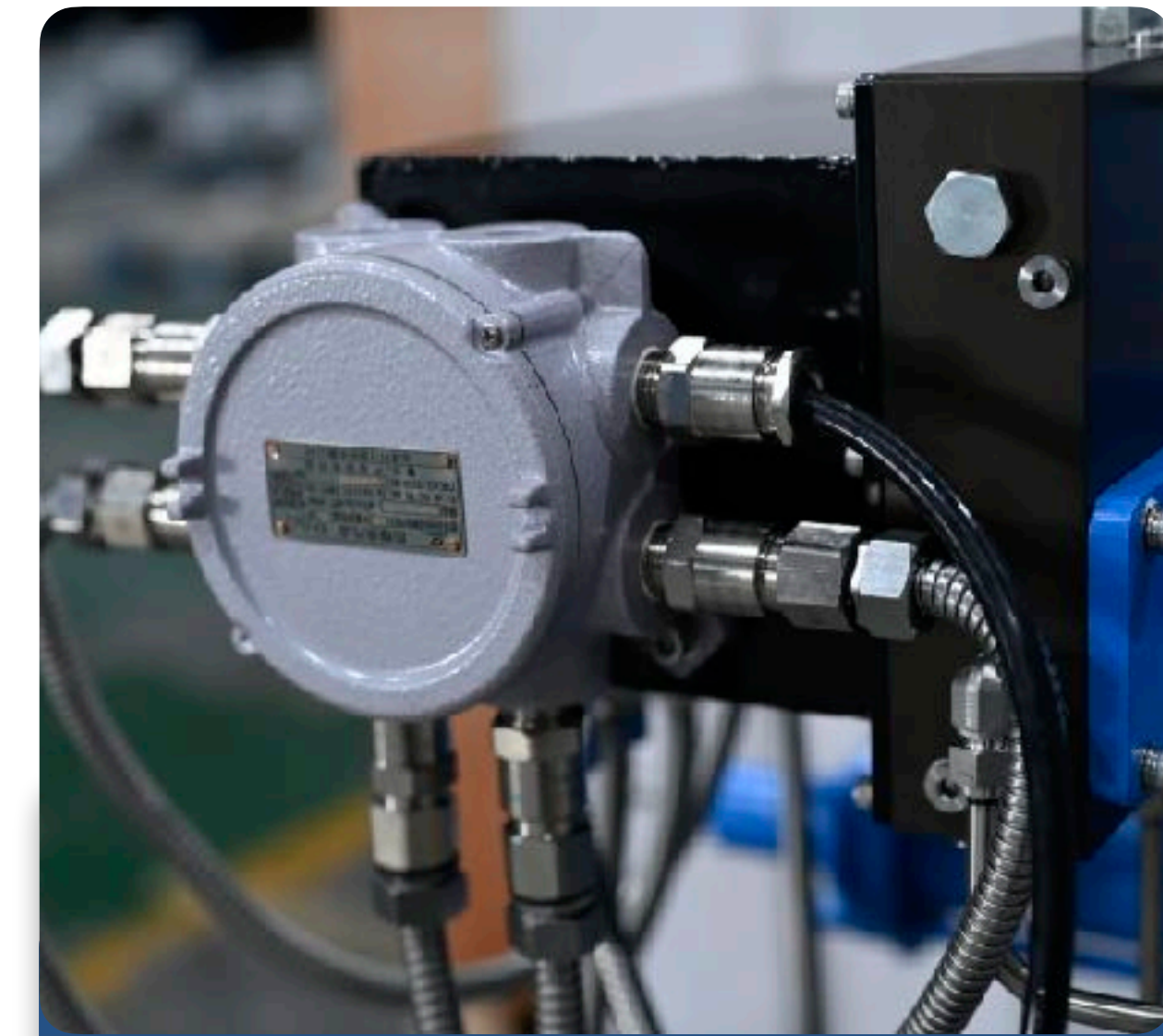


Motor Module



On-Off Units Use AC Asynchronous Motors; Modulating Units Use a Servo Control System Including a Servo Controller and Servo Motor.

GREATORK Electro-Hydraulic Actuator Product Structure



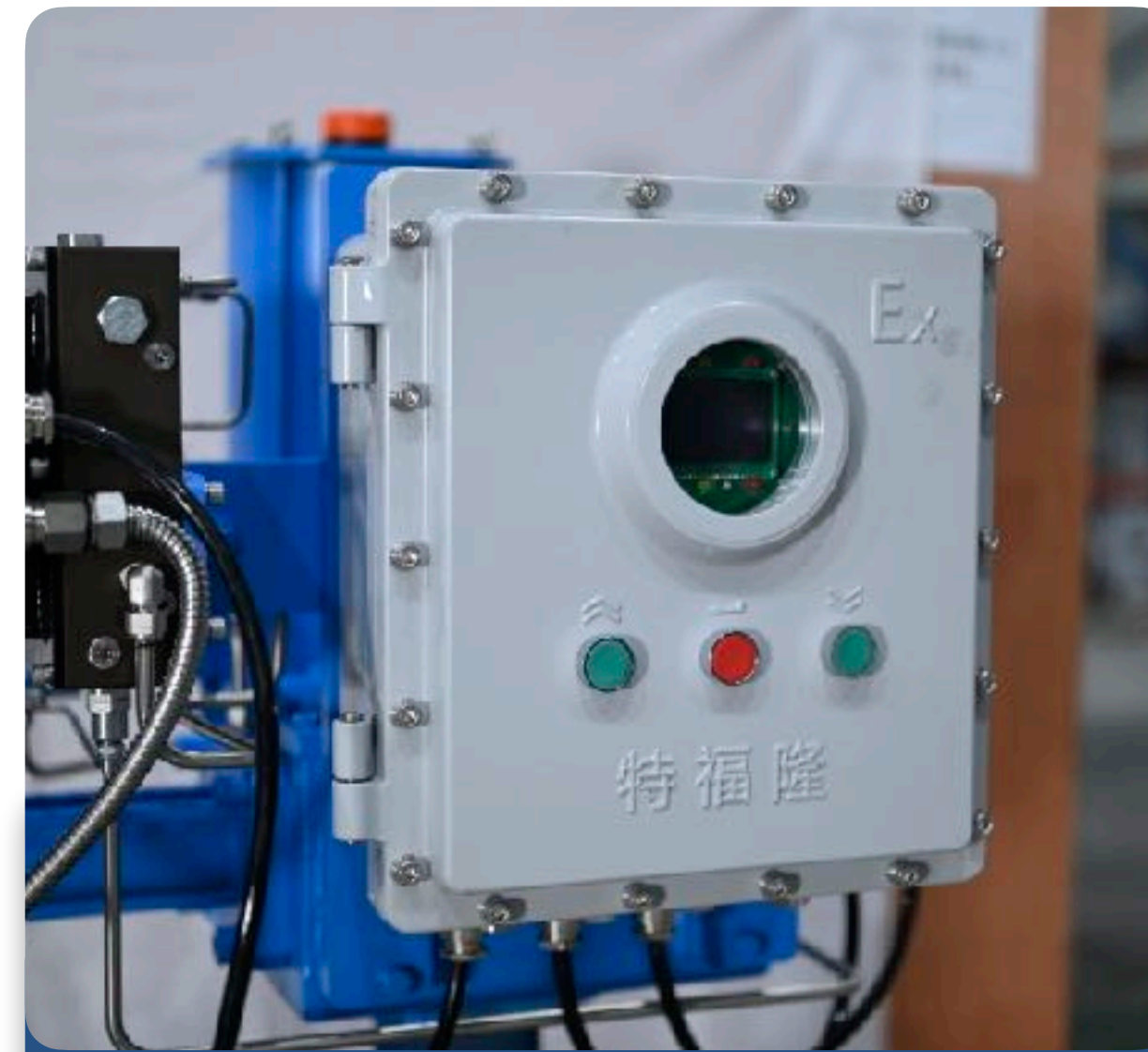
Solenoid Valve Module

Integrates Industrial-Grade Zero-Leakage Solenoid Valves; Open/Close Valves Are Non-Energized Type, While the ESD Solenoid Is Energized Type; Working Voltage Is 20.4-28.8 VDC.



Energy Storage Device

Nitrogen-Charged Accumulator Used To Drive the Valve to a Required Position During Emergencies or Provide Supplementary Power; Capacity Supports Two Full Strokes of the Valve (One Open and One Close).



Intelligent Control Unit

Uses a 32-Bit Embedded ARM Controller To Control Motor Direction and Speed, Enabling Valve Open/Close, Energy Storage, and Speed Regulation With High-Precision Position Output.

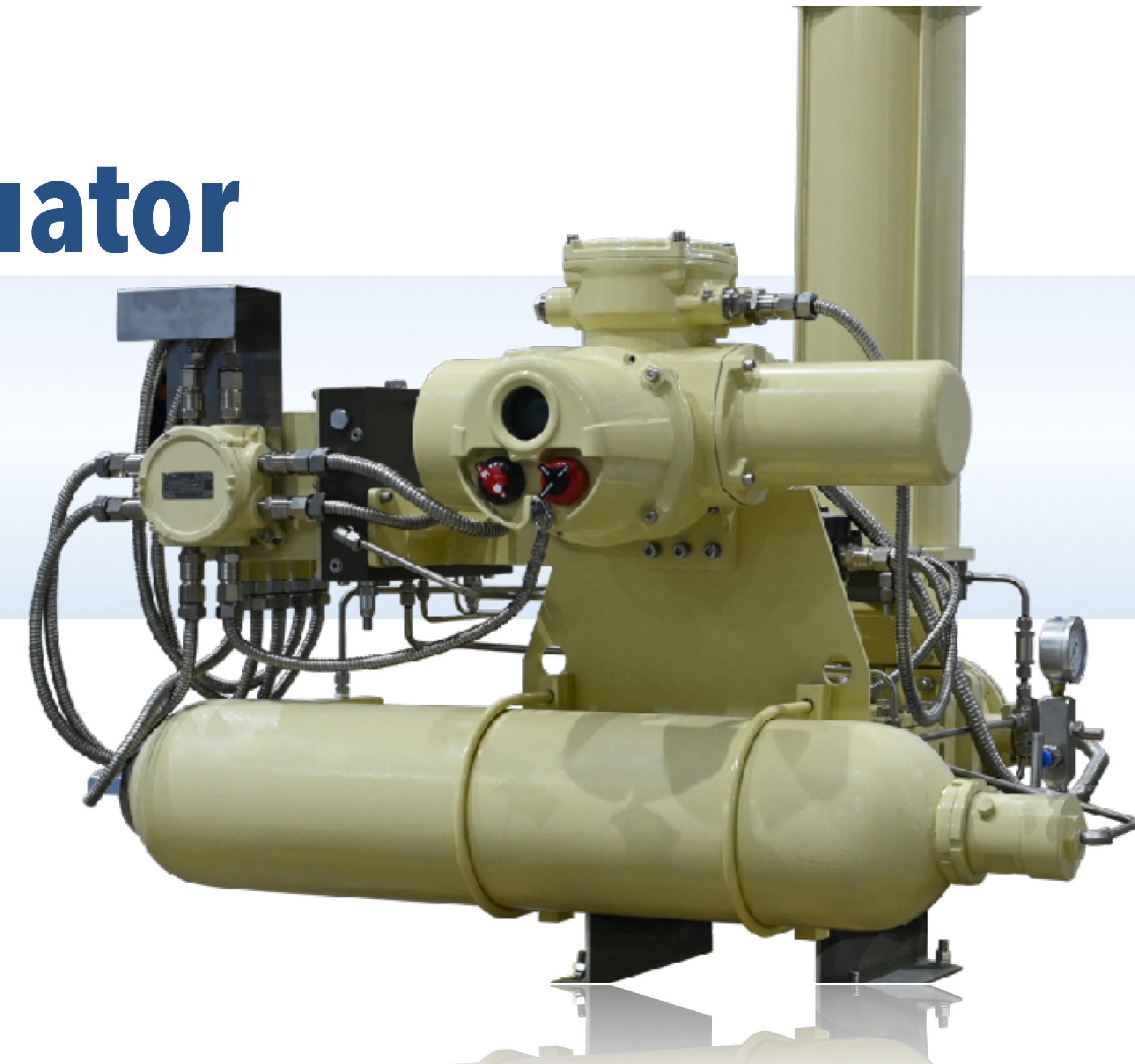


Limit Switch

Quarter-Turn Units Use OPEN/CLOSE Indication at the Top; Linear Units Use High-Precision Linear Displacement Sensors. Rotary Units Use a 12-Bit Absolute Encoder as Standard, With Optional 24-Bit Photoelectric Absolute Encoder.



Electro-Hydraulic Actuator Technical Support



GREATORK Electro-Hydraulic Actuator Technical Features

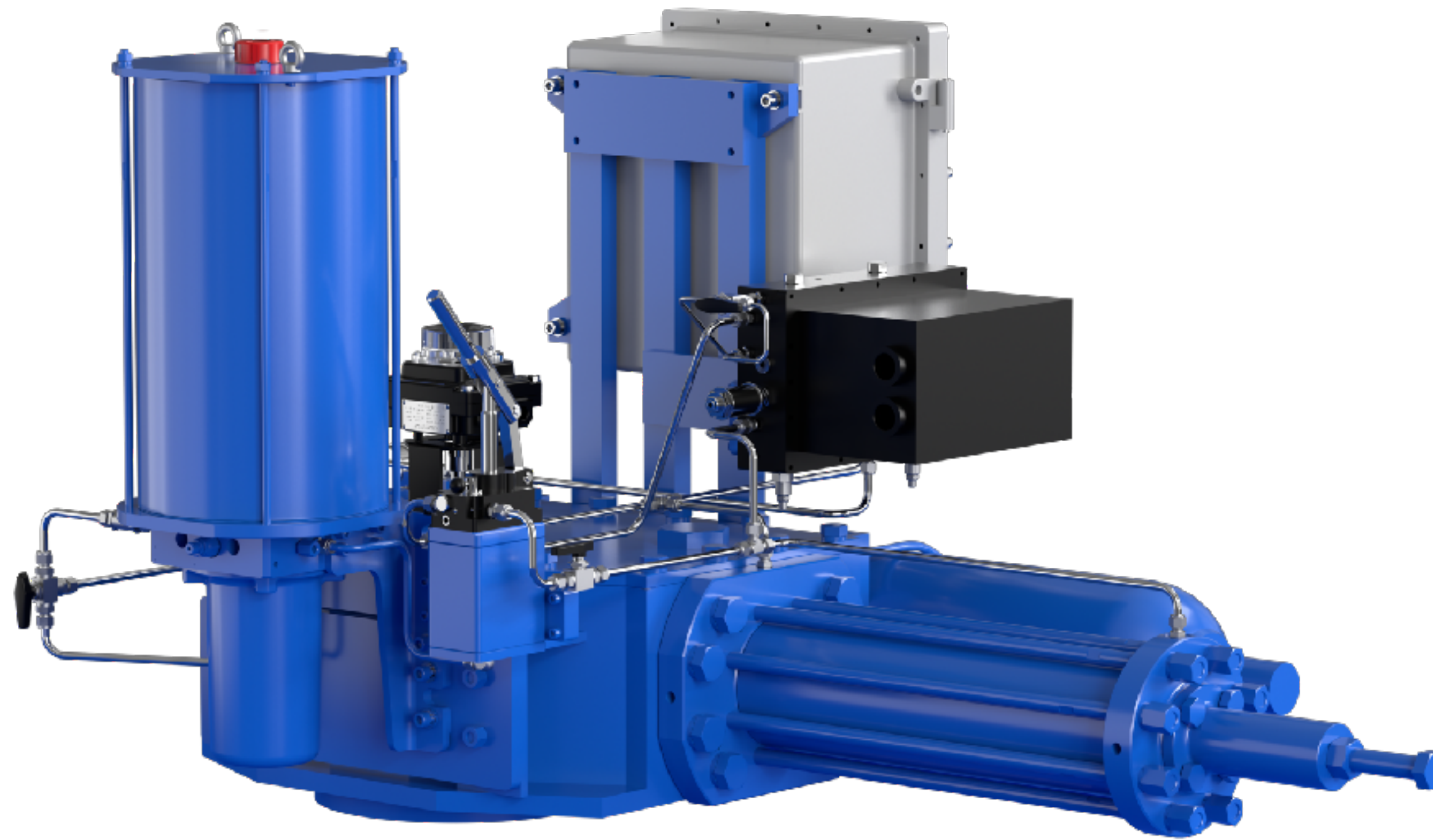
1) Fully Integrated Structure: Electrical Control Box, Hydraulic Controls, Manual Mechanism, Oil Source, and Hydraulic Cylinder Drive Are Integrated Into One Package, Reducing Footprint and Failure Points.

2) Human-Machine Interface: High-Brightness Dot-Matrix OLED Display With Chinese/English Menus for Intuitive Parameter Setting and Fault Assistance.

3) Infrared Setting Technology: Torque, Limits, Control, and Display Functions Can Be Configured Without Opening the Enclosure, Making Operation Easier Even in Hazardous Areas.

4) Self-Contained Closed Oil Source: no External Hydraulic Power Pack or Piping Required; the Gear Pump Is Immersed in the Oil Tank, Avoiding Contamination Associated With Open-Loop Systems.

5) 30-Day Pressure Retention: Industrial-Grade Zero-Leakage Solenoid Valves and Check Valves Allow the Accumulator To Retain Pressure for Over 30 Days Without Recharge While Maintaining One-Open/One-Close Redundancy.



6) Independently Adjustable Opening/Closing Time: Opening and Closing Times Are Adjusted Separately Through Speed-Regulating Valves on the Solenoid Module.

7) Stroke Adjustment and Limit Function: Quarter-Turn Angle Can Be Adjusted From 80° To 100°; Linear-Stroke Units Can Be Adjusted Within ± 5 Mm and Use High-Precision Sensors for Upper/Lower Limit Setting.

8) Critical ESD Solenoid Valves Can Be Supplied With SIL2 Functional Safety Certification.

9) Self-Diagnostic Partial Stroke Test: Local or Remote Partial Movement Testing From 1% to 50% of Travel, With Automatic Return to the Original Position.

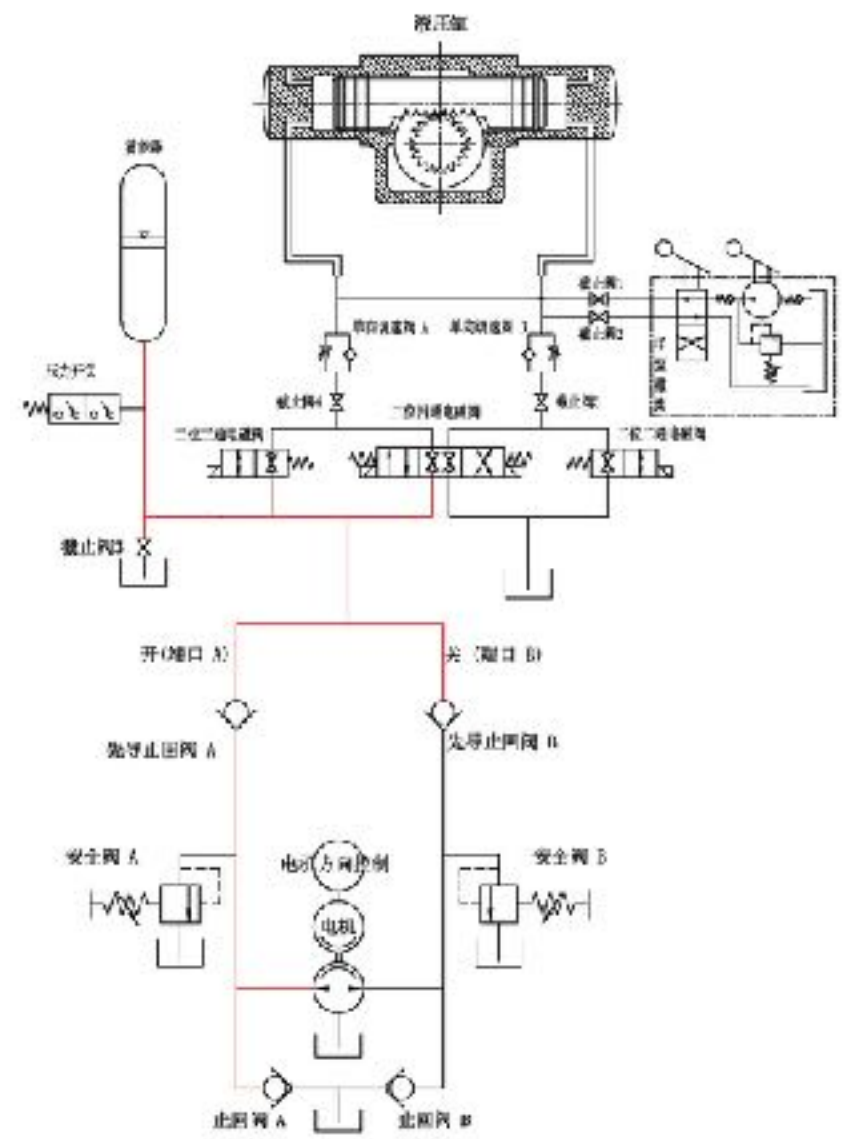
10) Cathodic-Protection Current Isolation: the Control Box, Motor, Junction Box, Position Switch, and Solenoid Mounting Sections Are Designed With Insulation Measures.

GREATORK Electro-Hydraulic Actuator Technical Specifications Comparison

Item	Quarter-turn	Linear-stroke
Output Torque / Thrust	30 Nm ~ 450 kNm (Other versions show 100 Nm ~ 80 kNm range examples)	3 kN ~ 700 kN (Other pages in the sample show 6 kN ~ 800 kN range examples)
Power	220VAC / 380VAC / 440VAC, 50/60Hz; Modulating type available in 24VDC 500W configuration	220VAC / 380VAC / 440VAC, 50/60Hz
Temperature	-20°C ~ +70°C, Optional low temp -40°C / -45°C	-20°C ~ +70°C, Optional low temp -40°C
Display	OLED	OLED
Feedback	12-bit absolute encoder, Optional 24-bit optical absolute encoder	Absolute encoder / Linear displacement sensor
Accuracy	< 0.1% of full stroke (Modulating type)	< 0.1% of full stroke (Modulating type)
Noise	< 75 dB(A) (A-weighted)	< 75 dB(A)
Control	On-off / Modulating	On-off / Modulating
Structure	Integral structure (Split mounting optional)	Integral structure (Split mounting optional)
Fieldbus	Profibus-DPV0, DPV1, Modbus, FF optional	Profibus-DPV0, DPV1, Modbus, FF optional
IP Rating	IP65	IP65
Explosion Proof	ExdIIBT4 Gb	ExdIIBT4 Gb
Functional Safety	SIL2 (Critical ESD circuit)	SIL2 (Critical ESD circuit)
Life	1 million full strokes (Visible on sample page)	Unified value not provided in the analyzed text

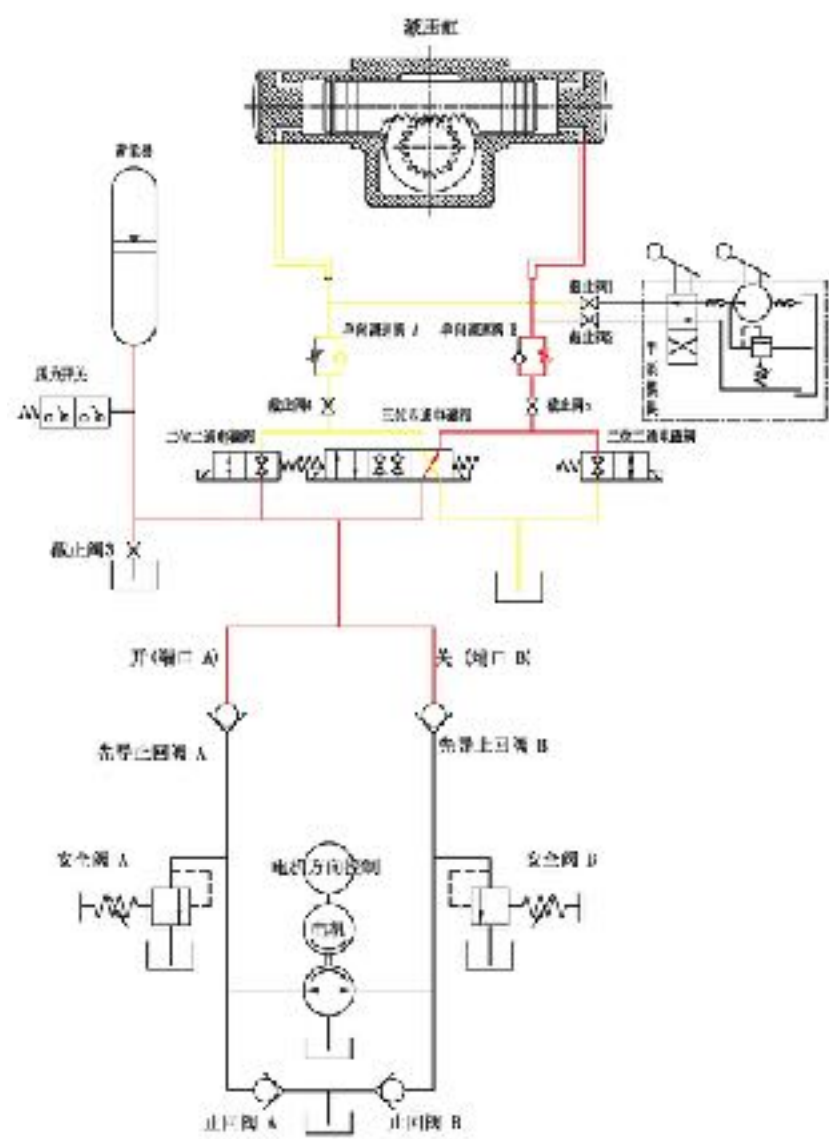
Note: There are display differences in parameter ranges across different sample versions. This framework consolidates data using the "Coverable Range + Currently Displayed Parameters" method. Please re-verify against the final series model list when re-producing the formal sample.

GREATORK Electro-Hydraulic Actuator Hydraulic Principle



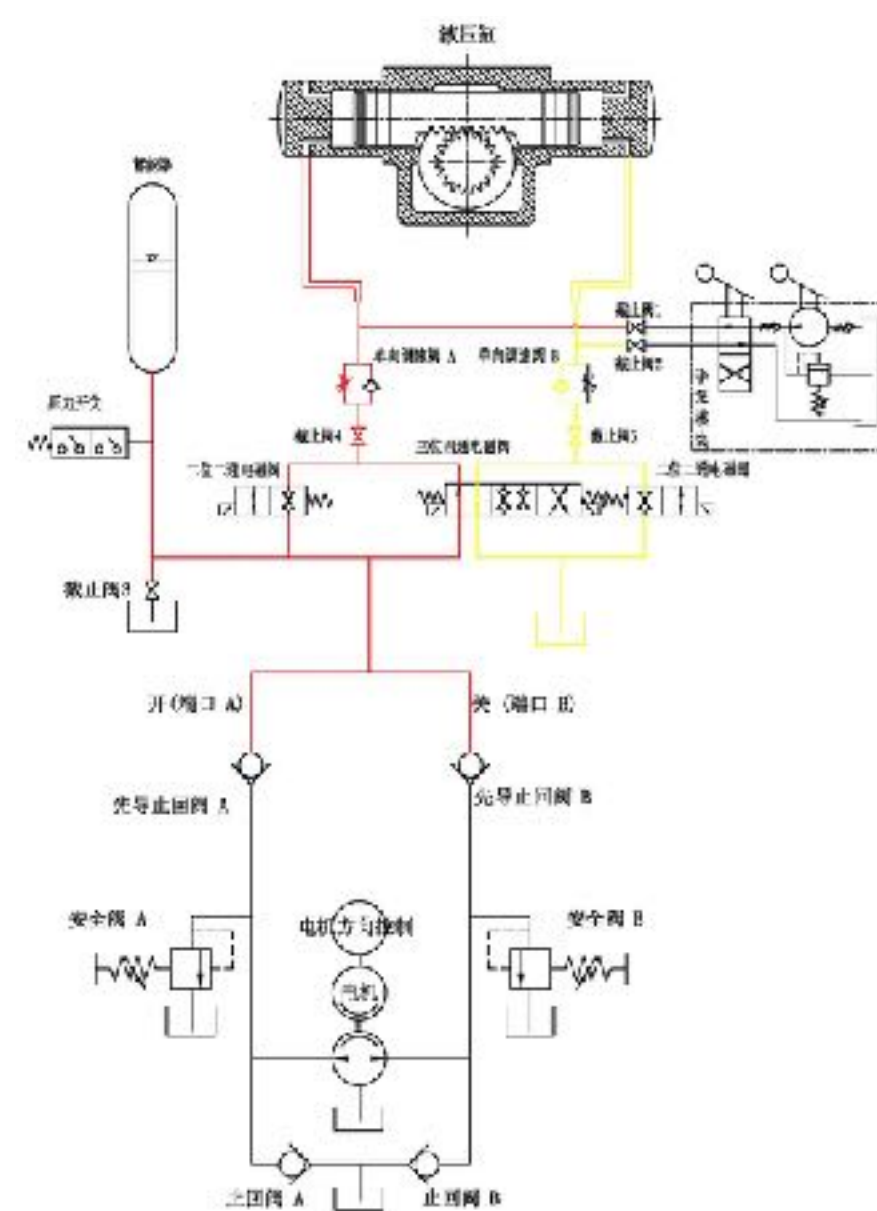
Accumulator charging

when accumulator pressure falls below the pressure switch setpoint, the motor receives a controller command to drive the gear pump; high-pressure hydraulic oil is delivered into the accumulator, and the pump stops once the upper setpoint is reached.



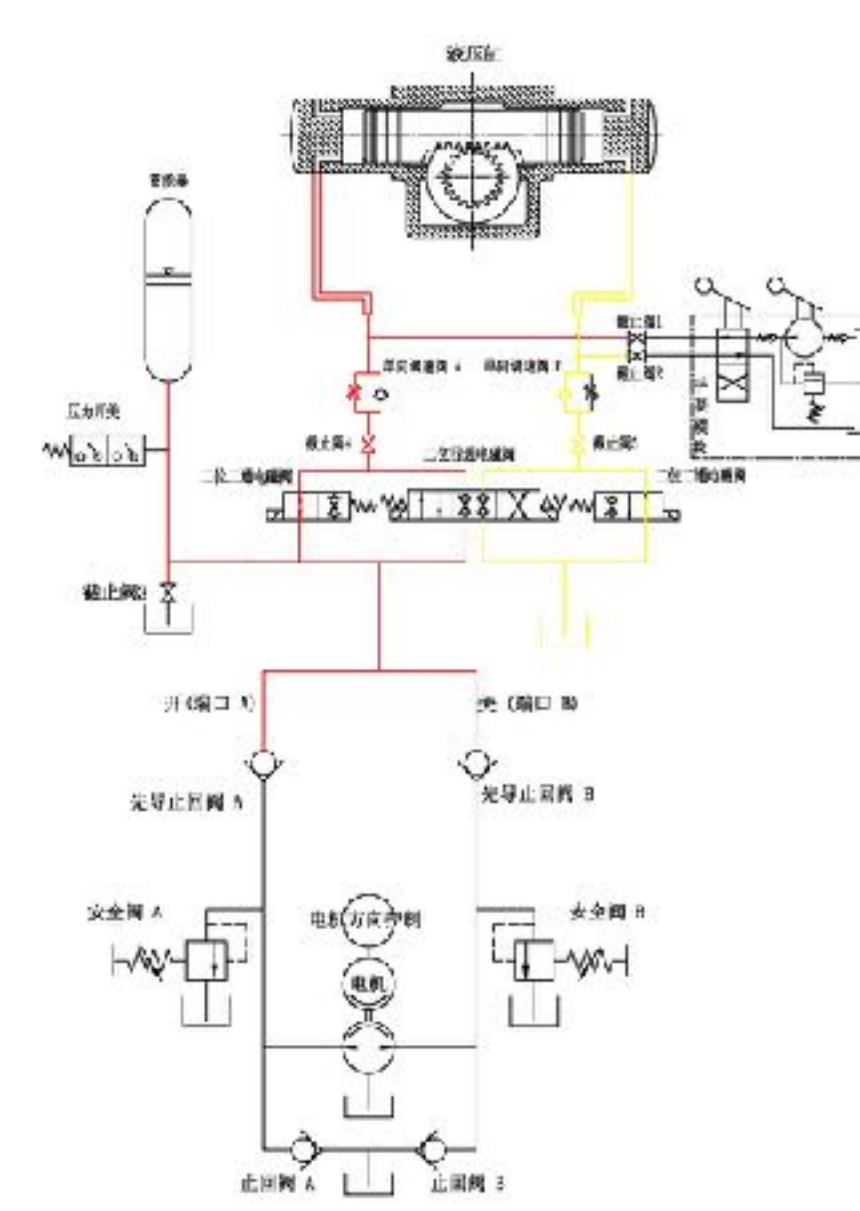
Opening Action

when the left coil of the 4/3-way solenoid valve is energized, pressure oil from the accumulator enters the cylinder, rotating it counterclockwise to open the valve.



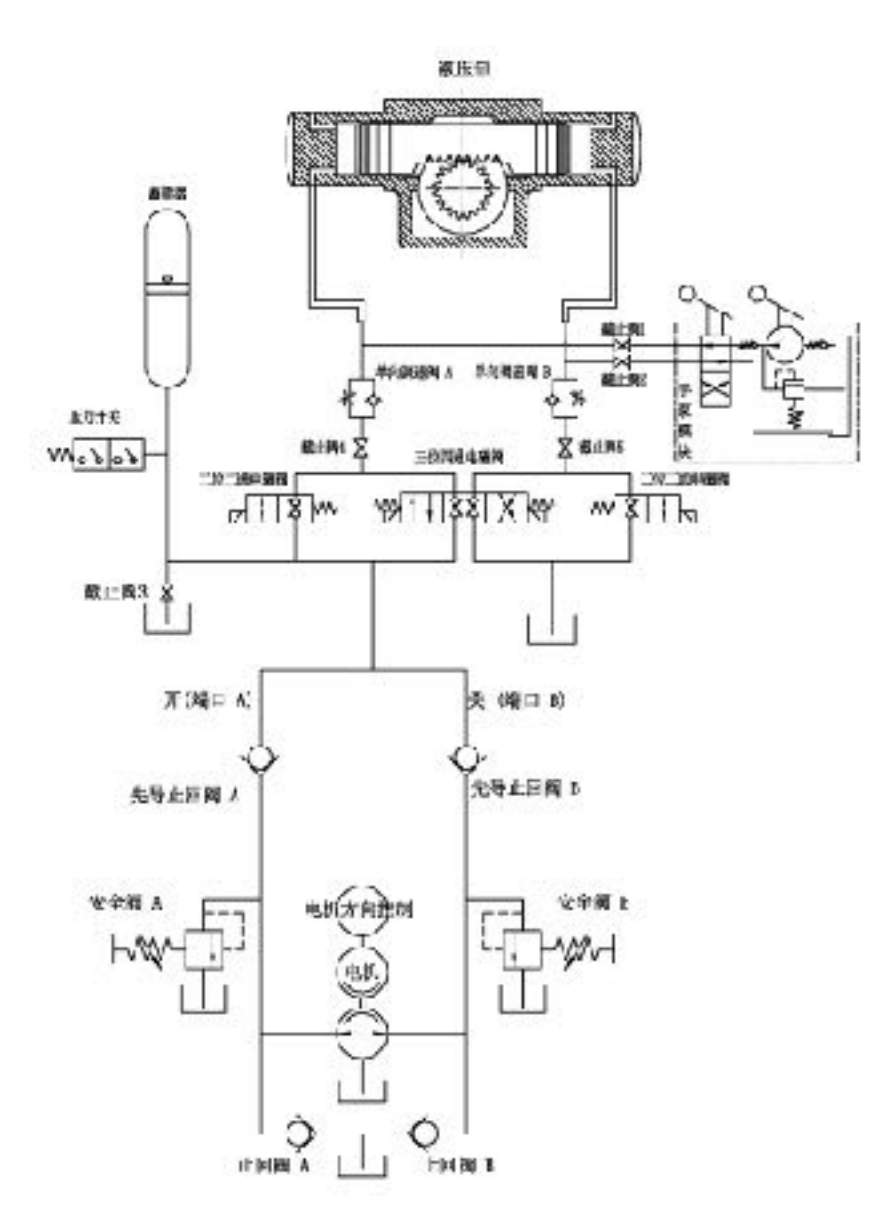
Closing Action

when the right coil of the 4/3-way solenoid valve is energized, pressure oil from the accumulator enters the cylinder, rotating it clockwise to close the valve.



ESD Action

when the 2/2-way solenoid valve is energized, hydraulic oil from the accumulator drives the valve to the fail position; once ESD is released, the valve remains at the corresponding position.



Manual Hydraulic Pump Action

during power loss or emergency conditions, the valve can be operated by the manual hydraulic pump.

GREATORK Electro-Hydraulic Actuator Technical Features

Model Code System

Sample model code: YK-T-0010-30-T1-D1 / S-1010

Code	Parameter
T / L	T indicates quarter-turn drive; L indicates linear-stroke drive.
0100	0010 indicates 1000 Nm output torque; for linear units it corresponds to the thrust code.
30	30 indicates a full-stroke time of 30 s.
T1	T1 indicates ambient temperature -20°C to +85°C; T2 indicates -40°C to +85°C.
D1 / D2 D3 / D4	D1 / D2 / D3 / D4 correspond to Modbus, Profibus DPV0, Profibus DPV1, and redundant Profibus DPV1 communication.
S	S indicates accumulator configuration.
The four-digit	The four-digit control code at the end corresponds to combinations of open/close control, fail-open, fail-close, and reset logic.

Control Logic

Code	Open/Close	Fail Open	Fail Close	Reset	Note
1100	√	√	–	–	On-off control + Fail open
1010	√	–	√	–	On-off control + Fail close
1000	√	–	–	–	Basic on-off control
1100	√	√	–	–	Duplicate entry in sample table
1010	√	–	√	–	Duplicate entry in sample table
1001	√	–	–	√	On-off control + Reset

Technical Comparison: GREATORK vs. Domestic & International

Comparison	GREATORK	Domestic	International
Max Torque (Nm)	Double Acting: 450,000Nm; Spring Start: 150,000Nm; Spring End: 100,000Nm	Double Acting: 450,000Nm; Spring Start: 150,000Nm; Spring End: 100,000Nm	Double Acting: 750,000Nm; Spring Start: 335,000Nm; Spring End: 235,000Nm
Structure Type	Scotch Yoke / Rack & Pinion	Scotch Yoke / Rack & Pinion	Scotch Yoke / Rack & Pinion
Mech. Ambient Temp.	-50°C / +70°C	-40°C / +70°C	-60°C / +70°C
Control Box Ambient	-46°C / +70°C	-40°C / +70°C	-60°C / +70°C
Power Supply	Motor: 380/220VAC, 24VDC; Control/Solenoid: 220VAC, 24VDC	Motor: 380/220VAC, 24VDC; Control/Solenoid: 220VAC, 24VDC	Motor: 380/220VAC, 24VDC; Control/Solenoid: 220VAC, 24VDC
Motor Power	250W ~ 4.0kW	250W ~ 3kW	150W ~ 3.0kW
Hydraulic Pressure	Low: up to 12.0MPa; Medium: up to 16.0MPa	Low: up to 12.0MPa; Medium: up to 16.0MPa	Low: 10.5MPa; Medium: 21.0MPa; High: 35.2MPa
Explosion Proof	ExdIICT4, ExdIIBT4	ExdIICT4, ExdIIBT4	ExdIICT4, ExdIIBT4
IP Rating	IP66; IP68	IP65; IP67; IP68	IP65; IP66; IP68
Accuracy (Full Stroke)	< 1‰	< 1‰	< 1‰
Hydraulic System	Closed / Open Loop	Closed / Open Loop	Closed / Open Loop
Fail-safe Position	DA: Open/Close/Stay; SA: Open/Close	DA: Open/Close/Stay; SA: Open/Close	DA: Open/Close/Stay; SA: Open/Close
Control Signal	Dry Contact / 24VDC / 4-20mA	Dry Contact / 24VDC / 4-20mA	Dry Contact / 24VDC / 4-20mA
Basic Functions	Local/Remote On-off, Pressure monitoring, Alarms (Oil level/Motor protection), Self-diagnosis	Local/Remote On-off, Pressure monitoring, Alarms (Oil level/Motor protection), Self-diagnosis	Local/Remote On-off, Pressure monitoring, Alarms (Oil level/Motor protection), Self-diagnosis
Optional Functions	ESD, PST, Variable speed control, Auto-fail, Line-break, Fire shutdown	ESD, PST, Variable speed, Auto-fail, Line-break (Some), Fire shutdown (Some)	ESD, PST, Variable speed, Auto-fail, Line-break (Some), Fire shutdown (Some)
Functional Safety (Unit)	SIL2	SIL2	SIL2
Functional Safety	SIL2	SIL2	SIL2
Parameter Setting	Infrared Setter & Push Buttons	Push Buttons	Infrared Setter & Push Buttons
Display Technology	OLED All-weather, visible in dark/bright light	OLED All-weather, visible in dark/bright light	LCD, invisible in dark/bright light, requires backlight

GREATORK Electro-Hydraulic Actuator Customization Capabilities

Based on Proven Technical Assets From our R&D Center



The Engineering Process | A reliable roadmap from concept to delivery

01



Requirement Discovery

Technical consultation and site analysis.

02



R&D & Simulation

3D modeling and stress testing.

03



Bespoke Manufacturing

Flexible assembly in our 53,000 sqm factory.

04



Quality Assurance

Certification testing and global delivery

Customization Capabilities , Please visit our support website



<https://www.greatorkpartners.com/customization>

Technical Support



partner@greatorkpartners.com



whatsapp

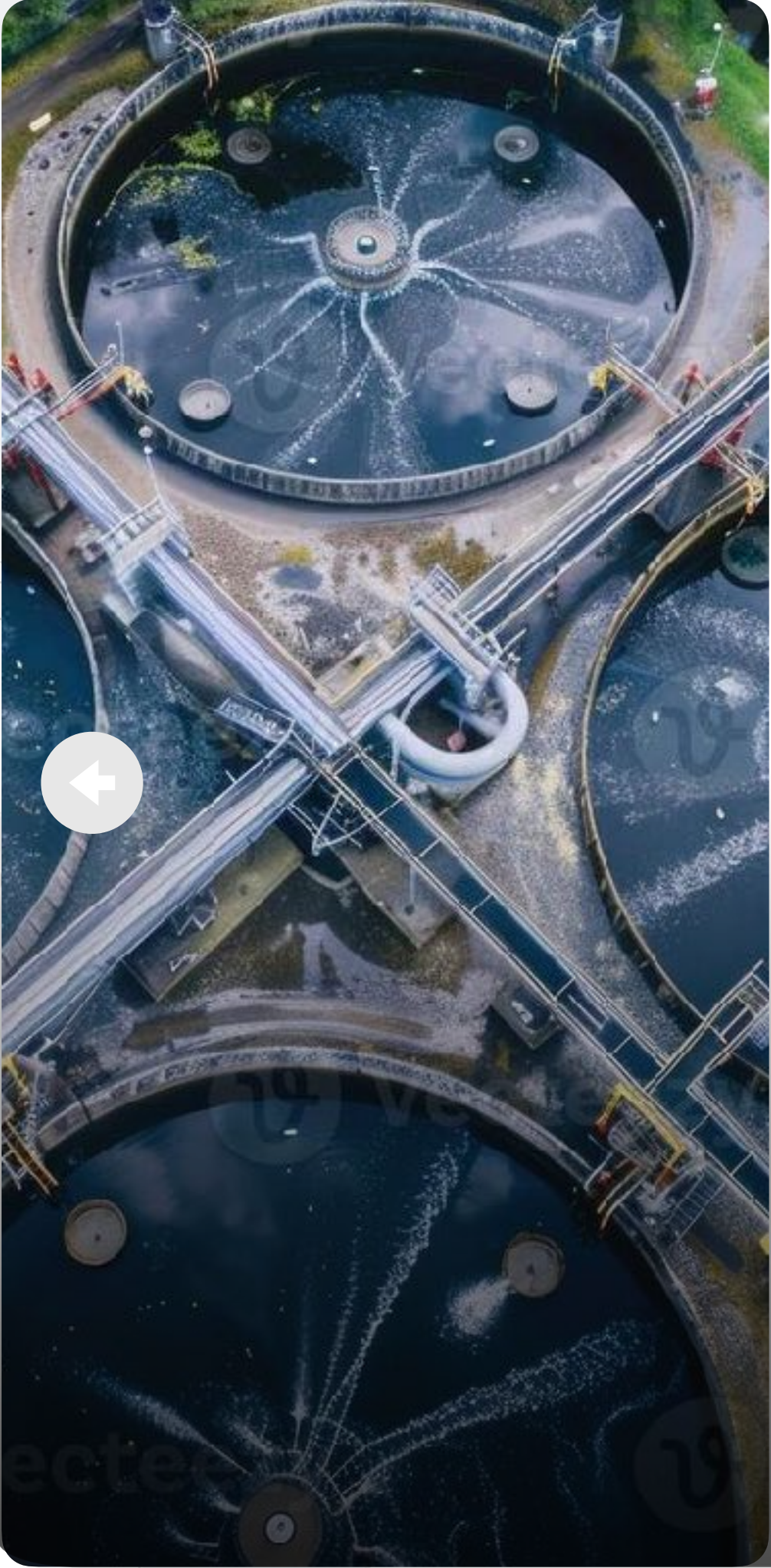
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Engineered to Replace. Built to Outperform

Oil & Gas | Power | Port & Terminal | Water Treatment | Smelting & Building Materials | General Industry



Partners Project Cases

[More Cases](#)

Trusted across the world's most demanding industries





Project Country : Russia
 Project Owner : Gazprom (PAO Gazprom)
 Product(s) Used : Electric Actuators (AVA/AVAT series)
 Quantity Used : 172 Units (Highest volume in 2022)

Industry Highlights :

- **Entry into High-Barrier Market:** Gazprom has some of the world's most stringent technical entry barriers. Being selected for their pipeline projects proves that GREATORK meets the rigorous Russian GOST standards and the specific safety requirements of the global oil and gas elite.
- **Extreme Low-Temperature Resilience:** Russian energy infrastructure often operates in sub-zero Arctic and Siberian conditions. GREATORK actuators are designed with specialized low-temperature seals and heating elements to ensure reliable operation at temperatures as low as -50°C.
- **Critical Pipeline Safety:** In high-pressure natural gas transmission, any actuator failure can lead to severe consequences. Our products provide the rapid, fail-safe response necessary to maintain the integrity of long-distance energy corridors.

Solutions :

- **Explosion-Proof & Flame-Proof (Ex db II CT4 Gb):** Certified for hazardous areas where explosive gases are present, ensuring the highest level of safety for gas compression and valve stations.
- **Non-Intrusive Infrared Setup:** Allows for commissioning and diagnostics without opening the enclosure, which is critical for preventing internal condensation and maintaining the hermetic seal in harsh Russian winters.
- **High-Precision Absolute Encoder:** Provides **0.5% measurement accuracy** without the need for battery backup, ensuring that even after a power outage in remote Siberian regions, the valve position is accurately remembered.





Project Country : China & Russia
 Project Owner : PipeChina
 Product(s) Used : Electric Actuators (AVA/AVAT series)
 Quantity Used : 105 Units

Industry Highlights :

- **Strategic Energy Corridor:** As one of the world's longest and most significant energy pipelines, the East Route requires the highest level of reliability. GREATORK's 105 units support the automated flow control across diverse terrains, ensuring a steady supply of natural gas between Russia and China.
- **Unmatched Technical Standards:** This project demands compliance with both international and national petroleum standards. GREATORK actuators were selected for their ability to provide precise, fail-safe operation in the high-pressure environments characteristic of major transmission pipelines.
- **Harsh Terrain & Remote Control:** Deployed in remote regions where accessibility for maintenance is limited, our actuators utilize advanced fieldbus communication and self-diagnostic features to allow for reliable remote monitoring and control from centralized dispatch centers.

Solutions:

- **Advanced Fieldbus Communication (Modbus/Profibus):** Integrated with the pipeline's SCADA system, these actuators enable real-time data acquisition and remote diagnostic capabilities, essential for managing a cross-border network.
- **High-Definition OLED Display & Data Logging:** Features clear status visibility and historical data storage (over 1 million data points), allowing for predictive maintenance and detailed analysis of valve performance without site visits.
- **Robust Non-Intrusive Design:** Infrared setting technology ensures that the flame-proof enclosure remains sealed during setup, preventing any risk of ignition in the high-pressure gas environment and protecting internal electronics from environmental degradation.





Project Country : China- & Russia

Project Owner :

PipeChina (National Oil and Gas Pipeline Network Group)

Product(s) Used : Electro-Hydraulic Actuator | Gas-over-oil (GOA) | Electro Hydraulic Actuator

Industry Highlights :

- **Extreme Scale:** The China-Russia Eastern Line spans **5,111 km** within China, passing through 9 provinces. Line 4 (Turpan-Zhongwei) stretches **1,745 km**.
- **Technical Benchmarking:** Utilizes **1,422 mm** (Eastern Line) and **1,219 mm** (Line 4) ultra-large diameters with X80M high-grade steel and **12 MPa** high-pressure ratings.
- **Extreme Environment:** Equipment must operate flawlessly in extreme cold reaching **-46°C** (Eastern Line) and harsh desert/mountainous terrains.
- **Localization Milestone:** GREATORK serves as a core supplier for the localization of critical high-end actuation equipment for China's national energy pulse.

Solutions:

- **Extreme Temperature Resistance:** Customized seals and hydraulic fluids enabling stable operation from **-46°C to -60°C**.
- **Fail-Safe Reliability:** For Line 4, GOA units were deployed at 18 valve stations to ensure emergency shutdown (ESD) capabilities using the pipeline's own gas pressure as the power source.
- **Smart Integration:** Electric actuators feature non-intrusive infrared setting and OLED displays for real-time diagnostics in remote valve chambers.
- **Full Lifecycle Service:** Provided high-level coordination with various project management divisions to ensure perfect delivery and ongoing maintenance across 44+ valve chambers.





Project Country : Pakistan
 Project Owner : Uch Power (Private) Ltd
 Product(s) Used : Electric Actuators (AVA/AVAT series)
 Quantity Used : 40 Units

Industry Highlights :

- **Critical Energy Infrastructure:** Uch Power Plant is a strategic asset for Pakistan's national grid. GREATORK provides essential actuation solutions for its combined cycle operations, ensuring high availability and power stability.
- **Harsh Desert Environment Adaptability:** Located in the Dera Murad Jamali region, the plant faces extreme ambient temperatures and dust. Our actuators' **IP68** sealing and robust thermal design are essential for reliable performance in these conditions.
- **High-End Replacement Strategy:** By supplying actuators and critical spares to a plant previously dominated by international giants, GREATORK reinforces its position as a "Complete Replacement" for premium Western brands.

Solutions:

- **Strategic Spare Parts Support:** Provided customized electrical and mechanical spares to ensure zero-downtime maintenance for the plant's automated valve systems.
- **Non-Intrusive Smart Diagnostics:** The actuators feature infrared setting and OLED displays, allowing engineers to check status and torque history without opening covers, preventing dust ingress into the electronics.
- **Absolute Encoder Precision:** Ensures 0.5% measurement accuracy for critical steam and water cycle control, with valve position memory retained even during sudden power fluctuations.



UCH Power (Private) Limited





Project Country : India
Project Owner : Vedanta Group Company / SEPCOIII Electric Power Construction Corporation
Product(s) Used : Electric Actuators (AVA/AVAT series)
Quantity Used : 131 Units

Industry Highlights :

- **Massive Scale Integration:** The JHARSUGUDA project is a giant power complex featuring nine 135MW units. GREATORK's supply of 131 units highlights our capacity to manage complex, large-scale simultaneous deployments across multiple power generation blocks.
- **Strategic Support for Global EPCs:** Being selected by SEPCOIII for their critical Indian projects proves that GREATORK is a Tier-1 actuator supplier capable of meeting the rigorous quality, documentation, and international standard requirements of world-class engineering firms.
- **High-Efficiency Industrial Power:** As a Captive Power Plant (CPP) supporting one of the world's largest aluminum smelters (Vedanta), the reliability of GREATORK actuators is essential for ensuring an uninterrupted power supply to critical industrial production lines.

Solutions:

- **Precision Measurement in High-Heat Zones:** Utilizing absolute encoders with **0.5% measurement accuracy**, our actuators ensure precise valve control in the plant's steam and water cycles, even in the intense heat characteristic of Indian industrial zones.
- **Non-Intrusive Smart Setup:** The infrared setting technology allows engineers to perform commissioning without opening the electrical cover, protecting the sensitive electronic control units from the pervasive coal dust and fly ash found in thermal plants.
- **Advanced Protection for Unstable Grids:** Features built-in motor overheating, phase loss, and overcurrent protection, which are vital for maintaining equipment integrity in regions where power grid fluctuations are common.





Project Country : China
 Project Owner : Liaoning Port Group
 Product(s) Used : Electric Actuators (AVA/AVAT series)
 Quantity Used : 92 Units

Industry Highlights :

- **Corrosive Marine Environment:** Yingkou Port is located on the Liaodong Bay. The actuators are exposed to high salinity, sea fog, and moisture. GREATORK's **IP68** double-sealing and specialized marine-grade anti-corrosion coating ensure the internal electronic components are fully protected from salt spray corrosion.
- **Oil & Chemical Safety Standards:** As the terminal handles volatile oil and chemical products, all actuators are required to meet the highest explosion-proof standards (**Ex db II CT4 Gb**). Our products ensure zero-spark operation in hazardous zones.
- **Winter Low-Temperature Resilience:** Northeast China experiences extreme cold in winter. GREATORK actuators are engineered to operate reliably at temperatures as low as **-30°C to -40°C** (with custom options down to -60°C), ensuring the port's energy logistics remain uninterrupted during the freezing months.

Solutions:

- **Non-Intrusive Infrared Setting:** Maintenance can be performed via an infrared setter without opening any electrical covers, which is vital for maintaining the equipment's seal in the humid, salty air of the port.
- **Precise Absolute Encoder:** Provides 0.5% accuracy for valve position monitoring. This high precision is essential for the automated loading and unloading processes, preventing overfills or leaks during cargo transfer.





Project Country : Thailand

Project Owner : Metropolitan Waterworks Authority

(MWA) Product(s) Used : Electric Actuators (AVA/AVAT series)

Quantity Used : 224 Units

Industry Highlights :

- **High-Volume Municipal Deployment:** Serving a national-level water authority like Thailand's MWA requires meeting strict public utility standards. Deploying 224 units in a single project framework demonstrates GREATORK's capacity for large-scale municipal automation.
- **Crucial Urban Water Stability:** As the primary water provider for Bangkok's millions of residents, the MWA demands zero-failure performance. GREATORK actuators ensure the precise regulation of flow and pressure, preventing water hammers and ensuring stable water supply 24/7.
- **Tropical Environment Resilience:** Bangkok's humid and high-temperature climate poses challenges to electronic equipment. Our actuators' **IP68** sealing and non-intrusive design are essential for maintaining long-term integrity in damp water plant environments.

Solutions:

- **IP68 Waterproofing & Anti-Condensation:** Designed to thrive in high-humidity pump rooms and valve pits, ensuring that moisture and condensation do not enter the electrical compartment, which is critical for urban water safety.
- **Absolute Encoder Precision:** Provides **0.5% measurement accuracy**, allowing MWA engineers to monitor and control valve positions remotely via the central control room with high confidence and precision.
- **Non-Intrusive Infrared Commissioning:** Allows for rapid parameter setting and diagnostics without opening the actuator cover, significantly reducing maintenance time and preventing environmental contaminants from affecting the electronics.





Project Country : South Africa
Project Owner : Various Municipal Water Boards / DEMCA (Pty) Ltd
Product(s) Used : GREATORK Intelligent Electric Actuators
Quantity Used : 71 Units

Industry Highlights :

- **Strategic African Infrastructure:** South Africa is a key market for water scarcity management. GREATORK's participation in these projects highlights our ability to provide robust automation solutions for essential water delivery systems in the African region.
- **Adaptability to Remote Locations:** Many water facilities in South Africa are situated in remote areas with limited technical support. The self-diagnostic and high-reliability features of GREATORK actuators ensure long-term operation with minimal on-site intervention.
- **Resilience Against Power Fluctuations:** In regions where power grid stability can be an issue, our actuators' built-in protection (phase loss, motor overheating) and non-battery absolute encoders ensure that valve positions are accurately maintained and monitored.

Solutions:

- **IP68 Protection for All-Weather Operation:** The highest grade of waterproof and dustproof performance ensures the actuators operate reliably in both underground pits and outdoor exposed locations common in South African water networks.
- **Non-Intrusive Setting for Easy Maintenance:** Parameters are set via an infrared setter without opening the electrical cover, which is critical for protecting sensitive internal electronics from dust and moisture in the field.
- **Precise Flow Control (0.5% Precision):** Using absolute encoders to provide high-accuracy feedback, ensuring the efficient distribution and pressure management required for large-scale water networks.





Project Country : Malaysia
 Project Owner : Dostek Engineering Sdn Bhd
 Product(s) Used : GREATORK Intelligent Electric Actuators
 Quantity Used : 400 Units

Industry Highlights :

- **Broad Regional Impact:** Through Dostek, GREATORK actuators have been deployed in numerous water treatment plants across **Penang, Melaka, and Sarawak**. This widespread application reinforces our brand's dominant position in both Peninsular and East Malaysia.
- **Tropical Humidity & Flood Protection:** Malaysia's equatorial climate requires equipment with superior sealing. Our actuators' **IP68** protection (submersible up to 7 meters for 72 hours) is a critical feature for water plants often located in low-lying, flood-prone areas.
- **Standardized Automation Solution:** Dostek utilizes GREATORK as a standardized actuation solution for their turnkey water projects, highlighting the ease of integration and the high compatibility of our products with diverse international valve brands.

Solutions:

- **Corrosion-Resistant Housing:** Features high-grade powder coating and aluminum alloy housing, providing excellent resistance to the chemical fumes (such as chlorine) commonly found in water disinfection areas.
- **Absolute Encoder Reliability:** The non-battery absolute encoder ensures that valve position data is never lost, even during the frequent tropical thunderstorms and subsequent power outages common in the region.
- **Widespread Local Application through Partnership:** Through the technical expertise and service network of **Dostek**, GREATORK has successfully permeated numerous landmark projects across Malaysia, including:
 Sungai Pinang WTP (Penang)
 Long Lama WTP (Sarawak)
 Spg Bekoh Pumping Station (Melaka)
 Selanda Booster Station (Melaka)



Dostek Engineering Sdn. Bhd.
 (662419-H)





Project Country : China
 Project Owner : Baowu Steel Group (Baosteel)
 Product(s) Used : Electric Actuators (AVA/AVAT series)
 Quantity Used : 420 Units

Industry Highlights :

- **Top-Tier Global Endorsement:** Baosteel is the benchmark for the global steel industry. Being integrated into their production lines—which require extremely high stability and precision—serves as a premier technical endorsement, proving that GREATORK products can **completely replace** premium Western brands in high-end metallurgical applications..
- **Smart Manufacturing Integration:** Baosteel leads the "Smart Steel" movement. GREATORK actuators' advanced fieldbus communication and diagnostic capabilities allow for seamless integration into their highly centralized control systems, supporting predictive maintenance and reducing unexpected downtime.
- **High-Temperature & Dust Resistance:** The steel-making process involves intense radiant heat and conductive dust. Our actuators' robust aluminum/cast iron housing and **IP68** double-sealing ensure that internal electronics remain protected even in the harshest areas of the blast furnace or continuous casting sections.

Solutions:

- **Advanced Communication (Profibus/Modbus):** Fully compatible with the complex automation networks used in Baosteel's modern plants, providing high-speed data transmission for real-time valve status monitoring.
- **Absolute Encoder with 0.5% Precision:** Provides pinpoint accuracy for critical flow control in water treatment and cooling systems, essential for maintaining the steel's metallurgical properties during the cooling phase.
- **Non-Intrusive Setting via OLED Interface:** Allows engineers to adjust limits and torque settings via an infrared tool without opening the electrical box, preventing conductive iron dust from entering the control compartment—a common cause of failure in older systems.





Project Country : Indonesia
 Project Owner : OKI Pulp & Paper Mills (Asia Pulp & Paper - APP Group)
 Product(s) Used : Electric Actuators (AVA/AVAT series)
 Quantity Used : 57 Units

Industry Highlights :

- **World-Class Scale and Standards:** OKI Pulp & Paper is a flagship project in the global paper industry. Being integrated into such a large-scale facility proves that GREATORK actuators can meet the stringent requirements of international industrial giants for high-capacity, automated production.
- **Corrosive & Humid Environment Resilience:** Pulp and paper manufacturing involves high humidity and exposure to chemicals (such as bleaching agents). GREATORK actuators, with their **IP68** double-sealed enclosure and high-grade anti-corrosion coating, are designed to survive and thrive in these aggressive environments.
- **Complex Flow Control:** The paper-making process requires precise regulation of pulp consistency, chemical dosing, and water treatment. These 57 units provide the necessary accuracy and rapid response to ensure consistent product quality and process efficiency.

Solutions:

- **Absolute Encoder (0.5% Accuracy):** Provides high-precision valve position measurement without needing battery backup. This is vital for the continuous 24/7 production cycle in paper mills, where even minor positioning errors can affect the final paper grade.
- **Non-Intrusive Setting via Infrared Tool:** Allows parameter adjustment without opening the electrical cover, protecting the sensitive internal electronics from the highly humid and potentially corrosive atmosphere of the mill.
- **Real-Time Monitoring & Protection:** Includes protection functions such as motor overheating, valve jamming, and torque protection. These features, combined with the clear OLED display, allow for rapid troubleshooting and minimize costly production downtime.





Project Country : Ecuador
Project Owner : HIVIMAR S.A.
Product(s) Used : GREATORK Intelligent Electric Actuators
Quantity Used : 152 Units

Industry Highlights :

- **Entry into the Latin American Market:** This collaboration with HIVIMAR marks GREATORK's successful penetration into the high-standard industrial market of Ecuador, representing our expanding footprint in South America
- **Strategic Brand Replacement:** HIVIMAR typically partners with top-tier global brands. GREATORK being selected for their industrial projects underscores our product's positioning as a "Complete Replacement" for European and American brands.
- **High Reliability in Complex Terrains:** Ecuador's diverse geography requires equipment that can handle varying altitudes and humidity levels, where GREATORK's IP68 protection and robust design excel.

Solutions:

- **Non-Intrusive Smart Configuration:** Parameters are set via infrared setters, ensuring the internal electronics remain sealed and protected from local environmental contaminants.
- **Precision Valve Control:** Using absolute encoders, the actuators provide 0.5% measurement accuracy, which is essential for the high-efficiency regulation required by HIVIMAR's industrial clients.
- **Intelligent Data Monitoring:** The high-definition OLED display and history logging allow onsite engineers to monitor torque and operating status in real-time, facilitating proactive maintenance.




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