



Discover Valve Automation

*Any valve. Any application.
Best-fit valve automation solutions.*

Cameron brings together the expertise and technology of the world's premier brands into one single, industry-leading entity. The **Valves & Measurement** business segment is a leading provider of valves, measurement and valve automation systems to the global energy and industrial markets.



Fortune 500 company with strong balance sheet



\$7 billion revenues in 2011



Leadership position in most every market segment served



Leading aftermarket service provider

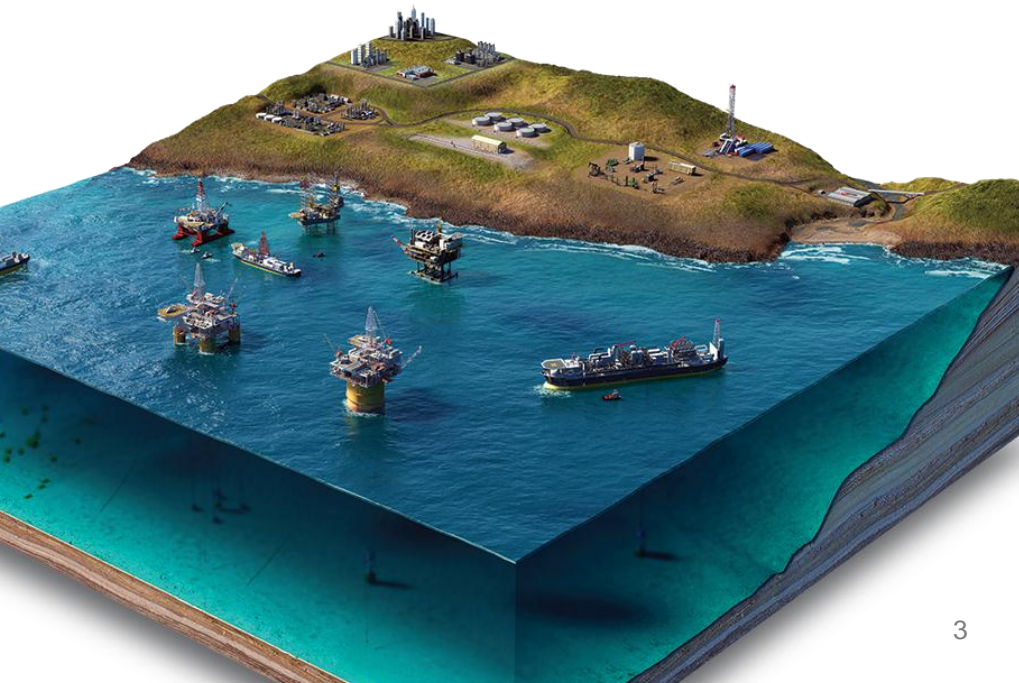


27,000+ employees in 300+ locations worldwide

Valve Automation

Comprehensive valve automation solutions for the global energy and industrial markets.

- A single, comprehensive API 6D and API 600 valve automation portfolio for the global oil and gas market
- \$300M Projected Revenue 5-Year Plan
- Premier actuation, controls, gear and automated valve accessory products
- Installed base across all markets



Cameron

LEDEEN®
Actuators & Control Systems

MAXTORQUE™
High-Performance Worm Gear Operators

DYNATORQUE™
Manual Gear Operators & Automated Valve
Accessories



Actuators & Controls

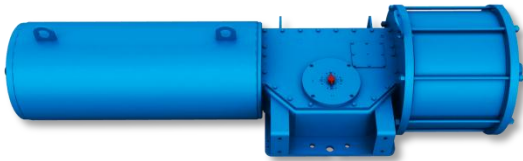
Gear Solutions

CAMSERV™ Aftermarket Services

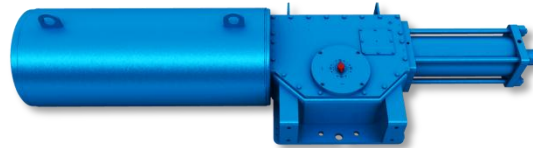
World-Class Manufacturing

LEDEEN Actuators & Control Systems

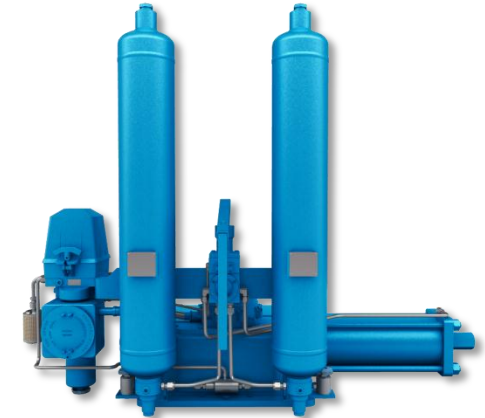
Cameron's LEDEEN portfolio of actuators and control systems has represented excellence since 1948, and continues to deliver customer-focused solutions into all markets and applications.



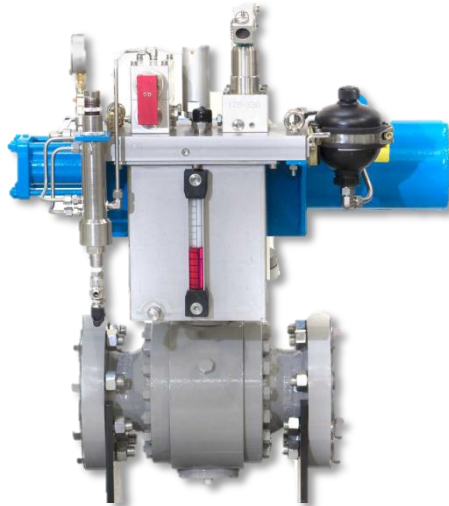
Pneumatic Actuators



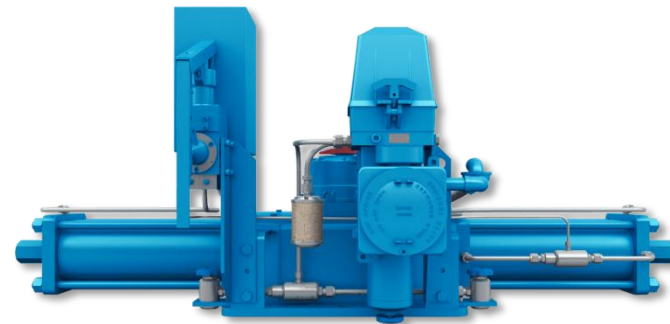
Hydraulic Actuators



Gas-Over-Oil Actuators



Self-Contained Control Systems



Direct Gas Actuators

LEDEEN Actuators & Control Systems

Quarter-Turn Core Products

	SERIES	TORQUE OUTPUTS	PRESSURE RANGE	TEMPERATURE RANGE
PNEUMATIC	GS Series, SY Series	5,700,000 in-lb (644,000 N•m)	40 to 175 psig (3 to 12 barg)	-22° F to 212° F (-30° C to 100° C)
	VA Series	9,700 in-lb (1100 N•m)	40 to 175 psig (3 to 12 barg)	
HYDRAULIC	GS Series, SY Series	5,700,000 in-lb (644,000 N•m)	145 to 3000 psig (10 to 207 barg)	
HYDRAULIC SUBSEA	Deepwater Series (Water depth > 500 ft [152 m])	3,600,000 in-lb (400,000 N•m)	150 to 3000 psig (10 to 207 barg)	
	Shallow-Water Series (Water depth ≤ 500 ft [152 m])	5,700,000 in-lb (644,000 N•m)	150 to 3000 psig (10 to 207 barg)	
GAS-OVER-OIL	GS Series, SY Series	5,700,000 in-lb (644,000 N•m)	145 to 3000 psig (10 to 207 barg)	
DIRECT GAS	GS Series, SY Series	5,700,000 in-lb (644,000 N•m)	145 to 3000 psig (10 to 207 barg)	

Linear Core Products

	SERIES	THRUST OUTPUTS	PRESSURE RANGE	TEMPERATURE RANGE
PNEUMATIC	LP Series	4,400,000 lb (19,500,000 N)	40 to 175 psig (3 to 12 barg)	-22° F to 212° F (-30° C to 100° C)
HYDRAULIC	LH Series	4,400,000 lb (19,500,000 N)	145 to 3000 psig (10 to 207 barg)	
SUBSEA	Mytilus Series	4,400,000 lb (19,500,000 N)	150 to 3000 psig (10 to 207 barg)	
GAS-OVER-OIL	LG Series	4,400,000 lb (19,500,000 N)	145 to 3000 psig (10 to 207 barg)	
DIRECT GAS	LD Series	4,400,000 lb (19,500,000 N)	145 to 3000 psig (10 to 207 barg)	

LEDEEN Actuators & Control Systems

Control Systems and Accessory Products

- Low-Pressure Pneumatic Controls
- Hydraulic Self-Contained Controls
- High-Pressure Gas Controls
- Hydraulic Power Units
- Electronic Linebreaks
- Position-Monitoring Switches
- Partial-Stroke Valve Testing





Actuators & Controls

Gear Solutions

CAMSERV™ Aftermarket Services

World-Class Manufacturing

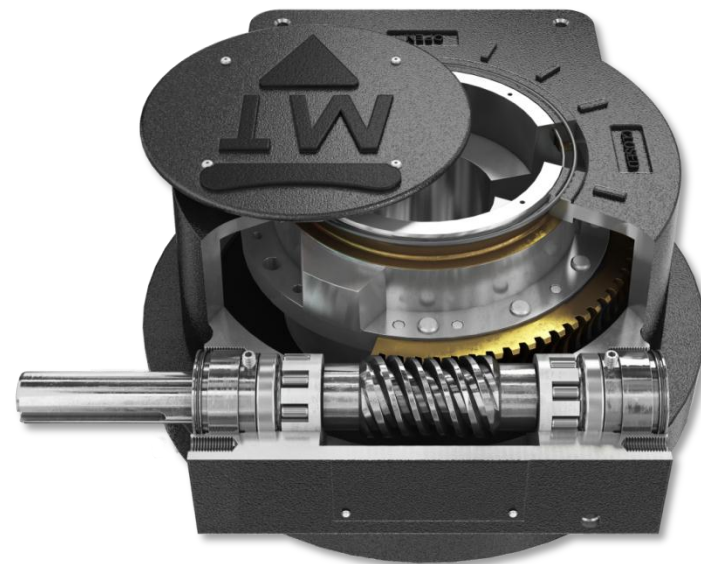
MAXTORQUE High-Performance Worm Gears

Efficiency. Durability. Quality.

Cameron's MAXTORQUE line of high-performance worm gears and valve accessories help reduce workload and provide high-torque capabilities into some of the harshest environments in the industry.

Portfolio

HIGH-PERFORMANCE WORM GEARS	Manual
	Motorized/Process Control
	Specialty and Custom
	Ultra-Large/Ultra-High Torque
VALVE ACCESSORIES	Subsea
	Declutch and Manual Overrides
	Temperature Compensators
	Dual-Input Gears
	High-Thrust Spur Gears
	Subsea Accessories



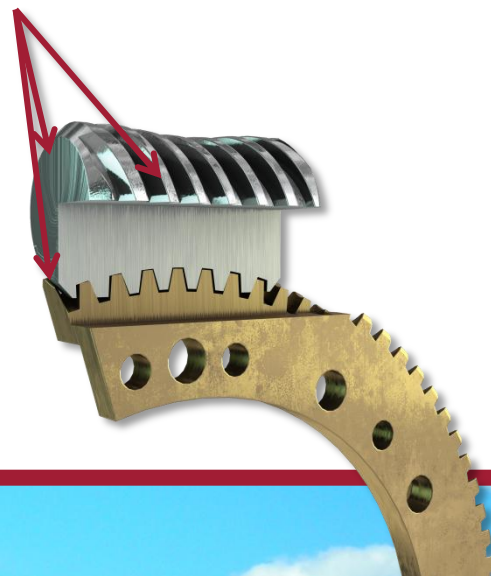
MAXTORQUE High-Performance Worm Gears

Double-Enveloping Technology:

Multistart Worm Gear

Standard worm gears maintain 1.23 to 2.98 teeth in contact. The double-enveloping technology that MAXTORQUE gears utilize provides for 6 to 13 teeth in contact, **reducing the amount of work required to operate the gear by up to 75%.**

Multistart



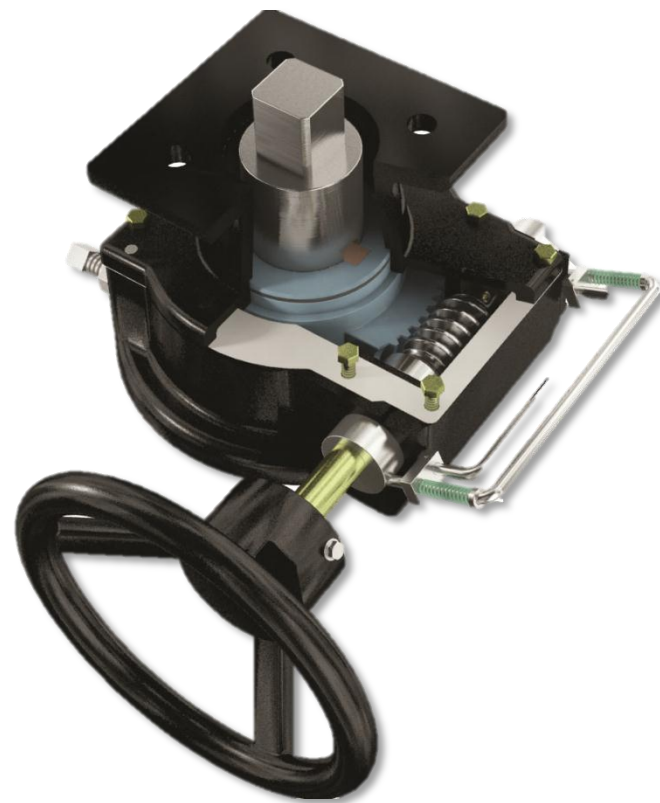
DYNATORQUE Manual Gears & Valve Accessories

Delivering customer-focused solutions – rapidly and economically.

Cameron’s DYNATORQUE manual gear operators and automated valve accessories provide single-source solutions from an innovative engineering team and state-of-the-art US manufacturing.

Portfolio

AUTOMATED VALVE ACCESSORIES	Manual Overrides
	D-Stop™ Mechanical Partial-Stroke Test Device
	D-Lock™ Automated Valve Lock Device
MANUAL GEAR OPERATORS	Worm Gear Operators
	Multi-Turn Bevel Gear Operators
VALVE ACCESSORIES	Ground Position Indicators
	Handwheels
	Locking Accessories



DYNATORQUE Manual Gears & Valve Accessories

Actuator-to-Valve Direct Interface Mounting

Cameron's complete DYNATORQUE portfolio of automated valve accessory products are suitable for use with all styles of quarter-turn automated valve and damper packages. Common to all of these products is the direct interface mounting concept in which **the accessory fits between the actuator and valve.**

The actuator drives the valve open and closed by means of a driver that connects the actuator to the valve stem. The driver and the top and bottom of the device will be machined to fit your valve and actuator combination, with either ISO 5211 standard, or your specific custom mounting dimensions.

Any Actuator



DYNATORQUE Device



Driver



Any Valve





Actuators & Controls

Gear Solutions

CAMSERV™ Aftermarket Services

World-Class Manufacturing

CAMSERV™ Services for Actuation & Valves

WE BUILD IT. WE BACK IT.

Global Presence

- Strategically located service centers in 20 countries
- Trained technicians available 24/7
- All brands. All types. All applications.

Service Portfolio

- Warranty
- Parts and Field Service
- Repair, Testing and Maintenance
- Remanufacturing
- Site and Asset Management
- Installation and Commissioning





Actuators & Controls

Gear Solutions

CAMSERV™ Aftermarket Services

World-Class Manufacturing

Worldclass Manufacturing

State-of-the-Art US Gear Manufacturing

MAXTORQUE

Manufactured in **Limerick, Maine, USA**

Quality Certifications

- ATEX 94/9/EC
- API 607
- PC/PLC Cycle Testing and Qualification
- IP 68 Rating
- AWWA Compliant

DYNATORQUE

Manufactured in **Muskegon, Michigan, USA**

Quality Certifications

- ISO 9001:2008

Globally Sourced and Delivered Actuation

LEDEEN

Manufactured in **Voghera, Italy**

Quality Certifications

- ATEX 94/9/EC
- ISO 9001:2008
- PED 97/23/EC H
- GOST-R
- RTN



Rapid Response Service in
Ville Platte, Louisiana, USA

Quality Certifications

- GOST
- ISO 9001:2008
- RTN
- API 6D/6DSS
- API 6D
- WG1B Worm Gear Operator



For more information:

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valveautomation@c-a-m.com

Learn more about LEDEEN actuators:

www.c-a-m.com/ledeen
ledeen@c-a-m.com

Learn more about MAXTORQUE gears:

www.c-a-m.com/maxtorque
maxtorque@c-a-m.com

Learn more about DYNATORQUE gears and accessories:

www.c-a-m.com/dynatorque
dynatorque@c-a-m.com