# CAMERON

# **DYNATORQUE** Gears and Automated Valve Accessories

State-of-the-art manufacturing, inventive engineering, and a comprehensive offering of gears and automated valve accessories – delivering customer-focused solutions rapidly and economically. For all technical information please visit our website at www.c-a-m.com/DYNATORQUE



DYNATORQUE<sup>™</sup> worm gear operators are used with quarter-turn valves and dampers. Commercial grade units have been designed to withstand loads far in excess of their rated torques. Operators are totally enclosed, weatherproof and permanently lubricated. Other grades of service include AWWA, All Stainless Steel, Severe Service, Buried Service, Hi and Lo Temp.

# **Valve Actuator Manual Overrides**

Valve actuator manual overrides are used with automated valve packages to provide manual operation of the valve in the event of actuator failure or power loss. These gear operators are mounted between the valve and the actuator. Cameron manufacturers two types of actuator-to-valve direct interface overrides.

- The Series SD (shown left) is a declutchable worm gear manual override
- The Series SRD is a non-declutchable worm gear manual override for use with spring-return style valve actuators and does not have a declutch mechanism

# **D-Stop Partial-Stroke Test Device**

D-Stop<sup>™</sup> partial-stroke test devices are used in automated quarter-turn valve applications where compliance with standards such as ISA-S84 and IEC 61511 is of concern. The D-Stop device allows testing of the entire Safety Instrumented System (SIS) in applications where exercising the final trip element (the valve) may not be practical, such as when the valve is installed in an active process flow line.

www.c-a-m.com/DStop

## **D-Lock Automated Valve Lock Device**

D-Lock<sup>™</sup> devices are suited for applications where powered equipment such as pneumatic, hydraulic, or electric actuators must be locked in either the full clockwise or counter-clockwise positions. This product provides lockout capabilities for all types of valve and other rotational devices where the function of the device requires the prevention of rotation (i.e., such as the torgue seated butterfly valves).

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#### **Stainless Steel Worm Gear Operators**

Developed for corrosive, radioactive or other extreme environments where standard iron or steel may not be suitable. (Consult Cameron for your application)

Unit housings, covers, indicators and bolting hardware are 300 series stainless steel; worms are heat-treated carbon steel; worm wheels are cast ductile iron (manganese bronze option); input shafts are 17-4 PH Stainless Steel; shaft and worm seals are Buna-N rubber; housing to cover seals are liquid gasket; and bushings are oil impregnated copper nickel steel alloy.

#### **Multi-Turn Bevel Gear Operators**

Cameron's DYNATORQUE bevel gear operators are suited for applications with rising stem valves such as gate valves and knife gate valves. All units have been designed to withstand loads far in excess of the rated thrusts and torques. Actuators in this category are totally enclosed, weatherproof and permanently lubricated. Units are suitable for use in all handwheel and chainwheel applications.

## Partial and Multi-Turn Worm Gear Operators/Memory Stop Gear Operators

Partial-turn and multi-turn worm gear operators/memory stop gear operators are supplied for actuation of specialty equipment such as multiport valves, non-thrust gate or globe valves, payoff reel applications that require a self-locking feature and more. The partial-turn operator includes adjustable end position stops in both the clockwise and counter-clockwise positions and so many may be used in memory stop applications. The multiturn operators do not include stops, requiring stops built into the driven equipment to provide end positioning.

## **GPI Ground Position Indicators**

The GPI can be used to indicate the position relative to open or closed buried service valves, dampers, payoff reels or any other rotating device. Standard ranges are available from 1 to 938 handwheel turns. Requirements for greater numbers of turns are available upon request. Each position indicator comes complete with valve box adapter and is ready to install in a standard 5-1/4" valve box. Available in both sealed and unsealed versions.

#### Handwheels and Locking Accessories

DYNATORQUE handwheels are manufactured in cast iron or tubular carbon and stainless steel from 6" through 48" diameters. The fabricated handwheels are manufactured to both recessed and flat designs. Locking devices are available for all of Cameron's DYNATORQUE gear operators as well as retrofit to other brands of gear operators and handwheels.