

WEDGEROCK

MECHANICAL SPRING RETURN

When Performance and Quality Matter



PRODUCTION

TRANSMISSION

WATER

POWER

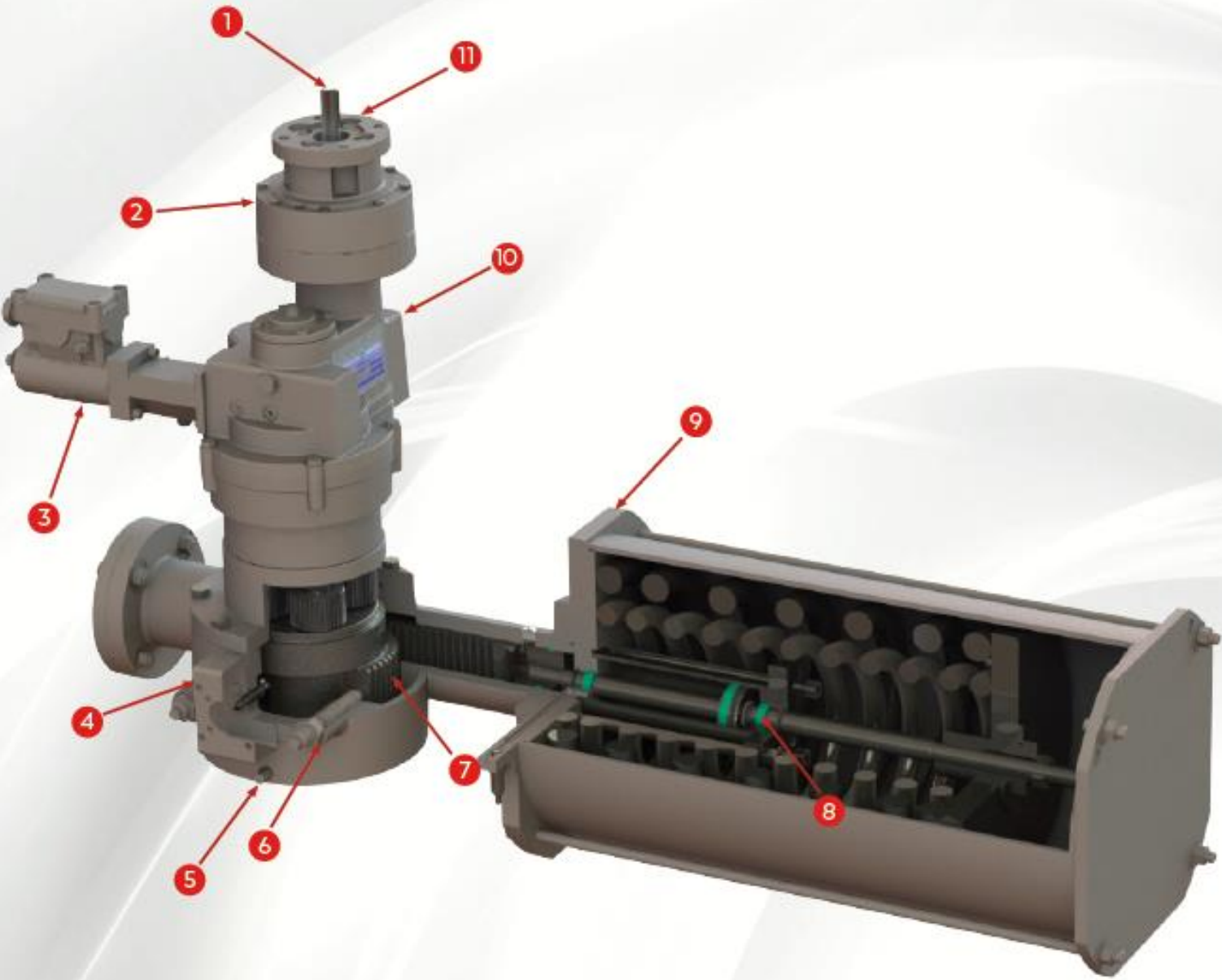
MILITARY



Challenge **WEDGEROCK** with your application...we haven't found a torque, thrust or environment we can't handle.



wedgerock.com | info@wedgerock.com



1. Input Orientation

- Parallel or perpendicular to valve stem
- Motorized or manual

2. Self Locking Input

- Patented PolyLock anti-backdrive clutch

3. Release Mechanism

Electric Linear Solenoid

-24VDC standard*

Line Pressure Operated

-Hi/Lo Pressure Pilot, 10-10,000 psi

Sealing

- Fully sealed spring canister
- Mechanical seals at ingress points
- Double seals at dynamic interfaces
- IP68 standard

4. Indication

- Standard Namur mounting

5. Pressure Relief Vent

- Avoid pressure build up due to valve stem leakage

6. End Stops

- Adjustable allowing $\pm 5^\circ$ travel

7. Gearing

- Rack & pinion gear transfer spring force to valve
- Planetary gears for configurable input ratio/MA

8. Dampener

- Adjustable speed of fail-safe operation

Scalable

- Quarter-turn spring end torque range:
<750 in-lbs. [85 Nm] to >1,500,000 in-lbs.
[170,000 Nm]

9. Spring Canister

- Helical compression spring design for proven reliability
- Design Safety: does not allow uncontrolled release of springs if disassembled

10. Mechanical Hold and Release

- Patented design allowing fail safe operation with low release force
- No valve creep from leaking pistons or temperature swings

Configurable

- Multiple ratios available to size input-Fail-Close or Fail-Open (CW/CCW)
- Hardware material
- Seal material
- Valve mounting

Certification

- ATEX certified option available

11. Operation

- Rotational actuator or handwheel

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Sawtooth Caverns (www.sawtoothcaverns.com), the largest underground salt cavern petroleum storage terminal of its kind in the Western United States. The high altitude flatlands of Utah prove a challenging environment for hydraulic and pneumatic spring return actuators, that can creep due to leaking pistons and thermal expansion and contraction. Looking for lower maintenance, more reliable and greener solution—enter **WedgeRock**.

WedgeRock offered an electric actuator driven mechanical spring return operator—the Rock Spring Return or RS. The RS passively, mechanically holds spring force and valve in normal position until fail condition releases spring energy, acting on rack and pinion, moving the valve to the fail position; the speed is controlled by an adjustable damper.

Simple.

We love this stuff!



[207] 793.2289

34 Business Park Road | Limerick, Maine 04048 USA

wedge-rock.com | info@wedge-rock.com