

# Hydraulic Subsea LEDEEN Actuators

## Shallow-water and deepwater series

### APPLICATIONS

On-off or modulating control of subsea valves

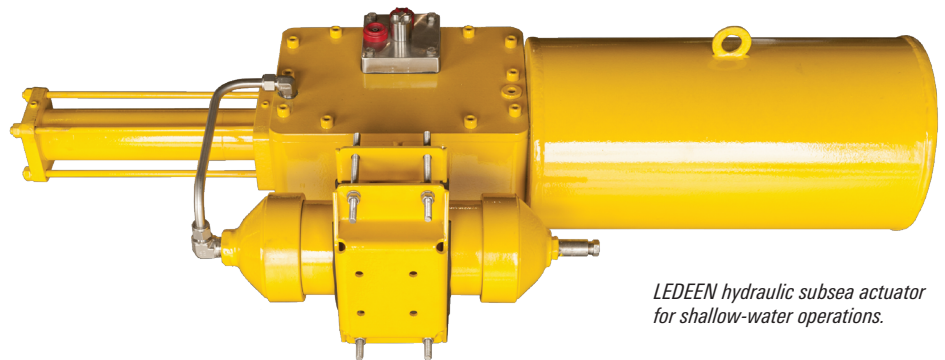
### ADVANTAGES

- All models available as double acting or spring return
- High torque outputs
  - 57,360 in.lbf [6,480 N.m] for S-GS model
  - 5,700,000 in.lbf [644,000 N.m] for S-SY model
  - 3,600,000 in.lbf [400,000 N.m] for deepwater model
  - Open and close travel stops provide  $\pm 3^\circ$  minimum
- Scotch yoke mechanism generates powerful opening and closing torque outputs
- Buna rubber piston seal configurations specifically designed for hydraulic applications
- Composite guide band on piston provides low-friction guidance and support
- Epoxy-coated prestressed springs provide consistent performance with corrosion protection
- Pressure compensator balances oil-filled cavity with ambient pressure

The Cameron portfolio of LEDEEN\* actuators includes hydraulic subsea actuators designed for shallow-water and deepwater applications. Both actuator types can operate with a supply pressure up to 3,000-psi [207-bar] gauge pressure.

### Shallow-water series (S-GS and S-SY models)

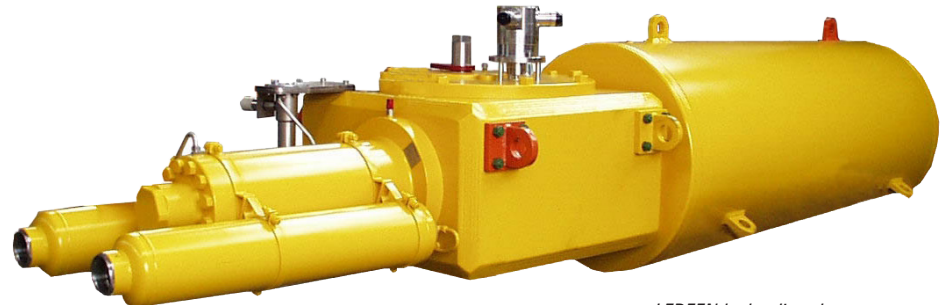
For installations to 500-ft [152-m] water depth



*LEDEEN hydraulic subsea actuator for shallow-water operations.*

### Deepwater series

For installations beyond 500-ft [152-m] water depth



*LEDEEN hydraulic subsea actuator for deepwater operations.*

### Available options

- Manual override
- ROV override
- Microswitch for open-close indication
- Position transmitter for 0% to 100% travel indication
- 100% radiographically and liquid-penetrant-inspected welds<sup>†</sup>
- No external tie rods<sup>†</sup>

<sup>†</sup> Unique for the deepwater series.