

# IMPLEMENTATION OF THE VALCO HELICAL DRIVE AIR ACTUATOR

## Technical Note 406

### MULTIPOSITION VALVES

Use of a 4-way solenoid (41E1 or 41E1-CE) is recommended for multiposition actuators. In this implementation air is continuously applied to the actuator, which is directed to step or reset by the solenoid. Energizing the solenoid steps the valve to its next position; de-energizing the solenoid resets the mechanically-ratcheted system in the actuator.

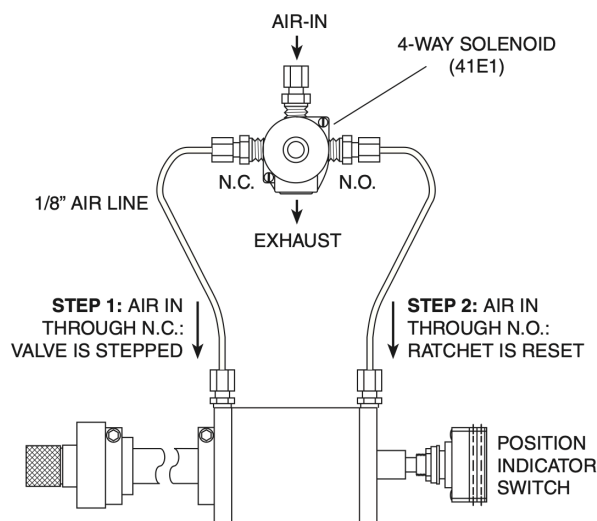
**CAUTION: We recommend bottled instrument air or nitrogen. If plant air from a compressor must be used, an oil separator and water dryer are required.**

### PROCEDURE

Requires one external event.

1. Energize solenoid – air through Normally Closed (N.C.) port. The valve is stepped to the next position.
2. De-energize solenoid – air through Normally Open (N.O.) port. The mechanically-ratcheted system in the actuator is reset.

**FIGURE 1: 41E1 solenoid/actuator configuration**



**FIGURE 2: 41E1-CE solenoid/actuator configuration**

