

# SEAL REPAIR KITS AND SEAL OPTIONS

PART NUMBERS FOR SEAL REPAIR KITS



**EXAMPLES:**

SEAL KIT FOR S3-90-CW-S75-3C2-3RL-1/4-1 = SRK-S3-C

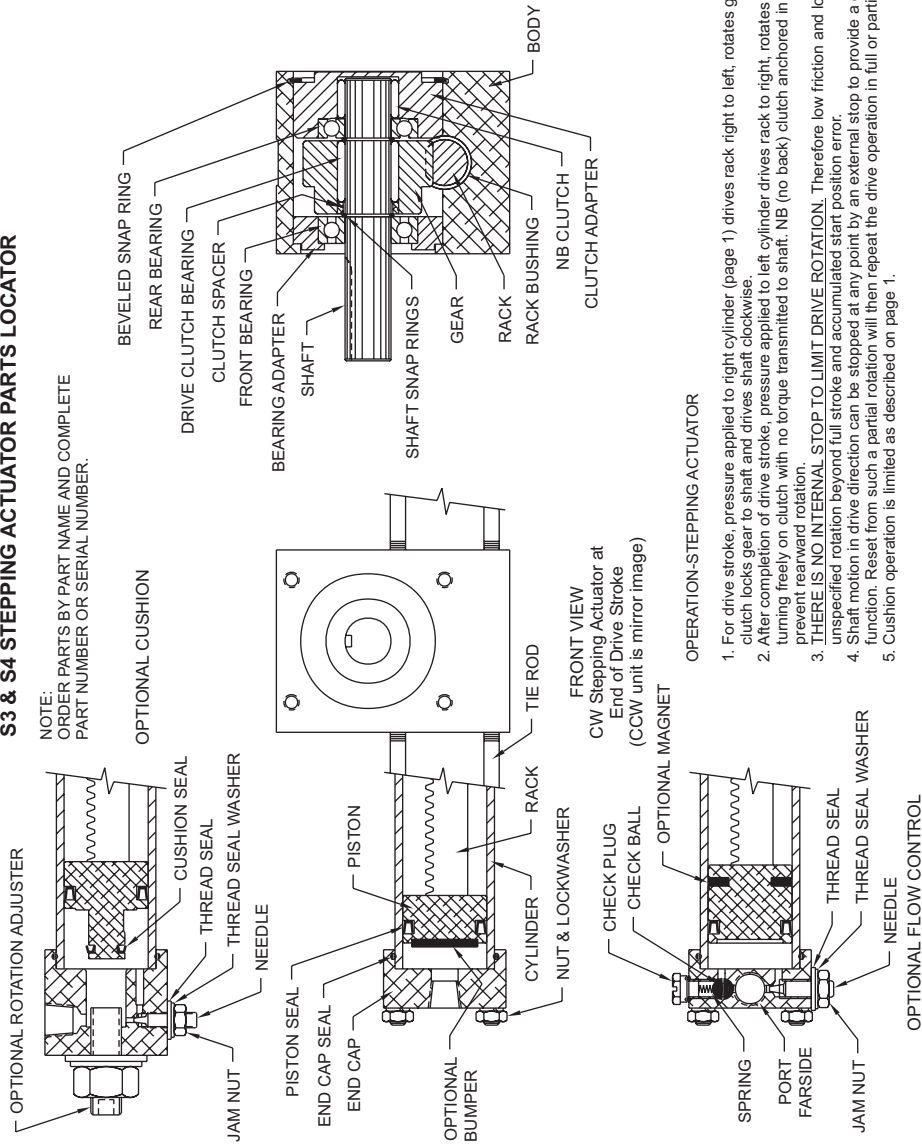
SEAL KIT FOR S4-180-CCW-S10-2F1-1/4 = SRK-S4-F

SEAL KIT FOR SPECIAL, SUCH AS S3-B004 = SRK-S3-B004

IF PART NUMBER IS NOT KNOWN, PROVIDE UNIT SERIAL NUMBER FROM LABEL OR STAMPED INTO BODY UNDER LABEL.

## S3 & S4 STEPPING ACTUATOR PARTS LOCATOR

NOTE: ORDER PARTS BY PART NAME AND COMPLETE PART NUMBER OR SERIAL NUMBER.



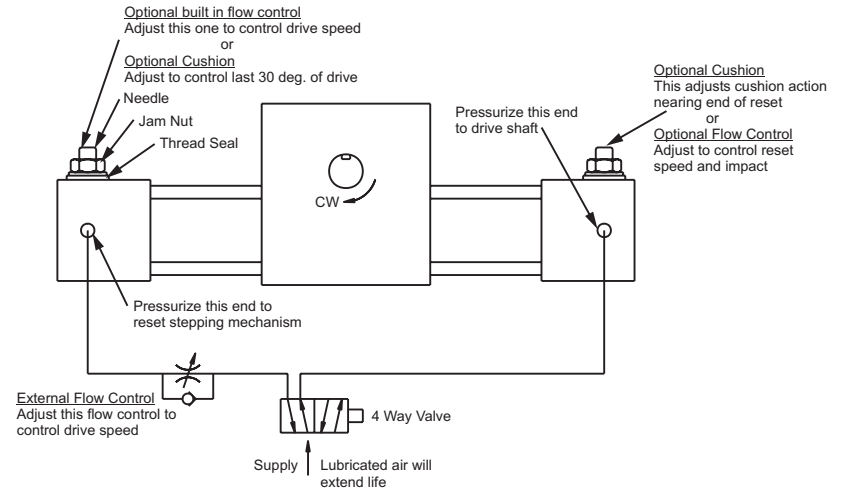
### OPERATION-STEPPING ACTUATOR

1. For drive stroke, pressure applied to right cylinder (page 1) drives rack right to left, rotates gear clockwise, drive clutch locks gear to shaft and drives shaft clockwise.
2. After completion of drive stroke, pressure applied to left cylinder drives rack to right, rotates gear counterclockwise turning freely on clutch with no torque transmitted to shaft. NB (no back) clutch anchored in body locks to shaft to prevent rearward rotation.
3. **THERE IS NO INTERNAL STOP TO LIMIT DRIVE ROTATION.** Therefore low friction and load inertia can cause a unspecified rotation beyond full stroke and accumulated start position error.
4. Shaft motion in drive direction can be stopped at any point by an external stop to provide a one-way crowding function. Reset from such a partial rotation will then repeat the drive operation in full or partial rotation as required.
5. Cushion operation is limited as described on page 1.



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## S3 & S4 STEPPING ACTUATOR INSTALLATION AND SETUP



CW STEPPING ACTUATOR SHOWN-CCW UNIT IS MIRROR IMAGE.  
 REVERSE OPTION LOCATIONS AND OPERATIONS FOR CCW STEPPING ACTUATOR.

### ADJUST IN FOLLOWING ORDER:

Skip options which your actuator does not have. Speed adjustment is made with flow controls, built in ("F" option) or external (not supplied by Rotomation).

To adjust built in controls:

To adjust drive speed (shaft rotation speed) or speed of reset,

1. Loosen jam nut.
2. Tighten needle to reduce speed, loosen to increase speed. Make small adjustments.
3. Tighten jam nut while holding needle steady.

To adjust cushion ("C" option) on reset or drive:

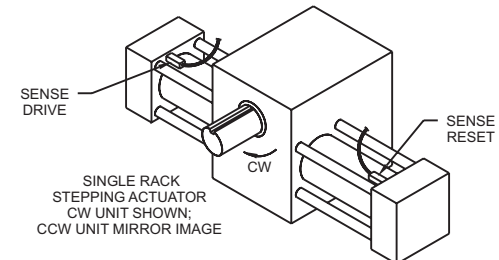
1. Loosen jam nut.
2. Tighten needle to increase stiffness of cushion, loosen to decrease. Do not close needle.
3. Tighten jam nut while holding needle steady.

To adjust magnetic switch "G", "R" or "S" option.

1. DISABLE AUTOMATIC CONTROL. KEEP CLEAR OF SHAFT AND SHAFT MOUNTED PARTS!
2. Apply voltage to switch only; place switch at end of cylinder sensing drive as shown.
3. Manually valve system to drive unit to rotate shaft to full rotation.
4. With clamp loose, move switch sensing drive toward body until LED glows, clamp.
5. Valve system to drive unit to reset.
6. With clamp loose, move switch sensing reset toward body until LED glows, clamp.
7. Cycle to check operating points, adjust as required.

NOTE: In drive direction, cushion reduces drive over last 30 deg. of rotation but WILL NOT retard load. Friction in load will slow load upon drive reduction by cushion.

### STEPPING ACTUATOR SWITCH PLACEMENT



## SWITCH LEADS

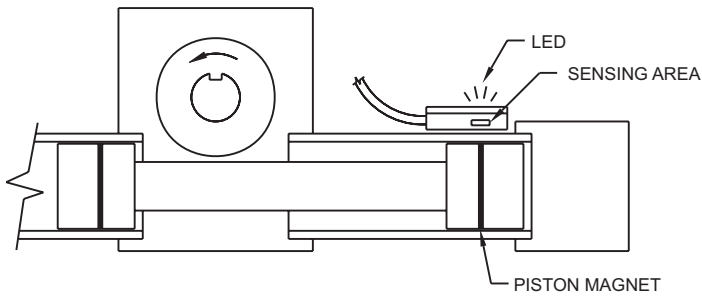
|                   | OPTION     | LEAD                           |
|-------------------|------------|--------------------------------|
| Standard Lead     | GL, RL, SL | 9', end stripped               |
| Connection option | GC, RC, SC | 6" pigtail with male connector |

## EXTENSION CABLES (PURCHASE SEPARATELY)

| PART NUMBER | DESCRIPTION  |
|-------------|--|
| CC2         | 2 m cable, female connector one end, stripped other end. |
| CC5         | 5 m cable, female connector one end, stripped other end. |

**- KEEP MAGNETIC MATERIAL AWAY -**

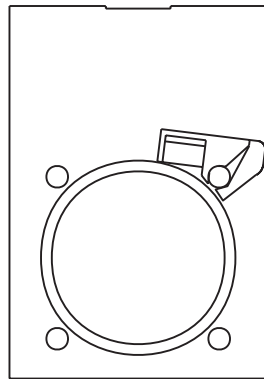
## SENSING



APPROACHING PISTON MAGNET ACTIVATES SENSOR, OPERATES SWITCH AND LED.  
PLACE SWITCH AS CLOSE AS POSSIBLE TO END CAP FOR CORRECT OPERATING POSITION.

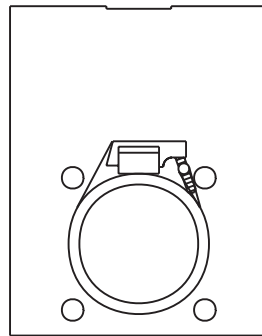
## SWITCH MOUNTING

TIE ROD CLAMP



SERIES S4

STRAP CLAMP



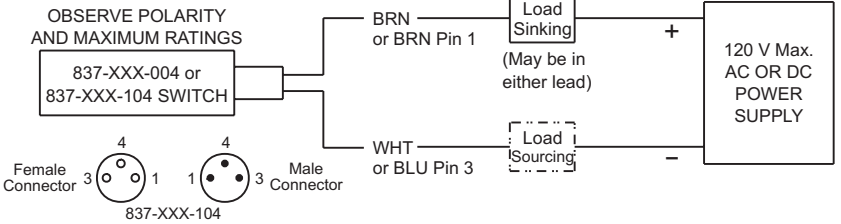
SERIES S3

**TIGHTEN STRAP CLAMP  
TO HOLD SWITCH STABLE.  
DO NOT DISTORT SWITCH CASE.**

## ROTOMATION REED SWITCH - OPTION G

### DESCRIPTION AND RATING

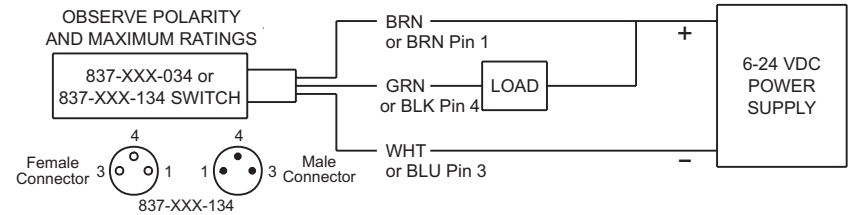
|  |                                  |
|--|----------------------------------|
| Reed switch with LED & Surge Protection, normally open |                                  |
| Switching voltage                                      | 5-120 VAC/VDC                    |
| Switching current                                      | .5 a, max., .005 min.            |
| Switching power  | 10 w, max.                       |
| Voltage drop   | 3.5 V                            |
| Temperature range                                      | -30 to +80C                      |
| Environment  | Resistant to moisture, dust, oil |



## ROTOMATION SINKING (NPN) SWITCH - OPTION R

### DESCRIPTION AND RATING

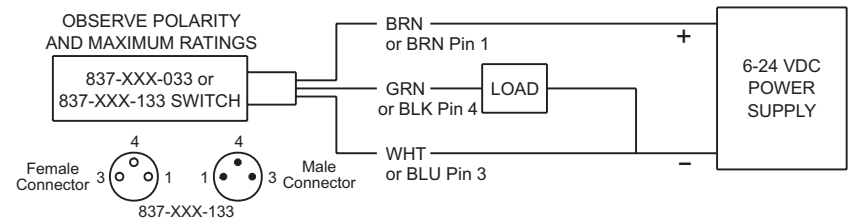
|                        |                                  |
|------------------------|----------------------------------|
| NO, sinking (NPN), LED |                                  |
| Switching voltage      | 6 to 24 VDC                      |
| Switching current      | .5 a, max.                       |
| Switching power        | 12 w, max.                       |
| Voltage drop           | .5 V                             |
| Temperature range      | -30 to +80C                      |
| Environment            | Resistant to moisture, dust, oil |



## ROTOMATION SOURCING (PNP) SWITCH - OPTION S

### DESCRIPTION AND RATING

|                         |                                  |
|-------------------------|----------------------------------|
| NO, sourcing (PNP), LED |                                  |
| Switching voltage       | 6 to 24 VDC                      |
| Switching current       | .5 a, max.                       |
| Switching power         | 12 w, max.                       |
| Voltage drop            | .5 V                             |
| Temperature range       | -30 to +80C                      |
| Environment             | Resistant to moisture, dust, oil |



ROTOMATION TESTS ALL SWITCHES FOR PROPER FUNCTION BEFORE SHIPMENT AND CANNOT REPLACE THEREAFTER. SWITCHES OF OTHER MANUFACTURE HAVE NO GUARANTEE OF COMPATIBLE PERFORMANCE BY ROTOMATION, INC.