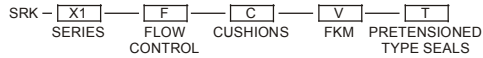


SEAL REPAIR KITS AND SEAL OPTIONS

PART NUMBERS FOR SEAL REPAIR KITS

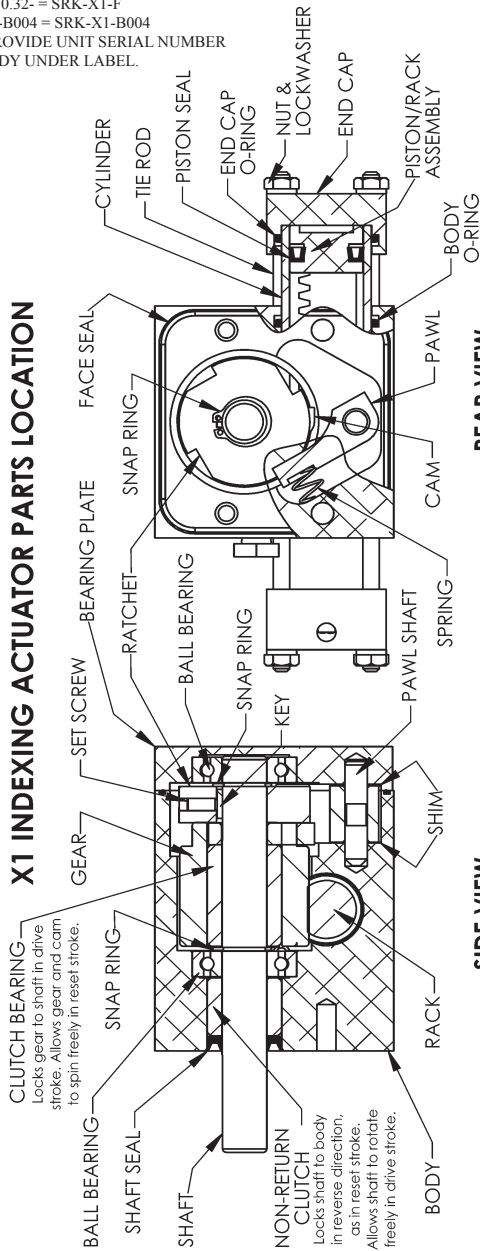


EXAMPLES:

1. SEAL KIT FOR X1-90-CW-S37-3C2-3RL-10.32-1 = SRK-X1-C
 2. SEAL KIT FOR X1-180-CCW-D37-2F1-10.32- = SRK-X1-F
 3. SEAL KIT FOR SPECIAL, SUCH AS X1-B004 = SRK-X1-B004
- IF PART NUMBER IS NOT KNOWN, PROVIDE UNIT SERIAL NUMBER FROM LABEL OR STAMPED INTO BODY UNDER LABEL.

- OPERATION-INDEXING ACTUATOR**
1. At end of drive stroke (shown) shaft is locked against forward motion by pawl in ratchet and against backward motion by applied torque and non-return clutch. Do all position sensitive work operations in this locked condition, with pressure applied in drive direction.
 2. To reset for the next drive operation, apply pressure to reset (left) cylinder. Rack moves to right, driving gear and cam but not shaft. At end of stroke, cam lifts pawl. Allow time in operating cycle to complete reset motion before initiating drive. Bumper will reduce reset impact. Flow control or cushion effective; do not slow beyond cycle time limit. With unit in reset, external torque can move shaft in forward direction; use brake if required.
 3. To drive to next index, apply pressure to opposite (right) port. Rack moves to left, driving gear and cam, shaft and ratchet to next index. Index stop is abrupt-metal to metal. It can dislodge work pieces or even break shaft. Regulate drive speed and impact by flow control or exhausting (left) cylinder. **DO NOT OPERATE WITH AN INERTIA LOAD WITHOUT SPEED (FLOW) CONTROL. ARRANGE CONTROL LOGIC TO SHUT DOWN IN LOCKED POSITION TO AVOID UNCONTROLLED ROTATION AT STARTUP.** Cushion reduces drive last 30 deg. but will not retard inertial load. Bumper not applicable.

X1 INDEXING ACTUATOR PARTS LOCATION



SIDE VIEW

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

REAR VIEW

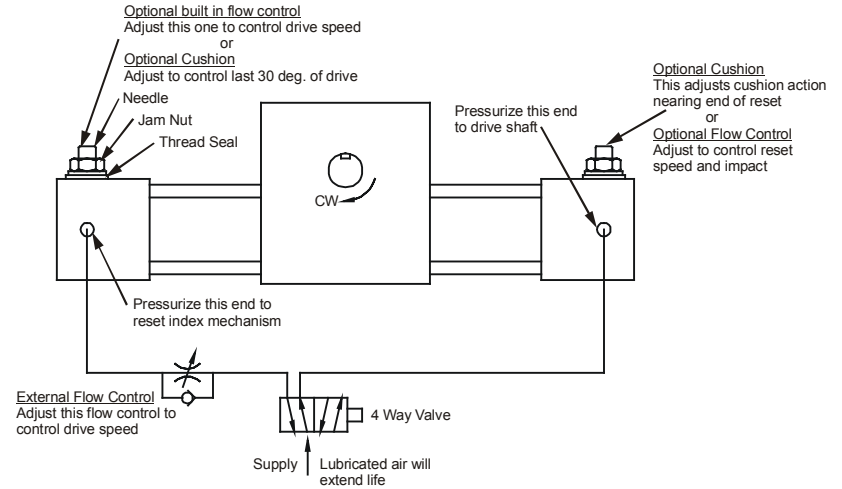
- BEARING PLATE AND BEARING REMOVED
- CW INDEXING ACTUATOR SHOWN AT THE END OF DRIVE STROKE WITH SHAFT LOCKED
- CCW INDEXING ACTUATOR IS A MIRROR IMAGE



11 Sunshine Blvd. Ormond Beach FL 32174

Phone: 386-676-6377 • Fax: 386-676-6379

X1 INDEXING ACTUATOR INSTALLATION AND SETUP



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

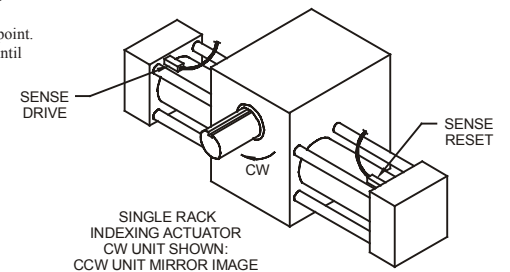
To adjust cushion ("C" option) on reset or drive:

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 "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 index point.
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.

INDEXING ACTUATOR SWITCH PLACEMENT



SWITCH LEADS

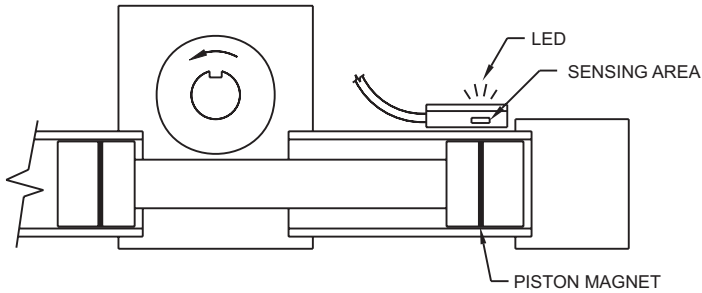
	OPTION	LEAD
Standard Lead	RL, SL	9', end stripped
Connection option	RC, SC	6" pigtail with male connector

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 -

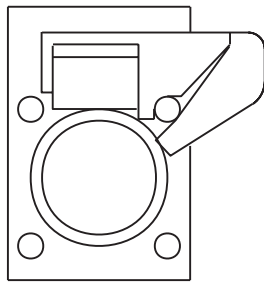
SENSING



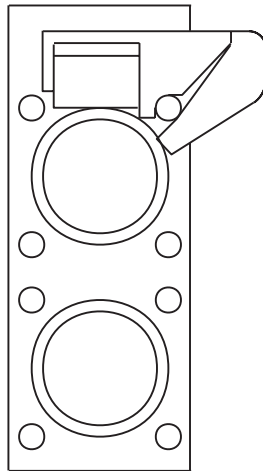
APPROACHING PISTON MAGNET ACTIVATES SENSOR, OPERATES SWITCH AND LED.
PLACE SWITCH AS CLOSE AS POSSIBLE TO END CAP FOR CORRECT OPERATING POSITION.

SWITCH MOUNTING

TIE ROD CLAMP



SERIES X1



SERIES X12

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

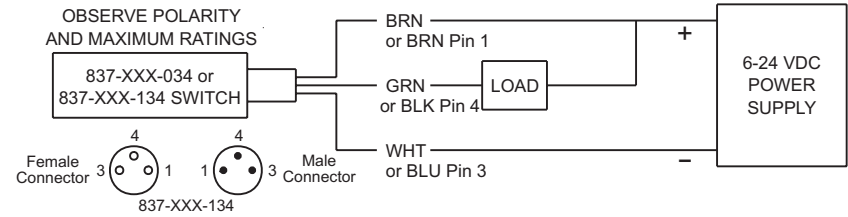
Temperature range

-30 to +80C

Environment

Resistant to moisture, dust, oil

OBSERVE POLARITY
AND MAXIMUM RATINGS



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

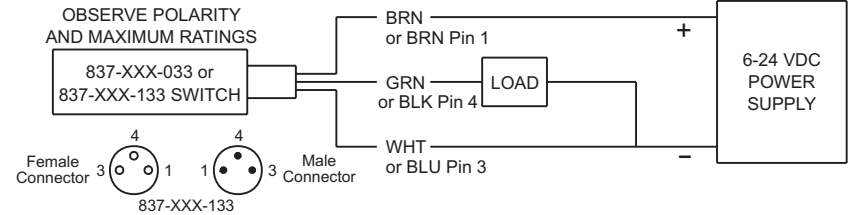
Temperature range

-30 to +80C

Environment

Resistant to moisture, dust, oil

OBSERVE POLARITY
AND MAXIMUM RATINGS



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.