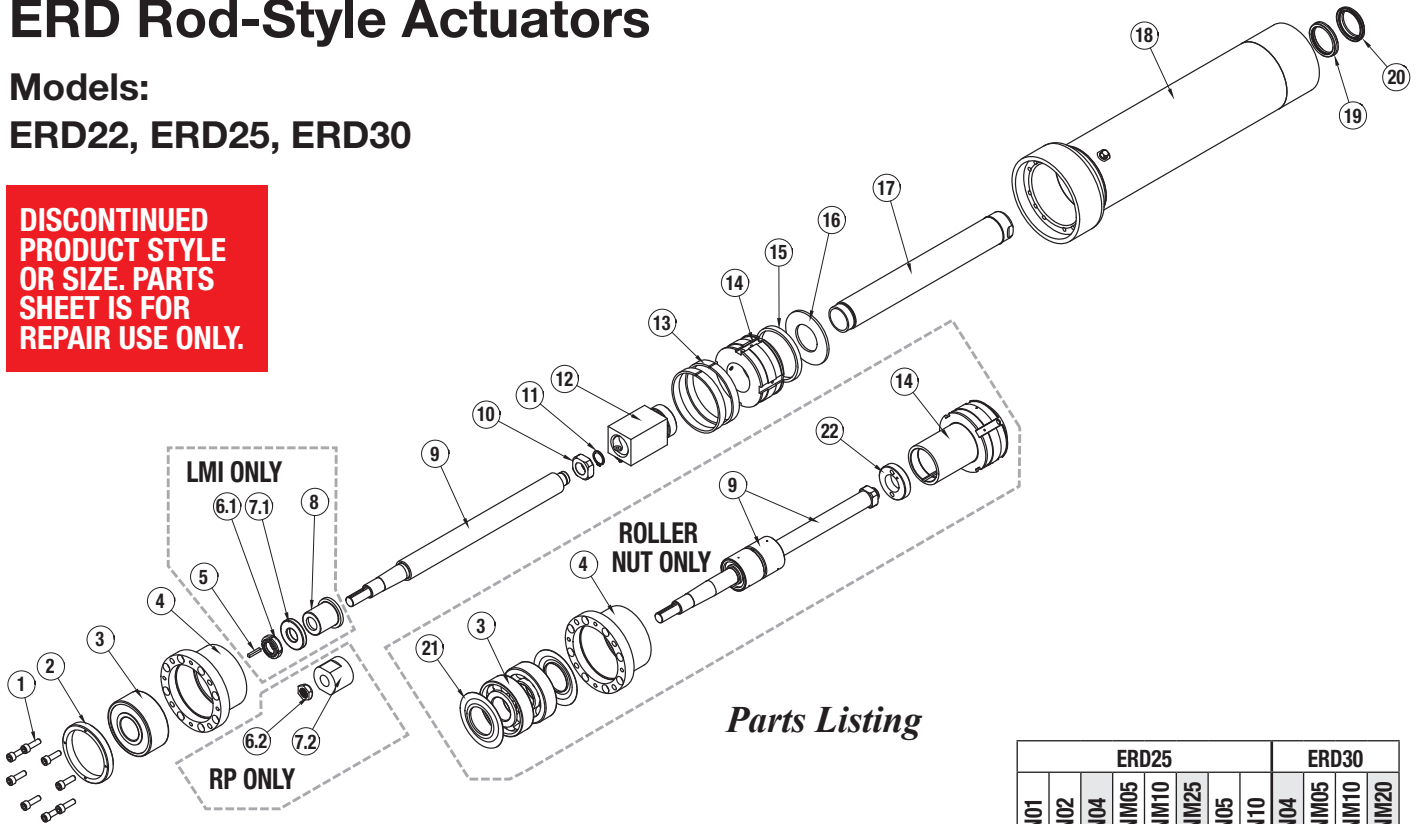


ERD Rod-Style Actuators

Models:

ERD22, ERD25, ERD30

**DISCONTINUED
PRODUCT STYLE
OR SIZE. PARTS
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Parts Listing

ITEM	PART NO	DESCRIPTION	ERD25						ERD30				
			BN01	BN02	BN04	BNM05	BNM10	BNM25	RN05	RN10	BN04	BNM05	BNM10
1	2194-3030	SHCS	8	8	8	8	8	8	8	8	8	8	8
2	2744-1018	LOCK RING	1	1	1	1	1	1	1	1	1	1	1
3	2700-1096	BEARING	1	1	1	1	1	1			1	1	1
	2744-1020	BEARING, RN							2	2			
4	2194-1437	BEARING PLATE	1	1	1	1	1	1			1	1	1
	2194-1438	BEARING PLATE, RN							1	1			
5	2194-3016	KEY	1	1	1	1	1	1	1	1			
	2132-1113	KEY									1	1	1
6.1	2750-1023	LOCK NUT, LMI	1	1	1	1	1	1	1	1			
	2755-1016	LOCK NUT, LMI									1	1	1
6.2	1132-1013	SPHERICAL NUT, RP	1	1	1	1	1	1	1	1			
	1150-1113	SPHERICAL NUT, RP									1	1	1
7.1	2750-1015	WASHER, LMI	1	1	1	1	1	1					
	2194-3140	WASHER, LMI									1	1	1
7.2	2744-1015	WASHER, LMI							1	1			
	2194-1550	SPACER, RP	1	1	1	1	1	1	1	1			
8	2194-1551	SPACER, RP									1	1	1
	2194-1503	SLEEVE	1	1	1	1	1	1					
9	2194-1504	SLEEVE									1	1	1
	2194-1505	SLEEVE, RN							1	1			
9	2194-1448	MACHINED SCREW, LMI	1										
	2194-1449	MACHINED SCREW, RP	1										
	2194-1450	MACHINED SCREW, LMI		1									
	2194-1451	MACHINED SCREW, RP			1								
	2194-1452	MACHINED SCREW, LMI				1							
	2194-1453	MACHINED SCREW, RP					1						
	2194-1454	MACHINED SCREW, LMI						1					
	2194-1455	MACHINED SCREW, RP							1				
	2194-1456	MACHINED SCREW, LMI								1			
	2194-1457	MACHINED SCREW, RP									1		
	2194-1458	MACHINED SCREW, LMI										1	
	2194-1459	MACHINED SCREW, RP											1
	2194-1463	MACHINED SCREW, LMI											
	2194-1464	MACHINED SCREW, RP											

NOTE!

Before starting any maintenance activities, make sure that the supply power is shut OFF.

ANTI ROTATE (ARI) OPTION

ARI

ITEM	PART NO	DESCRIPTION	ERD25	ERD30
23	2194-1090	ANTI ROTATE KEY	2	2
24	2194-1124	ANTI ROTATE TUBE	1	1
25	2750-1127	PIN	4	4

FRONT FLANGE MOUNT (FFG) OPTION

FFG

ITEM	PART NO	DESCRIPTION	ERD25	ERD30
39	2194-1066	GASKET	1	1
40	2194-1009	FLANGE	1	1
41	2194-3141	WASHER	4	4
42	2194-1010	BOLT	4	4

HYGIC (HYG1) OPTION

HYG1

ITEM	PART NO	DESCRIPTION	ERD25	ERD30
26	2194-1072	GASKET	1	1
27	2194-3141	WASHER	2	2
28	2194-1011	BOLT	2	2
29	2194-1020	BRACKET	1	
	2194-1021	BRACKET		1
30	2194-1101	WIPER	1	
	2194-1102	WIPER		1

TRUNNION MOUNT (TRR) OPTION

TRR

ITEM	PART NO	DESCRIPTION	ERD25	ERD30
43	1150-1411	TRUNNION	2	2

SWITCHES

SWITCHES

ITEM	PART NO OR CONFIG CODE	DESCRIPTION	ERD25	ERD30
44	SWORD30RY	SWTICH, REED, NO, FLYING LEAD	AR	AR
	SWORD30RK	SWTICH, REED, NO, QD	AR	AR
	SWORD30TY	SWTICH, PNP, NO, FLYING LEAD	AR	AR
	SWORD30TK	SWTICH, PNP, NO, QD	AR	AR
	SWORD30KY	SWTICH, NPN, NO, FLYING LEAD	AR	AR
	SWORD30KK	SWTICH, NPN, NO, QD	AR	AR

FOOT MOUNT (FM2) OPTION

FM2

ITEM	PART NO	DESCRIPTION	ERD25	ERD30
31	2194-1022	BOLT	2	2
32	2194-3142	WASHER	2	2
33	2194-1016	BRACKET	1	1
34	2194-1069	GASKET	1	1
35	2194-1066	GASKET	1	1
36	2194-1015	BRACKET	1	1
37	2194-3141	WASHER	4	4
38	2194-1011	BOLT	4	4

LMI MOTOR MOUNT

LMI

ITEM	PART NO	DESCRIPTION	ERD25	ERD30
46	*	SHCS	4	4
47	*	MOTOR GASKET	1	1
48	4415-1063	SHCS	4	4
49	*	MOTOR PLATE	1	1
50	2194-1063	MOTOR PLATE GASKET	1	1
51	4915-1003	SHCS	4	4
52	4420-1002	SHCS	4	4
53	*	MOTOR SPACER	1	1
54	2194-1062	SPACER GASKET	1	1
55	*	COUPLER ASSEMBLY	1	1

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RP MOTOR MOUNT


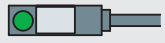

RP

ITEM	PART NO	DESCRIPTION	ERD25	ERD30
56	2194-1024	BOLT	4	4
57	2194-1036	BOLT	2	2
58	2733-1289	WASHER	6	6
59	*	RP COVER	1	1
60	*	RP GASKET	1	1
61	*	ACTUATOR PULLEY	1	1
62	*	MOTOR PULLEY	1	1
63	*	COLLAR CLAMP	1	1
64	*	TIMING BELT	1	1
65	2194-3030	SHCS	4	4
66	*	SQUARE NUT	4	4
67	4915-1003	SHCS	4	4
68	*	RP PLATE	1	1
69	2194-1062	RP PLATE GASKET	1	1
70	*	MOTOR GASKET	1	1
71	*	WASHER	4	4
72	*	SHCS	4	4

CLEVIS MOUNT (PCD) OPTION MOUNT

PCD

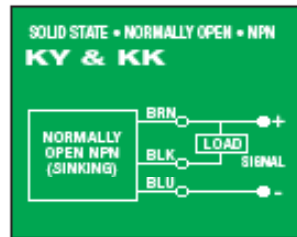
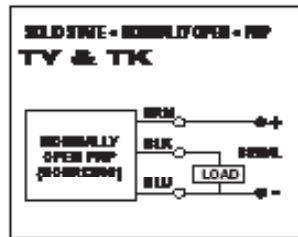
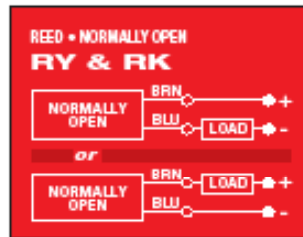
ITEM	PART NO	DESCRIPTION	ERD25	ERD30
73	2194-1073	CLEVIS PIN	1	1
74	2194-1074	BUSHING	2	2
75	2194-1225	BRACKET	2	2
76	2194-1067	GASKET	2	2
77	2194-1012	SHCS	4	4

	Order Code	Lead	Switching Logic	Power LED	Signal LED	Operating Voltage	**Power Rating (Watts)	Switching Current (mA max.)	Current Consumption	Voltage Drop	Leakage Current	Temp. Range	Shock / Vibration	
REED	RY	5m	SPST Normally Open	—	Red	5 - 240 AC/DC	**10.0	100mA	—	3.0 V max.	—	14 to 158°F	30 G / 9 G	
	RK	QD*												
SOLID STATE	TY	5m	PNP (Sourcing) Normally Open	—	Green	5 - 30 VDC	**3.0	200mA	8 mA @ 24V	1.0 V max.	0.01 mA max.	[-10 to 70°C]	50 G / 9 G	
	TK	QD*												
	KY	5m		NPN (Sinking) Normally Open	—									Red
	KK	QD*												

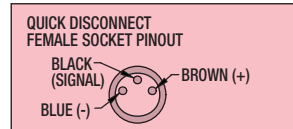
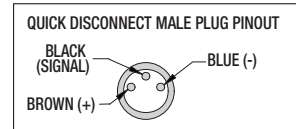
*QD = Quick-disconnect Enclosure classification IEC 529 IP67 (NEMA 6) CABLES: Robotic grade, oil resistant polyurethane jacket, PVC insulation

▲**WARNING: Do not exceed power rating (Watt = Voltage x Amperage). Permanent damage to sensor will occur.

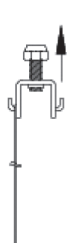
WIRING DIAGRAMS



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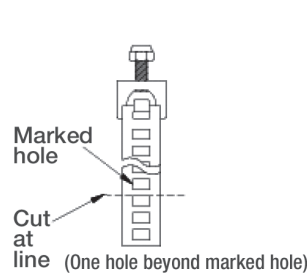
SWITCH INSTALLATION - FIELD REPLACEMENT INSTRUCTIONS



STEP 1:
Loosen screw and nut.



STEP 2:
Place sensor and wrap the band around the ERD cylinder. Position the hook with the nearest hole on the band and mark the hole with a permanent marker.



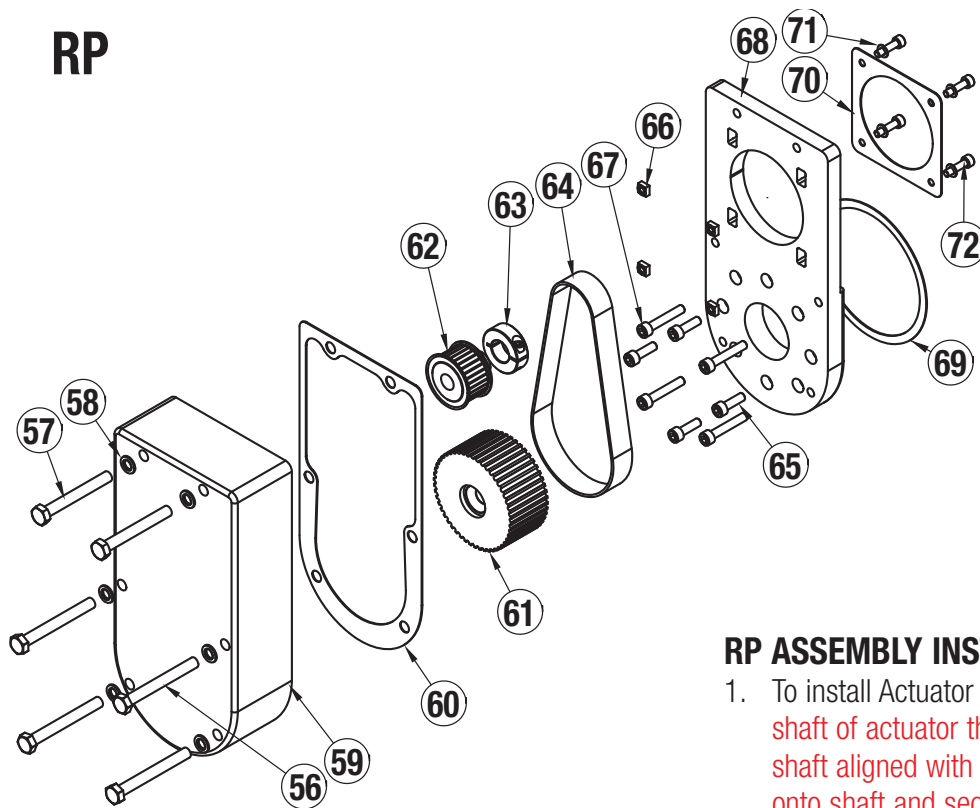
STEP 3:
Remove mounting assembly. Cut the band at the nearest edge of the next hole. (The one that's furthest away from the mounting head.)



STEP 4:
Replace the sensor and

mounting assembly. Wrap the band and put the chosen hole on the hook. Position the switch and tighten. Tighten nut for steadying.

RP



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RP DISASSEMBLY INSTRUCTIONS (ERD15 & 20)

Begin with a clean work area. Be sure all replacement parts are present and have no visual damage or defects. The following tools are recommended for proper disassembly and assembly.

Allen wrench set

Socket wrench & socket set

1. Loosen the Motor Mount Fasteners (72) to remove belt tension.
2. Remove RP Cover (59) by removing the six Socket Head Cap Screws (56 & 57).
3. Remove Belt (64).
4. Remove the motor by removing the Motor Mount Fasteners (72) and the Square Nuts (66).
5. To replace motor, remove Motor Pulley (62) by loosening Collar Clamp (63) and sliding both off motor shaft.
6. To replace Actuator Pulley (61) use spanner wrench on Actuator Pulley and socket to **remove Spherical Nut (10)**. **Pull Actuator Pulley, Key (8) and Spherical Washer (9) from the shaft.**

RP ASSEMBLY INSTRUCTIONS

1. To install Actuator Pulley (61) place **Key (8)** onto shaft of actuator then slide Actuator Pulley onto the shaft aligned with Key. Slide **Spherical Washer (9)** onto shaft and secure with **Spherical Nut (10)** using spanner wrench and socket.
2. Align motor with slots RP Plate (68). Install four Motor Mount Fasteners (72) through motor and RP Plate then into the four Square Nuts (66). The Square Nuts must seat into the pockets of the RP Plate. Tighten enough so motor is not drooping but able to move vertically.
3. Align the Collar Clamp (63) with the Motor Pulley (62) and install the Motor Pulley onto the motor shaft by tightening the Collar Clamp fastener. Align Motor Pulley with the Actuator Pulley (61).
4. Slide Belt (64) over Motor Pulley (62) and Actuator Pulley (61).
5. Attach RP Cover (59) to RP Plate (68) using six Socket Head Cap Screws (56 & 57).
6. Tension the Belt (64) by pulling the motor away from the leadscrew with the appropriate force in the chart below. Tighten the Motor Fasteners (72) while this force is applied to the motor.

Motor Shaft Diameter	Tension Force
< 0.375	10 lbs
>=.375 < .625	20 lbs
>=.625	30 lbs

COUPLER MOUNTING (ERD25 & 30)

- Slide actuator side coupler half onto leadscrew.
- Place correct sized Hex Key into the through hole in rear housing and lock into fastener as shown in Photo 2.1.
- End of leadscrew should be flush or below the face of the coupler.
Tighten each fastener in the coupler

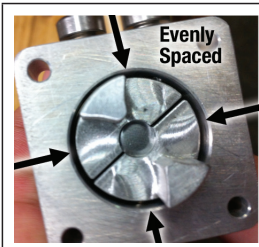


Photo 2.2

evenly and to the specs listed in table 2.1. When tightened, the gap between the coupler half and the rear housing should be equal all around. (see photo 2.2)

- Install spider gear onto the actuator side coupler half and install the motor spacer to the rear housing of the ERD.
- Install second half of coupler onto the motor shaft; keeping the face of

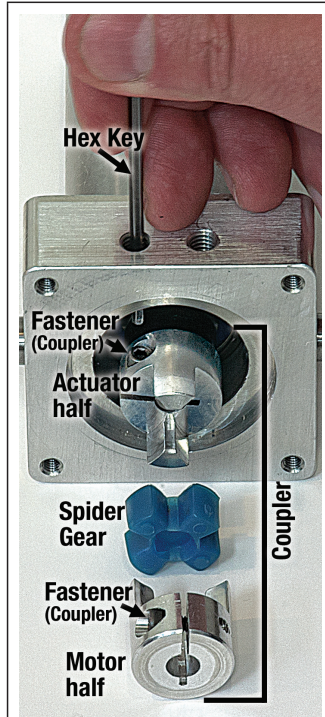


Photo 2.1

coupler flush with end of shaft. Tighten in same manner and to same specs as actuator side coupler half.

- Place motor onto the motor spacer and align coupler to spider gear. Tighten motor fastening screws.

Table 2.1

ERD SIZE	CROSS BOLT SIZE	HEX KEY SIZE	INSTALLATION TORQUE	
			(In-lbs)	(N-m)
25	M3	2.5 mm	13	1.47
30	M4	3.0 mm	40	4.52

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3800 County Road 116, Hamel, MN 55340 USA
<http://www.Tolomatic.com> • Email: Help@Tolomatic.com
 Phone: (763) 478-8000 • Fax: (763) 478-8080 • Toll Free: 1-800-328-2174

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