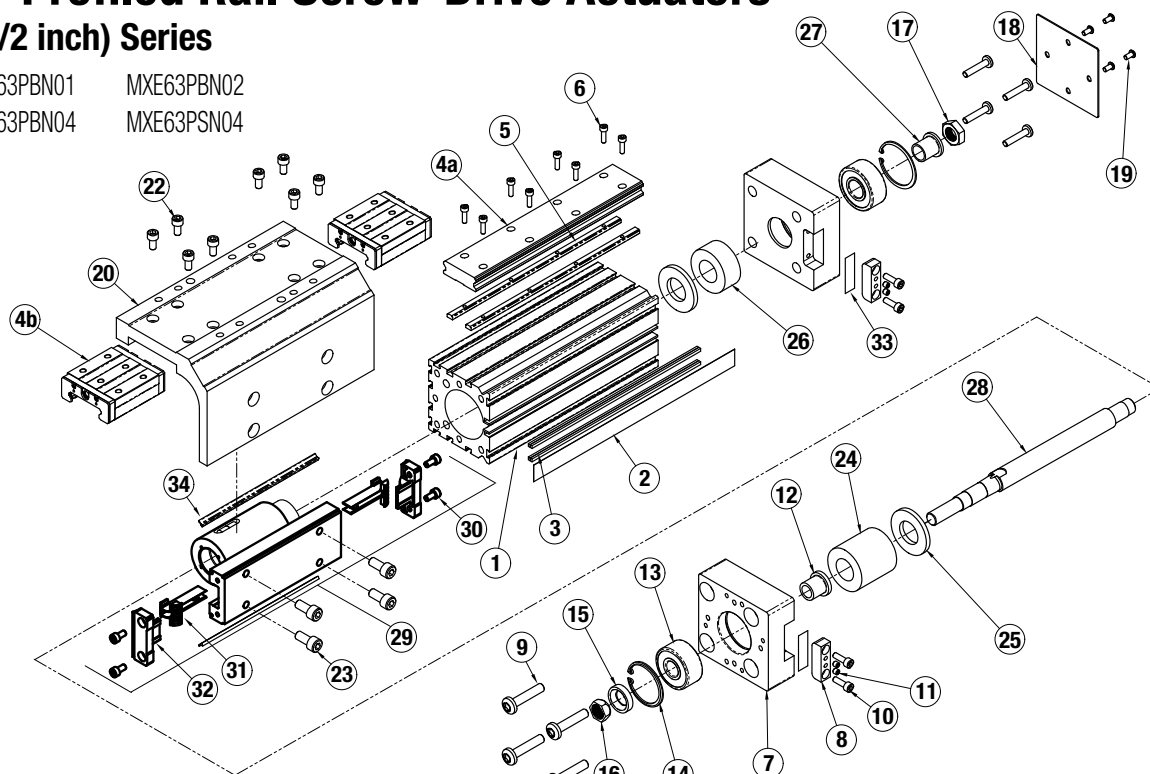


MXE63P Profiled Rail Screw-Drive Actuators

63mm (2-1/2 inch) Series

Models: MXE63PBN01 MXE63PBN02
 MXE63PBN04 MXE63PSN04



Parts Listing

A/R= Length As Required

ITEM	PART NO. or CONFIG. CODE	DESCRIPTION	MXE63P			
			BN01	BN02	BN04	SN04
1	RTBMXE63	Replacement Tube (8363-1010)				
2 ¹	NDBMXE63	New Dust Band (8363-1018)				
3	NMBMXE63	New Magnet Band Kit (8363-1019) (2 magnet strips included)	After Config. Code add: SK (stroke length in inches) or SM (stroke length in mm)			
5 ^{4a} 5 ^{4b}	NPRMXE63	Replacement Bearing Rail add DW for Dual Carrier add BB for optional Bearing Blocks				
5	NNRMXE63	New Nut Rail Kit (8363-1053) (2 rails included)				
6	4415-1024	SHCS	A/R	A/R	A/R	A/R
7	8363-1011	Head	2	2	2	2
8	8363-1017	Band Clamp	2	2	2	2
9	8350-1023	Pan Head Screw	8	8	8	8
10	2212-1031	Socket Head Cap Screw	4	4	4	4
11	8140-1073	Set Screw	4	4	4	4
12	1150-1144	Tapered Leadscrew Sleeve	1	1	1	1
13	2133-1022	Bearing	2	2	2	2
14	2133-1021	Retaining Ring	2	2	2	2
15	1150-1114	Spherical Washer	1	1	1	1
16	1150-1113	Spiralock Spherical Nut	1	1	1	1
17	2124-1023	Hex Nut	1	1	1	1
18	8363-1022	Cover Plate	1	1	1	1
19	8340-1009	Button Head Cap Screw	4	4	4	4
20	8363-1521	Carrier (inch)	1	1	1	1
	8363-1021	Carrier (metric)	1	1	1	1
21		Number is not used				
22	4415-1000	Socket Head Cap Screw	8	8	8	8
23	2164-1065	Socket Head Cap Screw, SS	4	4	4	4
24	8363-1024	Nylon Spacer	1	1	1	1
25	8363-1023	Bumper	1	1	1	1
26	8363-1025	Nylon Spacer	1	1	1	1
27	8363-1027	Flanged Sleeve Bearing	1	1	1	1

ITEM	PART NO. or CONFIG. CODE	DESCRIPTION	MXE63P			
			BN01	BN02	BN04	SN04
28	RLSAMXE63-BN01SK ³ LMI ⁴	Leadscrew, 1.00, BN01, LMI (8363-1100)	A/R	-	-	-
	RLSAMXE63-BN01SK ³ RP ⁴	Leadscrew, 1.00, BN01, RP (8363-1101)	A/R	-	-	-
	RLSAMXE63-BN02SK ³ LMI ⁴	Leadscrew, 1.00, BN02, LMI (8363-1102)	-	A/R	-	-
	RLSAMXE63-BN02SK ³ RP ⁴	Leadscrew, 1.00, BN02, RP (8363-1103)	-	A/R	-	-
	RLSAMXE63-BN04SK ³ LMI ⁴	Leadscrew, 1.00, BN04, LMI (8363-1104)	-	-	A/R	-
	RLSAMXE63-BN04SK ³ RP ⁴	Leadscrew, 1.00, BN04, RP (8363-1105)	-	-	A/R	-
	RLSAMXE63-SN04SK ³ LMI ⁴	Leadscrew, 1.00, SN04, LMI (8363-1106)	-	-	-	A/R
	RLSAMXE63-SN04SK ³ RP ⁴	Leadscrew, 1.00, SN04, RP (8363-1107)	-	-	-	A/R
29	8363-9006	Nut Bracket Assembly, BN01	1	-	-	-
	8363-9007	Nut Bracket Assembly, BN02	-	1	-	-
	8363-9008	Nut Bracket Assembly, BN04	-	-	1	-
	8363-9009	Nut Bracket Assembly, SN04	-	-	-	1
30 ²	0603-1016	Socket Head Cap Screw, SS	4	4	4	4
31 ^{1,2}	8363-1007	Band Ramp	2	2	2	2
32 ^{1,2}	8163-1006	End Cap	2	2	2	2
33	8363-1028	Shim	2	2	2	2
	8363-1029	Shim	2	2	2	2
34 ¹	8163-1059	Wiper	2	2	2	2

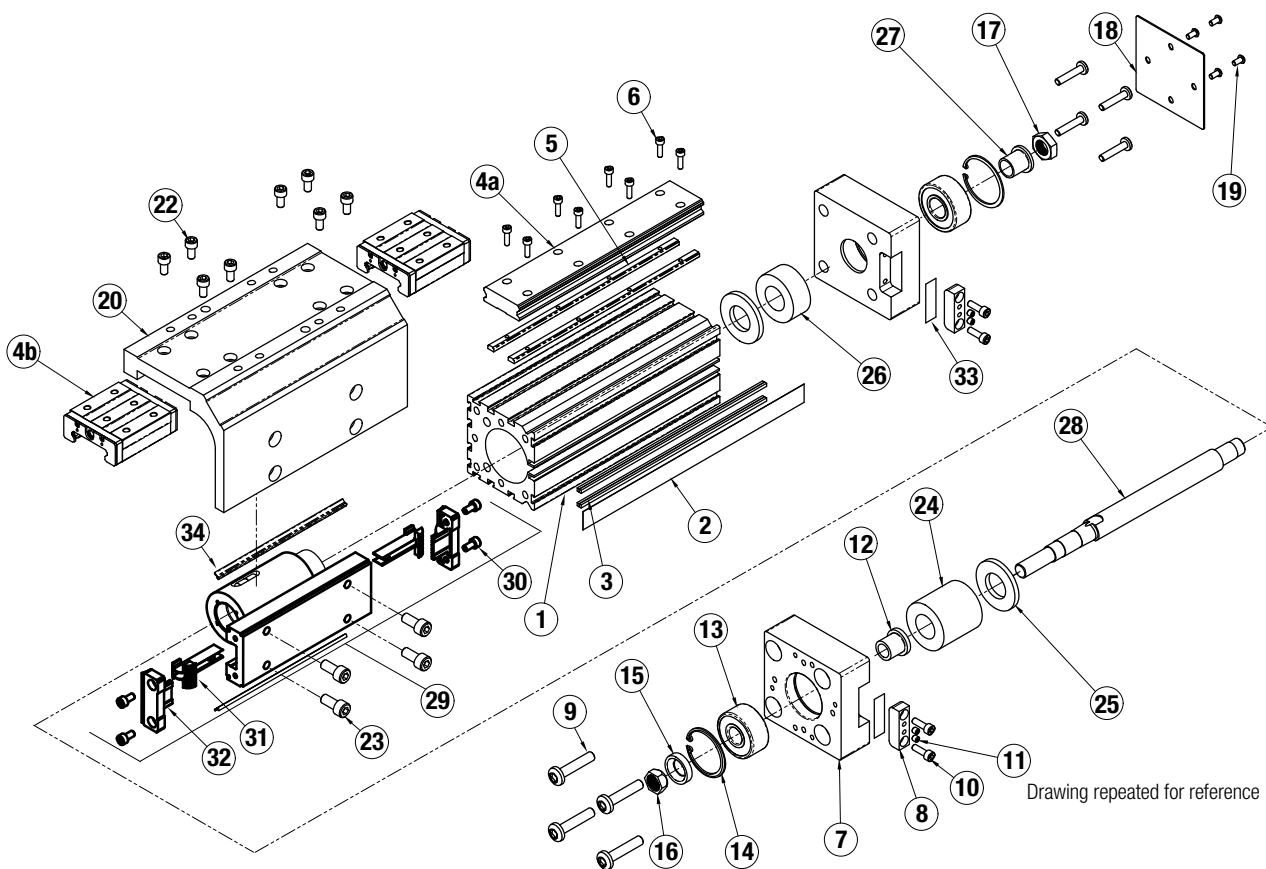
¹ Parts included in Repair Kits. (RKMXE63PSK or SM___, indicate stroke length in inches or millimeters)

² Parts included in Nut Bracket Assembly

³ SK or SM___, indicate stroke length in inches or millimeters

⁴ Length of connecting shaft varies by motor type and size, indicate motor code here

⁵ ⚠ Bearing Blocks and/or Bearing Rail purchased before Oct. 1, 2014 are NOT compatible with current Bearing Blocks and Bearing Rails purchased after Oct. 1, 2014



Drawing repeated for reference

Assembly and Disassembly Instructions

GENERAL ACTUATOR DISASSEMBLY INSTRUCTIONS

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.

- SAE Hex Wrench Set
- Metric Hex Wrench Set
- Torx bit set
- Metric Socket Set
- SAE Socket Set

For best actuator performance it is recommended that the following instructions be read and followed carefully.

1. DUST BAND AND CARRIER REMOVAL

Position the actuator with the Dust Band (2) facing up. Remove the Band Clamps (8) from both Heads (7) of the actuator by removing Screws (9) and backing out the Center Set Screw (11) a couple turns. Carefully lift the Dust Band (2) from the slot in each Head (7) and remove any Shims (33) located under the Band (2) in the Head (7) slot. Retain the Shims (33) for reassembly. Remove Screws (23) to release the Carrier (20) from the Nut Bracket Assembly (29). Slide the Carrier (20) clear of the Nut Bracket (29). Remove Nut Bracket End Caps (32) from both ends of the Nut Bracket (29). The Dust Band (2) can now be removed from the actuator.

NOTE: If removal of the Bearing Rail (4a) or Bearing Blocks (4b) is necessary, contact the factory prior to removal for specific instructions.

2. LEAD SCREW SUB-ASSEMBLY REMOVAL

On the *Non-Drive End* of the actuator remove the Screws (19) and remove the Cover Plate (18) and the Lock Nut (17) from Leadscrew (28). Remove the Screws (9) from both of the Heads (7) to the Tube (1). Remove the *Non-Drive End* Head (7) and the *Drive End* Head (7)/Leadscrew Assembly (28). If necessary, the Nut Bracket Assembly (29) can now be removed from the Leadscrew (28) and the Band Ramps (31) may also be removed from the Nut Bracket Assembly (29) if required.

Ball Nut style: Caution is required if removal of the Nut is necessary. Contact the factory for available parts and procedures.

Plastic Nut style: Plastic Nuts are factory pinned into the Nut Bracket (29) and cannot be removed. If Nuts are worn, a new Nut Bracket Assembly (29) must be ordered.

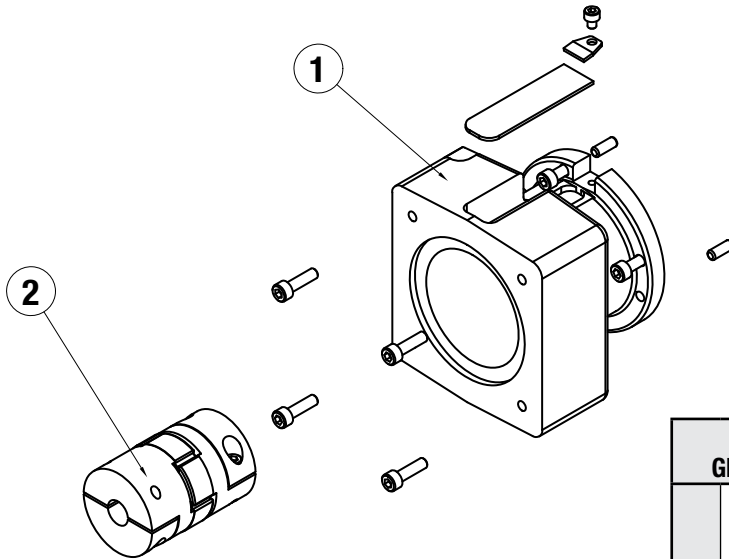
If *Drive End* Head (7) and Bearing (13) must be removed from the Leadscrew (28), contact the factory prior to removal for specific instructions.

GENERAL CYLINDER ASSEMBLY INSTRUCTIONS

1. INSTALL LEAD SCREW ASSEMBLY AND CARRIER

Install the Band Ramps (31) to the Nut Bracket Assembly (29) with Screws (30). From the *Drive End*, install the Head (7)/Leadscrew (28)/Nut Bracket Assembly (29) into the Tube (1) making sure the Bearing Rail (4a) is oriented on the left side of the Tube (1). With the Bumper (25) and Nut Spacer (24) in place, position the *Non-Drive End* Head (7) over the Leadscrew (28) and loosely install Screws (9) into the Head (7). Install the *Drive End* Screws (9) loosely into the *Drive End* Head (7).

Inline Motor Mount Option



ITEM	PART NUMBER	DESCRIPTION	WITH GEARHEAD				WITHOUT GEARHEAD			
			MRS3XXX/GHS3XX	MRS33XX/GHS3XX	MRV2XXX/GHV2XX	MRV3XXX/GHV3XX	MRS3XXX	MRS33XX	MRV2XXX	MRV3XXX
1	2150-9053	Motor Mounting Kit, MRV23X, 200			1			1		
	2150-9200	Motor Mounting Kit, MRV34FR,RSA/R	1	1		1				
	4520-9086	Motor Mounting Kit, MRS3,MCS20/M3S20					1	1		1
	2150-9056	Motor Mounting Kit, MRV51 RSA50								1
2	3600-9242	Coupler Kit, 24,.50/.50,AL,M	1	1	1	1		1	1	
	3600-9244	Coupler Kit, 24,.50/.63,AL,M6						1		
	3600-9244	Coupler Kit, 24,.50/.63,AL,M6								1

2. INSTALL DUST BAND AND CARRIER

Install the Dust Band (2) through the Nut Bracket Assembly (29) and install the End Caps (32) onto the Nut Bracket (29). Position Carrier (20) over the Bearing Blocks (4b) and the Nut Bracket (29) and install all Screws (22,23) and leave them loose at this time. By hand, load the Carrier (20) to keep it tight down on the surface of the Bearing Blocks (4b) and tighten the Carrier (20) to Nut Bracket Fasteners (23). Tighten the Carrier (20) to Bearing Block Fasteners (22).

Move Carrier Assembly (20) to idle end of Tube (1) and tighten these Head Screws (9).

Move Carrier Assembly (20) back to the Drive-End of Tube (1) and loosen the Screw (9) that was previously tightened and then tighten all Head Screws (9).

Apply Loctite 242 to Lock Nut (17) and thread onto the Leadscrew (28) and torque to 18-20 in-lbs (2-2.25 N-m).

3. PERFORM HEAD ALIGNMENT AND FINAL ASSEMBLY

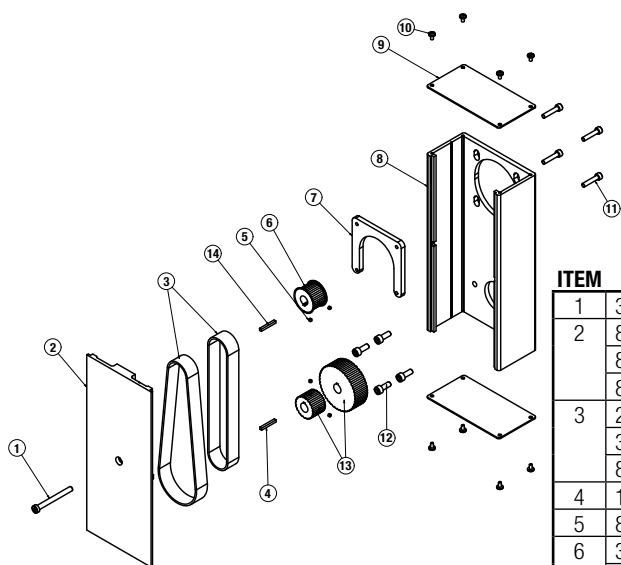
NOTE: Custom tooling is used at the factory to align the Heads (7) to the Tube (1) to maintain parallelism between the top of the Head (7) and top of the Tube (1). This is critical to performance and longevity of the Dust Band (2). In the following steps take care to visually align Head (7) to Tube (1).

Move Carrier Assembly (20) to Drive-End of Tube (1) and tighten one of the Head Screws (9). Support the actuator on the Tube (1) so that the Head (7) is free to float while tightening the Head Screws (9).

4. INSTALL BAND CLAMPS

Visually examine the interface between the Dust Band (2) surface of the Tube (1) and the clamping surface of each Head (7). This should be flush. It may be necessary to install Shims (33) in the pocket of the Head (7) in order to make flush. Position the Carrier (20) near the motor end, position the Band (2) in the pocket over any previously installed Shims (33) and install the Band Clamp (8) with the two Cap Screws (10). Lastly, tighten down the Center Set Screw (11). Position the Carrier (20) near the *Non-Drive End* and repeat the steps to install the Band Clamp (8).

Reverse Parallel (RP) Option



ITEM	PART NUMBER	DESCRIPTION										
			(8363-9020)			(8363-9022)			(8363-9026)			
			1:1			2:1						
			MRV2XXX	MRS3XXX	MRV51XX	MRS31XX, MRS32XX	MRS33XX	MRV2XXX	MRV31XX	MRV51XX	MRS31XX, MRS32XX	MRS33XX
1	3420-1641	Low Head Cap Screw	1	1	1	1	1	1	1	1	1	1
2	8363-1046	RP Cover, 34 Frame		1		1	1		1		1	1
	8363-1047	RP Cover, 56 Frame			1					1		
	8363-1045	RP Cover, 23 Frame	1					1				
3	2164-1007	Timing Belt, 375L	1									
	3415-1441	Timing Belt, 425L		1	1	1	1	1				
	8363-1042	Timing Belt, 475L							1	1	1	1
4	1004-7706	Square Key, .125 X .125 X 1.00	2	2	1	2	1	2	2	1	2	1
5	8363-1043	Set Screw	4	4	4	4	4	4	4	4	4	4
6	3415-1438	Pulley, 20Teeth, .500B, Key	1	1		1		1	1		1	
	3420-1438	Pulley, 20Teeth, 5/8B, Key			1		1			1		1
	0601-1053	U-Plate, 23 Frame	1					1				
7	0602-1057	U-Plate, 34 Frame		1		1	1		1		1	1
	3420-1625	U-Plate, 56 Frame			1					1		
	8363-1035	RP Housing, 23 Frame	1					1				
8	8363-1036	RP Housing, 34 Frame		1		1	1		1		1	1
	8363-1037	RP Housing, 56 Frame			1					1		
	3420-1602	End Cap, RP Housing	2	2	2	2	2	2	2	2	2	2
10	0601-1625	Screw	8	8	8	8	8	8	8	8	8	8
	2212-1099	Socket Head Cap Screw, M5 X 0.8, 25mm	4	4		4	4	4	4		4	4
11	3420-1638	Socket Head Cap Screw, M8 X 1.25, 35mm			4					4		
	4415-1000	Socket Head Cap Screw, M6 X 1.0, 16mm	4	4	4	4	4	4	4	4	4	4
12	8363-1040	Pulley, 20 Teeth	1	1	1	1	1					
	8363-1041	Pulley, 40 Teeth						1	1	1	1	1
14	2150-1067	Square Key, .18 X .188 X 1.00			1		1			1		1

REVERSE PARALLEL DISASSEMBLY INSTRUCTIONS

1. Remove Screws (10) to release Housing End Caps (9). Release the tension on Belt by breaking loose the Motor Screws (11).
2. Remove Screw (1) to remove Cover (2).
3. The Belt (3) can now be removed along with the Motor.
4. Remove both Pulleys (6) and (13) from their respective shafts.
5. Remove the RP Housing (8) from the actuator by removing Screws (12).

REVERSE PARALLEL ASSEMBLY INSTRUCTIONS

NOTE: Apply Loctite #242 to all Screws upon installation

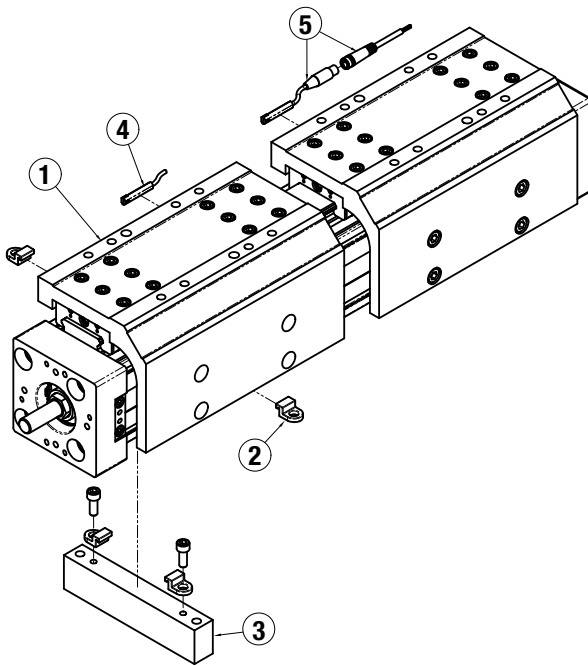
1. Install RP Housing (8) to the actuator Head (pg.1-#7) with Screws (12). Do not fully tighten the Fasteners at this time and verify that the RP Housing (8) can move with respect to the Head (pg.1-#7).
2. Install the Motor to the RP Housing (8) with Screws (11). Do not tighten the Screws (11) at this time.
3. Install Pulleys (6) and (13) as needed. Tighten each Pulley (6 & 13) to its shaft with either a trantorque or a collar clamp.

4. Locate the Belt (3) over the Pulleys (6) and (13).
5. Verify that there is clearance between the inside of the RP Housing (8) and each Pulley (6 & 13). Verify that the Pulleys (6 & 13) are aligned with each other.
6. Position the Cover (2) in the mating slot of the RP Housing (8) and install the Screw (1) to hold in place. Take care not to over tighten.
7. Tension the Belt (3) by pulling the Motor away from the drive shaft with the appropriate tension force shown in the chart below. While tensioning, the actuator should be positioned so the weight of the Motor does not affect the belt tension. Tighten the Motor Screws (11) while the tensioning force is applied to the Motor.
8. Install both End Caps (9) with the Screws (10) to finalize assembly.

Smallest Shaft Diameter*	Tension Force
.18" to .25"	10 lbs
> .25" to .50"	20 lbs
> .50"	30 lbs

*The smaller of the actuator drive shaft or the motor shaft.

Actuator Options Parts



ITEM	PART NO.	DESCRIPTION	QTY in KIT
1	8363-9514	Auxiliary Carrier Assembly, (inch)	
	8363-9014	Auxiliary Carrier Assembly, (metric)	
2	8163-9018	TUBE CLIP MOUNT KIT	
	8163-1050	Tube Clamp	
3	8363-9016	MOUNTING PLATE KIT	
	8363-1031	Mounting Plate	
	8163-1050	Tube Clamp	
	8363-1044	Socket Head Cap Screw	

TO ORDER SERVICE PARTS SWITCHES:

Switches for MXE include retained mounting hardware and are the same for all actuator sizes and bearing styles

ITEM	Config. Code	Lead	Normally	Sensor Type
4	SWMXE63 R Y	5m (197 in)	Open	Reed
5	SWMXE63 R K	Quick-disconnect		
4	SWMXE63 N Y	5m (197 in)	Closed	Reed
5	SWMXE63 N K	Quick-disconnect		
4	SWMXE63 T Y	5m (197 in)	Open	Solid State PNP
5	SWMXE63 T K	Quick-disconnect		
4	SWMXE63 K Y	5m (197 in)	Open	Solid State NPN
5	SWMXE63 K K	Quick-disconnect		
4	SWMXE63 P Y	5m (197 in)	Closed	Solid State PNP
5	SWMXE63 P K	Quick-disconnect		
4	SWMXE63 H Y	5m (197 in)	Closed	Solid State NPN
5	SWMXE63 H K	Quick-disconnect		

NOTE: When ordering Quick-disconnect mating female connector is included

ORDERING REPAIR KITS

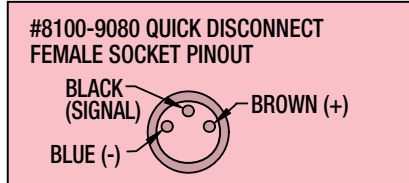
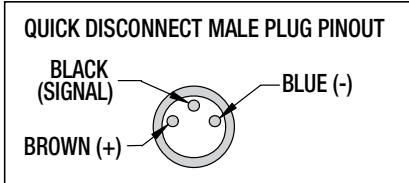
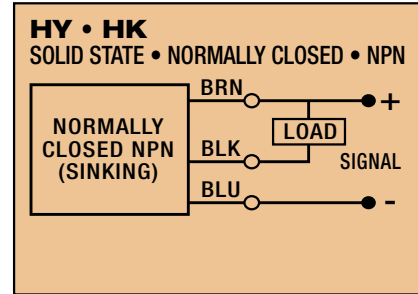
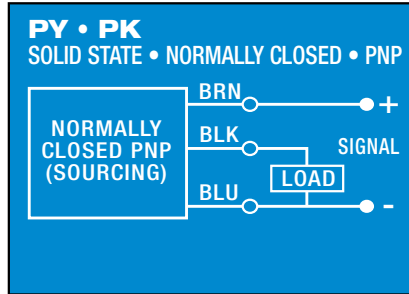
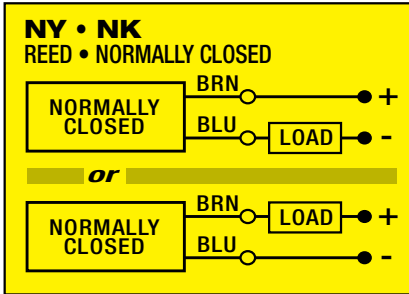
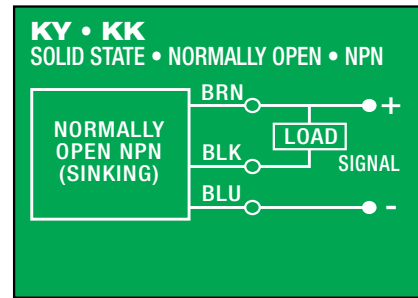
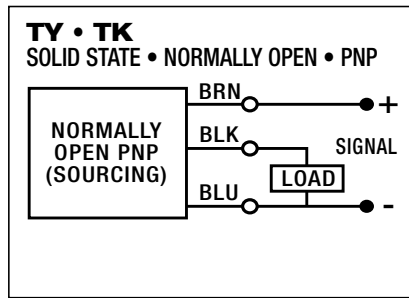
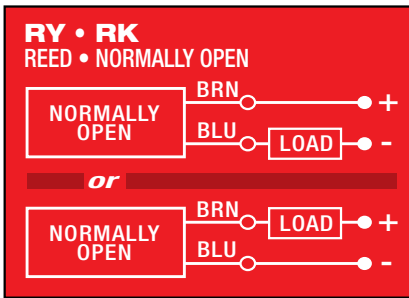
Repair kit includes: dust band, end caps, wipers

The part number for a repair kit begins with RK followed by model, actuator size, bearing type, and stroke length (**S****K** = inch/US Standard, **S****M** = metric)

(NOTE: If unit has an auxiliary carrier also include DC and distance between carrier centers)

REPAIR KIT	MODEL	ACTUATOR SIZE	BEARING TYPE	STROKE METRIC	STROKE LENGTH	AUXILIARY CARRIER	DISTANCE BETWEEN CARRIERS
RK	MXE	63	P	SM	2007	02	DC215.9

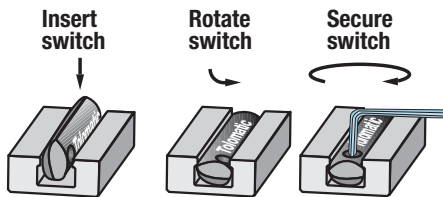
SWITCH WIRING DIAGRAMS AND LABEL COLOR CODING (CE and RoHS Compliant)



Switches for MX:

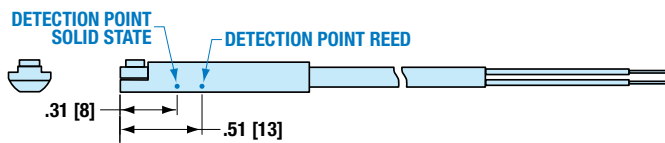
- Include retained mounting hardware
- In slot, sit below extrusion profile
- Same for all sizes and bearing styles

SWITCH INSTALLATION AND REPLACEMENT



Place switch in side groove on tube at desired location with "Tolomatic" facing outward. While applying light pressure to the switch, rotate the switch halfway into the groove. Maintaining light pressure, rotate the switch in the opposite direction until it is fully inside the groove with "Tolomatic" visible. Re-position the switch to the exact location and lock the switch securely into place by tightening the screw on the switch.

SWITCH DETECTION POINT



Dimensions in inches [brackets indicate dimensions in millimeters]



3800 County Road 116, Hamel, MN 55340
 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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