

# Hazardous Location EL Series Linear Actuators

## EL Series Explosion Proof Linear Actuators

This electromechanical system provides process engineers a clean, fast, simple and cost effective replacement for Hydraulic actuation and a longer life alternative to pneumatic actuation. The roller screw technology manufactured by Exlar outperforms rival ball screws by 15 times in travel life, and can carry higher loads. The compact design allows users to effectively replace hydraulic or air cylinders with an electromechanical actuator, yet meet all required capabilities of the application. Reduced emissions, reduced energy consumption (80% system energy efficiency), increased position control and accuracy – all leading to reduced cost – are provided by servo electric actuation.

The EL30 explosion-proof linear actuator offers CSA Class I\*, Division 1, Groups B, C or D rating.

The EL100 explosion-proof linear actuator offers a Class I, Division, Groups B, C, D & T3. The EL100 linear actuators. Also meet ATEX essential requirements and are in Conformance with the EU ATEX Directive 94/9/EC.

The EL Series linear actuators are compatible with nearly any Manufacturers' resolver-based amplifier.

*\*"Class I" means that flammable gases or vapors may be present in the air in quantities sufficient to produce explosive or ignitable mixtures. "Division 1" means that hazardous concentrations in the air may exist continuously, intermittently, or periodically under normal operating conditions. "Group B" allows for atmospheres containing hydrogen, or gases (or vapors) of equivalent hazard, such as manufactured gas. "Group C" allows for atmospheres containing ethyl-ether vapors, ethylene or cyclo propane. "Group D" allows for atmospheres containing gasoline, hexane, naphtha, benzene, butane, alcohol, acetone, benzol, lacquer solvent vapors or natural gas. EL Series actuators are not rated for operation in atmospheres containing acetylene Temperature classification defines the maximum surface temperature the product will reach at full load. T3 = 300 °C, T3A – 180 °C, T4 = 135 °C*

Typical Applications for EL Series explosion-proof motors are well-suited to many applications:

Turbine fuel flow	Chemical process plants
Printing presses	Fuel distribution systems
Engine test stands	Shipbound fuel management
Value control	Refineries
Pamper control	Paint booths



**EL30  
Explosion-Proof  
Linear Actuator**

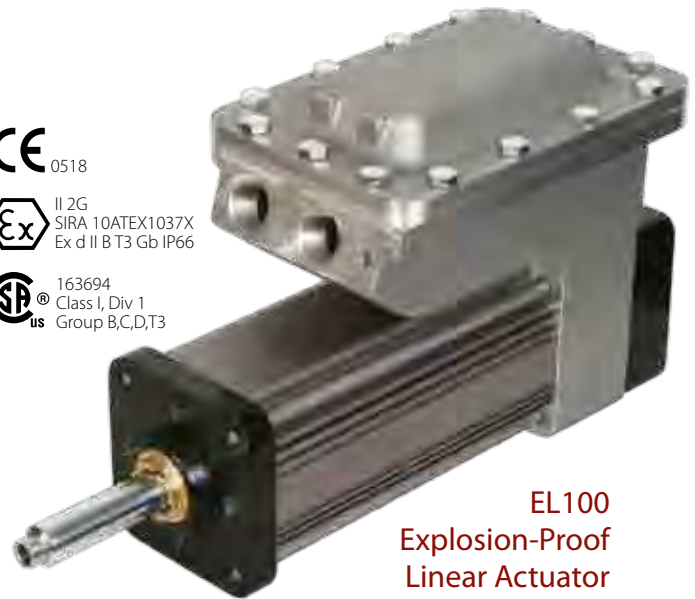
Class I, div 1, Groups B, C and D



II 2G  
SIRA 10ATEX1037X  
Ex d II B T3 Gb IP66



163694  
Class I, Div 1  
Group B,C,D,T3



**EL100  
Explosion-Proof  
Linear Actuator**

Class I, div 1, Groups B, C, D and T3

### Features

T-LAM technology yielding 35% increase in continuous motor torque over traditional windings

Forces to 2000 lbs

Speeds to 25 ips

Resolver feedback

Strokes up to 6 inches

8 pole motors

Rod end options

Several mounting configurations

Potted NPT connectors

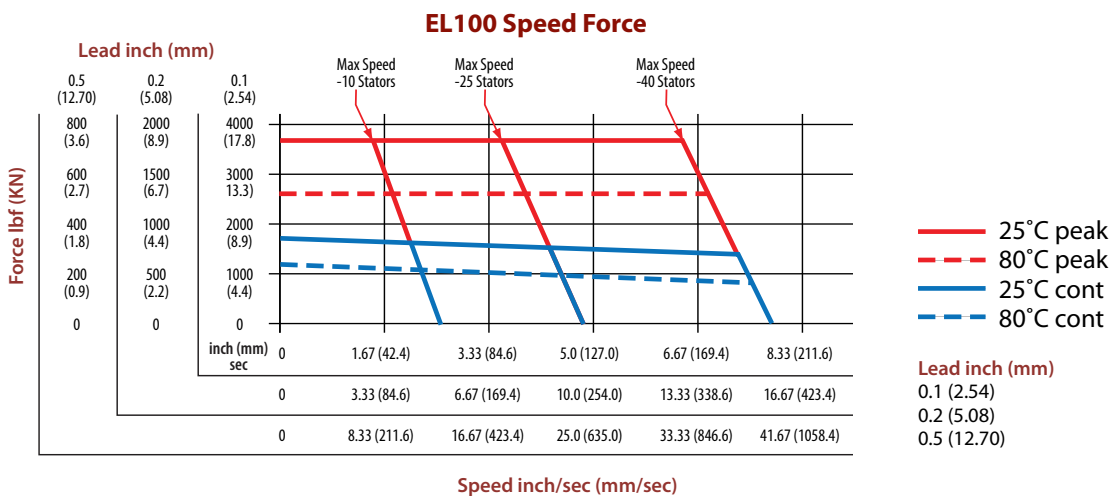
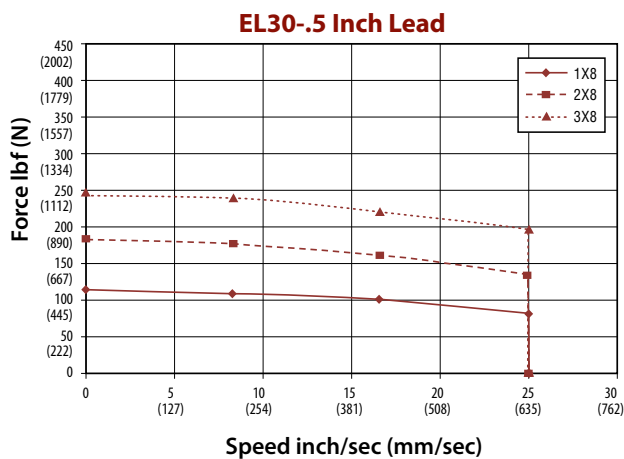
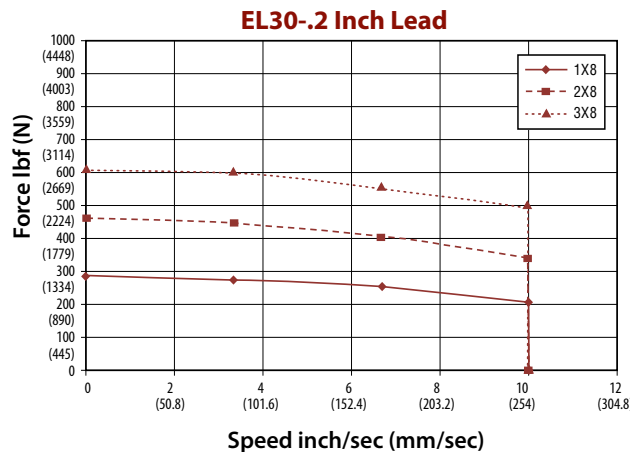
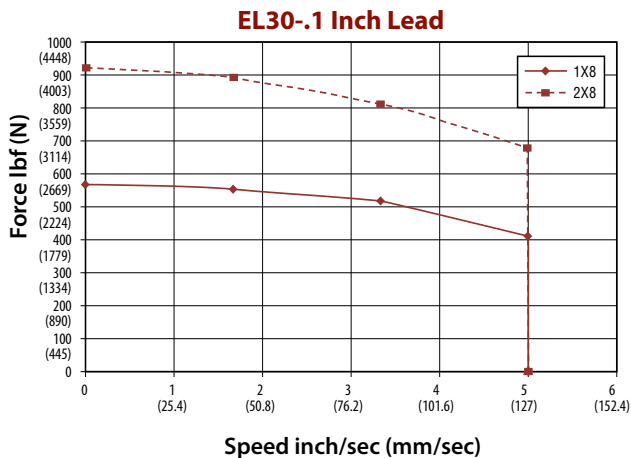
Windings available from 24 VDC to 460 VAC rms

Class 180H insulation

## EL Series Performance Curves

The below speed vs. force curves represent approximate continuous thrust ratings at indicated linear speed. Different types of servo amplifiers will offer varying motor torque and

thus actuator thrust. These values are at constant velocity and do not account for motor torque required for acceleration.



# Hazardous Location EL Series Linear Actuators

## EL Performance Specifications

Model No.	Frame Size in (mm)	Stroke (nominal)* in (mm)	Stator	Screw Lead in (mm)	Force Rating lb (N) 25°C/80°C	Max Velocity in/sec (mm/sec)	Approx* Cont. Motor Torque lb-in (N-m)	Maximum Static Load lb (N)	Armature Inertia Rating** lb-in-s <sup>2</sup> (Kg-m <sup>2</sup> )	Dynamic Load lb (N)	Weight (approx.) lb (kg)
EL30-0301	3.125 (79.0)	3 (75.0)		0.1 (2.54)	543/885/NA (2415/3936/NA)	5 (127.0)	10.8/17.6/NA (1.22/1.99/NA)	2700 (12010)	0.00319 (0.00036)	5516 (24536)	12 (5.4)
EL30-0302				0.2 (5.08)	271/442/NA (1205/1966/NA)	10 (254.0)				5800 (25798)	
EL30-0305				0.5 (12.7)	109/177/NA (485/787/NA)	25 (635.0)				4900 (21795)	
EL30-0601	3.125 (79.0)	6 (150.0)		0.1 (2.54)	543/885/NA (2415/3936/NA)	5 (127.0)	10.8/17.6/NA (1.22/1.99/NA)	2700 (12010)	0.00361 (0.00041)	5516 (24536)	15 (6.8)
EL30-0602				0.2 (5.08)	271/442/626 (1205/1966/2785)	10 (254.0)	10.8/17.6/24.9 (1.22/1.99/2.81)			5800 (25798)	
EL30-0605				0.5 (12.7)	109/177/250 (485/787/1112)	25 (635.0)	10.8/17.6/24.9 (1.22/1.99/2.81)			4900 (21795)	
EL100-0601	3.9 (100)	6 (150)	2A8-10 2B8-25 2C8-40 218-40 238.40 258.40 268.40	0.01 (2.54)	1806/1246 (8032/5542)	1.66 (4.16)	35.9 (24.8)	2700 (12010)	0.00361 (0.000408)	5516 (24536)	26.2 (11.9)
					1806/1246 (8032/5542)	41.66 (105.66)	35.9 (24.8)				
					1834/1266 (8160/5631)	6.66 (169.33)	36.5 (25.2)				
					1989/1373 (8848/6105)	6.66 (169.33)	39.6 (27.3)				
					2011/1387 (8943/6171)	6.66 (169.33)	40 (27.6)				
					1986/1371 (8835/6097)	6.66 (169.33)	39.5 (27.3)				
					2008/1385 (8930/6162)	6.66 (169.33)	39.9 (27.6)				
EL100-0602	3.9 (100)	6 (150)	2A8-10 2B8-25 2C8-40 218-40 238.40 258.40 268.40	0.2 (5.08)	903/623 (4016/2771)	3.33 (84.58)	35.9 (24.8)	2700 (12010)	0.00361 (0.000408)	5800 (25798)	26.2 (11.9)
					903/623 (4016/2771)	8.33 (211.58)	35.9 (24.8)				
					917/633 (4080/2815)	13.33 (338.58)	36.5 (25.2)				
					995/686 (4424/3053)	13.33 (338.58)	39.6 (27.3)				
					1005/694 (4472/3086)	13.33 (338.58)	40 (27.6)				
					993/685 (4417/3048)	13.33 (338.58)	39.5 (27.3)				
					1004/693 (4465/3081)	13.33 (338.58)	39.9 (27.6)				
EL100-0605	3.9 (100)	6 (150)	2A8-10 2B8-25 2C8-40 218-40 238.40 258.40 268.40	0.5 (12.70)	361/249 (1606/1108)	8.33 (211.58)	35.9 (24.8)	2700 (12010)	0.00361 (0.000408)	4900 (21795)	26.2 (11.9)
					361/249 (1606/1108)	20.83 (9529.08)	35.9 (24.8)				
					367/253 (1632/1126)	33.33 (846.58)	36.5 (25.2)				
					398/275 (1770/1221)	33.33 (846.58)	39.6 (27.3)				
					402/277 (1789/1234)	33.33 (846.58)	40 (27.6)				
					397/274 (1767/1219)	33.33 (846.58)	39.5 (27.3)				
					402/277 (1786/1232)	33.33 (846.58)	39.9 (27.6)				

\* Please note that stroke mm are nominal dimensions. \*\*Inertia +/- 5%  
See page 13 for definition of terms.

Specifications subject to change without notice.

## EL30 Series Mechanical/Electrical Specifications

Maximum Backlash (not preloaded)	in (mm)	0.004 (.10)															
Maximum Backlash (preloaded)	in (mm)	0.0															
Lead Accuracy	in/ft (mm/300 mm)	0.001 (.025)															
Maximum Radial Load	lb (N)	30 (134)															
Environmental Rating:	Standard	IP65															
<b>Motor Stator-T4 Ratings</b>		<b>1A8</b>	<b>AB8</b>	<b>118</b>	<b>138</b>	<b>158</b>	<b>168</b>	<b>2A8</b>	<b>2B8</b>	<b>218</b>	<b>238</b>	<b>258</b>	<b>268</b>	<b>318*</b>	<b>338*</b>	<b>358*</b>	<b>368*</b>
<b>RMS SINUSOIDAL COMMUTATION</b>																	
Continuous Motor Torque** (+/- 10% @ 25°C)	lbf-in (Nm)	10.8 (1.22)	10.8 (1.22)	10.9 (1.23)	10.8 (1.22)	10.7 (1.21)	10.3 (1.16)	17.4 (1.97)	17.4 (1.97)	17.6 (1.99)	17.6 (1.99)	17.5 (1.98)	17.5 (1.98)	25.2 (2.85)	24.9 (2.81)	23.6 (2.67)	23.6 (2.67)
Torque Constant (Kt)** (+/- 10% @ 25°C)	lbf-in/ (Nm/A)	1.1 (0.13)	1.1 (0.13)	4.4 (0.49)	8.7 (0.99)	15.5 (1.75)	17.5 (1.98)	1.1 (0.13)	1.1 (0.13)	4.4 (0.49)	8.7 (0.99)	15.5 (1.75)	17.5 (1.98)	4.4 (0.50)	8.7 (0.98)	15.7 (1.77)	17.6 (1.98)
Continuous Current Rating**	Amps	10.7	10.7	2.8	1.4	0.8	0.7	17.3	17.3	4.5	2.2	1.3	1.1	6.3	3.2	1.7	1.5
Peak Current Rating	Amps	21.3	21.3	5.6	2.8	1.5	1.3	34.5	34.5	9.0	4.5	2.5	2.2	12.7	6.4	3.4	3.0
<b>TRAPEZOIDAL COMMUTATION</b>																	
Continuous Motor Torque** (+/- 10% @ 80°C)	lbf-in (Nm)	10.3 (1.16)	10.3 (1.16)	10.4 (1.17)	10.3 (1.17)	10.2 (1.15)	9.8 (1.11)	16.6 (1.88)	16.6 (1.88)	16.8 (1.90)	16.8 (1.90)	16.7 (1.89)	16.7 (1.89)	24.1 (2.72)	23.8 (2.69)	22.5 (2.55)	22.6 (2.55)
Torque Constant (Kt)** (+/- 10% @ 80°C)	lbf-in/A (Nm/A)	0.9 (0.10)	0.9 (0.10)	3.4 (0.39)	6.8 (0.77)	12.1 (1.37)	13.6 (1.54)	0.9 (0.10)	0.9 (0.10)	3.4 (0.39)	6.8 (0.77)	12.1 (1.37)	13.6 (1.54)	3.5 (0.39)	6.8 (0.76)	12.2 (1.38)	13.7 (1.55)
Continuous Current Rating	Amps	13.1	13.1	3.4	1.7	0.9	0.8	21.1	21.1	5.5	2.8	1.5	1.4	7.8	3.9	2.1	1.8
Peak Current Rating	Amps	26.1	26.1	6.8	3.4	1.9	1.6	42.3	42.3	11.0	5.5	3.1	2.7	15.5	7.9	4.1	3.7
<b>MOTOR STATOR DATA</b>																	
Voltage Constant (Ke)** (+/- 10% @ 25°C)	Vrms/Krpm Vpk/Krpm	7.7 10.9	7.7 10.9	29.9 42.2	59.7 84.5	106.0 149.9	119.5 168.9	7.7 10.9	7.7 10.9	29.9 42.2	59.7 84.5	106.0 149.9	119.5 168.9	30.3 42.9	59.2 83.8	106.9 151.2	119.9 169.6
Pole Configuration		8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
Resistance (L-L)(+/- 5% @ 80°C)	Ohms	0.19	0.19	2.8	11.2	36.3	49.6	0.08	0.08	1.1	4.5	14.1	18.0	0.65	2.6	9.3	11.6
Inductance (L-L)(+/- 5%)	mH	0.51	0.51	7.7	30.7	96.8	123.0	0.24	0.24	3.7	14.7	46.2	58.7	2.5	9.5	30.9	38.8
Mech Time Constant (tm)	ms min	6.6	6.6	6.5	6.5	6.7	7.2	2.6	2.6	2.6	2.6	2.6	2.6	1.5	1.5	1.7	1.7
	max	7.4	7.4	7.3	7.4	7.6	8.1	3.0	3.0	2.9	2.9	3.0	3.0	1.7	1.7	1.9	1.9
Electrical Time Constant (te)	ms	2.7	2.7	2.8	2.7	2.7	2.5	3.2	3.2	3.3	3.3	3.3	3.3	3.8	3.7	3.3	3.3
Damping Constant	lbf-in/krpm (N-m/krpm)	1.23 (0.14)															
Friction Torque	lbf-in (Nm)	2.00 (0.23)															
Bus Voltage	Vrms	24VDC	48VDC	115	230	400	460	24VDC	48VDC	115	230	400	460	115	230	400	460
Speed @ Bus Voltage	rpm	1500	3000	3000	3000	3000	3000	1500	3000	3000	3000	3000	3000	3000	3000	3000	3000
Insulation Class		180 (H)															
Temperature Class	°C	T4 = 135°C T3A = 180°C															
Connectors		Potted NPT Connectors Only															

For amplifiers using peak sinusoidal ratings, multiply RMS sinusoidal Kt by .707 and current by 1.414. Specifications reflect 80°C test environment

Specifications subject to change without notice.

\*Not available with 3" stroke

\*\*For T3A Temperature Class multiply Kt & Ke ratings by 0.83; Continuous Current by 1.245; Continuous Torque by 1.095

# Hazardous Location EL Series Linear Actuators

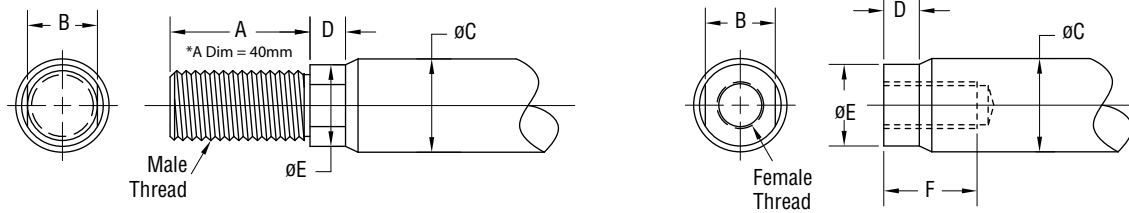
## EL100 Series Mechanical/Electrical Specifications

Nominal Backlash	in (mm)	0.004 (.10)							
Maximum Backlash (preloaded)	in (mm)	0.0							
Lead Accuracy in/ft	(mm/300 mm)	0.001 (.025)							
Maximum Radial Load	lb (N)	40 (179)							
Environmental Rating	Standard	IP66							
Motor Stator Ambient Temperature		2A8-10 25°/80°C	2B8-25 25°/80°C	2C8-40 25°/80°C	218-40 25°/80°C	238-40 25°/80°C	258-40 25°/80°C	268-40 25°/80°C	
<b>RMS SINUSOIDAL COMMUTATION DATA</b>									
Continuous Motor Torque	lbf-in (Nm)	35.9/24.8 (4.06/2.80)	35.9/24.8 (4.06/2.80)	36.5/25.2 (4.12/2.85)	39.6/27.3 (4.47/3.09)	40.0/27.6 (4.52/3.12)	39.5/27.3 (4.46/3.08)	39.9/27.6 (4.51/3.11)	
Torque Constant @ 25° C (Kt)	lbf-in/(Nm/A)	1.7 (0.19)	1.7 (0.19)	2.6 (0.30)	3.2 (0.37)	6.6 (0.75)	11.6 (1.31)	13.2 (1.50)	
Continuous Current Rating (IG)	Amps	23.6/16.3	23.6/16.3	15.6/10.7	13.6/9.4	6.8/4.7	3.8/2.6	3.4/2.3	
Peak Current Rating	Amps	47.1/32.5	47.1/32.5	31.1/21.5	27.3/18.8	13.5/9.3	7.6/5.3	6.7/4.7	
<b>TRAPEZOIDAL COMMUTATION DATA</b>									
Continuous Motor Torque	lbf-in (Nm)	34.3/23.7 (3.88/2.67)	34.3/23.7 (3.88/2.67)	34.9/24.0 (3.94/2.72)	37.8/26.1 (4.27/2.95)	38.2/26.4 (4.32/2.98)	37.7/26.0 (4.26/2.94)	38.1/26.3 (4.31/2.97)	
Torque Constant @ 25° C (Kt)	lbf-in/A (Nm/A)	1.3 (0.15)	1.3 (0.15)	2.0 (0.23)	2.5 (0.29)	5.2 (0.58)	9.0 (1.02)	10.3 (1.17)	
Continuous Current Rating (IG)	Amps	28.9/19.9	28.9/19.9	19.1/13.2	16.7/11.5	8.3/5.7	4.7/3.2	4.1/2.8	
Peak Current Rating	Amps	57.7/39.8	57.7/39.8	38.1/26.3	33.4/23.1	16.5/11.4	9.4/6.5	8.3/5.7	
<b>MOTOR STATOR DATA</b>									
Voltage Constant @ 25° C (Ke)	Vrms/Krpm	11.6	11.6	17.9	22.1	45.2	78.9	90.4	
	Vpk/Krpm	16.5	16.5	25.3	31.3	64.0	111.6	127.9	
Pole Configuration		8	8	8	8	8	8	8	
Resistance (L-L)	Ohms	0.10	0.10	0.20	0.30	1.2	3.8	4.86	
Inductance (L-L)	mH	0.79	0.79	1.9	2.93	12.2	37.2	48.9	
Brake Inertia	lbf-in-sec <sup>2</sup> (kg-cm <sup>2</sup> )	0.00047 (.53)							
Brake Current @24VDC +/- 10%	A	0.5							
Brake Holding Torque - Dry	lbf-in (Nm/A)	70 (8)							
Brake Engage/Disengage Time	ms	25/50							
Mechanical Time Constant (tm)	ms	1.7	1.7	1.7	1.4	1.4	1.4	1.4	
Electrical Time Constant (te)	ms	7.9	7.9	8.2	9.9	10.1	9.9	10.1	
Bus Voltage	Vrms	24 VDC	48 VDC	120 VDC	115 VDC	230 VDC	400 VDC	460 VDC	
Speed @ Bus Voltage	rpm	1000	2500	4000	4000	4000	4000	4000	
Insulation Class		180 (H)							
Ambient Temperature Rating		-29° C to 93° C							
CSA/ATEX Temperature Class		T3, 200° C Maximum Allowable Surface Temperature							
Continuous Force Ratings		25°/80°C	25°/80°C	25°/80°C	25°/80°C	25°/80°C	25°/80°C	25°/80°C	
0.1 inch lead	EL100-0601	lbf (N)	1806/1246 (8032/5542)	1806/1246 (8032/5542)	1834/1266 (8160/5631)	1989/1373 (8848/6105)	2011/1387 (8943/6171)	1986/1371 (8835/6097)	2008/1385 (8930/6162)
0.2 inch lead	EL100-0602	lbf (N)	903/623 (4016/2771)	903/623 (4016/2771)	917/633 (4080/2815)	995/686 (4424/3053)	1005/694 (4472/3086)	993/685 (4417/3048)	1004/693 (4465/3081)
0.5 inch lead	EL100-0605	lbf (N)	361/249 (1606/1108)	361/249 (1606/1108)	367/253 (1632/1126)	398/275 (1770/1221)	402/277 (1789/1234)	397/274 (1767/1219)	402/277 (1786/1232)

For amplifiers using peak sinusoidal ratings, multiply RMS sinusoidal Kt by 0.707, and peak current by 1.414. All temperature ratings ambient.

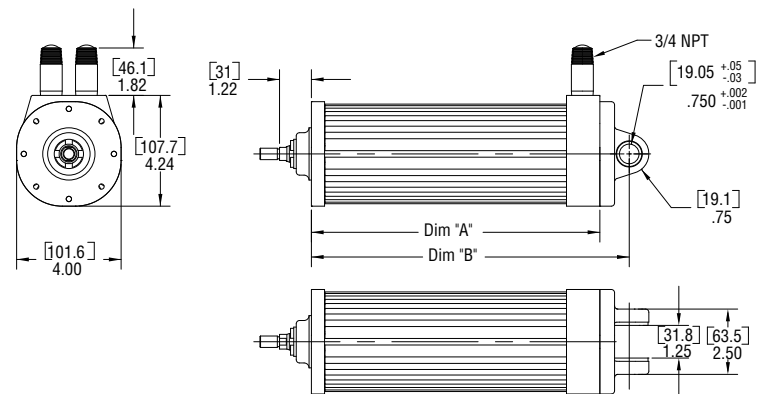
Specifications subject to change without notice.

## Actuator Rod End Options

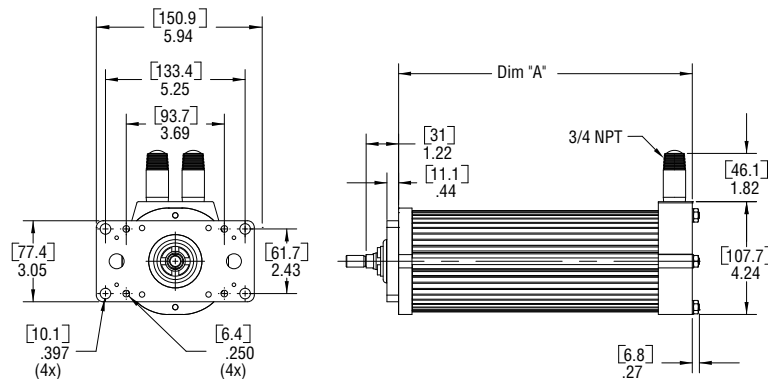


	A	B	øC	D	øE	F	Male U.S.	Male Metric	Female U.S.	Female Metric
EL30 in (mm)	0.750 (19.1)	0.500 (12.7)	0.625 (15.9)	0.281 (7.1)	0.562 (14.3)	0.750 (19.1)	7/16 - 20 UNF - 2A	M12 x 1.75' 6g	7/16 - 20 UNF - 2B	M10 x 1.5 6h

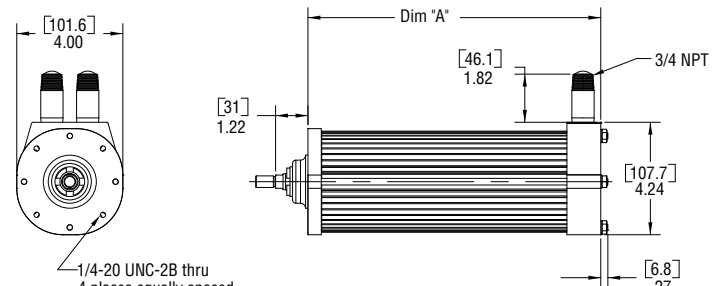
## EL30 Clevis Mount



## EL30 Front Flange Mount



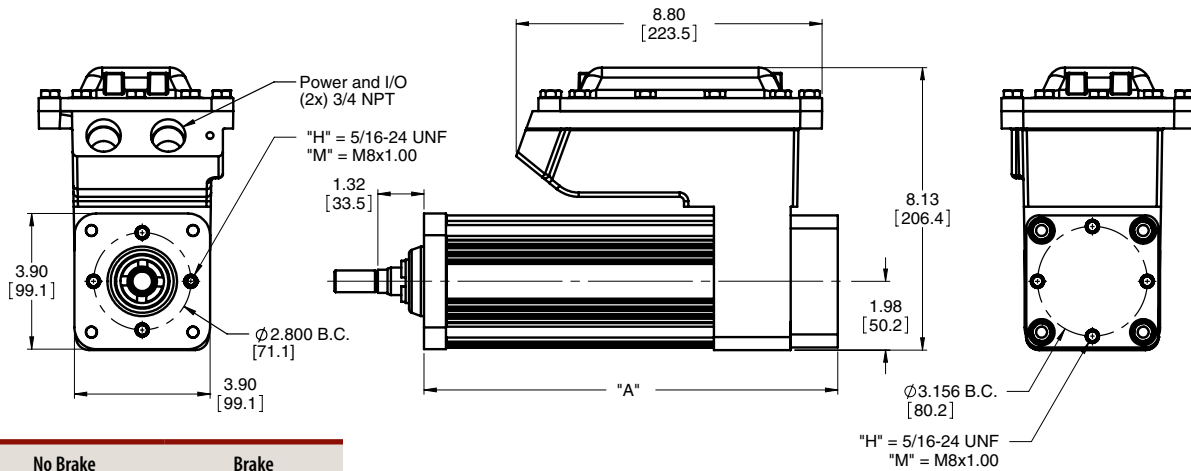
## EL30 Base Unit



Dim	3" (76.2 mm) Stroke	6" (152.4 mm) Stroke
A	8.6 (218)	11.0 (281)
B	9.7 (246)	12.2 (309)

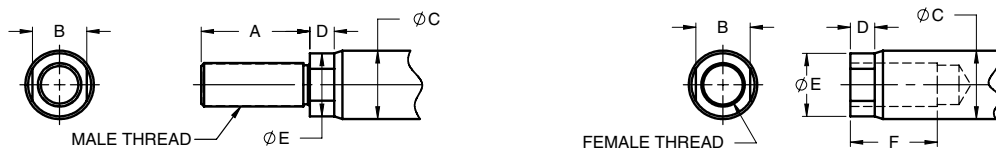
# Hazardous Location EL Series Linear Actuators

## EL100 Dimensions



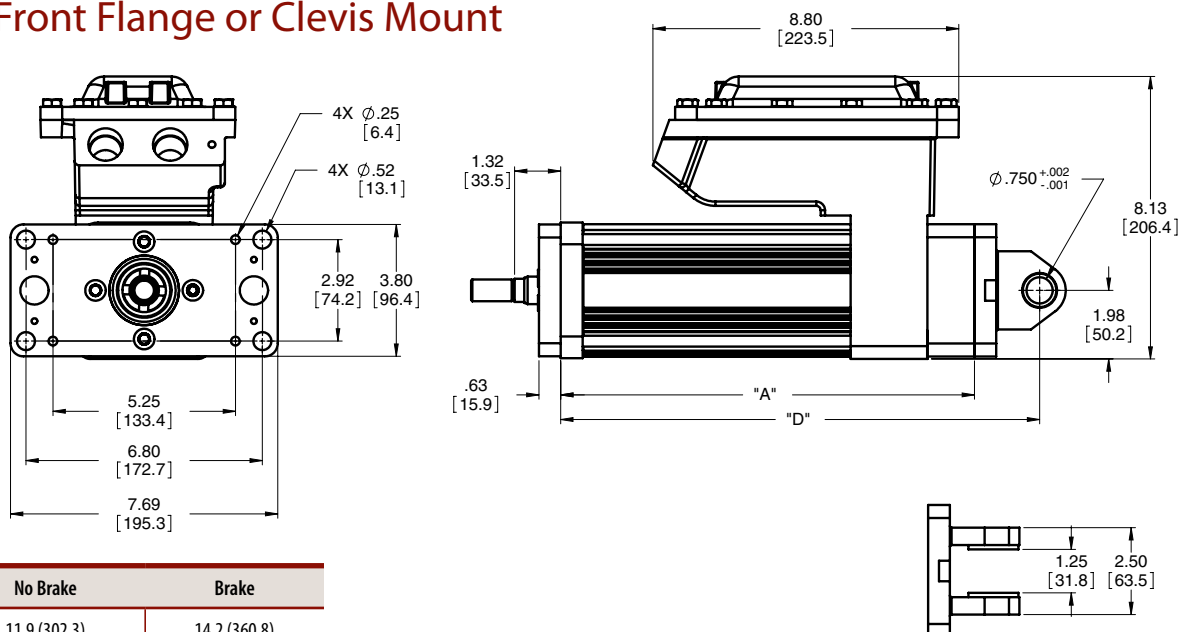
Dim	No Brake	Brake
A	11.9 (302.3)	14.2 (360.8)

## EL100 Actuator Rod End Options



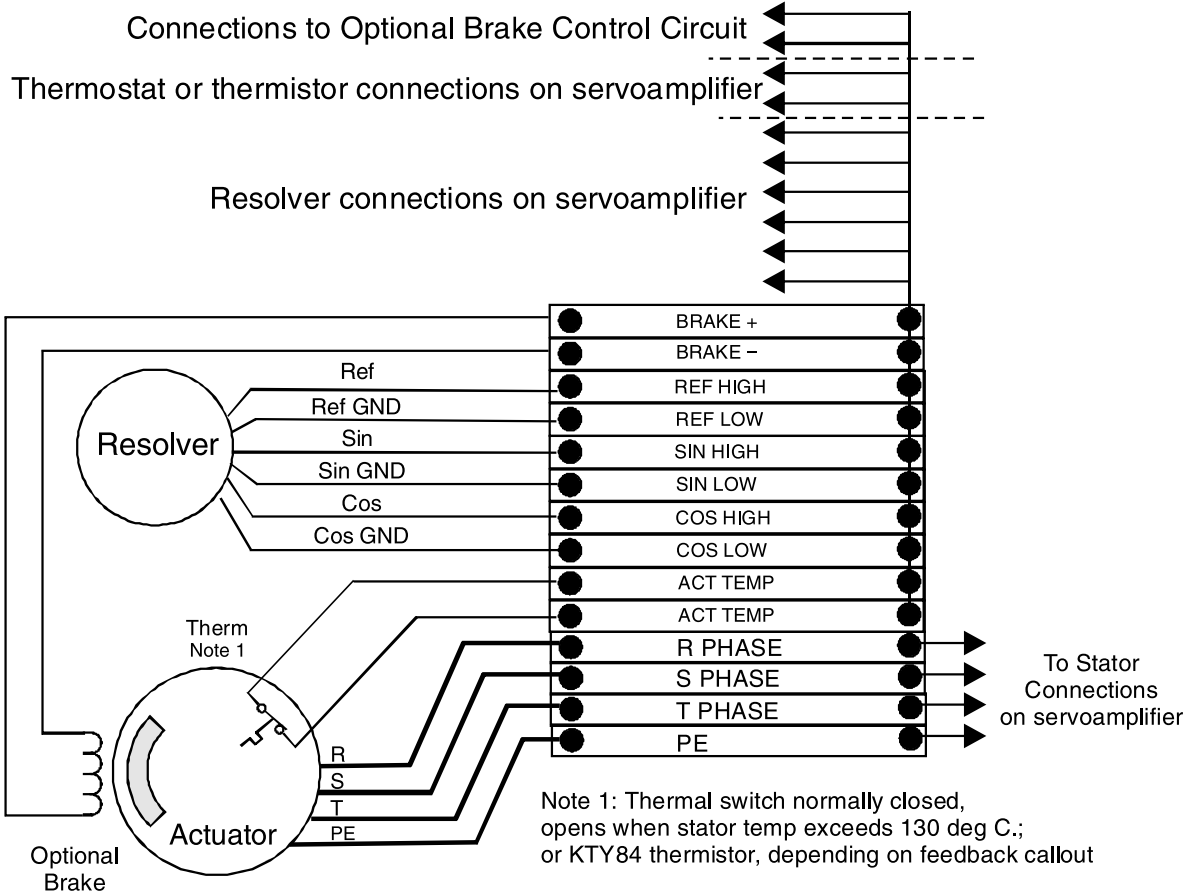
	A	B	ØC	D	ØE	F	Male "M" Inch	Male "A" Metric	Female "F" Inch	Female "B" Metric
EL100 in (mm)	1.250 (31.8)	0.625 (17.0)	0.787 (20.0)	0.281 (7.1)	0.725 (18.4)	1.000 (25.4)	1/2 - 20 UNF - 2A	M16 x 1.5 6g	1/2 - 20 UNF - 2B	M16 x 1.5 6h

## EL100 Front Flange or Clevis Mount



Dim	No Brake	Brake
A	11.9 (302.3)	14.2 (360.8)
D	13.77 (349.9)	16.7 (408.2)

EL100 Terminal Box Wiring





## EL30 = Model Series

### AA = Frame Size

30 = 3 inch (80 mm) nominal

### BB = Nominal Stroke Length

03 = 3 inch (75 mm) stroke  
 06 = 6 inch (150 mm) stroke  
 XX = Special stroke not to exceed 6 inch (150 mm)

### CC = Screw Lead

01 = 0.1 inch lead  
 02 = 0.2 inch lead  
 05 = 0.5 inch lead  
 XX = Special

### DDD = Connector Options

N## = Potted NPT with flying leads  
 ## = Length of flying leads in feet (not to exceed 99') Consult Exlar application engineering if longer length is needed.

### E = Mounting Options

F = Front Flange  
 C = Rear Clevis  
 H = Threaded Face  
 X = Special Mounting

### F = Rod Ends

M = Male, US std thread  
 A = Male, Metric std thread  
 F = Female, US std thread  
 B = Female, Metric std thread

## GGG = FeedbackType

(Also specify the Amplifier/Drive Model being used when ordering) -- Standard Resolver  
 -- Size 15 1024 line (2068 cts) per rev, two phase resolver

XX1 = Custom Feedback – Wiring and feedback device information must be provided and new feedback callout will be created – Please consult application engineering. Resolver only.

AB6 = Allen-Bradley/Rockwell – Standard Resolver

AM3 = Advanced Motion Control – Standard Resolver

AP1 = API Controls – Standard Resolver

BD2 = Baldor – Standard Resolver

BM2 = Baumuller – Standard Resolver

BR1 = B&R Automation – Standard Resolver

CO2 = Copley Controls – Standard Resolver

CT5 = Standard Resolver – FM/UM/EZ motor wiring w/M23 euro connectors for 'M' option

DT2 = Delta Tau Data Systems – Standard Resolver

EL1 = Elmo Motion Control – Standard Resolver

EX4 = Exlar – Standard Resolver

IF1 = Infranor – Standard Resolver

IN6 = Indramat/Bosch-Rexroth – Standard Resolver

JT1 = Jetter Technologies – Standard Resolver

KM5 = Kollmorgen/Danaher – Standard Resolver

LZ5 = Lenze/AC Tech – Standard Resolver

MD1 = Modicon – Standard Resolver

MG1 = Moog – Standard Resolver

MN4 = Momentum – Standard Resolver

MX1 = Metronix – Standard Resolver

OR1 = Ormec – Standard Resolver

PC7 = Parker – Standard Resolver – European only

PC0 = Parker – Standard Resolver – US Only

PS3 = Pacific Scientific – Standard Resolver

SM2 = Siemens – Standard Resolver

SW1 = SEW/Eurodrive – Standard Resolver

WD1 = Whedco/Fanuc – Standard Resolver

## HHH = Motor Stator all 8 pole

1A8 = 1 stack, 24 Vrms

218 = 2 stack, 115 Vrms

1B8 = 1 stack, 48 Vrms

238 = 2 stack, 230 Vrms

118 = 1 stack, 115 Vrms

258 = 2 stack, 400 Vrms

138 = 1 stack, 230 Vrms

268 = 2 stack, 460 Vrms

158 = 1 stack, 400 Vrms

318 = 3 stack, 115 Vrms<sup>2</sup>

168 = 1 stack, 460 Vrms

338 = 3 stack, 230 Vrms<sup>2</sup>

2A8 = 2 stack, 24 Vrms

358 = 3 stack, 400 Vrms<sup>2</sup>

2B8 = 2 stack, 48 Vrms

368 = 3 stack, 460 Vrms<sup>2</sup>

## II = Motor Speed

01-99 = Two digit number - rated speed in rpm x 100

## JJJ = Hazardous Location Temperature Rating

T3A = 180° C (Samarium Cobalt magnets)

T4 = 135° C (Neodymium-Iron-Boron magnets)

## XX = Optional Speed & Mechanical Designations

### – Multiples possible

XL = Special lubrication

PF = Preloaded follower<sup>1</sup>

XT = Special travel option

## ##### = Part Number Designator for Specials

## ##### = Optional 5 digit assigned part number to designate unique model number for specials

### Notes:

1. The dynamic load rating of zero backlash, preloaded screws is 63% of the dynamic load rating of the standard non-preloaded screws. The calculated travel life of a preloaded screw will be 25% of the calculated travel life of the same size and lead of a non-preloaded screw. Preloaded follower is not available with absolute internal feedback option.

2. Not available with 3" stroke.

**EL100 = Model Series**

**CC = Stroke Length**

06 = 5.9 inch (150 mm)

**DD = Roller Screw Lead (Linear Travel per Screw Revolution)**

01 = 0.1 in/rev (2.54 mm/rev)  
 02 = 0.2 in/rev (5.08 mm/rev)  
 05 = 0.5 in/rev (12.7 mm/rev)  
 XX = Special Lead

**E = Connections**

S = Terminal strips with 3/4" NPT port access, single row

**F = Mounting**

H = Threaded front and rear face, US standard thread  
 N = Threaded front and rear face, metric thread  
 B = Front and rear clevis  
 F = Standard front flange  
 C = Standard rear clevis  
 R = Rear flange  
 X = Special flange, clevis or threaded face mount

**G = Rod End**

M = Male, US standard thread  
 A = Male, metric thread  
 F = Female, US standard thread  
 B = Female, metric thread  
 W = Male, US standard thread 17-4 SS  
 R = Male, metric thread 17-4 SS  
 V = Female, US standard thread 17-4 SS  
 L = Female, metric thread 17-4 SS  
 X = Special rod end (consult Exlar)

**HHH = Controller Feedback Option**

XX1 = Custom Feedback. Resolver only. Consult Exlar  
 AB6 = Allen-Bradley/Rockwell - standard resolver  
 AM3 = Advanced Motion Control - standard resolver  
 AP1 = API Controls - standard resolver  
 BD2 = Baldor - standard resolver  
 BM2 = Baumuller - standard resolver  
 BR1 = B&R Automation  
 CT5 = Control Techniques - standard resolver  
 CO2 = Copely Controls - standard resolver  
 DT2 = Delta Tau Data Systems - standard resolver  
 EL1 = Elmo Motion Control - standard resolver  
 EX4 = Exlar - standard resolver  
 IF1 = Infranor - standard resolver  
 IN6 = Indramat/Bosch-Rexroth - standard resolver  
 JT1 = Jetter Technologies - standard resolver  
 KM5 = Kollmorgen/Danaher - standard resolver  
 LZ5 = Lenze/AC Tech - standard resolver  
 MD1 = Modicon - standard resolver  
 MG1 = Moog - standard resolver  
 MN4 = Momentum - Standard Resolver  
 MX1 = Metronix - standard resolver  
 OR1 = Ormec - standard resolver  
 PC7 = Parker - standard resolver - European only  
 PC0 = Parker - standard resolver - US only  
 PS3 = Pacific Scientific - standard resolver  
 SM2 = Siemens - standard resolver  
 SW1 = SEW/Eurodrive - standard resolver  
 WD1 = Whedco/Fanuc - standard resolver

**I = Motor Stacks**

2 = 2 stack motor

**J = Rated Voltage**

A = 24 VDC  
 B = 48 VDC  
 C = 120 VDC  
 1 = 115 Volt RMS  
 3 = 230 Volt RMS  
 5 = 400 Volt RMS  
 6 = 460 Volt RMS  
 X = Special voltage rating - not to exceed 460 Volt RMS

**K = Motor Poles**

8 = 8 Pole Motor

**LL = Rated Motor Speed at Rated Voltage**

01 - 99 = Two digit number x 100 = rated RPM

**MM = Mechanical Option (Multiple options may apply - separated by "-")**

XL = Special lubrication, Mobilgrease 28 or other (please specify)  
 PF = Pre-loaded roller screw follower<sup>1</sup>  
 AR = External anti-rotate assembly (requires flange mount option)  
 RB = Rear brake  
 XT = Special housing option (see options below)  
 Hard anodized aluminum motor housing parts  
 Epoxy coated terminal housing (casting)

**NN = Haz Loc Temp Rating**

T3 = 200° C max allowable surface temperature

**##### = Part Number**

5 digit numeric part number unique to model

**Notes:**

1. The dynamic load rating of zero backlash, preloaded screws is 63% of the dynamic load rating of the standard non-preloaded screws. The calculated travel life of a preloaded screw will be 25% of the calculated travel life of the same size and lead of a non-preloaded screw. Preloaded follower is not available with absolute internal feedback option.