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Mechanical Specifications

KX60

Models		KX	
		05	10
Screw Lead	in	0.1969	0.3937
	mm	5	10
Maximum Force[3]	lbf	1350	675
	kN	6.0	3.0
Life at Maximum Force[1]	in x 10^6	1.6	18.2
	km	41.7	461.4
C_a (Dynamic Load Rating)	lbf	2738	2421
	kN	12.2	10.8
Maximum Input Torque[2]	lbf-in	53	53
	Nm	6	6
Max Rated RPM @ Input Shaft	RPM	5000	5000
Maximum Linear Speed @ Maximum Rated RPM	in/sec	16.4	32.8
	mm/sec	417	833

1. See page 169 for life calculation information.
2. Input torque should be limited such that Max Force is not exceeded. For a parallel belt ratio, the input torque ratings must be divided by the belt ratio for allowable motor torque. The output force ratings remain the same.
3. Maximum allowable actuator–generated force that can be applied routinely. Exceeding this force may result in permanent damage to the actuator. For maximum allowable externally-applied axial forces, consult factory. For high force, short stroke applications, consult factory.

Weights kg (lbs)

Base Actuator Weight (Zero Stroke)	lb	3.7
	kg	1.7
Actuator Weight Adder (Per mm of Stroke)	lb	0.017
	kg	0.008

Adder for Inline (excluding motor)	0.42 (0.93)
Adder for Parallel Drive (excluding motor)	0.73 (1.6)
Adder for Front Flange	0.42 (0.93)
Adder for Rear Flange	2.16 (4.79)
Adder for Rear Clevis	0.44 (0.98)
Adder for Rear Eye	0.30 (0.67)
Adder for Front/Rear Angle Mounts	0.24 (0.54)
Adder for Two Trunnions	0.37 (0.82)
Adder for Two Foot Mounts	0.45 (1)

KX60 Inertias kg-m² (lbf-in-sec²)

	5 mm Lead	Add per 25 mm, 5 mm Lead
Base Unit - Input Drive Shaft Only	1.480×10^{-5} (1.31×10^{-4})	1.022×10^{-6} (9.045×10^{-6})
Inline Unit - w/Motor Coupling	2.702×10^{-5} (2.39×10^{-4})	1.022×10^{-6} (9.045×10^{-6})
	10 mm Lead	**Add per 25 mm, 10 mm Lead**
Base Unit - Input Drive Shaft Only	1.616×10^{-5} (1.43×10^{-4})	1.173×10^{-6} (1.038×10^{-5})
Inline Unit - w/Motor Coupling	2.837×10^{-5} (2.51×10^{-4})	1.173×10^{-6} (1.038×10^{-5})
Parallel Drive Inertias (P10 Option)		
	5 mm Lead	**Add per 25 mm, 5 mm Lead**
1:1 Reduction Parallel Belt Drive (66 mm)	4.339×10^{-5} (3.84×10^{-4})	1.022×10^{-6} (9.045×10^{-6})
1:1 Reduction Parallel Belt Drive (86 mm)	7.378×10^{-5} (6.53×10^{-4})	1.022×10^{-6} (9.045×10^{-6})
1:1 Reduction Parallel Belt Drive (96 mm)	8.564×10^{-5} (7.58×10^{-4})	1.022×10^{-6} (9.045×10^{-6})
2:1 Reduction Parallel Belt Drive (96 mm)	7.095×10^{-5} (6.28×10^{-4})	2.555×10^{-7} (2.261×1^{-6})
	10 mm Lead	**Add per 25 mm, 10 mm Lead**
1:1 Reduction Parallel Belt Drive (66 mm)	4.474×10^{-5} (3.96×10^{-4})	1.173×10^{-6} (1.038×10^{-5})
1:1 Reduction Parallel Belt Drive (86 mm)	7.514×10^{-5} (6.65×10^{-4})	1.173×10^{-6} (1.038×10^{-5})
1:1 Reduction Parallel Belt Drive (96 mm)	8.704×10^{-5} (7.70×10^{-4})	1.173×10^{-6} (1.038×10^{-5})
2:1 Reduction Parallel Belt Drive (96 mm)	7.129×10^{-5} (6.31×10^{-4})	2.931×10^{-7} (2.595×10^{-6})
Parallel Drive Inertias (Smooth Motor Shaft Option)		
	5 mm Lead	**Add per 25 mm, 5 mm Lead**
1:1 Reduction Parallel Belt Drive (66 mm)	6.015×10^{-5} (5.32×10^{-4})	1.022×10^{-6} (9.045×10^{-6})
1:1 Reduction Parallel Belt Drive (86 mm)	1.103×10^{-4} (9.76×10^{-4})	1.022×10^{-6} (9.045×10^{-6})
1:1 Reduction Parallel Belt Drive (96 mm)	2.176×10^{-4} (1.93×10^{-3})	1.022×10^{-6} (9.045×10^{-6})
2:1 Reduction Parallel Belt Drive (96 mm)	8.768×10^{-5} (7.76×10^{-4})	2.555×10^{-7} (2.261×10^{-6})
	10 mm Lead	**Add per 25 mm, 10 mm Lead**
1:1 Reduction Parallel Belt Drive (66 mm)	6.150×10^{-5} (5.44×10^{-4})	1.173×10^{-6} (1.038×10^{-5})
1:1 Reduction Parallel Belt Drive (86 mm)	1.117×10^{-4} (9.88×10^{-4})	1.173×10^{-6} (1.038×10^{-5})
1:1 Reduction Parallel Belt Drive (96 mm)	2.190×10^{-4} (1.94×10^{-3})	1.173×10^{-6} (1.038×10^{-5})
2:1 Reduction Parallel Belt Drive (96 mm)	8.802×10^{-5} (7.79×10^{-4})	2.931×10^{-7} (2.595×10^{-6})

*See definitions on page 123