

FTX Series

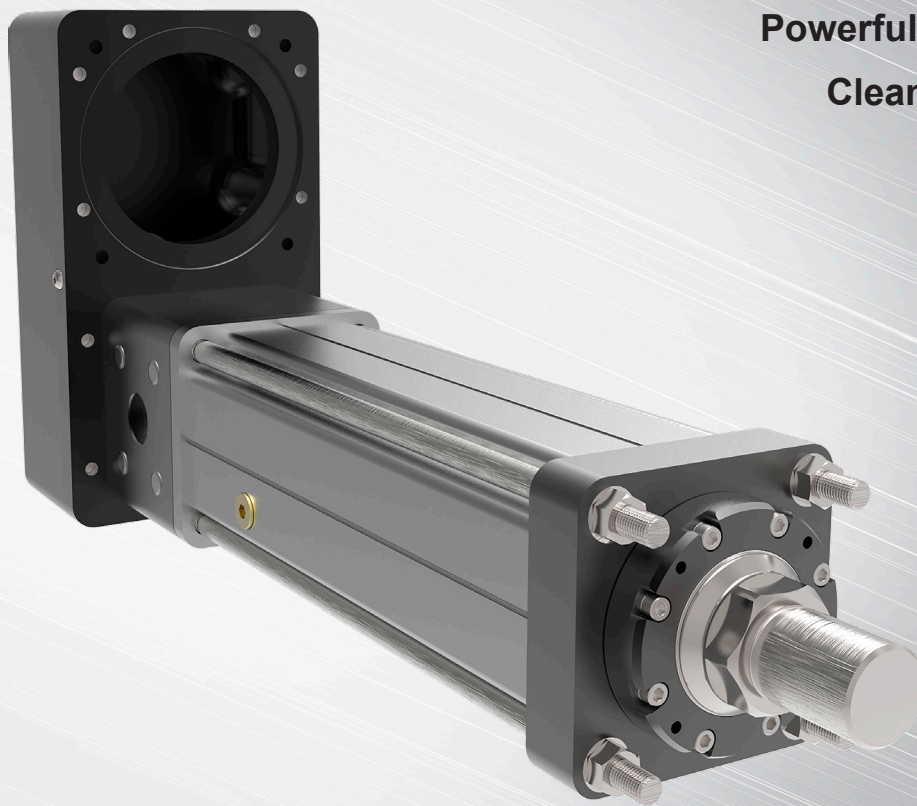
HIGH FORCE ACTUATOR

Hydraulic cylinder replacement

Rugged and reliable

Powerful and compact

Clean and efficient



In-Position
Technologies

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FTX Series

High Force Actuators

Hydraulic Cylinder Replacement

Hydraulic cylinders provide long life and high force in a small package size. The FTX Series high force electric actuators were designed specifically to allow migration from traditional hydraulic actuation to electric. Based on planetary roller screw technology, the FTX offers life and force density not attainable with more common ball screw based electric actuators. With up to 15X the life and 2X the force density, the roller screw based FTX is the right choice when migrating from hydraulic to electric actuation.

Rugged and Reliable

Hydraulic cylinders are commonly installed in harsh industrial settings. Therefore all FTX Series models are environmentally sealed to IP65. In addition, its planetary roller screw mechanism withstands significantly higher shock loads than weaker ball screw alternatives. Migrate to electric with confidence knowing the FTX Series is every bit as rugged and reliable as the hydraulics they are designed to replace.

Minimal Maintenance

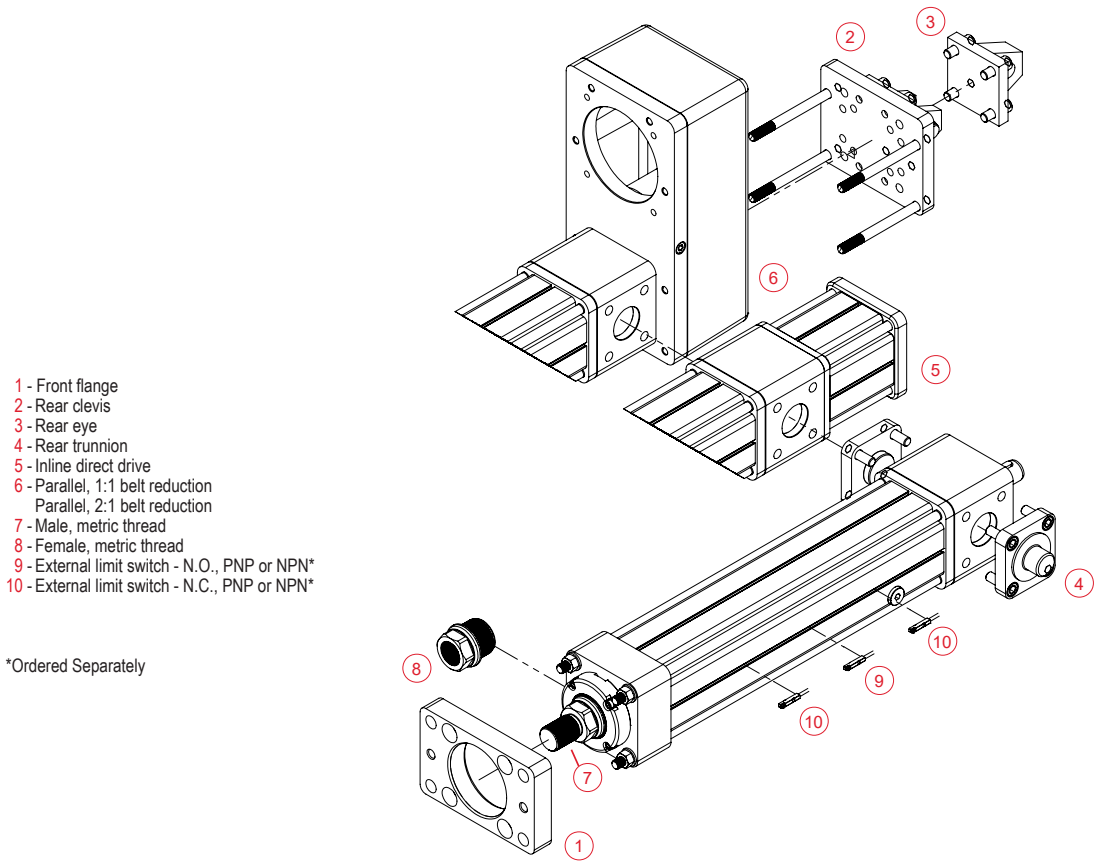
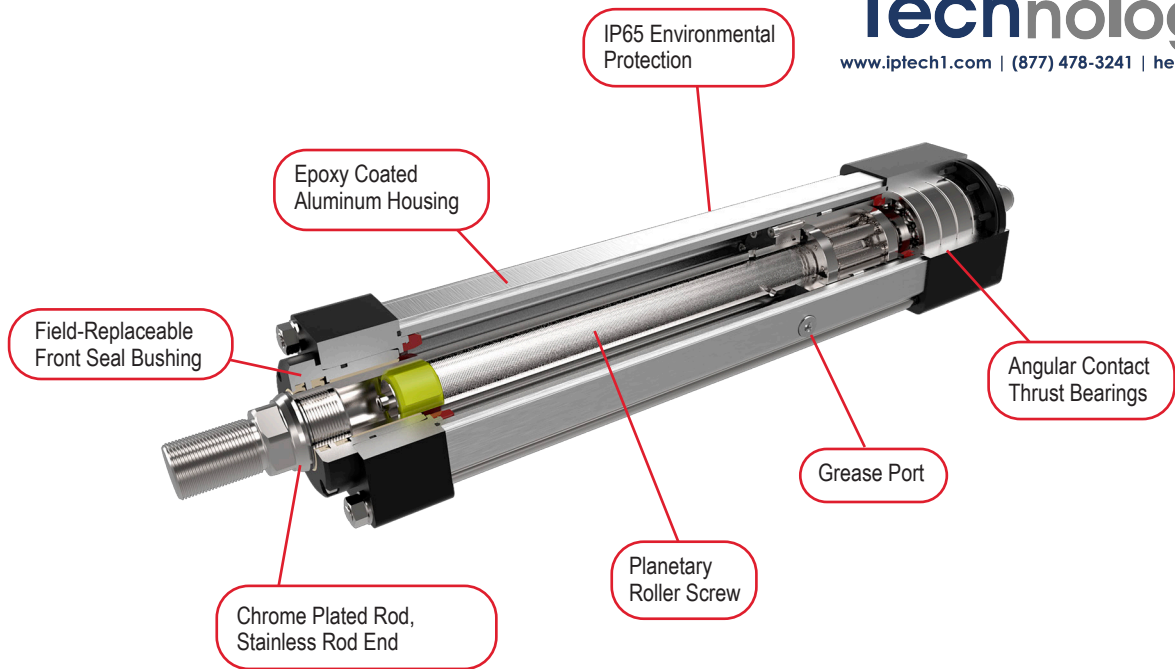
More and more machine builders are looking to eliminate the mess and downtime associated with hydraulic fluid leaks. Electric actuation not only eliminates the problems associated with fluid leaks, it offers significantly higher levels of performance and flexibility than is possible even with servo-hydraulic solutions. FTX Series roller screw actuators allow machine builders to meet the ever-increasing performance demands of their customers while minimizing or eliminating the maintenance issues associated with traditional hydraulic solutions.

Operating Conditions and Usage		
Accuracy:		
Screw Travel Variation	mm (in)	0.030 (0.0012)
Screw Lead Error	mm/300 mm (in/ft)	0.025 (0.001)
Screw Lead Backlash	mm (in)	0.06 (0.002)
Ambient Conditions:		
Standard Ambient Temperature	°C	0° to 85°
IP Rating		IP65S

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Product Features



- 1 - Front flange
- 2 - Rear clevis
- 3 - Rear eye
- 4 - Rear trunnion
- 5 - Inline direct drive
- 6 - Parallel, 1:1 belt reduction
Parallel, 2:1 belt reduction
- 7 - Male, metric thread
- 8 - Female, metric thread
- 9 - External limit switch - N.O., PNP or NPN*
- 10 - External limit switch - N.C., PNP or NPN*

*Ordered Separately

Mechanical Specifications

FTX095

		05	10	20
Screw Lead	mm	5	10	20
	in	0.197	0.394	0.787
Maximum Force	kN	22.2	22.2	22.2
	lbf	5,000	5,000	5,000
Life at Maximum Force	km	392	626	1440
	in x 10 ⁶	15.4	24.6	56.7
C _a (Dynamic Load Rating)	kN	95.2	88.3	92.5
	lbf	21,400	19,850	20,800
Maximum Input Torque	Nm	22.1	44.3	88.5
	lbf-in	196	392	783
Max Rated RPM @ Input Shaft	RPM	4,500	4,500	4,500
Maximum Linear Speed @ Maximum Rated RPM	mm/sec	373	750	1,500
	in/sec	14.7	29.5	59.3
Friction Torque (Typical)	Nm	1.12	1.12	1.12
	lbf-in	10	10	10

Weights kg (lbs)

Base Actuator Weight (Zero Stroke)	kg	10
	lb	21
Actuator Weight Adder (Per 25 mm of stroke)	kg	0.39
	lb	0.87
Adder for Inline (excluding motor)	kg	2.9
	lb	6.5
Adder for Parallel Drive (excluding motor)	kg	13.1
	lb	28.9
Adder for Front Flange	kg	1.9
	lb	4.2
Adder for Rear Clevis	kg	5.3
	lb	11.7
Adder for Rear Eye	kg	5.1
	lb	11.3
Adder for Rear Trunnion	kg	1.9
	lb	4.3

Base Unit Inertia		Zero Stroke [kg-m ² (lbf-in-sec ²)]	Add per 25 mm [kg-m ² (lbf-in-sec ²)]	
5 mm Lead		8.27 x 10 ⁻⁴ (7.32 x 10 ⁻³)	2.19 x 10 ⁻⁶ (1.94 x 10 ⁻⁵)	
10 mm Lead		8.33 x 10 ⁻⁴ (7.37 x 10 ⁻³)	2.42 x 10 ⁻⁶ (2.14 x 10 ⁻⁵)	
20 mm Lead		8.57 x 10 ⁻⁴ (7.58 x 10 ⁻³)	3.31 x 10 ⁻⁶ (2.93 x 10 ⁻⁵)	
Inline Drive Inertia	Inline Unit - w/Motor Coupling	Inline Unit - w/Motor Coupling For Gearbox Mount	Add per 25 mm	
5 mm Lead		9.27 x 10 ⁻⁴ (8.20 x 10 ⁻³)	1.09 x 10 ⁻³ (9.62 x 10 ⁻³)	2.19 x 10 ⁻⁶ (1.94 x 10 ⁻⁵)
10 mm Lead		9.33 x 10 ⁻⁴ (8.26 x 10 ⁻³)	1.09 x 10 ⁻³ (9.67 x 10 ⁻³)	2.42 x 10 ⁻⁶ (2.14 x 10 ⁻⁵)
20 mm Lead		9.57 x 10 ⁻⁴ (8.47 x 10 ⁻³)	1.12 x 10 ⁻³ (9.89 x 10 ⁻³)	3.31 x 10 ⁻⁶ (2.93 x 10 ⁻⁵)
Parallel Drive Inertia		1:1 Reduction	2:1 Reduction	
5 mm Lead (zero stroke)		4.90 x 10 ⁻³ (4.34 x 10 ⁻²)	2.22 x 10 ⁻³ (1.97 x 10 ⁻²)	
Add per 25 mm stroke		2.19 x 10 ⁻⁶ (1.94 x 10 ⁻⁵)	5.48 x 10 ⁻⁷ (4.85 x 10 ⁻⁶)	
10 mm Lead (zero stroke)		4.91 x 10 ⁻³ (4.34 x 10 ⁻²)	2.23 x 10 ⁻³ (1.97 x 10 ⁻²)	
Add per 25 mm stroke		2.42 x 10 ⁻⁶ (2.14 x 10 ⁻⁵)	6.04 x 10 ⁻⁷ (5.34 x 10 ⁻⁶)	
20 mm Lead (zero stroke)		4.93 x 10 ⁻³ (4.37 x 10 ⁻²)	2.23 x 10 ⁻³ (1.98 x 10 ⁻²)	
Add per 25 mm stroke		3.31 x 10 ⁻⁶ (2.93 x 10 ⁻⁵)	8.28 x 10 ⁻⁷ (7.33 x 10 ⁻⁶)	

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FTX125

		05	10
Screw Lead	mm	5	10
	in	0.197	0.394
Maximum Force	kN	44.5	44.5
	lbf	10,000	10,000
Life at Maximum Force	km	249.2	486.3
	in x 10 ⁶	9.81	19.14
C _a (Dynamic Load Rating)	kN	163.7	162.4
	lbf	36,800	36,500
Maximum Input Torque	Nm	46.5	82.3
	lbf-in	412	728
Max Rated RPM @ Input Shaft	RPM	3,500	3,500
Maximum Linear Speed @ Maximum Rated RPM	mm/sec	292	583
	in/sec	11.5	23
Friction Torque (Typical)	Nm	2.23	2.23
	lbf-in	20	20

Weights kg (lbs)

Base Actuator Weight (Zero Stroke)	kg	21
	lb	47
Actuator Weight Adder (Per 25 mm of stroke)	kg	0.84
	lb	1.85
Adder for Inline (excluding motor)	kg	6.8
	lb	15.0
Adder for Parallel Drive (excluding motor)	kg	25.6
	lb	56.5
Adder for Front Flange	kg	3.6
	lb	7.9
Adder for Rear Clevis	kg	6.5
	lb	14.3
Adder for Rear Eye	kg	6.3
	lb	13.8
Adder for Rear Trunnion	kg	3.1
	lb	6.8

Base Unit Inertia		Zero Stroke [kg-m ² (lbf-in-sec ²)]	Add per 25 mm [kg-m ² (lbf-in-sec ²)]
5 mm Lead		2.55 x 10 ⁻³ (2.26 x 10 ⁻²)	4.62 x 10 ⁻⁵ (4.09 x 10 ⁻⁴)
10 mm Lead		2.56 x 10 ⁻³ (2.27 x 10 ⁻²)	4.65 x 10 ⁻⁵ (4.12 x 10 ⁻⁴)
Inline Drive Inertia	<32 mm Motor Shaft Diameter	>32 mm Motor Shaft Diameter	Add per 25 mm
5 mm Lead	2.81 x 10 ⁻³ (2.49 x 10 ⁻²)	3.35 x 10 ⁻³ (2.97 x 10 ⁻²)	4.62 x 10 ⁻⁵ (4.09 x 10 ⁻⁴)
10 mm Lead	2.82 x 10 ⁻³ (2.50 x 10 ⁻²)	3.36 x 10 ⁻³ (2.98 x 10 ⁻²)	4.65 x 10 ⁻⁵ (4.12 x 10 ⁻⁴)
Parallel Drive Inertia		1:1 Reduction	2:1 Reduction
5 mm Lead (zero stroke)		9.43 x 10 ⁻³ (8.34 x 10 ⁻²)	4.66 x 10 ⁻³ (4.12 x 10 ⁻²)
Add per 25 mm stroke		4.62 x 10 ⁻⁵ (4.09 x 10 ⁻⁴)	1.15 x 10 ⁻⁵ (1.02 x 10 ⁻⁴)
10 mm Lead (zero stroke)		9.44 x 10 ⁻³ (8.35 x 10 ⁻²)	4.66 x 10 ⁻³ (4.13 x 10 ⁻²)
Add per 25 mm stroke		4.65 x 10 ⁻⁵ (4.12 x 10 ⁻⁴)	1.16 x 10 ⁻⁵ (1.03 x 10 ⁻⁴)

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FTX160

		06	12	30
Screw Lead	mm	6	12	30
	in	0.236	0.472	1.181
Maximum Force	kN	89.0	89.0	89.0
	lbf	20,000	20,000	20,000
Life at Maximum Force	km	154.9	416.6	358.9
	in x 10 ⁶	6.1	16.4	21.2
C _a (Dynamic Load Rating)	kN	263.7	290.0	233.0
	lbf	59,275	65,200	52,400
Maximum Input Torque	Nm	106	212	531
	lbf-in	940	1,880	4,699
Max Rated RPM @ Input Shaft	RPM	2,000	2,000	2,000
Maximum Linear Speed @ Maximum Rated RPM	mm/sec	201	401	1000
	in/sec	7.9	15.8	39.0
Friction Torque (Typical)	Nm	4.54	4.54	4.54
	lbf-in	40	40	40

Weights kg (lbs)

Base Actuator Weight (Zero Stroke)	kg	49
	lb	108
Actuator Weight Adder (Per 25 mm of stroke)	kg	1.62
	lb	3.6
Adder for Inline (excluding motor)	kg	14.2
	lb	31.5
Adder for Parallel Drive (excluding motor)	kg	53.1
	lb	117.8
Adder for Front Flange	kg	7.4
	lb	16.4
Adder for Rear Clevis	kg	21.2
	lb	48.8
Adder for Rear Eye	kg	22.4
	lb	49.7
Adder for Rear Trunnion	kg	10.9
	lb	24.2

Base Unit Inertia		Zero Stroke [kg-m ² (lbf-in-sec ²)]	Add per 25 mm [kg-m ² (lbf-in-sec ²)]	
6 mm Lead		1.35 x 10 ⁻² (1.19 x 10 ⁻¹)	2.57 x 10 ⁻⁴ (2.27 x 10 ⁻³)	
12 mm Lead		1.35 x 10 ⁻² (1.20 x 10 ⁻¹)	2.58 x 10 ⁻⁴ (2.28 x 10 ⁻³)	
30 mm Lead		1.38 x 10 ⁻² (1.22 x 10 ⁻¹)	2.66 x 10 ⁻⁴ (2.36 x 10 ⁻³)	
Inline Drive Inertia	<32 mm Motor Shaft Diameter	>32 mm Motor Shaft Diameter	Add per 25 mm	
6 mm Lead		1.47 x 10 ⁻² (1.30 x 10 ⁻¹)	1.67 x 10 ⁻² (1.48 x 10 ⁻¹)	2.57x 10 ⁻⁴ (2.27 x 10 ⁻³)
12 mm Lead		1.47 x 10 ⁻² (1.30 x 10 ⁻¹)	1.68 x 10 ⁻² (1.49 x 10 ⁻¹)	2.58 x 10 ⁻⁴ (2.28 x 10 ⁻³)
30 mm Lead		1.50 x 10 ⁻² (1.33 x 10 ⁻¹)	1.71 x 10 ⁻² (1.51 x 10 ⁻¹)	2.66 x 10 ⁻⁴ (2.36 x 10 ⁻³)
Parallel Drive Inertia	1:1 Reduction		2:1 Reduction	
6 mm Lead (zero stroke)		5.27 x 10 ⁻² (4.67 x 10 ⁻¹)	2.30 x 10 ⁻² (2.04 x 10 ⁻¹)	
Add per 25 mm stroke		2.57 x 10 ⁻⁴ (2.27 x 10 ⁻³)	6.42 x 10 ⁻⁵ (5.68 x 10 ⁻⁴)	
12 mm Lead (zero stroke)		5.28 x 10 ⁻² (4.67 x 10 ⁻¹)	2.30 x 10 ⁻² (2.04 x 10 ⁻¹)	
Add per 25 mm stroke		2.58 x 10 ⁻⁴ (2.28 x 10 ⁻³)	6.45 x 10 ⁻⁵ (5.71 x 10 ⁻⁴)	
30 mm Lead (zero stroke)		5.30 x 10 ⁻² (4.69 x 10 ⁻¹)	2.31 x 10 ⁻² (2.05 x 10 ⁻¹)	
Add per 25 mm stroke		2.66 x 10 ⁻⁴ (2.36 x 10 ⁻³)	6.66 x 10 ⁻⁵ (5.89 x 10 ⁻⁴)	

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FTX215

		06	12	30
Screw Lead	mm	6	12	30
	in	0.236	0.472	1.181
Maximum Force	kN	177.9	177.9	177.9
	lbf	40,000	40,000	40,000
Life at Maximum Force	km	78.7	161.8	414.3
	in x 10 ⁶	3.1	6.4	16.3
C _a (Dynamic Load Rating)	kN	398	423	376
	lbf	89,500	95,200	84,700
Maximum Input Torque	Nm	243	425	976
	lbf-in	2,148	3,760	8,642
Max Rated RPM @ Input Shaft	RPM	1,750	1,750	1,750
Maximum Linear Speed @ Maximum Rated RPM	mm/sec	175	351	875
	in/sec	6.9	13.8	34.4
Friction Torque (Typical)	Nm	5.65	5.65	5.65
	lbf-in	50	50	50

Weights kg (lbs)

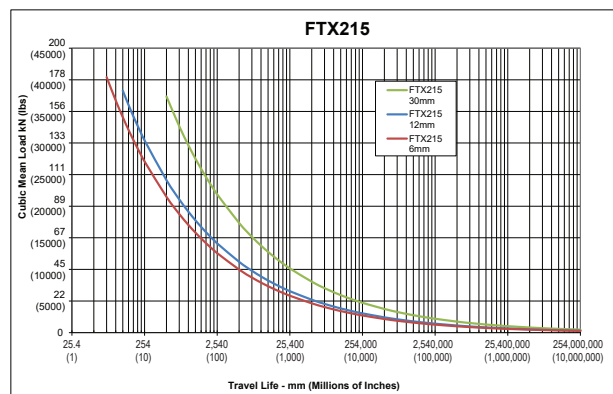
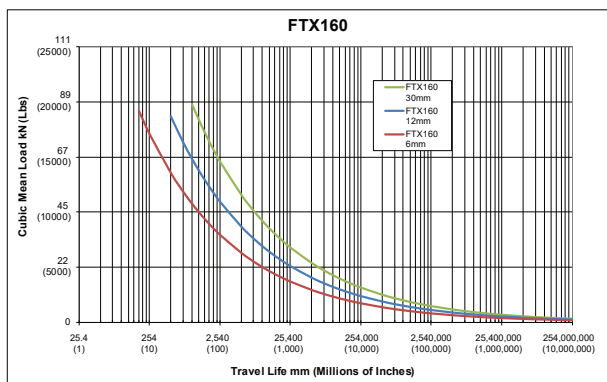
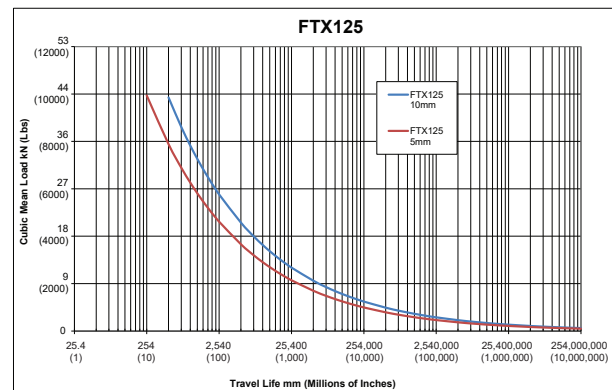
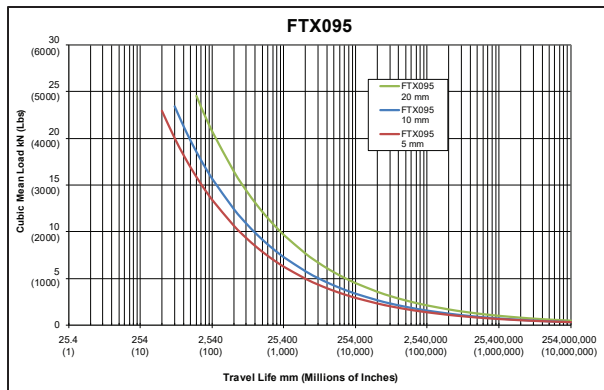
Base Actuator Weight (Zero Stroke)	kg	103
	lb	227
Actuator Weight Adder (Per 25 mm of stroke)	kg	2.70
	lb	5.96
Adder for Inline (excluding motor)	kg	38.6
	lb	85.1
Adder for Parallel Drive (excluding motor)	kg	62.3
	lb	137.3
Adder for Front Flange	kg	26.7
	lb	58.8
Adder for Rear Clevis	kg	32.5
	lb	71.6
Adder for Rear Eye	kg	32.5
	lb	71.6
Adder for Rear Trunnion	kg	9.6
	lb	21.2

Base Unit Inertia		Zero Stroke [kg-m ² (lbf-in-sec ²)]	Add per 25 mm [kg-m ² (lbf-in-sec ²)]
6 mm Lead		4.25 x 10 ⁻² (3.76 x 10 ⁻¹)	8.00 x 10 ⁻⁴ (7.08 x 10 ⁻³)
12 mm Lead		4.26 x 10 ⁻² (3.77 x 10 ⁻¹)	8.02 x 10 ⁻⁴ (7.10 x 10 ⁻³)
30 mm Lead		4.31 x 10 ⁻² (3.82 x 10 ⁻¹)	8.15 x 10 ⁻⁴ (7.21 x 10 ⁻³)
Inline Drive Inertia	<55 mm Motor Shaft Diameter	>55 mm Motor Shaft Diameter	Add per 25 mm
6 mm Lead		4.43 x 10 ⁻² (3.92 x 10 ⁻¹)	8.00 x 10 ⁻⁴ (7.08 x 10 ⁻³)
12 mm Lead		4.44 x 10 ⁻² (3.93 x 10 ⁻¹)	8.02 x 10 ⁻⁴ (7.10 x 10 ⁻³)
30 mm Lead		4.49 x 10 ⁻² (3.98 x 10 ⁻¹)	8.15 x 10 ⁻⁴ (7.21 x 10 ⁻³)
Parallel Drive Inertia		1:1 Reduction	2:1 Reduction
6 mm Lead (zero stroke)		9.42 x 10 ⁻² (8.34 x 10 ⁻¹)	3.50 x 10 ⁻² (3.10 x 10 ⁻¹)
Add per 25 mm stroke		8.00 x 10 ⁻⁴ (7.08 x 10 ⁻³)	2.00 x 10 ⁻⁴ (1.77 x 10 ⁻³)
12 mm Lead (zero stroke)		9.43 x 10 ⁻² (8.34 x 10 ⁻¹)	3.50 x 10 ⁻² (3.10 x 10 ⁻¹)
Add per 25 mm stroke		8.02 x 10 ⁻⁴ (7.10 x 10 ⁻³)	2.01 x 10 ⁻⁴ (1.78 x 10 ⁻³)
30 mm Lead (zero stroke)		9.48 x 10 ⁻² (8.39 x 10 ⁻¹)	3.52 x 10 ⁻² (3.11 x 10 ⁻¹)
Add per 25 mm stroke		8.15 x 10 ⁻⁴ (7.21 x 10 ⁻³)	2.04 x 10 ⁻⁴ (1.80 x 10 ⁻³)

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Estimated Service Life



The L_{10} expected life of a roller screw linear actuator is expressed as the linear travel distance that 90% of properly maintained roller screws manufactured are expected to meet or exceed. This is not a guarantee and these charts should be used for estimation purposes only.

The underlying formula that defines this value is:
Travel life in millions of inches, where:

$$L_{10} = \left(\frac{C_a}{F_{cml}} \right)^3 \times \ell$$

C_a = Dynamic load rating (lbf)
 F_{cml} = Cubic mean applied load (lbf)
 ℓ = Roller screw lead (inches)

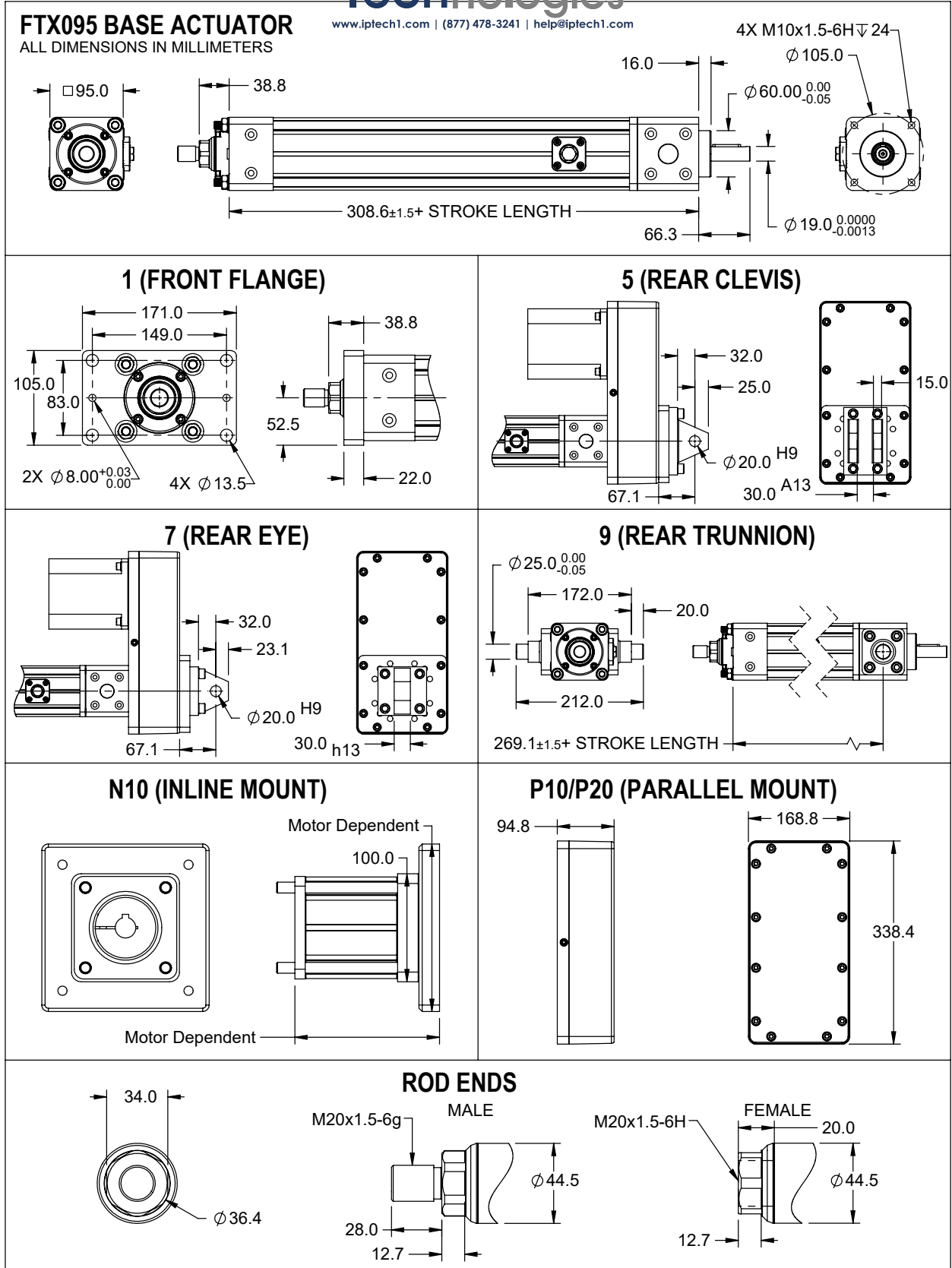
Service Life Estimate Assumptions:

- Sufficient quality and quantity of lubrication is maintained throughout service life
- Bearing and screw temperature between 20° C and 40° C
- No mechanical hard stops (external or internal) or impact loads
- No external side loads
- Does not apply to short stroke, high frequency applications such as fatigue testing or short stroke, high force applications such as pressing.

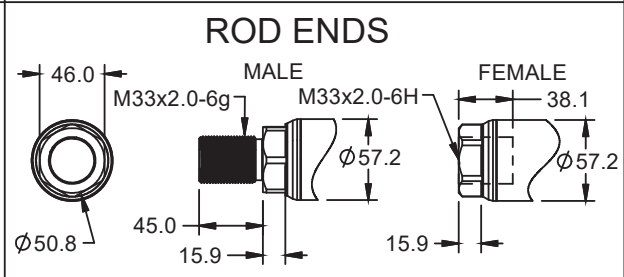
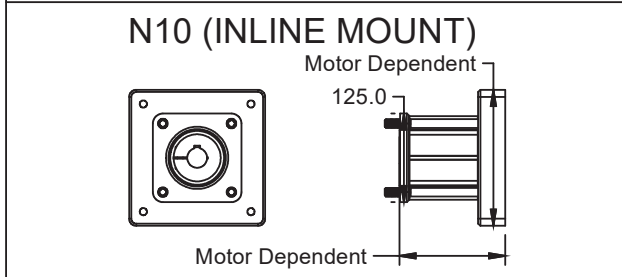
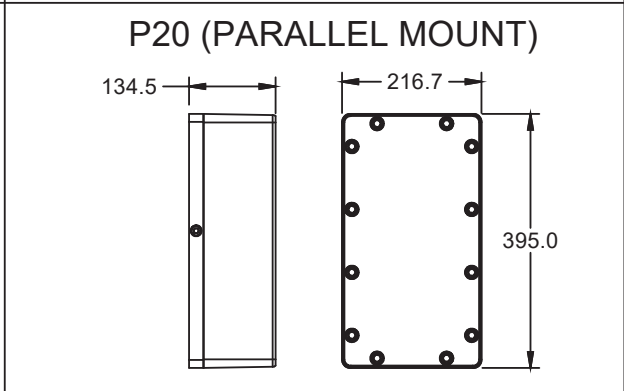
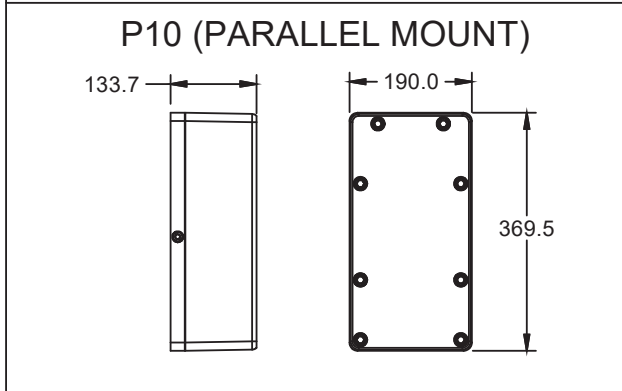
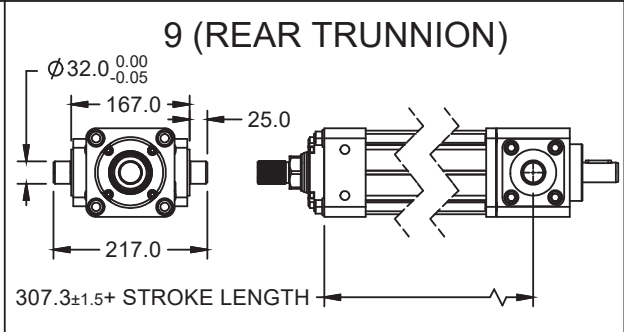
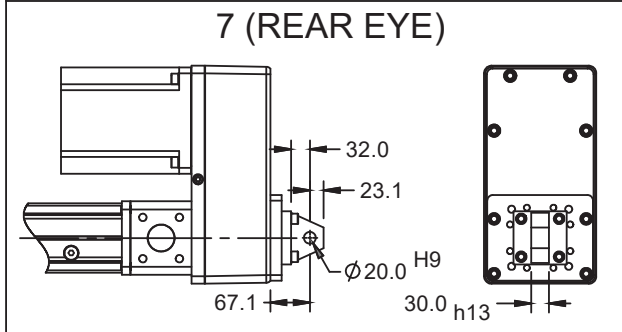
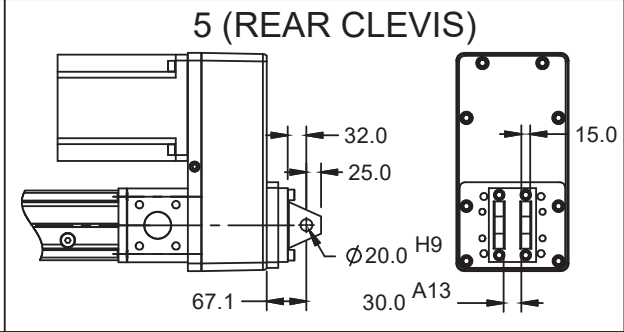
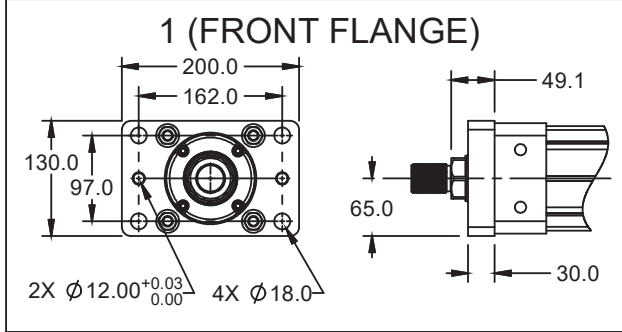
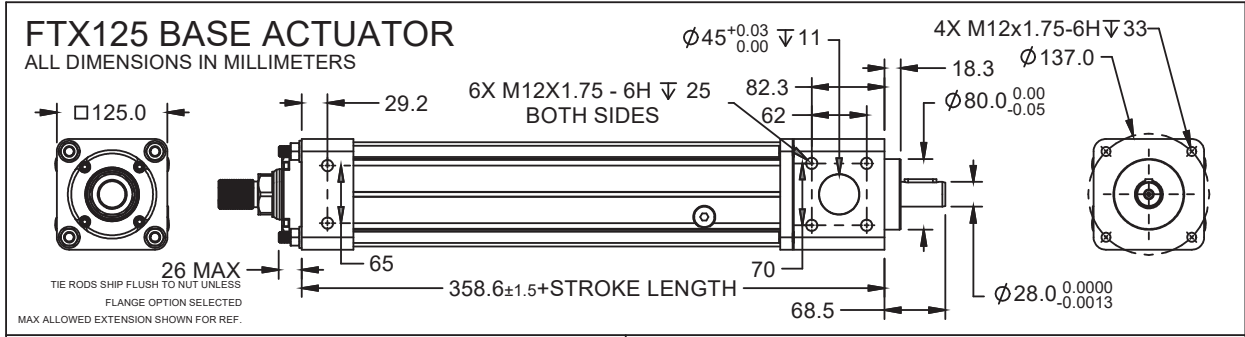
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Dimensions



Pre-sale drawings and models are representative and are subject to change.



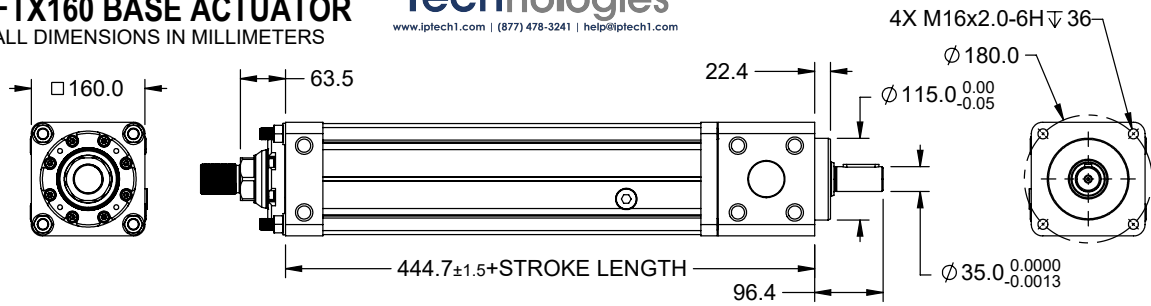
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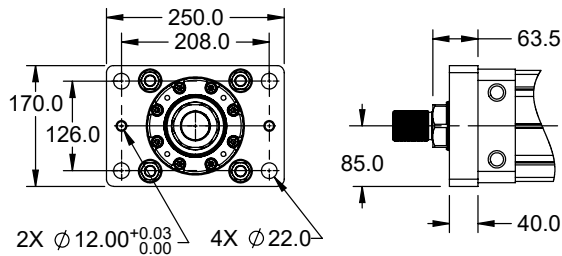
FTX160 BASE ACTUATOR

ALL DIMENSIONS IN MILLIMETERS

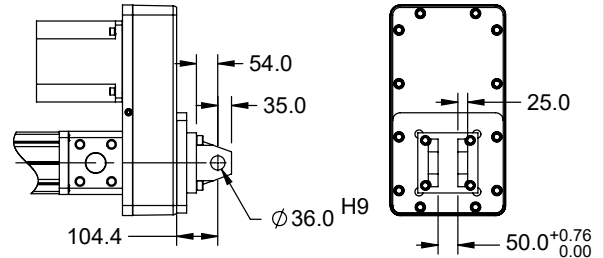
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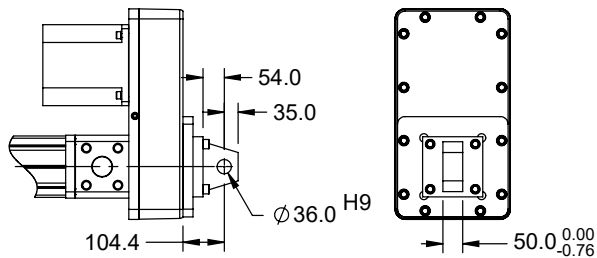
1 (FRONT FLANGE)



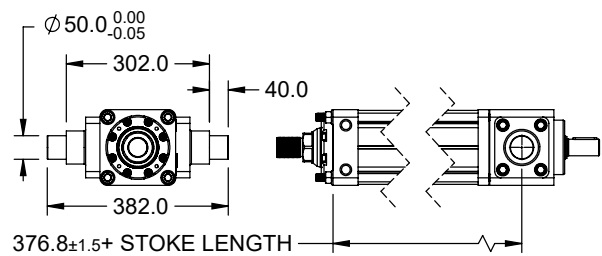
5 (REAR CLEVIS)



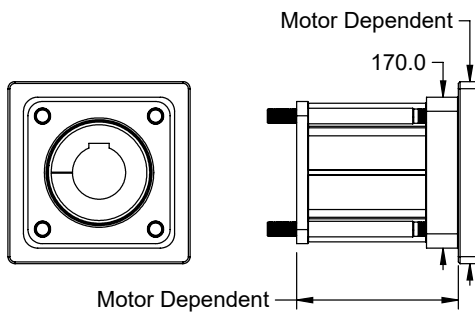
7 (REAR EYE)



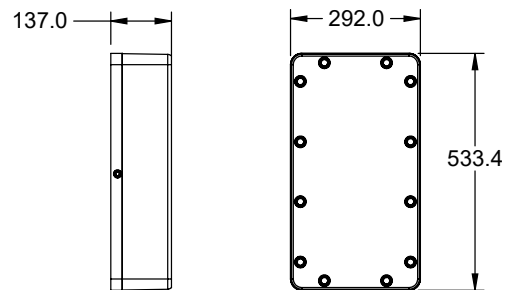
9 (REAR TRUNNION)



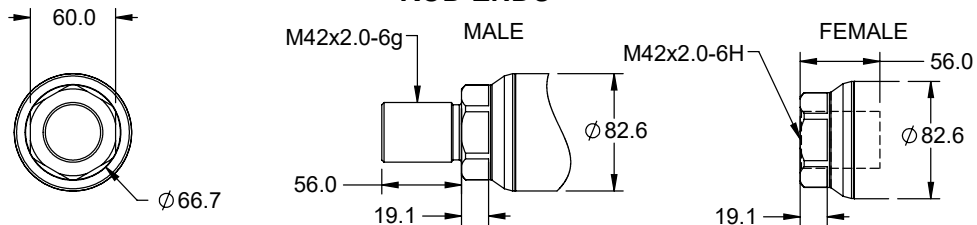
N10 (INLINE MOUNT)



P10/P20 (PARALLEL MOUNT)



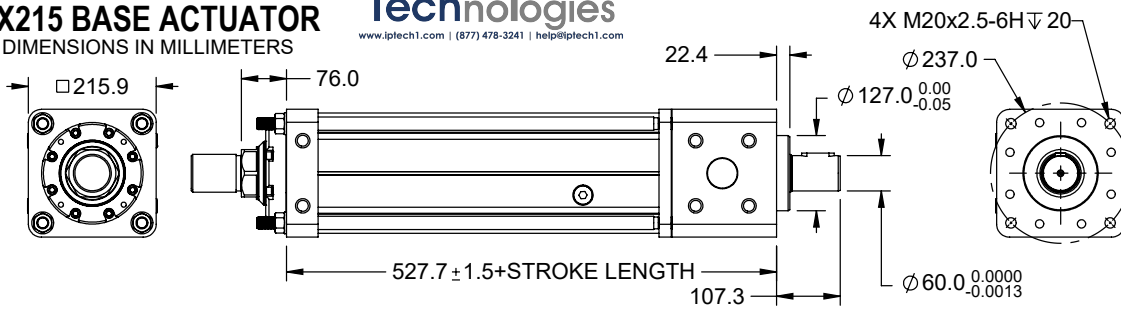
ROD ENDS



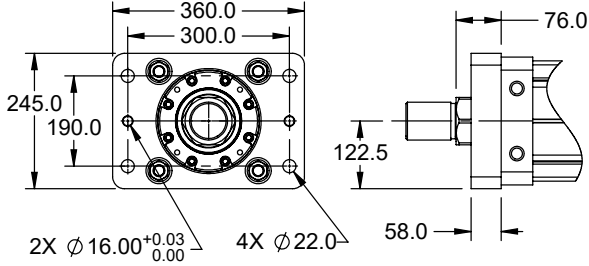
Pre-sale drawings and models are representative and are subject to change.

FTX215 BASE ACTUATOR

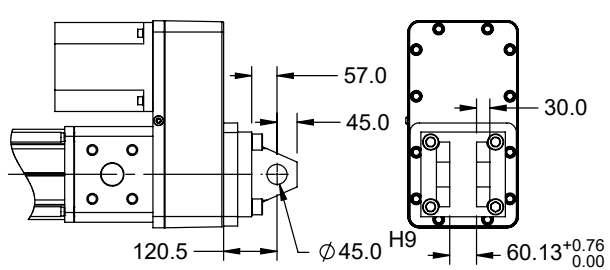
ALL DIMENSIONS IN MILLIMETERS



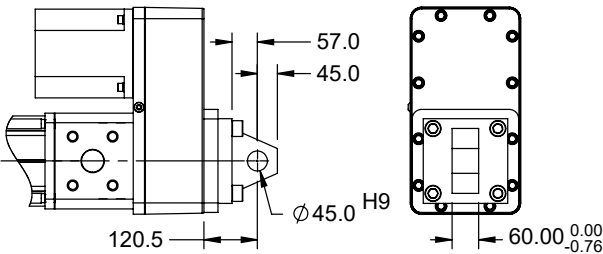
1 (FRONT FLANGE)



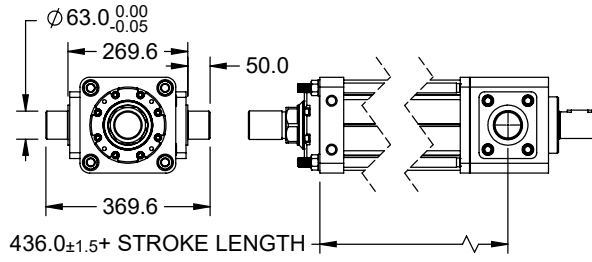
5 (REAR CLEVIS)



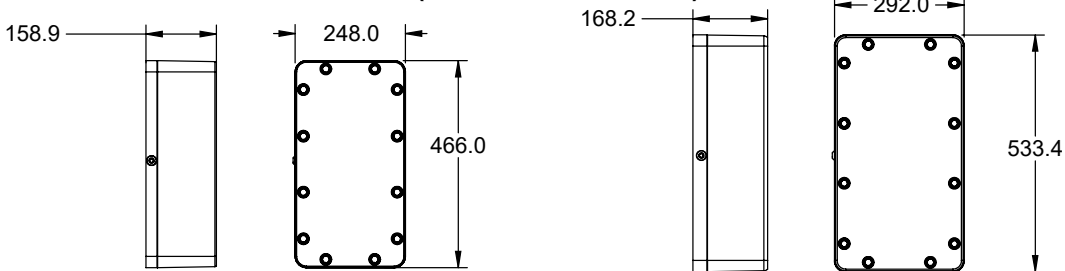
7 (REAR EYE)



9 (REAR TRUNNION)

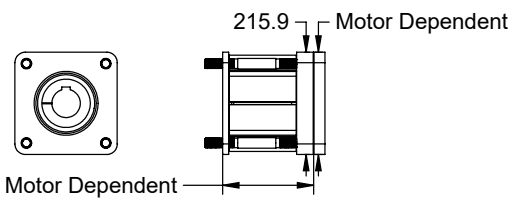


P10/P20 (PARALLEL MOUNT)

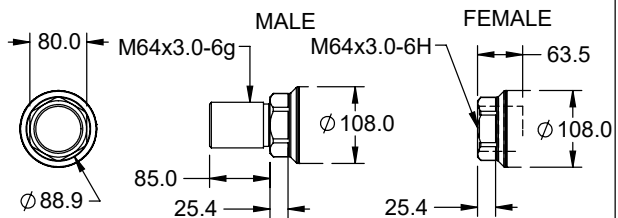


NOTE: 248mm Wide Housing used for Motors with 215mm Mounting B.C. and Smaller P10 1:1 Mounts, 292mm Wide Housing used for all 2:1 Drive Motors and Motors with B.C. Larger 2:1 P20 Mounts

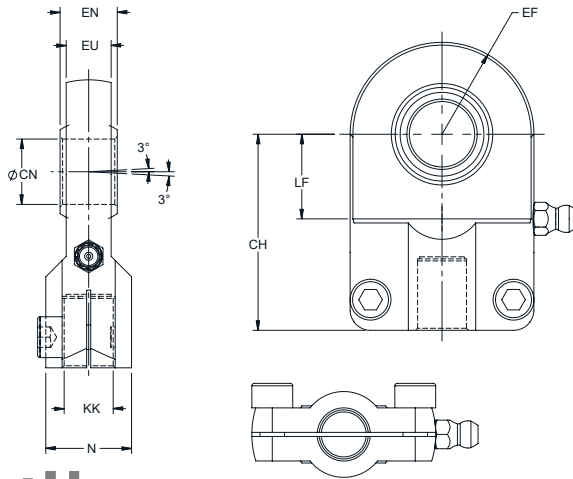
N10 (INLINE MOUNT)



ROD ENDS



Rod Eye, Spherical

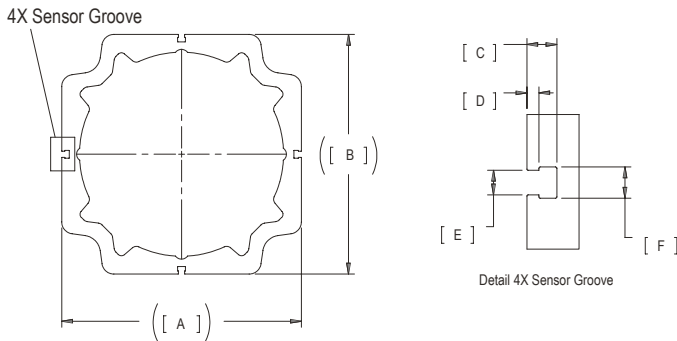


		FTX095	FTX125	FTX160	FTX215
AV	mm	29.0	46.0	55.0	86.0
	in	1.14	1.81	2.17	3.39
CH	mm	85.0	130.0	150.0	240.0
	in	3.35	5.12	5.91	9.45
CN	mm	30.0	50.0	60.0	100.0
	in	1.18	1.97	2.36	3.94
EF (max)	mm	41.0	61.0	80.0	120.0
	in	1.61	2.40	3.15	4.72
EN	mm	22.0	35.0	44.0	70.0
	in	0.87	1.38	1.73	2.76
EU (max)	mm	20.0	31.0	39.0	57.0
	in	0.79	1.22	1.54	2.24
KK		M20X1.5 6H	M33X2.0 6H	M42X2.0 6H	M64X3.0 6H
LF (min)	mm	35.0	58.0	68.0	116.0
	in	1.38	2.28	2.68	4.57
N (max)	mm	37.0	57.0	69.0	110.0
	in	1.46	2.24	2.72	4.33

**In-Position
Technologies**

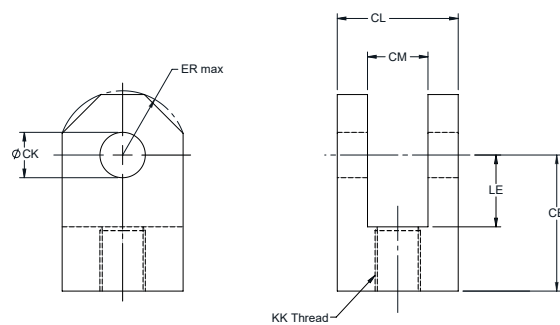
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Case Dimensions



		FTX095	FTX125	FTX160	FTX215
A	mm	94	118	156	203
	in	3.7	4.6	6.1	8.0
B	mm	94	118	156	203
	in	3.7	4.6	6.1	8.0
C	mm	4.9	5.6	5.5	6.4
	in	0.19	0.22	0.22	0.25
D	mm	1.1	1.8	1.7	2.5
	in	0.4	0.07	0.07	0.10
E	mm	5.2	5.2	5.3	5.2
	in	0.21	0.21	0.21	0.21
F	mm	6.6	6.6	6.6	6.6
	in	0.26	0.26	0.26	0.26

Rod Clevis



		FTX095	FTX125	FTX160	FTX215
CE	mm	60.0	99.0	113.0	168.0
	in	2.36	3.90	4.45	6.61
Ø CK	mm	20.0 h9	36.0 h9	45.0 h9	70.0 h9
	in	0.79	1.42	1.77	2.76
CL	mm	62.0	103.0	123.0	163.0
	in	2.44	4.06	4.84	6.42
CM	mm	30.0	50.0	60.0	80.0
	in	1.18	1.97	2.36	3.15
Ø ER (max)	mm	29.0	50.0	53.0	78.0
	in	1.14	1.97	2.09	3.07
LE (min)	mm	32.0	54.0	57.0	83.0
	in	1.26	2.13	2.24	3.27
KK		M20X1.5 6H	M33X2.0 6H	M42X2.0 6H	M64X3.0 6H

Standard Motor/Gearbox Mount Codes for the FTX

FTX095 (Inline or Parallel - 1:1)

Bolt Circle Diameter (mm)	Pilot Diameter (mm)	Shaft Diameter (mm)	Shaft Length (mm)	Key Width (mm)	Motor Mount Code
68	60	16	48	5	GFA
75	60	16	48	5	GHA
165	130	28	60	8	IRB
165	130	32	58	10	IRC
165	130	32	50	10	IRD
145	110	28	63	8	JQA
85	70	22	49/56	6	GIA
130	110	24	50	8	IPB
115	95	19	40	6	INA
115	95	24	50	8	INB
130	110	19	40	6	IPA
130	95	24	50	8	IPD
165	130	24	50	8	IRA
165	130	32	80	10	IRE

FTX125 (Inline or Parallel - 1:1)

Bolt Circle Diameter (mm)	Pilot Diameter (mm)	Shaft Diameter (mm)	Shaft Length (mm)	Key Width (mm)	Motor Mount Code
120	90	32	88	10	G7A
200	114.3	42	113	10	JSD
215	130	32	60	10	ITE
215	180	38	80	10	ITF
215	180	42	82	12	ITG
85	70	22	49/56	6	GIA
100	80	22	40/48/52	6	GMA
165	130	24	50	8	IRA
165	130	32	58	10	IRC
165	130	32	50	10	IRD
200	114.3	35	79/80	10	JSA
200	114.3	42	113	12	JSG

FTX160 (Inline or Parallel - 1:1)

Bolt Circle Diameter (mm)	Pilot Diameter (mm)	Shaft Diameter (mm)	Shaft Length (mm)	Key Width (mm)	Motor Mount Code
120	90	32	88	10	G7A
165	130	40	112	12	GRA
265	230	42	110	12	IVC
130	110	32	65/68/72	10	GPA
215	180	38	80	10	ITF
235	200	55	116	16	JUA
265	230	55	110	16	JVA

FTX095 (Parallel - 2:1)

Bolt Circle Diameter (mm)	Pilot Diameter (mm)	Shaft Diameter (mm)	Shaft Length (mm)	Key Width (mm)	Motor Mount Code
68	60	16	48	5	GFA
75	60	16	48	5	GHA
130	110	24	50	8	IPB
165	130	24	50	8	IRA
100	80	19	40	6	IMC
145	110	24	55	8	JQD
115	95	19	40	6	INA
115	95	24	50	8	INB
130	95	24	50	8	IPD
145	110	22	70	8	JQE

FTX125 (Parallel - 2:1)

Bolt Circle Diameter (mm)	Pilot Diameter (mm)	Shaft Diameter (mm)	Shaft Length (mm)	Key Width (mm)	Motor Mount Code
85	70	22	56	6	GIA
165	130	24	50	8	IRA
165	130	32	58	10	IRC
200	114.3	35	80	10	JSA
130	110	24	50	8	IPB
165	130	28	60	8	IRB
200	114.3	35	70	10	JSB
215	130	32	60	10	ITE

FTX160 (Parallel - 2:1)

Bolt Circle Diameter (mm)	Pilot Diameter (mm)	Shaft Diameter (mm)	Shaft Length (mm)	Key Width (mm)	Motor Mount Code
120	90	32	88	10	G7A
200	114.3	42	113	10	JSD
215	130	32	60	10	ITE
100	80	22	40/48/52	6	GMA
130	110	32	65/68/72	10	GPA
165	130	32	50	10	IRD
200	114.3	35	79/80	10	JSA
215	180	38	80	10	ITF
215	180	42	82/85	12	ITG
265	230	42	110	12	IVC

**In-Position
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Configured option may add lead time and/or cost
 Available as configured in P10 only

FTX215 (Inline or Parallel - 1:1)

Bolt Circle Diameter (mm)	Pilot Diameter (mm)	Shaft Diameter (mm)	Shaft Length (mm)	Key Width (mm)	Motor Mount Code
215	160	55	112	16	GTA
265	230	42	110	12	IVC
265	230	60	140	18	JVC
300	250	48	112	14	IWA
300	250	60	140	18	JWA
165	130	40	112	12	GRA
215	180	38	80	10	ITF
235	200	55	116	16	JUA
265	230	38	110	10	IVB
265	230	55	110	16	JVA
265	230	65	140	18	JVB
300	250	48	82	14	IWB

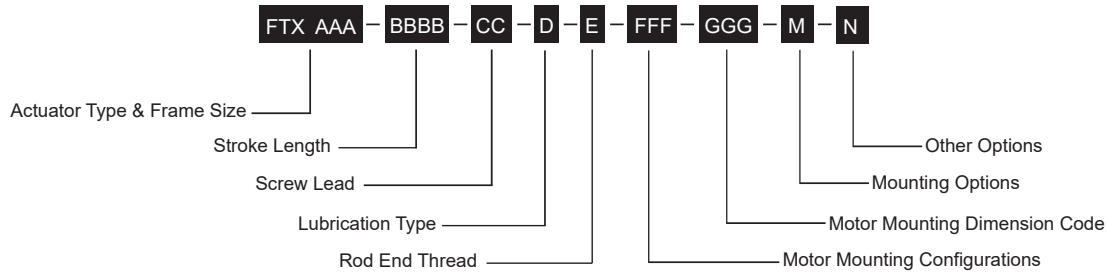
FTX215 (Parallel - 2:1)

Bolt Circle Diameter (mm)	Pilot Diameter (mm)	Shaft Diameter (mm)	Shaft Length (mm)	Key Width (mm)	Motor Mount Code
165	130	40	112	12	GRA
215	180	38	80	10	ITF
265	230	38	110	10	IVB
265	230	42	110	12	IVC
300	250	48	110/112	14	IWA
300	250	48	82	14	IWB

 Configured option may add lead time and/or cost

In-Position Technologies

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AAA = Frame Size

095 = 95 mm
 125 = 125 mm
 160 = 160 mm
 215 = 215 mm

BBBB = Stroke Length

0150 = 150 mm
 0300 = 300 mm
 0600 = 600 mm
 0900 = 900 mm (FTX095, FTX125, FTX160)

CC = Screw Lead

05 = 5 mm (FTX095, FTX125)
 06 = 6 mm (FTX160, FTX215)
 10 = 10 mm (FTX095, FTX125)
 12 = 12 mm (FTX160, FTX215)
 20 = 20 mm (FTX095)
 30 = 30 mm (FTX160, FTX215)

D = Lubrication Type

1 = Grease
 2 = Oil

E = Rod End Thread

A = Male, Metric
 B = Female, Metric
 M = Male, English³
 F = Female, English³

FFF = Motor Mounting Configurations¹

NMT = None, base unit only
 N10 = Inline, includes shaft coupling
 P10 = Parallel, 1:1 belt reduction
 P20 = Parallel, 2:1 belt reduction

GGG = Motor/Gearbox Mounting Dimension Code

See standard motor/gearbox mounting code dimension sheet (Page 57)
 NMT = None, base unit only

M = Mounting Options

N = None
 1 = Front Flange, Metric
 5 = Rear Clevis, Metric²
 7 = Rear Eye, Metric²
 9 = Rear Trunnion, Metric
 F = Front Flange, English³
 C = Rear Clevis, English³ (Not available on FTX215)
 G = Rear Clevis, Metric³ (Not available on FTX125 or FTX215)

N = Other Options

N = None
 L = Limit Switches*

*Ordered Separately

NOTES:

1. Always discuss your motor selection with your local sales representative.
2. Not available with inline or NMT motor mount, contact your local sales representative.
3. Available option. May add lead time



For options or specials not listed above, please contact Exlar



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FTX Series Accessories

Exlar Part Number	Switches Type
43403	Normally Open PNP Limit Switch (10-30 VDC, 1m. 3 wire embedded cable)
43404	Normally Closed PNP Limit Switch (10-30 VDC, 1m. 3 wire embedded cable)
67634	Normally Open NPN Limit Switch (10-30 VDC, 1m. 3 wire embedded cable)
67635	Normally Closed NPN Limit Switch (10-30 VDC, 1m. 3 wire embedded cable)