LINEAR ACTUATOR TECHNOLOGY

MT Series

MTD 42 BELT DRIVEN LINEAR ACTUATOR

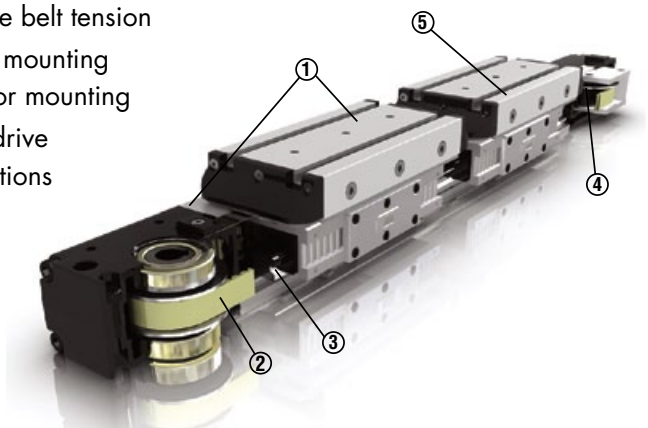
The MTD belt driven unit features a flat profile design and bidirectional movement. Available with one or two railway runner blocks per carriage.

FEATURES & BENEFITS

- High Acceleration, Speed & Rigidity
- Long Travel Length
- Low Friction, Noise & Vibration
- Strong yet Lightweight & Corrosion Resistant

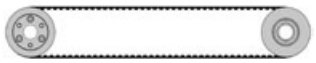
KEY FEATURES

(1) Anodized aluminum housing and carriage
(2) Steel reinforced belt capable of handling high loads
(3) Ball guided rail system
(4) Adjustable belt tension
(5) T-slots for mounting and sensor mounting
(6) Multiple drive configurations

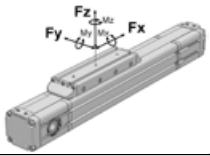


NOTE:
1. Moment arms for calculating moments should be measured from the centerline of the extrusion.
2. Limit switches must be used in order to prevent the carriage from contacting the actuator end blocks, resulting in damage.
3. 25mm of over-travel has been added to the body length in each direction to allow for carriage over-travel. 25 mm is the recommended over-travel; although a minimum of 10mm may be specified for special applications.

TECHNICAL DATA



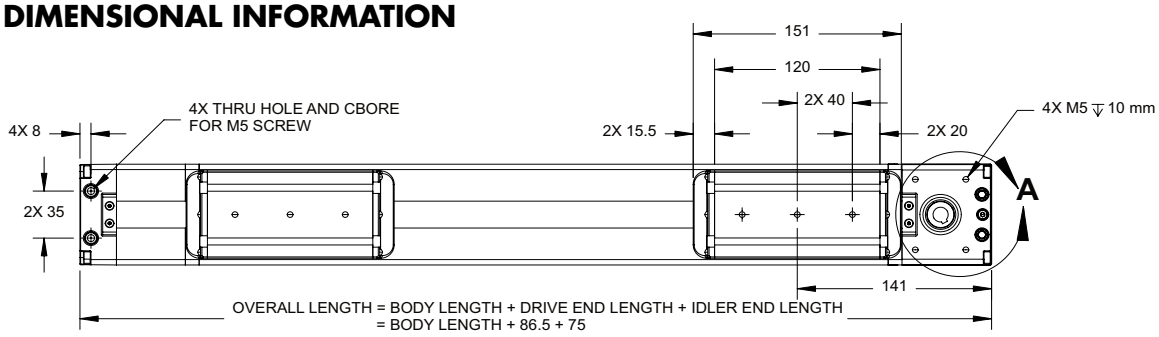
Size		mm	42 x 75	in	1.65 x 2.95
Max. Speed		m/s	3	in/s	118
Max. Stroke Length		mm	3000	in	118
Min. Stroke Length		mm	100	in	3.94
Pulley Drive Ratio		mm	130	in	5.12
Number of Pulley Teeth		26			
Max RPM		2000			
Base Weight		Kg	3.7	lbf	8.14
Add for 100 mm or 3.94 in of Stroke		Kg	0.50	lbf	1.10
Max. Load	**Fx**	N	615	lbf	138
	Fy	N	1275	lbf	287
	Fz	N	1275	lbf	287
Max. Moments	**Mx**	Nm	18	lbf-in	159
	My	Nm	110	lbf-in	974
	Mz	Nm	110	lbf-in	974
Moment of Inertia	**Ix**	cm^4	28	in^4	0.67
	Iy	cm^4	37	in^4	0.89
Max. Radial Load on Input Shaft		N	250	lbf	56.2
No Load Torque		Nm	1.4	lbf-in	12.4

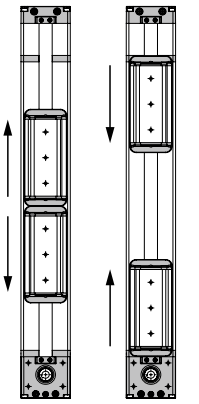


For combined loads, the combined loading cannot exceed the following formula.

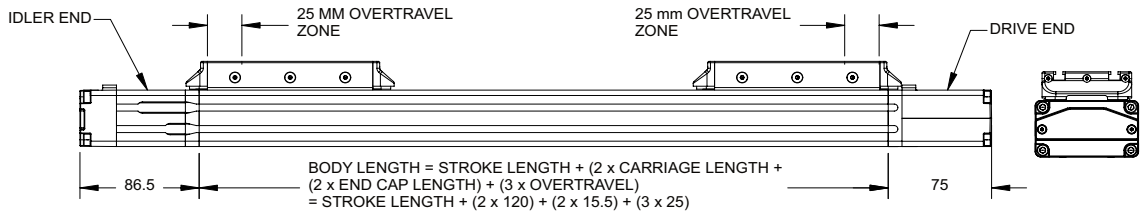
$$\frac{Fy_A}{Fy}+\frac{Fz_A}{Fz}+\frac{Mx_A}{Mx}+\frac{My_A}{My}+\frac{Mz_A}{Mz}<=1$$

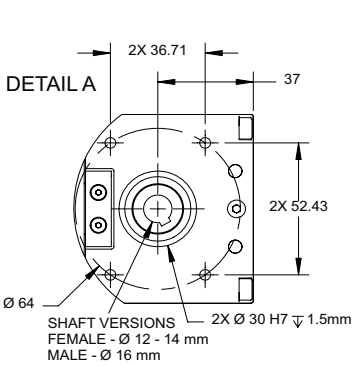
DIMENSIONAL INFORMATION

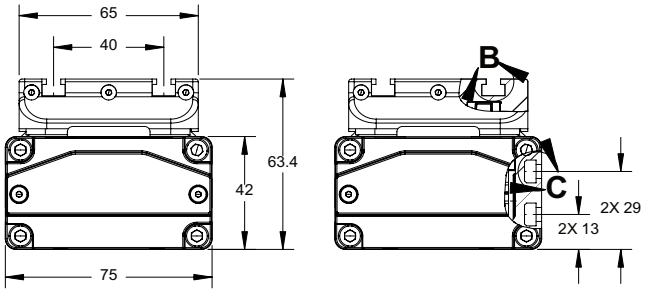


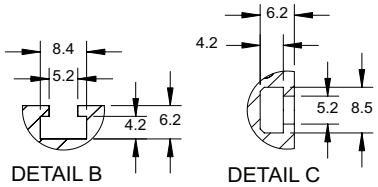


Bi-directional opposed movement

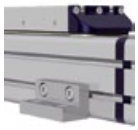






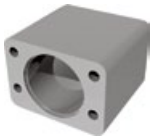


ACCESSORIES (Available upon request.)



Mid Section Mounting Bracket

End Cap Mounting Bracket



Motor Mounts/ Coupling Housings

Coupling

Flange Plate

Stub Shafting

ORDERING INFORMATION

EXAMPLE: MTD42D-1000-12F22

MTD	042	D	-	XXXX	-	X	X	X	X

Series	Size (mm) *(Base x Height)*	System Type*	Body Length**	Shaft Diameter	Shaft Type	#Carriage**	Guidance Type
MTD Belt Driven Unit	**42** mm x **42**mm	**N** - Undriven **D** - Driven	**6000 mm (max.)** *Must include 50mm over-travel*	**00** = No shaft (undriven system) **12** = 12mm **14** = 14mm **16** = 16mm	**0** = No shaft (undriven system) **F** = Female hollow (12, 14) **L** = Left Male (16) **R** = Right Male (16) **B** = Both Male (16)	**2** **3** **4**	**2** = Profile rail w/2 runner blocks per carriage **Future Option** **C** = CRT/IVT - V-wheel roller **G** = GST - Gliding polymer

**No belt or motor mount, contact manufacturer for "N" version.*
***Contact manufacturer for other options and availability.*

Product information and 2D/3D CAD drawings available for download at www.pbclinear.com
For technical & application information call **1-888-962-8979**.

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