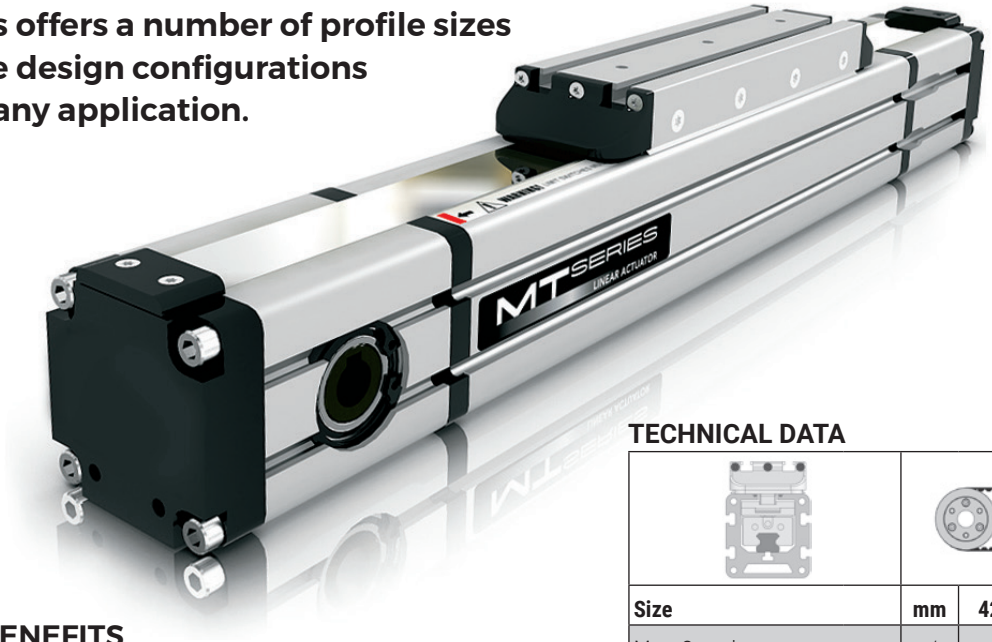
MT Series

MTB 42 BELT DRIVEN LINEAR ACTUATOR

The MT Series offers a number of profile sizes with multiple design configurations to fit almost any application.

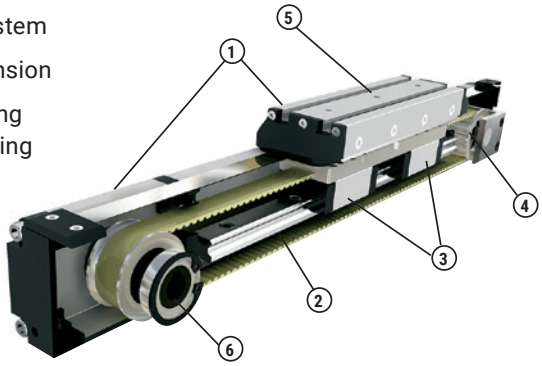


FEATURES & BENEFITS

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

KEY FEATURES

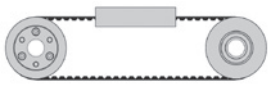
1 – Anodized aluminum housing and carriage
2 – Steel reinforced belt capable of handling high loads
3 – Ball guided rail system
4 – Adjustable belt tension
5 – T-slots for mounting and sensor mounting
6 – Multiple drive configurations



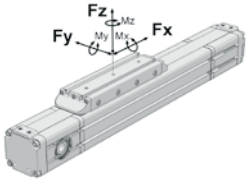
NOTE:

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. 25 mm 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 10 mm may be specified for special applications.

TECHNICAL DATA



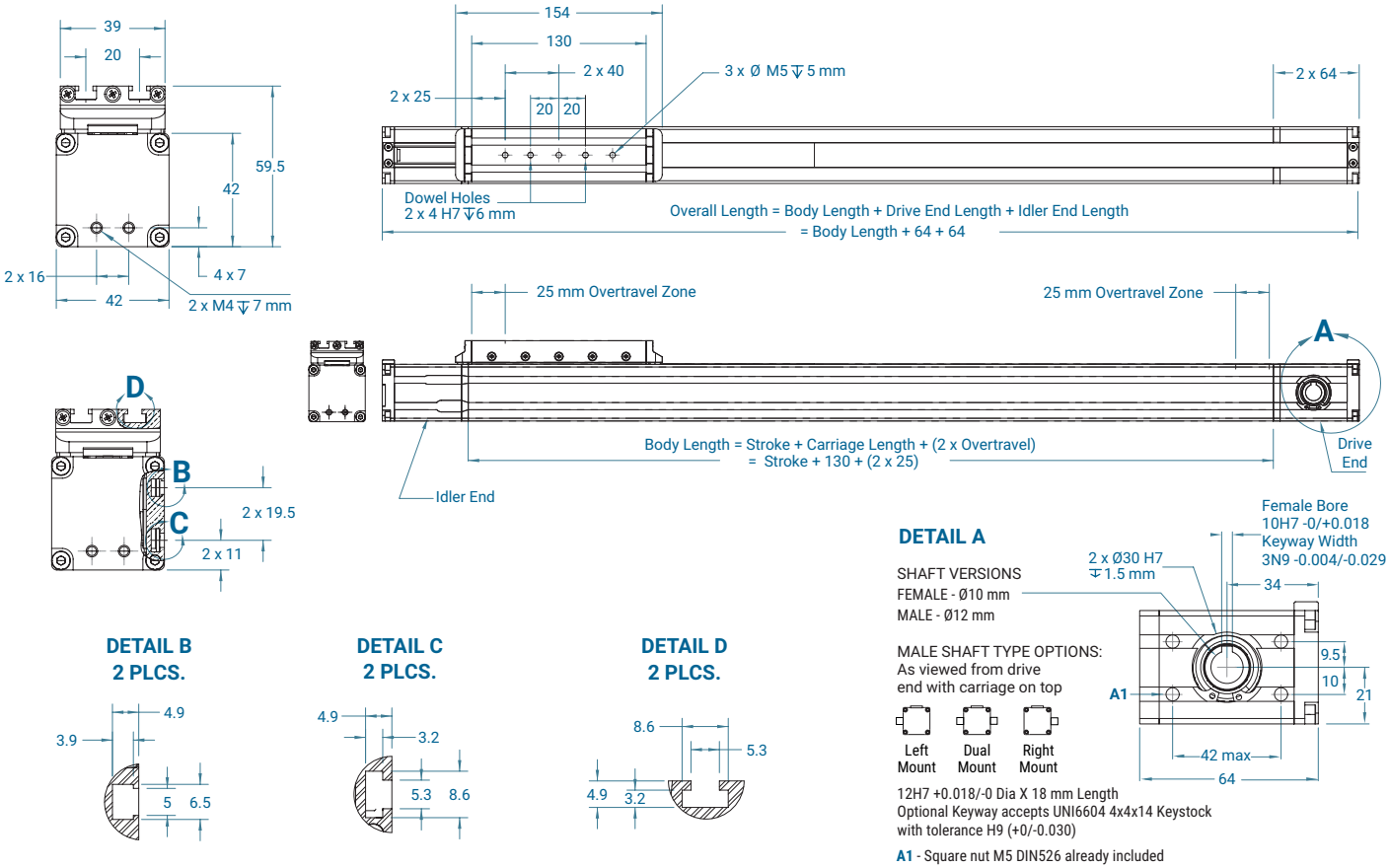
Size		mm	42 x 42	in	1.65 x 1.65
Max. Speed		m/s	3	in/s	118.11
Max. Stroke Length		mm	2,000	in	78.74
Min. Stroke Length		mm	100	in	3.94
Pulley Drive Ratio		mm	90	in	3.54
Number of Pulley Teeth		18			
Max RPM		2,000			
Base Weight		Kg	1.6	lb	3.53
Add for 100 mm or 3.94 in of Stroke		Kg	0.25	lb	0.55
Max. Load	**Fx**	N	460	lbf	103
	Fy	N	1,560	lbf	351
	Fz	N	1,560	lbf	351
Max. Moments	**Mx**	Nm	20	lbf-in	177
	My	Nm	55	lbf-in	487
	Mz	Nm	55	lbf-in	487
Moment of Inertia	**Ix**	cm^4	12	in^4	0.29
	Iy	cm^4	15	in^4	0.36
Max. Radial Load on Input Shaft		N	220	lbf	49.5
No Load Torque		Nm	0.8	lbf-in	7.1
Repeatability		+—0.05 mm			



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

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

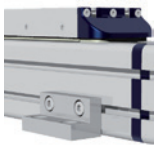
DIMENSIONAL INFORMATION



ACCESSORIES (Available upon request.)

End Cap Mounting Bracket
MTB042A-A0AA001
MTB042A-A0AA001-Kit

MTB042A-A0AA001-Kit Includes:
(2 PCS) MTB042A-A0AA001 Bracket
(4 PCS) M4 X 16 mm SHCS
(Secondary Support - Do Not Use Alone)



Mid Section Mounting Bracket
MTB042A-A0AA002
MTB042A-A0AA002-Kit

MTB042A-A0AA002-Kit Includes:
(2 PCS) MTB042A-A0AA002 Bracket
(4 PCS) M5 X 8 mm SHCS
(4 PCS) M5 T-Nut

Sq Nut & T-Nut Accessories for Details B, C & D
6100504 Sq Nut M5 X 0.8

For Detail C
6100443 T-Nut M5 X 0.8

ORDERING INFORMATION

Example: MTB-042D-1000-12B12

MTB	042	X	-	XXXX	-	XX	XX	X	X
Series	**Size (mm)** (Base x Height)	**System Type***		**Body Length****		**Shaft Diameter**	**Shaft Type**	**# Carriage****	**Guidance Type**
MTB Belt Driven Unit	**42** mm x **42** mm	**D = Driven** **N** = Undriven		**2,000 mm (max.)** Must include 50 mm over-travel For lengths greater than 1,500 mm, consult factory		**00** = No shaft (undriven system) **10** = 10 mm **12** = 12 mm	**F = Female hollow** (10) **L** = Left Male (12) **R** = Right Male (12) **B** = Both Male (12) **0** = No shaft (undriven system) **LW** = Left Male w/o Keyway **RW** = Right Male w/o Keyway **BW** = Both Male w/o Keyway	**1 Standard** **2** **3** **4**	**2** = Profile rail w/2 runner blocks per carriage

* No belt or motor mount, contact manufacturer for "N" version.
** Contact manufacturer for other options and availability. Profile rail will be segmented for lengths over 1 m.

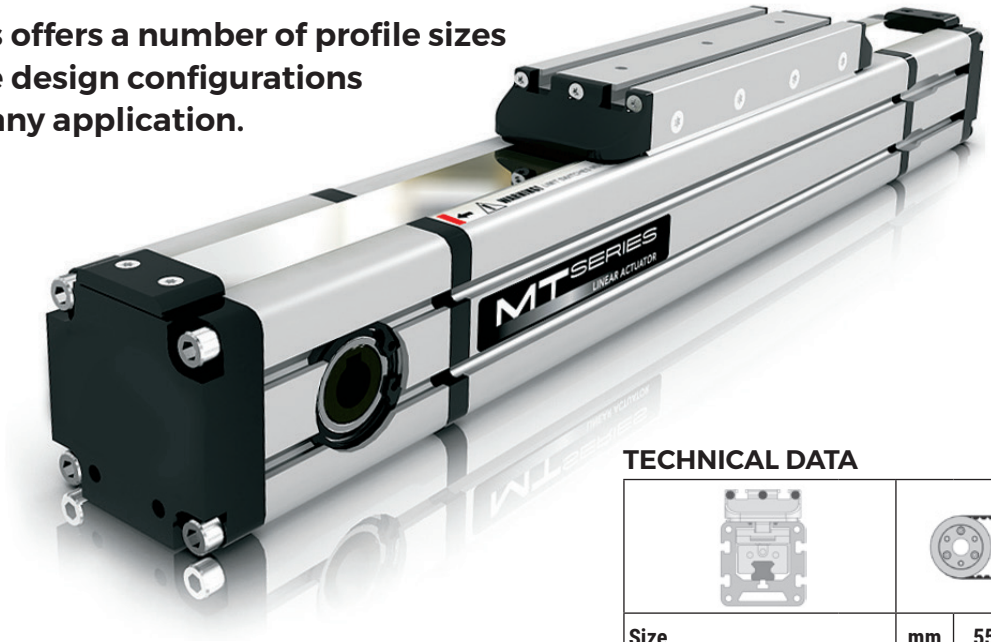
Common Drive Combinations
12B - 40% **12F - 20%** **12R - 20%** **12L - 10%** **10F - 10%**

MT Series

MTB 55 BELT DRIVEN LINEAR ACTUATOR

LINEAR ACTUATOR TECHNOLOGY

The MT Series offers a number of profile sizes with multiple design configurations to fit almost any application.



FEATURES & BENEFITS

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

KEY FEATURES

1 – Anodized aluminum housing and carriage

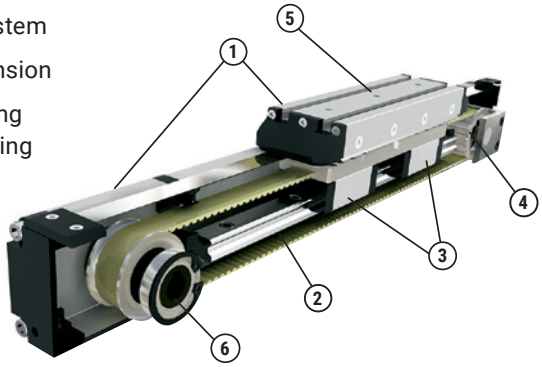
2 – Steel reinforced belt capable of handling high loads

3 – Ball guided rail system

4 – Adjustable belt tension

5 – T-slots for mounting and sensor mounting

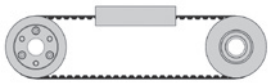
6 – Multiple drive configurations



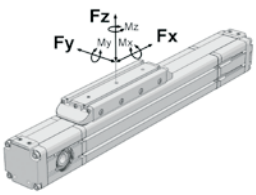
NOTE:

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. 25 mm 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 10 mm may be specified for special applications.

TECHNICAL DATA



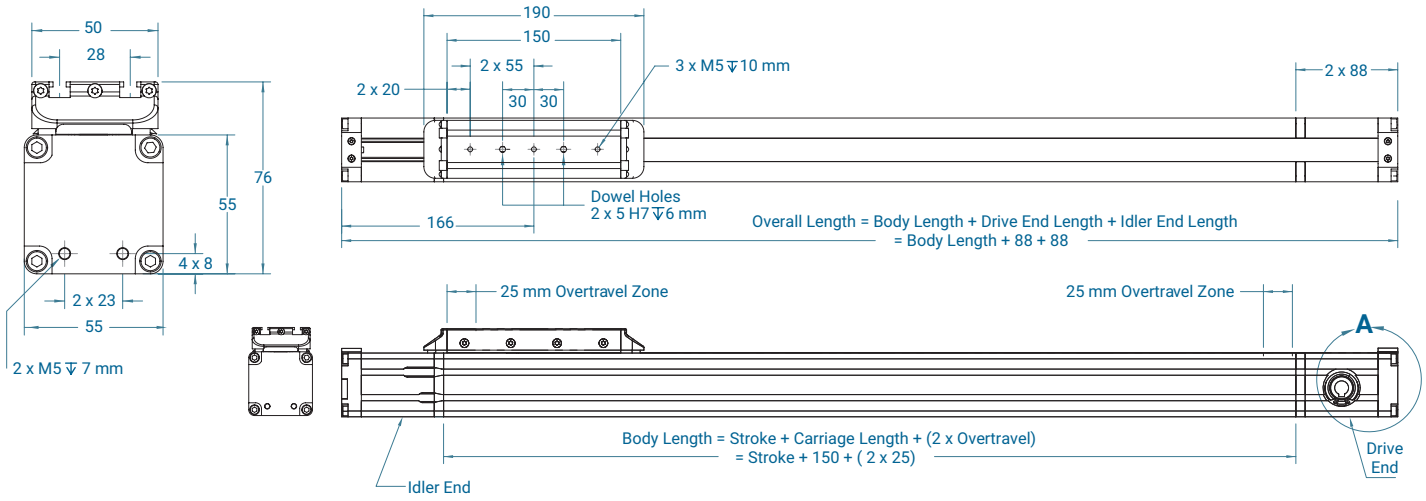
Size		mm	55 x 55	in	2.17 x 2.17
Max. Speed		m/s	3	in/s	118.11
Max. Stroke Length		mm	6,000	in	236.22
Min. Stroke Length		mm	100	in	3.94
Pulley Drive Ratio		mm	120	in	4.72
Number of Pulley Teeth		24			
Max RPM		1,500			
Base Weight		Kg	4.8	lb	10.58
Add for 100 mm or 3.94 in of Stroke		Kg	0.37	lb	0.816
Max. Load	**Fx**	N	820	lbf	184
	Fy	N	1,850	lbf	416
	Fz	N	1,850	lbf	416
Max. Moments	**Mx**	Nm	25	lbf-in	221
	My	Nm	120	lbf-in	1,062
	Mz	Nm	120	lbf-in	1,062
Moment of Inertia	**Ix**	cm^4	36	in^4	0.86
	Iy	cm^4	45	in^4	1.08
Max. Radial Load on Input Shaft		N	300	lbf	67.4
No Load Torque		Nm	1	lbf-in	8.9
Repeatability		+—0.05 mm			

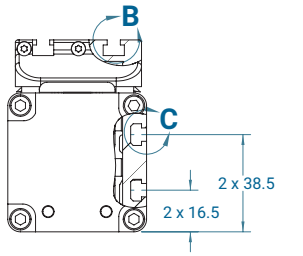


For combined loads, the combined loading cannot exceed the following formula.

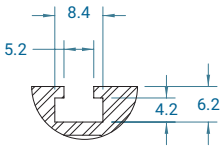
$$\frac{Fy_A}{Fy}+\frac{Fz_A}{Fz}+\frac{Mx_A}{Mx}+\frac{My_A}{My}+\frac{Mz_A}{Mz}<=1$$

DIMENSIONAL INFORMATION

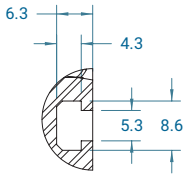




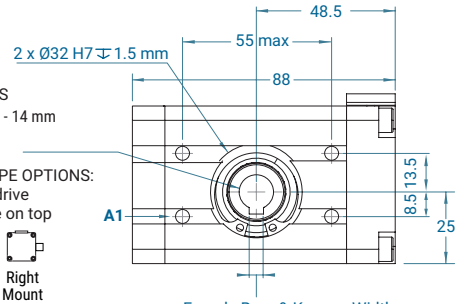
DETAIL B
2 PLCS.



DETAIL C
4 PLCS.

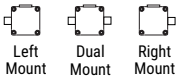


DETAIL A



SHAFT VERSIONS
FEMALE - Ø 12 mm - 14 mm
MALE - Ø 16 mm

MALE SHAFT TYPE OPTIONS:
As viewed from drive
end with carriage on top



16H7 +0.018/-0 DIA X 18.5 mm Length
Optional Keyway accepts UNI6604 5x5x20
Keystock with tolerance H9 (+0/-0.030)

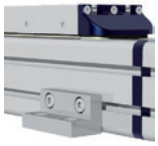
A1 - Square nut M5 DIN557 already included

Female Bore & Keyway Width
12H7 -0/+0.018 Dia Bore with
4N9 -0.030/+0 Keyway Width
14H7 -0/+0.018 Dia Bore with
5N9 -0.030/+0 Keyway Width

ACCESSORIES (Available upon request.)

End Cap
Mounting Bracket
MTB055A-A1AA001
MTB055A-A1AA001-Kit

MTB055A-A1AA001-Kit Includes:
(2 PCS) MTB055A-A1AA001 Bracket
(4 PCS) M5 X 16MM SHCS
(Secondary Support - Do Not Use Alone)



Mid Section
Mounting Bracket
MTB055A-A1AA002
MTB055A-A1AA002-Kit

MTB055A-A1AA002-Kit Includes:
(2 PCS) MTB055A-A1AA002 Bracket
(4 PCS) M5 X 10MM SHCS
(4 PCS) M5 T-NUT

Sq Nut & T-Nut Accessories for Detail B
6100445 SQ NUT M5 X 0.8

For Detail C
6100443 T-NUT M5 X 0.8

ORDERING INFORMATION

Example: MTB-055D-1000-12F12

MTB	055	X	-	XXXX	-	XX	XX	X	X
Series	**Size (mm)** (Base x Height)	**System Type***		**Body Length****		**Shaft Diameter**	**Shaft Type**	**# Carriage****	**Guidance Type**
MTB Belt Driven Unit	**55** mm x **55** mm	**D = Driven** **N** = Undriven		**6,000 mm (max.)** Must include 50 mm over-travel For lengths greater than 1,500 mm consult factory		**00** = No shaft (undriven system) **12** = 12 mm **14** = 14 mm **16** = 16 mm	**F = Female hollow (12,14)** **L** = Left Male (16) **R** = Right Male (16) **B** = Both Male (16) **0** = No shaft (undriven system) **LW** = Left Male w/o Keyway **RW** = Right Male w/o Keyway **BW** = Both Male w/o Keyway	**1 Standard** **2** **3** **4**	**2** = Profile rail w/2 runner blocks per carriage

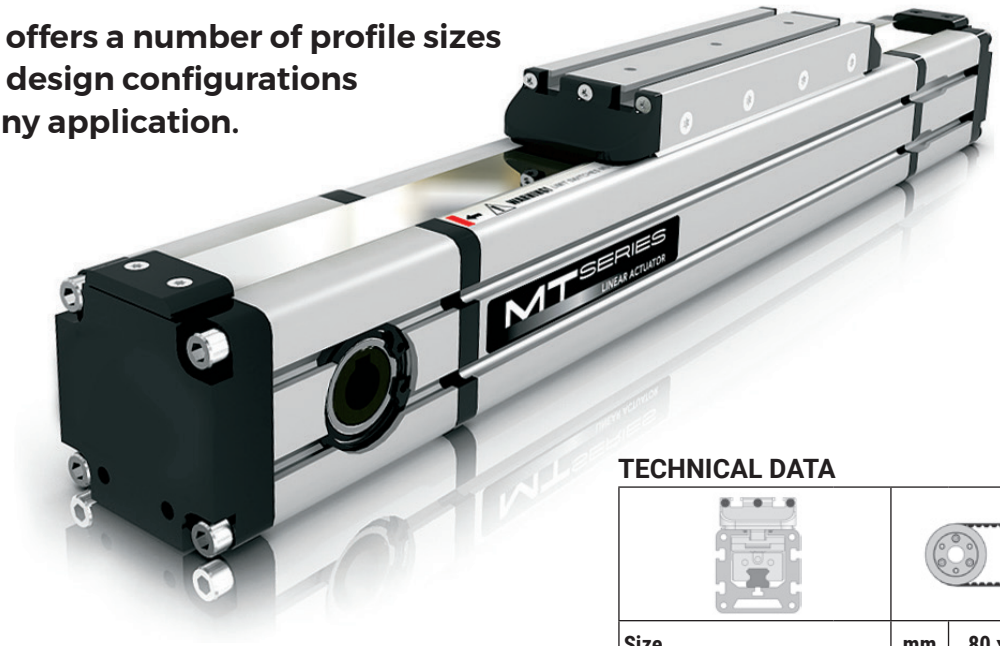
* No belt or motor mount, contact manufacturer for "N" version.
** Contact manufacturer for other options and availability. Profile rail will be segmented for lengths over 1 m.

Common Drive Combinations
12F - 40% **14F - 20%** **16L - 10%** **16B - 20%** **16R - 10%**

MT Series

MTB 80 BELT DRIVEN LINEAR ACTUATOR

The MT Series offers a number of profile sizes with multiple design configurations to fit almost any application.



FEATURES & BENEFITS

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

KEY FEATURES

1 – Anodized aluminum housing and carriage

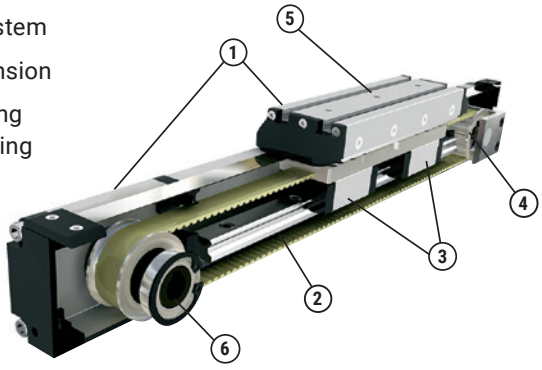
2 – Steel reinforced belt capable of handling high loads

3 – Ball guided rail system

4 – Adjustable belt tension

5 – T-slots for mounting and sensor mounting

6 – Multiple drive configurations

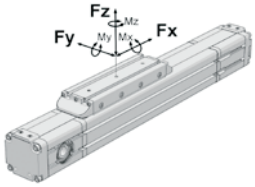


NOTE:

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. 25 mm 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 10 mm may be specified for special applications.

TECHNICAL DATA

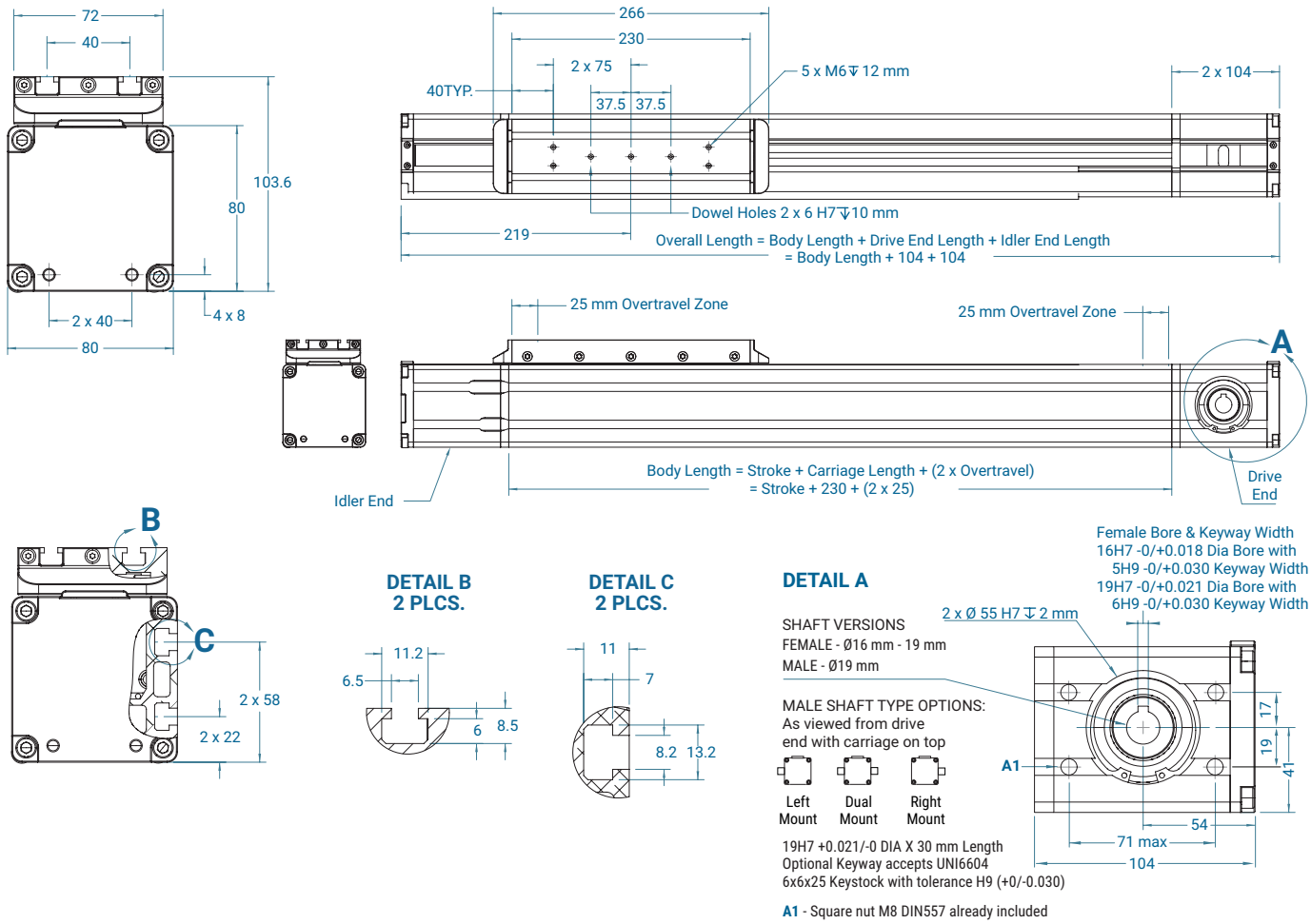
Size		mm	80 x 80	in	3.15 x 3.15
Max. Speed		m/s	3	in/s	118.11
Max. Stroke Length		mm	6,000	in	236.22
Min. Stroke Length		mm	100	in	3.94
Pulley Drive Ratio		mm	160	in	6.30
Number of Pulley Teeth		32			
Max RPM		1,125			
Base Weight		Kg	6.0	lb	13.23
Add for 100 mm or 3.94 in of Stroke		Kg	0.90	lb	1.98
Max. Load	**Fx**	N	1,650	lbf	370.93
	Fy	N	4,500	lbf	1011.64
	Fz	N	4,500	lbf	1011.64
Max. Moments	**Mx**	Nm	80	lbf-in	708
	My	Nm	450	lbf-in	3,983
	Mz	Nm	450	lbf-in	3,983
Moment of Inertia	**Ix**	cm^4	**183**	in^4	**4.39**
	Iy	cm^4	**226**	in^4	**5.42**
Max. Radial Load on Input Shaft		N	300	lbf	67.4
No Load Torque		Nm	1.1	lbf-in	9.7
Repeatability		+—0.05 mm			



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

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

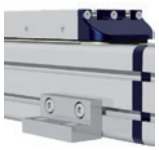
DIMENSIONAL INFORMATION



ACCESSORIES (Available upon request.)

End Cap
Mounting Bracket
MTB080A-A2AA001
MTB080A-A2AA001-Kit

MTB080A-A2AA001-Kit Includes:
(2 PCS) MTB080A-A2AA001 Bracket
(4 PCS) M6 X 16MM SHCS
(Secondary Support - Do Not Use Alone)



Mid Section
Mounting Bracket
MTB080A-A2AA002
MTB080A-A2AA002-Kit

MTB080A-A2AA002-Kit Includes:
(2 PCS) MTB080A-A2AA002 Bracket
(4 PCS) M8 X 16MM SHCS
(4 PCS) M8 T-NUT

Sq Nut & T-Nut Accessories for Detail B
6100649 SQ NUT M6 X 1.0

For Detail C
6100436 T-NUT M8 X 1.25

ORDERING INFORMATION

Example: MTB-080D-1000-19F12

MTB	080	X	-	XXXX	-	XX	XX	X	X

Series	Size (mm) (Base x Height)	System Type*	Body Length**	Shaft Diameter	Shaft Type	# Carriage**	Guidance Type
MTB Belt Driven Unit	**80** mm x **80** mm	**D = Driven** **N** = Undriven	**6,000 mm (max.)** Must include 50 mm over-travel For lengths greater than 1,500 mm consult factory	**00** = No shaft (undriven system) **16** = 16 mm **19** = 19 mm	**F = Female hollow** (16, **19**) **L** = Left Male (19) **R** = Right Male (19) **B** = Both Male (19) **0** = No shaft (undriven system) **LW** = Left Male w/o Keyway **RW** = Right Male w/o Keyway **BW** = Both Male w/o Keyway	**1 Standard** **2** **3** **4**	**2** = Profile rail w/2 runner blocks per carriage

* No belt or motor mount, contact manufacturer for "N" version.
** Contact manufacturer for other options and availability. Profile rail will be segmented for lengths over 1 m.

Common Drive Combinations
19F - 50% **19L - 20%** **19R - 10%** **19B - 10%** **16F - 10%**

战略合作伙伴
PBC LINEAR
A PACIFIC BEARING CO.
北京润诚时代科技有限公司
自动化事业部
地址：北京市朝阳区汤立路218号C座968室
邮编：100012
电话：010-84450370
传真：010-84450371
网址：www.runcheng.net