TL8
series

Product Segments

- **Care Motion**

TiMOTION's TL8 series columns are designed with a 3 stage cylindrical appearance and built-in motors. It was designed primarily for use in medical applications. The TL8 provides stable vertical lifting. This makes the engineering design process easier and safer by replacing older style lifting mechanisms that use many moving stages and have pinch points. The TL8 is suitable for the medical bed applications.

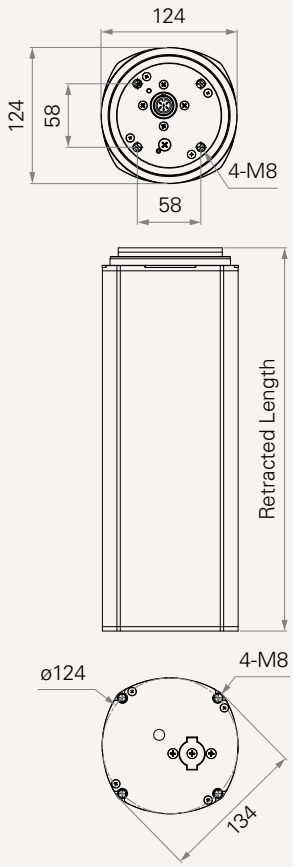
General Features

Maximum load	2,000N in push
Maximum dynamic bending moment	500Nm
Maximum static bending moment	1,000Nm
Maximum speed at full load	19.9mm/s (with 1,000N in a push condition)
Minimum installation dimension	≥ (stroke/2) + 150mm
Stroke	200~400mm
Dimension of outer tube	Ø124mm
Certificate	IEC60601-1-2, IEC60601-1, ES60601-1, EMC
Operational temperature range	+5°C~+45°C

The TL8 can only be used in pairs; single column usage is not recommended.
The TL8 is recommended for push applications only; pull conditions are not advised.

Drawing

Standard Dimensions (mm)



Load and Speed

CODE	Load (N)	Bending Moment (Nm)		Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)	
	Push	Dynamic	Static		No Load 32V DC	With Load 24V DC	No Load 32V DC	With Load 24V DC
Motor Speed (5200RPM)								
A	2000	500	1000	2000	1.7	4.0	16.5	9.6
B	1000	250	500	1000	1.7	3.6	32.6	19.9

Note

1 Please refer to the approved drawing for the final authentic value.

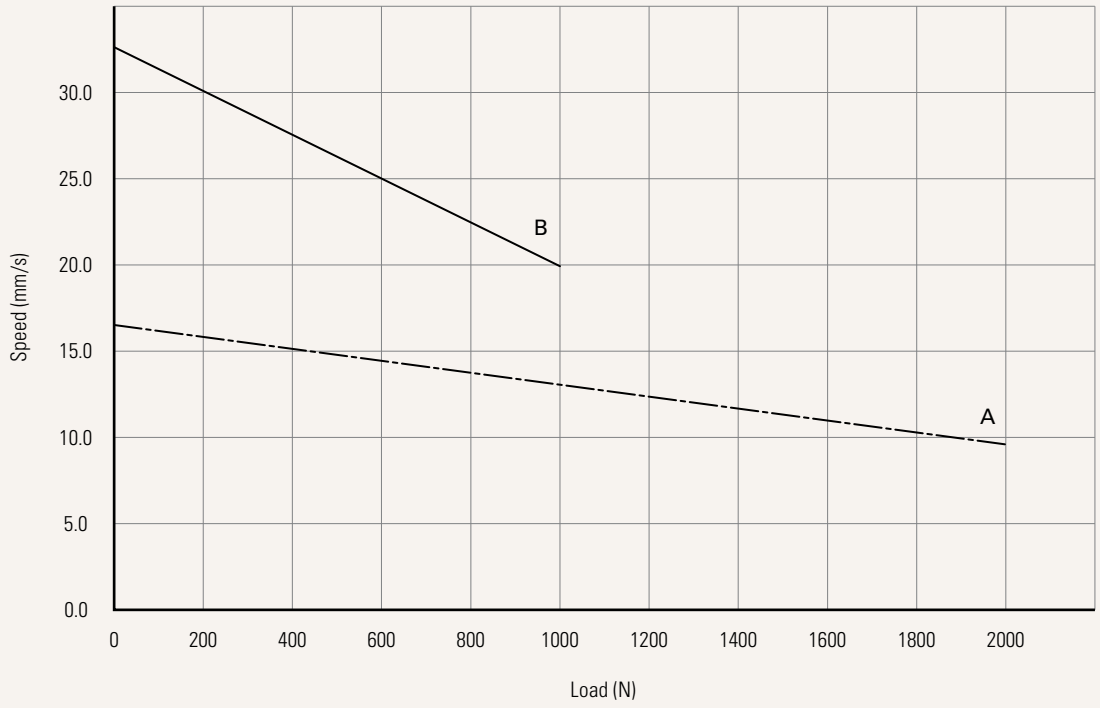
2 The current & speed in table are tested with 24V DC motor.

3 The current & speed in table and diagram are tested with TiMOTION control boxes, and there will be around 10% tolerance depending on different models of the control box.
(Under no load condition, the voltage is around 32V DC. At rated load, the voltage output will be around 24V DC)

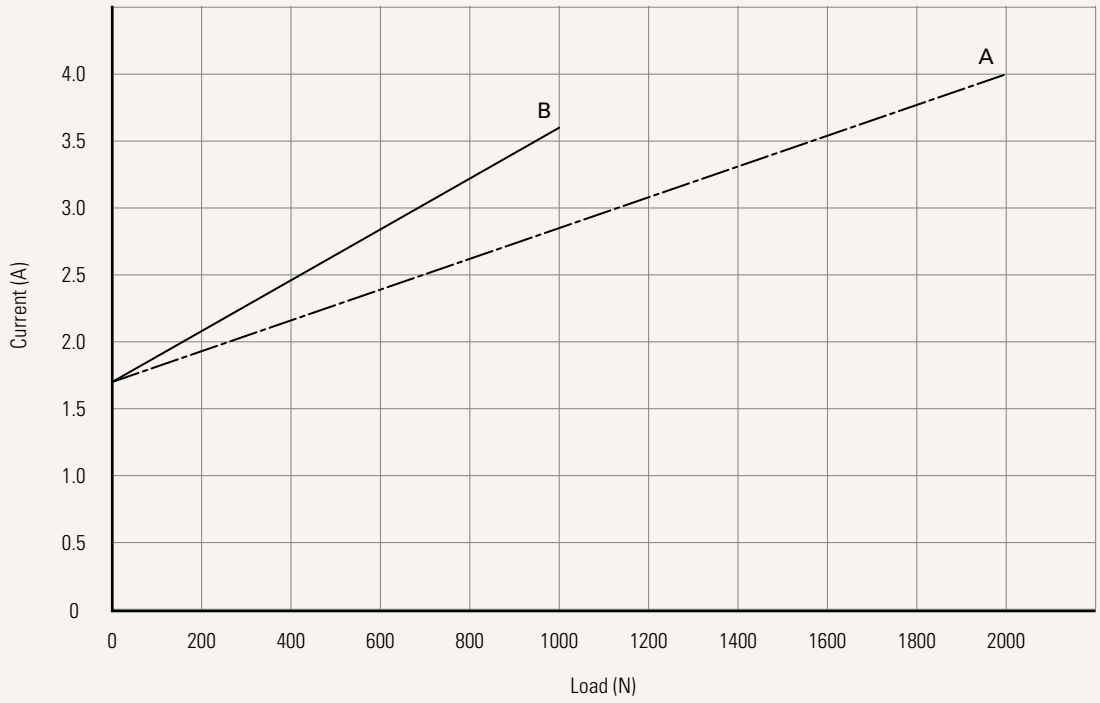
Performance Data (24V DC Motor)

Motor Speed (5200RPM)

Speed vs. Load



Current vs. Load



TL8 Ordering Key

TL8

Version: 2018113-I

	Voltage	5 = 24V DC, PTC
	Load and Speed	See page 2
	Stroke (mm)	200 - 400
	Retracted Length (mm)	Minimum retract length needs to ≥ (stroke/2) +150
	Color	2 = Matte silver
	Special Functions for Spindle Sub-assembly	0 = Without (standard)
	Functions for Limit Switches See page 5	1 = Two switches at full retracted / extended positions to cut current 3 = Two switches at full retracted / extended positions to send signal
	Output Signals	0 = Without 2 = Hall sensors*2

Note

1 The TL8 is designed especially for push applications, not suitable for pull applications.

2 It is recommended to choose pair columns application for TL8, the maximum rotating torque of single column application is 100 Nm.

TL8 Ordering Key Appendix

Functions for Limit Switches

Wire Definitions						
CODE	Pin					
	1 (Green)	2 (Red)	3 (White)	4 (Black)	5 (Yellow)	6 (Blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch

Terms of Use

The user is responsible for determining the suitability of TiMOTION products for a specific application.
TiMOTION products are subject to change without prior notice.