TL8
series

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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.
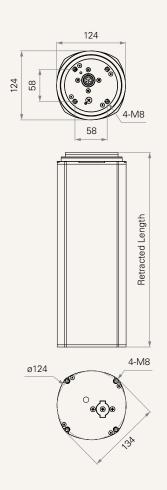
General Features

Max. load	2000N (push)
Max. dynamic bending moment	500Nm
Max. static bending moment	1,000Nm
Max. speed at max. load	9.6mm/s
Max. speed at no load	32.6mm/s
Retracted length	≥ (Stroke/2) + 150mm
IP rating	IPX6
Dimension of outer tube	3-stage, Ø124mm round
Stroke	200~400mm
Certificate	IEC60601-1-2, IEC60601-1, ES60601-1, EMC
Color	Matte silver, black
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

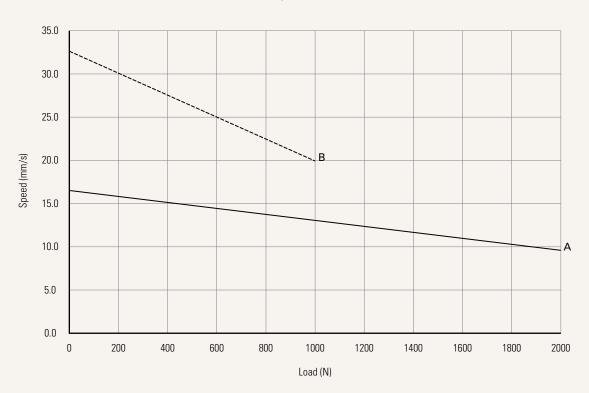**1** Parameters above are from tested average, please refer to approval drawing for final value.
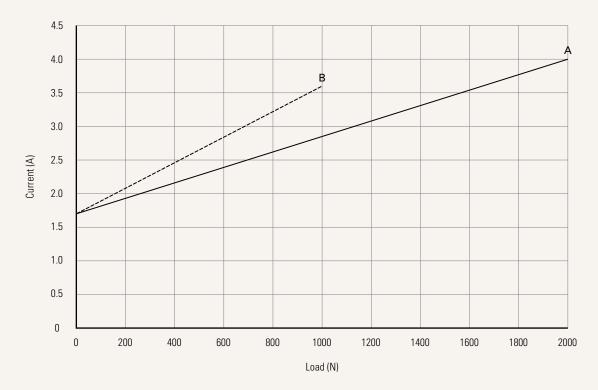
2 The current & speed are tested with 24VDC motor.

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Performance Data (24V DC Motor)

Motor Speed (5200RPM)

Speed vs. Load

Current vs. Load

TL8 Ordering Key

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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	1 = Black	
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	
IP Rating	1 = Without	2 = IPX4	3 = IPX6

Note

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

TL8 Ordering Key Appendix

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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.