TL52

series

Product Segments

- **Care Motion**

TiMOTION's TL52 series electric lifting column is designed for medical applications, particularly ophthalmic testing equipment or eye examination instruments. It is equipped with three optimally positioned AC plugs that directly connect related devices.

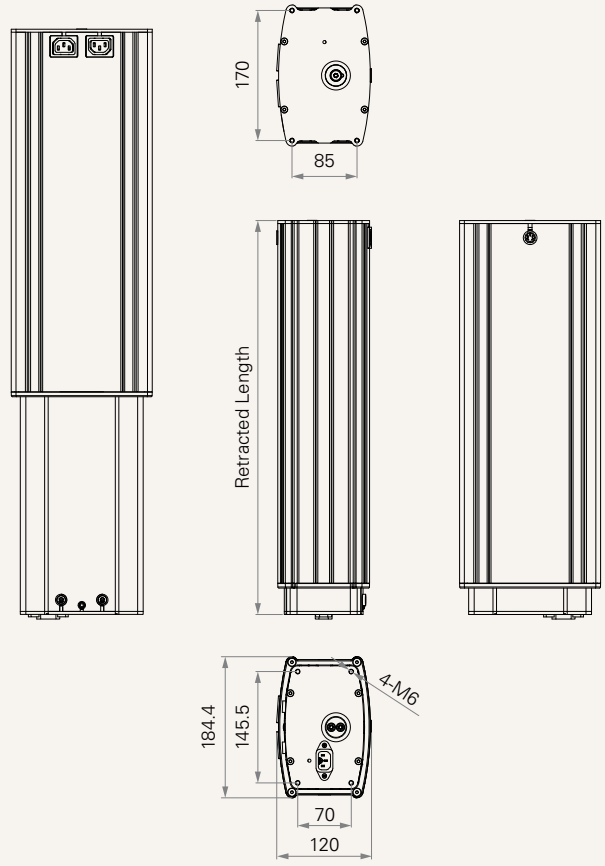
The TL52 has a two stage telescopic outer tube designed for a wide-top, narrow-bottom rectangular appearance.

General Features

Max. load	3,300N (push)
Self-locking force	3,300N
Max. dynamic bending moment	250Nm
Max. static bending moment	500Nm
Max. speed at max. load	6.5mm/s
Max. speed at no load	38mm/s
Retracted length	≥ Stroke + 256mm
Dimension of outer tube	184.4*120mm rectangular
Stages	2-stage, upside down
Stroke	100~600mm
Options	AC power input/output
Voltage	100~240V AC (SMPS)
Color	Black, silver
Operational temperature range	+5°C~+45°C

Drawing

Standard Dimensions
(mm)



Load and Speed

CODE	Load (N)	Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)	
	Push		No Load 32V DC	With Load 24V DC	No Load 32V DC	With Load 24V DC
Motor Speed (5600RPM, Duty Cycle 10%)						
G	3300	3300	2.0	4.7	12.0	6.5
J	1800	1800	2.0	3.2	17.0	10.5
L	800	800	2.5	5.0	38.0	22.0

Note

1 Parameters above are from tested average, please refer to approval drawing for final value.

2 This self-locking force level is reached only when a short circuit is applied on the terminals of the motor. All the TiMOTION control boxes have this feature built-in.

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

4 Standard stroke: Min. ≥ 20mm, Max. please refer to below table.

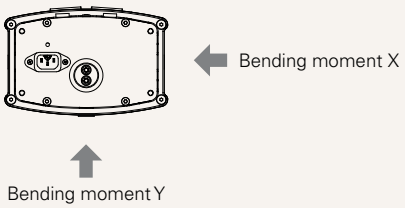
CODE	Load (N)	Min. Stroke (mm)	Max. Stroke (mm)
	Push		
G	3300	100	≤300
J	1800	100	≤450
L	800	100	≤600

* Select "L",stroke has to be ≥ 38mm
* Calculate S + 256mm
* When S < 200, Retracted length has to be ≥ 456mm

5 Dynamic bending moment (Nm) - X direction

Stroke (mm)	Retracted length (mm)
	S+256
200-400	250
401-600	250
601-800	250

* Static bending moment= dynamic*2



6 Dynamic bending moment (Nm) - X direction

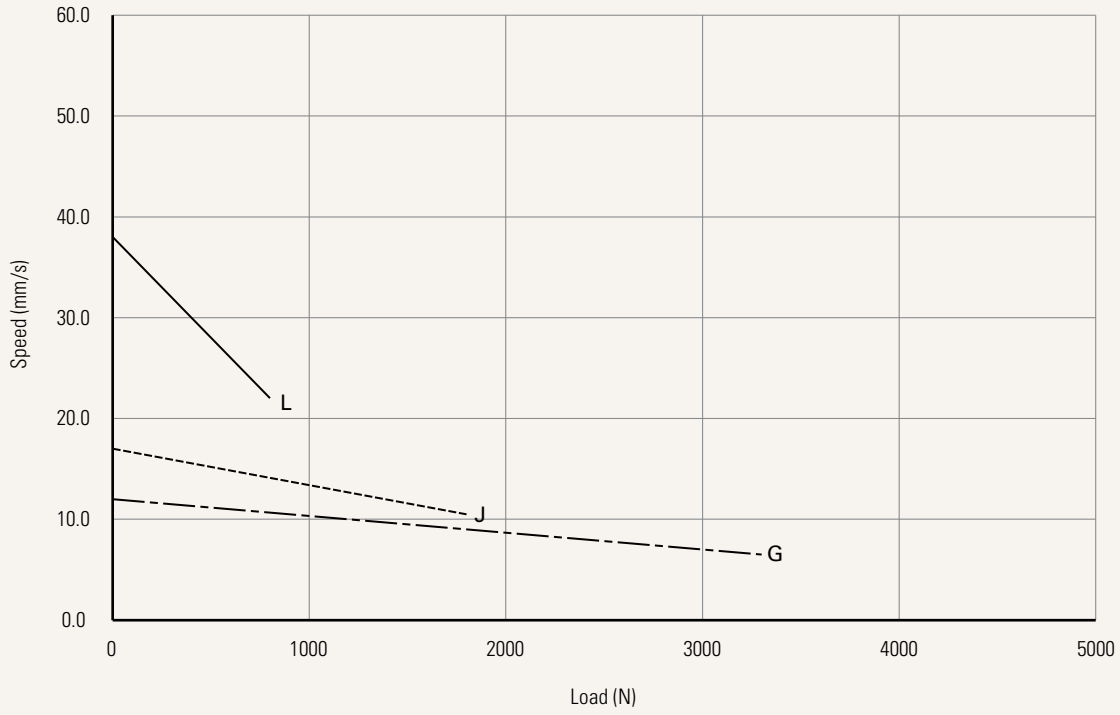
Stroke (mm)	Retracted length (mm)
	S+256
200-400	200
401-600	200
601-800	200

* Static bending moment= dynamic*2

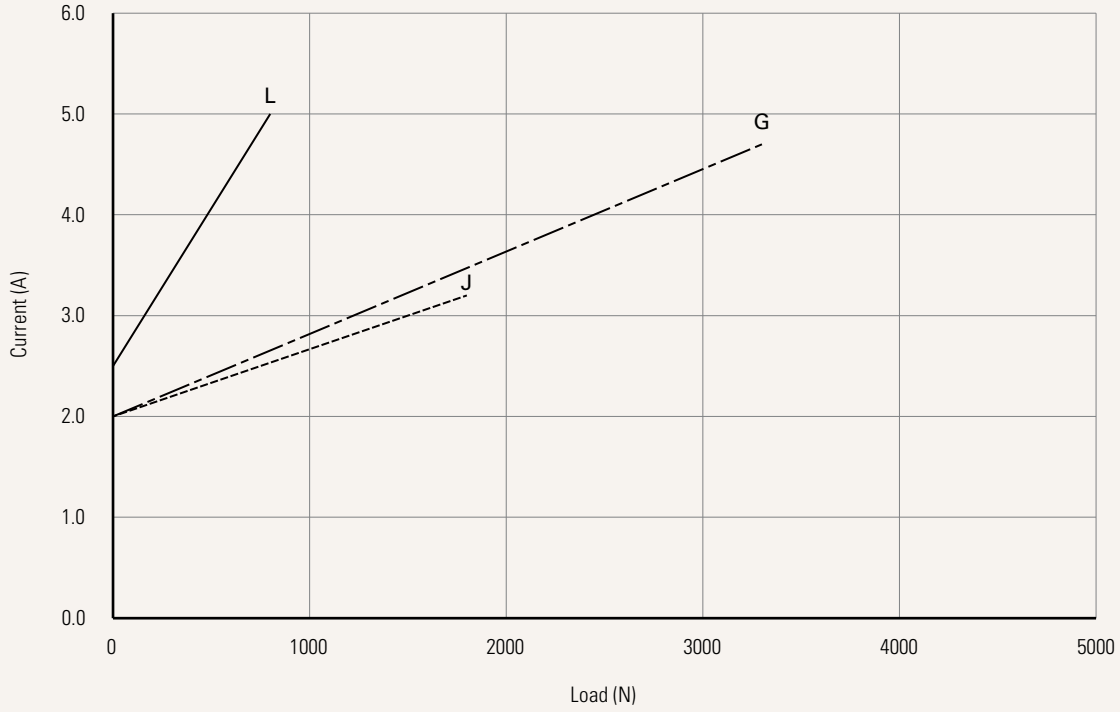
Performance Data (24V DC Motor)

Motor Speed (5600RPM, Duty Cycle 10%)

Speed vs. Load



Current vs. Load



TL52 Ordering Key

TL52

Version: 20230530-G

	Load and Speed	See page 3	
	Stroke (mm)	See page 3	
	Retracted Length (mm)	≥ S + 256	
	Special Functions for Spindle Sub-Assembly	0 = Without (Standard)	
	Color	1 = Black	2 = Silver
	Tubes & Sockets Position	E = Tubes: thicker on top; Sockets position: top side	
	Top Plate	1 = Small plate	
	Bottom Plate	1 = Small plate	
	AC Input Socket & Input Plug	1 = C13 female plug & EU male plug	2 = C13 female plug & US male plug
	AC Cable Length (mm)	5 = Straight, 1500	
	AC Output Socket	1 = With (C14 socket)	
	Direct Cut	K = 1 motor direct cut system	
	Internet Socket	0 = Without	

Note

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