TL50

series

Product Segments

- **Care Motion**

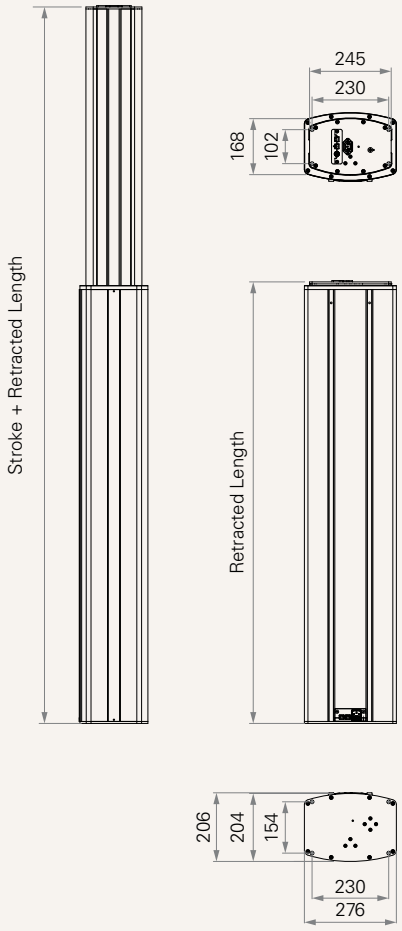
The TL50 electric lifting column from TiMOTION is designed for medical applications, particularly the dental X-ray machine, also known as Cone beam computed tomography (CBCT). With its white and elegant aluminum alloy-made outer tubes, the TL50 is perfect for the medical environment. Its dynamic bending moment is the highest (542.5Nm) among the 2-stage lifting columns. At the same time, it offers a high degree of stability. The TL50 is equipped with an integrated AC plug to directly connect computers, TVs or other devices.

General Features

Max. load	1,150N (push)
Self-locking force	1,150N
Max. dynamic bending moment	542.5Nm
Max. static bending moment	1,085Nm
Max. speed at max. load	32.2mm/s
Max. speed at no load	49.4mm/s
Retracted length	≥ Stroke + 500mm
Dimension of outer tube	276*206mm rectangular
Stages	2-stage
Stroke	200~900mm
Output signals	Hall sensors
Options	Internet socket
Voltage	24V DC, thermal switch
Color	White
Operational temperature range	+5°C~+45°C
AC plug	

Drawing

Standard Dimensions
(mm)



Load and Speed

CODE	Load (N) Push	Self Locking Force (N)	Typical Current (A) No Load 32V DC	Typical Current (A) With Load 24V DC	Typical Speed (mm/s) No Load 32V DC	Typical Speed (mm/s) With Load 24V DC
Motor Speed (3800RPM, Duty cycle 10%)						
F	1150	1150	2.5	6.5	49.4	32.2

Note

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

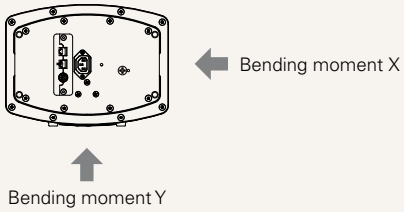
2 Bending moment Y direction = X

3 Static bending moment = dynamic*2

4 Standard stroke: Min. ≥ 200mm, Max. please refer to below table.

Dynamic bending moment (Nm)- X direction	
Stroke (mm)	S+500
200-900	542.5

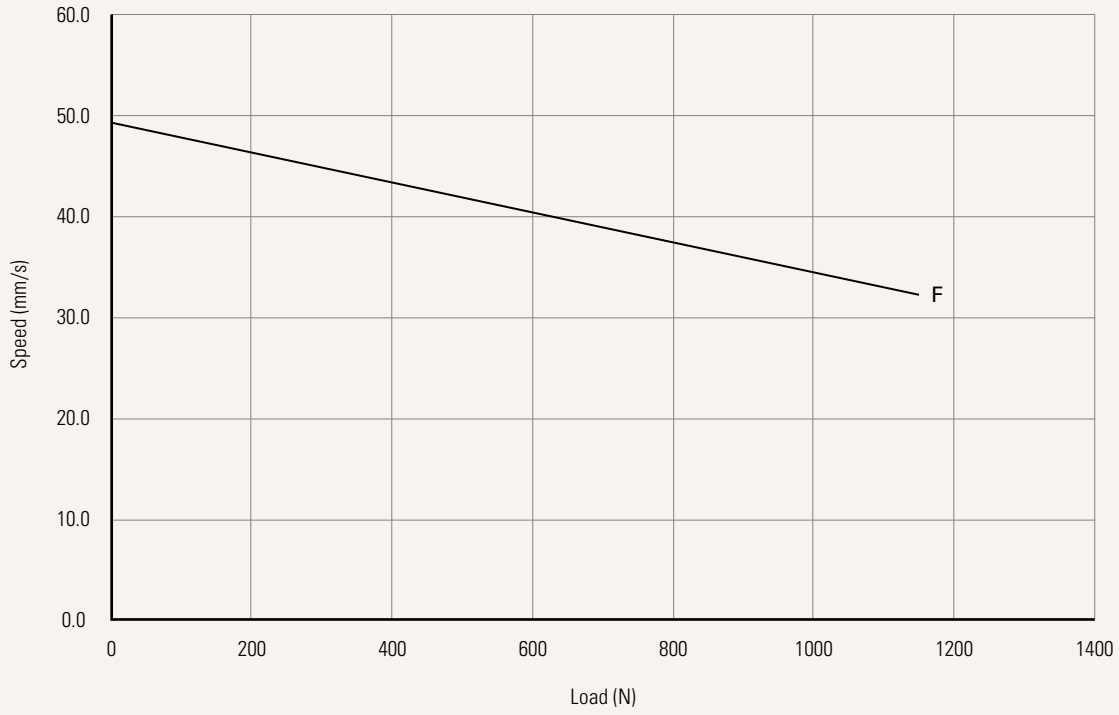
Code	Load (N)	Max Stroke (mm)
F	≤ 1150	900



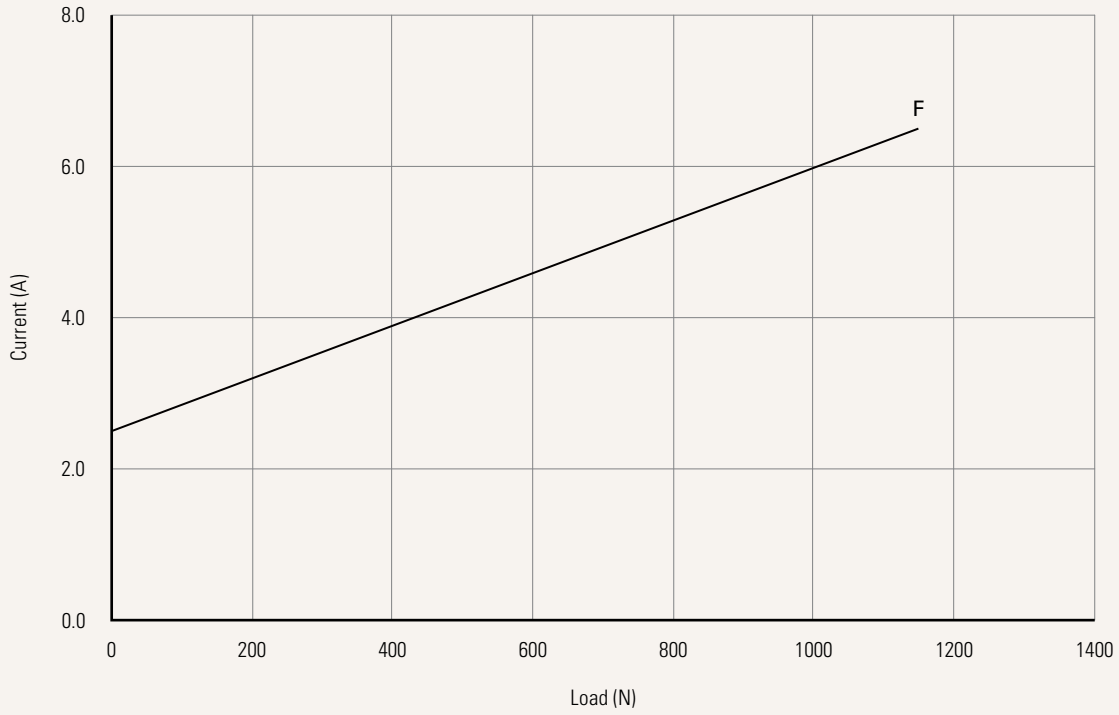
Performance Data (24V DC Motor)

Motor Speed (3800RPM, Duty cycle 10%)

Speed vs. Load



Current vs. Load



TL50 Ordering Key

TL50

Version: 20220902-F

Voltage	5 = 24V DC, thermal switch		
Load and Speed	See page 2		
Stroke (mm)	200-900		
Retracted Length (mm)	> = S + 500		
Special Functions for Spindle Sub-Assembly	0 = Without (Standard)	1 = Safety nut	
Color	2 = White (RAL 9016)		
Tubes & Sockets Position	B = Tubes: thinner on top; Output sockets position: top		
Top Plate	1 = Small plate		
Bottom Plate	1 = Small plate		
Ac Input Plug	1 = C14 male plug & EU female plug 2 = C14 male plug & US female plug 3 = C14 male plug & AU female plug		4 = C14 male plug & UK female plug 5 = C14 male plug & JP female plug 6 = C14 male plug & Without female plug
AC Cable Length (mm)	5 = Straight, 1500	6 = Without	
AC Output Socket	1 = With		
DC Socket	1 = DIN 6P, Socket	2 = DIN 8P, Socket	
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 Signal	0 = Without	2 = Hall sensor * 2	
Internet Socket	0 = Without	1 = With	

Note

1 The TL50 is designed especially for push applications, not suitable for pull applications.

TL50 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.