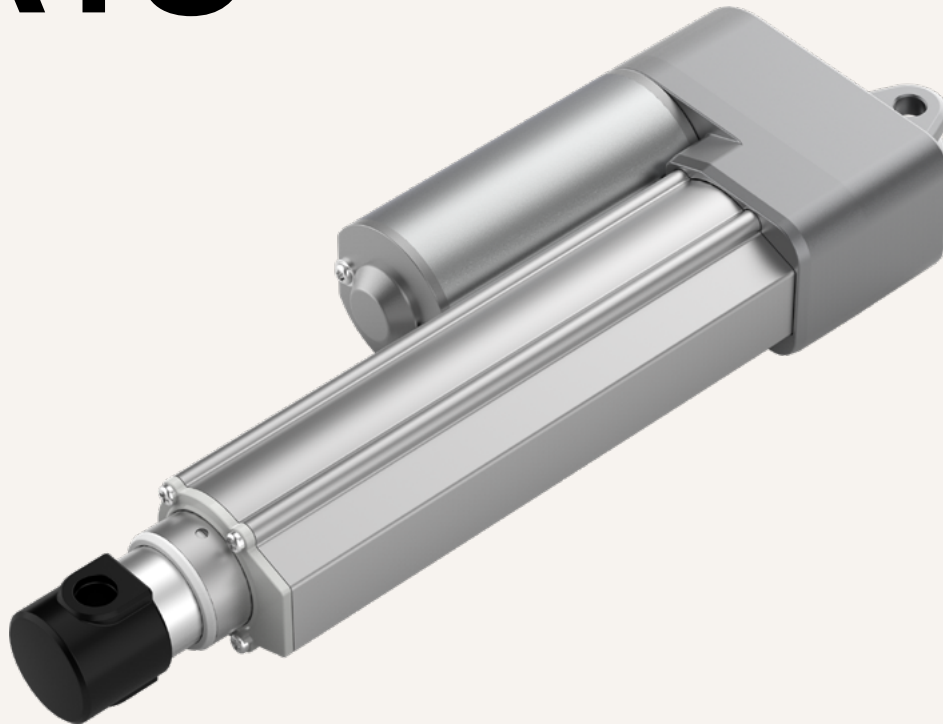


TA19

series



Product Segments

- **Care Motion**
- **Comfort Motion**
- **Ergo Motion**

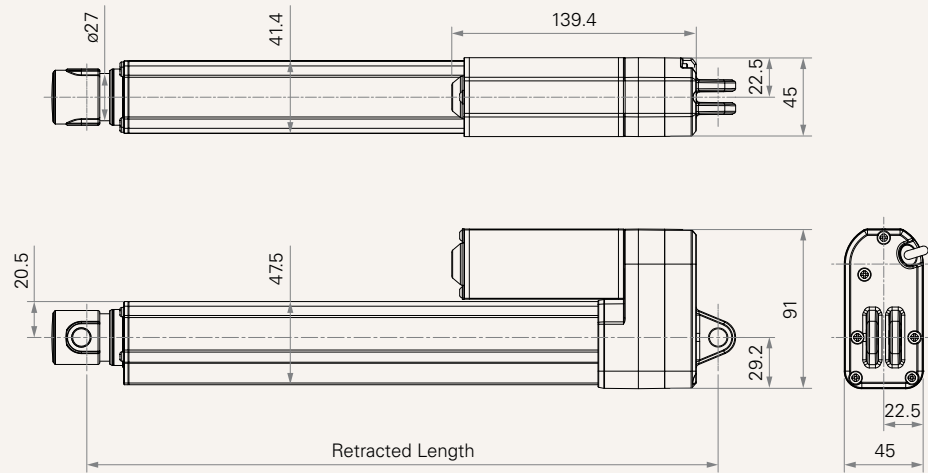
TiMOTION's TA19 series is a quiet and telescopic style linear actuator suited for height-adjustable work tables. The telescopic tube design of the TA19 linear actuator allows for a longer stroke with a shorter retracted length and reduced installation dimensions. This linear actuator can also be equipped with Hall sensors for position feedback.

General Features

Max. load	1,000N (push)
Max. speed at max. load	18mm/s
Max. speed at no load	64mm/s
Retracted length	$\geq \text{Stroke} / 2 + 165\text{mm}$
Certificate	IEC60601-1, ES60601-1, EMC
Stroke	180~800mm
Output signals	Hall sensors
Voltage	12V/24V DC; 24V DC (PTC)
Operational temperature range	+5°C~+45°C
Suitable for height-adjustable work tables	

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 (3800RPM, Duty Cycle 10%)						
A	600	400	2.5	3.2	51.0	27.0
B	1000	1000	2.0	4.0	22.5	11.0
Motor Speed (5200RPM, Duty Cycle 10%)						
C	800	400	2.5	6.5	64.0	30.0
D	1000	1000	2.5	5.0	32.0	18.0
E	800	500	2.5	6.0	54.0	26.5

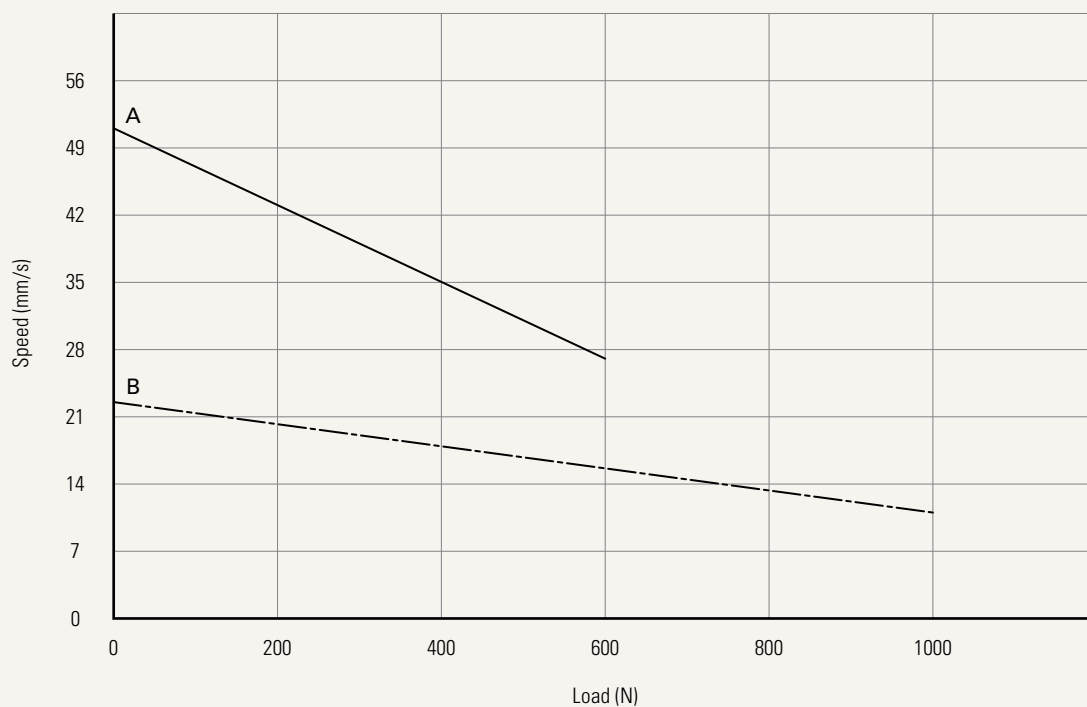
Note

- 1 With a 12V motor, the current is approximately twice the current measured in 24V; speed will be similar for both voltages.
- 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 Current and speed: Tested average value when stretching in push direction.
- 4 Standard stroke: 180~800mm, over 800mm, please contact our engineers.

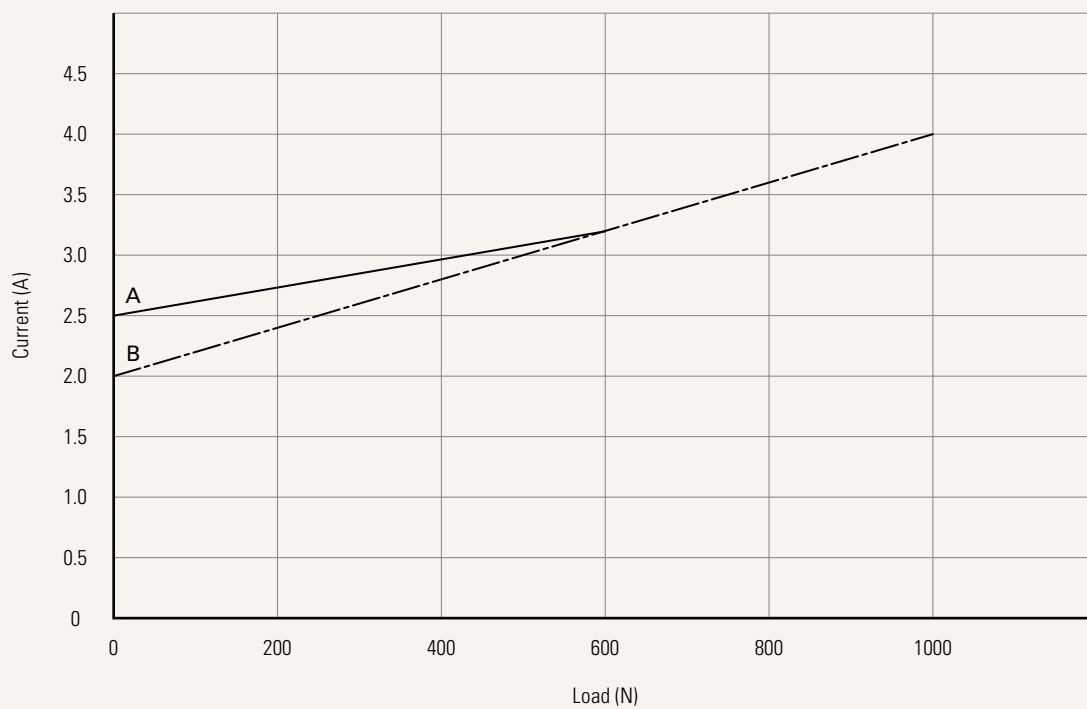
Performance Data (24V DC Motor)

Motor Speed (3800RPM, Duty Cycle 10%)

Speed vs. Load



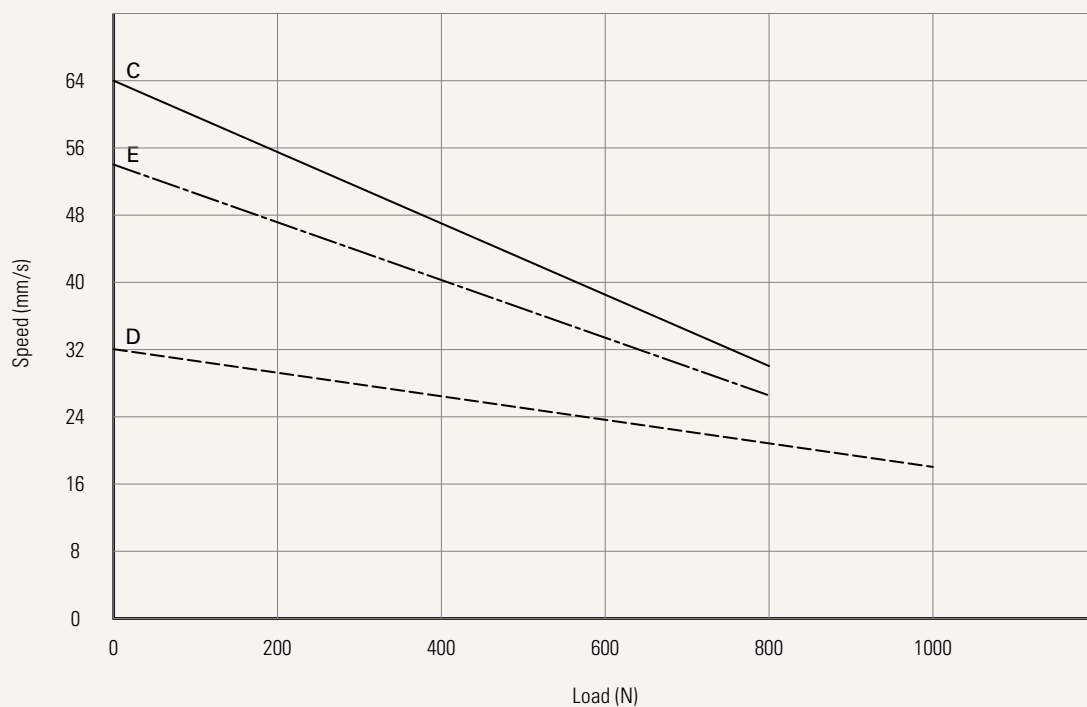
Current vs. Load



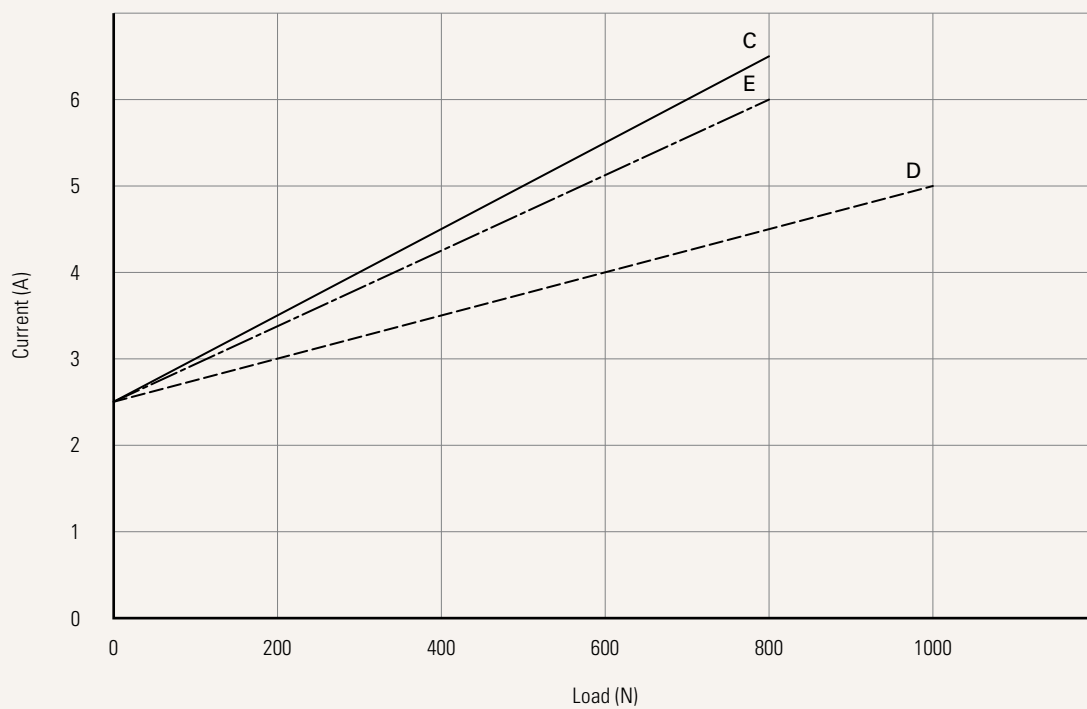
Performance Data (24V DC Motor)

Motor Speed (5200RPM, Duty Cycle 10%)

Speed vs. Load



Current vs. Load



Voltage	1 = 12V	2 = 24V	5 = 24V, PTC
Load and Speed	See page 2		
Stroke (mm)	180 ~ 800		
Retracted Length (mm)	See page 6		
Rear Attachment (mm)	1 = Aluminum casting, U clevis, width 6.0, depth 12.5, hole 10.0 2 = Aluminum casting, U clevis, width 6.0, depth 12.5, hole 8.0 See page 7		
Front Attachment (mm)	1 = Punched hole on the tube with plastic cover on, hole 10.0 2 = Punched hole on the tube with plastic cover on, hole 8.0 See page 7		
Direction of Rear Attachment (Counterclockwise)	1 = 90° 2 = 0° See page 7		
IP protection	1 = Without		
Functions for Limit Switches	1 = Two switches at full retracted / extended positions to cut current 2 = Two switches at full retracted / extended positions to cut current + third one in between to send signal 3 = Two switches at full retracted / extended positions to send signal 4 = Two switches at full retracted / extended positions to send signal + third one in between to send signal See page 8		
Special Functions for Spindle Sub-Assembly	0 = Without (Standard)		
Output Signals	0 = Without	5 = Two Hall sensors	
Connector	1 = DIN 6P, 90° plug 2 = Tinned leads 4 = Big 01P, plug See page 8	C = Y cable (direct cut, water proof, anti-pull) E = Molex 8P, plug	F = Molex 6P, 90° plug
Cable Length (mm)	0 = Straight, 100 1 = Straight, 500 2 = Straight, 750	3 = Straight, 1000 4 = Straight, 1250 5 = Straight, 1500	6 = Straight, 2000 7 = Curly, 200 8 = Curly, 400 B~H = For direct cut system cable, See page 8

Retracted Length (mm)

1. Calculate $A+B = Y$
2. Retracted length needs to $\geq \text{Stroke} / 2 + Y$ (3 stages)

A. Rear/ Front Attachment	
Front Attachment	Rear Attachment
	1, 2
1	+165
2	+165

B. Load V.S. Stroke	
Stroke (mm)	
181~300	-
301~350	+10
351~400	+20
401~450	+30
451~500	+40
501~550	+50
551~600	+60
601~650	+70
651~700	+80
701~750	+90
751~800	+100

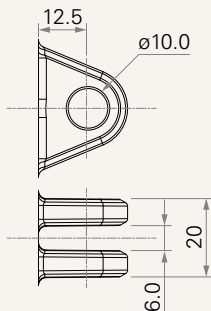
* For stroke over 300mm, +10mm for each increment of 50mm stroke.

Note

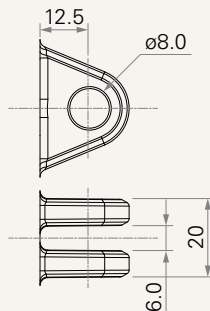
¹ For stroke over 300mm, + 10 mm for each increment of 50mm stroke.

Rear Attachment (mm)

1 = Aluminum casting, U clevis,
width 6.0, depth 12.5, hole 10.0

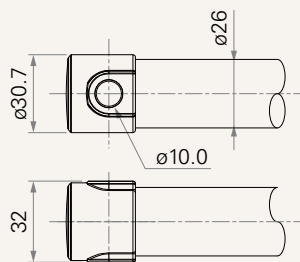


2 = Aluminum casting, U clevis,
width 6.0, depth 12.5, hole 8.0

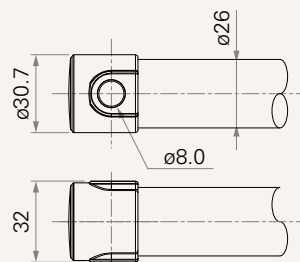


Front Attachment (mm)

1 = Punched hole on the tube with
plastic cover on, hole 10.0

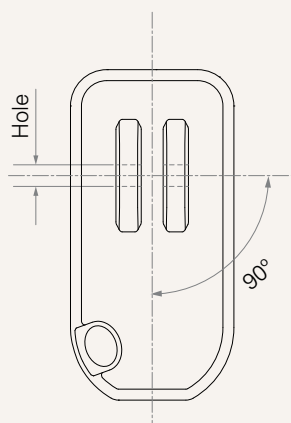


2 = Punched hole on the tube with
plastic cover on, hole 8.0

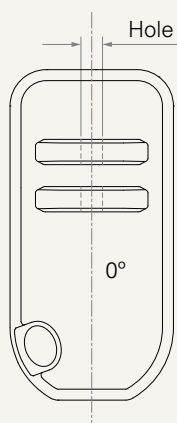


Direction of Rear Attachment (Counterclockwise)

1 = 90°



2 = 0°



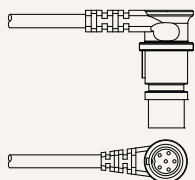
Functions for Limit Switches

Wire Definitions

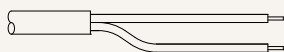
CODE	Pin					
	1 (Green)	2 (Red)	3 (White)	4 (Black)	5 (Yellow)	6 (Blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
2	extend (VDC+)	N/A	middle switch pin B	middle switch pin A	retract (VDC+)	N/A
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch
4	extend (VDC+)	common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

Connector

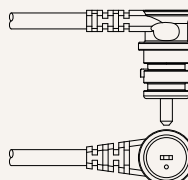
1 = DIN 6P, 90° plug



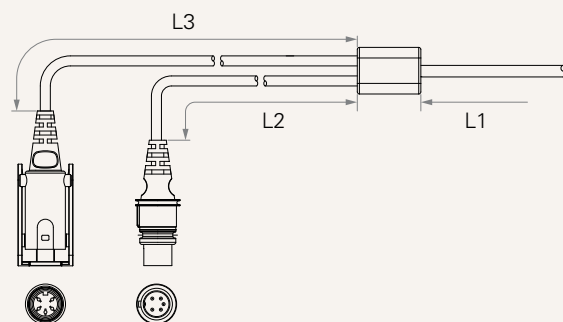
2 = Tinned leads



4 = Big 01P, plug



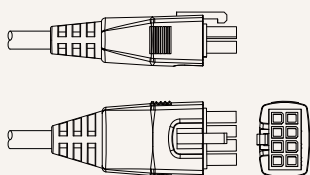
C = Y cable (direct cut, water proof, anti-pull)



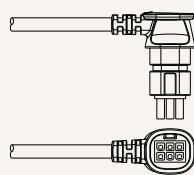
Cable length for direct cut system (mm)

CODE	L1	L2	L3
B	100	100	100
C	100	1000	400
D	100	2700	500
E	1000	100	100
F	100	600	1000
G	1500	1000	1000
H	100	100	1200

E = Molex 8P, plug



F = Molex 6P, 90° plug



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.