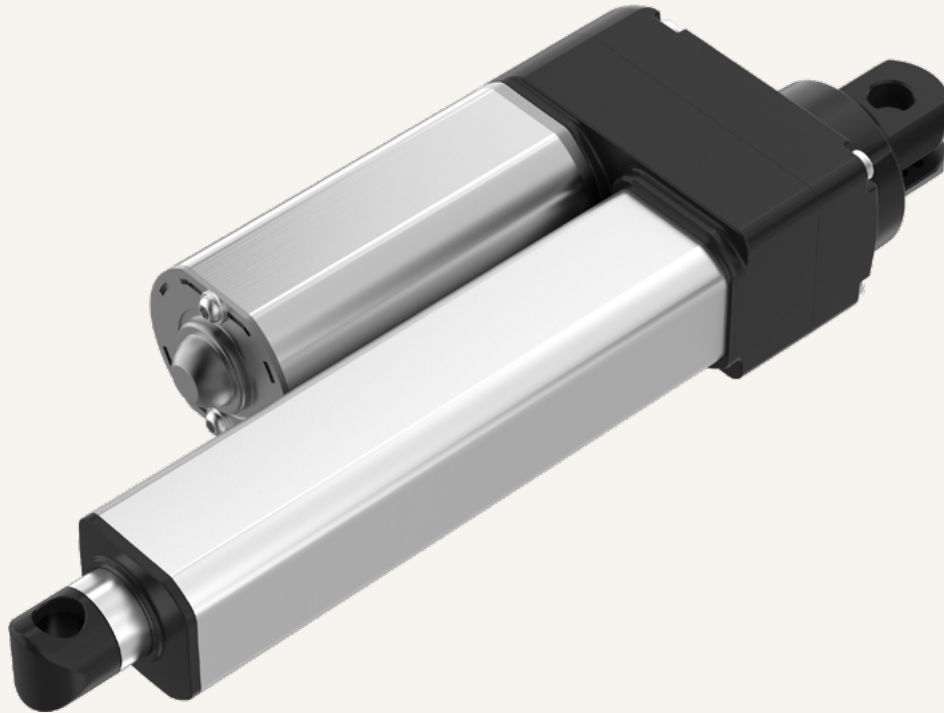


TA16S

series



Product Segments

• **Comfort Motion**

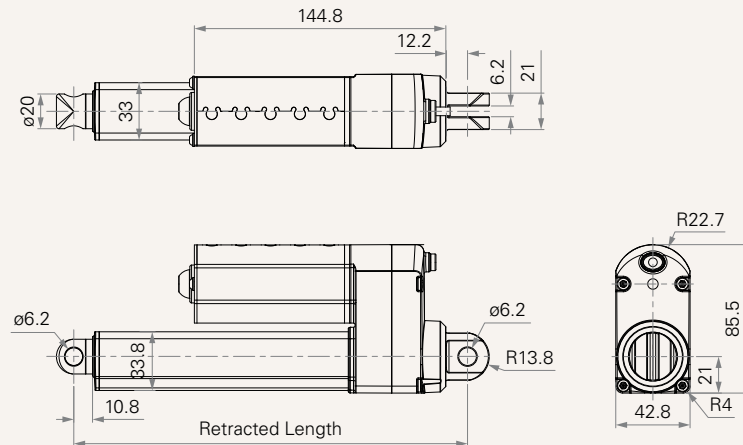
TiMOTION's TA16S electric linear actuator is TiMOTION's cost-effective solution tailored for the furniture industry. Built on the reliable foundation of the TA16, the TA16S delivers the same trusted performance in a more economical package. With its compact design, the TA16S is ideal for space-constrained applications – making it a perfect fit for electric recliners, sofas, and other comfort-driven furniture solutions.

General Features

Max. load	3,500N (push) 1,500N (pull)
Max. speed at max. load	6.2mm/s
Max. speed at no load	21.5mm/s
Retracted length	≥ Stroke + 115mm
Stroke	20~450mm
Output signals	Hall sensor(s)
Options	Spindle/motor brake
Voltage	24V DC; 24V DC (PTC)
Color	Black, grey
Operational temperature range at full performance	+5°C~+45°C
Small size for easy installation	
Suitable for electric recliner application	

Drawing

Standard Dimensions
(mm)



Load and Speed

CODE	Load (N)		Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)	
	Push	Pull		No Load 32V DC	With Load 24V DC	No Load 32V DC	With Load 24V DC
Motor Speed (3800RPM, Duty Cycle 10%)							
B	2000	1500	2000	1.7	2.4	8.3	4.7
C	1500	1500	1500	1.7	2.2	10.8	7.0
Motor Speed (5200RPM, Duty Cycle 10%)							
G	3500	1500	3500	2.0	4.7	11.0	6.2
J	2000	1500	2000	2.0	3.7	15.8	9.5
K	1500	1500	1500	2.0	3.7	21.5	14.2

Note

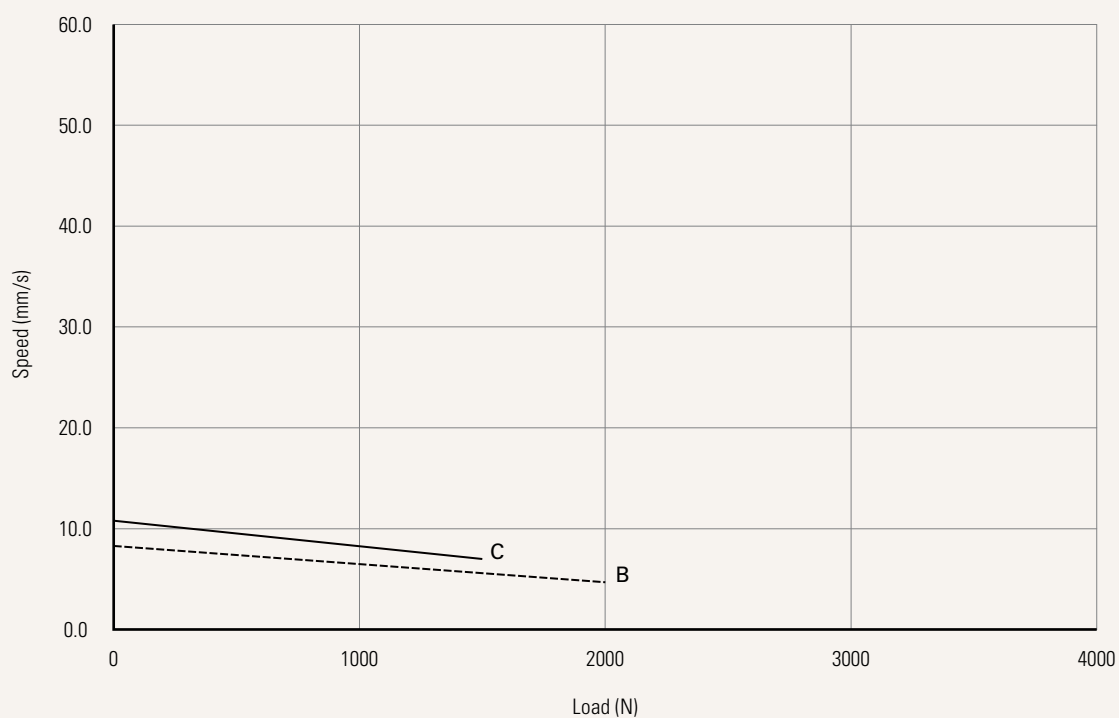
- #G_When pull load > 2500N, please discuss with engineer.
- Please refer to the approved drawing for the final authentic value.
- This self-locking force level is reached only when a short circuit is applied on the terminals of the motor. All the TiMOTION control boxes have this feature built-in. The self-locking force is a minimum value and can be actually higher.
- The current & speed in table are tested with 24V DC motor.
- The current & speed in table are tested when the actuator is extending under push load.
- 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)
- Standard stroke: Min. ≥ 25mm, Max. please refer to below table.
- Without load, noise level ≤ 56dBA (by TiMOTION test standard, ambient noise level ≤ 36dBA)
- Standard stroke: Please refer to the table below.

CODE	Load (N)	Min Stroke (mm)	Max Stroke (mm)
C, K	≤ 1500	20	450
B, J	≤ 2000	20	350
G	≤ 3500	20	250

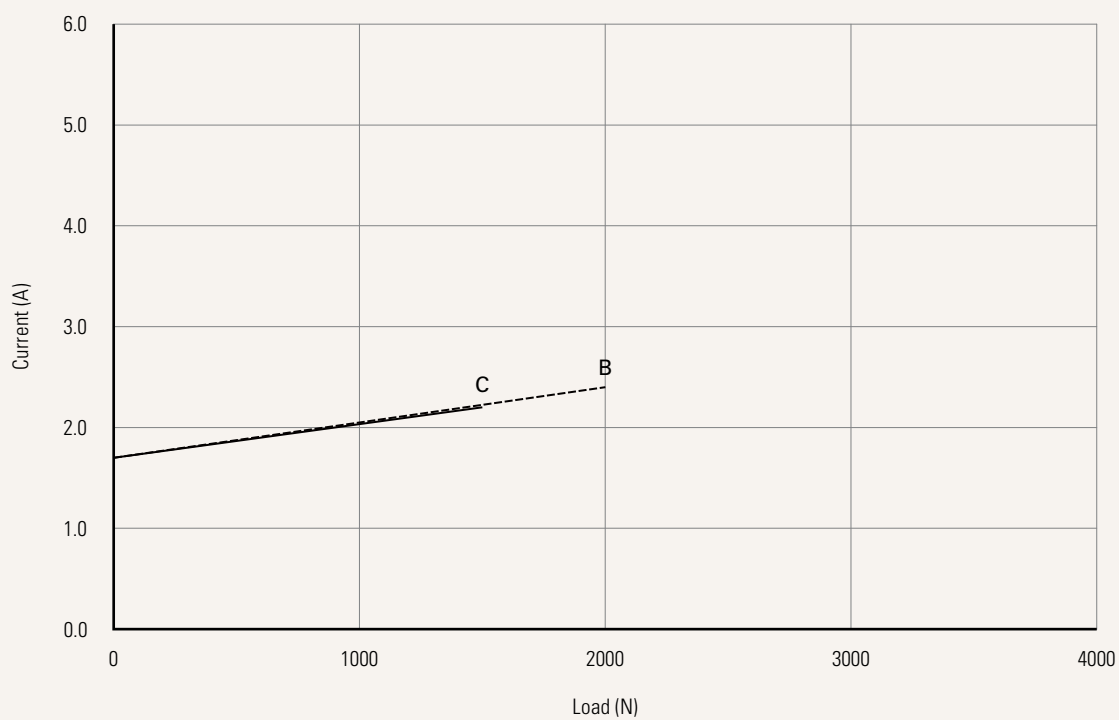
Performance Data (24V DC Motor)

Motor Speed (3800RPM, Duty Cycle 10%)

Speed vs. Load



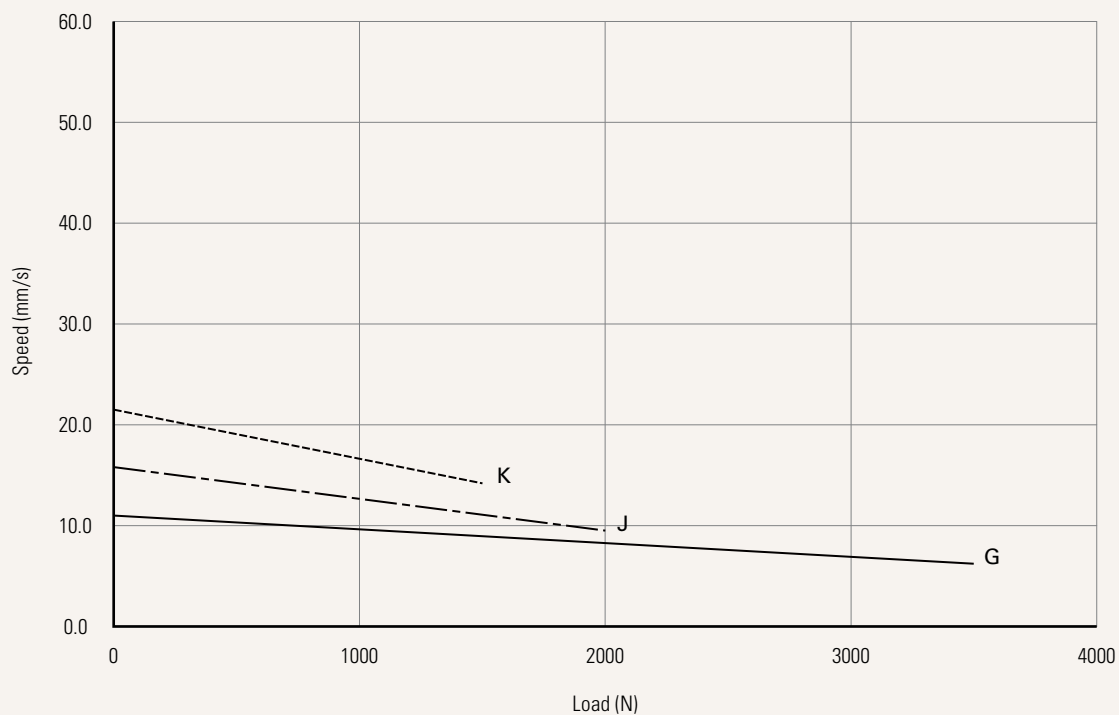
Current vs. Load



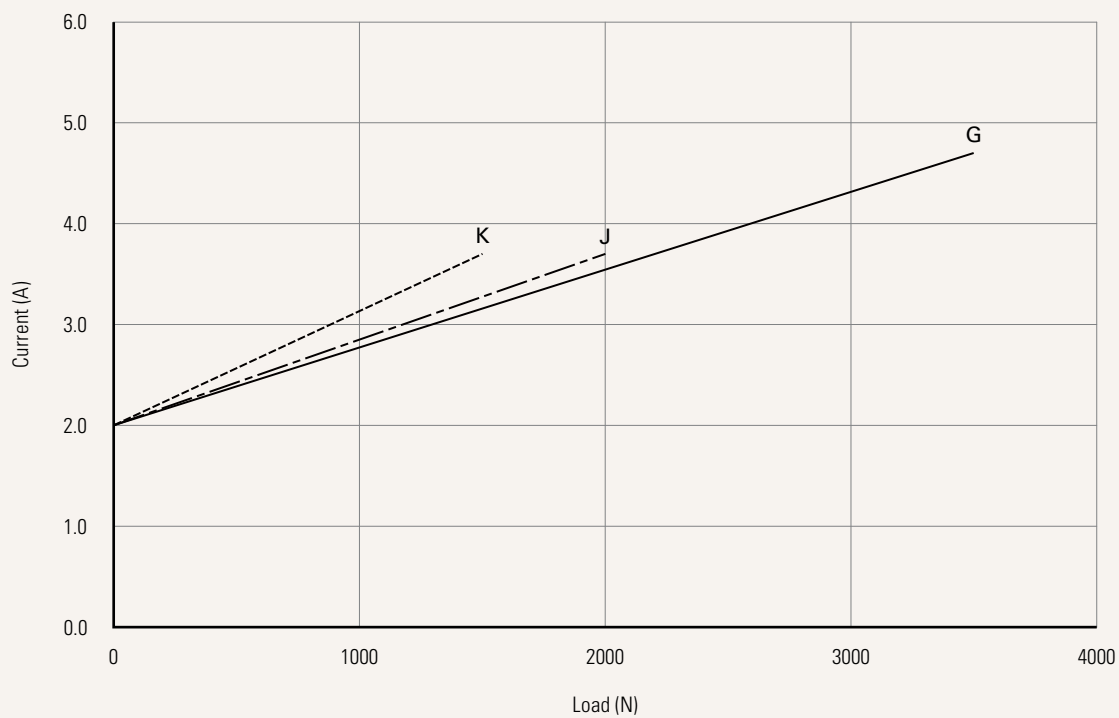
Performance Data (24V DC Motor)

Motor Speed (5200RPM, Duty Cycle 10%)

Speed vs. Load



Current vs. Load



TA16S Ordering Key

TA16S

Version: 20250702-D

Voltage	2 = 24V DC	5 = 24V DC, PTC	
Load and Speed	See page 2		
Stroke (mm)	See page 2		
Retracted Length (mm)	See page 6		
Rear Attachment (mm) See page 7	1 = Plastic, U clevis, width 6.2, depth 12.2, hole 6.2, one piece casting with gearbox 2 = Plastic, U clevis, width 6.2, depth 12.2, hole 8.2, one piece casting with gearbox	3 = Plastic, U clevis, width 6.2, depth 12.2, hole 10.2, one piece casting with gearbox	
Front Attachment (mm) See page 7	1 = Plastic, slotless, hole 6.2 2 = Plastic, slotless, hole 8.2	3 = Plastic, slotless, hole 10.2	
Direction of Rear Attachment (Counterclockwise) See page 7	1 = 90°	2 = 0°	
IP Rating	1 = Without		
Function of Limit Switches See page 8	1 = Two micro switches cut off the actuator at end of stroke 2 = Two micro switches cut off the actuator at end of stroke + third one in between sends signal	3 = Two micro switches send signal at end of stroke 4 = Two micro switches send signal at end of stroke + third one in middle sends signal	
Special Function of Spindle Set	0 = Without (Standard)	2 = Standard push only	
Output Signal	0 = Without	4 = Hall sensor*1	5 = Hall sensor*2
Connector See page 8	1 = DIN 6P, 90° plug	2 = Tinned leads	Q = Molex 6P, plug
Cable Length (mm)	1 = Straight, 500 3 = Straight, 1000	5 = Straight, 1500 6 = Straight, 2000	7 = Curly, 200 8 = Curly, 400
Brake	0 = Without	3 = Spindle brake	M = Motor brake
Load Type	T = Push	P = Pull	
Color	0 = Silver grey	1 = Black	

Retracted Length (mm)

1. Calculate $A+B+C = Y$
2. Retracted length needs to $\geq \text{Stroke}+Y$

A.

Front Attach.	Rear Attach.
	1, 2, 3
1, 2, 3	+163

B.

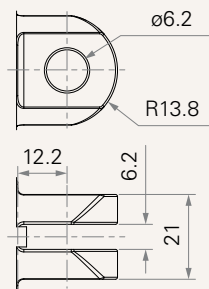
Stroke (mm)	Load & Speed Type		
	C, K	B, J	G
20~150	-	-	+10
151~200	-	+5	+18
201~250	+5	+10	+28
251~300	+10	+15	-
301~350	+15	+20	-
351~400	+20	-	-
401~450	+25	-	-
451~500	+30	-	-
501~550	+35	-	-
551~600	+45	-	-

C.

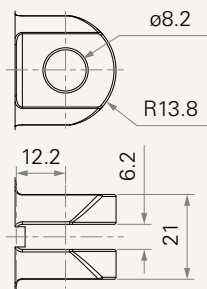
Spindle Functions	Load & Speed Type	
	B, C, J, K	G
0	-	-
2	+2	+2

Rear Attachment (mm)

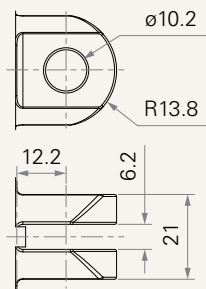
1 = Plastic, U clevis, width 6.2, depth 12.2, hole 6.2, one piece casting with gearbox



2 = Plastic, U clevis, width 6.2, depth 12.2, hole 8.2, one piece casting with gearbox

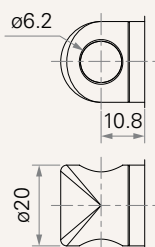


3 = Plastic, U clevis, width 6.2, depth 12.2, hole 10.2, one piece casting with gearbox

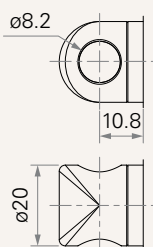


Front Attachment (mm)

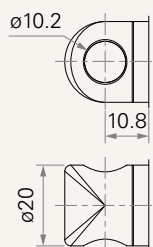
1 = Plastic, slotless, hole 6.2



2 = Plastic, slotless, hole 8.2

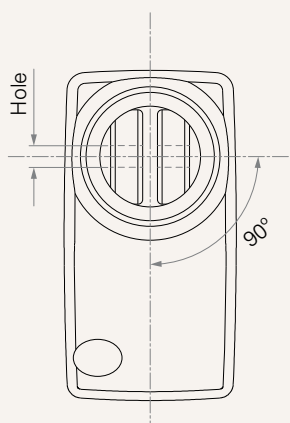


3 = Plastic, slotless, hole 10.2

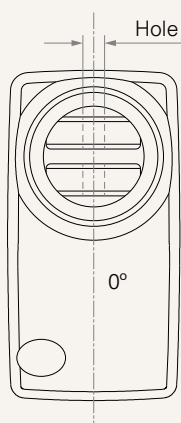


Direction of Rear Attachment (Counterclockwise)

1 = 90°



2 = 0°

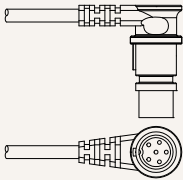


Functions for Limit Switches

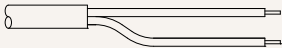
Wire Definitions						
CODE	Pin					
	1 (Green)	2 (Red)	3 (White)	4 (Black)	5 (Yellow)	6 (Blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
2	extend (VDC+)	N/A	middle switch pin B	middle switch pin A	retract (VDC+)	N/A
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch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

Connector

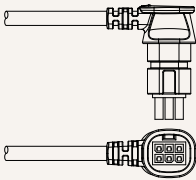
1 = DIN 6P, 90° plug



2 = Tinned leads



Q = Molex 6P, 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.