TA6
series

Product Segments

- **Comfort Motion**

TiMOTION's TA6 series linear actuator is designed for lift applications like recliners, lifting chairs and movie theater seating. Its right angle design reduces noise and allows for fitment into most applications. Industry certifications for the TA6 linear actuator include EMC, ETL and RoHS. In addition, the TA6 is available with optional Hall sensors for position feedback. It can also be used where freewheeling push only functionality is desired.

General Features

Voltage of motor	12V DC, 24V DC, or 36V DC
Maximum load	6,000N in push
Maximum load	4,000N in pull
Maximum speed at full load	23.4mm/s (with 1000N in a push or pull condition)
Minimum installation dimension	Stroke+163mm
Color	Black
Certificate	EMC, ETL, UL 962, and RoHS
Operational temperature range	+5°C~+45°C
Option	Safety nut, Hall sensor(s)

Load and Speed

CODE	Rated Load PUSH N	Rated Load PULL N	Self Locking N (PUSH)	Typical Current at Rated Load (A)	Typical Speed No Load (32V DC) mm/s	Typical Speed Rated Load (24V DC) mm/s
Motor Speed (2600RPM)						
C	5000	4000	2500	3.6	8.0	4.1
D	6000	4000	4000	3.6	6.0	3.1
F	2500	2500	1500	3.3	15.9	8.3
G	2000	2000	1000	3.3	21.4	11.1
H	1000	1000	500	2.2	32.1	19.1
J	3500	3500	2500	3.7	11.9	6.0
Motor Speed (3400RPM)						
L	6000	4000	4000	4.3	7.6	4.1
N	2500	2500	1500	4.2	20.2	11.1
O	2000	2000	1000	4.1	27.1	14.9
P	1000	1000	500	3.1	39.5	23.4
Q	3500	3500	2500	4.7	15.1	7.9
T	5000	4000	2500	4.3	10.1	5.4
Motor Speed (3800RPM)						
X	6000	4000	4000	4.5	8.6	5.0

Note

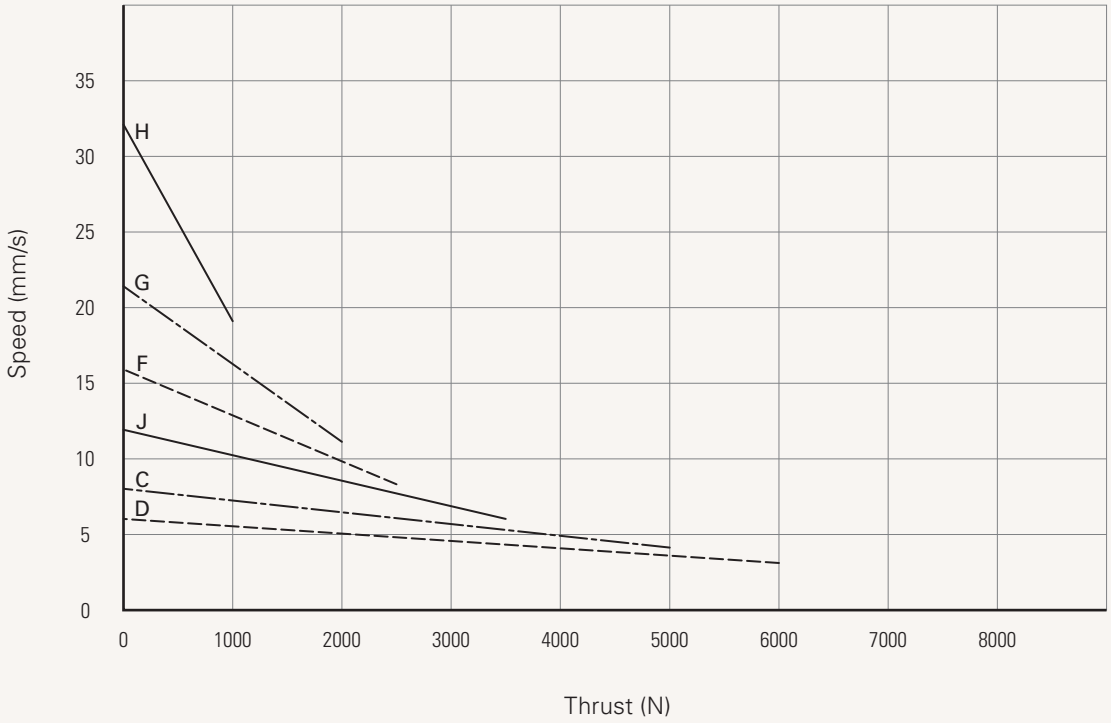
1 Motor 12V current is around 2 times in 24V; Motor 36V current is around 2/3 in 24V; speed is around the same.

2 Above self lock performance needs working with Timotion control system.

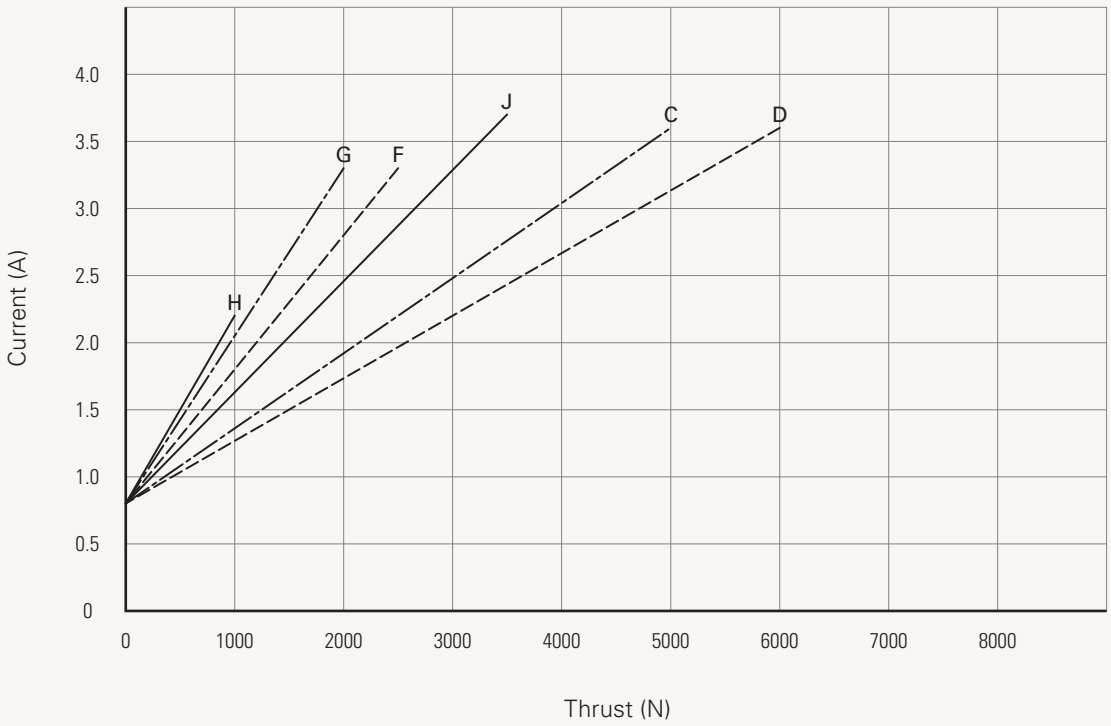
Performance Data

Motor Speed (2600RPM)

Speed vs. Thrust



Current vs. Thrust



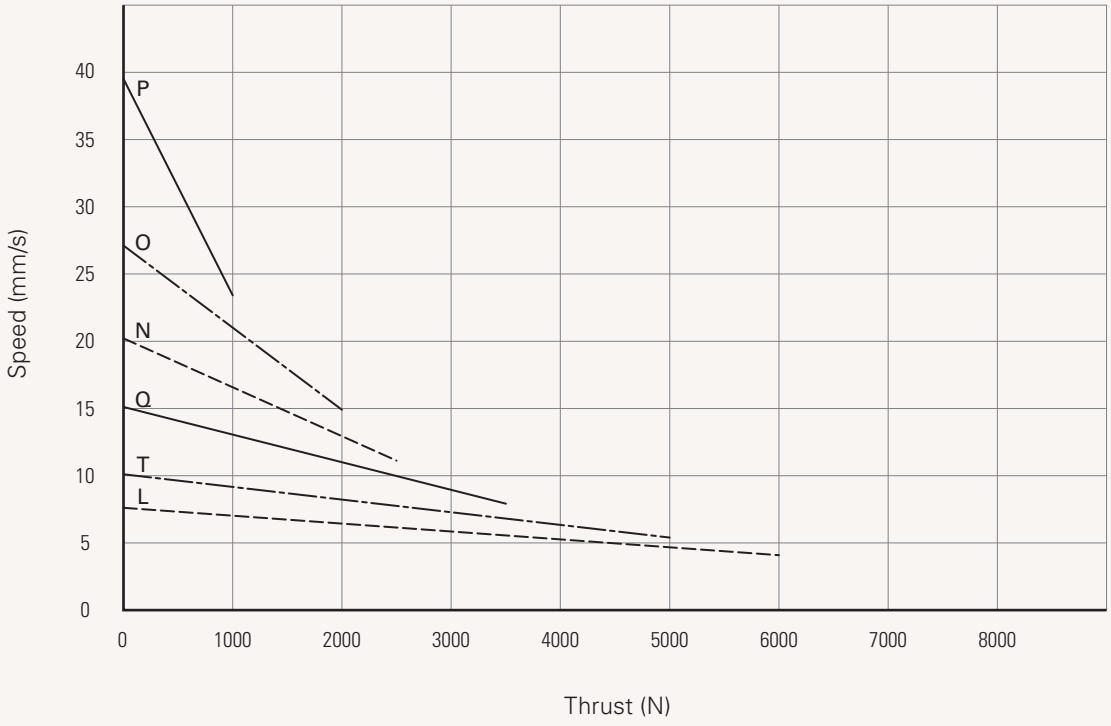
Note

1 The performance data in the curve charts shows theoretical value only.

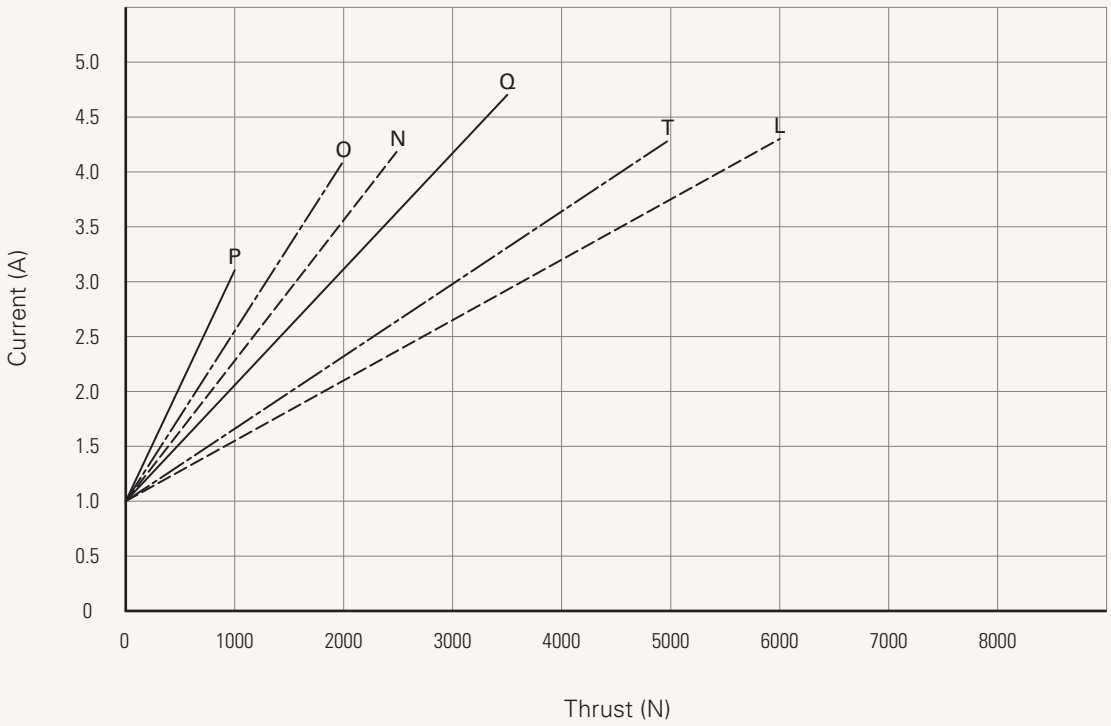
Performance Data

Motor Speed (3400RPM)

Speed vs. Thrust



Current vs. Thrust

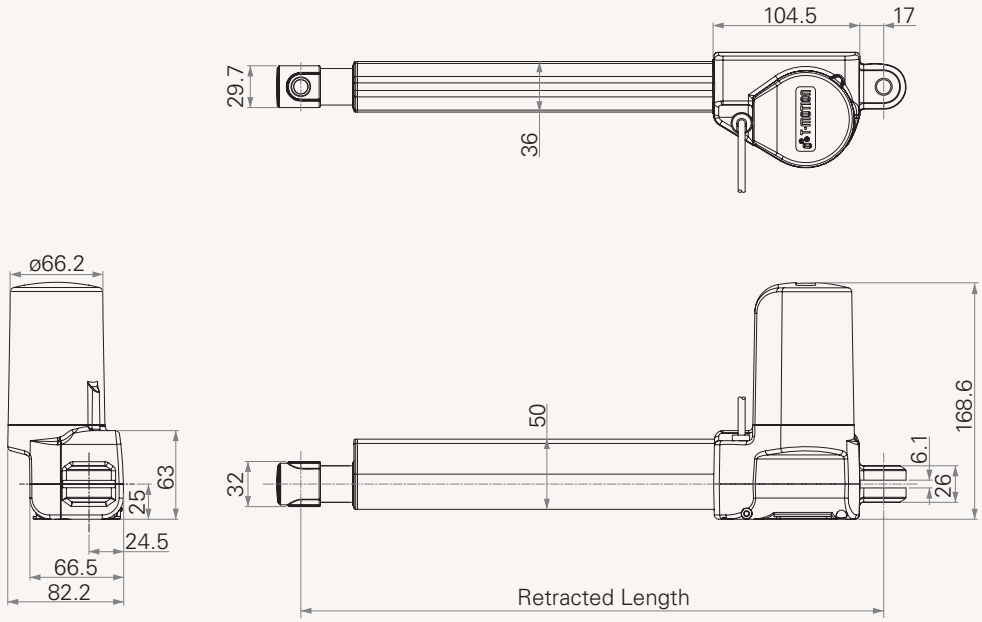


Note

1 The performance data in the curve charts shows theoretical value only.

Drawing

Standard Dimensions
(mm)



Invalid length (mm)

Front Attachment	
CODE	
1	+163
2	+163
3	+185
4	+185
5	+163
6	+163
7	+175
8	+175
9	+175

Load V.S. Stroke	Load (N)	
Stroke (mm)	< 6000	= 6000
0~150	-	-
151~200	-	-
201~250	-	+5
251~300	-	+10
301~350	+5	+15
351~400	+10	+20

Special Functions For Spindle Sub-Assembly	Front attachment	
Push only	1, 2, 5, 6	3, 4, 7, 8, 9
0	-	-
1	-	-
2	+5	-
3	+5	-

Note

* Retracted length needs ≥ stroke + invalid length

Wire Definitions

CODE*	Pin					
	1	2	3	4	5	6
	(green)	(red)	(white)	(black)	(yellow)	(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

Note

* See ordering key - functions for limit switches

TA6 Ordering Key

TiMOTION

TA6

Version: 20151126-T

Voltage	1 = 12V	2 = 24V	3 = 36V	
Load and Speed	See page 2.			
Stroke (mm)				
Retracted Length (mm)	See page 6.			
Rear Attachment	1 = U clevis plastic , slot 6.1mm, hole 10.2mm			
Front Attachment	1 = Punched hole on inner tube + plastic cap, width 32mm, without slot, hole 10.2mm 2 = Punched hole on inner tube + plastic cap, width 32mm, without slot, hole 12.2mm 3 = U clevis plastic, ø30mm, slot 8.2mm, hole 10.2mm (for load push < 4000N & pull < 2500N) 4 = U clevis plastic, ø30mm, slot 8.2mm, hole 12.2mm (for load push < 4000N & pull < 2500N) 5 = Punched hole on inner tube, width 26mm, without slot, hole 10.2mm		6 = Punched hole on inner tube, width 26mm, without slot, hole 12.2mm 7 = U clevis Aluminum casting, width 26mm, slot 6.2mm, hole 10.2mm 8 = U clevis Aluminum casting, width 26mm, slot 6.2mm, hole 12.2mm 9 = U clevis Aluminum casting #8 + plastic bushing, width 28mm, slot 6.2mm, hole 10.2mm	
Color	1 = Black			
Special Functions for Spindle Sub-Assembly	0 = Without 1 = Safety nut		2 = Standard push only 3 = Standard push only + safety nut	
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			
Output Signals	0 = Without	1 = One Hall sensor	2 = Two Hall sensors	
Connector	1 = DIN 6pin, 90° plug 2 = Tinned leads	3 = Small 01pin, plug 4 = Y cable (for direct cut system, non water proof, non anti pull)		
Cable Length	0 = Straight, 100mm 1 = Straight, 500mm 2 = Straight, 750mm	3 = Straight, 1000mm 4 = Straight, 1250mm 5 = Straight, 1500mm	6 = Straight, 2000mm 7 = Coiled, 200mm 8 = Coiled, 400mm	B~H = For direct cut system, please contact TiMOTION