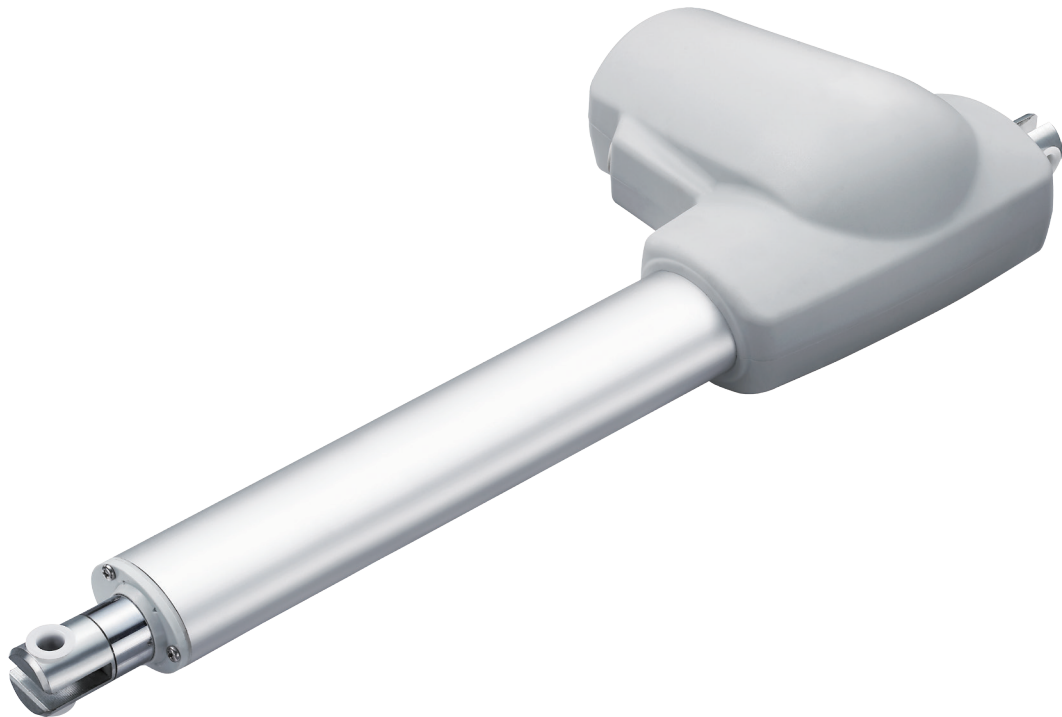


TA12

series



Product Segments

- **Care Motion**
- **Industrial Motion**

TecHome's TA12 series linear actuator is designed primarily for high-load patient lifts and bariatric beds. These sensitive applications require a linear actuator whose design is focused on safety, reliability and effortless operation. A significant feature of the TA12 is the manual release function that allows for lowering of the patient in the event of an emergency or electrical power outage. The TA12 linear actuator has obtained the UL/EN60601-1 certification and is available with an optional IP54 or 66 rating.

General Features

Voltage of motor	12V DC, or 24V DC
Maximum load	12,000N in push
Maximum load	6,000N in pull
Maximum speed at full load	32.3mm/s (with 1,500N in a push or pull condition)
Minimum installation dimension	Stroke+210mm
Color	Black or grey
IP rating	Up to IP66W
Certificate	RoHS, ES60601-1 and IEC60601-1 compliant
Operational temperature range	+5°C~+45°C
Option	Safety nut, Hall/Reed/POT sensor(s), manual release

Load and Speed

CODE	Rated Load		Self Locking Force (N)	Typical Current (A)		Typical Speed (mm/s)	
	PUSH N	PULL N		No Load 32V DC	With Load 24V DC	No Load 32V DC	With Load 24V DC
Motor Speed (3800RPM, Duty Cycle 10%)							
B	12000	6000	12000	2.0	10.0	7.2	4.0
C	7000	6000	7000	2.5	9.0	14.4	8.1
D	4000	4000	4000	2.5	9.5	28.7	16.2
E	2500	2500	2500	2.5	8.5	43.1	24.3
F	1500	1500	1500	2.5	7.5	57.3	32.3
Motor Speed (3000RPM, Duty Cycle 10%)							
G	10000	6000	10000	2.0	10.0	11.0	5.2
H	12000	6000	12000	2.0	7.5	5.5	3.1
J	7000	6000	7000	2.0	7.5	11.3	6.0
K	4000	4000	4000	2.0	7.0	22.7	12.7
L	2500	2500	2500	2.0	6.5	34.0	19.1
M	1500	1500	1500	2.0	6.0	45.3	25.5

Note

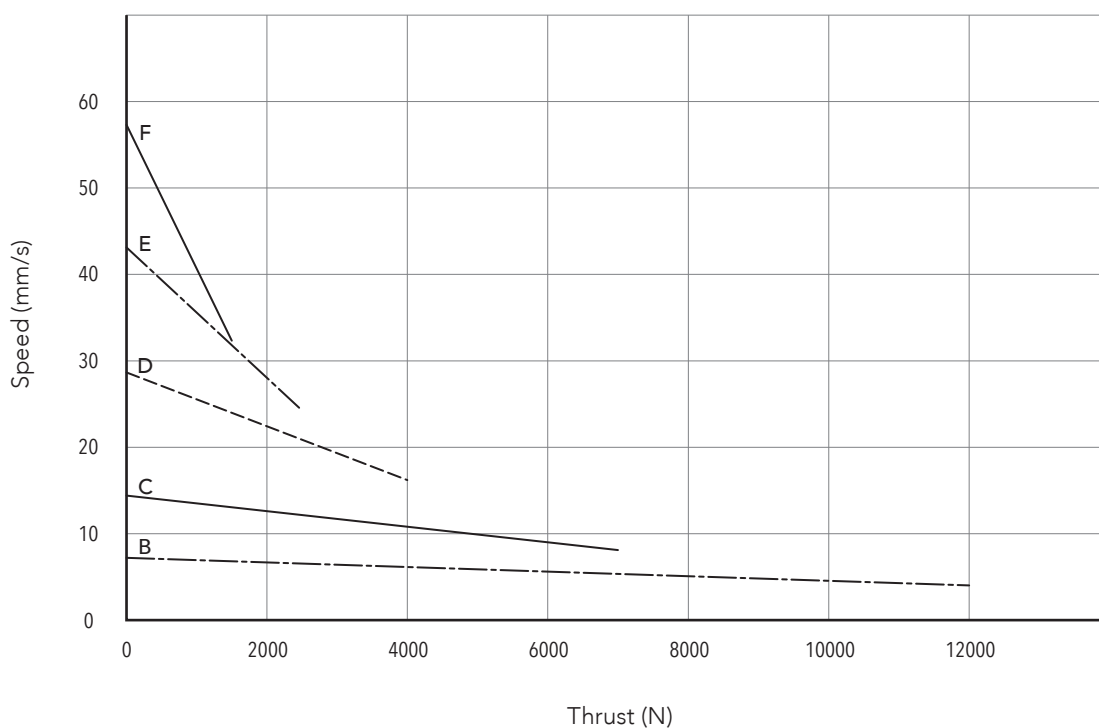
- 1 With motor 12V- current is around 2 times in 24V; Motor 36V- current is around 2/3 in 24V; speed around the same
- 2 Self locking force: Tested average value when working with TecHome control system in push direction
- 3 Current and speed: Tested average value when stretching in push direction
- 4 Standard stroke: min needs $\geq 20\text{mm}$, Max refer to below table

Load (N)	Max stroke (mm)
12000	450
10000	750
7000	900
4000	1000
2500	1200
1500	1500
4000	4000

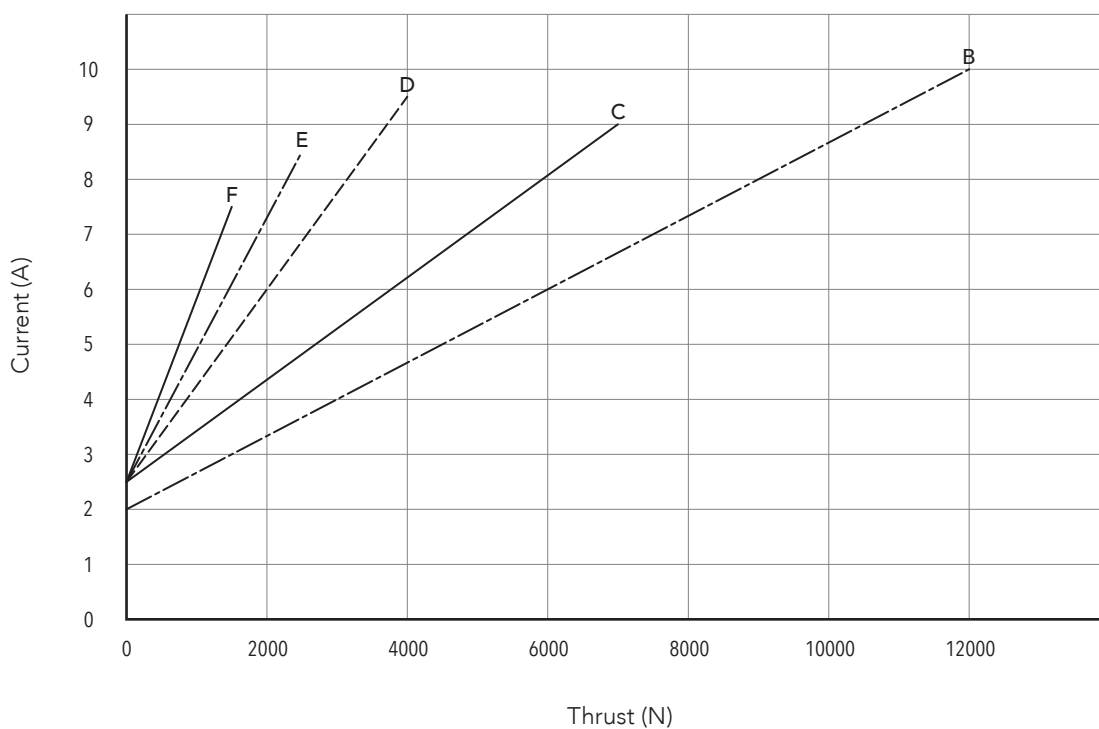
Performance Data

Motor Speed (3800RPM)

Speed vs. Thrust



Current vs. Thrust



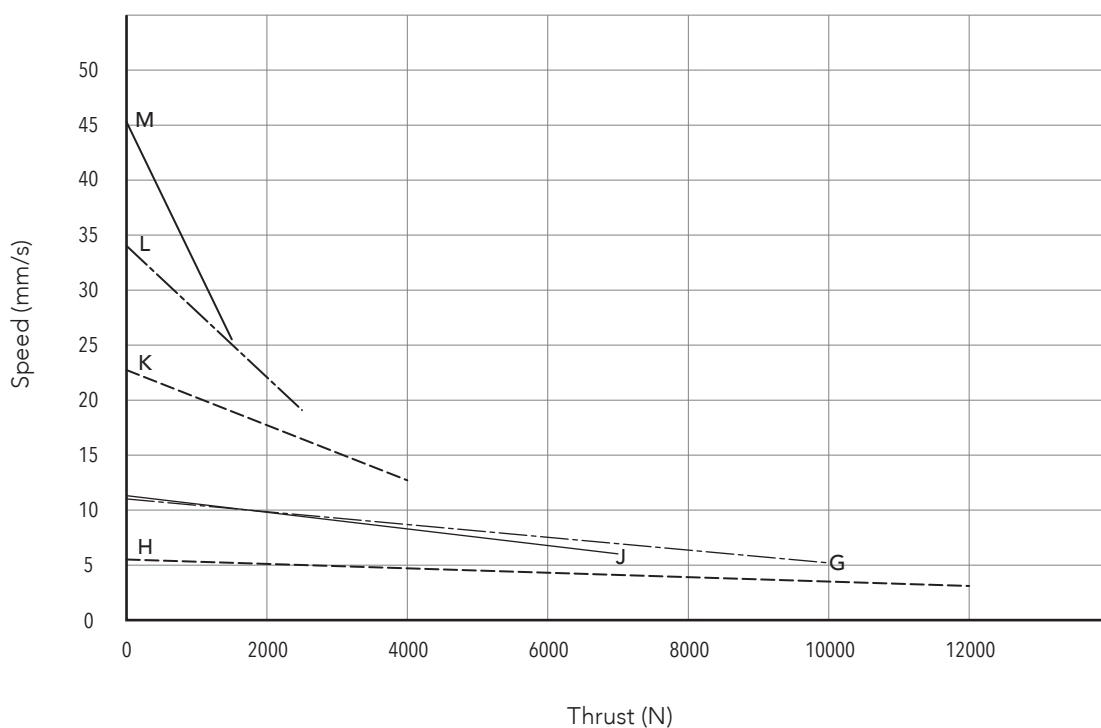
Note

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

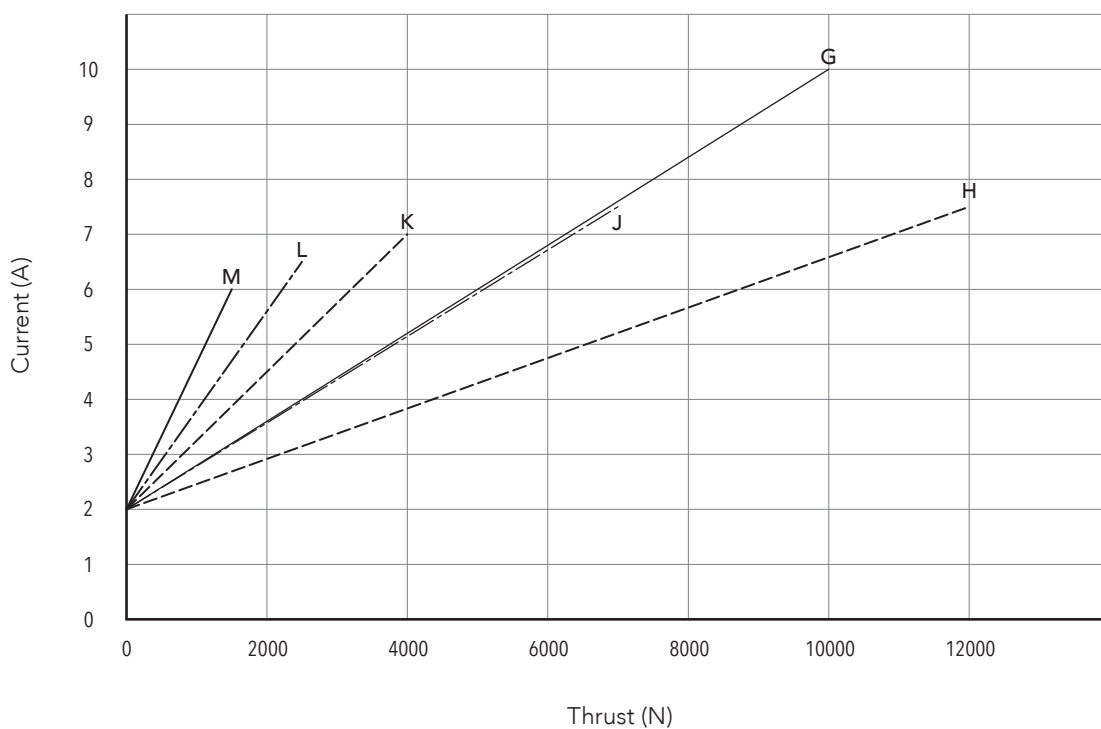
Performance Data

Motor Speed (3000RPM)

Speed vs. Thrust



Current vs. Thrust

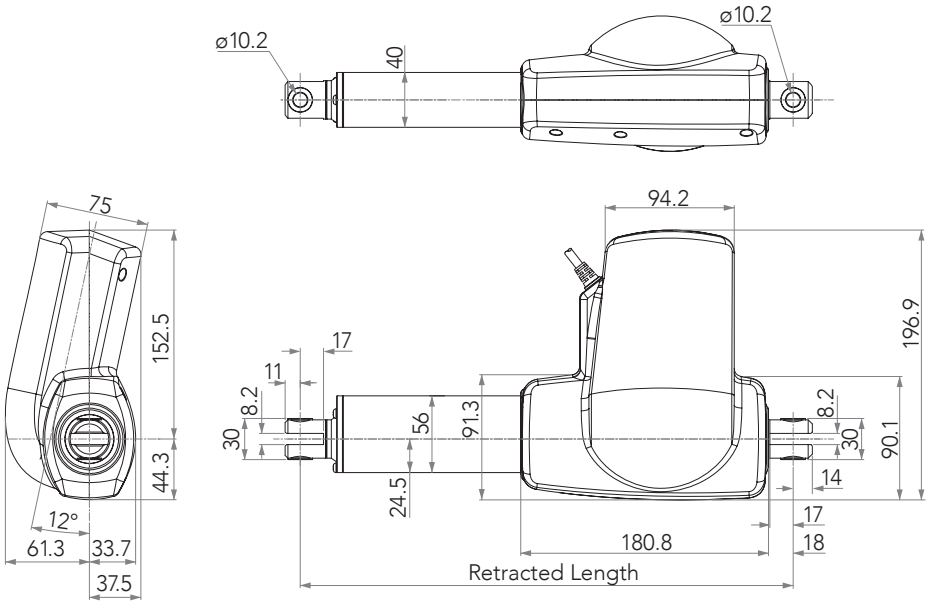


Note

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

Drawing

Standard Dimensions
(mm)



Retracted length (mm)

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

A. Attachment	Normal	Patient hoist
Front Attachment Code		
1, 2, 3, 4	+220	-
6, 7, 8, 9, C (for load < 8000N)	+210	-
E	+270	-
F	-	+267

B. Stroke vs Load	Normal	Patient hoist
Stroke (mm)		
0~300	-	-
301~350	+10	+10
351~400	+20	+20

For stroke over 400mm, +10mm for each incremental 50mm stroke.

C. Output signal	Normal	Patient hoist
Code		
0	-	-
1	-	-
2	+15	-
3	+15	-
6	-	+15

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
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch

Note

* See ordering key - functions for limit switches

TA12 Ordering Key

TA12

Version: 20160704-M

<div></div>	Voltage	5 = 24V, thermal protector		6 = 12V, thermal protector	
<div></div>	Load and Speed	See page 2			
<div></div>	Stroke (mm)				
<div></div>					
<div></div>					
<div></div>					
<div></div>	Retracted Length (mm)	See page 6			
<div></div>					
<div></div>					
<div></div>					
<div></div>	Rear Attachment (mm)	1 =Iron CNC, clevis U, slot 8.2, depth 17.0, hole 10.2, T bushing 2 =Iron CNC, clevis U, slot 8.2, depth 17.0, hole 12.2 6 =Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 10.2 (for load<8000N)		7 =Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 12.2 (for load<8000N) C =Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 10.2, T bushing (for load<8000N)	
<div></div>	Front Attachment (mm)	1 =Iron CNC, clevis U, slot 8.2, depth 17.0, hole 10.2, T bushing 2 =Iron CNC, clevis U, slot 8.2, depth 17.0, hole 12.2 6 =Aluminum casting, clevis U, slot 8.2, depth 15.0, hole 10.2 (for load<8000N)		7 =Aluminum casting, clevis U, slot 8.2, depth 15.0, hole 12.2 (for load<8000N) C =Aluminum casting, clevis U, slot 8.2, depth 15.0, hole 10.2, T bushing (for load<8000N)	
<div></div>	Direction of Rear Attachment (Counterclockwise)	1 = 0°		3 = 90°	
<div></div>	Color	1 = Black		2 = Grey (Pantone 428C)	
<div></div>	IP Rating	1 = Without	2 = IP54	3 = IP66	5 = IP66W
<div></div>	Emergency Release Function	0 = Without			
<div></div>	Special Functions for Spindle Sub-Assembly	0 =Without (standard) 1 =Safety nut		2 =Standard push only 3 =Standard push only + safety nut	
<div></div>	Functions for Limit Switches	1 =Two switches at full retracted/extended positions to cut current 3 = Two switches at full retracted/extended positions to send signal			
<div></div>	Output Signals	0 = Without	1 = One Hall sensor	2 = Two Hall sensors	4 = POT
<div></div>	Connector	1 = DIN 6pin, 90° plug	2 = Tinned leads	F = DIN 6pin, 180° plug	G = Audio plug
<div></div>	Cable Length	1 =Straight, 500mm	3 =Straight, 1000mm	5 =Straight, 1500mm	7 =Curly, 200mm
		2 =Straight, 750mm	4 =Straight, 1250mm	6 =Straight, 2000mm	8 =Curly, 400mm

TA12 - Patient Hoist Ordering Key

TA12

Version: 20160704-M

<input type="checkbox"/>	Voltage	5 = 24V, thermal protector		
<input type="checkbox"/>	Load and Speed	B = 12000N	G = 10000N	
<input type="checkbox"/>	Stroke (mm)			
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>	Retracted Length (mm)	See page 6		
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>	Rear Attachment (mm)	C = Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 10.2, T bushing		
<input type="checkbox"/>	Front Attachment (mm)	F = Aluminum casting, clevis U, slot 8.2, depth 19.0, hole 10.2, T bushing (for manual release)		
<input type="checkbox"/>	Direction of Rear Attachment (Counterclockwise)	1 = 0°		
<input type="checkbox"/>	Color	1 = Black	2 = Grey (Pantone 428C)	
<input type="checkbox"/>	IP Rating	2 = IP54	3 = IP66	
<input type="checkbox"/>	Emergency Release Function	5 = Manual release		
<input type="checkbox"/>	Special Functions for Spindle Sub-Assembly	6 = Mechanical push only + safety nut		
<input type="checkbox"/>	Functions for Limit Switches	1 = Two switches at full retracted/extended positions to cut current		
<input type="checkbox"/>	Output Signals	0 = Without		
<input type="checkbox"/>	Connector	1 = DIN 6pin, 90° plug	F = DIN 6pin, 180° plug	G = Audio plug
<input type="checkbox"/>	Cable Length	1 = Straight, 500mm	3 = Straight, 1000mm	

Terms of Use

The user is responsible for determining the suitability of TecHome products for a specific application. TecHome products are subject to change without prior notice.