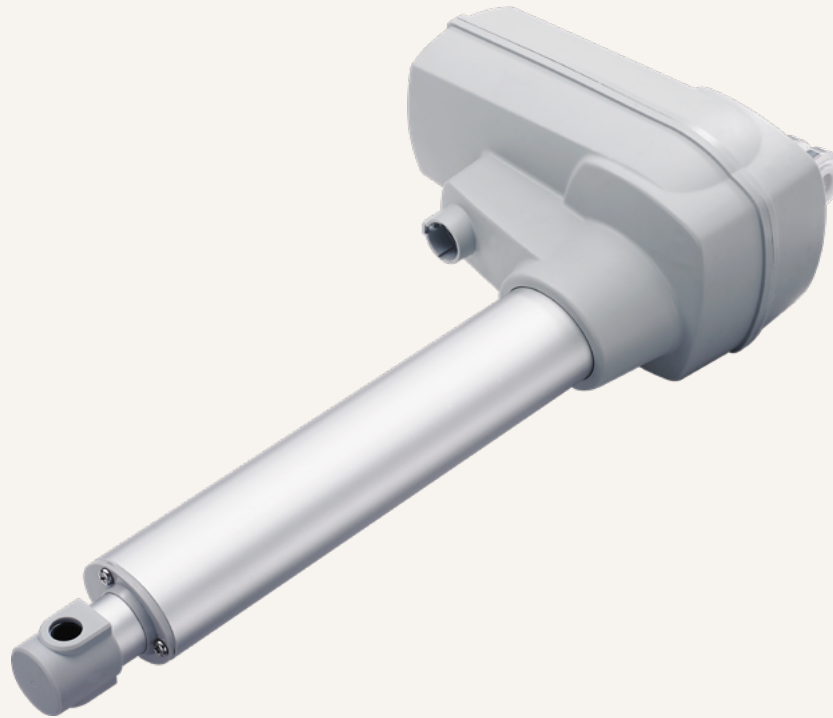


TA24

series



Product Segments

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

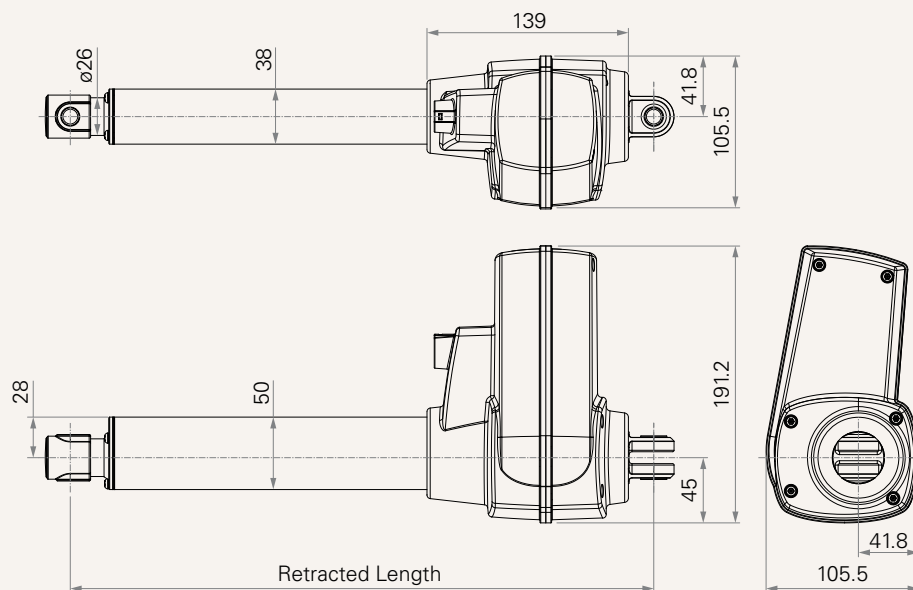
The TA24 series linear actuator is suited for healthcare and industrial applications. The certifications for the TA24 include IEC60601-1 and ES60601-1. In addition, the TA24 linear actuator is available with an optional up to IP66W rating. Other options include Hall or POT feedback sensors.

General Features

Voltage of motor	24V DC, 36V DC; 24V DC (PTC)
Maximum load	10,000N in push
Maximum load	6,000N in pull
Maximum speed at full load	8mm/s (with 6,000N in a push or pull condition)
Stroke	≥ 25~900mm
Minimum installation dimension	≥ Stroke + 190mm
Color	Black or grey
IP rating	Up to IP66W
Certificate	IEC60601-1, ES60601-1, IEC60601-1-2
Operational temperature range at full performance	+5°C~+45°C
Options	Safety nut, POT, Hall sensors

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 (4200RPM, duty cycle 10%)							
B	6000	6000	6000	1.5	6.0	13.9	8.0
C	8000	6000	8000	1.5	9.0	11.9	6.4
D	10000	6000	10000	1.5	9.8	10.3	5.4

Note

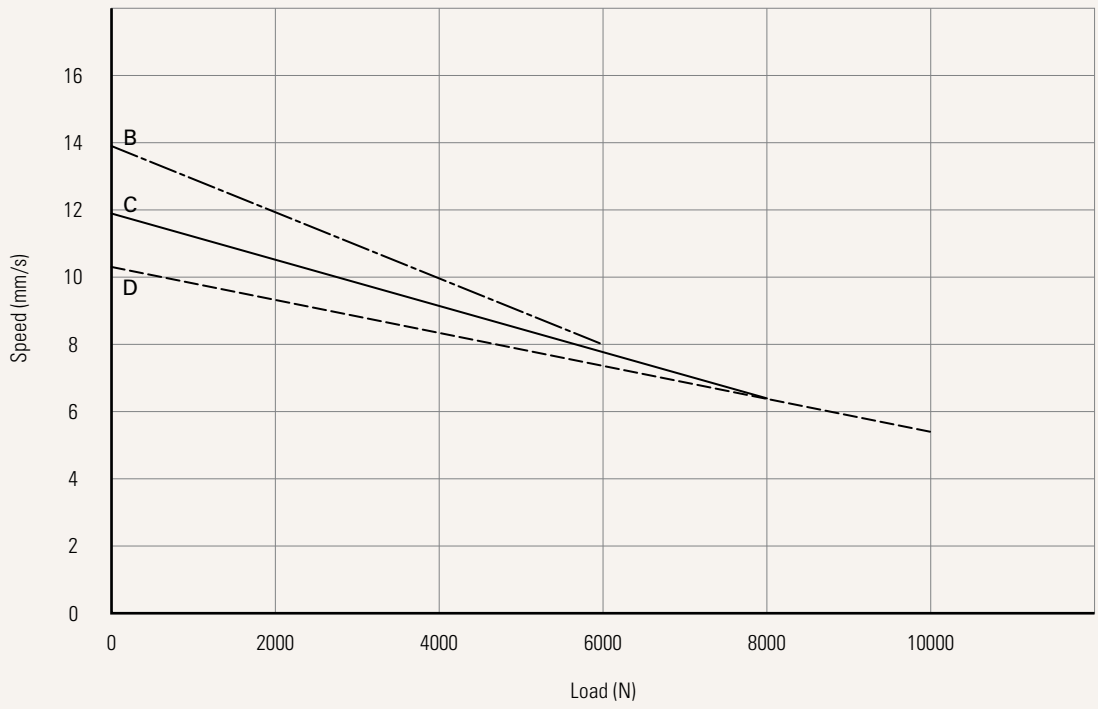
- 1 Please refer to the approved drawing for the final authentic value.
- 2 This self-locking force level is reached only when a short circuit is applied on the terminals of the motor. All the TiMOTION control boxes have this feature built-in.
- 3 The current & speed in table are tested with 24V DC motor. With a 12V DC motor, the current is approximately twice the current measured in 24V DC. With a 36V DC motor, the current is approximately two-thirds the current measured in 24V DC. Speed will be similar for all the voltages.
- 4 The current & speed in table are tested when the actuator is extending under push load.
- 5 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)
- 6 Standard stroke: Min. ≥ 25 mm, Max. please refer to below table.

CODE	Load (N)	Max Stroke (mm)
B	6000	900
C	8000	800
D	10000	650

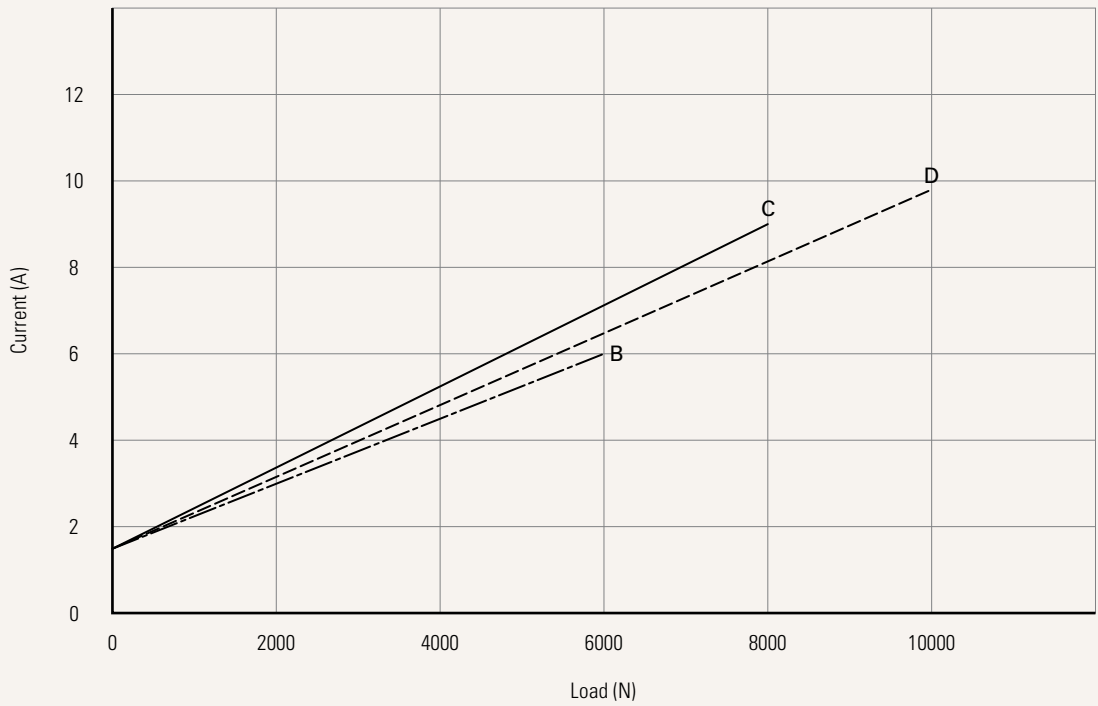
Performance Data (24V DC Motor)

Motor Speed (4200RPM)

Speed vs. Load



Current vs. Load



Voltage	2 = 24V DC	3 = 36V DC	5 = 24V DC, PTC
Load and Speed	See page 2		
Stroke (mm)	See page 2		
Retracted Length (mm)	See page 5		
Rear Attachment (mm) See page 6	6 = Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 10.2 7 = Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 12.2 8 = Aluminum casting, clevis U, slot 10.2, depth 17.0, hole 10.2	9 = Aluminum casting, clevis U, slot 10.2, depth 17.0, hole 12.2 C = Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 10.2, with plastic T-bushing	
Front Attachment (mm) See page 6	1 = Inner tube with punched hole + plastic cap, no slot, hole 10.2, with plastic bushing 2 = Inner tube with punched hole + plastic cap, no slot, hole 12.2 5 = Inner tube with punched hole, no slot, hole 10.2, with plastic bushing 6 = Inner tube with punched hole, no slot, hole 12.2	7 = Aluminum casting, clevis U, slot 6.2, depth 17.0, hole 10.2 8 = Aluminum casting, clevis U, slot 6.2, depth 17.0, hole 12.2 9 = Aluminum casting, clevis U, slot 6.2, depth 17.0, hole 10.2, with plastic T-bushing J = Aluminum casting, no slot, hole 10.2, for Dental Chair	
Direction of Rear Attachment (Counterclockwise) See page 7	1 = 0°	3 = 90°	
Color	1 = Black	2 = Grey (Pantone 428C)	
IP Rating	1 = Without	2 = IP54	3 = IP66 5 = IP66W
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 See page 7	1 = Two switches at full retracted / extended positions to cut current		
Output Signal	0 = Without	2 = Hall sensors * 2	3 = POT
Connector See page 7	0 = DIN 6P, socket on gear box 1 = DIN 6P, 90° plug 2 = Tinned leads	4 = Big 01P, plug E = Molex 8P, plug F = DIN 6P, 180° plug	G = Audio plug
Cable Length (mm)	0 = Without, for socket on gear box 1 = Straight, 500	2 = Straight, 750 3 = Straight, 1000 4 = Straight, 1250	5 = Straight, 1500 6 = Straight, 2000 7 = Curly, 200 8 = Curly, 400

Retracted Length (mm)

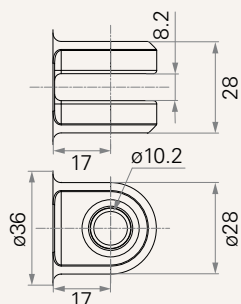
1. Calculate $A+B = Y$
2. Retracted length needs to \geq Stroke + Y

A.	
Front Attach.	
1, 2, 5, 6	+190
7, 8, 9	+202
J	+193

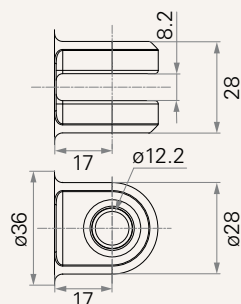
B.	Stroke (mm)	Load (N)		
		= 6000	= 8000	= 10000
25~150	-	-	-	+5
151~200	-	-	+5	+10
201~250	+5	+5	+10	+15
251~300	+10	+10	+15	+20
301~350	+15	+15	+20	+25
351~400	+20	+20	+25	+30
401~450	+25	+25	+30	+35
451~500	+30	+30	+35	+40
501~550	+35	+35	+40	+45
551~600	+40	+40	+45	+50
601~650	+45	+45	+50	+55
651~700	+50	+50	+55	x
701~750	+55	+55	+60	x
751~800	+60	+60	+65	x
801~850	+65	+65	x	x
851~900	+70	+70	x	x

Rear Attachment (mm)

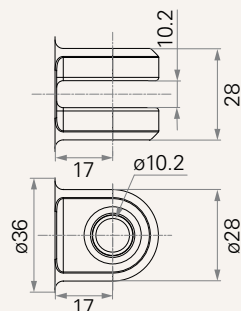
6 = Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 10.2



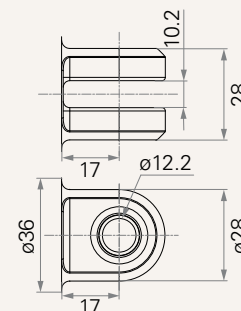
7 = Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 12.2



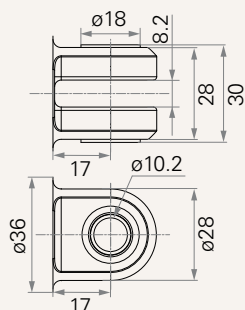
8 = Aluminum casting, clevis U, slot 10.2, depth 17.0, hole 10.2



9 = Aluminum casting, clevis U, slot 10.2, depth 17.0, hole 12.2

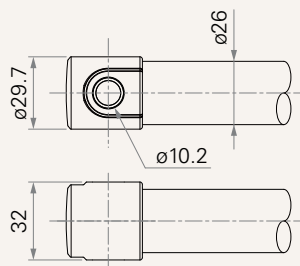


C = Aluminum casting, clevis U, slot 8.2, depth 17.0, hole 10.2, T bush

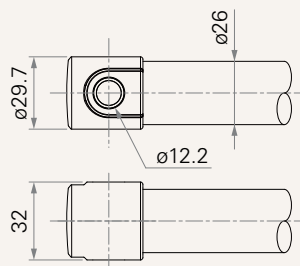


Front Attachment (mm)

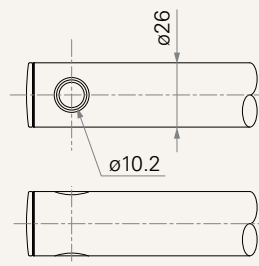
1 = Inner tube with punched hole + plastic cap, no slot, hole 10.2, with bush



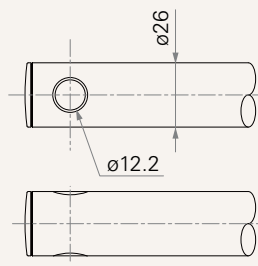
2 = Inner tube with punched hole + plastic cap, no slot, hole 12.2



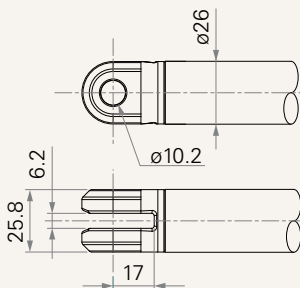
5 = Inner tube with punched hole, no slot, hole 10.2, with bush



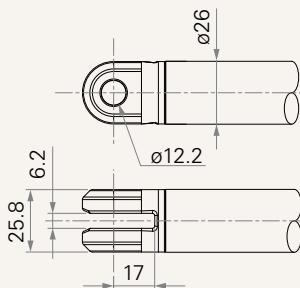
6 = Inner tube with punched hole, no slot, hole 12.2



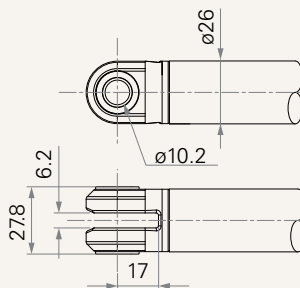
7 = Aluminum casting, clevis U, slot 6.2, depth 17.0, hole 10.2



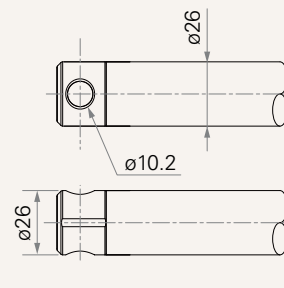
8 = Aluminum casting, clevis U, slot 6.2, depth 17.0, hole 12.2



9 = Aluminum casting, clevis U, slot 6.2, depth 17.0, hole 10.2, with T bush

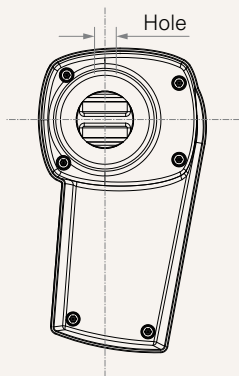


J = Aluminum casting, no slot, hole 10.2, for Dental Chair

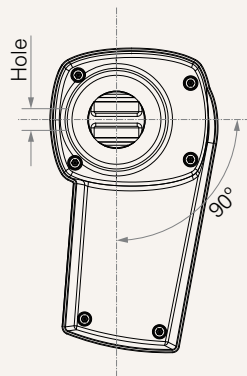


Direction of Rear Attachment (Counterclockwise)

1 = 0°



3 = 90°



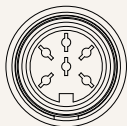
Functions for Limit Switches

Wire Definitions

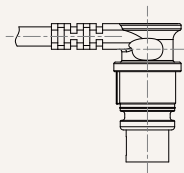
CODE	Pin					
	1 (Green)	2 (Red)	3 (White)	4 (Black)	5 (Yellow)	6 (Blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A

Connector

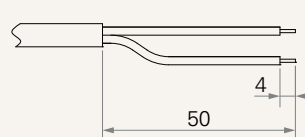
0 = DIN 6P, socket on gear box



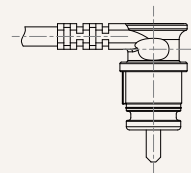
1 = DIN 6P, 90° plug



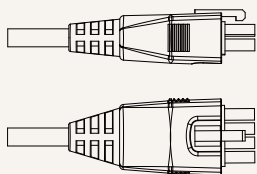
2 = Tinned leads



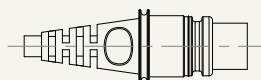
4 = Big 01P, plug



E = Molex 8P, plug



F = DIN 6P, 180° plug



G = Audio plug



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