TA14

series

Product Segments

- **Comfort Motion**

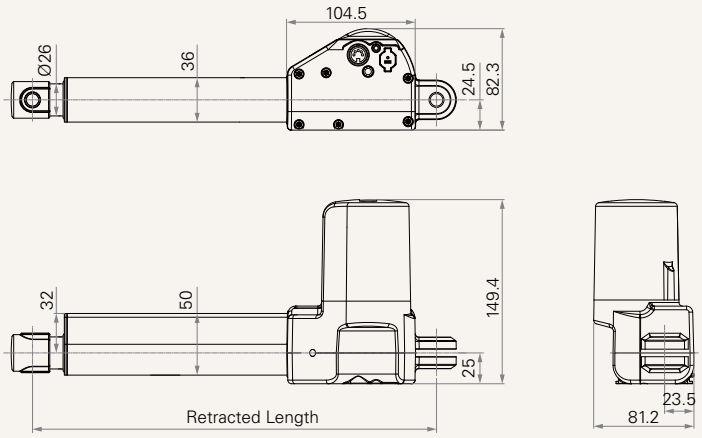
TiMOTION's TA14 linear actuator is designed for lift applications like recliners, lifting chairs and movie theater seating. This linear actuator is designed to function as a direct cut system, eliminating the need for a control box, offering a simple and economical alternative. Options for the TA14 include a safety nut and multiple mounting styles for the front attachment.

General Features

Voltage of motor	12V DC, 24V DC, 36V DC or 24V DC (PTC)
Maximum load	6,000N in push
Maximum load	4,000N in pull
Maximum speed at full load	23.4mm/s (with 1,000N in a push or pull condition)
Minimum installation dimension	≥ Stroke + 163mm
Color	Black or dark grey
Certificate	UL962, EMC
Operational temperature range	+5°C~+45°C
For direct-cut system	Can function without control box

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 (2600RPM, Duty Cycle 10%)							
C	5000	4000	2500	0.8	3.5	8.0	4.1
D	6000	4000	4000	0.8	3.5	6.0	3.1
F	2500	2500	1500	0.8	3.2	15.9	8.3
G	2000	2000	1000	0.8	2.8	21.4	12.1
H	1000	1000	500	0.8	2.1	32.1	19.1
J	3500	3500	2500	0.8	3.6	11.9	6.0
Motor Speed (3400RPM, Duty Cycle 10%)							
L	6000	4000	4000	1.0	4.2	7.3	4.1
N	2500	2500	1500	1.0	4.1	19.4	11.1
O	2000	2000	1000	1.0	4.0	26.1	14.9
P	1000	1000	500	1.0	3.0	39.0	23.4
Q	3500	3500	2500	1.0	4.6	14.5	7.9
T	5000	4000	2500	1.0	4.2	9.8	5.4
Motor Speed (3800RPM, Duty Cycle 10%)							
U	5000	4000	2500	1.2	4.7	11.3	6.6
W	2500	2500	1500	1.2	4.6	23.0	13.4
Z	3500	3500	2500	1.2	5.3	16.8	9.8

Note

1 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.

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 when the actuator is extending under push load.

4 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)

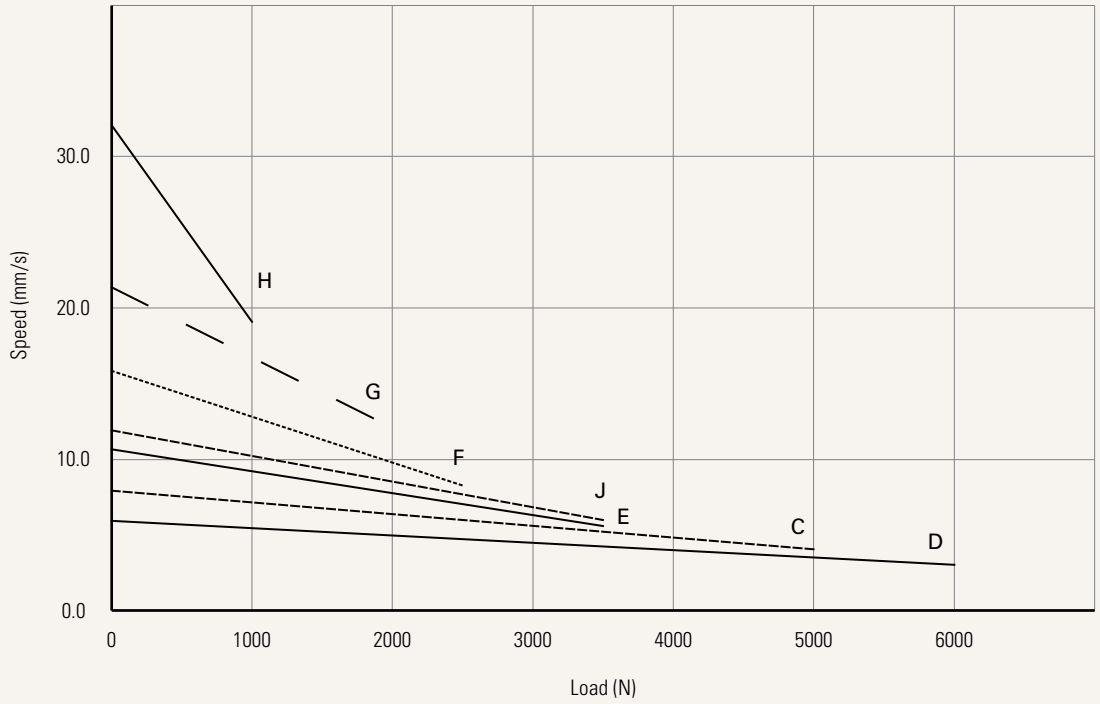
5 Standard stroke: Min. ≥ 25mm, Max. please refer to below table

CODE	Load (N)	Max Stroke (mm)
D, L	= 6000	600
Others	< 6000	1000

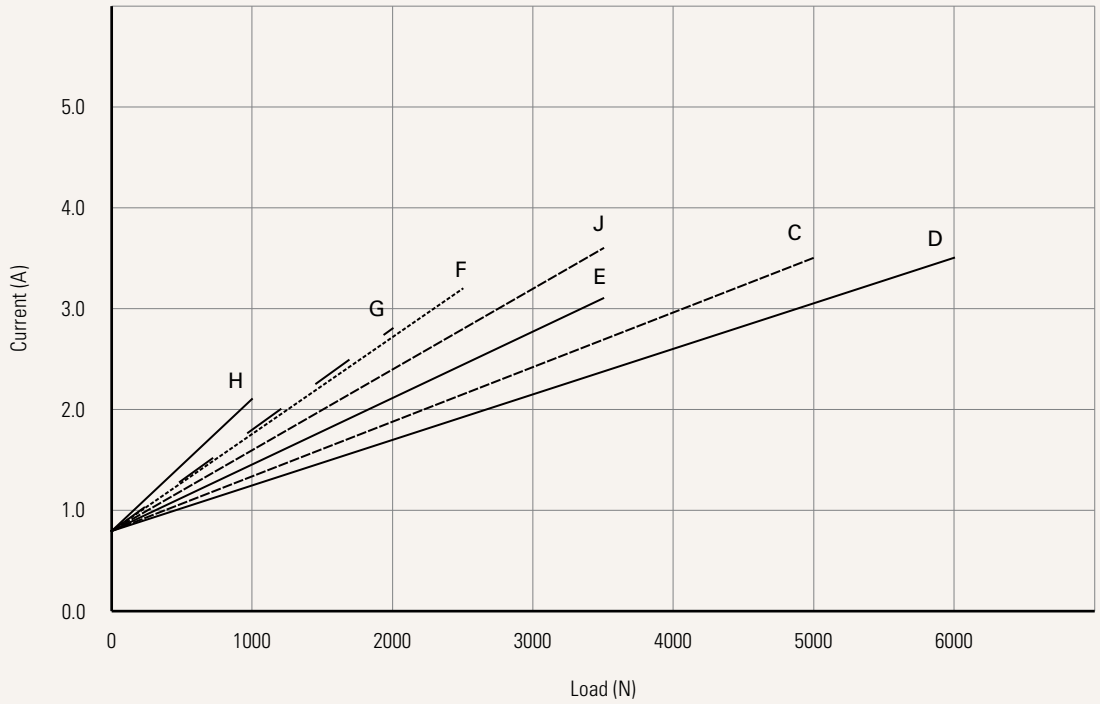
Performance Data (24V DC Motor)

Motor Speed (2600RPM, Duty Cycle 10%)

Speed vs. Load



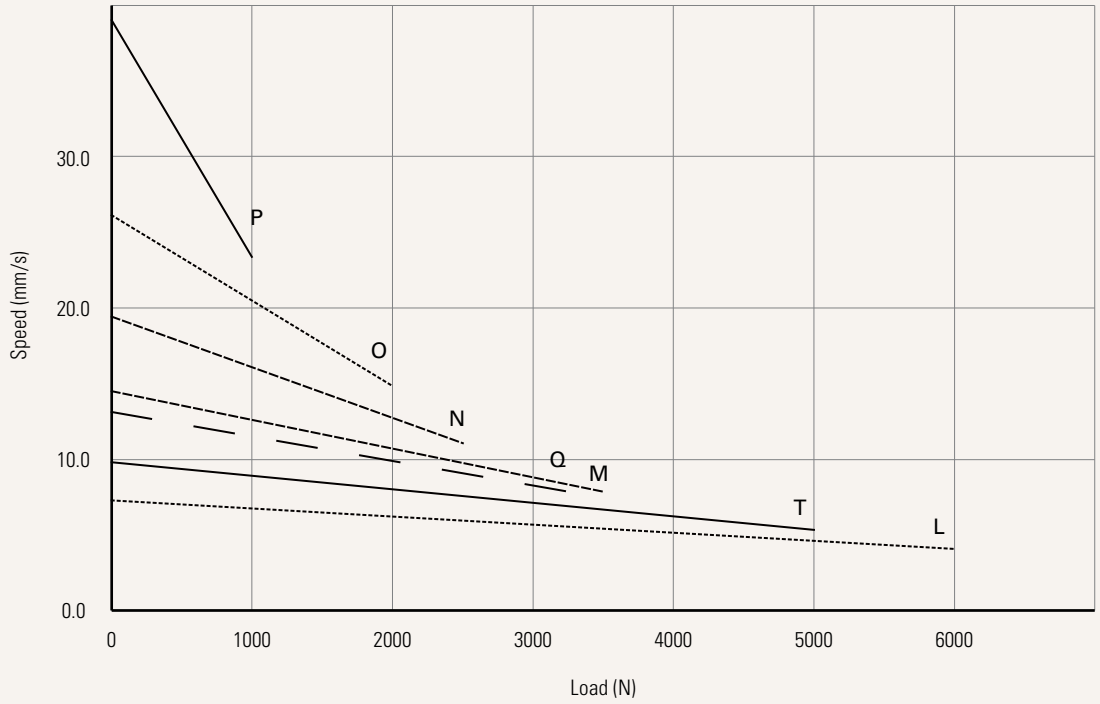
Current vs. Load



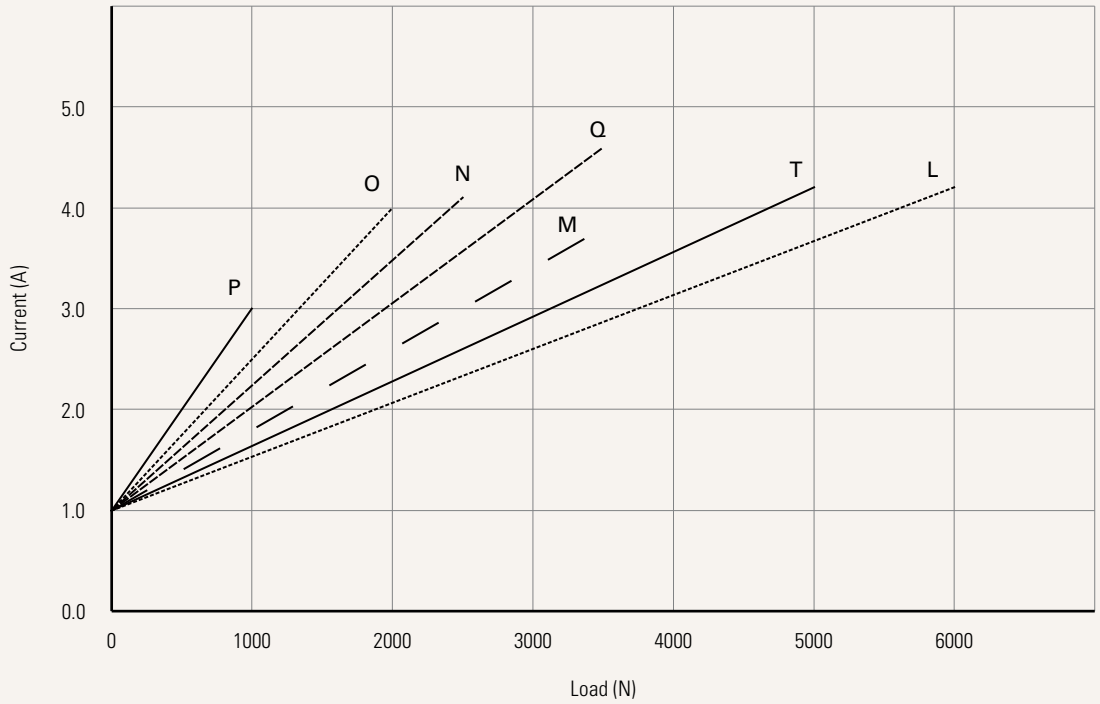
Performance Data (24V DC Motor)

Motor Speed (3400RPM, Duty Cycle 10%)

Speed vs. Load



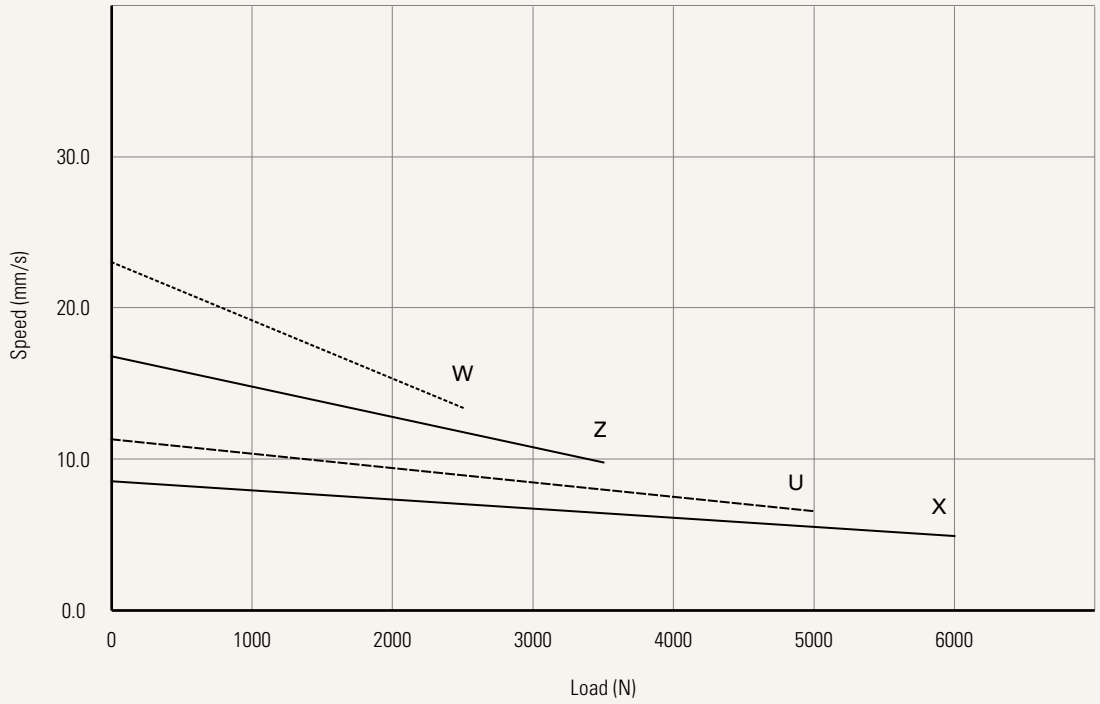
Current vs. Load



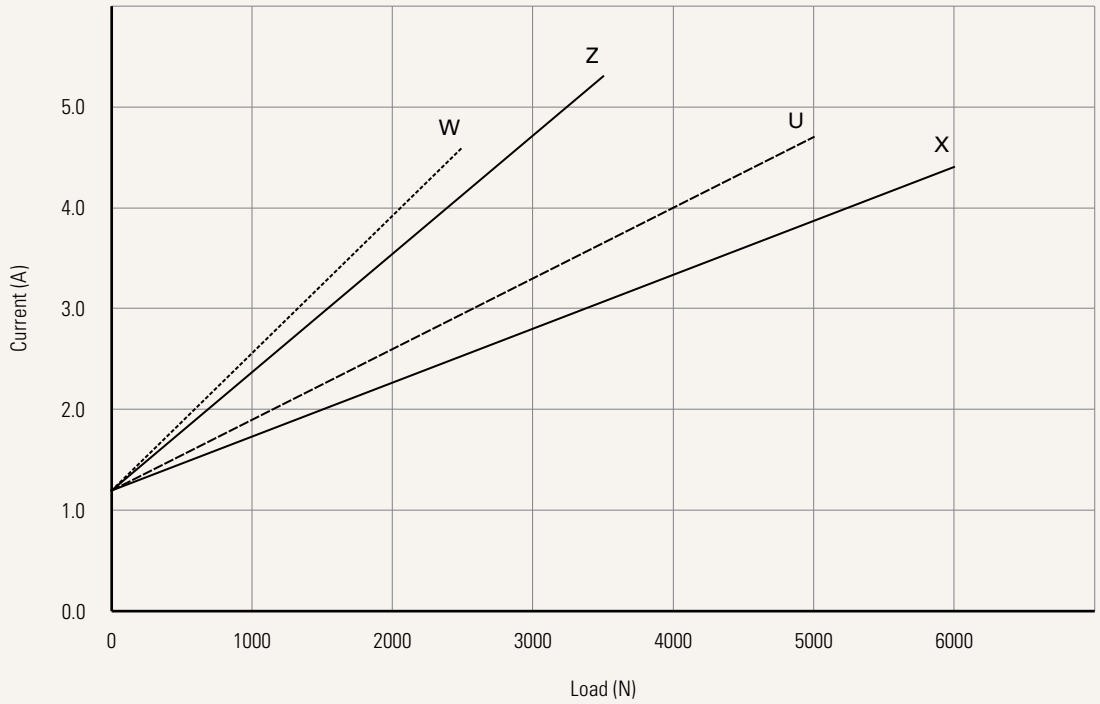
Performance Data (24V DC Motor)

Motor Speed (3800RPM, Duty Cycle 10%)

Speed vs. Load



Current vs. Load



TA14 Ordering Key

TiMOTION

TA14

Version: 20180201-G

Voltage	1 = 12V DC	2 = 24V DC	3 = 36V DC	5 = 24V DC, PTC
Load and Speed	See page 2			
Stroke (mm)				
Retracted Length (mm)	See page 2			
Rear Attachment (mm) See page 7	1 = Plastic, U clevis, slot 6.1, depth 17.0, hole 10.2			
Front Attachment (mm) See page 8	1 = Punched hole on inner tube + plastic cap, without slot, hole 10.2, plastic bush 2 = Punched hole on inner tube + plastic cap, without slot, hole 12.2 3 = Plastic, U clevis, slot 8.2, depth 20.2, hole 10.2, for load push < 4000N & pull < 2500N 4 = Plastic, U clevis, slot 8.2, depth 20.2, hole 12.2, for load push < 4000N & pull < 2500N 5 = Punched hole on inner tube, without slot, hole 10.2, plastic bush		6 = Punched hole on inner tube, without slot, hole 12.2 7 = Aluminum casting, U clevis, slot 6.2, depth 17.0, hole 10.2 8 = Aluminum casting, U clevis, slot 6.2, depth 17.0, hole 12.2 9 = Aluminum casting, U clevis, slot 6.2, depth 17.0, hole 10.2, T-bush	
Color (Gear box)	1 = Black	5 = Dark grey		
Special Functions for Spindle Sub-Assembly	0 = Without	1 = Safety nut	2 = Standard push only	3 = Safety nut and standard push only
Connector See page 8	1 = Direct cut operation with single actuator		2 = Direct cut operation with 2 actuators	
Output Signals	0 = Without			
Brake	0 = Without	4 = Spindle brake (4.5N)	M = Motor brake	
Load Type	T = Push	P = Pull	1 = Push + Pull, mainly push	2 = Push + Pull, mainly pull
IP Rating	1 = Without			

TA14 Ordering Key Appendix

Retracted Length (mm)

1. Calculate A+B+C = Y
2. Retracted length needs to ≥ Stroke + Y

A. Rear/ Front Attachment

Front attach	(mm)
1, 2, 5, 6, D	+163
3, 4	+185
7, 8, 9	+175
B, C	+180

B. Load V.S. Stroke

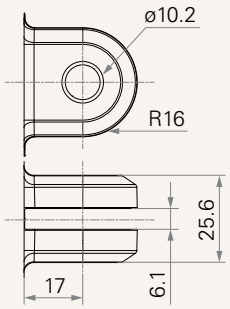
Stroke (mm)	Load (N)	
	< 6000	= 6000
25~150	-	-
151~200	-	-
201~250	-	+5
251~300	-	+10
301~350	+5	+15
351~400	+10	+20
401~450	+15	+25
451~500	+20	+30
501~550	+25	+35
551~600	+30	+40
601~650	+35	x
751~700	+40	x
701~750	+45	x
751~800	+50	x
801~850	+55	x
851~900	+60	x
901~950	+65	x
951~1000	+70	x

C. Special Functions for Spindle Sub-Assembly

Front attach	0, 1	2, 3
1, 2, 5, 6	-	+5
3, 4	-	-
7, 8, 9	-	-
B, C	-	-
D	-	+5

Rear Attachment (mm)

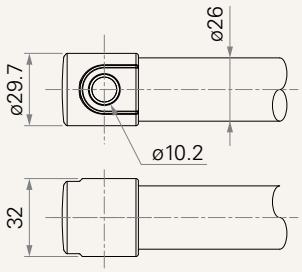
1 = Plastic, U clevis, slot 6.1, depth 17.0, hole 10.2



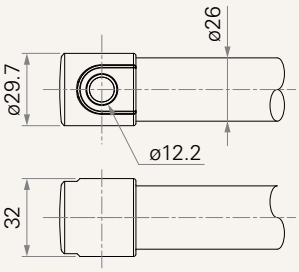
TA14 Ordering Key Appendix

Front Attachment (mm)

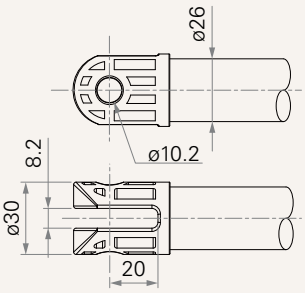
1 = Punched hole on inner tube + plastic cap, without slot, hole 10.2, plastic bush



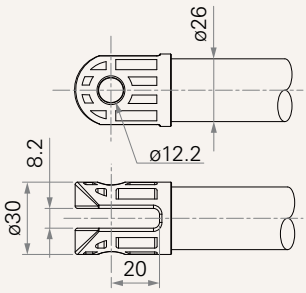
2 = Punched hole on inner tube + plastic cap, without slot, hole 12.2



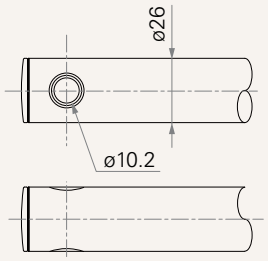
3 = Plastic, U clevis, slot 8.2, depth 20.2, hole 10.2, for load push < 4000N & pull < 2500N



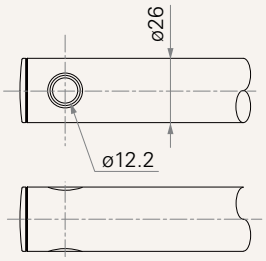
4 = Plastic, U clevis, slot 8.2, depth 20.2, hole 12.2, for load push < 4000N & pull < 2500N



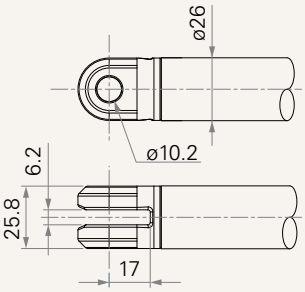
5 = Punched hole on inner tube, without slot, hole 10.2, plastic bush



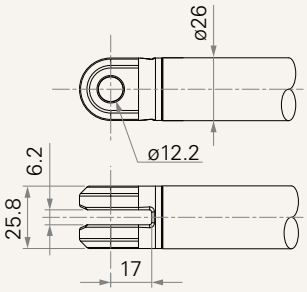
6 = Punched hole on inner tube, without slot, hole 12.2



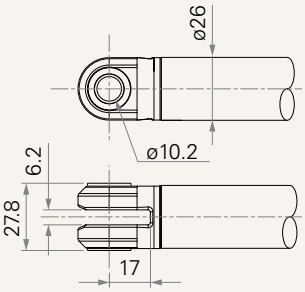
7 = Aluminum casting, U clevis, slot 6.2, depth 17.0, hole 10.2



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

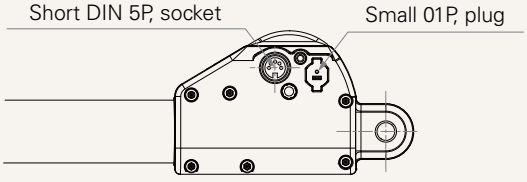


9 = Aluminum casting, U clevis, slot 6.2, depth 17.0, hole 10.2, T-bush

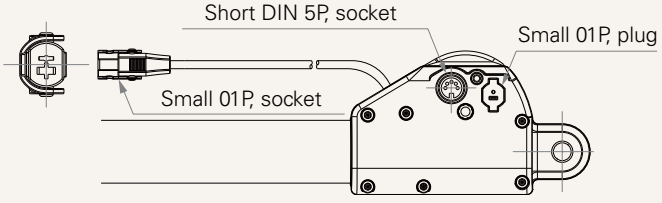


Connector

1 = Direct cut operation with single actuator



2 = Direct cut operation with 2 actuators



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