TA43

series

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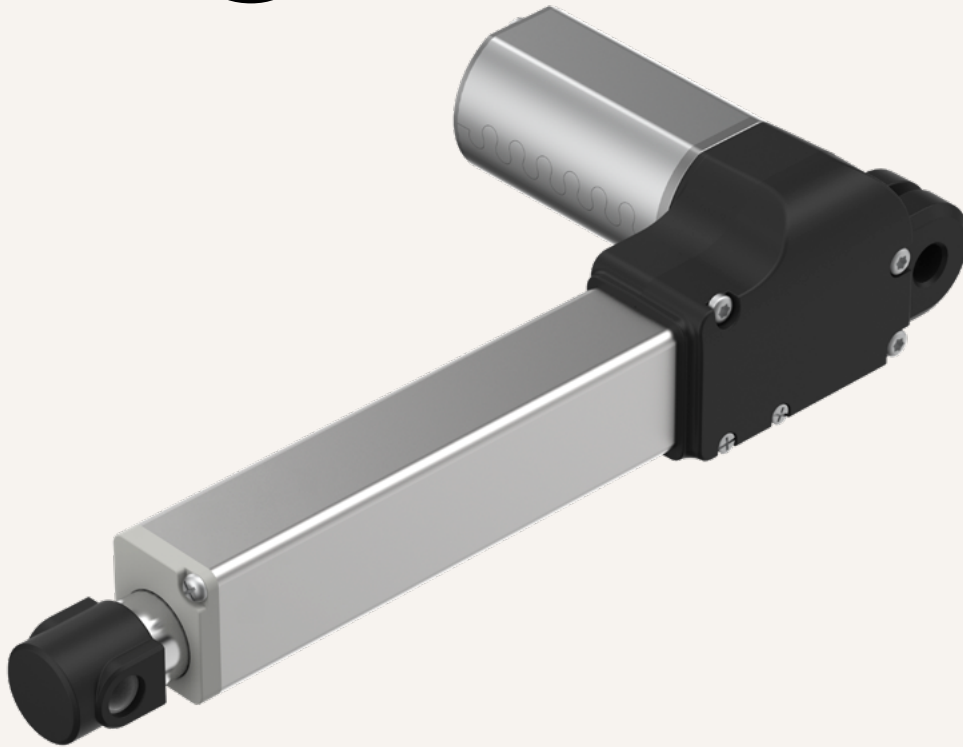## Product Segments

• Comfort Motion

TiMOTION's TA43 linear actuator can fulfill a manufacturer's seating requirement for small installation dimensions. Although small, this linear actuator provides great force. The compact design is merely 100mm, with a maximum stroke length of 300mm, yet can withstand a maximum pressure of 4000N.

General Features

Max. load	4,000N (push/pull)
Max. speed at max. load	2.5mm/s
Max. speed at no load	12.1mm/s
Retracted length	≥ Stroke + 100mm
Stroke	20~300mm
Options	Hall sensors
Voltage	24V DC; 24V DC (PTC)
Color	Black or grey
Operational temperature range	+5°C~+45°C

Drawing

Standard Dimensions
(mm)

Retracted Length
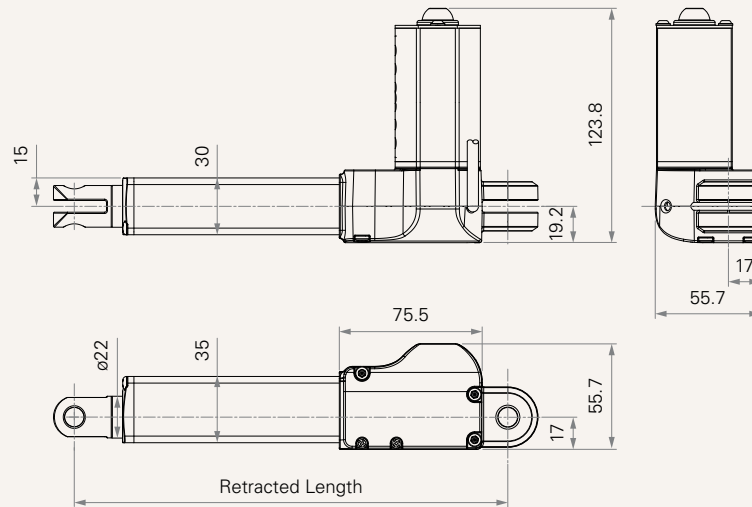
Load and Speed

| 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 (4100RPM, Duty Cycle 10%)							
C	3000	3000	3000	1.0	2.7	7.9	3.6
D	2000	2000	2000	1.0	2.7	12.1	5.4
Motor Speed (4500RPM, Duty Cycle 10%)							
B	4000	4000	4000	1.0	3.1	6.0	2.5
E	3000	3000	3000	1.0	3.1	8.5	5.0

Note

1 Please refer to the approved drawing for the final authentic value.

2 The current & speed in table are tested with 24V DC motor.

3 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.

4 The current & speed in table are tested when the actuator is extending under push load.

5 The data in the performance charts shows theoretical value using specific TiMOTION control boxes.

6 Standard stroke: Min. ≥ 20mm, Max. please refer to below table. Please contact TiMOTION for more details.

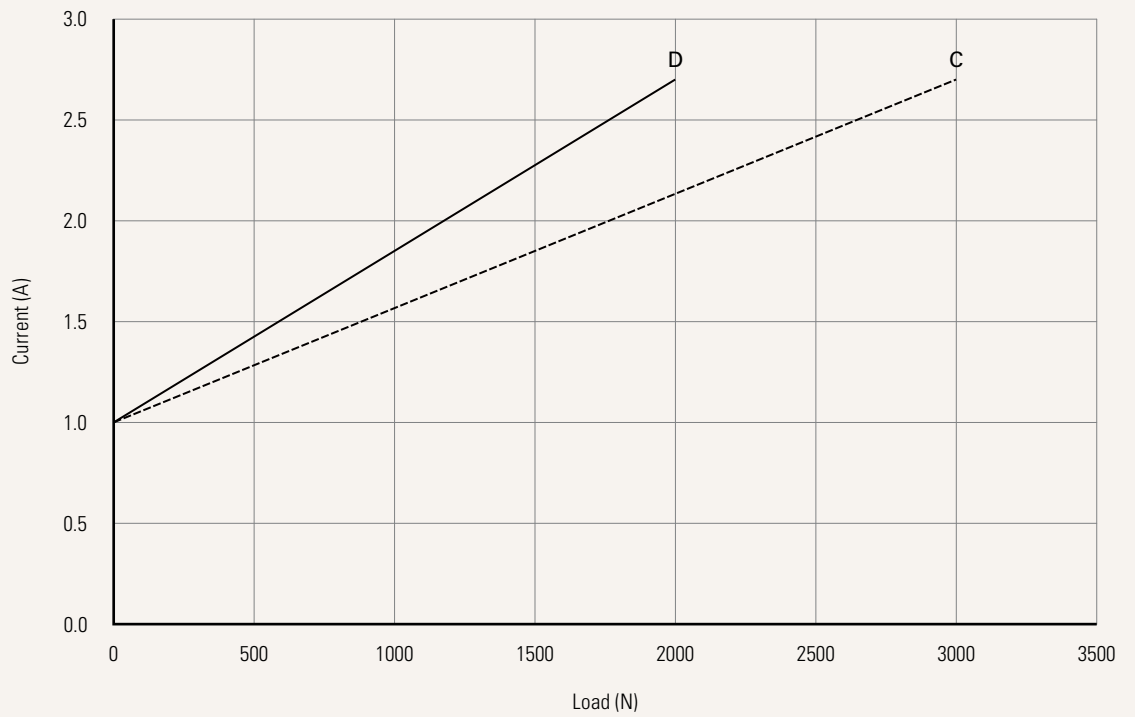| CODE	Load (N)	Max Stroke (mm)
B, C, D, E	≤ 4000	300

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Performance Data (24V DC Motor)

Motor Speed (4100RPM)

Speed vs. Load
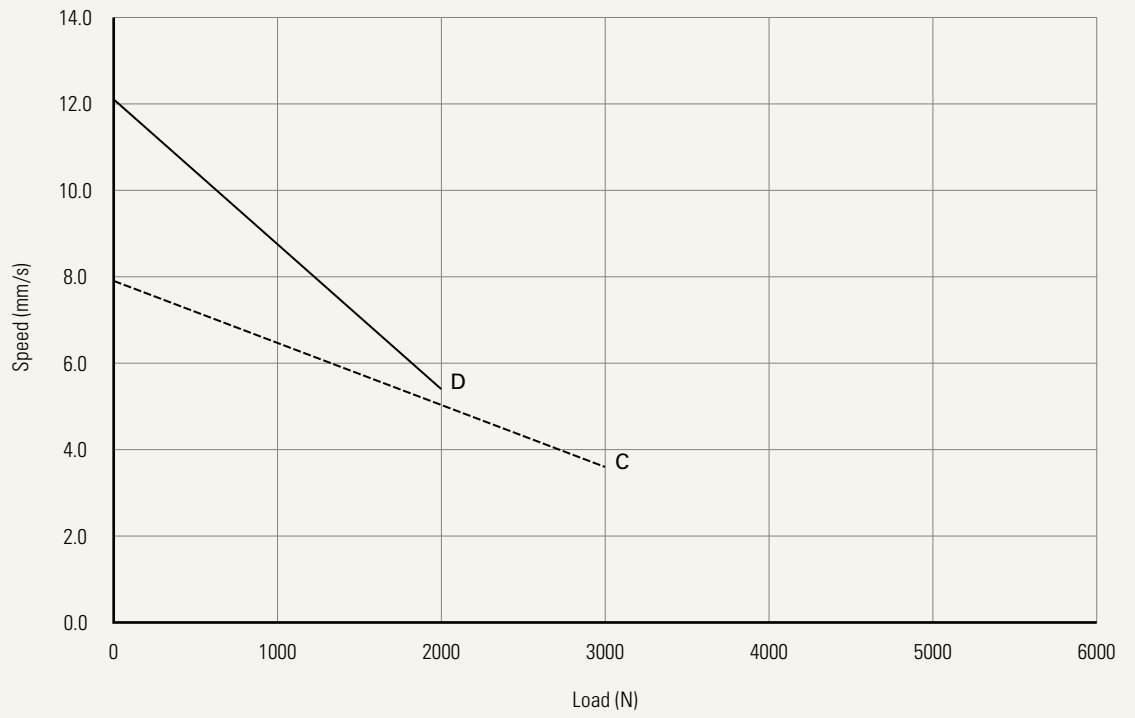
Current vs. Load

Performance Data (24V DC Motor)

Motor Speed (4500RPM)

Speed vs. Load

Current vs. Load

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TA43 Ordering Key

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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, slot 6.2, depth 13.5, hole 8.2	2 = Plastic, U clevis, slot 6.2, depth 13.5, hole 10.2

Front Attachment (mm) See page 7	2 = Punched hole on inner tube + plastic cap, without slot, hole 10.2 5 = Plastic, without slot, hole 8.2, with plastic T-bushing 6 = Plastic, without slot, hole 10.2, with plastic T-bushing	7 = Aluminum casting, U clevis, width 6.2, depth 17.0, hole 8.2 8 = Aluminum casting, U clevis, width 6.2, depth 17.0, hole 10.2

Direction of Rear Attachment (Counterclockwise) See page 7	2 = 0°

Color	1 = Black	2 = Pantone 428C

IP Rating	1 = Without

Special Functions for Spindle Sub-Assembly	0 = Without	2 = Push only

Functions for Limit Switches See page 8	1 = Two switches at full retracted / extended positions to cut current	3 = Two switches at full retracted / extended positions to send signal

Output Signals	0 = Without	5 = Hall sensor*2

Connector See page 8	1 = DIN 6P, 90° plug 2 = Tinned leads 4 = Big 01P, plug	C = Y cable (For direct cut system, water proof, anti pull) E = Molex 8P, 180° plug	F = DIN 6P, 180° plug P = Molex 8P, 90° plug, without anti-clip	Q = Molex 6P, 90°plug (40511-123)

Cable Length (mm)	0 = Straight, 100 1 = Straight, 500 2 = Straight, 750	3 = Straight, 1000 4 = Straight, 1250 5 = Straight, 1500	6 = Straight, 2000 7 = Curly, 200 8 = Curly, 400	B~H = For direct cut system. See page 8

Retracted Length (mm)

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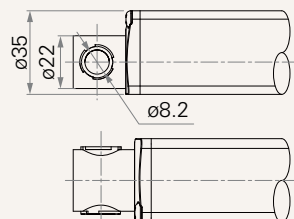
A.

Front Attach.	Rear Attach.
	1, 2
2	+100
5, 6	+108
7, 8	+138

B.

Stroke (mm)	
20~200	-
201~250	+5
251~300	+10

TA43 Ordering Key Appendix

Rear Attachment (mm)

1 = Plastic, U clevis, slot 6.2, depth 13.5, hole 8.2
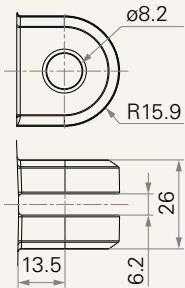
2 = Plastic, U clevis, slot 6.2, depth 13.5, hole 10.2
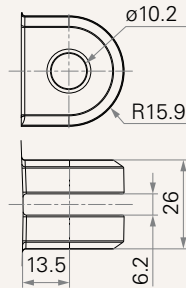
Front Attachment (mm)

2 = Punched hole on inner tube + plastic cap, without slot, hole 10.2
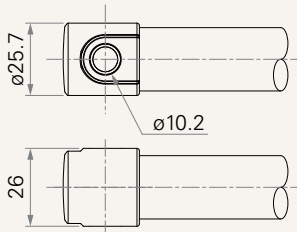
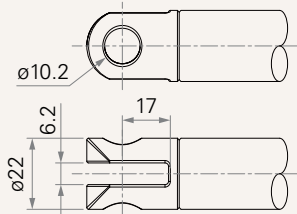5 = Plastic, without slot, hole 8.2, with plastic T-bushing

6 = Plastic, without slot, hole 10.2, with plastic T-bushing
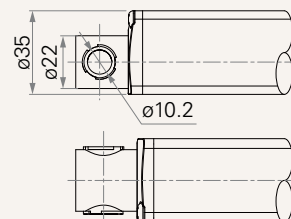
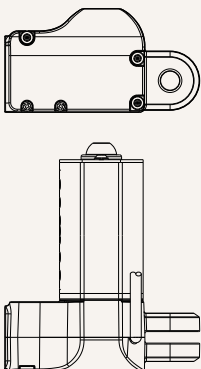7 = Aluminum casting, U clevis, width 6.2, depth 17.0, hole 8.2
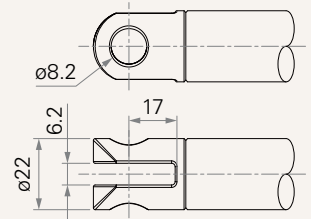
8 = Aluminum casting, U clevis, width 6.2, depth 17.0, hole 10.2

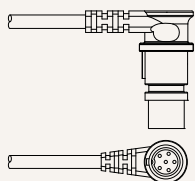## Direction of Rear Attachment (Counterclockwise)

2 = 0°

Functions for Limit Switches

Wire Definitions

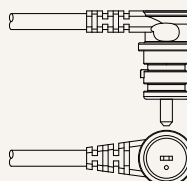| CODE	Pin					
	🟢 1 (Green)	🔴 2 (Red)	⚪ 3 (White)	⚫ 4 (Black)	🟡 5 (Yellow)	🔵 6 (Blue)
1	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
3	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch

Connector
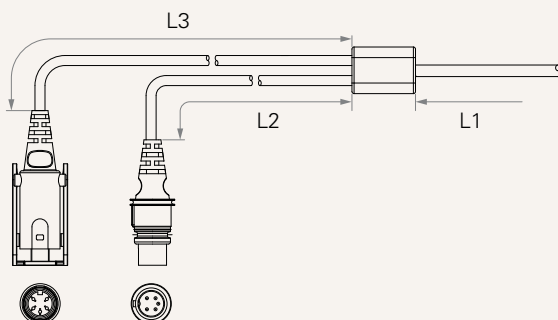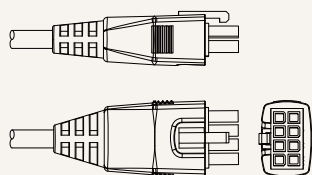
1 = DIN 6P, 90° plug

2 = Tinned leads

4 = Big 01P, plug

C = Y cable (For direct cut system, water proof, anti pull)

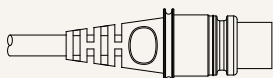#### Cable Length for Direct Cut System (mm)

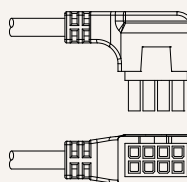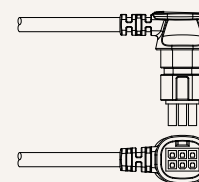| CODE	L1	L2	L3
B	100	100	100
C	100	1000	400
D	100	2700	500
E	1000	100	100
F	100	600	1000
G	1500	1000	1000
H	100	100	1200

E = Molex 8P, 180° plug

F = DIN 6P, 180° plug

P = Molex 8P, 90° plug, without anti-clip

Q = Molex 6P, 90° plug (40511-123)

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.