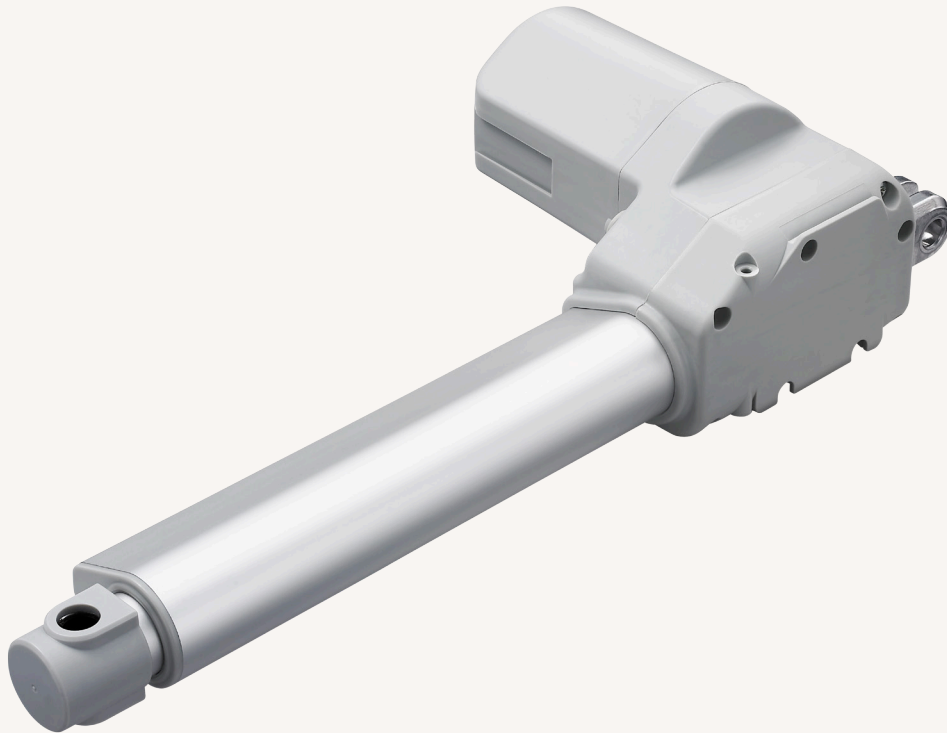


# TA7

series



## Product Segments

- **Comfort Motion**
- **Care Motion**

TiMOTION's TA7 series linear actuator is an economical choice for applications requiring a compact, long life linear actuator. The TA7's design is compliant with key standards such as CB (3rd medical electrical equipment), EN60601-1, RoHS, and noise level testing approved by SGS. In addition, the TA7 linear actuator is available with optional IP rating 54 or 66. Medical equipment and furniture are typical applications for the TA7 series linear actuator.

### General Features

Voltage of motor	12V DC, 24V DC, or 36V DC
Maximum load	10,000N 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+171mm
Color	Black or grey
IP rating	Up to IP66
Certificate	IEC60601-1, ES60601-1, CB, and RoHS
Operational temperature range	+5°C~+45°C
Option	Safety nut, Hall/Reed sensor(s)

## Load and Speed

CODE	Rated Load		Self Locking N (PUSH)	Typical Current at Rated Load (A)	Typical Speed	
	PUSH N	PULL N			No Load (32V DC) mm/s	Rated Load (24V DC) mm/s
<b>Motor Speed (2600RPM)</b>						
<b>C</b>	5000	4000	2500	3.6	8.0	4.1
<b>D</b>	6000	4000	4000	3.6	6.0	3.1
<b>F</b>	2500	2500	1500	3.3	15.9	8.3
<b>G</b>	2000	2000	1000	3.3	21.4	11.1
<b>H</b>	1000	1000	500	2.2	32.1	19.1
<b>J</b>	3500	3500	2500	3.7	11.9	6.0
<b>K</b>	8000	4000	5000	4.1	5.4	2.7
<b>Motor Speed (3400RPM)</b>						
<b>L</b>	6000	4000	4000	4.3	7.6	4.1
<b>N</b>	2500	2500	1500	4.2	20.2	11.1
<b>O</b>	2000	2000	1000	4.1	27.1	14.9
<b>P</b>	1000	1000	500	3.1	39.5	23.4
<b>Q</b>	3500	3500	2500	4.7	15.1	7.9
<b>R</b>	8000	4000	5000	5.1	6.8	3.5
<b>T</b>	5000	4000	2500	4.3	10.1	5.4
<b>Motor Speed (3800RPM)</b>						
<b>X</b>	6000	4000	4000	4.5	8.6	5.0
<b>Y</b>	8000	4000	5000	5.4	7.7	4.4
<b>B</b>	10000	4000	10000	5.3	5.7	3.3
<b>U</b>	5000	4000	2500	4.6	11.4	6.6
<b>W</b>	2500	2500	1500	4.4	22.9	13.1
<b>Z</b>	3500	3500	2500	4.9	17.1	9.5

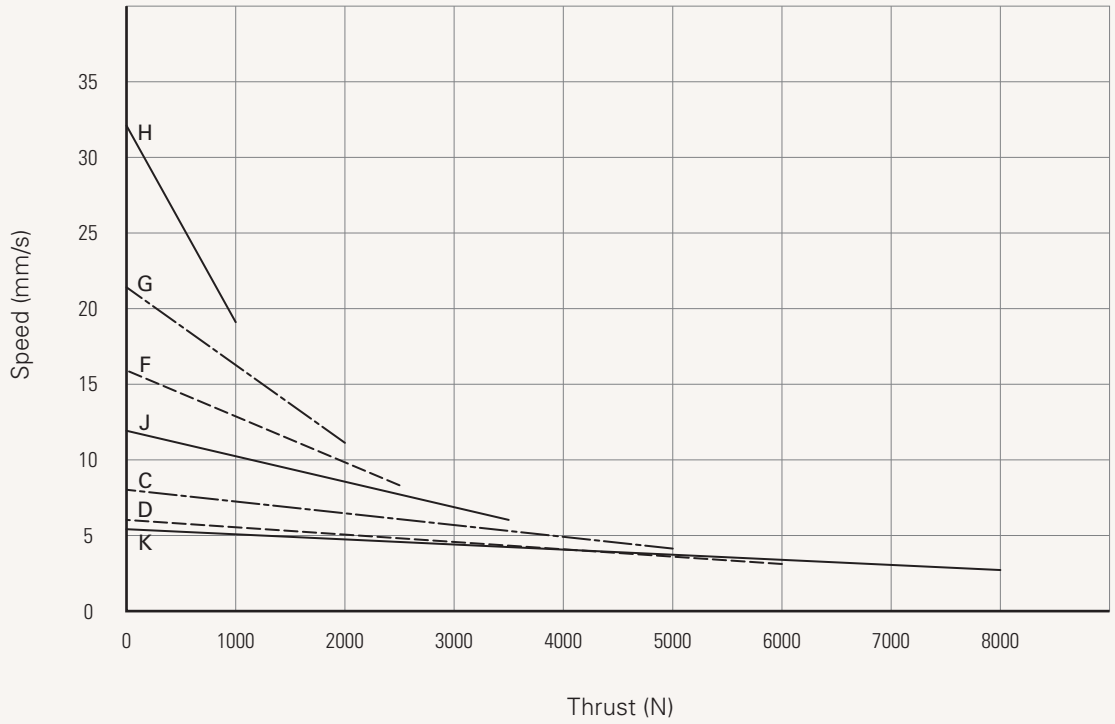
### Note

- 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.

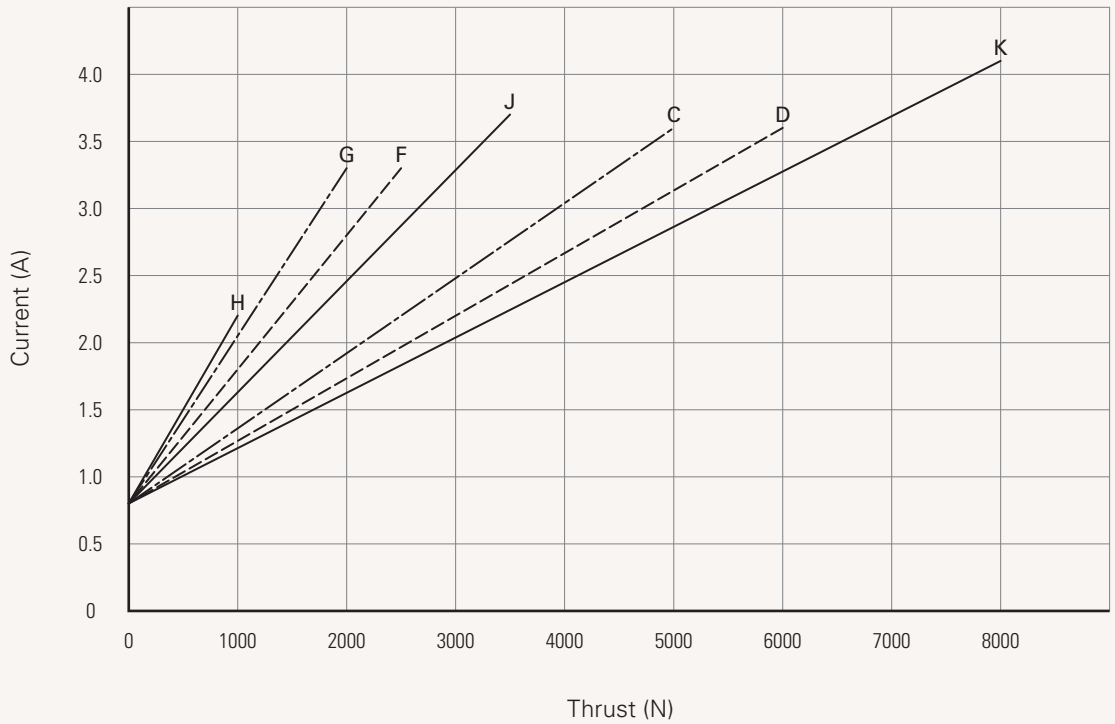
**Performance Data**

Motor Speed (2600RPM)

Speed vs. Thrust



Current vs. Thrust



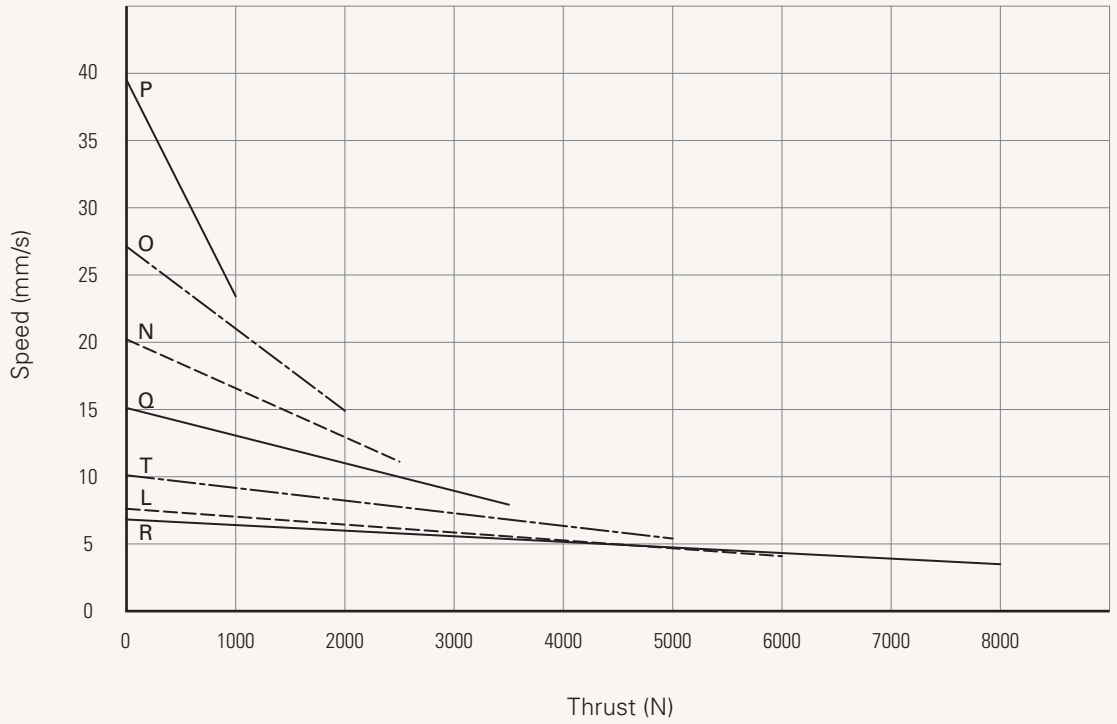
**Note**

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

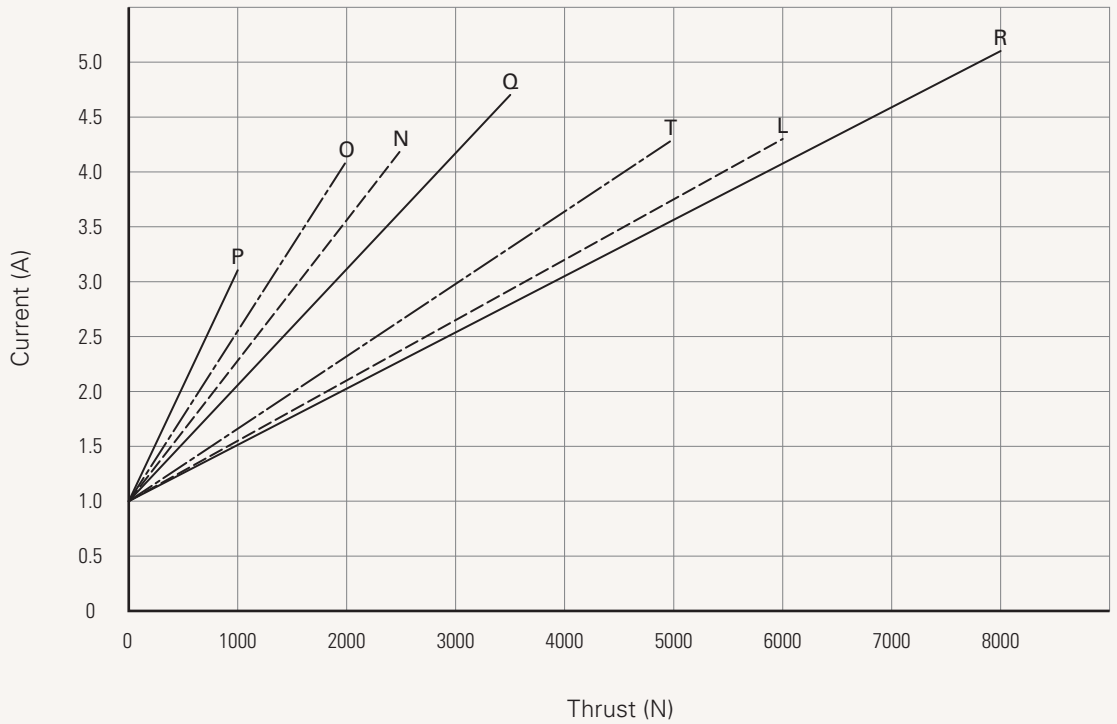
Performance Data

Motor Speed (3400RPM)

Speed vs. Thrust



Current vs. Thrust



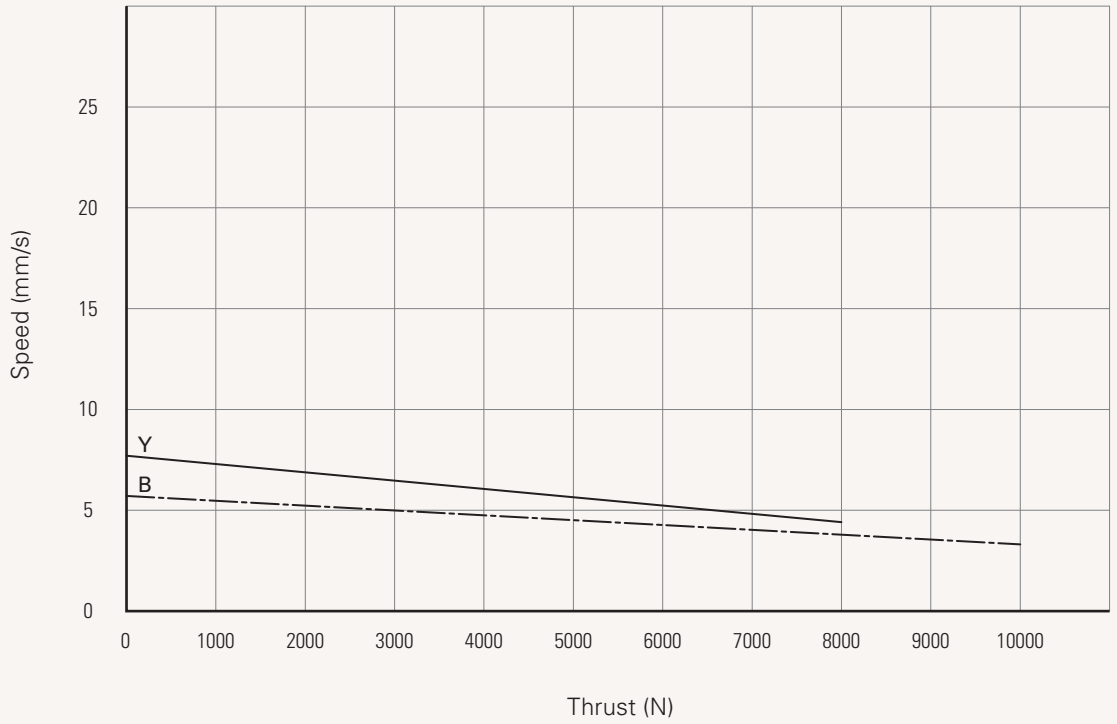
Note

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

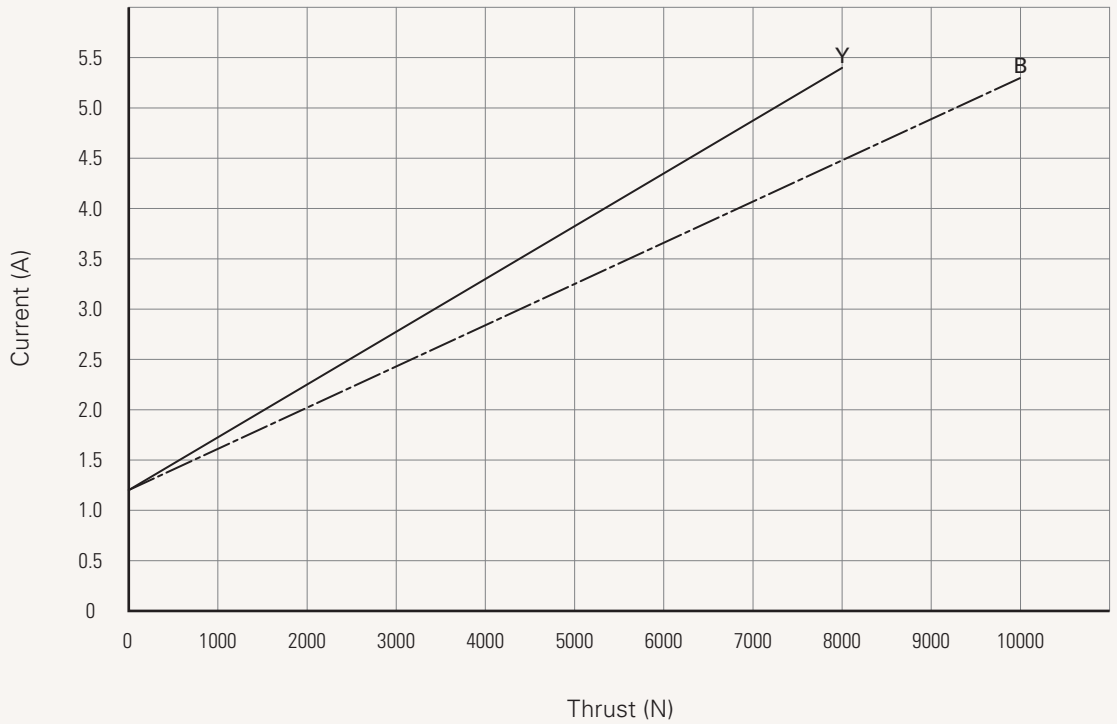
Performance Data

Motor Speed (3800RPM)

Speed vs. Thrust



Current vs. Thrust

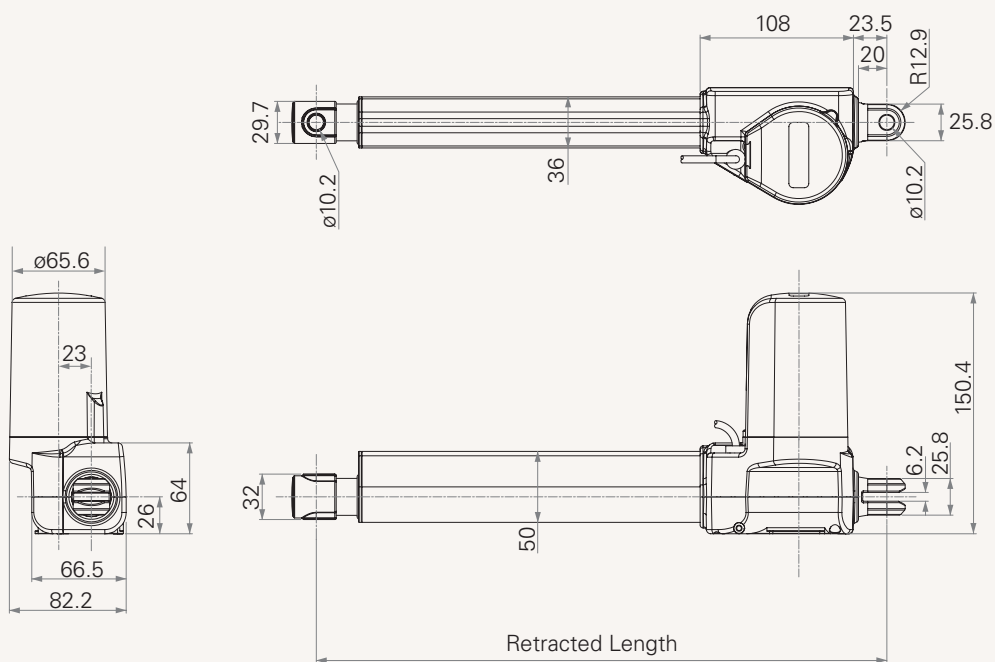


Note

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

## Drawing

Standard Dimensions  
(mm)



## Wire Definitions

CODE*	Pin					
	1	2	3	4	5	6
	● (green)	● (red)	○ (white)	● (black)	● (yellow)	● (blue)
<b>1</b>	extend (VDC+)	N/A	N/A	N/A	retract (VDC+)	N/A
<b>2</b>	extend (VDC+)	N/A	middle switch pin B	middle switch pin A	retract (VDC+)	N/A
<b>3</b>	extend (VDC+)	common	upper limit switch	N/A	retract (VDC+)	lower limit switch
<b>4</b>	extend (VDC+)	common	upper limit switch	medium limit switch	retract (VDC+)	lower limit switch

## Note

\* See ordering key - functions for limit switches

### Invalid length (mm)

#### Front Attachment

##### CODE

1	+171
2	+171
3	+192
4	+192
5	+171
6	+171
7	+183
8	+183
9	+183
J	+172

#### Load V.S. Stroke

#### Load (N)

Stroke (mm)	< 6000	= 6000	= 8000	= 10000
0~150	-	-	-	+5
151~200	-	-	+5	+10
201~250	-	+5	+10	+15
251~300	-	+10	+15	+20
301~350	+5	+15	+20	+25
351~400	+10	+20	+25	+30

#### Special Functions For Spindle Sub-Assembly

#### Front attachment

Push only	1, 2, 5, 6, J	3, 4,	7, 8, 9
Load (N) < 6000			
0	-	-	-
1	-	-	-
2	+5	-	-
3	+5	-	-
Load (N) ≥ 6000			
0	-	-	-
1	-	-	-
2	+8	-	+3
3	+8	-	+3

#### Note

\* Retracted length needs ≥ stroke + invalid length

#### 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.

TA7

Version: 20151126-S

<input type="checkbox"/>	<b>Voltage</b>	1 = 12V	2 = 24V	3 = 36V
<input type="checkbox"/>	<b>Load and Speed</b>	See page 2.		
<input type="checkbox"/>	<b>Stroke (mm)</b>			
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>	<b>Retracted Length (mm)</b>	See page 7.		
<input type="checkbox"/>				
<input type="checkbox"/>				
<input type="checkbox"/>	<b>Rear Attachment</b>	2 = U clevis Aluminum casting, slot 6.2mm, hole 10.2mm 3 = U clevis Aluminum casting, slot 6.2mm, hole 12.2mm 4 = U clevis Aluminum casting, slot 8.2mm, hole 10.2mm	5 = U clevis Aluminum casting, slot 8.2mm, hole 12.2mm C = U clevis Aluminum casting #5 + plastic bushing, slot 8.2mm, hole 10.2mm	
<input type="checkbox"/>	<b>Front Attachment</b>	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 J = Aluminum casting, ø26mm, without slot, hole 10.2mm, for application dental chair	
<input type="checkbox"/>	<b>Direction of Rear Attachment (Counterclockwise)</b>	1 = 0°	3 = 90°	
<input type="checkbox"/>	<b>Color</b>	1 = Black	2 = Grey (Pantone 428C)	
<input type="checkbox"/>	<b>IP Rating</b>	1 = Without	2 = IP54	3 = IP66 5 = IP66W
<input type="checkbox"/>	<b>Special Functions for Spindle Sub-Assembly</b>	0 = Without 1 = Safety nut	2 = Standard push only 3 = Standard push only + safety nut	
<input type="checkbox"/>	<b>Functions for Limit Switches</b>	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		
<input type="checkbox"/>	<b>Output Signals</b>	0 = Without	1 = One Hall sensor	2 = Two Hall sensors 3 = Reed sensor
<input type="checkbox"/>	<b>Connector</b>	1 = DIN 6pin, 90° plug 2 = Tinned leads 4 = Big 01pin, plug	C = Y cable ( for direct cut system, water proof, anti pull) D = Extension cable + DIN 6P socket (with anti pull clip) E = MOLEX 8pin, plug	F = DIN 6pin, 180° plug G = Audio plug
<input type="checkbox"/>	<b>Cable Length</b>	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