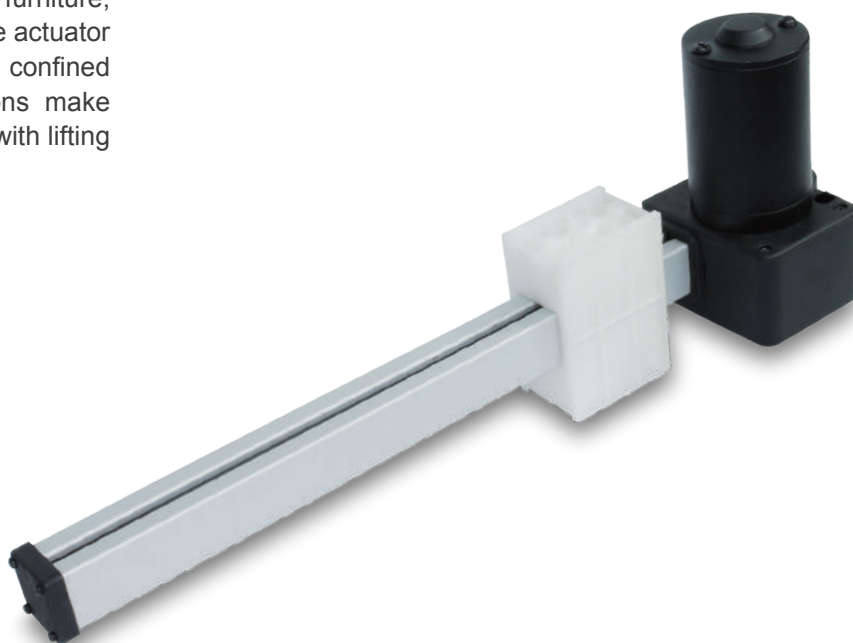


# Actuator

## BD60

BD60 is a quiet and powerful actuator up to 6000N thrust, designed for use in furniture, homecare and fitness equipment. The actuator block allows a big stroke range in confined spaces. The small fitting dimensions make BD60 an ideal solution for recliners with lifting assistance.



### Feature

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- Main applications: Furniture, homecare, and fitness equipment
- Input voltage: 24V DC / 12V DC
- Max. load: 6000N (push) / 4000N (pull)
- Max. speed at no load: 33.3 mm/sec
- Max. speed at full load: 2.9 mm/sec @ 6000N
- Stroke: 100 ~ 1000 mm
- Noise level:  $\leq 53$ dB
- Color: Black
- Preset limit switches
- Duty cycle: 10%, max. 2 min. continuous operation in 20 min.
- Ambient operation temperature: -20°C ~ +65°C
- Certified: CE Marking, EMC Directive 2014/30/EU

## Option

- Positioning signal feedback with Hall effect sensor x 1
- Positioning signal feedback with Hall effect sensor x 2
- Mechanical brake

## Compatibility

Product	Model	BD60 spec
<b>Control box</b>	T control, CS1, CS2, CB3T, CB4M, CBT2	- Without positioning sensor feedback - 4-pin MOTECK F-type DIN plug
	CB3T-SY, CB4M-S, CB4M-B	- With dual Hall effect sensors - 6-pin MOTECK F-type DIN plug
<b>Hand control</b>	Depend on control box	- Powered by control box
	H3B, HS01, HZ01	- With MOTECK dedicated cable TL2*
	HB, H2G, HZ02, HZ03, HZ04, HZ05, HZ06	- With MOTECK dedicated cable DL1*
<b>Accessory</b>	Switching mode power supply: TSW1, TSW4, TSW5	- With MOTECK dedicated cable DL1 or TL2
	T Connector (Extension cable of actuator and handset, to connect to power supply or transformer box)	- 4-pin MOTECK F-type DIN plug

**\*Remarks:**

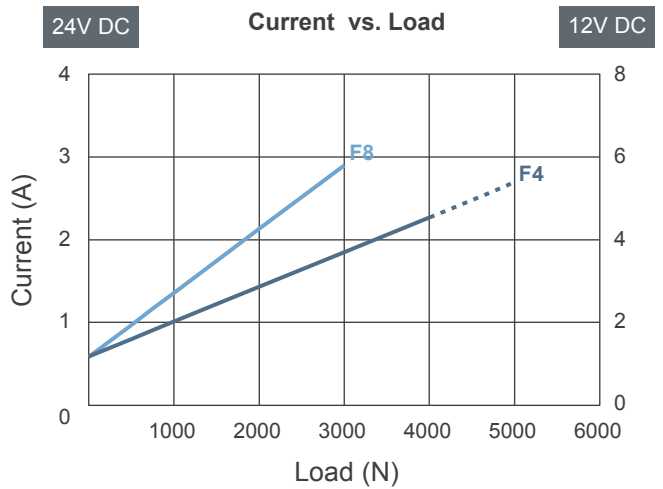
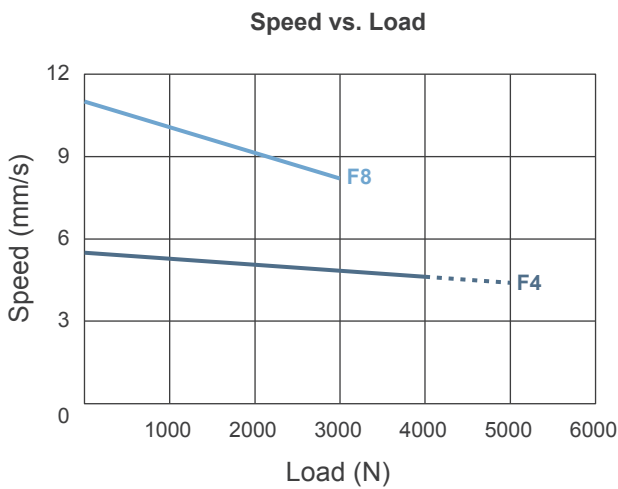
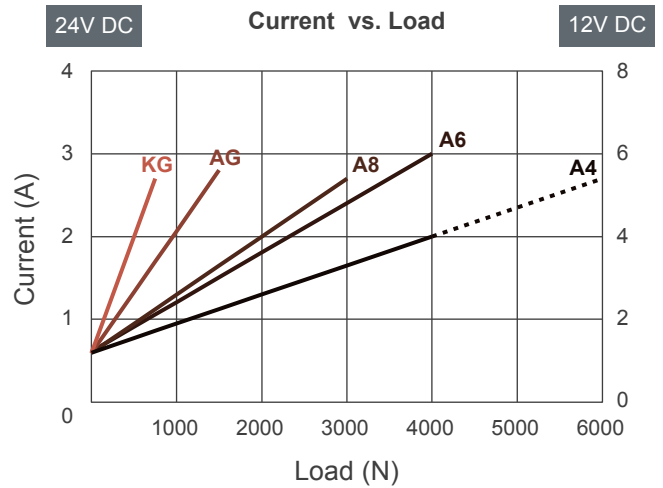
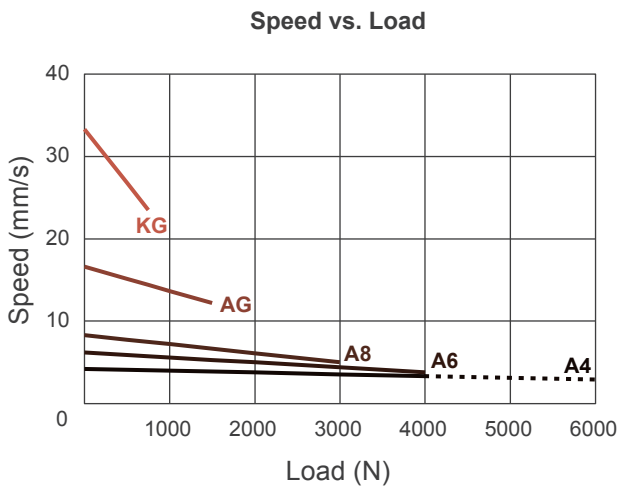
Dedicated cable DL1 or TL2 to connect to power supply and control directly, without control box.

# Performance Data

Model No.	Push Max. (N)	Pull Max. (N)	Self-locking ability (N)	Typical Speed (mm/s)		Typical Current (A)			
				No load	Full load	No load		Full load	
						12V	24V	12V	24V
BD60-XX-A4	6000	4000	5000	4.2	2.9	0.8	0.6	5.4	2.7
BD60-XX-A6	4000	4000	2500	6.2	3.8	0.4	0.6	6.0	3.0
BD60-XX-A8	3000	3000	2000	8.3	5.0	0.6	0.6	5.4	2.7
BD60-XX-AG	1500	1500	700	16.6	12.2	0.4	0.6	5.6	2.8
BD60-XX-KG	750	750	0	33.3	23.5	0.4	0.6	5.2	2.7
BD60-XX-F4	5000	4000	5000	5.5	4.4	0.8	0.6	5.6	2.8
BD60-XX-F8	3000	3000	2000	11.0	8.2	1.0	0.6	5.8	2.9

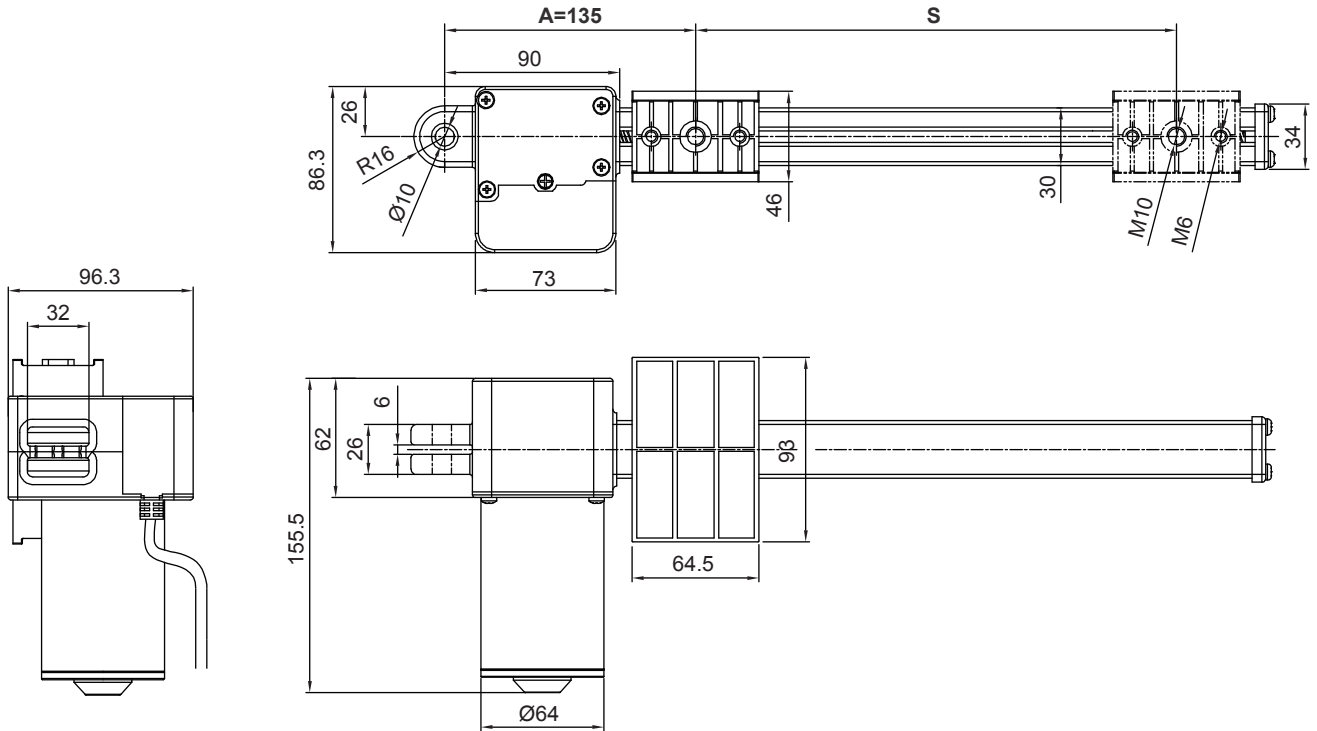
**\*Remarks:**

Mechanical brake is available upon request, to further enhance the self-locking ability.



Push / Pull Load — Push Load - - -

# Dimensions



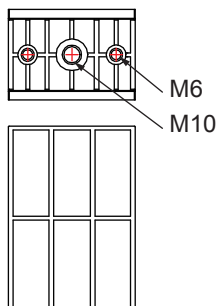
Extended length = S + A  
 Retracted length (A) = 135 mm Min.

Available stroke (S) range = 100 ~ 1000 mm  
 Please refer to following table for max. stroke of each model.

Model No.	Max. stroke (mm)
BD60-XX-A4-XXX.XXX-CXX-XXX	400
BD60-XX-F4-XXX.XXX-CXX-XXX	400
BD60-XX-A6-XXX.XXX-CXX-XXX	600
BD60-XX-A8-XXX.XXX-CXX-XXX	800
BD60-XX-F8-XXX.XXX-CXX-XXX	800
BD60-XX-AG-XXX.XXX-CXX-XXX	1000
BD60-XX-KG-XXX.XXX-CXX-XXX	1000

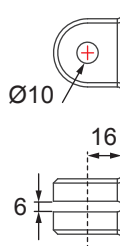
## Front Connector

1: Plastic nut



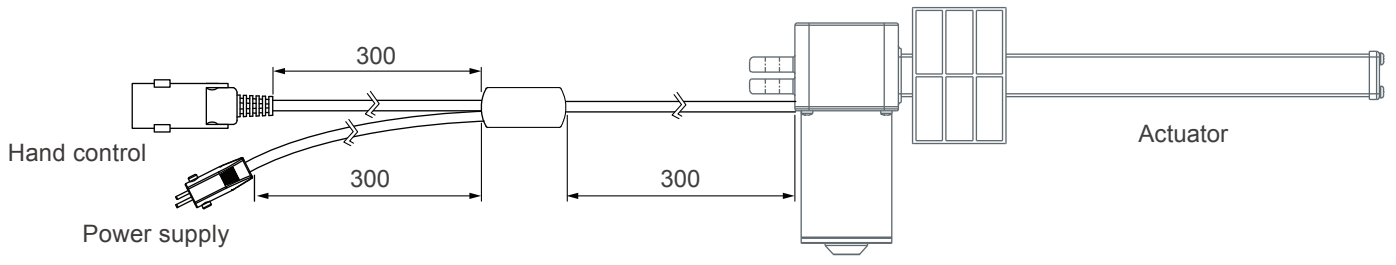
## Rear Connector

1: Plastic

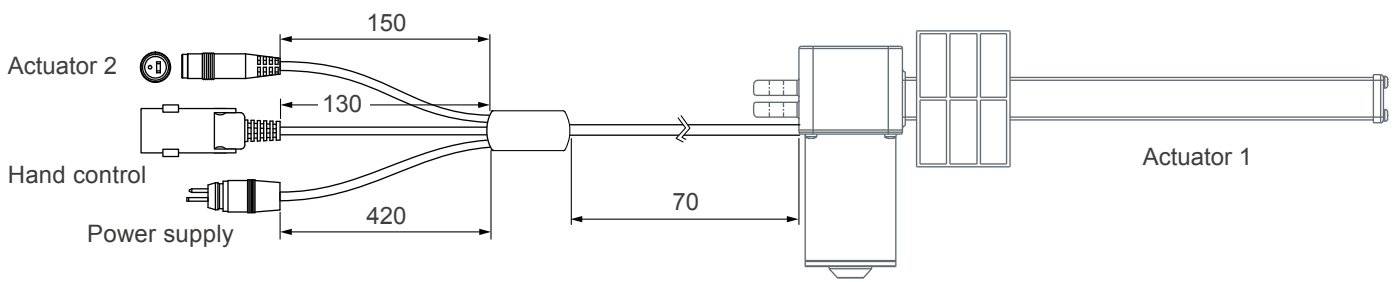


# Cable Length

## Dedicated cable DL1



## Dedicated cable TL2

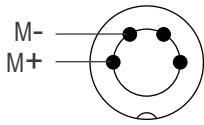


# Cable Plug

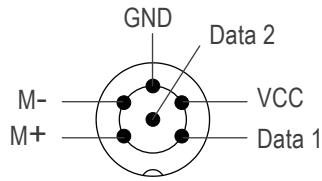
## > With Moteck F-type DIN plug to connect to control box

- Without positioning sensor feedback

- 1x or 2x Hall sensors for positioning



4-pin DIN plug



6-pin DIN plug



F-type

**Note:**

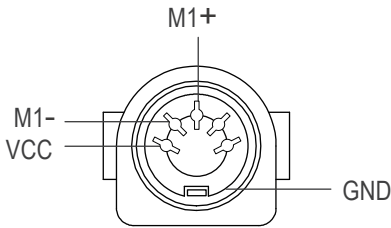
Connect Pin (M+) to "+" & Pin (M-) to "-" of DC power, the actuator will extend.

## > Dedicated cable DL1 or TL2 to connect to hand control and power supply directly, without control box.

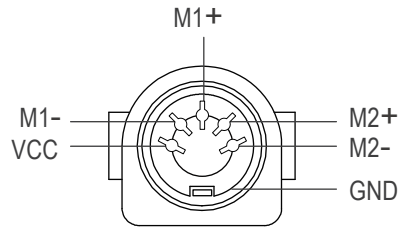
### ▶ Hand control connector: with Moteck U-type female connector

- 1 drive

- 2 drives



5-pin connector  
(Moteck pinout: C-DIN-51H)



5-pin connector  
(Moteck pinout: C-DIN-52H)

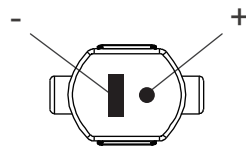


U-type

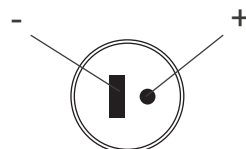
**Note:**

Connect pin (M1+) to "+" & pin (M1-) to "-" of DC power, the M1 actuator will extend. Definition of M2 actuator is the same.

### ▶ Power plug: with Moteck S-type or R-type DIN 41529 male plug



DIN 41529 plug (S-type for DL1 only)



DIN 41529 plug (R-type for TL2 only)

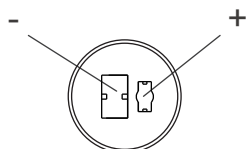


S-type



R-type

### ▶ Connector for 2nd actuator: with Moteck R-type DIN 41529 female (for TL2 only)



DIN 41529 connector



R-type

## Ordering Key

**BD60 - 24 - AG - 135 . 1135 - C 1 1 - HS2 - BK - 1**

<b>Input voltage</b>	<b>12:</b> 12V DC <b>24:</b> 24V DC
<b>Motor and Spindle type</b>	<b>A4</b> <b>A6</b> <b>A8</b> <b>AG</b> <b>KG</b> <b>F4</b> <b>F8</b> (Refer to Performance Data)
<b>Retracted length</b>	<b>XXX</b> (Refer to Dimensions)
<b>Extended length</b>	<b>XXX</b> (Refer to Dimensions)
<b>Front connector</b>	<b>1:</b> Plastic nut (Refer to Dimensions)
<b>Rear connector</b>	<b>1:</b> Plastic (Refer to Dimensions)
<b>Positioning feedback</b>	<b>Blank:</b> None <b>HS1:</b> Hall effect sensor x 1 <b>HS2:</b> Hall effect sensor x 2
<b>Option</b>	<b>Blank:</b> None <b>BK:</b> Mechanical brake
<b>Cable</b>	<b>0:</b> 300 mm straight <b>1:</b> 1000 mm straight <b>2:</b> 450 mm with 300 mm coiled <b>A:</b> Dedicated cable DL1, without control box (Refer to page 5) <b>B:</b> Dedicated cable TL2, without control box (Refer to page 5)

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