

Actuator

GD70

GD70 is a strong and powerful actuator up to 7000N thrust, designed for use in furniture, such as recliner or lift chair. There are many types of control boxes compatible with GD70 which are available for customers to choose.



Features and Options

Main applications: Furniture, Home care

Standard features:

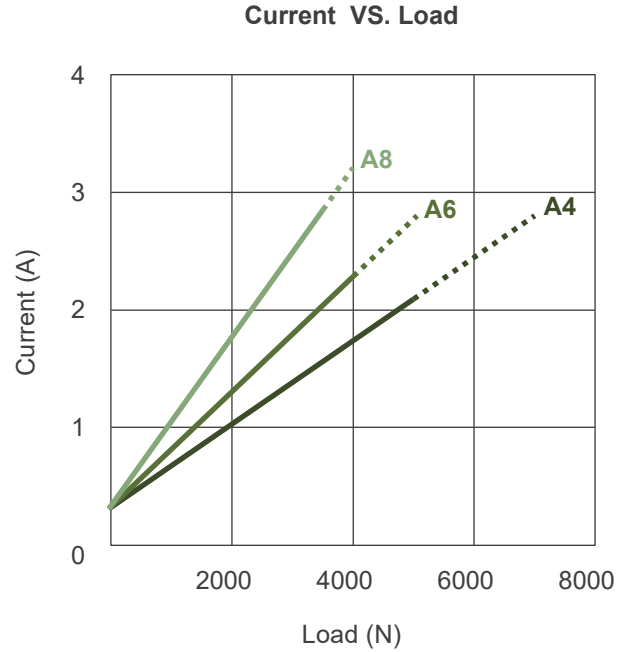
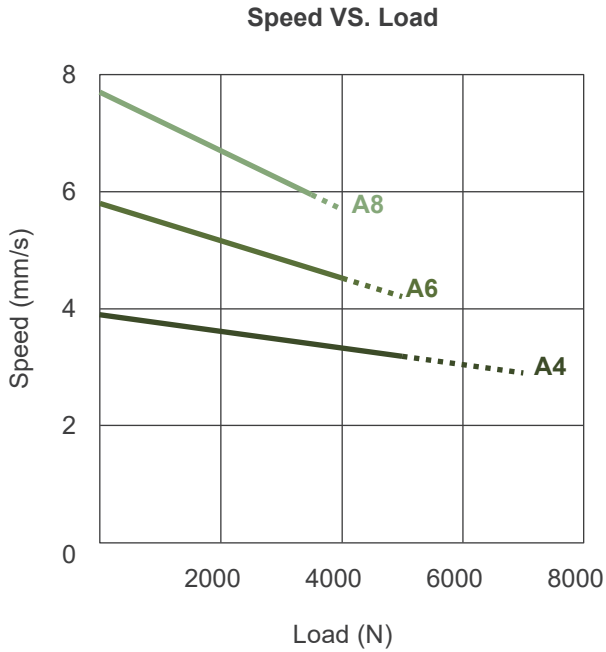
- Input voltage: 24V DC
- Max. load: 7000N (Push) / 5000N (Pull)
- Max. speed at no load: 7.7mm/sec (Typical value)
- Speed at full load: 2.9mm/sec (Typical value @7000N loaded)
- Stroke: 50 ~ 300mm
- Noise level: ≤ 50 dB
- IP level: IP43 (Static; non-action)
- Preset limit switches
- Duty cycle: 10%, max. 2 min. continuous operation in 20 min.
- Operating ambient temperature: -20°C ~ +60°C
- Certified: CE Marking, EMC Directive 2014/30/EU,
UL 962 Standard for Household and Commercial Furnishings.

Options:

- Positioning signal feedback with Hall effect sensor x 1
- Positioning signal feedback with Hall effect sensor x 2
- Mechanical push only extension tube
- Mechanical brake

Performance Data

Model No.	Max. Push (N)	Max. Pull (N)	Self-locking ability (N) *	Typical speed (mm/s) **		Typical current (A) @ 24V **	
				No load	Full load	No load	Full load
GD70-24-A4-XXX-CXX	7000	5000	5000	3.9	2.9	0.3	2.8
GD70-24-A6-XXX-CXX	5000	4000	2500	5.8	4.2	0.3	2.8
GD70-24-A8-XXX-CXX	4000	3500	2000	7.7	5.7	0.3	3.2



Push / Pull Load — Push Load - - -

Remarks:

* The self-locking ability is performed by short circuit the motor terminals when the actuator is powered off. All MOTECK compatible control boxes are designed with this feature. Mechanical brake in push direction is available upon request, to further enhance the self-locking ability to maximum load.

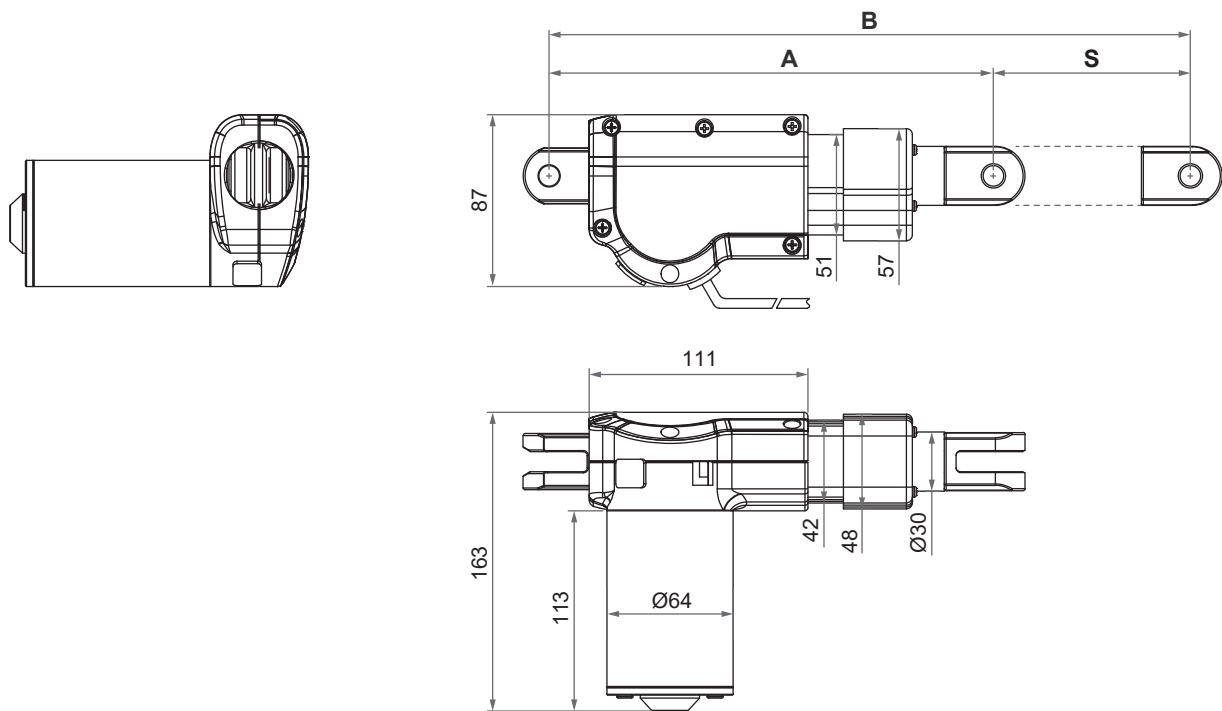
** The typical speed or typical current means the average value neither upper limit nor lower limit. The performance curves are made with typical values.

Dimensions

- Available stroke (S) range = 50 ~ 300mm (±3mm)
- Extended length (B) = Retracted length (A) + Stroke (S)
- Retracted length (A)

	Front connector code	Option	
		Standard	Push only
Retracted length (A)	3	$A \geq S + 150\text{mm}$ (±3mm)	Add 10mm to retracted length (A)
	4	$A \geq S + 160\text{mm}$ (±3mm)	
	6	$A \geq S + 188\text{mm}$ (±3mm)	

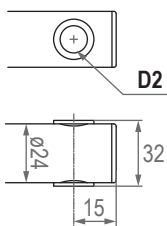
• Drawing



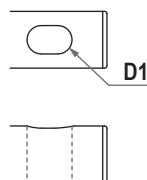
Unit: mm

• Front connector

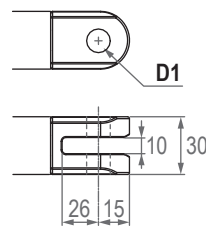
3: Drilled hole



4: Oval hole



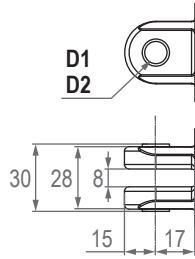
6: Enhanced plastic



Front connector code	Diameter of pivot without bushing (D1)	Diameter of pivot with bushing (D2)
3	N/A	Ø8, Ø10
4	Ø8x10	N/A
6	Ø10	N/A

● **Rear connector**

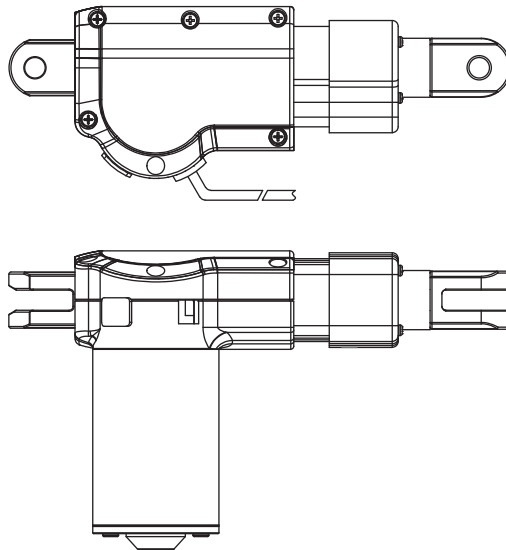
2: Zinc alloy clevis



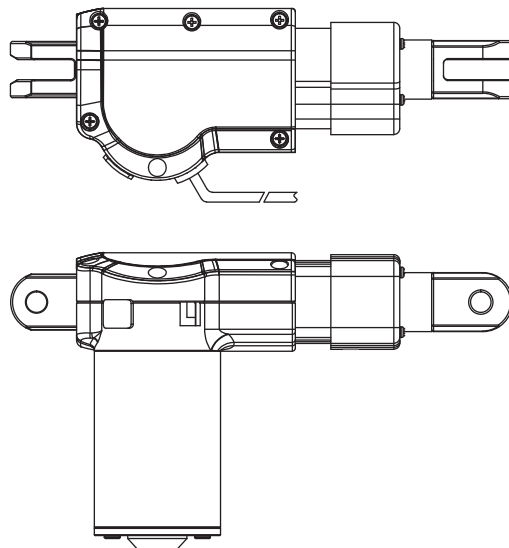
Rear connector code	Diameter of pivot without bushing (D1)	Diameter of pivot with bushing (D2)
2	Ø10, Ø12	Ø8, Ø10

● **Pivot orientation of rear connectors**

0° (standard)



90°



Compatibility

Product	Model	GD70 spec
Control box	T-control, CS1, CS2, CB3T, CB4M, CBT2	<ul style="list-style-type: none"> • Without positioning sensor • With Moteck F-type 4-pin DIN plug
	CF11H, CF12H	<ul style="list-style-type: none"> • Without positioning sensor • With Moteck L3-type minifit 6-pin plug
	CB3T-SY, CB4M-S, CB4M-B	<ul style="list-style-type: none"> • With dual Hall effect sensors for positioning • With Moteck F-type 6-pin DIN plug
	CF11S, CF12S	<ul style="list-style-type: none"> • With dual Hall effect sensors for positioning • With Moteck L3-type minifit 6-pin plug
Hand control	Depend on control box	<ul style="list-style-type: none"> • Powered by control box
	HS15	<ul style="list-style-type: none"> • With Moteck S-type DIN 41529 male plug ⁽¹⁾

Remarks:

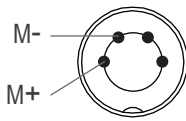
(1) The S-type DIN 41529 plug of the actuator is connected to the HS15 hand control directly, no control box.

Cable Plug

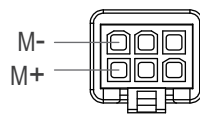
Connecting control devices that provide power

1. With Moetck F-type or L3-type plug

- Without positioning feedback



F-type 4-pin DIN plug

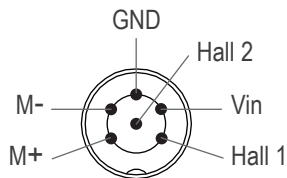


L3-type Minifit 6-pin plug

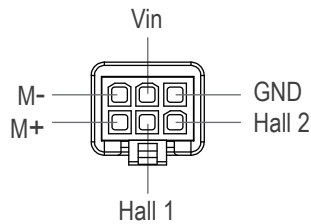


F-type plug

- Positioning feedback with dual Hall effect sensors



F-type 6-pin DIN plug



L3-type Minifit 6-pin plug



L3-type plug

2. With Moteck S-type DIN 41529 2-pin male plug



S-type plug

Note: Pin definition


	Definition	Descriptions								
Power	M+	Connect M+ to "Vdc +" & M- to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.								
	M-									
Signal	Vin	Voltage input range: 5 ~ 20V								
	Hall 1 output	High= Input - 1.2V (±0.6V) Low= GND Hall signal data: <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;"> <p>Actuator extends</p> </div> <div style="text-align: center;"> <p>Actuator retracts</p> </div> </div>								
	Hall 2 output	Hall effect sensor resolution: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Model No.</th> <th>Resolution (Pulses/mm)</th> </tr> </thead> <tbody> <tr> <td>GD70-24-A4-XXX-CXX-HSX</td> <td>10.00</td> </tr> <tr> <td>GD70-24-A6-XXX-CXX-HSX</td> <td>6.67</td> </tr> <tr> <td>GD70-24-A8-XXX-CXX-HSX</td> <td>5.00</td> </tr> </tbody> </table>	Model No.	Resolution (Pulses/mm)	GD70-24-A4-XXX-CXX-HSX	10.00	GD70-24-A6-XXX-CXX-HSX	6.67	GD70-24-A8-XXX-CXX-HSX	5.00
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GND										

Cable with Flying Leads

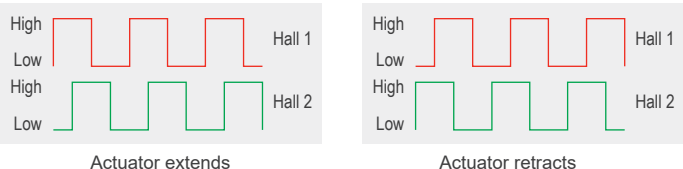
- Basic, without positioning feedback.

	Wire color	Definition	Descriptions
Power wires	White	DC Power	Connect white wire to "Vdc +" & black wire to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.
	Black		

- With single Hall effect sensor for positioning

	Wire color	Definitions	Descriptions								
Power wires	Blue	DC Power	Connect blue wire to "Vdc +" & brown wire to "Vdc -" of DC power to extend the actuator. Switch the polarity of DC input to retract it.								
	Brown										
Signal wires	Yellow	Vin	Voltage input range: 3.5 ~ 20V								
	Red	Hall output	<p>High= Input - 1.2V ($\pm 0.6V$) Low= GND Hall signal data:</p>  <p>Hall effect sensor resolution:</p> <table border="1"> <thead> <tr> <th>Model No.</th> <th>Resolution (pulses/mm)</th> </tr> </thead> <tbody> <tr> <td>GD70-24-A4-XXX-CXX-HS</td> <td>10.00</td> </tr> <tr> <td>GD70-24-A6-XXX-CXX-HS</td> <td>6.67</td> </tr> <tr> <td>GD70-24-A8-XXX-CXX-HS</td> <td>5.00</td> </tr> </tbody> </table>	Model No.	Resolution (pulses/mm)	GD70-24- A4 -XXX-CXX- HS	10.00	GD70-24- A6 -XXX-CXX- HS	6.67	GD70-24- A8 -XXX-CXX- HS	5.00
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GD70-24- A4 -XXX-CXX- HS	10.00										
GD70-24- A6 -XXX-CXX- HS	6.67										
GD70-24- A8 -XXX-CXX- HS	5.00										
Black	GND										

• With dual Hall effect sensors for positioning

	Wire color	Definitions	Descriptions								
Power wires	Blue	DC Power	Connect blue wire to “Vdc +” & brown wire to “Vdc -“ of DC power to extend the actuator. Switch the polarity of DC input to retract it.								
	Brown										
Signal wires	Yellow	Vin	Voltage input range: 3.5 ~ 20V								
	Red	Hall 1 output	High= Input - 1.2V (±0.6V) Low= GND Hall signal data: 								
	Green	Hall 2 output	Hall effect sensor resolution: <table border="1" data-bbox="678 806 1364 985"> <thead> <tr> <th>Model No.</th> <th>Resolution (pulses/mm)</th> </tr> </thead> <tbody> <tr> <td>GD70-24-A4-XXX-CXX-HS2</td> <td>10.00</td> </tr> <tr> <td>GD70-24-A6-XXX-CXX-HS2</td> <td>6.67</td> </tr> <tr> <td>GD70-24-A8-XXX-CXX-HS2</td> <td>5.00</td> </tr> </tbody> </table>	Model No.	Resolution (pulses/mm)	GD70-24-A4-XXX-CXX-HS2	10.00	GD70-24-A6-XXX-CXX-HS2	6.67	GD70-24-A8-XXX-CXX-HS2	5.00
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GD70-24-A8-XXX-CXX-HS2	5.00										
Black	GND										

Certifications

GD70 actuator is compliant with the following regulations, in terms of the essential conformity requirements of EMC Directive of 2014/30/EU.

Emission	Immunity
EN55014-1:2017+A11:2020	EN 55014-2:2015

Ordering Key

GD70 - 24 - A4 - 388 - 588 - C 3 2 - HS - PO-BK 0	
Input voltage	24: 24V DC
Motor and Spindle type	A4: 2500rpm / 4mm pitch A6: 2500rpm / 6mm pitch A8: 2500rpm / 8mm pitch
Retracted length <i>(Refer to page 3)</i>	XXX
Extended length <i>(Refer to Page 3)</i>	XXX
Front connector <i>(Refer to Page 3)</i>	3: Drilled hole 4: Oval hole 6: Enhanced plastic
Rear connector <i>(Refer to Page 4)</i>	2: Zinc alloy clevis
Positioning feedback	Blank: None HS: Hall effect sensor x 1 HS2: Hall effect sensor x 2
Option <i>(Multiple choice is allowed)</i>	Blank: None PO: Mechanical push only extension tube BK: Mechanical brake
Cable length	0: 300mm straight 1: 1000mm straight A: 450mm with 300mm coiled

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