Linear Actuator
MD80

MD80 is a quiet and powerful actuator up to 8000N thrust, which is designed for use in a variety of medical and home care applications such as patient hoist and bed.

Features and Options

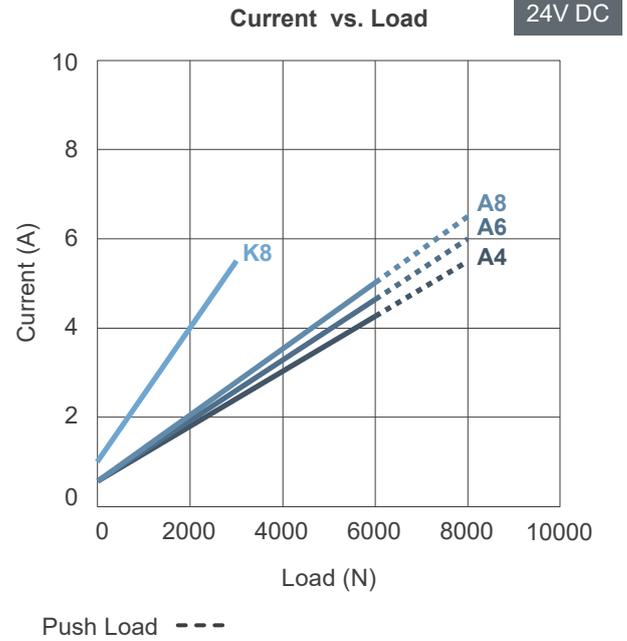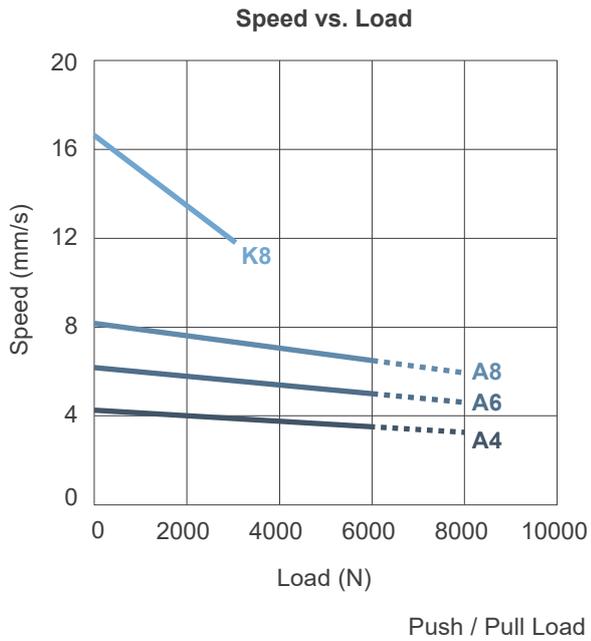**Main applications:** Home care, medical
Standard features:
● Max. load: 8000N (push) / 6000N (pull)
● Max. speed at no load: 16.6 mm/sec (Typical value)
● Stroke: 50~400mm
● Noise level: ≦53dB
● IP Level: IPX4, IPX5 (static, non-action)
● Rear connector's pivot orientation can be chosen in every 30 degrees.
● Preset limit switches
● Steel extension tube
● Color: Light gray RAL 7035
● Duty cycle: 10%, max. 2 min. continuous operation in 20 min.
● Ambient operation temperature: +5°C ~ +40°C
● Storage ambient temperature: -25°C ~ +65°C
● Certified:
  - CE Marking: EN IEC 60601-1, EN 60601-1-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-8
  - RoHS: Directive 2011/65/EU and commission delegated Directive (EU)2015/863, (EU)2017/2102

Options:
● Mechanical push only extension tube
● Safety nut (in push direction)
● QR2 quick release: To retract actuator quickly by pinching the QR2 grip while emergency.
● MR3 manual release: To retract actuator slowly and put down the patient safely by turning the MR3 knob with hand when losing power in the application of patient hoist.

Performance Data

Model No.	Push Max. (N)	Pull Max. (N)	*Typical Speed (mm/s)		*Typical Current (A)	
			No load	Full load	No load	Full load
MD80-24D**A4**-XXX.XXX-XXXX0XX	8000	6000	4.2	3.3	0.6	5.5
MD80-24D**A6**-XXX.XXX-XXXX0XX	8000	6000	6.2	4.6	0.6	6.0
MD80-24D**A8**-XXX.XXX-XXXX0XX	8000	6000	8.1	5.9	0.6	6.5
MD80-24D**K8**-XXX.XXX-XXXX0XX	3000	3000	16.6	11.8	1.0	5.5

24V DC

Speed vs. Load

Current vs. Load
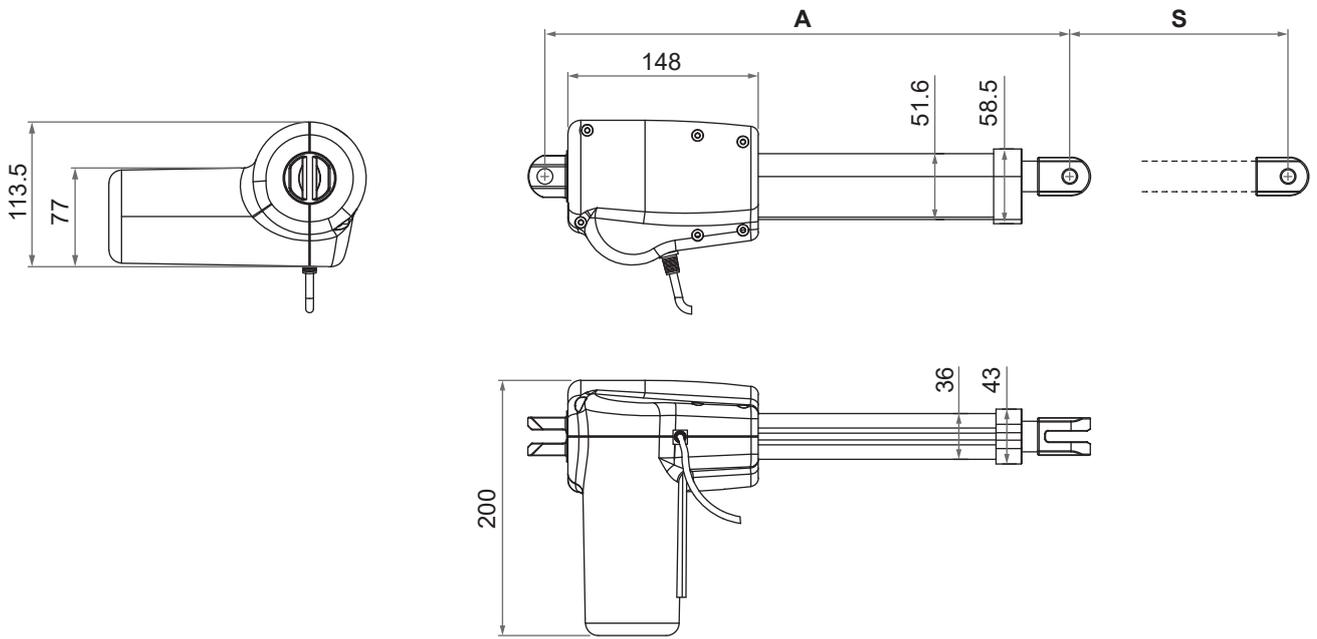
Push / Pull Load ——   Push Load - - -

Remarks:

* 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

Stroke (s)	50≦S≦300mm			
Retracted length (A)	Front connector Safety option	**7**	**8**	**M, N, O**
	No safety option	A≧S+180mm	A≧S+210mm	A≧S+260mm
	With Safety Nut (SN)	A≧S+185mm	A≧S+215mm	A≧S+265mm

- 301≦S≦400mm, retracted length (A) + 30mm   • Tolerance: ±3mm
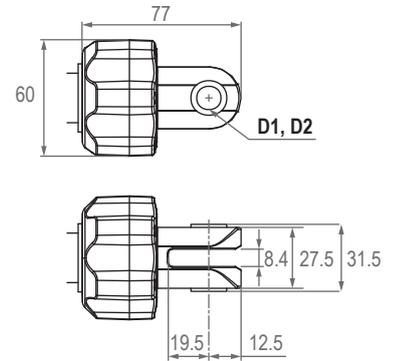- S≧401mm, Please consult MOTECK sales representative for feasibility and the available retracted length.
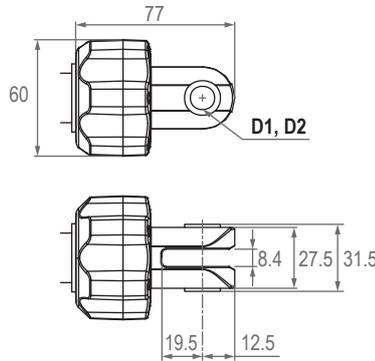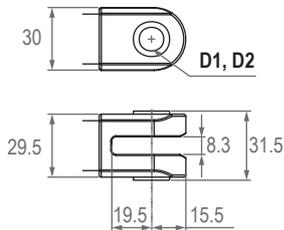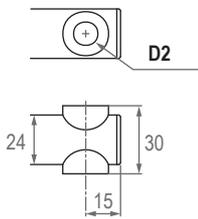
Unit: mm

● Front connector
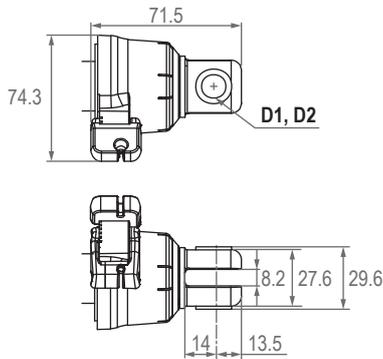
7: Plastic bushing **8:** Aluminum alloy clevis **M:** Aluminum alloy clevis with MR3 manual release **N:** Zinc alloy clevis with MR3 manual release
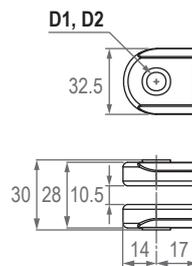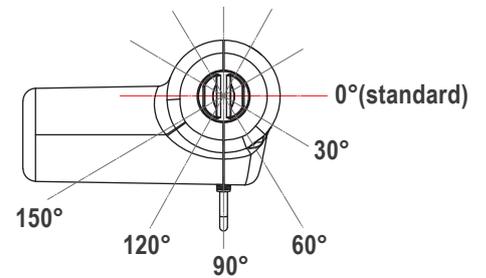

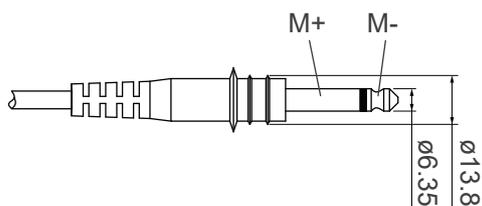**Q:** Zinc alloy clevis with QR2 quick release   ● Rear connector   ● Pivot orientation of rear connectors

1: Zinc alloy clevis

Front connector code	Diameter of pivot without bushing (D1)	Diameter of pivot with bushing (D2)
7	N/A	ø10
8	ø10, ø12	ø8, ø10
M	ø12	ø10
N	ø12	ø10
Q	ø10, ø12	ø10
Rear connector code	**Diameter of pivot without bushing (D1)**	**Diameter of pivot with bushing (D2)**
1	ø12	ø10

Compatibility

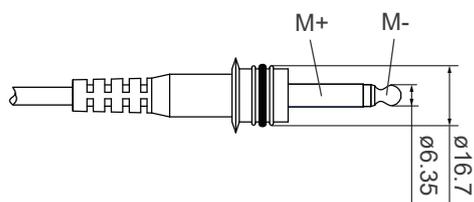| Product	Model	MD80 spec
Control box	CM42, CBP2, CBP3	- With Moteck J1-type ø6.35 phone jack
	CM43, CB4P-HP	- With Moteck J2-type ø6.35 phone jack

Cable Plug

● **Moteck J1-type ø6.35 phone jack**

J1-type

● **Moteck J2-type ø6.35 phone jack**

J2-type

Note: Connect (M+) to '+' & (M-) to '-' of DC power, the actuator will extend.

Ordering Key

		MD80 -	24	D	A8 -	300	.	400 -	8	1	0	P	0	4	A

Input voltage	**24**: 24V DC
Motor	**D**: Standard power and speed
Motor and Spindle type	**A4:** 2500rpm / 4mm pitch **A6:** 2500rpm / 6mm pitch **A8:** 2500rpm / 8mm pitch **K8:** 2500rpm / 8mm pitch
Retracted length	**XXX** *(Refer to Page 3)*
Extended length	**XXX** *(Refer to Page 3)*
Front connector	**7**: Plastic bushing **8**: Zinc alloy clevis **M**: Aluminum alloy clevis with MR3 manual release *(must with options of Push only and Safety nut, A8 or K8 spindle)* **N**: Zinc alloy clevis with MR3 manual release *(must with options of Push only and Safety nut, A8 or K8 spindle)* **Q**: Zinc alloy clevis with QR2 quick release *(must with options of Push only and Safety nut, A8 or K8 spindle)* *(Refer to Page 3)*
Rear connector	**1**: Zinc alloy clevis *(Refer to Page 3)*
Pivot orientation of rear connector	**0**: 0° *(Standard)* **3**: 30° **6**: 60° **9**: 90° **C**: 120° **F**: 150°
Option	**0**: None **S**: Safety nut **P**: Push only + Safety nut
Reserved	**0**
IP Level *(static, non-action)*	**4**: IPX4 *(Standard)* **5**: IPX5
Cable length	**0**: 300mm straight **1**: 1000mm straight **A**: 400mm with 200mm coiled

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