

## Actuator MD100

MD100 is quiet and powerful actuator up to 10,000N thrust, designed for variety of medical and home care applications such as patient lift and medical bed.



### Feature

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- Main applications: Homecare, medical
- Input voltage: 24V DC
- Max. load: 10,000N (push) / 6,000N (pull)
- Max. speed at no load: 9 mm/sec
- Max. speed at full load: 6.7 mm/sec @ 10000N
- Stroke: 100 ~ 600 mm
- Max. current: 8.2A @ 24V DC
- Noise level:  $\leq 52$ dB
- IP Protection level: IPX4
- Preset limit switches
- Aluminum outer tube
- Stainless 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
- Certified: CE Marking, EMC Directive 93/42/EEC



## Option

- Mechanical push only extension tube
- Safety nut (in push direction)
- QR2 quick release: To retract actuator quickly by pinching the QR2 grip while emergency.
- MR2 manual release: To retract actuator slowly and put down the patient safely by turning the MR2 knob with hand when losing power in the application of patient hoist.
- IPX6 Protection level



Fig. 1 QR2 quick release



Fig. 2 MR2 manual release

## Compatibility

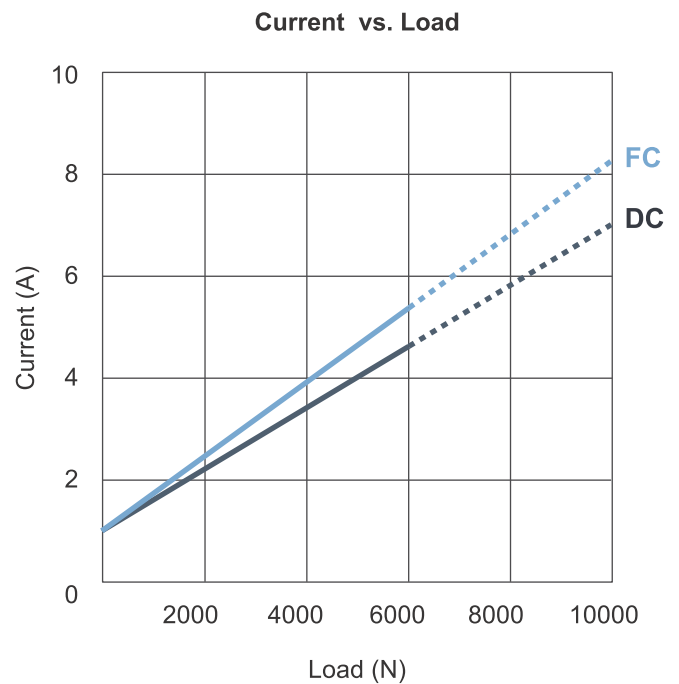
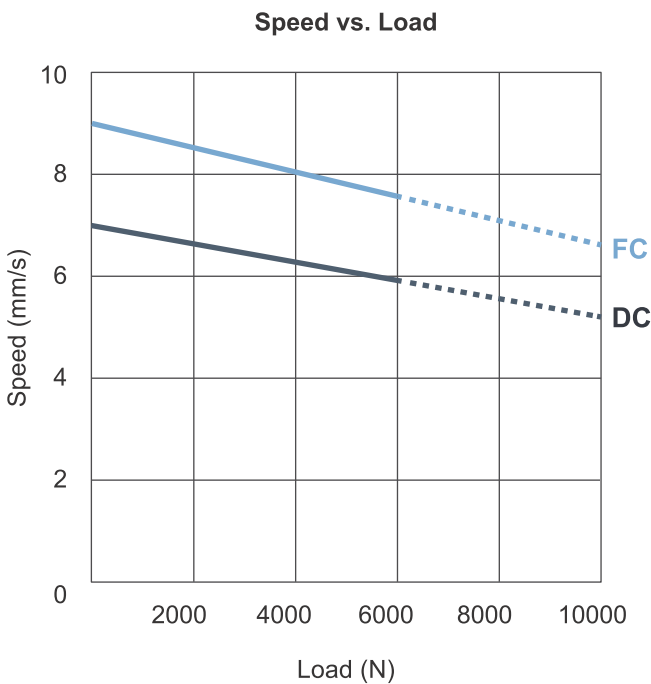
Product	Model	MD100 spec
Control box	CBP2, CBP3	Phone jack(Ø6.35mm) with Moteck J1 or J2 type plug
	CB4P-HP, CB4P-HP-SY	Phone jack(Ø6.35mm) with Moteck J2 type plug



## Performance Data

Model No.	Push Max. (N)	Pull Max. (N)	Typical speed (mm/s)		Typical current (A) @ 24V	
			No load	Full load	No load	Full load
MD100-24DC-XXX.XXX-XX	10,000 <sup>①</sup>	6,000	7.0	5.2	1.0	7.0
MD100-24FC-XXX.XXX-XX	10,000 <sup>①</sup>	6,000	9.0	6.7	1.0	8.2

Note <sup>①</sup>: Within the stroke range of 150 mm (refer to Table 1)



Push / Pull Load — Push Load - - -

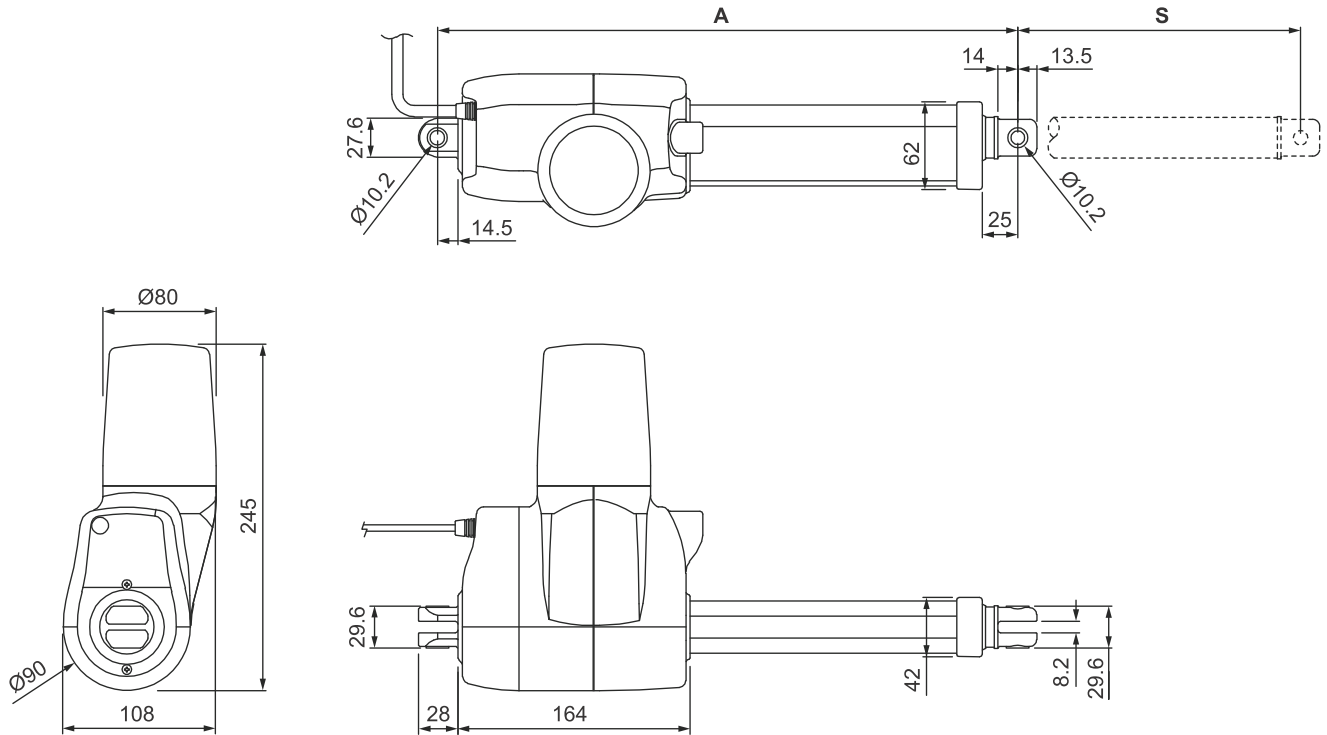
Table 1 Maximum push load VS. stroke

Spec of stroke (mm)	At actual stroke position (mm)					
	150	200	300	400	500	600
200	10,000	8,000	-	-	-	-
300	10,000	10,000	5,000	-	-	-
600	10,000	10,000	10,000	9,000	6,000	5,000

Unit: N



## Dimensions



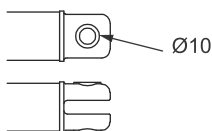
Front connector	Retracted length (A)
Standard	$A \geq S + 210 \text{ mm}$
Option (QR2 / MR2)	$A \geq S + 267 \text{ mm}$

Available stroke (S) range = 100 ~ 600 mm

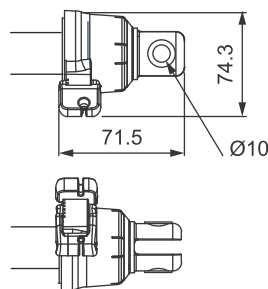
### Front Connector

Standard

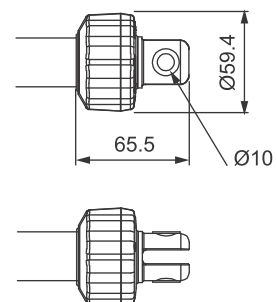
(Zinc alloy clevis with plastic bushing)



With QR2 quick release

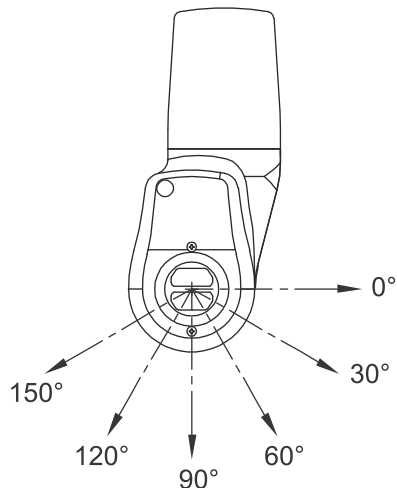


With MR2 manual release



## Rear Connector

Zinc alloy clevis with plastic bushing, with following orientation options.



## Cable Plug

MOTECK Phone jack(Ø6.35 mm) plug



**J1 type**  
(Ø13.8 mm)



**J2 type**  
(Ø16.7 mm)



## Ordering Key

MD100 - 24 DC - 310 . 410 - 1 0 0 0 G 4 1	
Input voltage	24: 24V DC
Motor and Spindle type	DC FC (Refer to Performance Data)
Retracted length	XXX (Refer to Dimensions)
Extended length	XXX (Refer to Dimensions)
Front connector	1: Zinc alloy clevis with plastic bushing (Refer to Dimensions)
Pivot orientation of Rear connector	Zinc alloy clevis with plastic bushing, with following orientation options 1: 0°                                    3: 30°                                    6: 60° 9: 90°                                    C: 120°                                    F: 150°
Option	0: None S: Safety nut P: Push only + Safety nut M: MR2 Manual release + Push only + Safety nut Q: QR2 Quick release + Push only + Safety nut (Note: Single selection is available)
Reserved	0: No meaning
Color	G: Light gray RAL 7035
IP Protection level	4: IPX4 6: IPX6
Cable	Phone jack J1 type plug 1: 300 mm straight 2: 1000 mm straight 3: 400 mm coiled (Refer to page 5) Phone jack J2 type plug A: 300 mm straight B: 1000 mm straight C: 400 mm coiled

