

Actuator

MD120



Features

- ◆ MD120 is a quiet and powerful actuator, which can push up to 12,000N. It's designed for use in a variety of medical and home care applications, such as patient hoist and medical bed.
- ◆ Main applications : home care, medical
- ◆ Input voltage : 24V DC
- ◆ Max. push load : 12,000 N (push) / 6,000 N (pull)
- ◆ Max. current : 7.5 A @ 24V DC
- ◆ Max. speed at no load : 6.9 mm/s
- ◆ Max. speed at full load : 5.2 mm/s @ 12,000N
- ◆ Stroke : 100 ~ 400mm
- ◆ Safety nut (in push direction)
- ◆ Preset limit switches
- ◆ Duty cycle : 10% or 2 min. continuous operation in 20 min.
- ◆ IP protection level : IPX4
- ◆ Color : RAL 7035
- ◆ Certified : EMC Directive 93/42/EEC for CE Marking
- ◆ Aluminum outer tube
- ◆ Noise level : \leq 50 dB
- ◆ Working environment temperature : +5 ~ 40°C

Options

- ◆ Mechanical push only extension tube
- ◆ Electrical push only function
- ◆ Positioning signal feedback with Hall effect sensors
- ◆ IPX6 protection level

Compatibility

1. Control box

- (1) CBP2 (\varnothing 6.35mm loud speaker plug with Moteck J1 type strain relief \varnothing 13.8)
- (2) CB4P-HP (\varnothing 6.35mm loud speaker plug with Moteck J2 type strain relief \varnothing 16.7)



J1 type strain relief



J2 type strain relief

2. Accessory

None

Performance Data

Model No.	Push Load Max. (N)	Speed (mm/s)		Current (A) @ 24V	
		No load	Full load**	No load	Full load**
MD120-24 E8 -XXX.XXX-XXXXXXX	12,000*	6.3	4.4	0.6	6.6
MD120-24 F8 -XXX.XXX-XXXXXXX	12,000*	6.9	5.2	0.9	7.5

Note * : Within the stroke range of 200 mm.

Note ** : At 12,000N loaded.

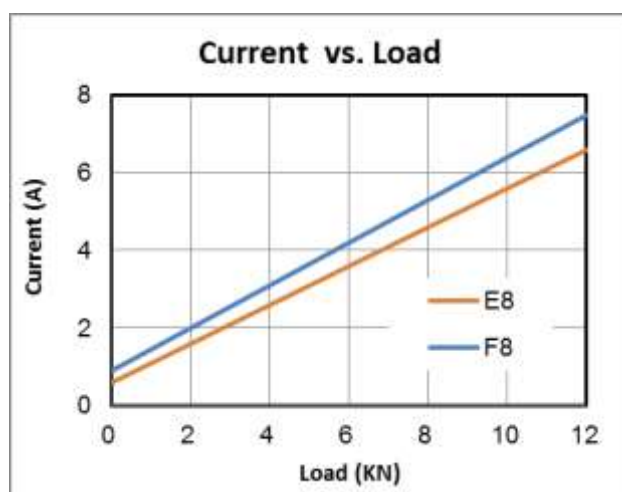
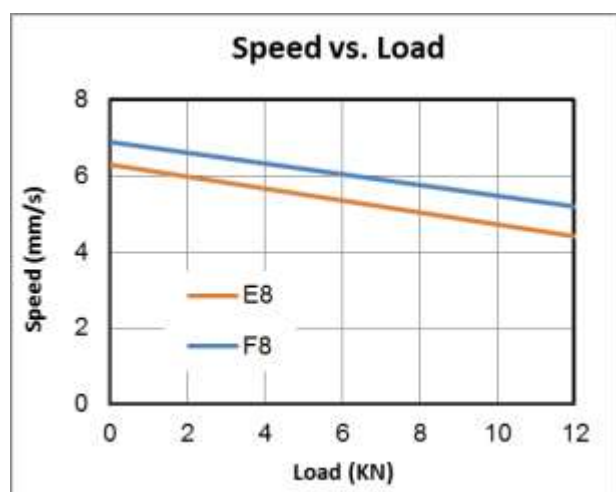
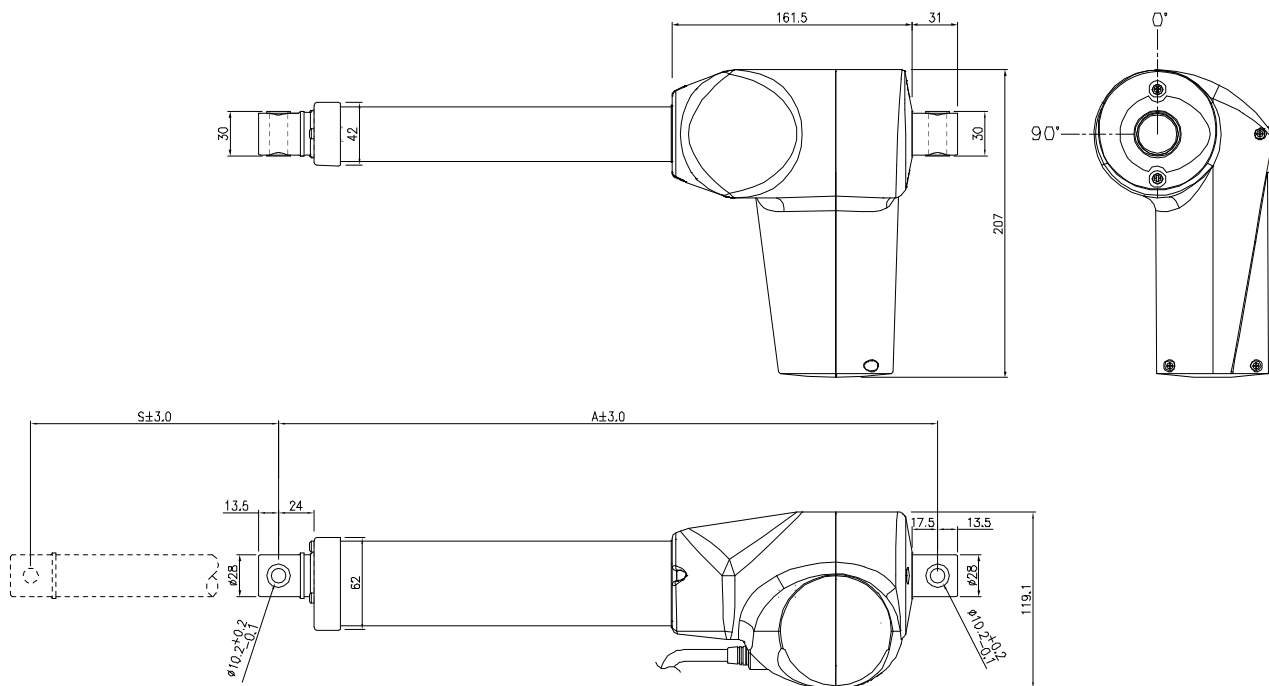


Table of max. push load

Unit : KN

Spec of stroke (mm)	At actual stroke position (mm)			
	100	200	300	400
100	12	-	-	-
200	12	12	-	-
300	12	12	8	-
400	12	12	9	6

Dimensions

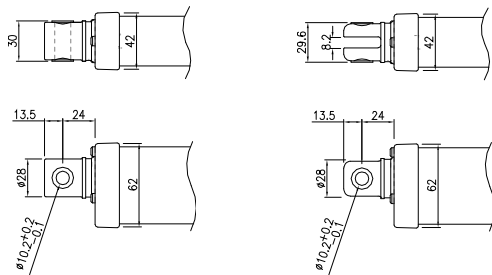


Unit : mm

Installation Length

Stroke Range (S)	$100 \leq S \leq 300 \text{ mm}$	$300 < S \leq 400 \text{ mm}$
Min. Retracted Length (A)	$A \geq S + 230 \text{ mm}$	$A \geq S + 250 \text{ mm}$

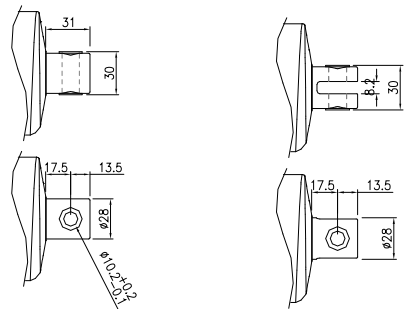
Front Connectors



Solid type

Slot type

Rear Connectors



Solid type

Slot type

Ordering Key

MD120——.—

Input Voltage
24 : 24V DC

Motor and Spindle Code
E8, F8
(Refer to paragraph Performance Data)

Retracted Length (mm)
(Refer to paragraph Dimensions)

Extended Length (mm)
(=Retracted length + Stroke. Refer to Dimensions drawing)

Front Connector
1 : Slot with bushing, $\phi 10.2$ mm 3 : Solid with bushing, $\phi 10.2$ mm
2 : Slot w/o bushing, $\phi 12.2$ mm 4 : Solid w/o bushing, $\phi 12.2$ mm

Rear Connector
1 : Slot with bushing, $\phi 10.2$ mm 3 : Solid with bushing, $\phi 10.2$ mm
2 : Slot w/o bushing, $\phi 12.2$ mm 4 : Solid w/o bushing, $\phi 12.2$ mm

Safety Options
P : Push Only extension tube
E : Electrical push only function
0 : None

Positioning Feedback
0 : None H : Dual Hall Effect Sensors

Color
G : RAL 7035

IP Protection Level
4 : IPX4 6 : IPX6

Cable & Pug
(6.35mm jack plug, $\phi 13.8$) (6.35mm jack plug, $\phi 16.7$)
1 : Straight cable 300mm A : Straight cable 300mm
2 : Straight cable 1000mm B : Straight cable 1000mm
3 : Coiled cable 400mm C : Coiled cable 400mm

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