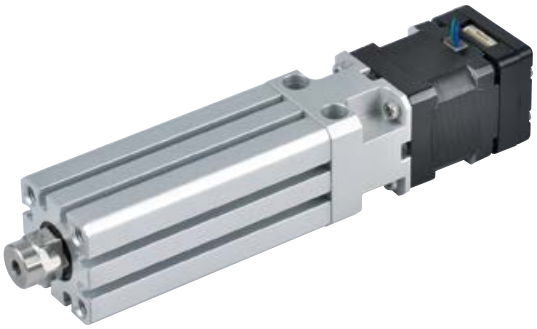
MEJQ series

COMPACT ELECTRIC ACTUATOR (WITH MOTOR)

mindman

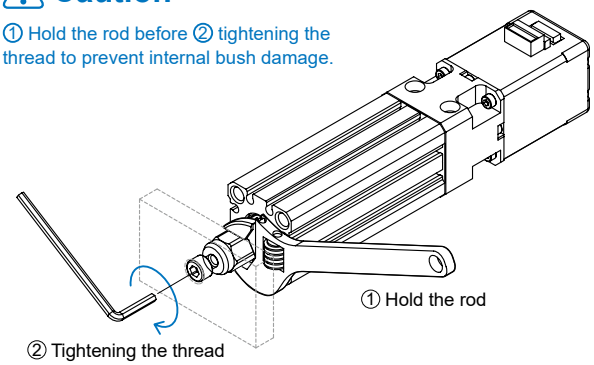
Selection table
Applications
Motor selection
Controller



Motor type	Step motor	Transmission	Ball screw
Sensor type	Reed switch	Anti-rotation mech.	Hexagonal rod

Caution

① Hold the rod before ② tightening the thread to prevent internal bush damage.



Feature

- Non-rotating rod.
- Compact, Lightweight.
- Pre-lubricated before shipment.
- Good repeatability accuracy.
- Compatible with external magnetic sensors.

Specification

Model			MEJQ		
Size			16		20
Positioning repeatability		(mm)	±0.02		
Lead		(mm)	1		2
Ball screw		(ø)	4		6
Stroke		(mm)	30 / 50 / 75 / 100		
Anti-rotation tolerance *1		(°)	±0.7		
Sensor switch			RDC(V), RQC(V)		
With step motor			□25	□28	□35
Max. speed	SM	(mm/s)	–	≤ 50	≤ 100
	BM	(mm/s)	≤ 50	–	≤ 100
	OBM	(mm/s)	≤ 42	–	≤ 84
Rated load	Horizontal *2,3	(kg)	5		12
	Vertical *2	(kg)	2		5
Max. thrust *4	SM	(N)	–	470	206
	BM	(N)	665	–	1196

*1. Do not apply radial loads or loads in directions other than the intended movement direction to the shaft.

*2. The rated load capacity varies depending on the moving speed. Please refer to the Speed-Load Graph.

*3. The rated horizontal load refers to a value when the shaft is free from radial and moment loads and is supported externally by a linear guide.

*4. Thrust and operating speed are subject to variation depending on cable length, load, stroke, and mounting conditions. The thrust tolerance is ±20%. All specified values are based on 250 rpm motor operation.

Order example

MEJQ – 20 L02 – 30 – BC L – CK10 03 N 015

Model

Size / Ball screw lead

Size	Ball screw lead	
16	L01	1 mm
20	L02	2 mm

Stroke

30	30 mm
50	50 mm
75	75 mm
100	100 mm

Controller / Motor

Controller	Motor
CK10	SM
CM10 *	OBM
CM20 *	BM

* Sensors are required for proper operation.

I/O type

N	NPN

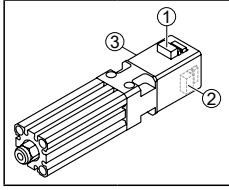
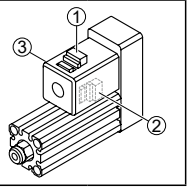
* Not applicable to CM10.

I/O cable length

015	1.5 m (Standard)
03	3 m

* Not applicable to CM10.

Motor position

BC : Direct connection	BA : Turned
	

Wire direction

–	① Top
R	② Right
L	③ Left

Motor + Encoder cable

01	1 m (CM10/20 only)
015	1.5 m (CK10 only)
03	3 m (Standard)
05	5 m

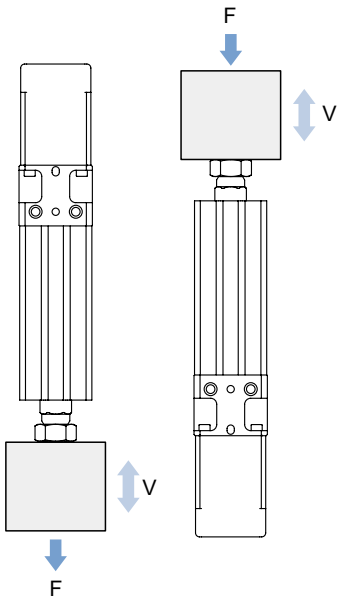
* Refer to the motor wiring direction for code ①~③.

Life − Axial force relationship chart

The estimated service life under an axial load of F is shown in the plot.

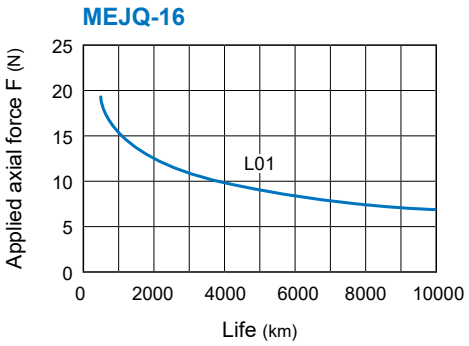
Motor spindle speed − Axial output force chart

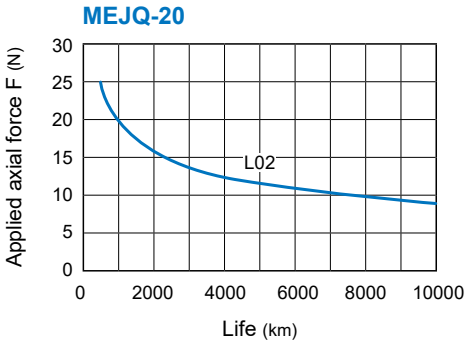
Speed − Axial velocity relationship chart



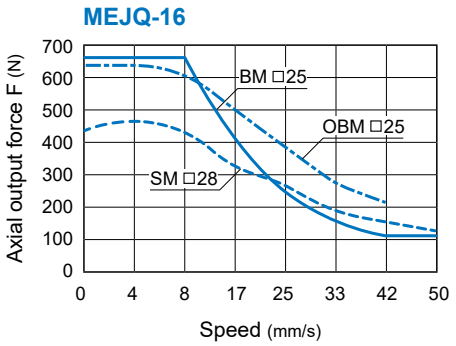
* Do not apply radial load directly to the rod.

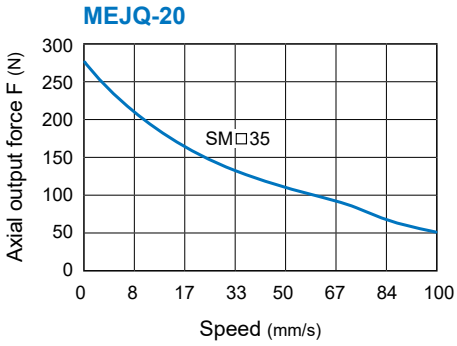
Life − Applied axial force relationship chart

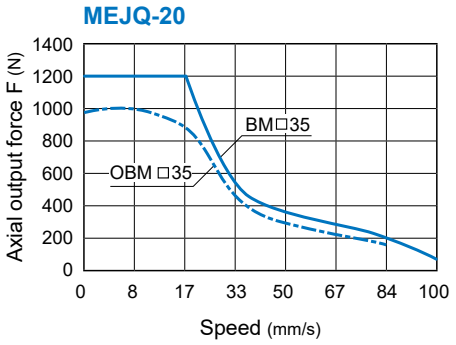




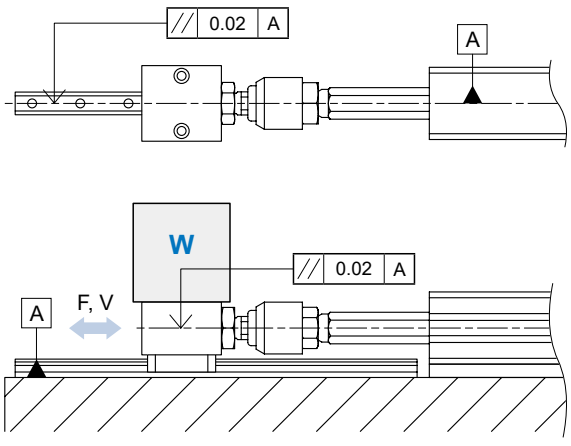
Motor spindle speed − Axial output force relationship chart







External guide support mounting



Motor spindle speed − Axial velocity relationship chart

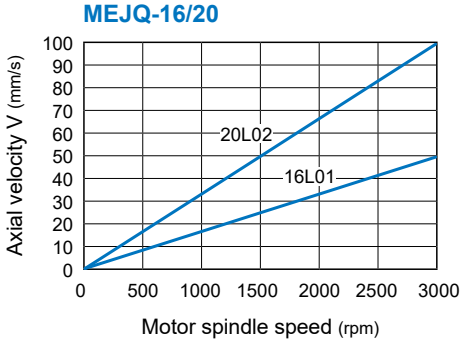
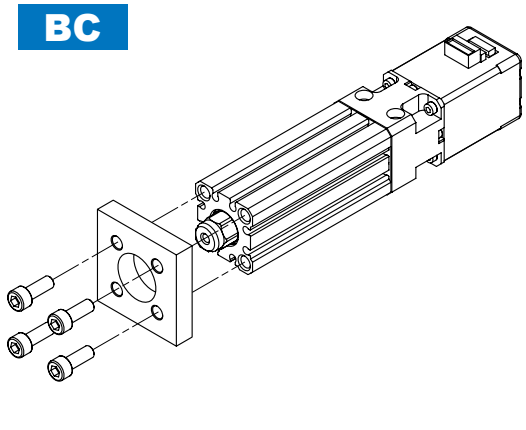


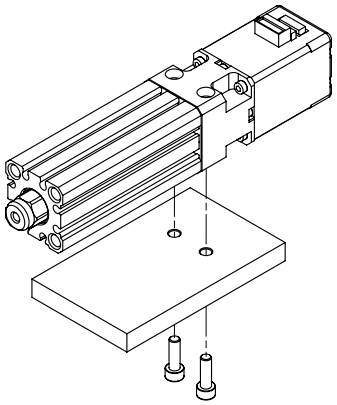
Plate installation

* The plates are prepared by the customers.

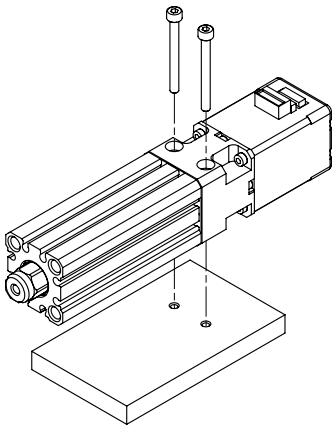
BC



A The plate is positioned in the front, and bolts are mounted from the front.

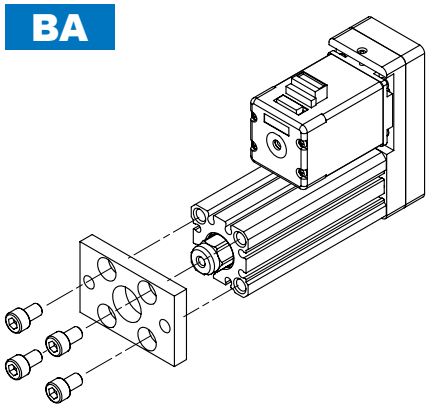


B The plate is positioned below, and bolts are mounted from below.

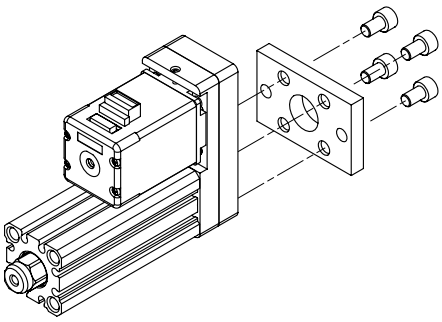


C The plate is positioned below, and bolts are mounted from above.

BA



A The plate is positioned in the front, and bolts are mounted from the front.

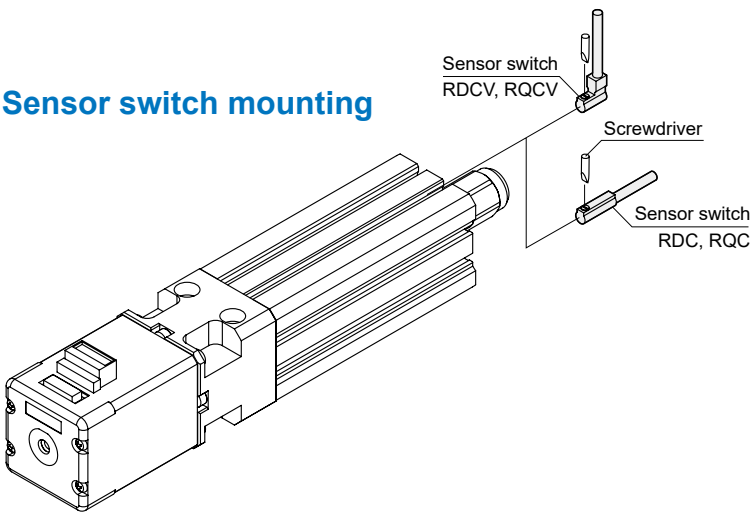


D The plate is positioned at the back, and bolts are mounted from the rear.

Bolt size

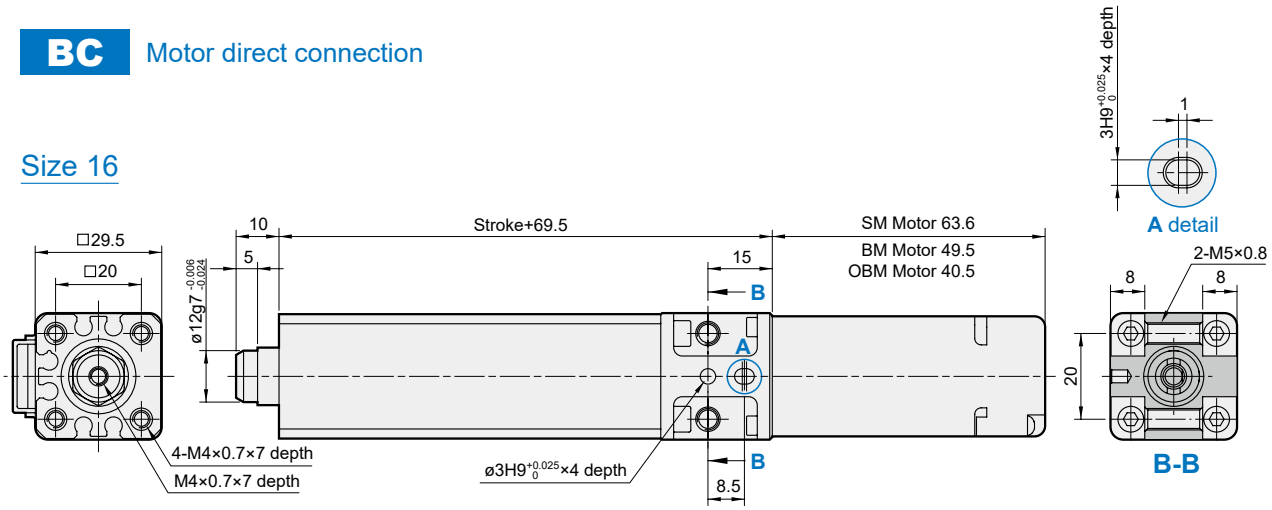
Installation method	Size	
	16	**20**
A, D	M4×0.7	M6×1.0
B	M5×0.8	M5×0.8
C	M4×0.7	M4×0.7

Sensor switch mounting

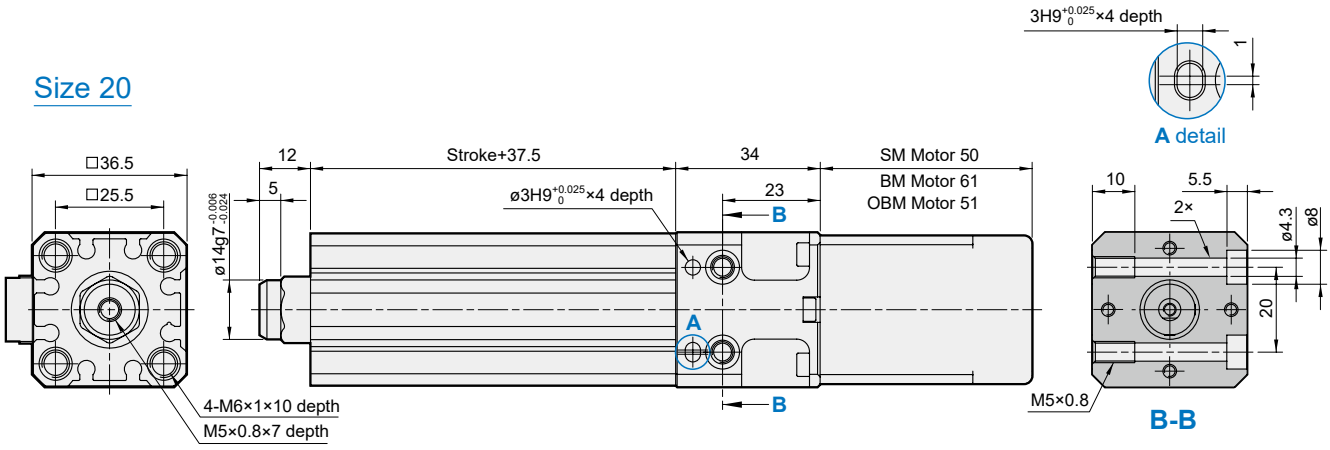


BC Motor direct connection

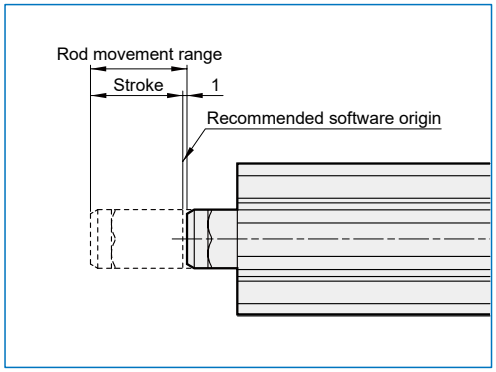
Size 16



Size 20



Rod movement range



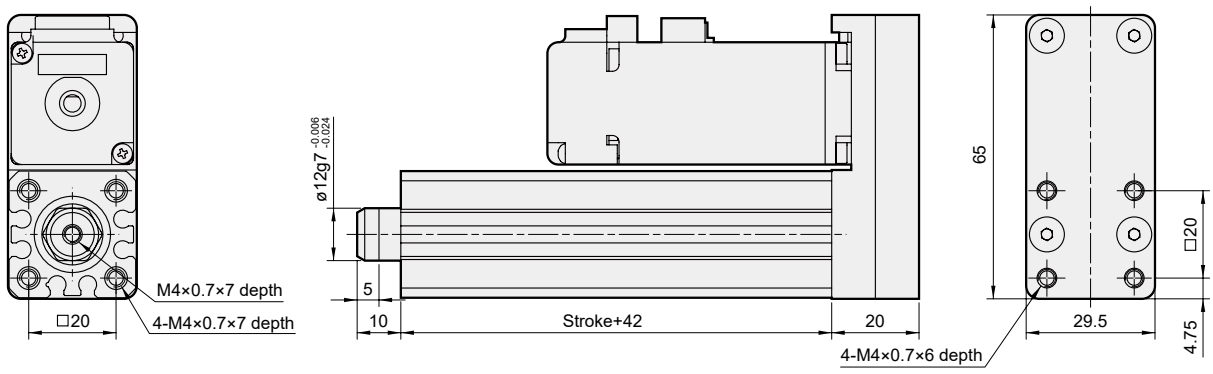
Weight

Unit: kg

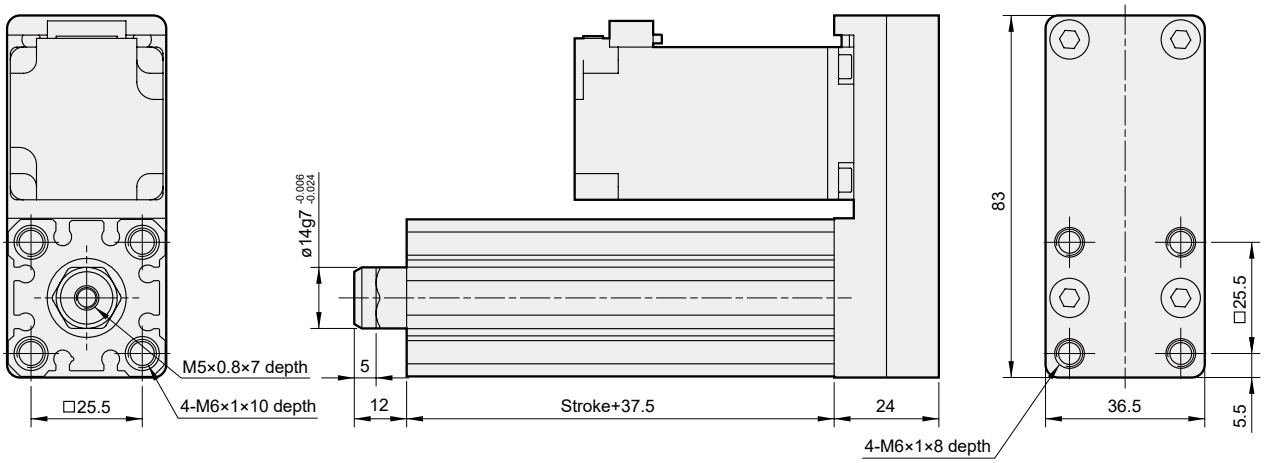
Stroke / Size	SM motor				BM motor			
	30	50	75	100	30	50	75	100
16	0.42	0.46	0.50	0.54	0.35	0.39	0.43	0.47
20	0.50	0.56	0.62	0.69	0.59	0.65	0.71	0.78

BA Motor Turned

Size 16



Size 20



Weight

Unit: kg

Stroke / Size	SM motor				BM motor			
	30	50	75	100	30	50	75	100
16	0.48	0.52	0.56	0.6	0.41	0.45	0.49	0.53
20	0.58	0.64	0.7	0.77	0.67	0.73	0.79	0.86