METFB-40 series

SLIDER ELECTRIC ACTUATOR (WITHOUT MOTOR)

mindman

Selection table
Applications
Measuring tools
Reference data
Motor selection
Controller



Motor type	Servo / Step	Transmission	Timing belt
Environment	Standard	Guide type	Linear guide

Specification

Model		METFB-40
Positioning repeatability	(mm)	±0.05
Lead	(mm/rev)	72
Belt pitch	(mm)	3
Stroke	(mm)	100~2000
No-load torque	(N.m)	0.6
Slot-type photomicro sensor		RLT

Motor type			AC servo		Step
Power output / size			200W	400W	□56
Max. speed *1		(mm/s)	2400		720
Rated load *2	Horizontal	(kg)	7.5	15	13
	Vertical	(kg)	–		–

*1. Acceleration and deceleration values are set to 0.5 second.
*2. Not available for vertical installation.

Order example

Electric cylinder without motor | Optional with step motor (*2)

METFB–40 N – 1000 BW – B56 – CM20 03 N 015

Model | Size | ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧

① Guide installation

N	Without guide
GR	Guide right side
GL	Guide left side

② Stroke

100~2000 mm

③ Motor position

BW	Top side
BM	Down side

④ Flange (For motor installation)

Applicable motor brand *1		Dimensions	
M	Mitsubishi	40	200/400W Servo
	Yaskawa		
	Delta		
P	Panasonic	20	200W Servo
		40	400W Servo
S	Mindman	56	□56 Step NEMA 23
B			

⑤ Controller / Motor

Controller	Motor
CK10	SM (for S56)
CM20 *	BM (for B56)

* Sensors would be needed.

⑥ Motor + Encoder cable

01	1 m (CM20 only)
015	1.5 m (CK10 only)
03	3 m (standard)
05	5 m

⑦ I/O type

N	NPN

⑧ I/O cable length

015	1.5 m (standard)
03	3 m

*1. Motor not included. Please refer to the "Motor Selection Table" for details.
*2. For the optional transmission cable (CK10-C035) for controller management.

Slot-type photomicro sensor set

RZ – EB2 – N

Sensor set | Sensor type

N	NPN
P	PNP

* With RLT sensor, mounting seat, bolt and cable 2m.

Accessory kits

AK – EB2 – 40

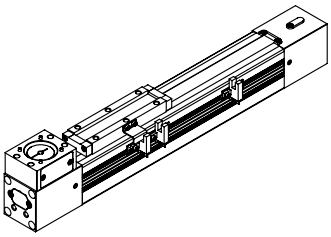
Accessory kits | Size

* With light baffle and bolt.

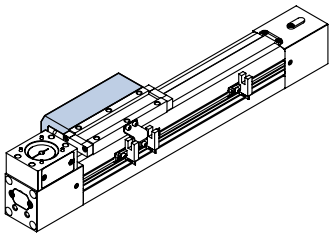
METFB-40 Guide installtion & Sensor mounting

SLIDER ELECTRIC ACTUATOR (WITHOUT MOTOR)

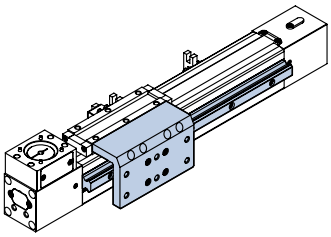
Guide installtion



N Without guide

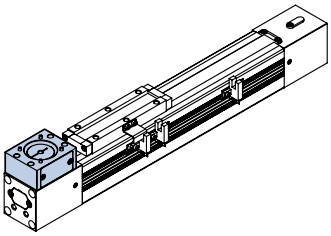


GR Guide right side

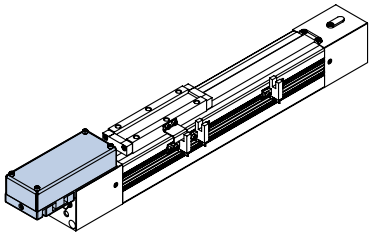


GL Guide left side

Motor position

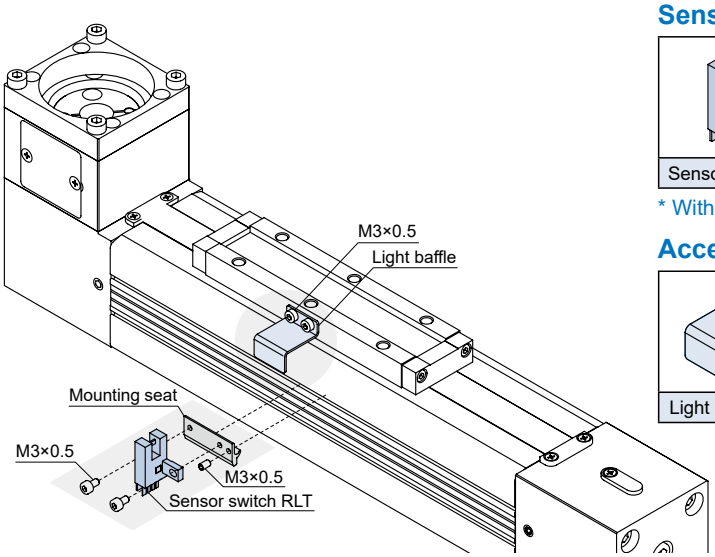


BW Top side

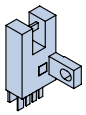
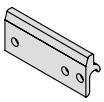


BM Down side

Slot-type photomicro sensor mounting

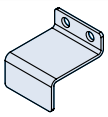


Sensor set

			
Sensor switch (×1)	Mounting seat (×1)	Bolt (×1)	Bolt (×2)

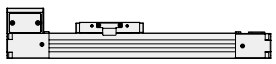
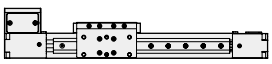
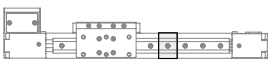
* With cable 2m.

Accessory kits

	
Light baffle (×1)	Bolt (×2)

Weight

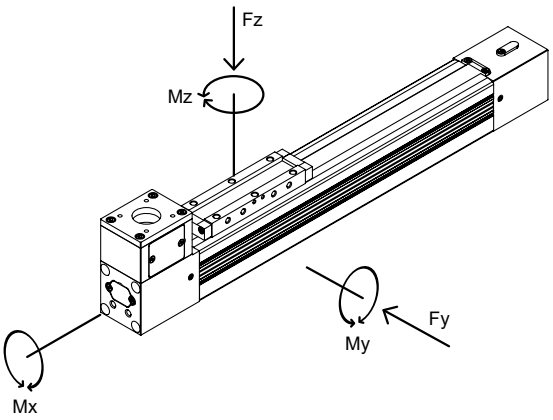
Unit: kg

Model	Basic weight **METFB-40N**	Stroke 100 mm **METFB-40N**	Basic weight (with guide) **METFB-40G***	Stroke 100 mm (with guide) **METFB-40G***
Size				
40	2.96	0.5	3.73	0.62

* The table lists the weight of motor mounting on top.

METFB-40 Capacity

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Forces & Moments

Model		Mx	My	Mz	Fy	Fz
		Max. allowed moment (N.m)			Max. allowed load(N)	
METFB-40	Without guide	10	30	30	–	600
	With guide	78	90	90	4000	4600

Attention: In case of undefinable situations the above max. values have to be reduced by 10~-20%.

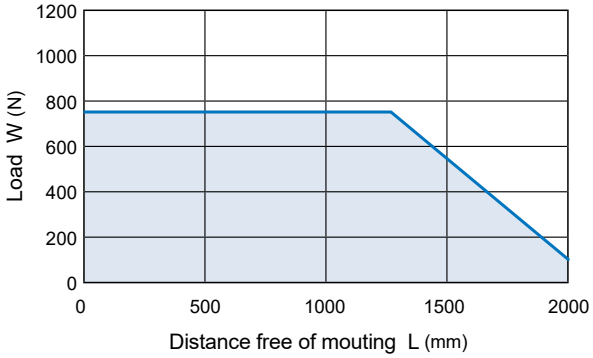
Please refer to the following formula when combined loads are applied.

$$\frac{M_{xA}}{M_x} + \frac{M_{yA}}{M_y} + \frac{M_{zA}}{M_z} + \frac{F_{yA}}{F_y} + \frac{F_{zA}}{F_z} \leq 1$$

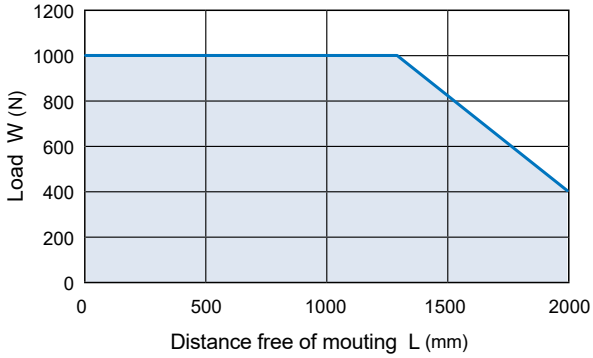
* The A letters show the calculated value.

Positioning of cylinder mountings

METFB-40 Without guide



METFB-40 With guide



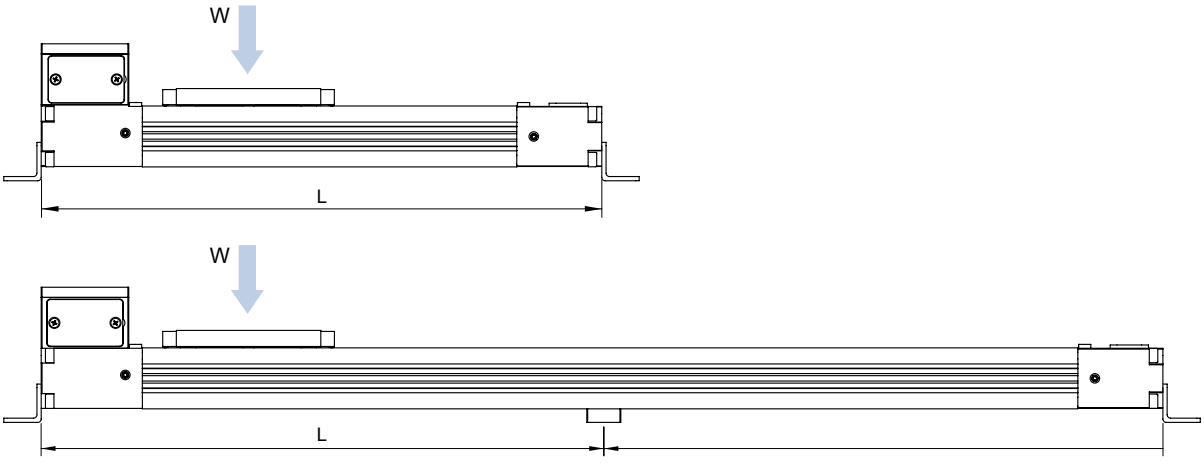


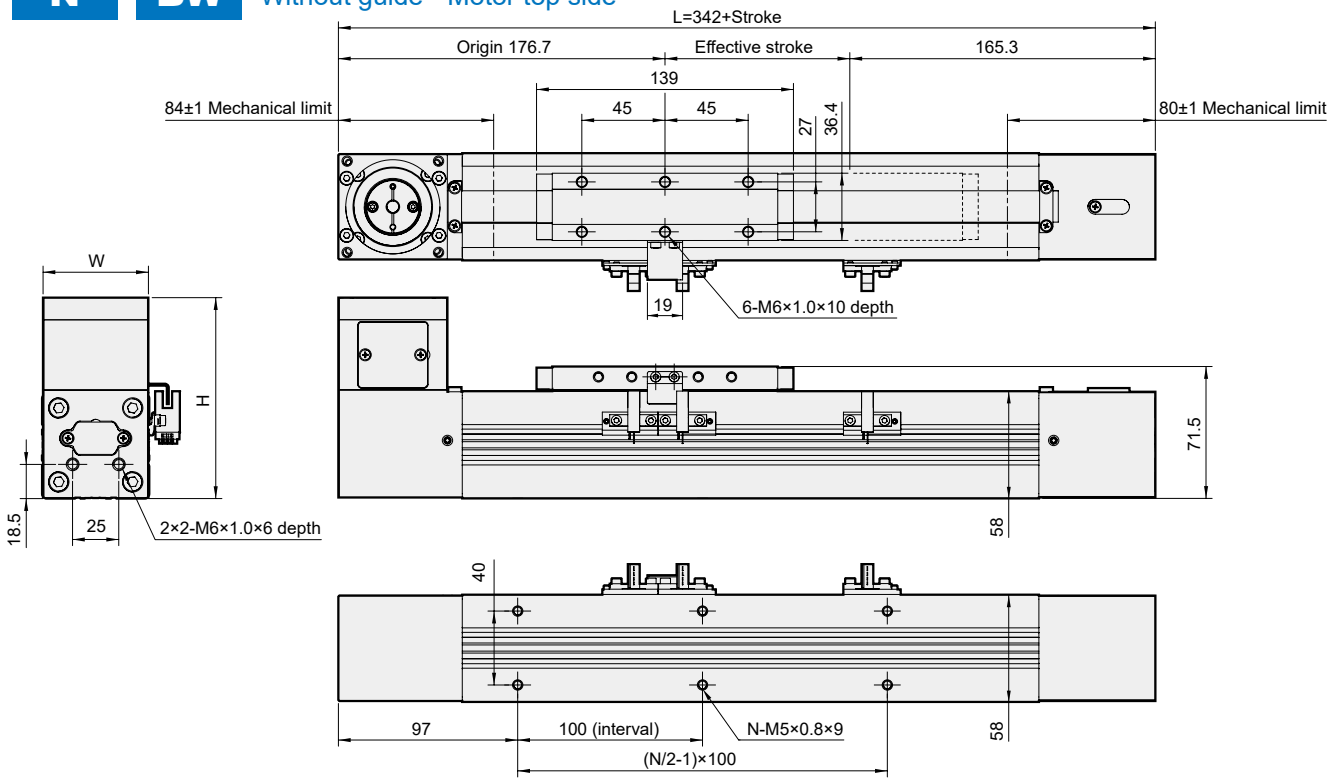
Diagram information

- Calculated deflections without support of 0.5~1 mm allow exceeding of the approved limits.
- Calculated deflections without support of > 1~1.5 mm require reduction of approved limits.

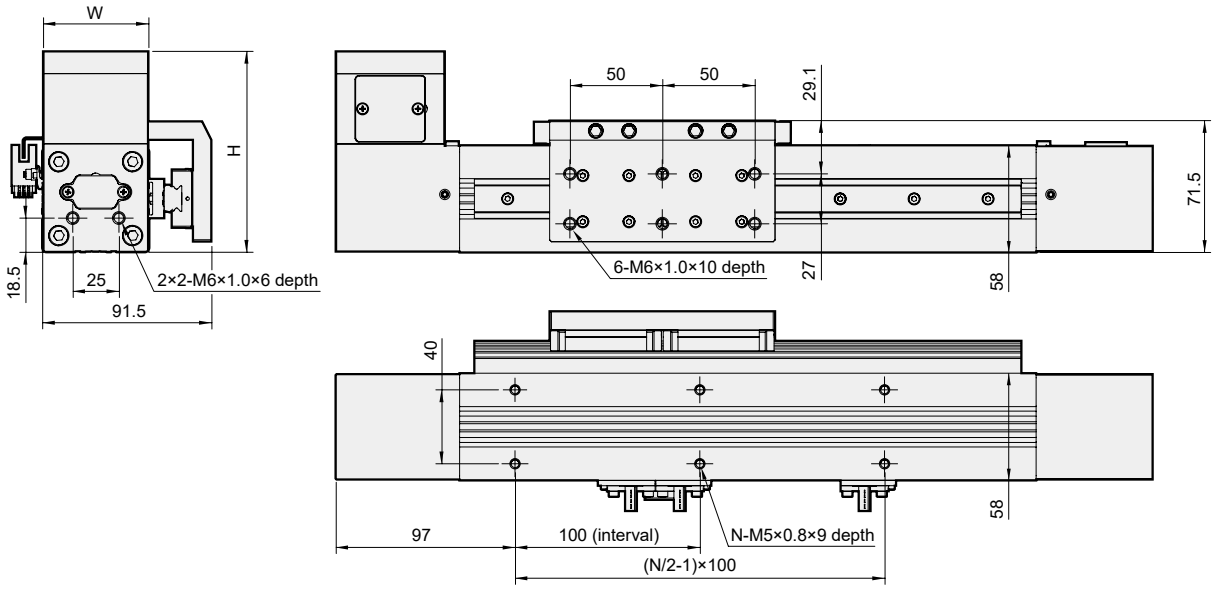
METFB-40 Dimensions

SLIDER ELECTRIC ACTUATOR (WITHOUT MOTOR)

N BW Without guide • Motor top side



GL BW Guide left side • Motor top side



Unit: mm

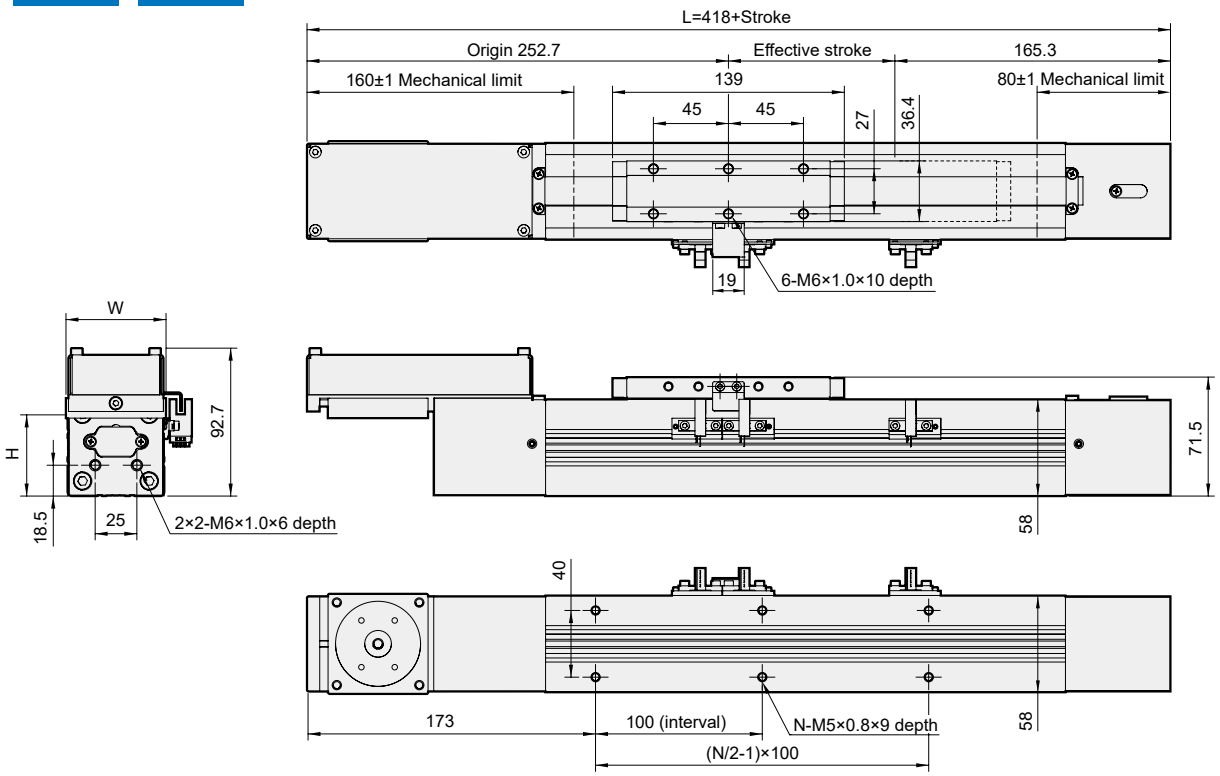
Stroke / Code	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
L	442	542	642	742	842	942	1042	1142	1242	1342	1442	1542	1642	1742	1842	1942	2042	2142	2242	2342
N	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44

Stroke / Code	Servo	Step
W	57	57
H	108.7	102.7

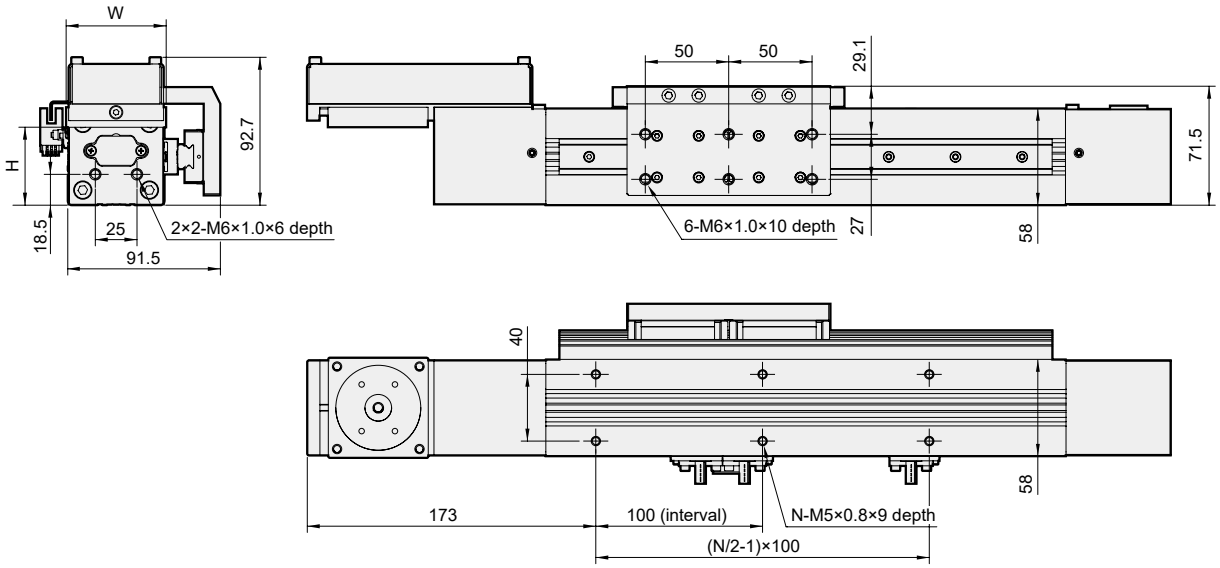
METFB-40 Dimensions

SLIDER ELECTRIC ACTUATOR (WITHOUT MOTOR)

N BM Without guide • Motor down side



GL BM Guide left side • Motor down side



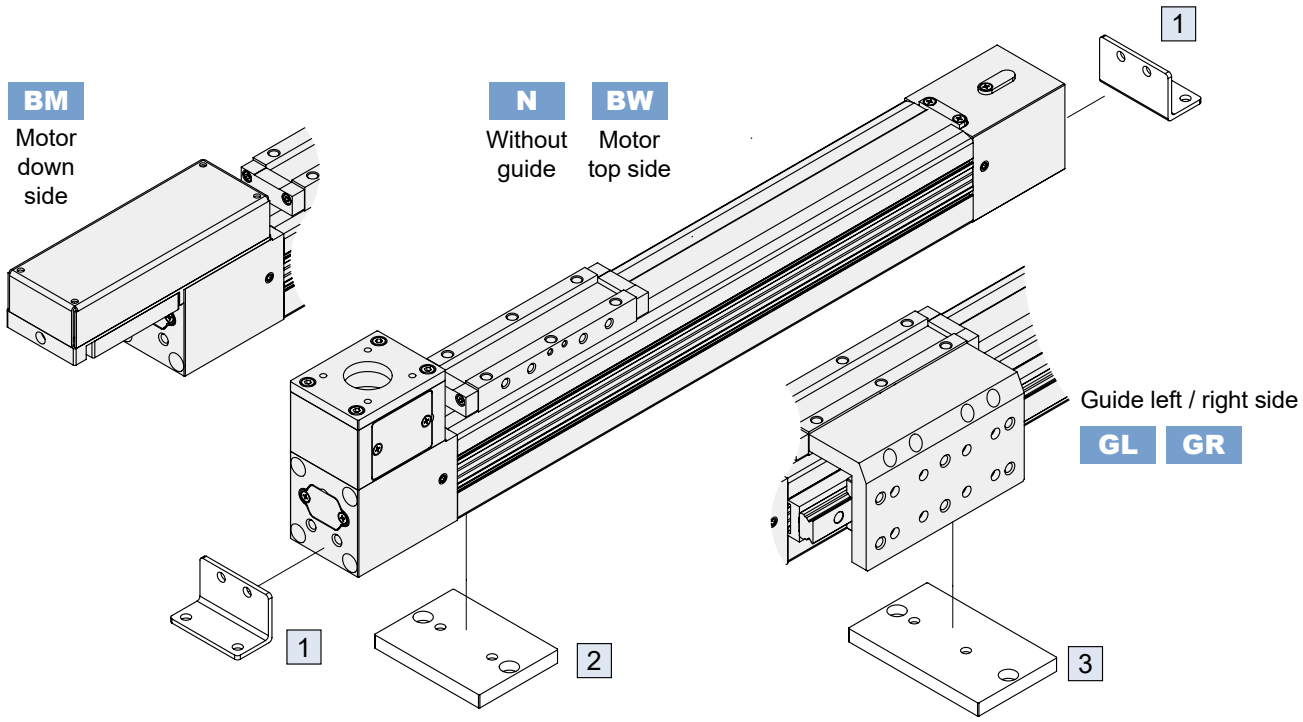
Unit: mm

Stroke / Code	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000
L	518	618	718	818	918	1018	1118	1218	1318	1418	1518	1618	1718	1818	1918	2018	2118	2218	2318	2418
N	6	8	10	12	14	16	18	20	22	24	26	28	30	32	34	36	38	40	42	44

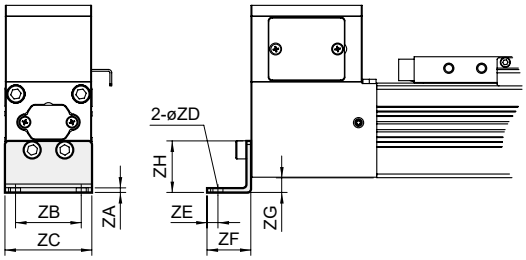
Stroke / Code	Servo	Step
W	60	57
H	46.7	48.7

METFB-40 Mounting accessories

SLIDER ELECTRIC ACTUATOR (WITHOUT MOTOR)

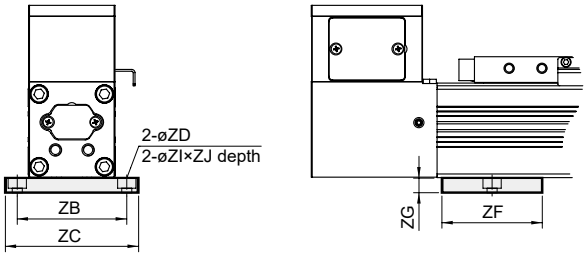


1 End cover bracket (2pcs/set)

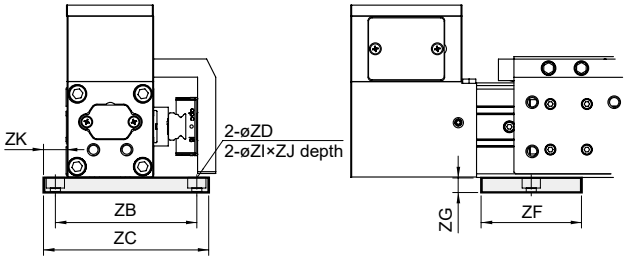


* Not applicable for (BM) motor down side.

2 Mid section support *Applicable for (N) without guide.



3 Mid section support * Applicable for (GR / GL) with guide.



Unit: mm

Item	ZA	ZB	ZC	ZD	ZE	ZF	ZG	ZH	ZI	ZJ	ZK	Weight (g)	Order number
1	2.5	40	57	5.5	6	24	8	31.5	–	–	–	59	**LB-EB2-40**
2	–	70	85	5.5	–	60	8	–	10	5.5	–	105	**MS-EB2-40**
3	–	88	103	5.5	–	60	8	–	10	5.5	13.5	128	**MS-EB2-40G**