

METFB-40 series

SLIDER ELECTRIC CYLINDER (WITHOUT MOTOR)



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)	100~2000/50 pitch	
No-load torque (N.m)	0.6	
Slot-type photomicrosensor	RLT (Please refer to page 5-16)	

Motor type	AC servo	Step
Power output / size	400W	□56
Max. speed *1 (mm/s)	2400	720
Work load *2,3	Horizontal (kg)	15
	Vertical (kg)	—

*1. Acceleration and deceleration value is set 0.5 second.

*2. The operating speed under work load is less than maximum speed.

*3. Not available for vertical condition.

Order example of electric cylinder

METFB-40	N	1000	BW	S56	B	A3	XA00
Model	Size	Stroke					Special order No.
		100~2000 mm 50 mm pitch					
Guide installation		Motor position		Motor brand		Flange face	Brakes
N	Without guide	BW	Top side	M	Mitsubishi	40 400W Servo	— No brake
GR	Guide right side	BM	Down side	P	Panasonic		B With brake
GL	Guide left side			Y	Yaskawa		
				D	Delta		
				S	Mindman	56 □56 Step*1	
				B			
							Sensor switch
							— No sensor
							A1 1 pc
							A2 2 pcs
							A3 3 pcs

* With cable 2m.

*1. Step motors are without brake.

*2. Standard type is without motor.

Please refer to the list of standard motors for flange size.

Order example of controller

CK10	03	N	015
Model	Power + Encoder cable of motor	Switch type	I/O cable length
CK10	01 1 m *2	N NPN	015 1.5 m
CM20 *1	015 1.5 m *3		03 3 m
	03 3 m		
	05 5 m		

*1. Sensors would be needed.

*2. Only for CM20.

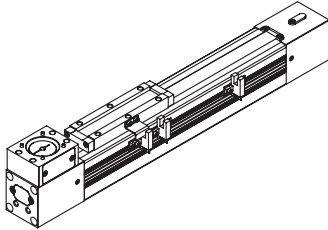
*3. Only for CK10.

METFB-40 Motor specification

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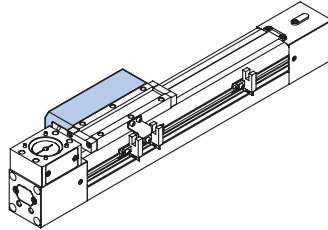


Guide installation



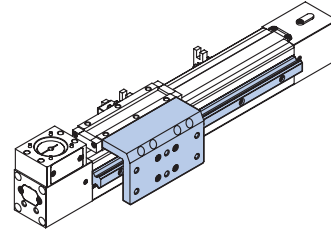
N

Without guide



GR

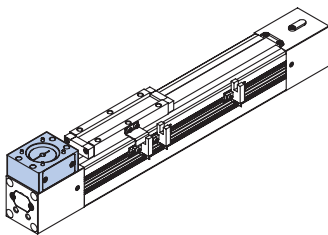
Guide right side



GL

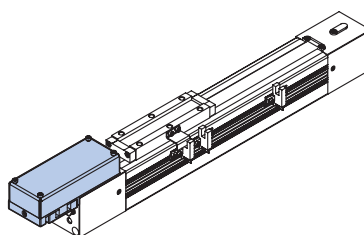
Guide left side

Motor position



BW

Top side



BM

Down side

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 form is the weight of the type of motor top side.

Standard motors

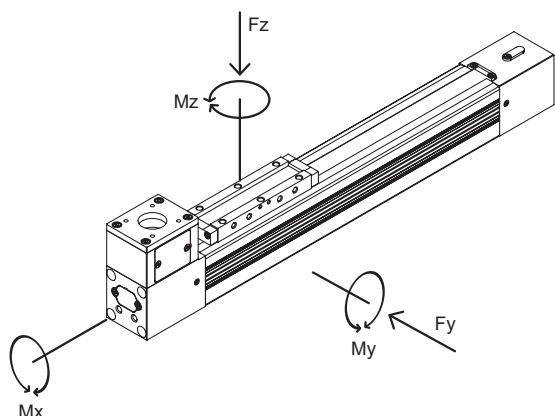
Brand	Mark	Power output	Motor model (Without brake)	Motor model (With brake)	Motor rod dia-shaft length (mm)	Centring collar diameter (mm)	Centring collar depth (mm)	Motor mount P.C.D (mm)	Mounting port (mm)
Mitsubishi	M	400W	HG-KN43J	HG-KN43B J	ø14-30	ø50	3	ø70	4-ø5.8
Panasonic	P	400W	MHMF042L1U2M	MHMF042L1V2M	ø14-30	ø50	3	ø70	4-ø4.5
Yaskawa	Y	400W	SGM7J-04A7A21	SGM7J-04A7A2C	ø14-30	ø50	3	ø70	4-ø5.5
Delta	D	400W	ECMA-C20604PS	ECMA-C20604QS	ø14-30	ø50	3	ø70	4-ø5.5

* If your inquiry is not included in above table, please kindly contact us.

Brand	Mark	Dimensions of motor	Motor model (Without brake)	With controller	Motor rod dia-shaft length (mm)	Centring collar diameter (mm)	Centring collar depth (mm)	Mounting holes position (mm)	Mounting port (mm)
Mindman	S	□56	SM-56L-F	CK10	ø6.35-20	ø38.1	1.6	□47.14	4-ø5
	B	□56	BM-56L	CM20	ø8-24	ø38.1	1.6	□47.14	4-ø4.5

METFB-40 Capacity

SLIDER ELECTRIC CYLINDER (WITHOUT MOTOR)



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%.

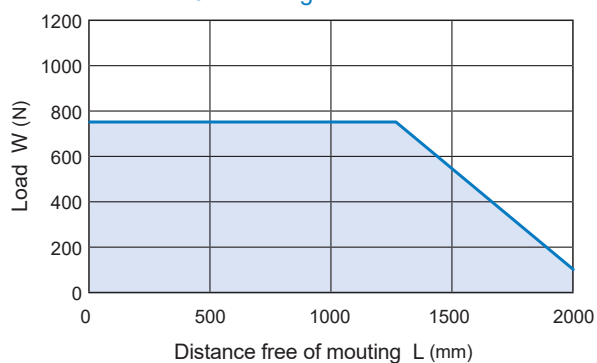
Please refer to the following formula when combined loads are applied.

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

* The A letters show the calculated value.

Positioning of cylinder mountings

METFB-40 Without guide



METFB-40 With guide

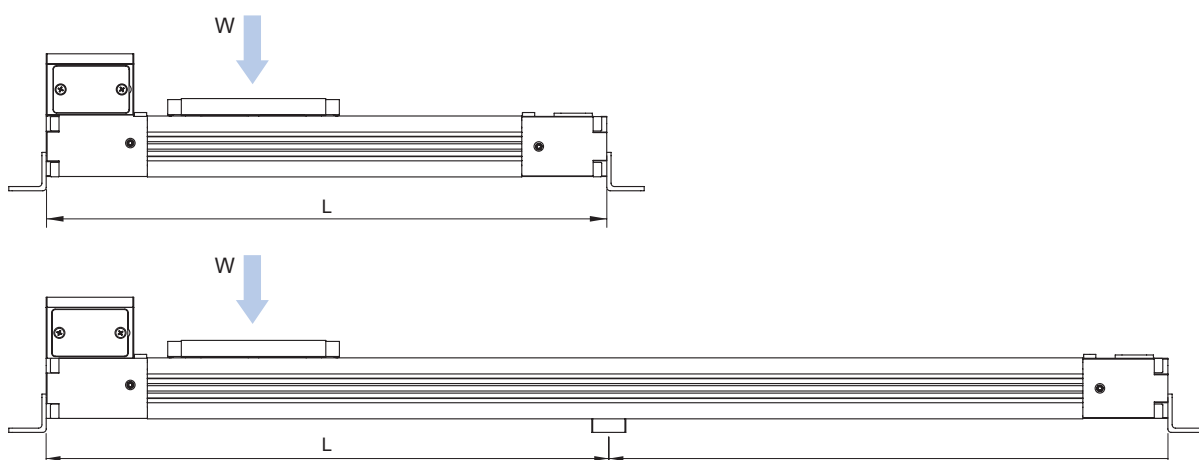
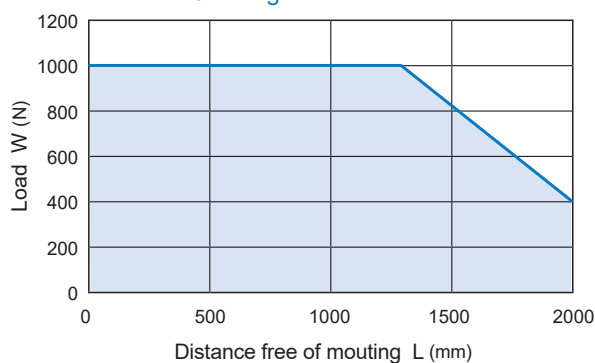


Diagram information

- 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

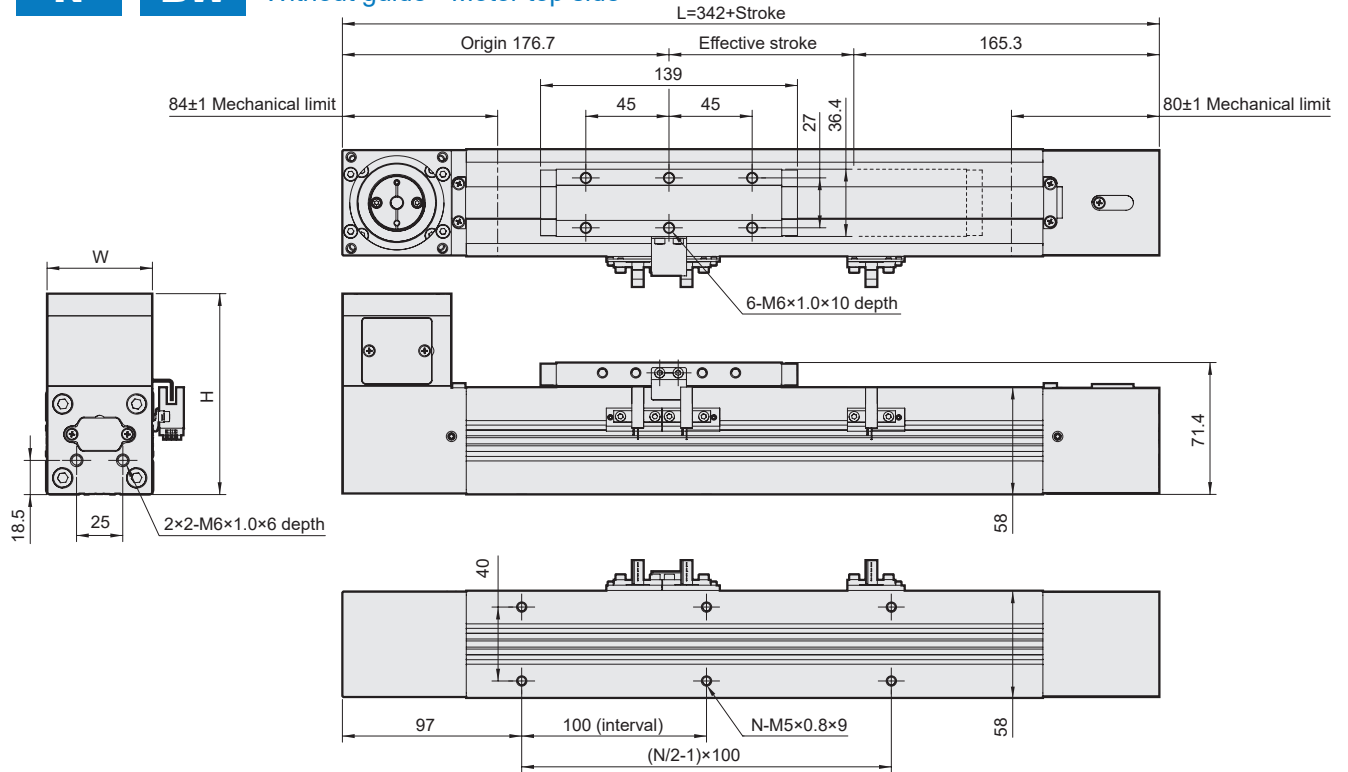
SLIDER ELECTRIC CYLINDER (WITHOUT MOTOR)



N

BW

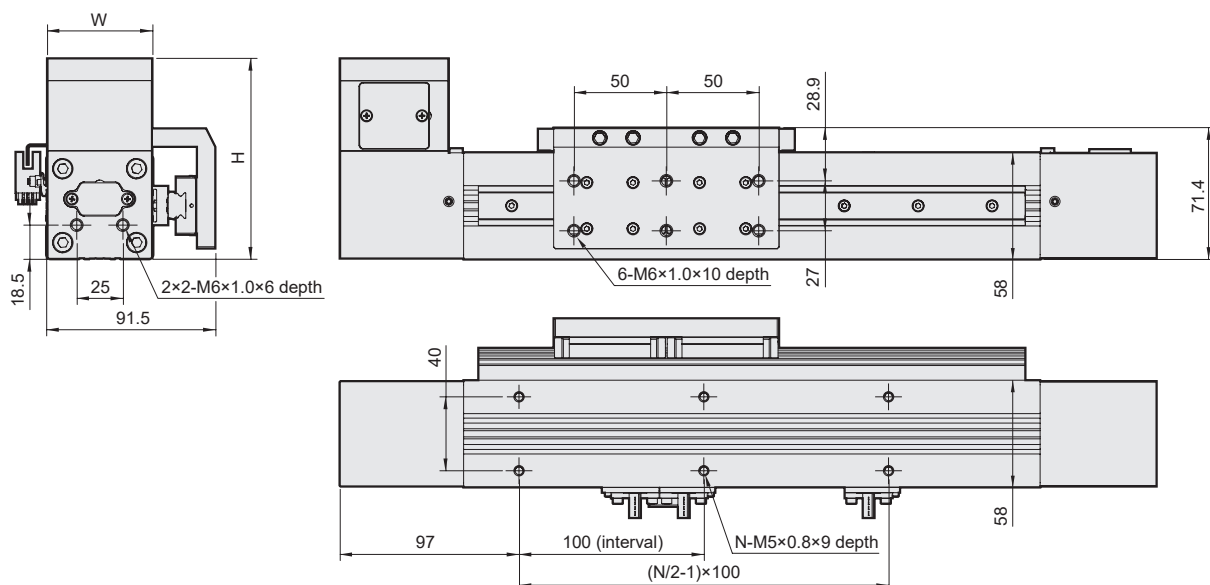
Without guide • Motor top side



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

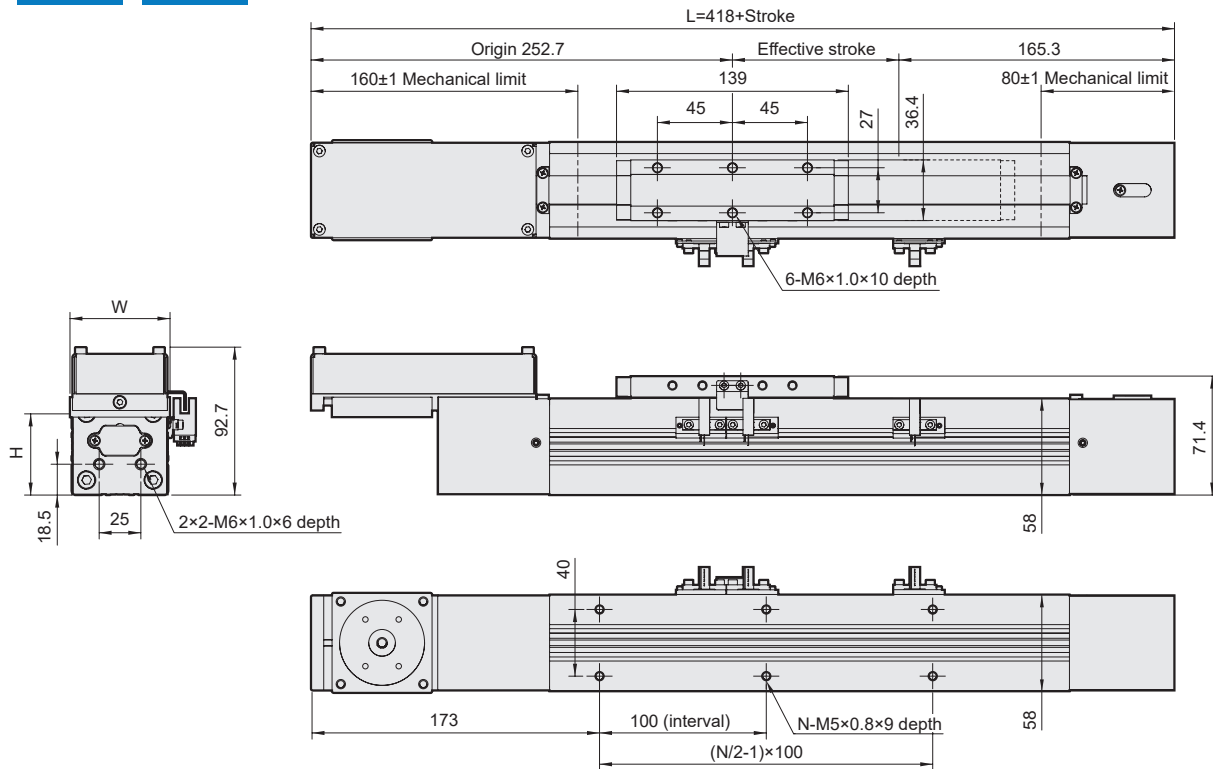
SLIDER ELECTRIC CYLINDER (WITHOUT MOTOR)



N

BM

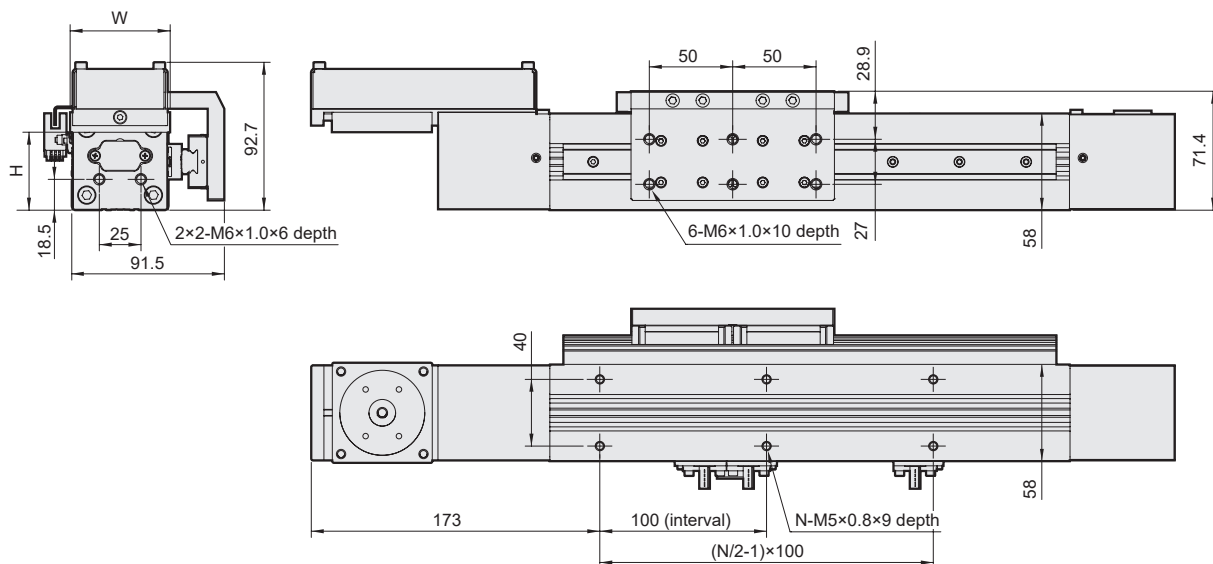
Without guide • Motor down side



GL

BM

Guide left side • Motor down side



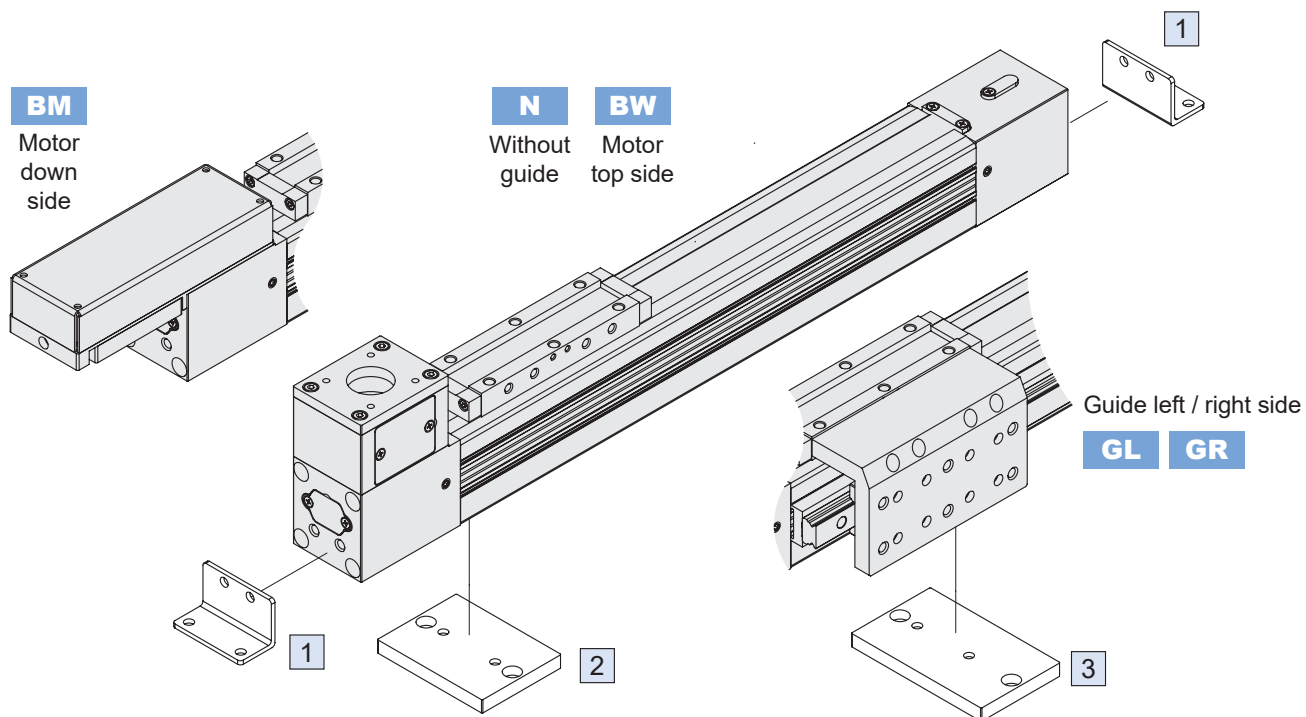
Unit: mm

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

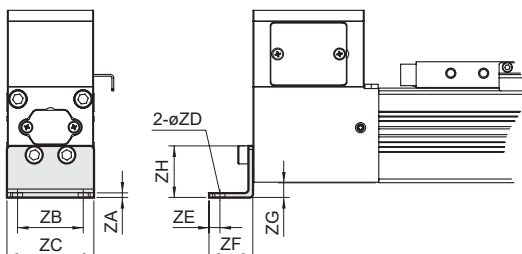
Stroke Code	Servo	Step
W	60	57
H	46.7	48.7

METFB-40 Mounting accessories

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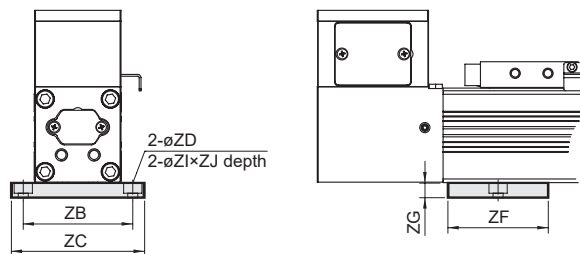


1 End cover bracket (2pcs/set)

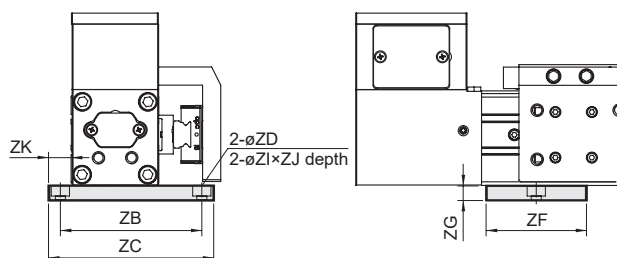


* Not applicable for (BM) motor down side.

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)
1	2.5	40	57	5.5	6	24	8	31.5	—	—	—	59
2	—	70	85	5.5	—	60	8	—	10	5.5	—	105
3	—	88	103	5.5	—	60	8	—	10	5.5	13.5	128