METB series

SLIDER ELECTRIC ACTUATOR (WITHOUT MOTOR)

mindman

Selection table

Applications



Features

- Belt driven unit with railway integrated.
- Extruded aluminum anodized 6060 alloy, tempered stainless steel protection band.
- Carriage with sealed system to protect against pollution.

Specification

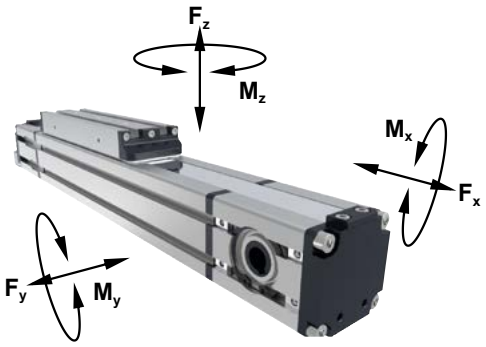
Model			METB		
Size		(mm)	42	55	80
Max. speed		(m/s)	3	3	3
Max. stroke length		(mm)	6000	6000	6000
Min. stroke length		(mm)	100	100	100
Pulley drive ratio		(mm)	90	120	160
Number of teeth of pulley		(mm)	18	24	32
Belt width (Teeth type ATL5)		(mm)	12	16	25
Max rpm		(g/min)	2000	1500	1150
Max. rated load	Fx	(N)	460	820	1650
	Fy	(N)	1560	1850	4500
	Fz	(N)	1560	1850	4500
Moments	Mx	(Nm)	20	25	80
	My	(Nm)	55	120	450
	Mz	(Nm)	55	120	450
Inertia moment aluminum profile	Ix	(cm^4)	11.8	36	183
	Iy	(cm^4)	14.2	45	226
Positioning repeatability		(mm)	±0.05	±0.05	±0.05
Max. radial load on input shaft		(N)	220	300	300
No load torque		(Nm)	>0.1	>0.5	0.9
Sensor switch			RDT, RQT, RCI		
Basic weight		(kg)	1.6	4.8	6
Added weight per 100 mm stroke		(kg)	0.25	0.37	0.9

Max values for dynamic conditions.

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

$$\frac{Fy_A}{Fy} + \frac{Fz_A}{Fz} + \frac{Mx_A}{Mx} + \frac{My_A}{My} + \frac{Mz_A}{Mz} \leq 1$$

* The **A** letters show the calculated value.



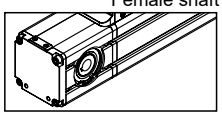
Order example

METB – 42 – 0100 – F08 L

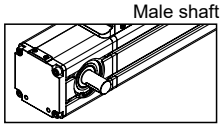
Model

METB

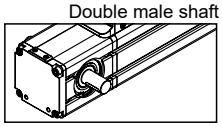
Female shaft



Male shaft



Double male shaft



Size (mm)

42	42×42
55	55×55
80	80×80

Stroke

100~6000 mm (4 codes)

* Minimum stroke unit 1mm.

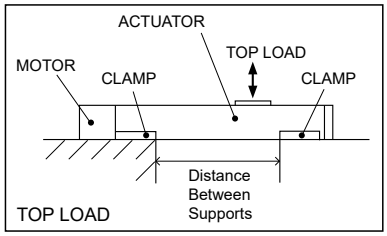
Shaft versions

Size	Type	ø	Part No.
42	Female shaft	8	**F08**
	Male shaft	12	**M12**
	Double male shaft	12	**D12**
55	Female shaft	8	**F08**
	Male shaft	16	**M16**
	Double male shaft	16	**D16**
80	Female shaft	19	**F19**
	Male shaft	19	**M19**
	Double male shaft	19	**D19**

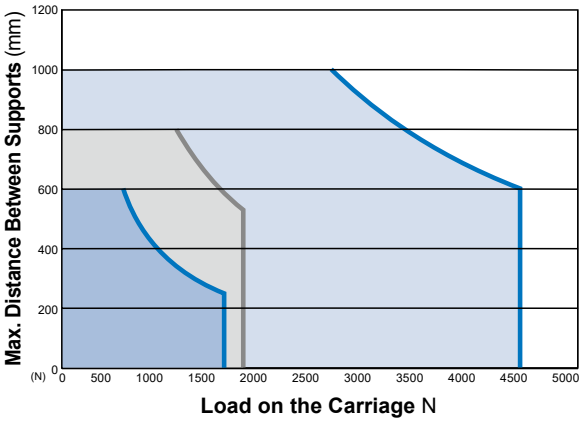
Male shaft

L	Left shaft
R	Right shaft

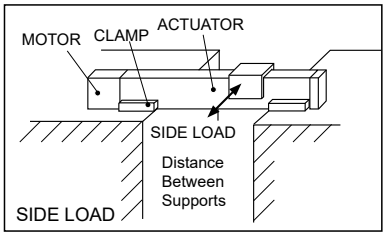
End supported top load



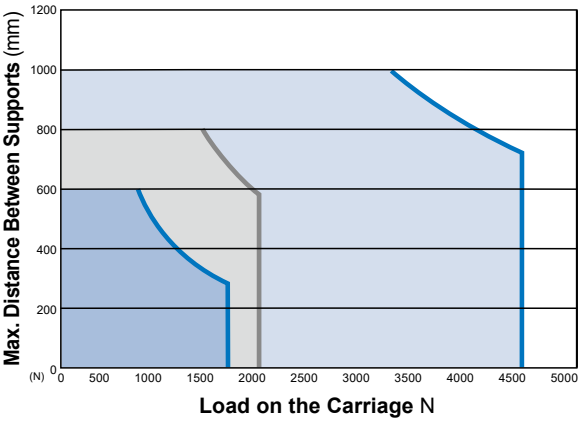
METB-42
METB-55
METB-80



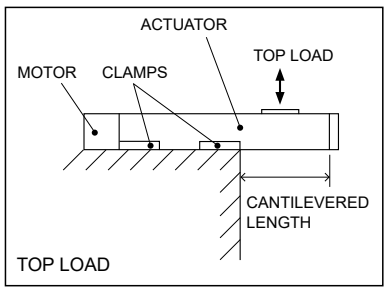
End supported side load



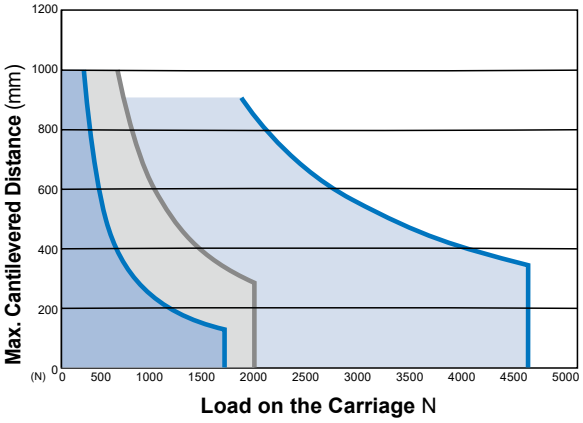
METB-42
METB-55
METB-80



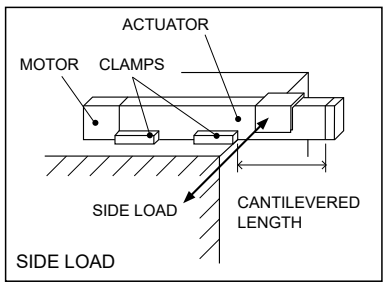
Cantilevered top load



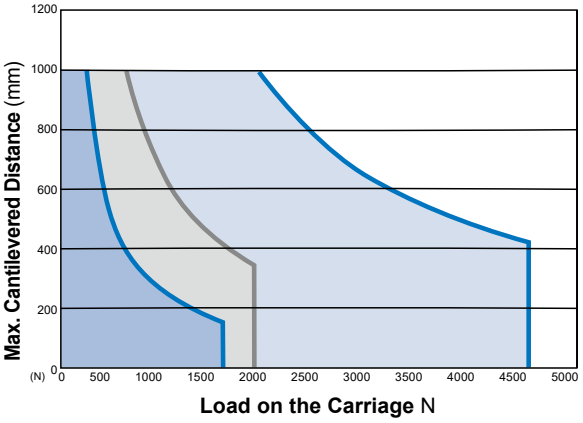
METB-42
METB-55
METB-80



Cantilevered side load



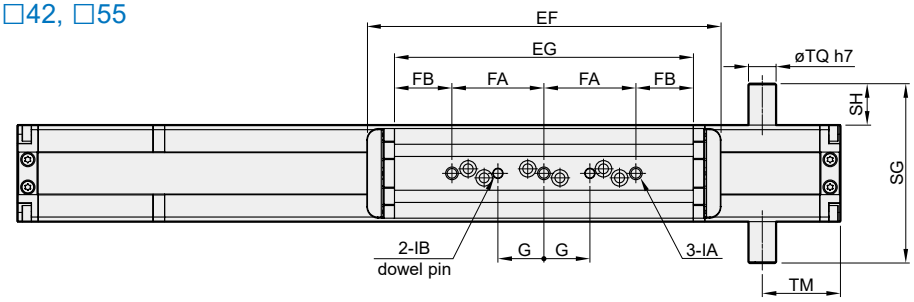
METB-42
METB-55
METB-80



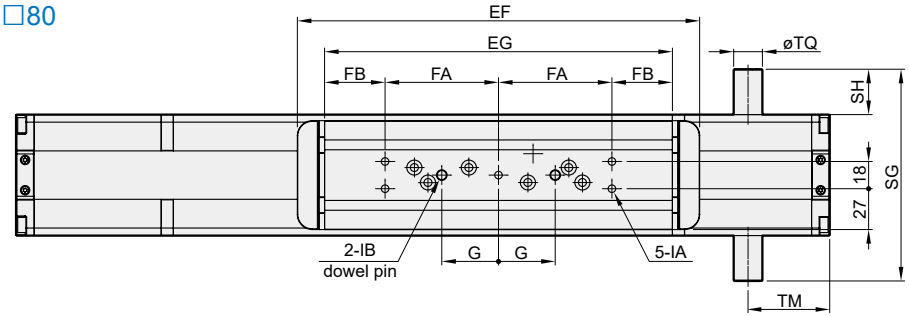
METB Dimensions □42~□80

SLIDER ELECTRIC ACTUATOR (WITHOUT MOTOR)

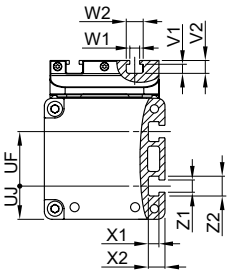
□42, □55

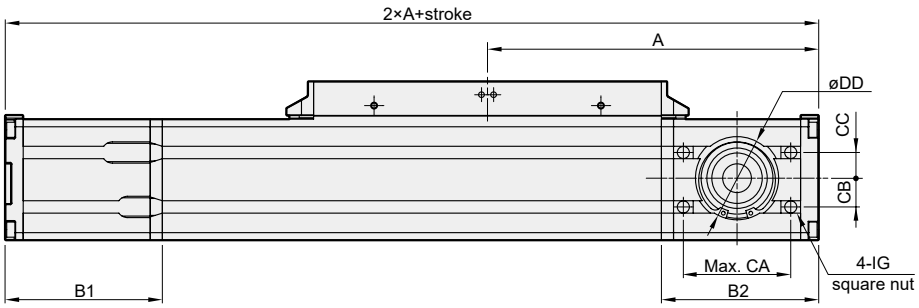


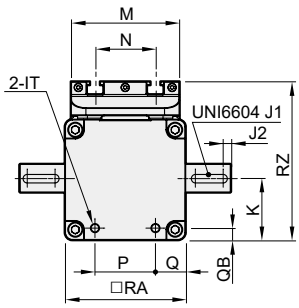
□80



Groove position

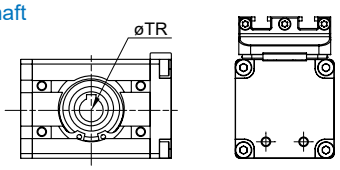




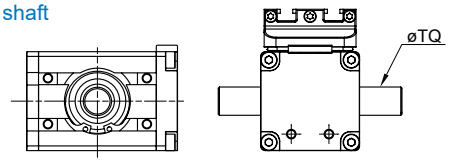


Shaft versions

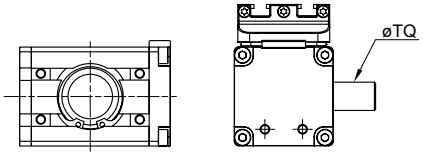
Female shaft



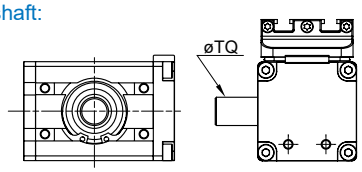
Double male shaft



Single male shaft:
side right



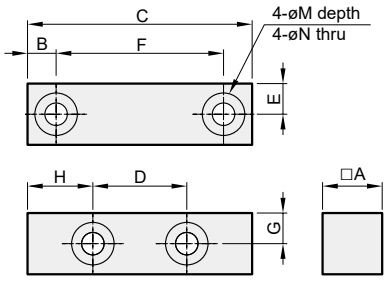
Single male shaft:
side left



Code / Tube I.D.	A	B1	B2	CA	CB	CC	DD	EF	EG	FA	FB	G	IA	IB	IG	IT
42	129.5	64	64	42	10	9.5	ø30×H7×1.7 dp	154	130	40	25	20	M5×0.8×5 dp	ø4×H7×5 dp	M5×0.8 DIN 562	M4×6 dp
55	166	88	88.5	55	8.5	13.5	ø32×H7×1.5 dp	190	150	55	20	30	M5×0.8×7.5 dp	ø5×H7×5 dp	M5×0.8 DIN 562	M5×6 dp
80	219	104	104	71	19.5	16.5	ø55×H7×2.75 dp	266	230	75	40	37.5	M6×1.0×10 dp	ø6×H7×10 dp	M8×1.25 DIN 562	M6×4 dp

Code / Tube I.D.	J1	J2	K	M	N	P	Q	QB	RA	RZ	SG	SH	TM	TQ	TR	UF	UJ	V1	V2	W1	W2	X1	X2	Z1	Z2
42	4×4×18	3.2	21	39	20	16	13	7	42	59.5	78	18	34	12	8	19.5	11	3.2	4.9	5.3	8	3.2	4.9	5.3	8.6
55	5×5×20	3.5	25	50	28	23	16	8	55	76.5	93	19	49	16	8	22	16.5	4.2	6.2	5.2	8.4	4.3	6.3	5.3	8.6
80	6×6×25	5.5	41.5	72	40	40	20	8	80	105.25	140	30	54	19	19	36	22	6	8.5	6.5	11	7	11	8.2	13.2

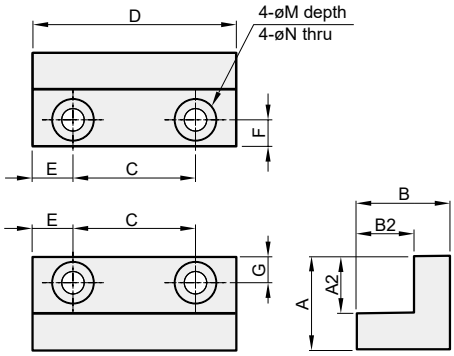
End cap mounting
(2 pcs/set)



Code / Size	A	B	C	D	E	F	G	H
42	14	5	42	16	7	32	7	13
55	15	7	55	23	7.5	41	8	16
80	16	8	80	40	8	64	8	20

Code / Size	M	N	Weight (g)	Order number
42	8×4.4 depth	4.5	65	**LB-EB1-42**
55	10×5 depth	5.5	100	**LB-EB1-55**
80	11×6 depth	6.6	160	**LB-EB1-80**

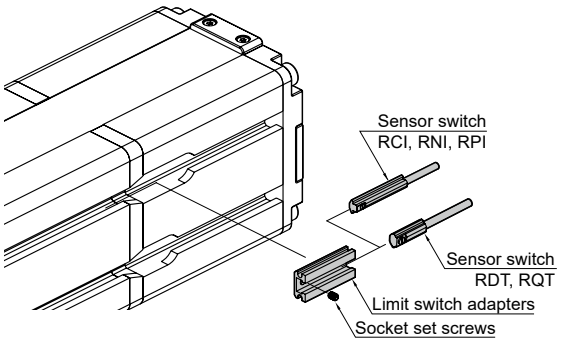
Mid section mounting
(2 pcs/set)



Code / Size	A	A2	B	B2	C	D	E	F	G
42	17	12	17	12	25	40	7.5	6	6
55	23	14	23	14	30	50	10	6.5	6.5
80	32	19	34	21	40	60	10	10	10

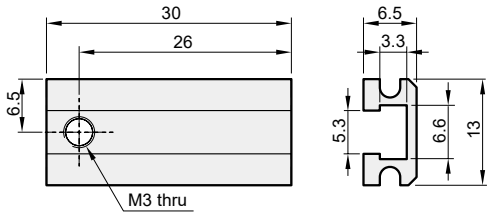
Code / Size	M	N	Weight (g)	Order number
42	10×3.5 depth	5.5	45	**MS-EB1-42**
55	10×5.5 depth	5.5	130	**MS-EB1-55**
80	15×8.6 depth	9	310	**MS-EB1-80**

Installation of sensor switch



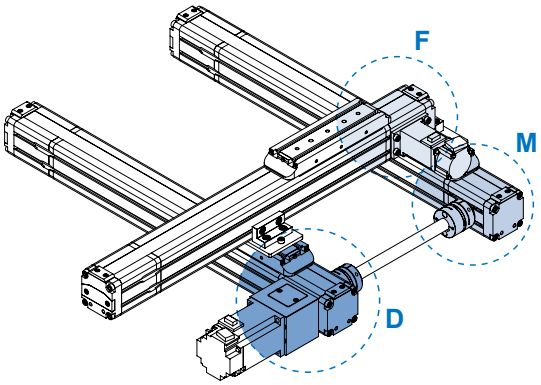
Limit switch adapters

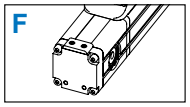
AK-EB1 (Only for size **80**)
Weight: 15 g



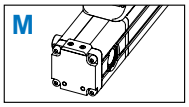
Applications

CNC machines: For precise cutting, drilling, or milling of materials.
3D printers: To move the print head accurately across the print bed.
Pick & place machines: Common in electronics manufacturing for placing components onto PCBs (Printed circuit boards).
Laser cutters & engravers: To guide the laser head with precision.

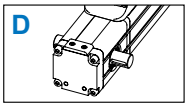




Female shaft



Male shaft



Double male shaft

