

Ⅱ-3

End bracket

IKU Precision Positioning Table TE

Slide table

Ball screw

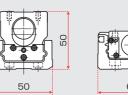


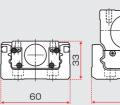


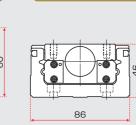


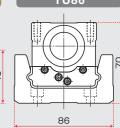
Sensor mounting groove

Bed









Major product specifications

Driving method	Precision ball screw
Linear motion rolling guide	Linear Way (ball type)
Built-in lubrication part	Lubrication part "C-Lube" is built-in
Material of table and bed	High-strength aluminum alloy
Sensor	Select by identification number

Accuracy

Linear Way

	uni	it: mm
Positioning repeatability	±0.002~0.020	
Positioning accuracy	0.035~0.065	
Lost motion	-	
Parallelism in table motion A	-	
Parallelism in table motion B	0.008~0.016	
Attitude accuracy	-	
Straightness	-	
Backlash	0.005	

Points

Light weight, low profile and highprecision positioning table

Light weight, low profile and compact positioning table using high-strength aluminum alloy for its main components with a slide table assembled inside a U-shaped bed.

The mass of the entire table is reduced to about 40% of TU series. Low cross sectional height (26mm for TE50B, 33mm for TE60B, and 46mm for TE86B). Moreover, the structure of various sensors directly installable on sensor mounting groove of the bed contributes to the miniaturization.

■ Table specification is selectable according to your use

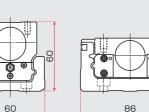
There are two types in the shape of slide table: standard and with flange. The number of slide tables, motor folding back specification, ball screw lead, with or without a dust protection cover, installation of various sensors can be selected, you can select an optimal product for the specifications of your machine

Excellent cost performance

The excellent cost performance is realized by reducing the number of parts, and optimizing the part shapes.

Comparison with Precision Positioning Table TU

Sectional height



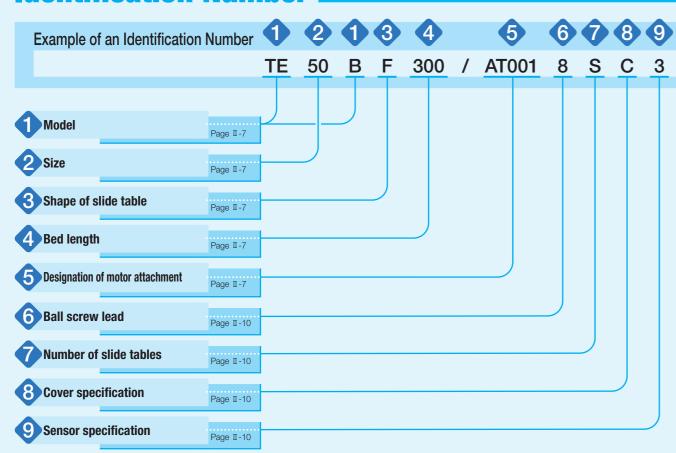
Mass

Model and size	Stroke length (mm)	Overall length(mm)	Mass(kg)	Mass / 100mm(kg)
TE50B	60	218	0.52	0.24
TU50	60	226	1.8	0.80
TE60B	100	269	1.0	0.37
TU60	100	298	3.3	1.11
TE86B	300	523	3.7	0.71
TU86	250	498	10.9	2.19

Variation

Shape	Model	Bed width (mm)				
Snape	Model	50	60	86		
Standard	TE···BS	☆	\Rightarrow	☆		
With flange	TE···BF	☆	☆	☆		

Identification Number



Identification Number and Specification

Model	TE···B: Precision Positioning Table TE
2 Size	Size indicates bed width. Select a size from the list of Table 1.
3 Shape of slide table	S: Standard table F: Flange type standard table
4 Bed length	Select a bed length from the list of Table 1.

Table 1 Sizes and bed lengths unit: mm					
Model and size	Bed width	Bed length			
TE50B	50	150, 200, 250, 300, 400, 500			
TE60B	60	150, 200, 300, 400, 500, 600, 700			
TE86B	86	340, 440, 540, 640, 740, 840, 940			

Remark: For stroke length, please see the dimension tables shown in pages of II-19 or later.

Designation of motor attachment	AT000 : Motor inline specificatio AT001 to AT011 : Motor inline specificatio	n With motor attachment
	9 1	cification Without motor attachment
	AR001 to AR008: Motor folding back spec	cification With motor attachment
	To specify the motor attachment, select it to	from the list of Table 2.1 and Table 2.2.
	· Please specify motor folding back specifica	ation and motor attachment applicable to motor for use.
	· If motor inline specification with motor at	ttachment is specified, the main body is shipped
	with a coupling indicated in the Table 3 n	nounted. However, the final position adjustment
	should be made by customer since it is o	only temporarily fixed. For a product without motor
	attachment (AT000), no coupling is attac	hed.
	· If motor folding back specification with mo	tor attachment is specified, "housing applicable to the

specified motor, pulley (on motor side and ball screw side), cover, motor bracket, belt and bolts

necessary for assembly" are supplied. Motor mounting bolts should be prepared by customer.

Identification Number and Specification

Table 2.1 Application of motor attachment (motor inline specification)

		Motor to b	e used		Flange	Motor attachment		
Туре	Manufacturer	Series	Model	Rated output W	size mm	TE50B	TE60B	TE86B
			SGMJV-A5A	50		AT001	AT002	_
	VACICANA		SGMAV-A5A	30	□40	AT001	AT002	_
	YASKAWA ELECTRIC	Σ-V	SGMJV-01A	100	□40	_	AT002	_
	CORPORATION	Z-V	SGMAV-01A	100		_	AT002	_
	CONFORMION		SGMJV-02A	200	□60	_	_	AT003
			SGMAV-02A	200		_	_	AT003
			HG-MR053	50		AT001	AT002	_
	Mitaulaialai		HG-KR053	30	□40	AT001	AT002	_
	Mitsubishi Electric	J4	HG-MR13	100	□40	_	AT002	_
AC servo	Corporation	J4	HG-KR13	100		_	AT002	_
motor	Corporation		HG-MR23	200	□60	_	_	AT003
motor			HG-KR23			_	_	AT003
			MSMD5A	- 50		AT004	AT005	_
			MSME5A		- □38	AT004	AT005	_
	Panasonic	MINAS A5	MSMD01	100		_	AT005	_
	Corporation	IVIIINAS AS	MSME01			_	AT005	_
			MSMD02	200	□60	_	_	AT006
			MSME02	200		_	_	AT006
	Hitachi Industrial		ADMA-R5L	50	□40	AT001	AT002	_
	Equipment	AD	ADMA-01L	100	□40	_	AT002	_
	Systems Co., Ltd		ADMA-02L	200	□60	_	_	AT003
			ARM46		□42	AT007	_	_
Stepper	ORIENTAL	α step	ARM66		□60	_	_	AT008
motor	MOTOR		ARM69		□60	_	_	AT008
motor	Co., Ltd.	CRK	CRK54		□42	AT009	_	_
		Ortic	CRK56	1)	□60	_	AT010	AT011

Note (1) Applicable to the outer diameter ϕ 8 of motor output shaft.

Remark: For detailed motor specifications, please see respective motor manufacturer's catalog.

Motor to be used				Flange	M	otor attachme	ent	
Type	Manufacturer	Series	Model	Rated output W	size	TE50B	TE60B	TE86B
			TLY-A110(AA type)	41	□40	AT001	AT002	_
			TLY-A120(AA type)	86	□40	AT001	AT002	_
	TLY(metric)	TLY-A130(AA type)	140	□40	AT001	AT002	_	
			TLY-A220(AA type)	350	□60	_	_	AT003 (3)
			TLY-A230(AA type)	440	□60	_	_	AT003 (3)
			TLY-A120(AN type)	86	□42	TAE9043- ATE137 (1)	_	_
AC servo motor	Allen-Bradley	Bradley TLY(NEMA)	TLY-A130(AN type)	140	□42	TAE9043- ATE137 (1)	_	_
			TLY-A220(AN type)	350	□56.4	_	_	TAE9017- ATE135 (1)
			TLY-A230(AN type)	440	□56.4	_	_	TAE9017- ATE135 (1)
			TLY-A2530(AN type)	690	□86	_	_	TAE9056- ATE134 (1)
			TLY-A2540(AN type)	860	□86	-	_	TAE9056- ATE134 (1)
Servo or Stepper	NEMA17C					TAE9043- ATE110 (1)(2)	_	_
	NEMA23D					TAE9017- ATE096 (1)	TAE9017- ATE096 (1) (2)	-
	INCIVIAZOD					(2)	TAE9017- ATE097 (1) (2)	-
	NEMA34D					_	_	TAE9056- ATE095 (1) (2

Note (1) The TAE part numbers are the part number of motor attachment component sold separately. In the TE part number, please choose motor attachment code AT000. No Coupling is included. It is required to consider customer's operation patterns for these motor

Remark: For detailed motor specifications, please see respective motor manufacturer's catalog.

⁽²⁾ Please confirm the length and the diameter of the motor shaft etc., and check the usability of the motor attachment with your motor

⁽³⁾ It is required to change the delivered coupling to XGS-30C-8×12 which is for the 12mm motor shaft by customer.

Table 2.3 Application of motor attachment (motor folding back specification)

		Motor to b	e used		Flange	Mo	otor attachme	ent
Туре	Manufacturer	Series	Model	Rated output W	size mm	TE50B	TE60B	TE86B
			SGMJV-A5A	50		AR001	AR002	_
	VACIZAVAA		SGMAV-A5A	50	□40	AR001	AR002	_
	YASKAWA ELECTRIC CORPORATION	Σ-V	SGMJV-01A	100	□40	_	AR002	_
		Z-V	SGMAV-01A	100		_	AR002	_
			SGMJV-02A	200	□60	_	-	AR003
			SGMAV-02A	200		_	_	AR003
			HG-MR053	50		AR001	AR002	_
	Mitsubishi		HG-KR053	30	□40	AR001	AR002	_
	Electric	J4	HG-MR13	100	⊔ 4 0	_	AR002	_
AC servo	Corporation	04	HG-KR13			_	AR002	_
motor			HG-MR23	200	□60	_	_	AR003
motor			HG-KR23	200		_	_	AR003
			MSMD5A	50	□38	AR004	AR005	_
			MSME5A	30		AR004	AR005	_
	Panasonic	MINAS A5	MSMD01	100		_	AR005	_
	Corporation	IVIII VAO AO	MSME01	100		_	AR005	_
			MSMD02	200	□60	_	_	AR006
			MSME02	200		_	_	AR006
	Hitachi Industrial		ADMA-R5L	50	□40	AR001	AR002	_
	Equipment	AD	ADMA-01L	100	□+0	_	AR002	_
	Systems Co., Ltd		ADMA-02L	200	□60	_	_	AR003
Stepper	ORIENTAL MOTOR	α step	ARM46		□42	AR007	_	_
motor	Co., Ltd.	CRK	CRK54		□42	AR008	_	_

Remark: For detailed motor specifications, please see respective motor manufacturer's catalog.

Table 3 Coupling models (motor inline specification)

Motor attachment	Coupling models	Manufacturer	Coupling inertia J_c ×10 ⁻⁵ kg·m ²
AT001	XGS-19C- 5× 8	Nabeya Bi-tech Kaisha	0.062
AT002	XGS-19C- 5× 8	Nabeya Bi-tech Kaisha	0.062
AT003	XGS-30C- 8×14	Nabeya Bi-tech Kaisha	0.55
AT004	XGS-19C- 5× 8	Nabeya Bi-tech Kaisha	0.062
AT005	XGS-19C- 5× 8	Nabeya Bi-tech Kaisha	0.062
AT006	XGS-30C- 8×11	Nabeya Bi-tech Kaisha	0.55
AT007	XGS-19C- 5× 6	Nabeya Bi-tech Kaisha	0.062
AT008	XGS-30C- 8×10	Nabeya Bi-tech Kaisha	0.55
AT009	XGS-19C- 5× 5	Nabeya Bi-tech Kaisha	0.062
AT010	XGS-19C- 5× 8	Nabeya Bi-tech Kaisha	0.062
AT011	XGS-30C- 8× 8	Nabeya Bi-tech Kaisha	0.55
TAE9043-ATE137	XGS-19C- 5× 6.35	Nabeya Bi-tech Kaisha	0.062
TAE9017-ATE135	XGS-30C- 8×12.7	Nabeya Bi-tech Kaisha	0.55
TAE9056-ATE134	XGS-34C- 8×15.875	Nabeya Bi-tech Kaisha	1.0

Remark: For detailed coupling specification, please see the manufacturer's catalog.

6 Ball screw lead

Select from among ball screw leads applicable to the sizes and bed lengths shown in the table below.

Model	Bed length mm	Ball screw lead mm				
and size	bea length min	4	5	8	10	20
TE50B	300 or less	0	_	0	_	_
I ESUB	400 or more	_	_	0	_	_
TE60B	600 or less	_	0	_	0	_
IEOUB	700	_	_	_	_	0
TE86B	All	_	_	_	0	0

Number of slide table

S: One unit

C: Two units

8 Cover specification

0: Without cover

C: With bridge cover (applied to TE···BF)

Specification of sensor

0: Without sensor

2: Two units of sensor mounted (limit)

3: Three units of sensor mounted (limit, pre-origin)

4: Four units of sensor mounted (limit, pre-origin, origin)

5: Two sensors attached (limit)

6: Three sensors attached (limit, pre-origin)

7: Four sensors attached (limit, pre-origin and origin sensors)

If sensor mounting (symbol 2, 3, or 4) is specified, the sensor is mounted into the mounting groove on the side of bed, and two detecting plates are attached onto the slide table. If sensor attachment (symbol 5, 6, or 7) is specified, specified number of sensors are attached including mounting screws for sensors, nuts, two detecting plates, and mounting screws for the detecting plates.

1N=0.102kgf=0.2248lbs. 1mm=0.03937inch

Specifications.

Table 4 Accuracy unit: mm

Table 4 Accurac	<i>y</i>				uriit. IIIII
Model and size	Bed length	Positioning repeatability	Positioning accuracy	Parallelism in table motion B	Backlash (1)
	150		0.005		
	200		0.035	0.008	
TE50B	250	±0.002	0.040	0.006	0.005
TESOB	300	(±0.020)	0.040		0.003
	400		0.045	0.010	
	500		0.043	0.012	
	150		0.005		
	200	±0.002 (±0.020)	0.035	0.000	0.005
	300		0.040	0.008	
TE60B	400		0.045		
	500			0.010	
	600		0.050		
	700		0.060	0.012	
	340		0.040	0.008	
	440		0.045	0.010	
	540	10000	0.050	0.010	
TE86B	640	±0.002 (±0.020)	0.000	0.012	0.005
	740	(±0.020)	0.055	0.012	
	840		0.065	0.014	
	940		0.000	0.016	

Note (1) This does not apply to table of motor folding back specification.

Remark: The values in () are reference values provided that the timing belt tension is properly adjusted in motor folding back specification table.

Table 5 Maximum carrying mass

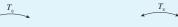
Table & Maximum carrying made								
Model and size	Ball screw lead	Maximum carrying mass kg						
Wodel and Size	mm	Horizontal	Vertical					
TE50B	4	12	11					
12308	8	12	7					
	5	17	13					
TE60B	10	17	8					
	20	17	7					
TE86B	10	36	18					
	20	29	10					

Remark: The value is for one flange type standard table.

Table 6 Allowable moment

Model and size	Allowable moment (¹) N ⋅ m					
Widdel allu Size	$T_{\rm o}$ $T_{\rm x}$		$T_{\scriptscriptstyle m Y}$			
TE50B	9.8 (19.6)	9.8 (48.4)	9.8 (48.4)			
TE60B	16.7 (33.4)	16.7 (88.1)	16.7 (88.1)			
TE86B	49.0 (98.0)	49.0 (247.0)	49.0 (247.0)			

Note (1) The value in (1) represents two slide tables in close contact.

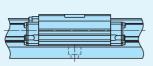


■ Allowable moment

Allowable moment refers to the maximum static moment that can be used without affecting functions or performance. Therefore, do not exceed the allowable moment value during operation.







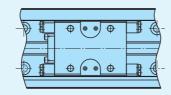


Table 7 Load rating of linear motion rolling guide

Model	Basic dynamic load rating C	Basic static load rating C_0	Static moment rating (1) N·m			
and size	N	N	T_{0}	T_{x}	$T_{\scriptscriptstyle m Y}$	
TE50B	8 490	12 500	211 (422)	99.5 (508)	99.5 (508)	
TE60B	12 400	17 100	354 (708)	151 (795)	151 (795)	
TE86B	26 800	35 900	1 110 (2 220)	472 (2 400)	472 (2 400)	

Note (1) In directions indicated in the above figures, the value in (1) is for two slide tables in close contact.

Table 8 Maximum speed

		Dad langth	Maximum speed mm/s					
Motor type	Model and size	Bed length mm	Lead 4mm	Lead 5mm	Lead 8mm	Lead 10mm	Lead 20mm	
		300 or less	400	_	800	_	_	
	TE50B	400	_	_	800	_	_	
		500	_	_	620	_	_	
		500 or less	_	500	_	1 000	_	
AC	TE60B	600	_	350	_	710	_	
servomotor		700	_	_	_	_	960	
Servomotor	TE86B	540 or less	_	_	_	930	1 860	
		640	_	_	_	830	1 630	
		740	_	_	_	590	1 170	
		840	_	_	_	440	880	
		940	_	_	_	340	690	
		300 or less	120	_	240	_	_	
	TE50B	400	_	_	240	_	_	
Stepper		500	_	_	240	_	_	
motor	TE60B	600 or less	_	150	_	300	_	
	IEOUD	700	_	_	_	_	600	
	TE86B	940 or less	_	_	_	300	600	

Remark: To measure the practical maximum speed, it is required to consider operation patterns based on the motor to be used and load conditions.

Table 9.1 Specifications of ball screw 1

Model and size	Lead mm	Shaft dia. mm	Basic dynamic load rating $ {\it C} $	Basic static load rating $C_{\scriptscriptstyle 0}$
TEFOR	4	0	2 290	3 575
TE50B 8	8	8	1 450	2 155
	5		2 730	4 410
TE60B	10	10	1 720	2 745
	20		1 636	2 790
TEOGD	10	12	3 820	6 480
TE86B	20	12	2 300	3 920

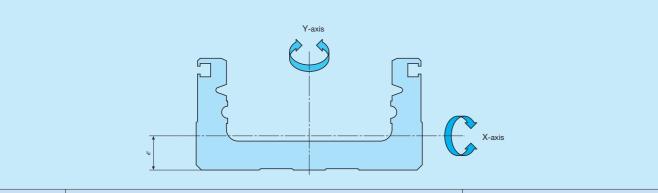
Table 9.2 Specifications of ball screw 2

unit: mm

Model and size	150 200 250	Shaft dia.	Overall length 192.5 242.5
	200 250		
	250		242.5
			-
TE50B		8	292.5
TESOB	300	0	342.5
	400		442.5
	500		542.5
	150		194
	200	10	244
	300		344
TE60B	400		444
	500		544
	600		644
	700		744
	340		395
	440		495
	540		595
TE86B	640	12	695
	740		795
	840		895
	940		995

I-12

Table 10 Moment of inertia of sectional area of bed



Model	Moment of inertia of	Center of gravity	
and size	I_{X}	$I_{\scriptscriptstyle Y}$	e mm
TE50B	1.3×10 ⁴	1.2×10 ⁵	6.4
TE60B	4.7×10 ⁴	3.2×10⁵	8.8
TE86B	2.0×10 ⁵	1.3×10 ⁶	13.0

Table 11 Table inertia and starting torque

Model and size		Table inertia $J_{_{\rm T}}$ (2) $\times 10^{.5} {\rm kg \cdot m^2}$								Starting		
		Standard table				Flange type standard table					torque $T_s(1)$	
	mm			Lead					Lead			N·m
		4mm	5mm	8mm	10mm	20mm	4mm	5mm	8mm	10mm	20mm	
	150	0.057	_	0.071	_	_	0.060	_	0.084	_	_	
	200	0.069	_	0.083	_	_	0.072	_	0.096	_	_	
TE50B	250	0.085	_	0.099	_	_	0.088	_	0.112	_	_	0.03
IEOUD	300	0.097	_	0.111	_	_	0.100	_	0.124	_	_	0.03
	400	_	_	0.139	_	_	_	_	0.152	_	_	
	500	_	_	0.167	_	_	_	_	0.180	_	_	
	150	_	0.13	_	0.17	_	_	0.14	_	0.20	_	
	200	_	0.19	_	0.23	_	_	0.20	_	0.26	_	
	300	_	0.26	_	0.30	_	_	0.27	_	0.33	_	
TE60B	400	_	0.33	_	0.36	_	_	0.34	_	0.40	_	0.03
	500	_	0.40	_	0.44	_	_	0.41	_	0.47	_	
	600	_	0.47	_	0.51	_	_	0.48	_	0.54	_	
	700	_	_	_	_	0.76	_	_	_	_	0.88	
	340	_	_	_	0.73	1.19	_	_	_	0.81	1.50	
	440	_	_	_	0.88	1.35	_	_	_	0.95	1.64	
	540	_	_	_	1.03	1.50	_	_	_	1.11	1.80	
TE86B	640	_	_	_	1.18	1.64	_	_	_	1.25	1.95	0.05
	740	_	_	_	1.33	1.79	_	_	_	1.41	2.10	
	840	_	_	_	1.48	1.94	_	_	_	1.56	2.25	
	940	_	_	_	1.63	2.10	_	_	_	1.71	2.40	

Notes (1) When two units of slide table are used, it is about 1.5 times as long as that of one unit, and when table of motor folding back specification is used, it is about twice.

Mounting

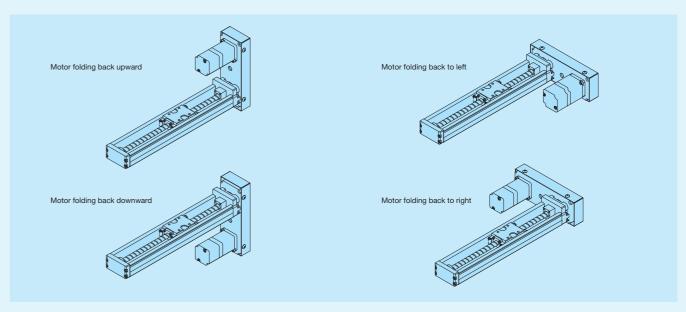
For the processing accuracy of the Precision Positioning Table mounting surface and the tightening torque of the fixing screws, see page II-29.

Motor Folding Back Specification

Motor folding back specification is available for Precision Positioning Table TE, space can be saved by folding back the motor and reducing the overall length of the table. For dimensions of motor folding back specification, please refer to respective dimension table.

For motor folding back specification, assembly should be made by customer since "housing applicable to the specified motor, pulley (on motor side and ball screw side), cover, motor bracket, belt and bolts necessary for assembly" are supplied. However, motor mounting bolts should be prepared by customer. The motor attachment can be attached in 4 directions as indicated in the following figure.

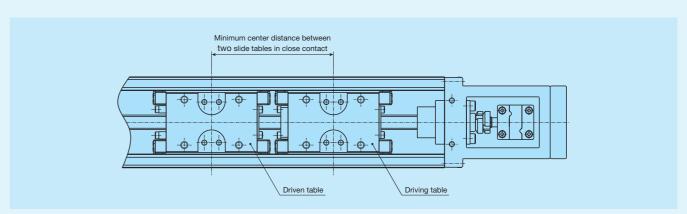
There is difference in dimension between where the motor attachment or the motor is lower than the bottom of the bed depending on the motor folding back direction. Do the design ensuring that the peripheral components do not interfere and that enough allowance is provided according to the approximate values in the dimension table shown in Page II-25 to II-30.



Two Slide Table Specification

Two slide table specification is available for Precision Positioning Table TE. Ball screw nuts are mounted on slide table at the motor side, and it can be driven by the motor (driving table). Ball screw nuts are not mounted on slide table at the opposite motor side, and it is free condition (driven table).

It is possible to make the structure resistant to moment load by using two slide tables in combination (Table 8). When combining slide tables, allow more clearance than "Minimum center distance between two slide tables in close contact" described in the dimension table shown in pages II-19 to II-30. (Enlarging the span will shorten the stroke.)



⁽²⁾ For motor folding back specification, please add the following value to the value in the table. TE50B: 0.17×10⁻⁵kg·m², TE60B: 0.39×10⁻⁵kg·m², TE86B: 0.86×10⁻⁵kg·m²

Sensor Specification

Table 12 Sensor timing chart

Motor inline specification 14 Pre-origin OFF CCW limit OFF Stroke length CW limit Mechanical stopper Motor folding back specification Origin C OFF CW limit OFF CCW limit Stroke length (E) Mechanical stopper unit: mm Ball screw $D(^{1})$ lead 33 10 6 (9) 8 6 5 3 44 10 20 9.5(8.5) 20 12 10 50 20 11 (11)

Note (1) The value in (1) represents dimensions for two slide tables.

20

Remarks 1. Mounting a sensor is specified using the corresponding identification number.

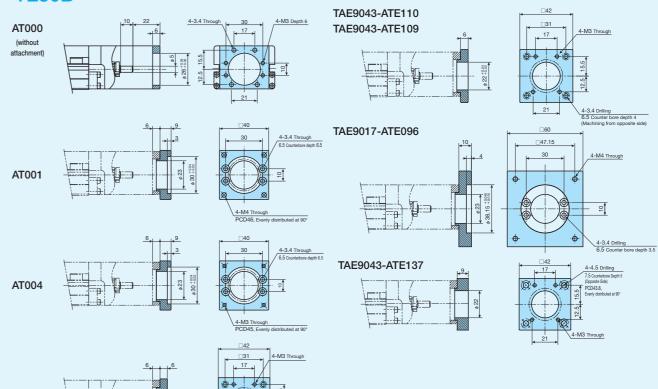
- 2. For the specifications of respective sensors, please see the section of sensor specification in General Explanation.
- 3. For the motor folding back specification, CW and CCW will invert.

Dimensions of Motor Attachment

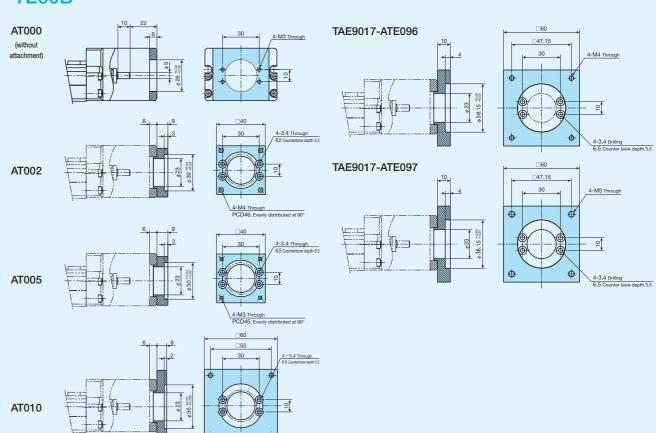
■ Motor inline specification

Remark: Motor attachment for NEMA, please see the pages II-31 or later.

TE50B



TE60B



Model

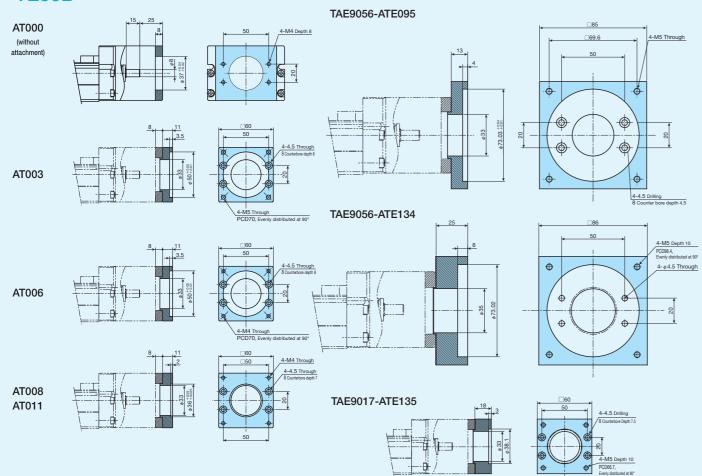
and size

TE50B

TE60B

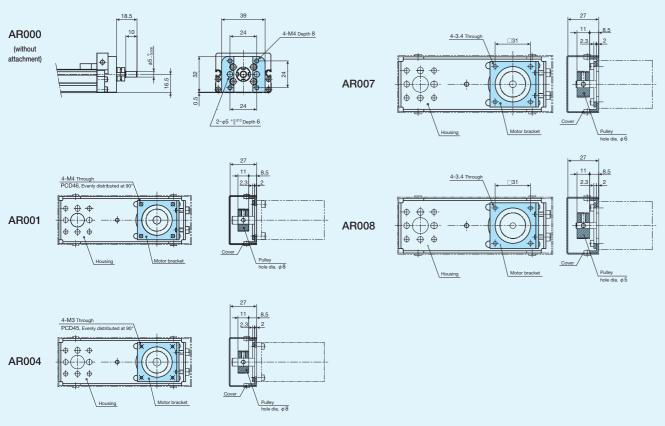
TE86B

TE86B



■ Motor folding back specification

TE50B

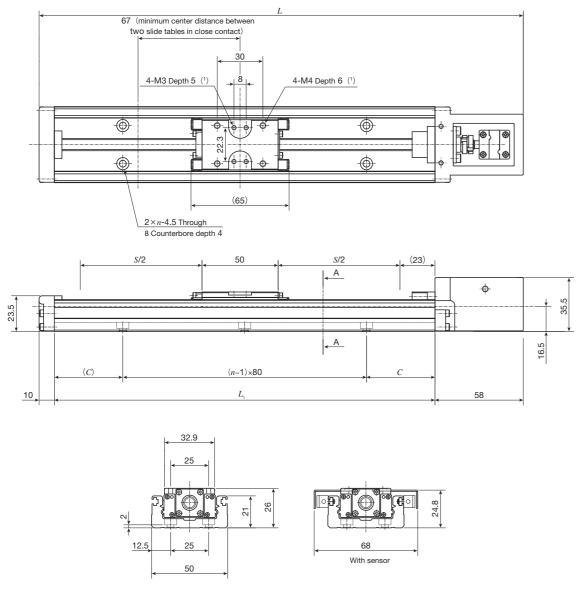


AR000 (without attachment) AR001 AR002 AR003 AR

AR006

AR005

TE50BS (Motor inline specification)



A-A Sectional dimension

unite	mm
unit:	1111111

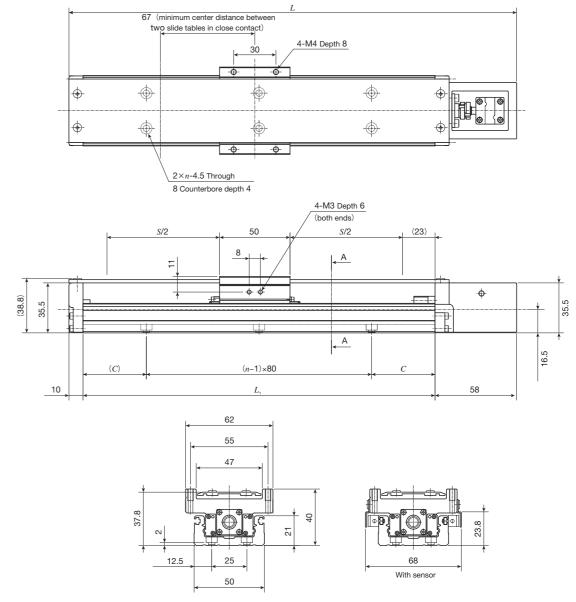
Bed length	Overall length	Stroke length	Mounting holes of bed		Mass (Ref.)
$L_{_1}$	L	S(2)	C	n	kg(³)
150	218	60(-)	35	2	0.52
200	268	110(40)	20	3	0.62
250	318	160(90)	45	3	0.72
300	368	210(140)	30	4	0.82
400	468	310(240)	40	5	1.02
500	568	410(340)	10	7	1.22

Notes (1) Too deep insertion depth of the mounting bolt may affect the running performance of the slide table, so never insert a bolt longer than the depth of the through hole.

Remarks 1. Motor attachment for AC servomotor is 3.5mm lower than the bottom of the bed.

2. Motor attachment for stepper motor is 4.5mm lower than the bottom of the bed.

TE50BF (Motor inline specification)



A-A Sectional dimension

					unit: mm
Bed length	Overall length	Stroke length	Mounting holes of bed		Mass (Ref.)
$L_{_1}$	L	S(1)	C	n	kg (²)
150	218	60(-)	35	2	0.65
200	268	110(40)	20	3	0.75
250	318	160(90)	45	3	0.85
300	368	210(140)	30	4	0.94
400	468	310(240)	40	5	1.14
500	568	410(340)	10	7	1.33

Notes (1) The value indicates the allowable stroke when limit sensors are mounted. The value in (1) represents dimension for two slide tables in close contact.

(2) The value shows the mass of the entire table with one slide table, and it is 0.16kg heavier with two slide tables.

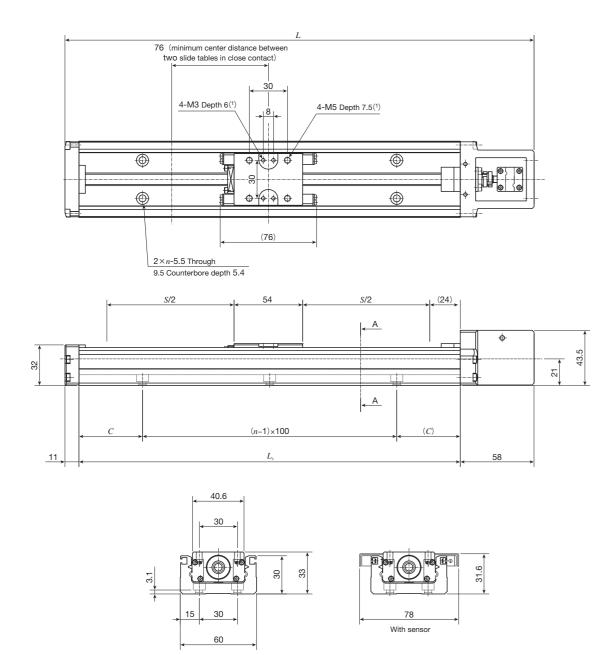
Remarks 1. Motor attachment for AC servomotor is 3.5mm lower than the bottom of the bed.

2. Motor attachment for stepper motor is 4.5mm lower than the bottom of the bed.

⁽²⁾ The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables in close contact.

⁽³⁾ The value shows the mass of the entire table with one slide table, and it is 0.07kg heavier with two slide tables.

TE60BS (Motor inline specification)



A-A Sectional dimension

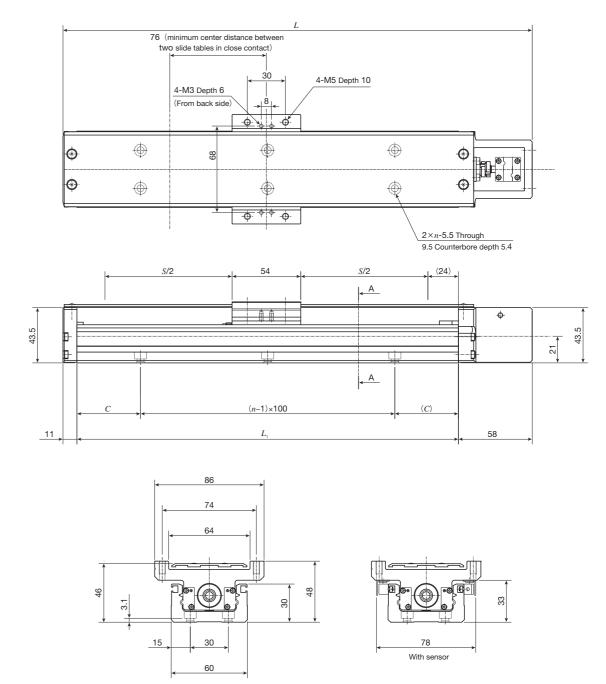
unit: mm

Wille Hill					
Bed length	Overall length	Stroke length	Mounting ho	les of bed	Mass (Ref.)
$L_{_1}$	L	$S(^{2})$	C	n	kg(³)
150	219	50(-)	25	2	0.9
200	269	100(-)	50	2	1.0
300	369	200(125)	50	3	1.3
400	469	300(225)	50	4	1.6
500	569	400(325)	50	5	1.9
600	669	500(425)	50	6	2.2
700	769	600(525)	50	7	2.5

Notes (1) Too deep a fixing thread depth of the mounting bolt may affect the running performance of the slide table, so never insert a bolt longer than the depth of the tapped hole.

Remark: Motor attachment for stepper motor is 9mm lower than the bottom of the bed.

TE60BF (Motor inline specification)



A-A Sectional dimension

unit: mm

Bed length	Overall length	Stroke length	Mounting ho	les of bed	Mass (Ref.)
$L_{\scriptscriptstyle 1}$	L	S(1)	C	n	kg (²)
150	219	50(-)	25	2	1.1
200	269	100(-)	50	2	1.2
300	369	200(125)	50	3	1.5
400	469	300(225)	50	4	1.9
500	569	400(325)	50	5	2.2
600	669	500(425)	50	6	2.5
700	769	600(525)	50	7	2.8

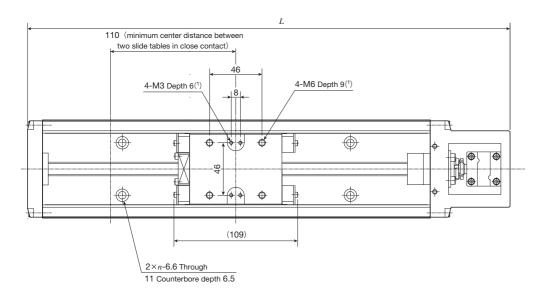
Notes (1) The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables

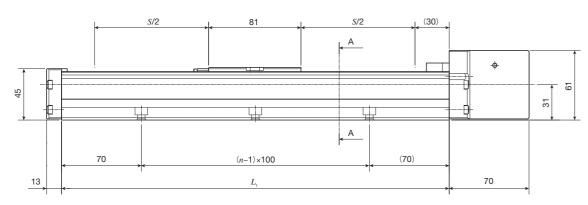
⁽²⁾ The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables

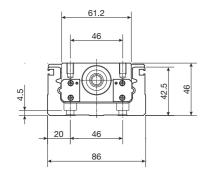
⁽³⁾ The value shows the mass of the entire table with one slide table, and it is 0.1kg heavier with two slide tables.

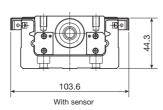
⁽²⁾ The value shows the mass of the entire table with one slide table, and it is 0.2kg heavier with two slide tables. Remark: Motor attachment for stepper motor is 9mm lower than the bottom of the bed.

TE86BS (Motor inline specification)









A-A Sectional dimension

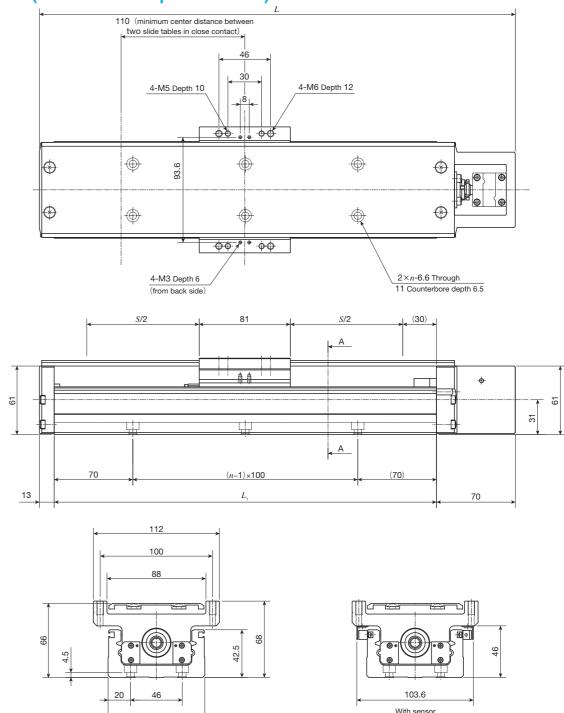
unit: mm

Bed length	Overall length	Stroke length	Mounting holes of bed	Mass (Ref.)
$L_{\scriptscriptstyle 1}$	L	S(2)	n	kg(³)
340	423	200(90)	3	3.1
440	523	300(190)	4	3.7
540	623	400(290)	5	4.2
640	723	500(390)	6	4.7
740	823	600(490)	7	5.2
840	923	700(590)	8	5.7
940	1 023	800(690)	9	6.3

Notes (1) Too deep a fixing thread depth of the mounting bolt may affect the running performance of the slide table, so never insert a bolt longer than the depth of the tapped hole.

- (2) The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables in close contact.
- (3) The value shows the mass of the entire table with one slide table, and it is 0.3kg heavier with two slide tables.

TE86BF (Motor inline specification)



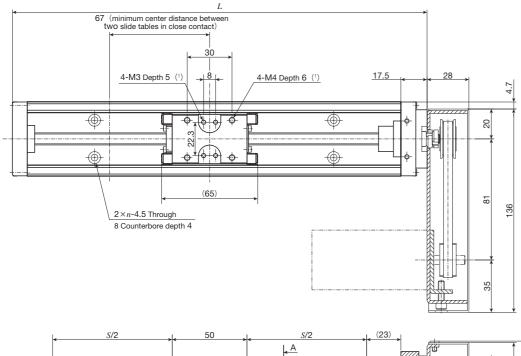
A-A Sectional dimension unit: mm

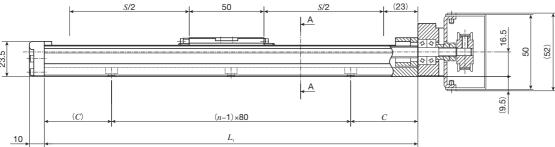
Bed length	Overall length	Stroke length	Mounting holes of bed	Mass (Ref.)
$L_{\scriptscriptstyle 1}$	L	S(1)	n	kg (²)
340	423	200(90)	3	3.7
440	523	300(190)	4	4.3
540	623	400(290)	5	4.9
640	723	500(390)	6	5.5
740	823	600(490)	7	6.1
840	923	700(590)	8	6.7
940	1 023	800(690)	9	7.2

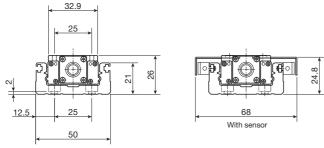
Notes (1) The value indicates the allowable stroke when limit sensors are mounted. The value in (1) represents dimension for two slide tables in close contact.

⁽²⁾ The value shows the mass of the entire table with one slide table, and it is 0.6kg heavier with two slide tables.

TE50BS (Motor folding back specification)







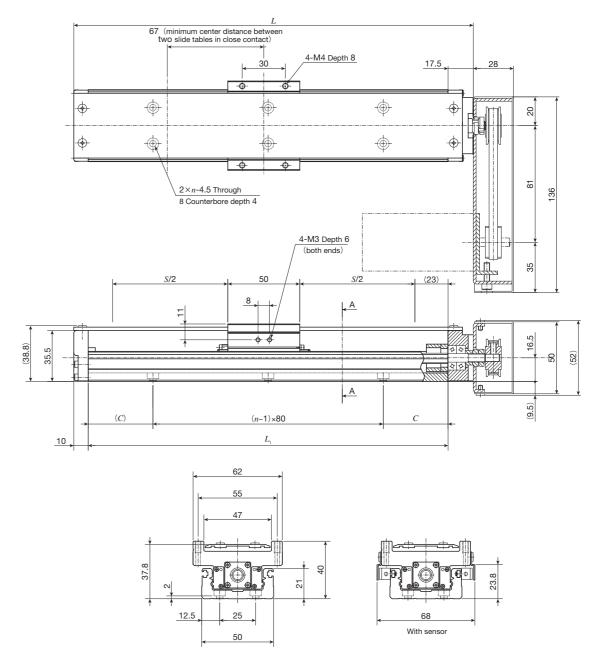
A-A Sectional dimension

unit: mm

Bed length	Overall length	Stroke length	Mounting holes of bed		Mass (Ref.)
$L_{_1}$	L	S(2)	C	n	kg (3)
150	177.5	60(-)	35	2	0.72
200	227.5	110(40)	20	3	0.82
250	277.5	160(90)	45	3	0.92
300	327.5	210(140)	30	4	1.02
400	427.5	310(240)	40	5	1.22
500	527.5	410(340)	10	7	1.42

- Notes (1) Too deep insertion depth of the mounting bolt may affect the running performance of the slide table, so never insert a bolt longer than the depth of the through hole.
 - (2) The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables in close contact.
 - (3) The value shows the mass of the entire table with one slide table, and it is 0.07kg heavier with two slide tables.
- Remarks 1. Parts for motor attachment are appended, and this figure indicates a finished state after assembled by the customer.
 - 2. If folded back to right and left, motor attachment is about 9.5mm lower than the bottom of the bed. In addition, it is about 2.5 to 3.5mm lower than the bottom of the bed if AC servomotor is mounted by customers, and about 4.5mm lower if stepper motor is mounted.
 - 3. If folded back upward, motor attachment is about 3.5mm lower than the bottom of the bed.

TE50BF (Motor folding back specification)



A-A Sectional dimension

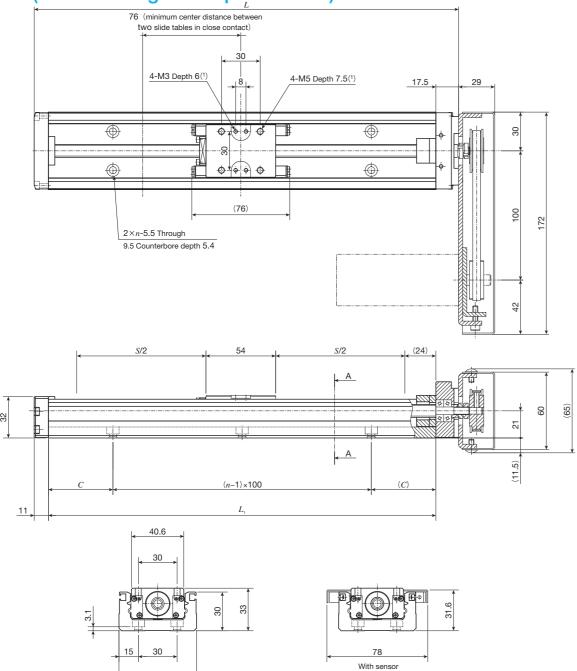
unit: mm

Bed length	Overall length	Stroke length	Mounting holes of bed		Mass (Ref.)
$L_{\scriptscriptstyle 1}$	L	S(1)	C	n	kg (²)
150	177.5	60(-)	35	2	0.85
200	227.5	110(40)	20	3	0.95
250	277.5	160(90)	45	3	1.05
300	327.5	210(140)	30	4	1.15
400	427.5	310(240)	40	5	1.35
500	527.5	410(340)	10	7	1.55

Notes (1) The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables in close contact.

- (2) The value shows the mass of the entire table with one slide table, and it is 0.16kg heavier with two slide tables.
- Remarks 1. Parts for motor attachment are appended, and this figure indicates a finished state after assembled by the customer.
 - 2. If folded back to right and left, motor attachment is about 9.5mm lower than the bottom of the bed. In addition, it is about 2.5 to 3.5mm lower than the bottom of the bed if AC servomotor is mounted by customers, and about 4.5mm lower if stepper motor is mounted.
 - 3. If folded back upward, motor attachment is about 3.5mm lower than the bottom of the bed.

TE60BS (Motor folding back specification)



A-A Sectional dimension

unit: mm

Bed length	Overall length	Stroke length	Mounting holes of bed		Mass (Ref.)
$L_{_1}$	L	S(2)	C	n	kg(3)
150	178.5	50(-)	25	2	1.2
200	228.5	100(-)	50	2	1.3
300	328.5	200(125)	50	3	1.6
400	428.5	300(225)	50	4	1.9
500	528.5	400(325)	50	5	2.2
600	628.5	500(425)	50	6	2.5
700	728.5	600(525)	50	7	2.8

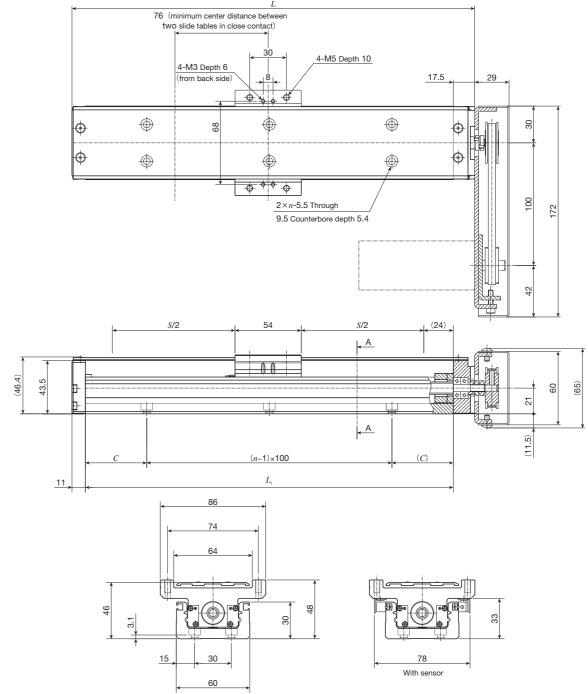
Notes (1) Too deep a fixing thread depth of the mounting bolt may affect the running performance of the slide table, so never insert a bolt longer than the depth of the tapped hole.

- (2) The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables in close contact.
- (3) The value shows the mass of the entire table with one slide table, and it is 0.1kg heavier with two slide tables.

Remarks 1. Parts for motor attachment are appended, and this figure indicates a finished state after assembled by the customer.

- 2. If folded back to right and left, motor attachment is about 11.5mm lower than the bottom of the bed.
- 3. If folded back upward, motor attachment is about 9mm lower than the bottom of the bed.

TE60BF (Motor folding back specification)



A-A Sectional dimension

unit: mm

Bed length	Overall length	Stroke length	Mounting holes of bed		Mass (Ref.)
$L_{\scriptscriptstyle 1}$	L	S(1)	C	n	kg (²)
150	178.5	50(-)	25	2	1.4
200	228.5	100(-)	50	2	1.5
300	328.5	200(125)	50	3	1.8
400	428.5	300(225)	50	4	2.2
500	528.5	400(325)	50	5	2.5
600	628.5	500(425)	50	6	2.8
700	728.5	600(525)	50	7	3.1

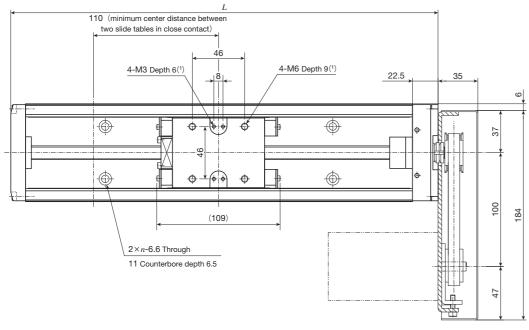
Notes (1) The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables in close contact.

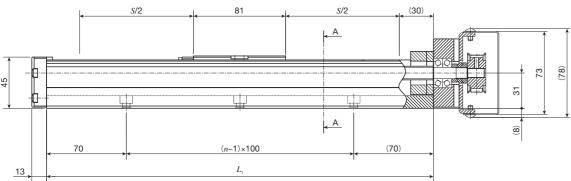
(2) The value shows the mass of the entire table with one slide table, and it is 0.2kg heavier with two slide tables.

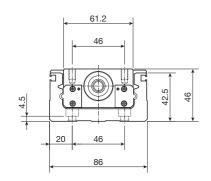
Remarks 1. Parts for motor attachment are appended, and this figure indicates a finished state after assembled by the customer.

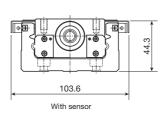
- 2. If folded back to right and left, motor attachment is about 11.5mm lower than the bottom of the bed.
- 3. If folded back upward, motor attachment is about 9mm lower than the bottom of the bed.

TE86BS (Motor folding back specification)









A-A Sectional dimension

unit: mm

	Bed length	Overall length	Stroke length	Mounting holes of bed	Mass (Ref.)
	$L_{_1}$	L	S(2)	n	kg(3)
	340	375.5	200(90)	3	4.0
	440	475.5	300(190)	4	4.6
	540	575.5	400(290)	5	5.1
	640	675.5	500(390)	6	5.6
	740	775.5	600(490)	7	6.1
	840	875.5	700(590)	8	6.6
Ī	940	975.5	800(690)	9	7.2

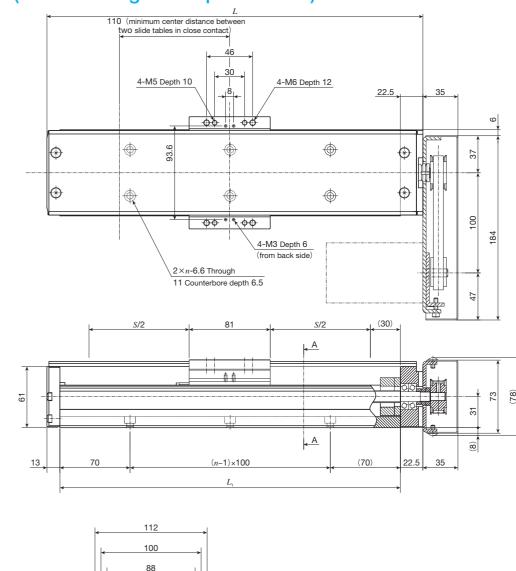
Notes (1) Too deep a fixing thread depth of the mounting bolt may affect the running performance of the slide table, so never insert a bolt longer than the depth of the tapped hole.

- (2) The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables in close contact.
- (3) The value shows the mass of the entire table with one slide table, and it is 0.3kg heavier with two slide tables.

Remarks 1. Parts for motor attachment are appended, and this figure indicates a finished state after assembled by the customer.

- 2. If folded back to right and left, motor attachment is about 8mm lower than the bottom of the bed.
- 3. If folded back upward, motor attachment is about 6mm lower than the bottom of the bed.

TE86BF (Motor folding back specification)



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		r	A—A Sectional of	dimension	unit: mm
	Bed length	Overall length	Stroke length	Mounting holes of bed	Mass (Ref.)
	$L_{_1}$	L	S(1)	n	kg(²)
	340	375.5	200(90)	3	4.6
	440	475.5	300(190)	4	5.2
	540	575.5	400(290)	5	5.8
	640	675.5	500(390)	6	6.4
	740	775.5	600(490)	7	7.0
	840	875.5	700(590)	8	7.6
	940	975 5	800(690)	g	8.1

With sensor

Notes (1) The value indicates the allowable stroke when limit sensors are mounted. The value in () represents dimension for two slide tables in close contact.

(2) The value shows the mass of the entire table with one slide table, and it is 0.6kg heavier with two slide tables.

Remarks 1. Parts for motor attachment are appended, and this figure indicates a finished state after assembled by the customer.

- 2. If folded back to right and left, motor attachment is about 8mm lower than the bottom of the bed.
- 3. If folded back upward, motor attachment is about 6mm lower than the bottom of the bed.