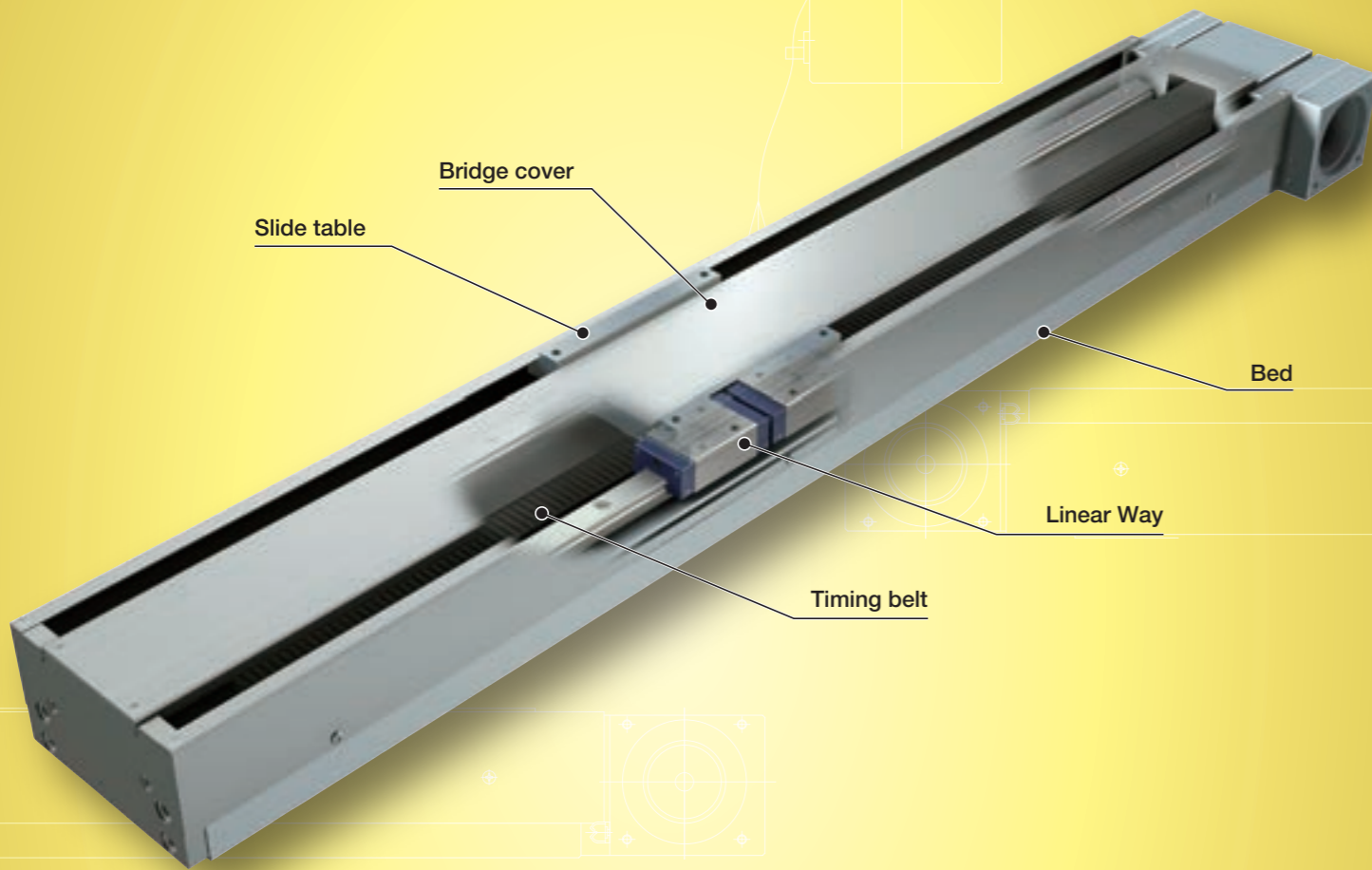
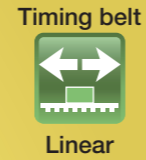


**TSLB**

# TSLB



## Points

### ● High speed and long stroke positioning table

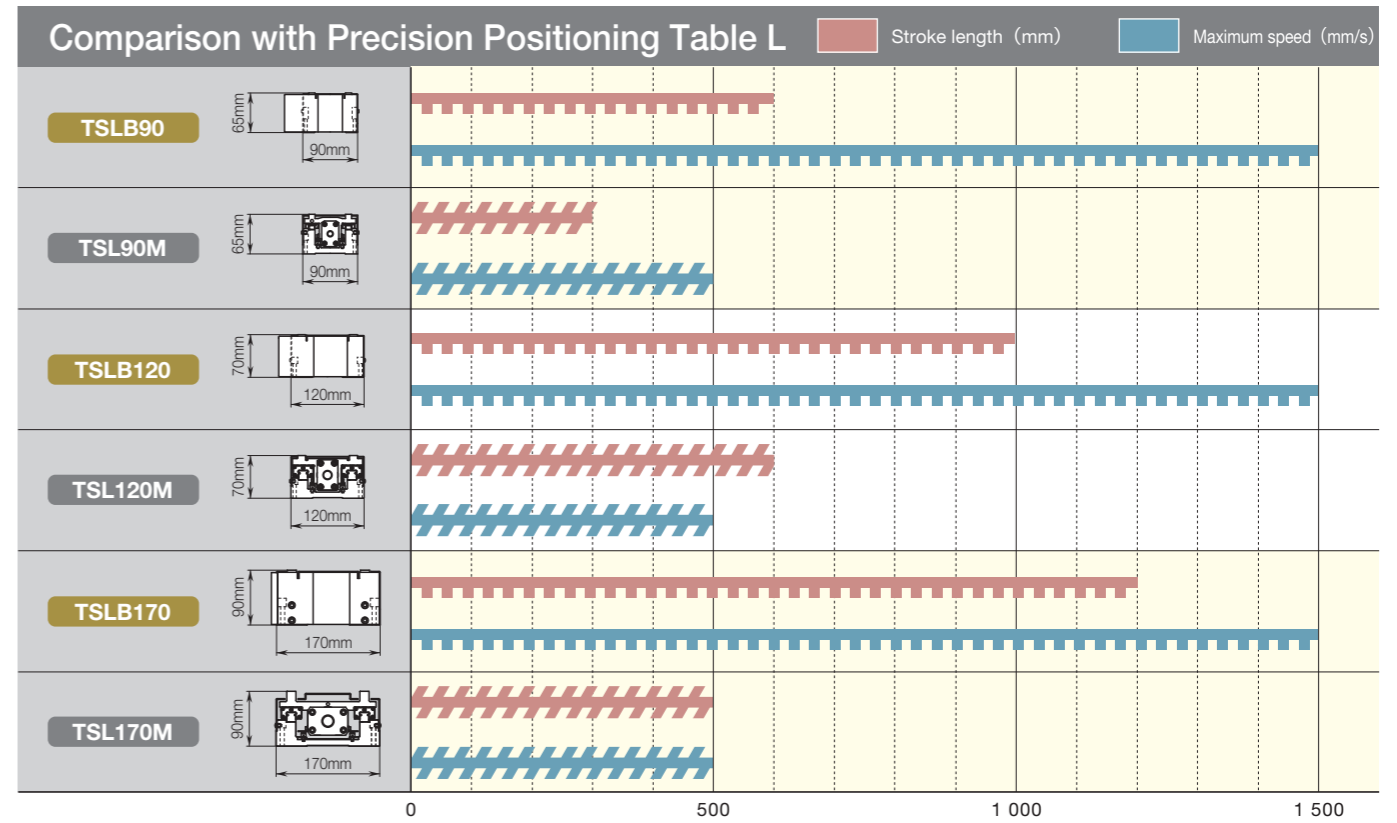
1 High speed movement-enabled and long stroke positioning table with highly durable and high-tensile steel cord-contained timing belt incorporated into the feeding mechanism of the slide table.

### ● Light weight and long stroke

2 Lightweight solution is achieved by adopting the slide table and bed made from high-strength aluminum alloy. Series of stroke length up to 1,200mm is available.

### ● Stable high running accuracy

3 Incorporation of two sets of Linear Way in parallel realized stable and high running performance.



### Major product specifications

Driving method	High-tensile timing belt
Linear motion rolling guide	Linear Way (ball type)
Built-in lubrication part	No built-in
Material of table and bed	High-strength aluminum alloy
Sensor	Provided as standard

### Accuracy

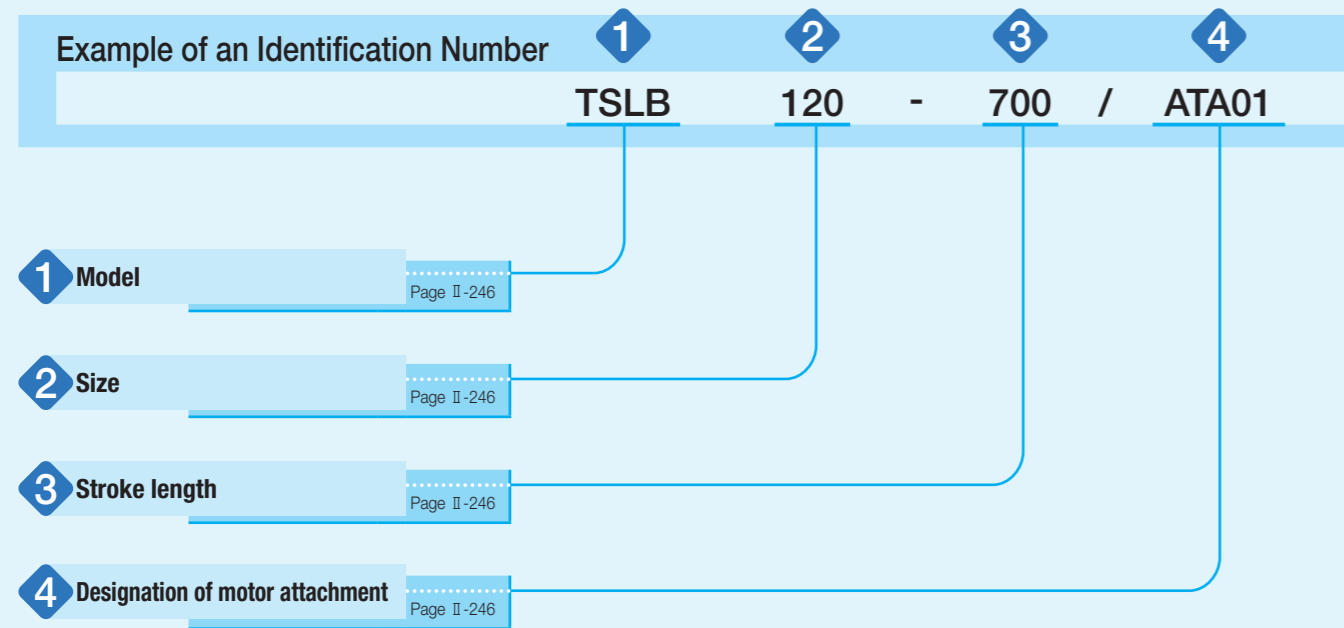
Positioning repeatability	±0.070~0.100
Positioning accuracy	-
Lost motion	-
Parallelism in table motion A	-
Parallelism in table motion B	0.050~0.070
Attitude accuracy	-
Straightness	-
Backlash	-

unit: mm

### Variation

Shape	Model and size	Table width (mm)	Stroke length (mm)									
			300	400	500	600	700	800	900	1000	1200	
	TSLB 90	90	☆	☆	☆	☆	-	-	-	-	-	
	TSLB120	120	-	-	-	☆	☆	☆	☆	☆	-	
	TSLB170	170	-	-	-	-	-	☆	-	☆	☆	

# Identification Number



# Identification Number and Specification

- 1
**Model**
TSLB: Precision Positioning Table LB
- 2
**Size**
Size indicates table width.  
Select a size from the list of Table 1.
- 3
**Stroke length**
Select a stroke length from the list of Table 1.

**Table 1 Sizes, table width dimensions, and stroke lengths** unit: mm

Model and size	Table width	Stroke length
TSLB 90	90	300, 400, 500, 600
TSLB120	120	600, 700, 800, 900, 1 000
TSLB170	170	800, 1 000, 1 200

- 4
**Designation of motor attachment**

Motor attachment shown in Table 2 is attached.

  - Motor should be prepared by customer.
  - A coupling shown in Table 3 is mounted on the main body before shipment. However, the final position adjustment should be made by customer since it is only temporarily fixed.

**Table 2 Application of motor attachment**

Type	Motor to be used			Flange size mm	Motor attachment	
	Manufacturer	Series	Model		TSLB 90 TSLB120	TSLB170
Stepper motor	ORIENTAL MOTOR Co., Ltd.	RKS CRK	CRK56 <sup>(1)</sup>	□60	ATA01	—
			RKS59	□85	—	ATA02
			RKS56 <sup>(2)</sup>	□60	ATA03	—

Note <sup>(1)</sup> Applicable to the outer diameter  $\phi 8$  of motor output shaft.

<sup>(2)</sup> Applicable to the outer diameter  $\phi 10$  of motor output shaft.

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

**Table 3 Coupling models**

Model and size	Coupling models	Manufacturer	Coupling inertia $J_c$ $\times 10^{-5} \text{kg} \cdot \text{m}^2$
ATA01	MOL-32C- 8×12	Nabeya Bi-tech Kaisha	1.4
ATA02	MOL-40C-12×14		4.1
ATA03	MOL-32C-10×12		1.4

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

# Specifications

**Table 4 Accuracy**

unit: mm

Model and size	Stroke length	Positioning repeatability	Parallelism in table motion B
TSLB 90	300	±0.070	0.050
	400		
	500		
	600		0.070
TSLB120		±0.100	0.070
TSLB170		±0.100	0.070

**Table 5 Maximum speed and resolution**

Model and size	Maximum speed <sup>(1)</sup> mm/s	Resolution <sup>(2)</sup> mm
TSLB 90 TSLB120 TSLB170	1 500	0.1

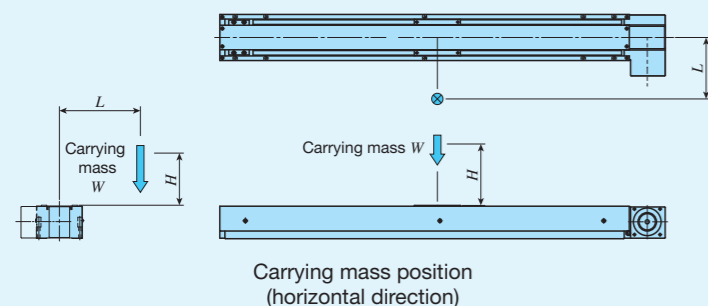
Notes <sup>(1)</sup> To measure the practical maximum speed, it is required to consider operation patterns based on the motor to be used and load conditions.

<sup>(2)</sup> This is a value given when the number of fraction sizes of the motor is 1,000 pulses/rev.

**Table 6 Maximum carrying mass**

Model and size	Carrying mass position mm	Horizontal direction Maximum carrying mass kg			
		Length L	0	100	200
TSLB 90	0	5	2.0	1.1	0.7
	100	1.3	1.0	0.7	0.6
	200	0.7	0.6	0.5	0.4
	300	0.5	0.4	0.4	0.3
TSLB120	0	62	18	9	6
	100	16	11	7	5
	200	9	7	6	5
	300	6	5	4.9	4.2
TSLB170	0	46	17	9	6
	100	15	10	7	5
	200	9	7	5	4.9
	300	6	5	4.7	4.1

Remark: The maximum carrying mass is adjusted by the mass when the rating life of the linear motion rolling guide, ball screws, or bearings is 18,000 hours during continuous operation at a number of revolutions of the motor of 3000min<sup>-1</sup> and an acceleration/deceleration time of 0.2s. The mass calculated is based upon the basic static load rating of the linear motion rolling guide.



**Table 7 Maximum load mass**

Model and size	Horizontal direction Maximum load mass kg
TSLB 90	23
TSLB120	18
TSLB170	14

Remark: The maximum load mass is the maximum mass that ensures the number of revolutions of the motor of 900min<sup>-1</sup> and acceleration/deceleration of 0.3G, when repeating operations with the same acceleration/deceleration time and stop time.

**Table 8 Table inertia and starting torque**

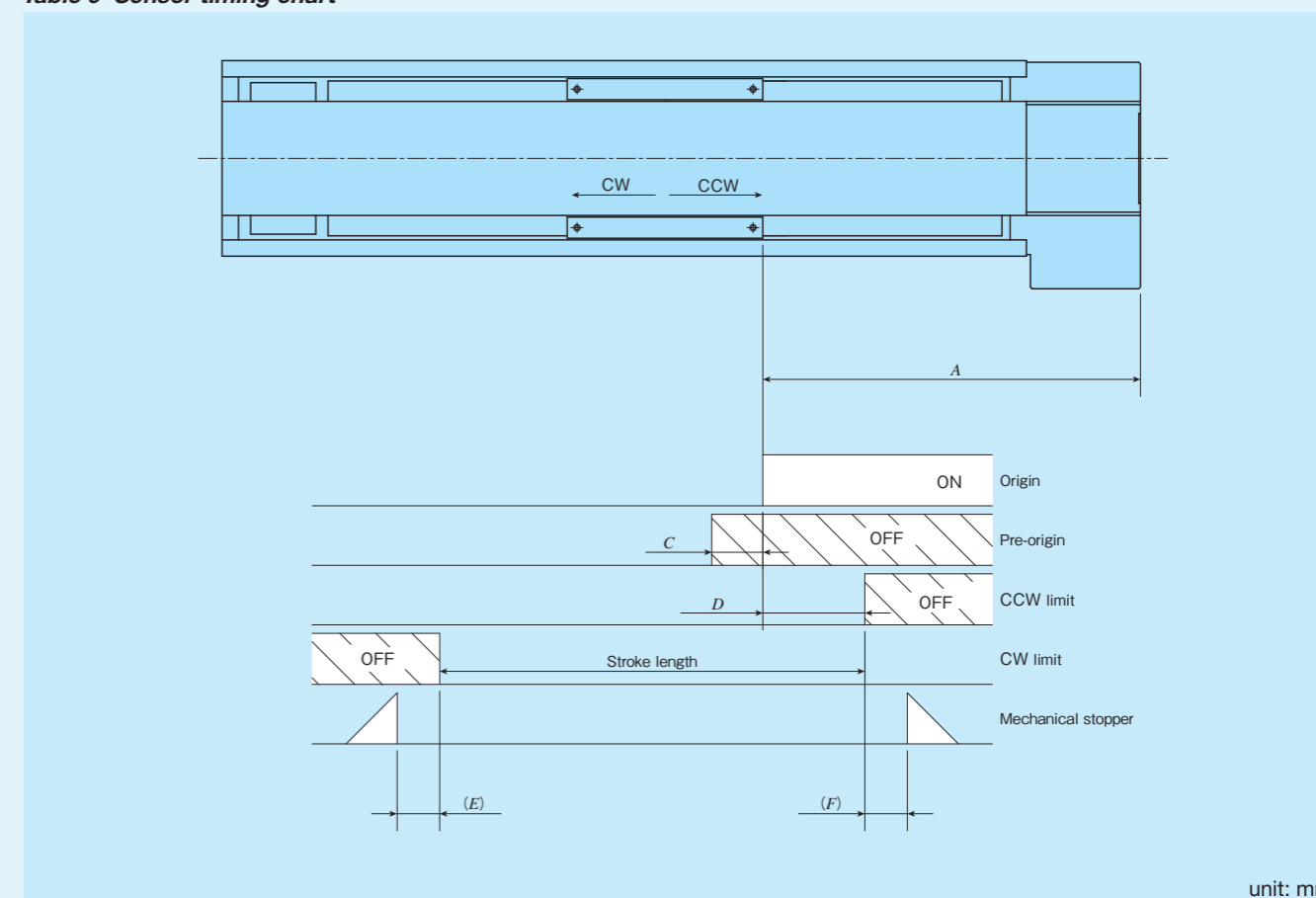
Model and size	Table inertia $J_T$ $\times 10^{-5} \text{kg} \cdot \text{m}^2$	Starting torque $T_s$ N·m
TSLB 90	19	0.3
TSLB120	42	0.5
TSLB170	64	0.6

## Mounting

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

## Sensor Specification

**Table 9 Sensor timing chart**

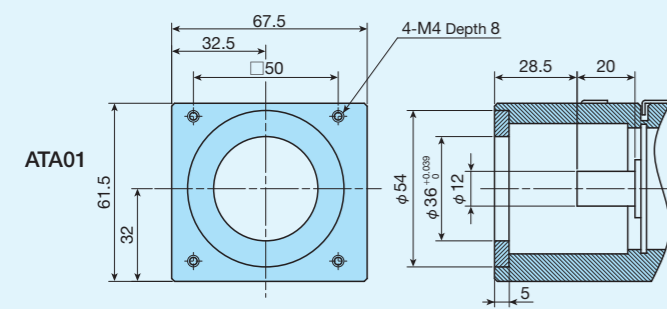


Model and size	A	C	D	E	F
TSLB 90	120	50	20	13	10
TSLB120	120	50	20	8	5
TSLB170	160	50	20	23	30

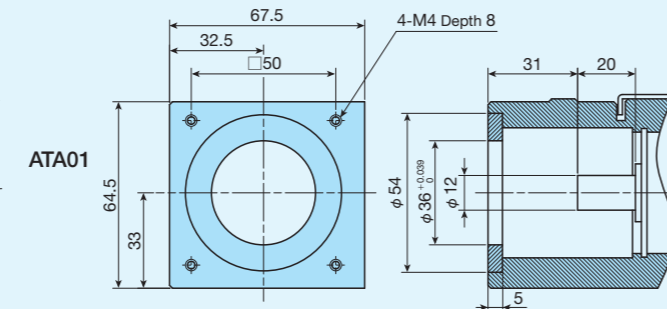
Remark: For detailed specifications of respective sensors, please see the section of sensor specification in General Explanation.

# Dimensions of Motor Attachment

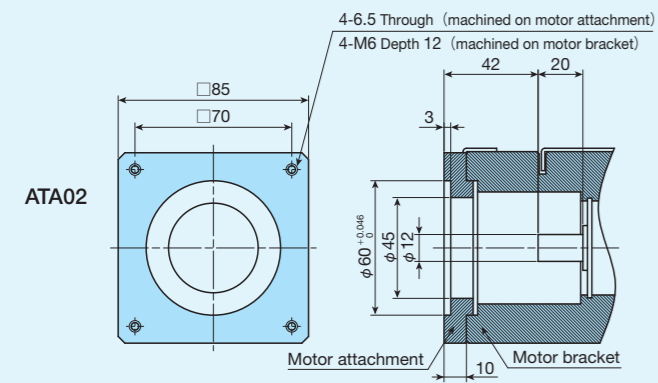
## TSLB90



## TSLB120

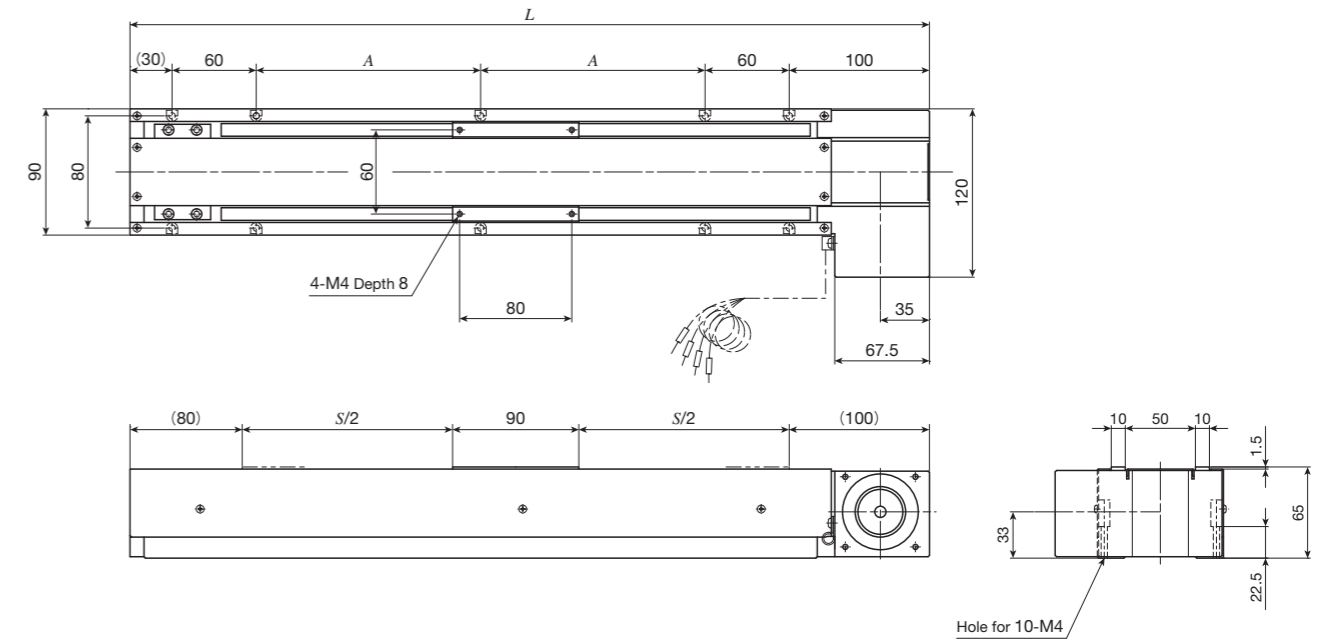


## TSLB170



# IKO Precision Positioning Table LB

## TSLB90

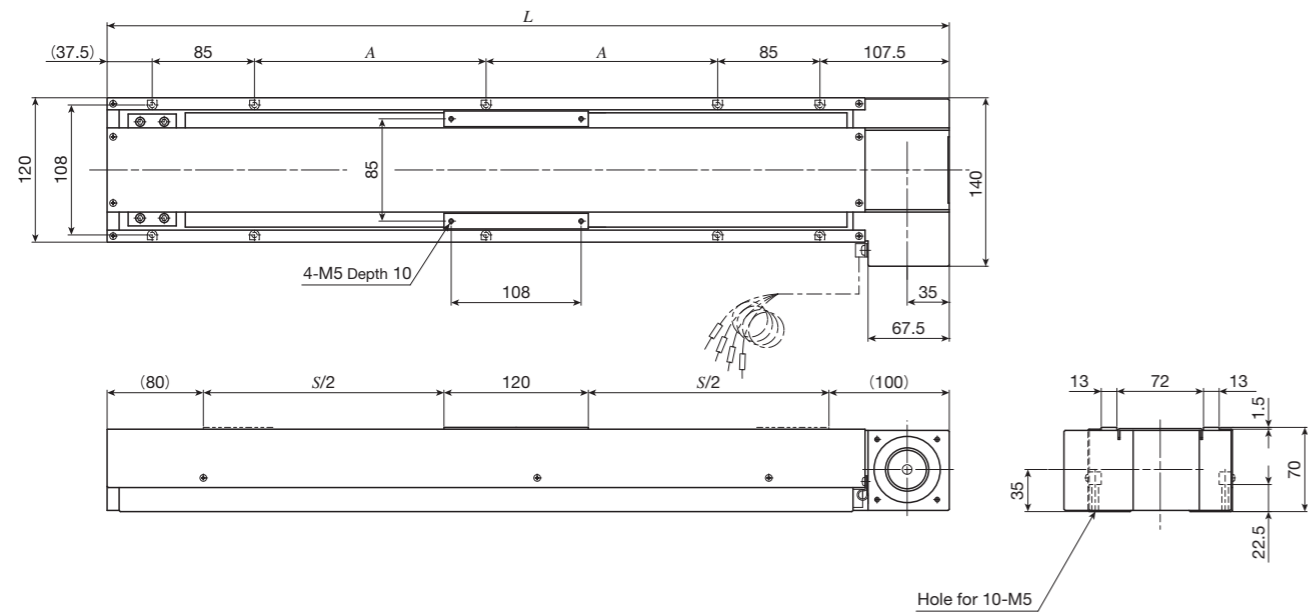


unit: mm

Identification number	Stroke length $S$	Overall length $L$	Mounting holes of bed $A$	Mass (Ref.) kg
TSLB90-300	300	570	160	6.5
TSLB90-400	400	670	210	7.5
TSLB90-500	500	770	260	8.5
TSLB90-600	600	870	310	9.5

# IKO Precision Positioning Table LB

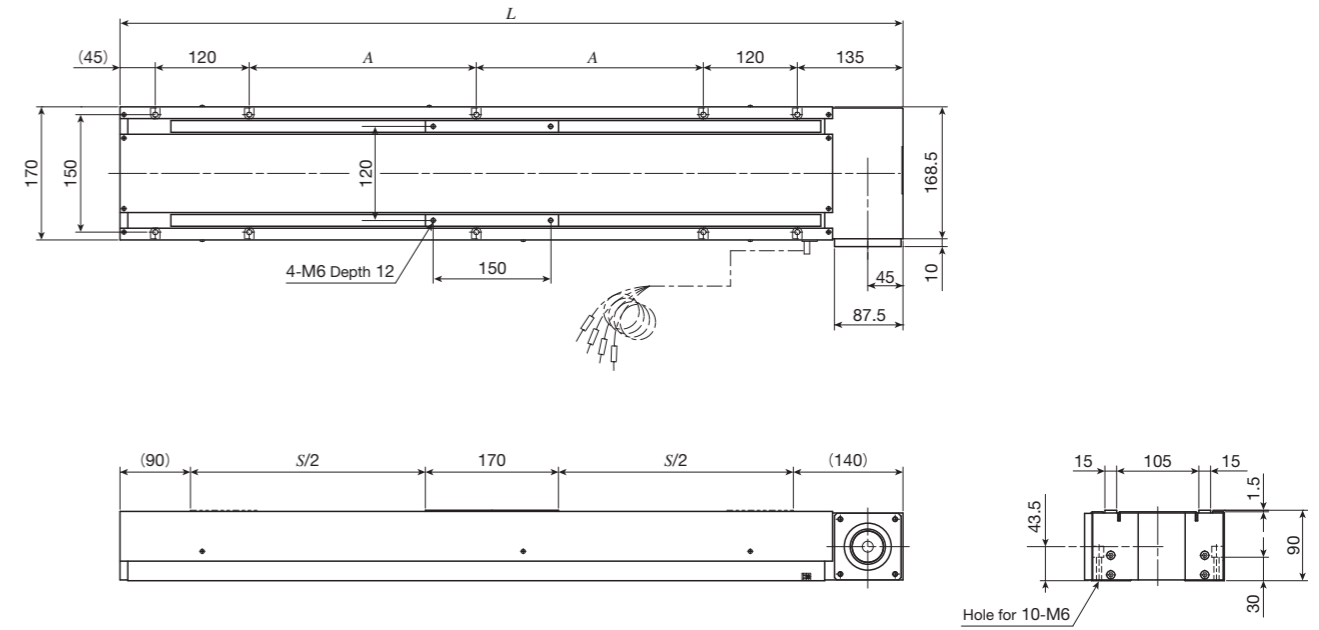
## TSLB120



unit: mm

Identification number	Stroke length <i>S</i>	Overall length <i>L</i>	Mounting holes of bed <i>A</i>	Mass (Ref.) kg
TSLB120- 600	600	900	292.5	13
TSLB120- 700	700	1 000	342.5	14
TSLB120- 800	800	1 100	392.5	15
TSLB120- 900	900	1 200	442.5	16
TSLB120-1000	1 000	1 300	492.5	17

## TSLB170



unit: mm

Identification number	Stroke length <i>S</i>	Overall length <i>L</i>	Mounting holes of bed <i>A</i>	Mass (Ref.) kg
TSLB170- 800	800	1 200	390	23
TSLB170-1000	1 000	1 400	490	26
TSLB170-1200	1 200	1 600	590	29