


## CERTIFICATE

of EC type-approval of a non-automatic weighing instrument  
Number FI 08.1.01 Revision 1

<b>Issued by</b>	<b>Inspecta Inspection Oy</b> , PL 94, FIN-02151 Espoo, Finland <b>Notified Body Number 0424</b>	
<b>In accordance with</b>	The Council Directive 90/384/EEC on Non-automatic Weighing Instruments.	
<b>Issued to</b>	<b>Joint Stock Company "MASSA-K", 15 A, Pirogovskaya nab, St-Petersburg, Russia</b>	
<b>In respect of</b>	A graduated, self-indicating, electronic, single-interval non-automatic weighing instrument.	
<b>Characteristics</b>	Manufacturer	Joint Stock Company "MASSA-K"
	Type	TB
	Accuracy class	III
	Number of verification intervals	$n \leq 4\ 000$
	Verification scale interval	$e \geq 5\ \text{g}$
	Maximum capacity	$15\ \text{kg} \leq \text{Max} \leq 600\ \text{kg}$
<b>Description</b>	The principal characteristics and approval conditions are set out in the descriptive Annex to this certificate.	
<b>Remarks</b>	This revision EC type-approval certificate replaces the earlier version, including its documentation folder.	
<b>Document number</b>	2030-08-074	
<b>Valid until</b>	26 <sup>th</sup> of June 2018	
	Espoo, 17 <sup>th</sup> of September 2008	
<b>Signatories</b>	  Ari Paajanen Senior Measuring Expert	



## DESCRIPTIVE ANNEX

### of EC type-approval of a non -automatic weighing instrument Number FI 08.1.01 Revision 1

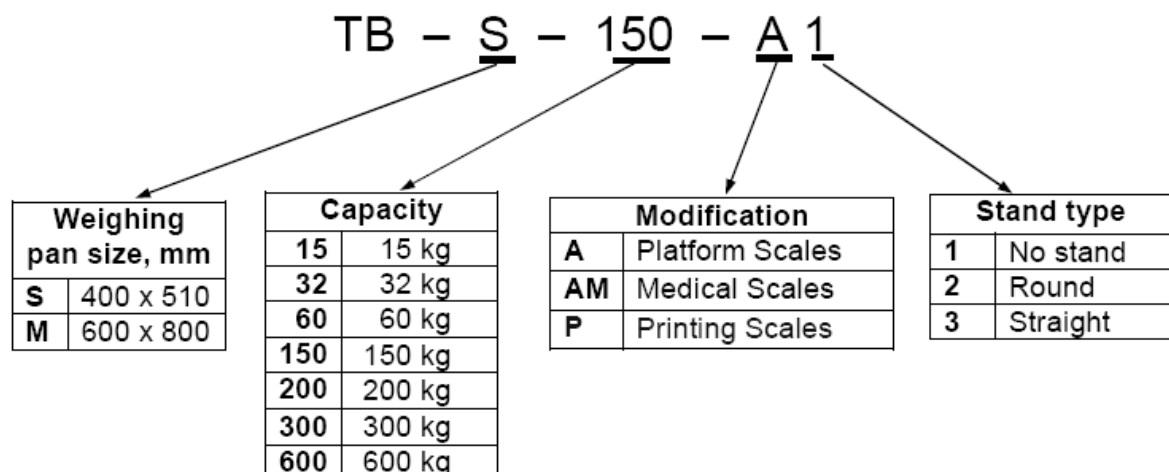
#### NAME AND TYPE OF INSTRUMENT

The name of the type of the instrument is TB and depending on the purpose the model is one of the following:

Modification	Model	Description
TB-S-A	TB-S-15-A1, TB-S-32-A1, TB-S-60-A1, TB-S-150-A1, TB-S-200-A1	Platform scales without stand
	TB-S -15-A2, TB-S-32-A2, TB-S-60-A2, TB-S-150-A2, TB-S-200-A2	Platform scales with round stand
	TB-S -15-A3, TB-S-32-A3, TB-S-60-A3, TB-S-150-A3, TB-S-200-A3	Platform scales with straight stand
TB-S-AM	TB-S-200-AM1	Medical scales without stand
	TB-S-200-AM2	Medical scales with round stand
	TB-S-200-AM3	Medical scales with straight stand
TB-M-A	TB-M-60-A1, TB-M-150-A1, TB-M-300-A1, TB-M-600-A1	Platform scales without stand
	TB-M-60-A3, TB-M-150-A3, TB-M-300-A3, TB-M-600-A3	Platform scales with straight stand
TB-S-P	TB-S-15-P3, TB-S-32-P3, TB-S-60-P3, TB-S-150-P3, TB-S-200-P3	Printing scales with straight stand
TB-M-P	TB-M-60-P3, TB-M-150-P3, TB-M-300-P3, TB-M-600-P3	Printing scales with straight stand

The instrument can in addition have a commercial model designation of their own, e.g. "IMBA TB-S-15-A1" (IMBA ITALY SAS), "OPI TB-S-15-A1" (OPI S.R.L.)

#### Model designation



## DESCRIPTION

### Construction

The weighing instrument consists of following parts:

- Digital load cell DLC (S or M)
- Display TB-DD-A-LCD, TB-DD-AM-LCD or TB-DD-P-LCD
- External power supply unit
- Weighing platform

Display and digital load cell are connected together by internal bus interface RS232

### Devices

- Device to check the display
- Semi-automatic subtractive tare balancing device
- Semi-automatic zero-setting device
- Automatic zero-setting device
- Initial zero-setting device
- Zero tracking device
- Zero indicating-device
- Memory storage device
- Sum function device
- Unit weight calculation device (counting scales)

## TECHNICAL DATA

Accuracy class

III

Minimum capacity

Min = 20 e

Power supply

230 V, 50 Hz, output 9 V DC

	Maximum Capacity, kg	Readability, g	Maximum subtractive tare, kg	Zero setting range, % of capacity	Digital load cell type	Temperature range, °C	Weighing Indicator dimensions, mm	Dimensions of Weighing Platform (including Weighing Pan), mm
TB-S-15-A1 TB-S-15-A2 TB-S-15-A3	15	5	5	20	DLC-S	- 10 ... + 40	260mm(W)×103mm(D)×67mm(H)	390mm(W)×510mm(D)×90mm(H)*
TB-S-32-A1 TB-S-32-A2 TB-S-32-A3	32	10	10	20	DLC-S			
TB-S-60-A1 TB-S-60-A2 TB-S-60-A3	60	20	20	20	DLC-S			
TB-S-150-A1 TB-S-150-A1 TB-S-150-A3	150	50	50	20	DLC-S			
TB-S-200-A1 TB-S-200-A2 TB-S-200-A3	200	50	50	20	DLC-S			
TB-S-200-AM1 TB-S-200-AM2 TB-S-200-AM3	200	50	50	20	DLC-S			
TB-M-60-A1 TB-M-60-A3	60	20	20	20	DLC-M			600mm(W)×800mm(D)×162mm(H)**
TB-M-150-A1 TB-M-150-A3	150	50	50	20	DLC-M			
TB-M-300-A1 TB-M-300-A3	300	100	100	20	DLC-M			
TB-M-600-A1 TB-M-600-A3	600	200	200	20	DLC-M			

TB-S-15-P3	15	5	5	20	DLC-S	275mm(W)×175mm(D) × 215mm(H)	390mm (W)× 510mm (D)× 90mm (H)***
TB-S-32-P3	32	10	10	20			
TB-S-60-P3	60	20	20	20			
TB-S-150-P3	150	50	50	20			
TB-S-200-P3	200	50	100	20	DLC-M		600mm (W)× 800mm (D)× 162mm (H)****
TB-M-60-P3	60	20	20	20			
TB-M-150-P3	150	50	50	20			
TB-M-300-P3	300	100	100	20			
TB-M-600-P3	600	200	200	20			

- \* height of scales with round stand S2 (mm)..... 555
- \* height of scales with straight stand S3 (mm).....825
- \*\* height of scales with straight stand M3 (mm).....782
- \*\*\* height of scales with straight stand S-P3 (mm).....610
- \*\*\*\* height of scales with straight stand M-P3 (mm).....820

## PERIPHERAL DEVICES AND INTERFACES

Peripheral devices may be connected via RS 232 protective interface.

## APPROVAL CONDITIONS

No parts of weighing instrument, no matter if they are mentioned or not, may be in conflict with the essential requirements of the appendix 1 of the Directive 90/384/EEC.

## LOCATION OF SEALS AND VERIFICATION MARKS

### Verification marks

A green M-sticker and a sticker with verification marks may be placed near the keyboard and display.

### Sealing

Calibration checksum must be written on the stamping plate (see figure 11.) locating on the platform which is sealed together with the digital load cell using for example sealing sticker. The checksum will be displayed after switch on the scales while during self test is pressed key → **0** ← and holding it is pressed key **T**. After waiting until messages first **tEST** and then **CAL S** appear the checksum will be displayed after pressing key **T**.

## LOCATION OF CE MARK AND INSCRIPTIONS

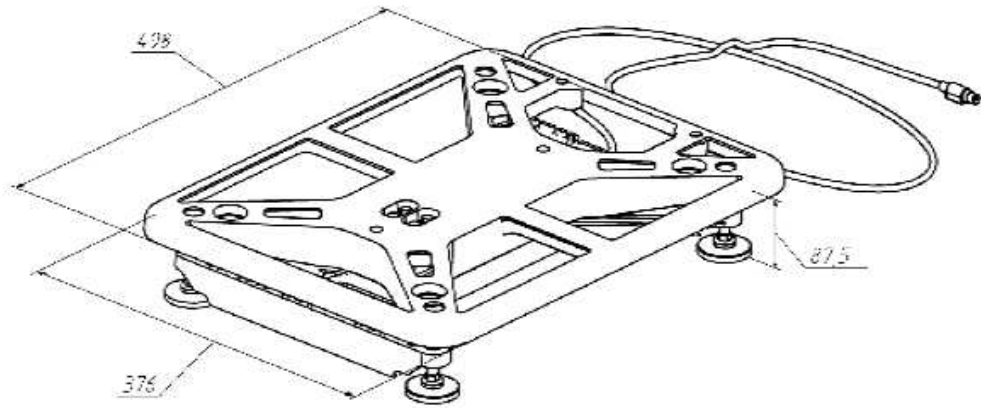
A sticker with the CE mark of conformity is placed near the front panel.

The instrument bears markings according to the Annex IV in Council Directive 90/384/EEC in such a way that the markings cannot be removed. Max, Min and e are marked near the indication device.

The weighing instrument bears the type-approval number, manufacturers name, accuracy class and serial number.

## ILLUSTRATIONS

Figure 1. Weighing platform P-TB-S



### 2) Assembly

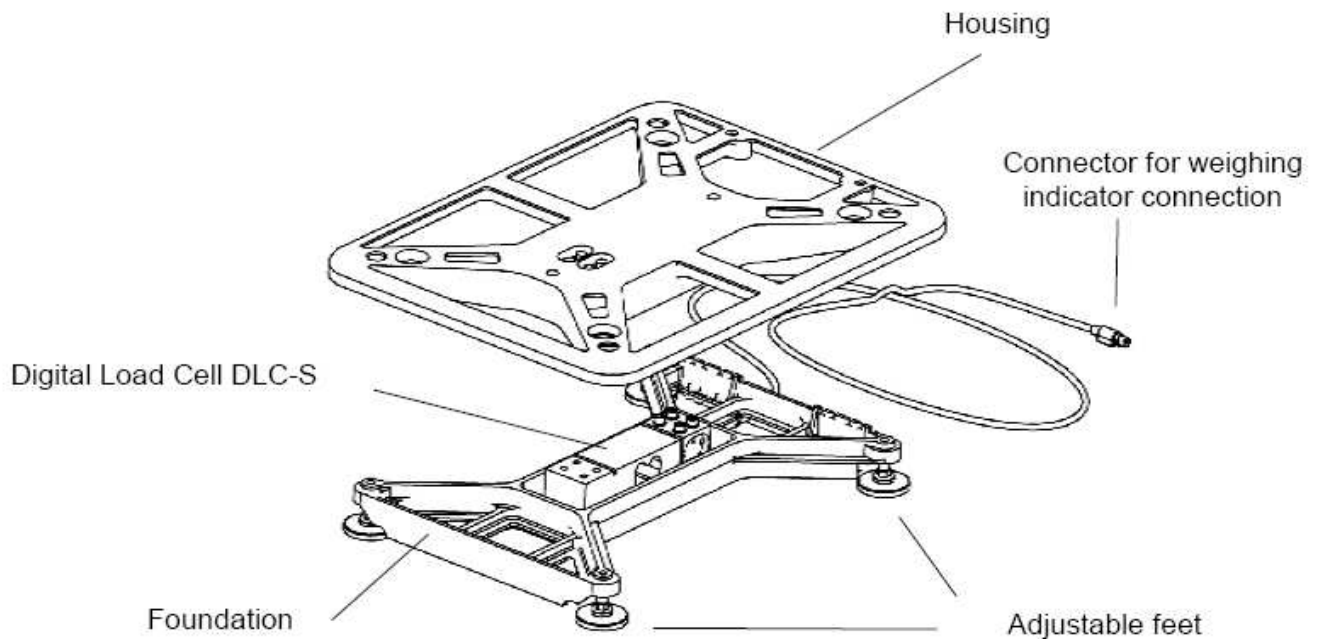
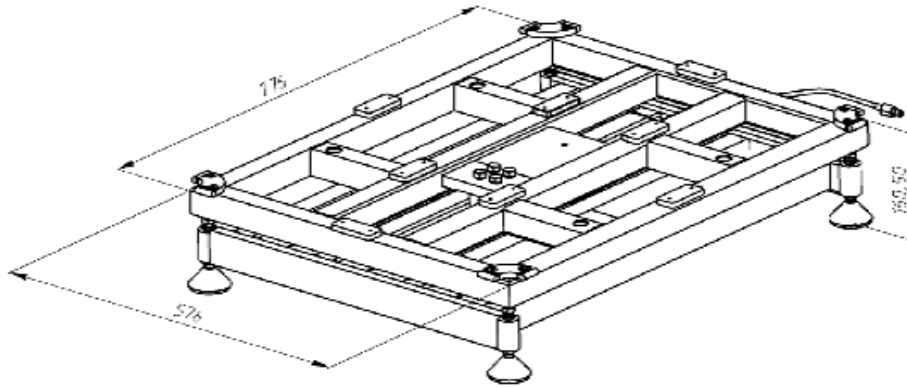


Figure 2. Weighing platform P-TB-M



2) Assembly

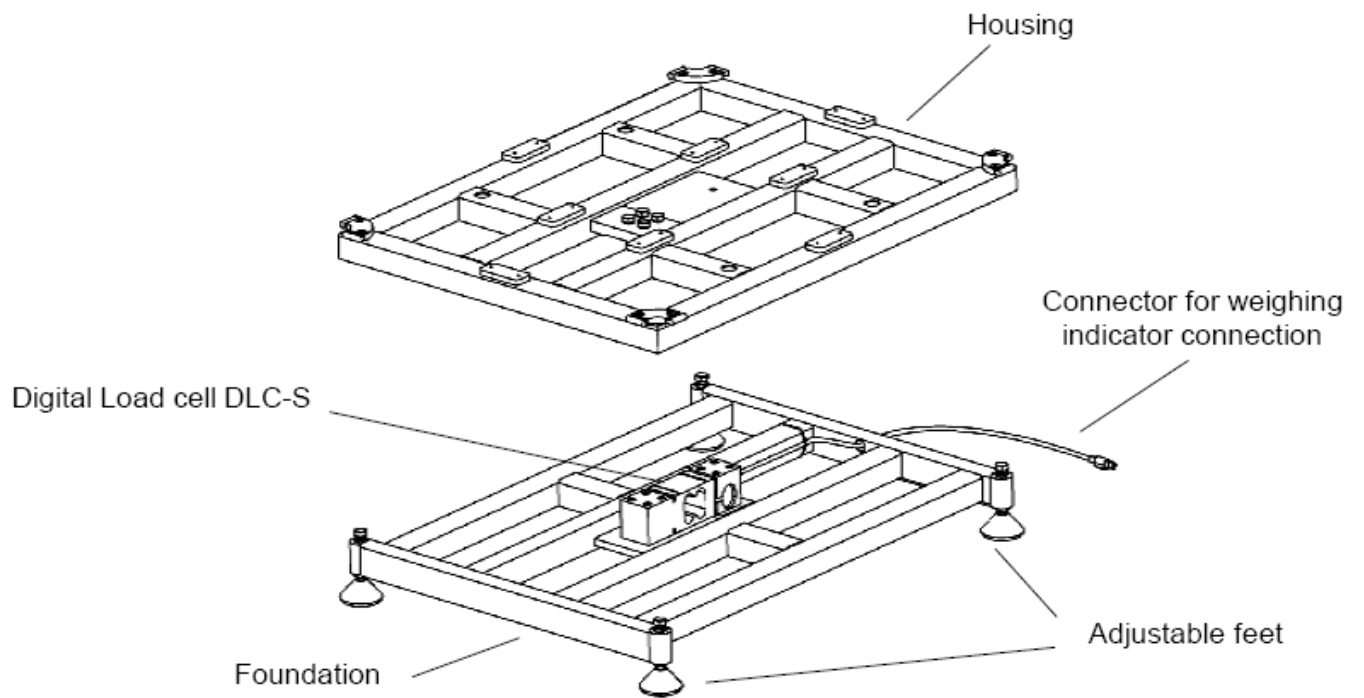
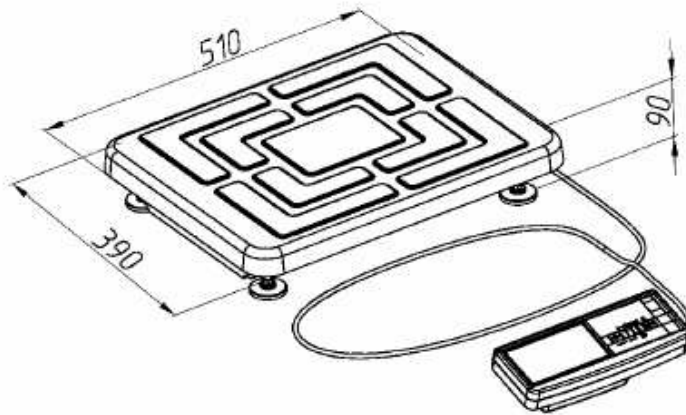


Figure 3. Platform Scales TB-S-A1



2) Assembly

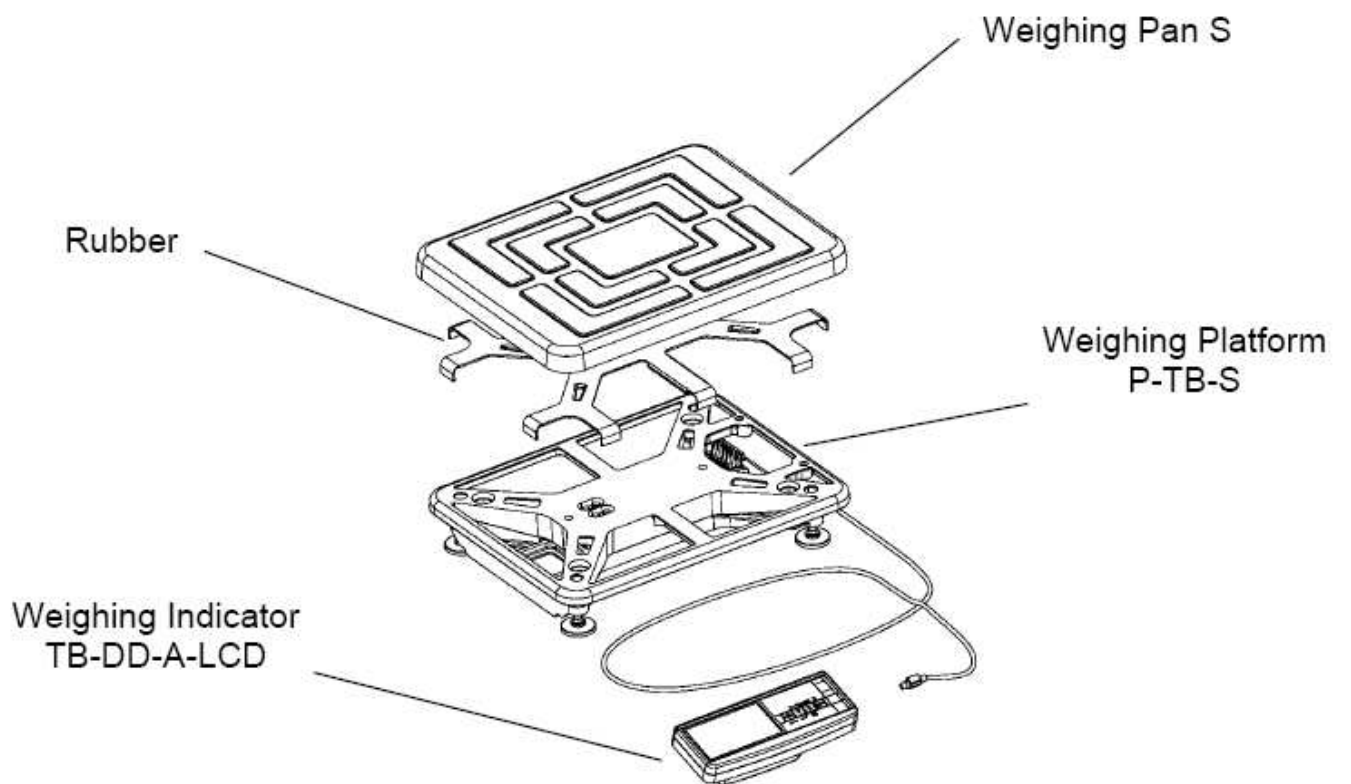
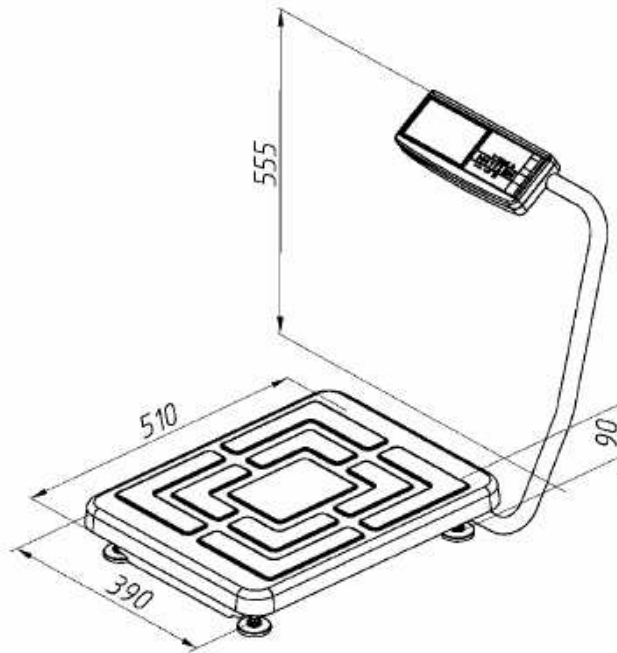


Figure 4. Platform Scales TB-S-A2



2) Assembly

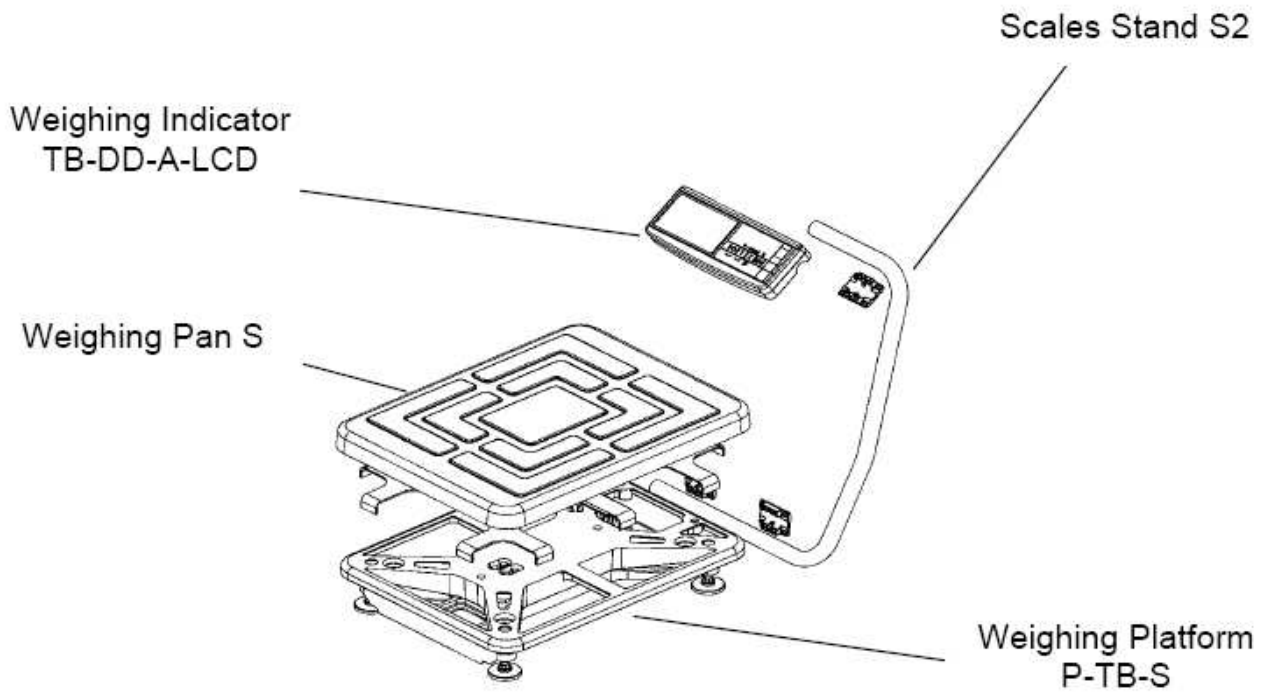
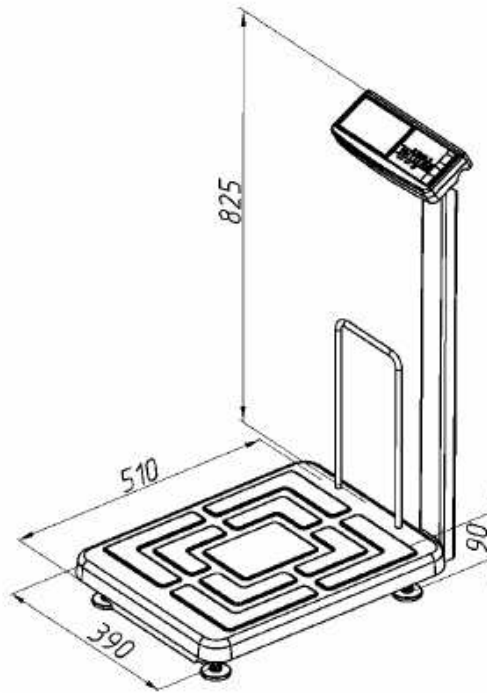


Figure 5. Platform Scales TB-S-A3



2) Assembly

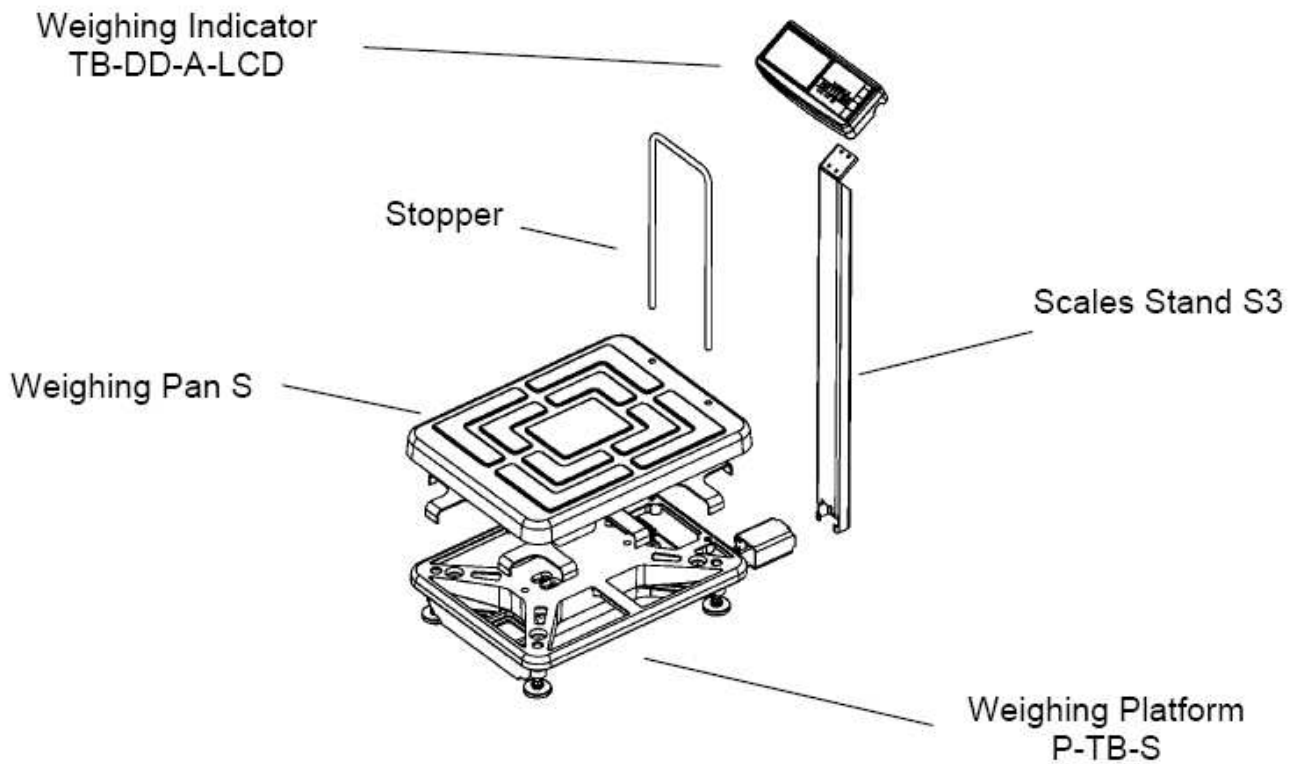
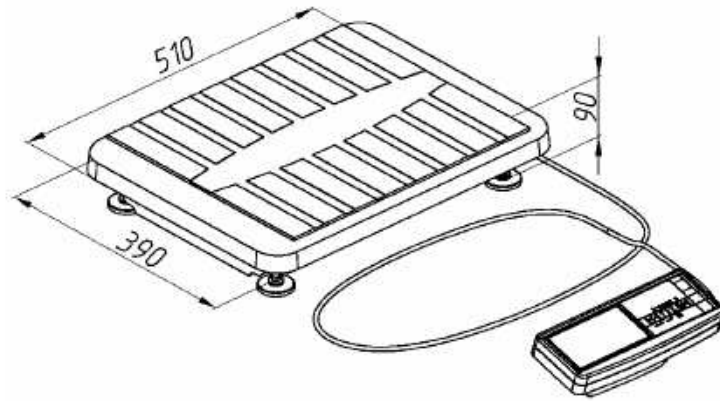


Figure 6. Medical scales TB-S-AM 1



## 2) Assembly

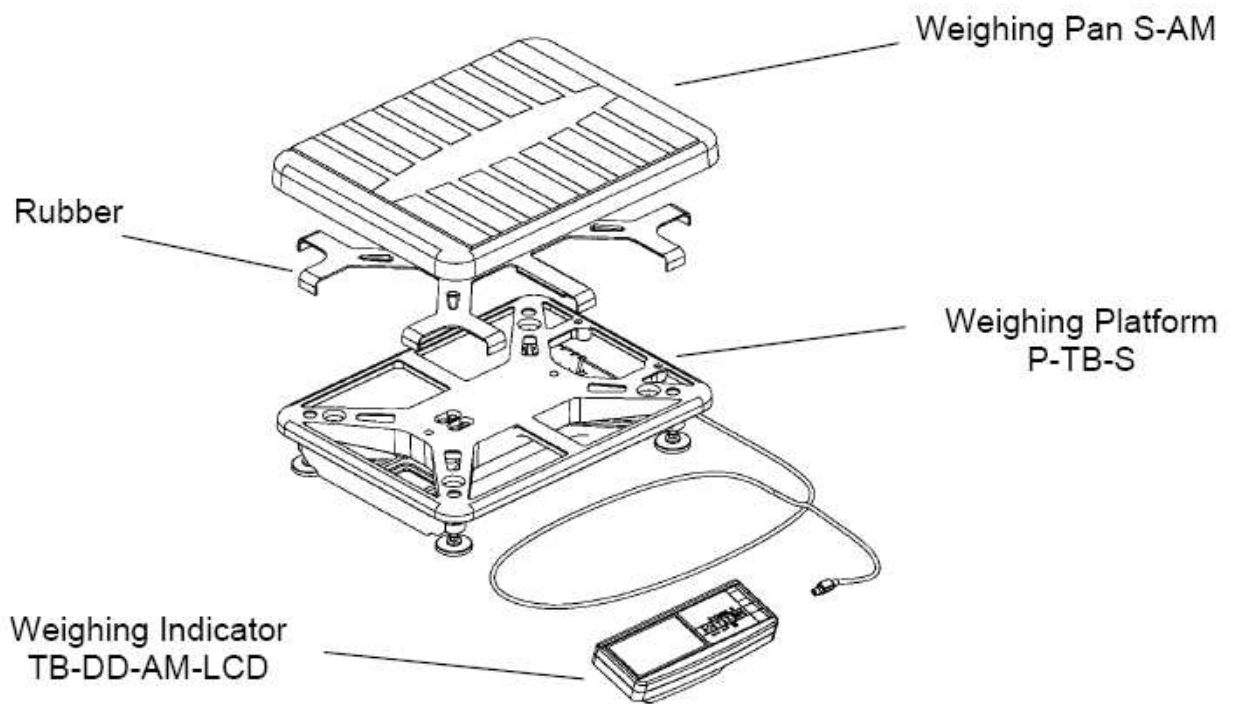
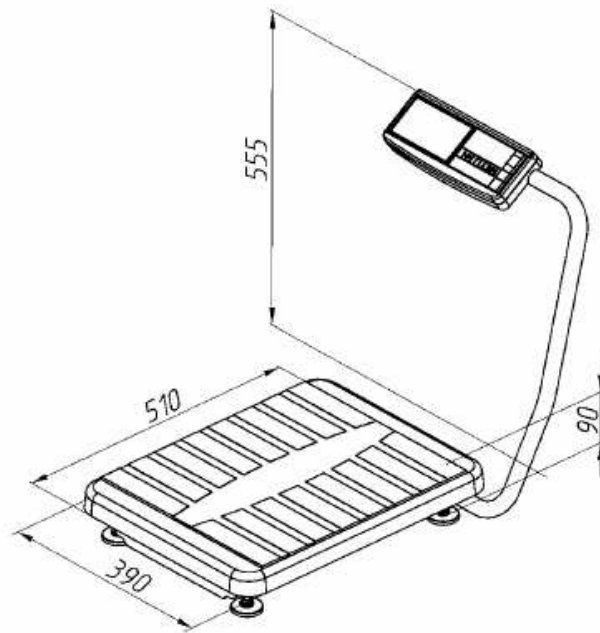


Figure 7. Medicales Scales TB-S-AM2



2) Assembly

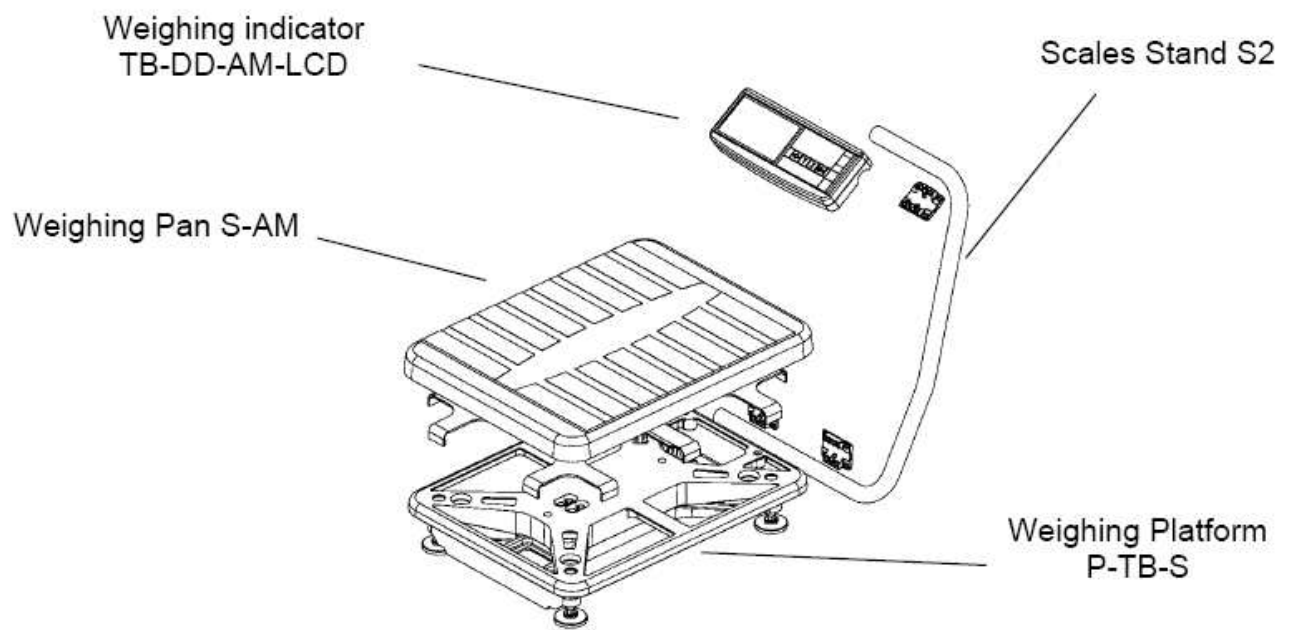
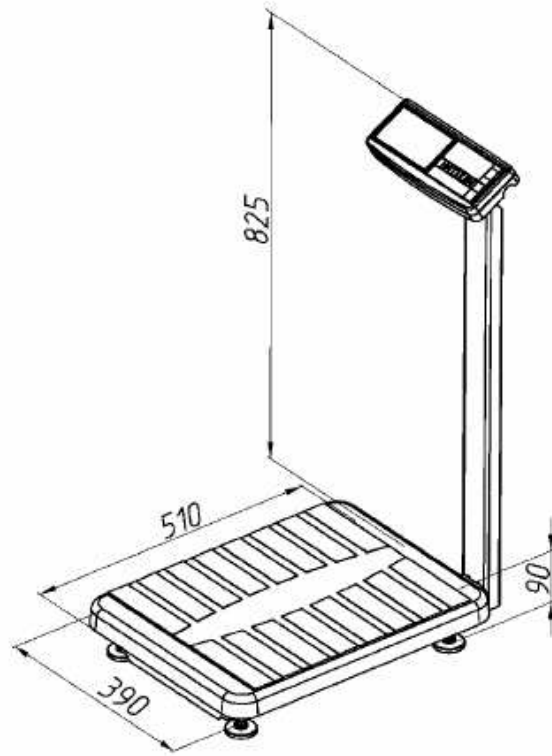


Figure 8. Medical Scales TB-S-AM3



2) Assembly

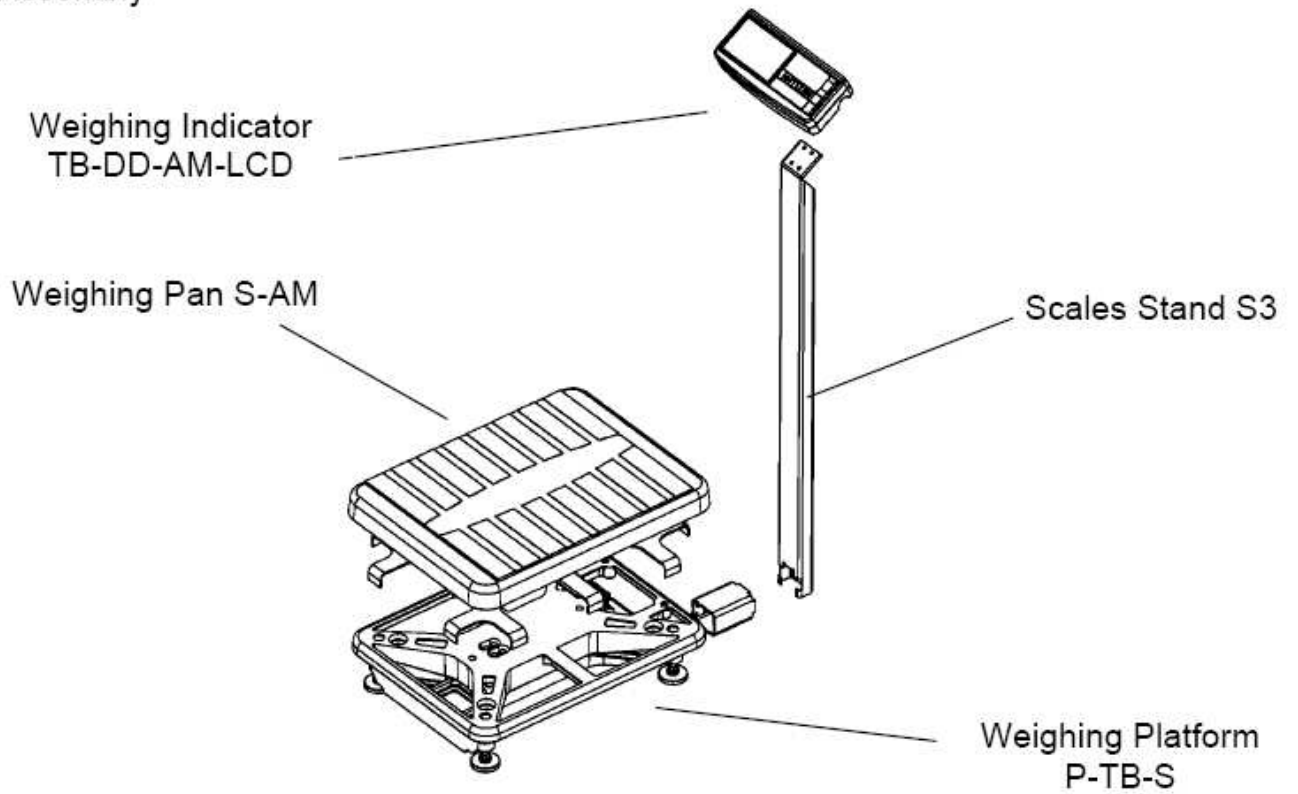
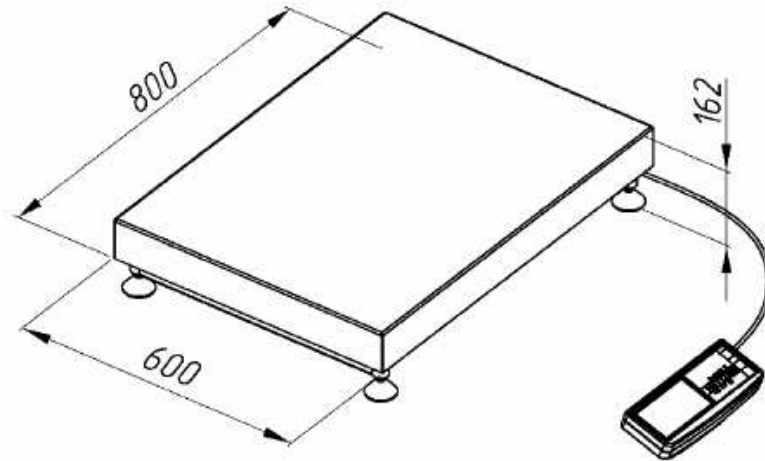


Figure 9. Platform Scales TB-M-A1



2) Assembly

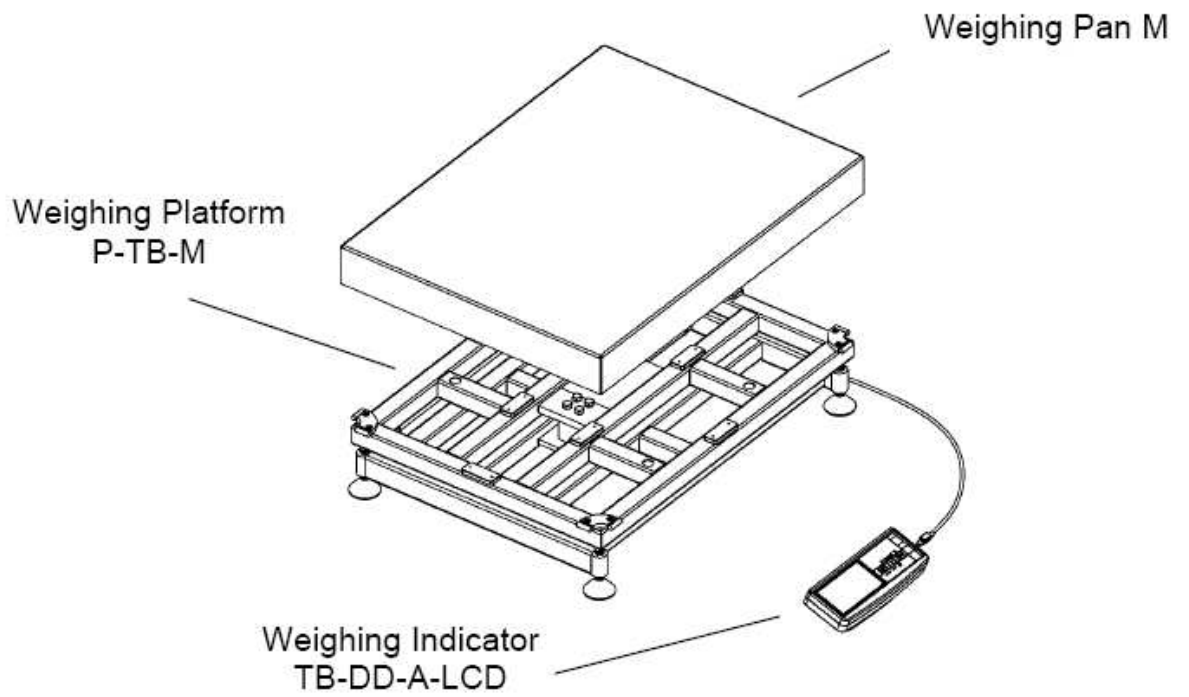
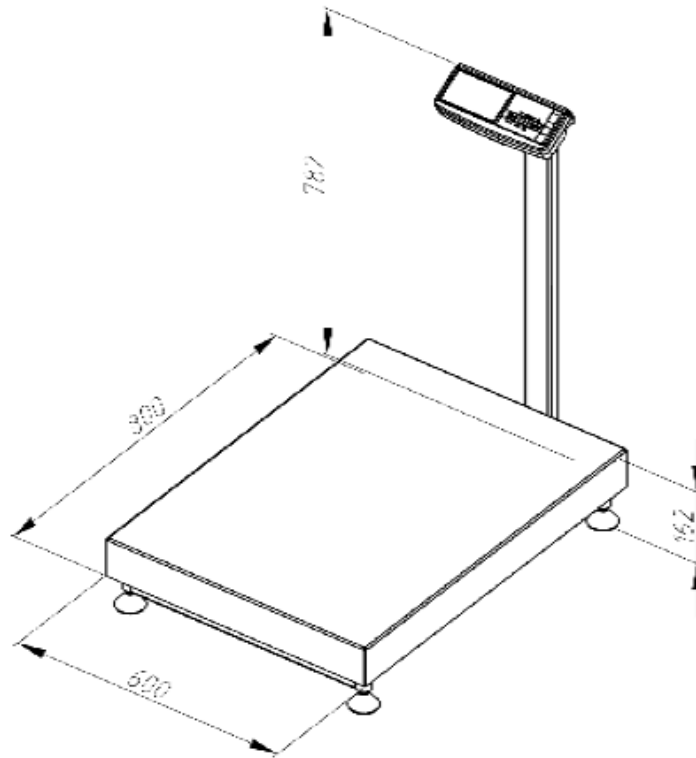


Figure 10. Platform scales TB-M-A3



2) Assembly

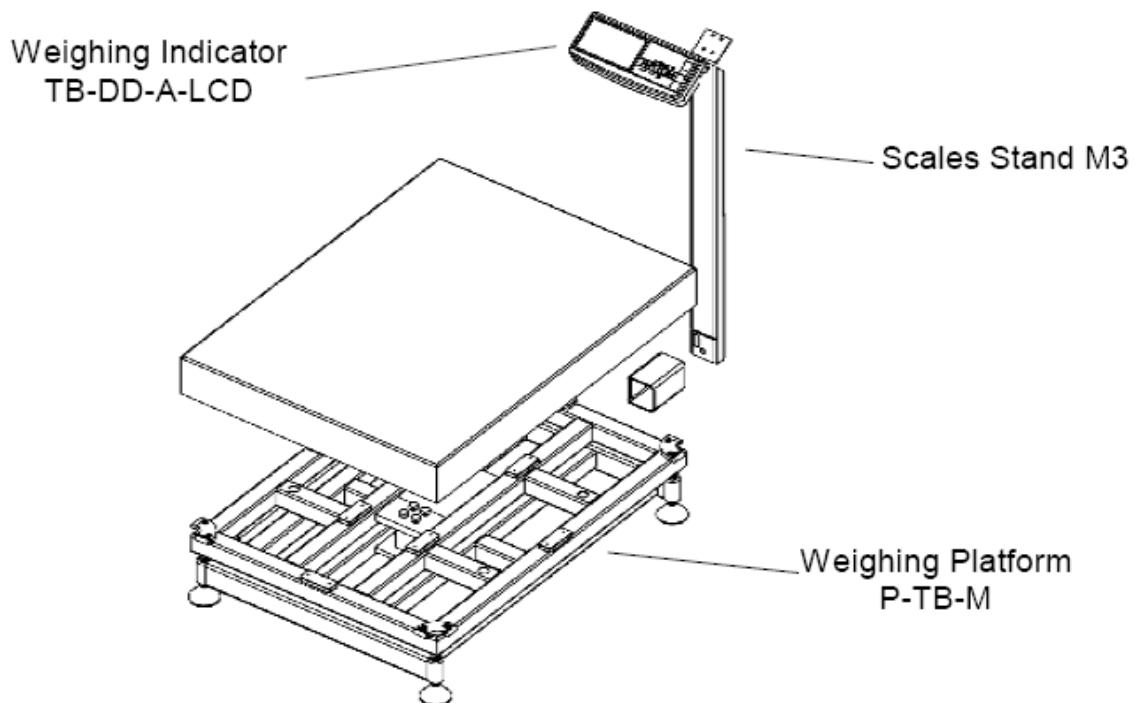
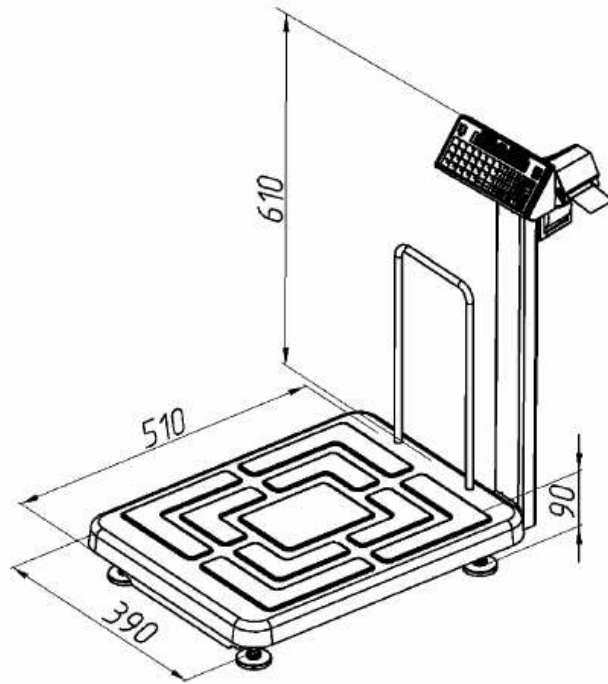
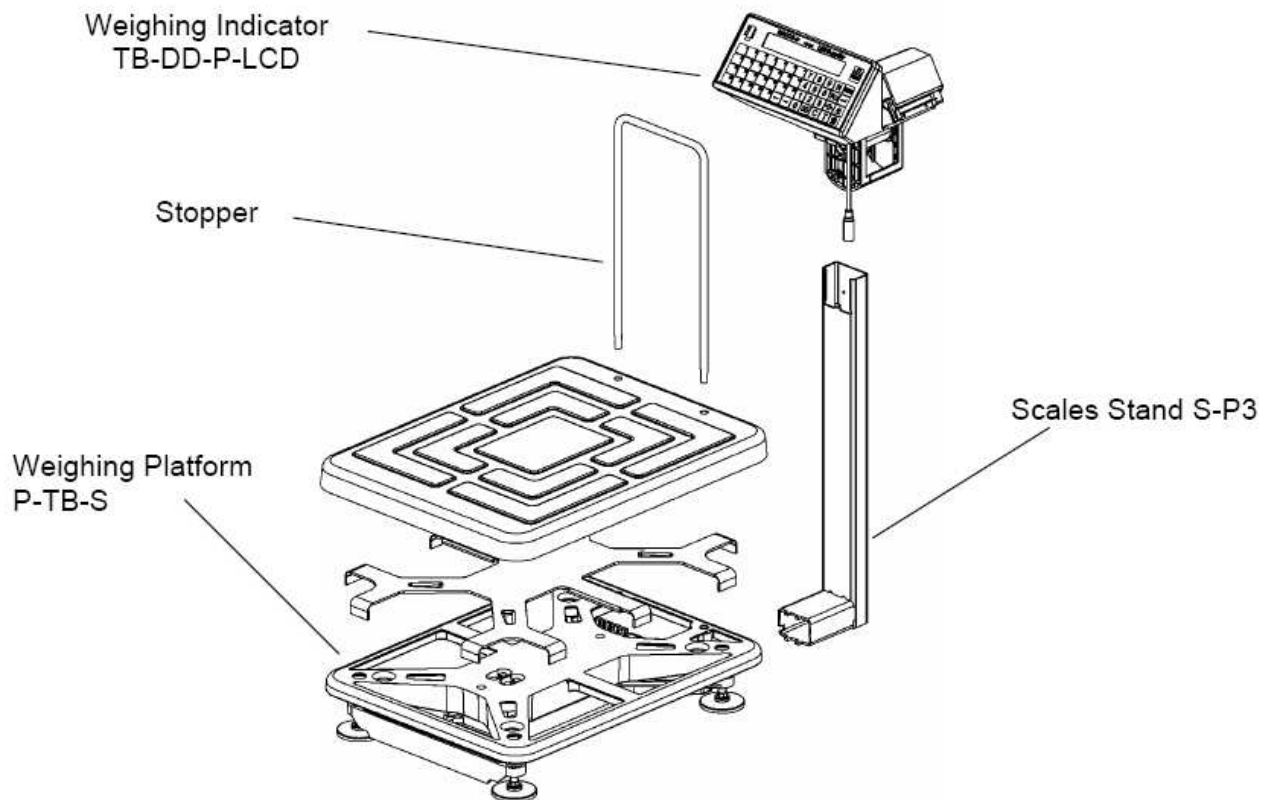


Figure 11. Printing scales TB-S-P3

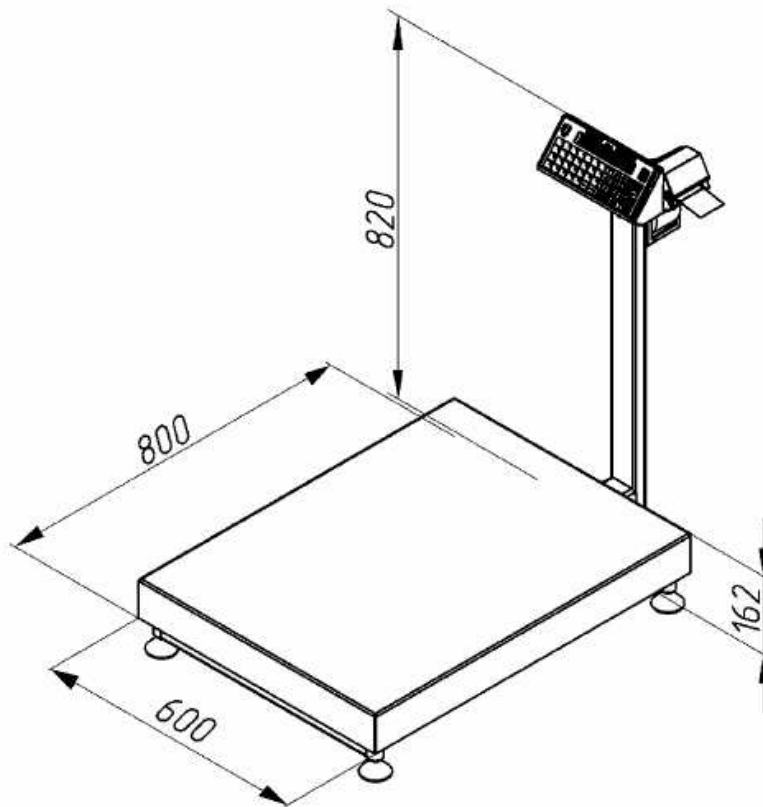
1) General view



2) Assembly



1) General view



2) Assembly

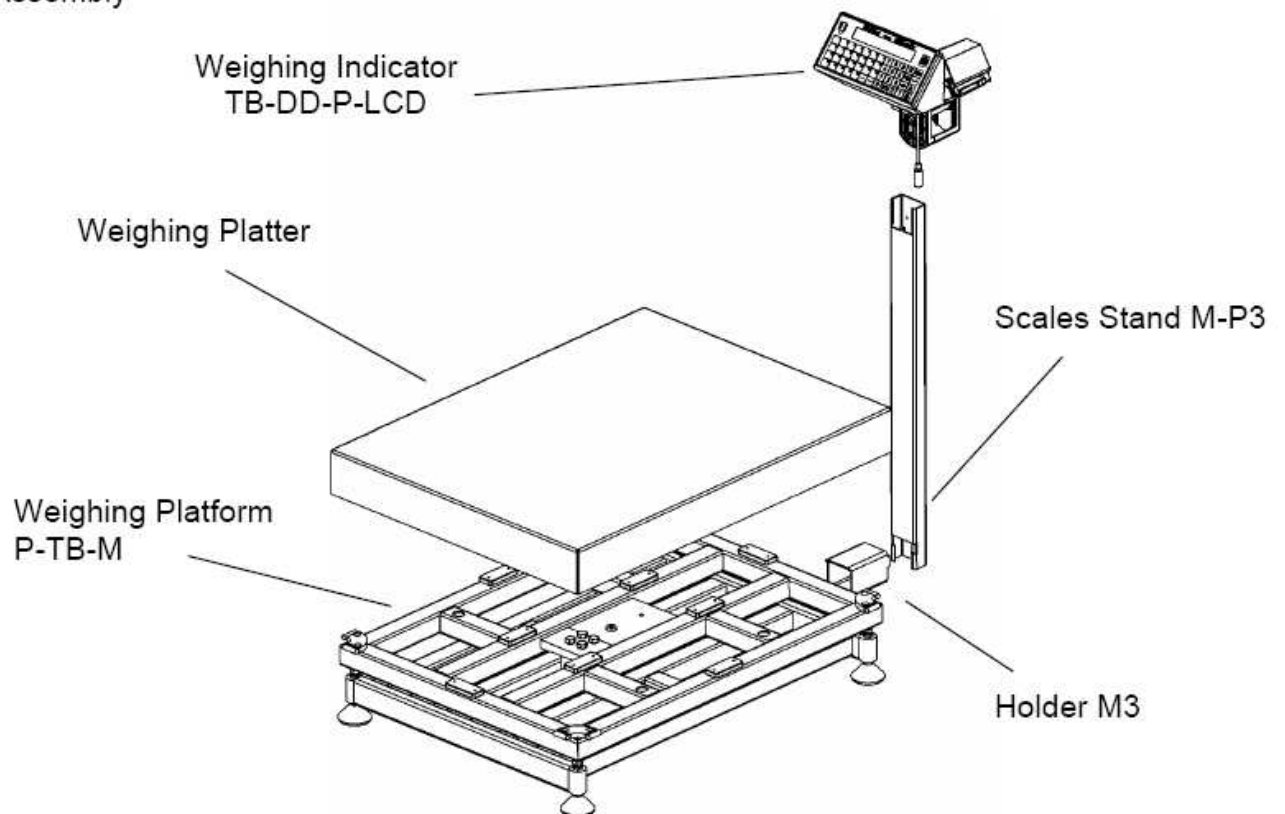
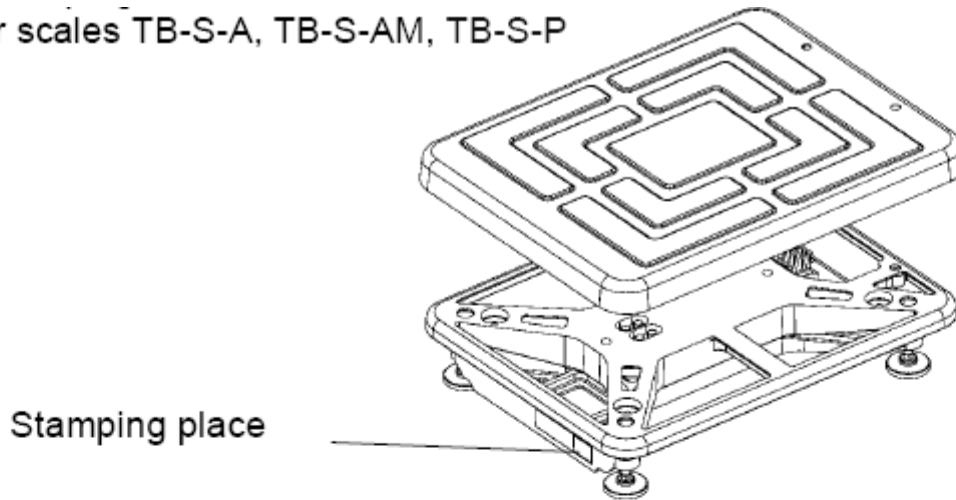


Figure 13. Stamping

1) For scales TB-S-A, TB-S-AM, TB-S-P



2) For scales TB-M-A, TB-M-P

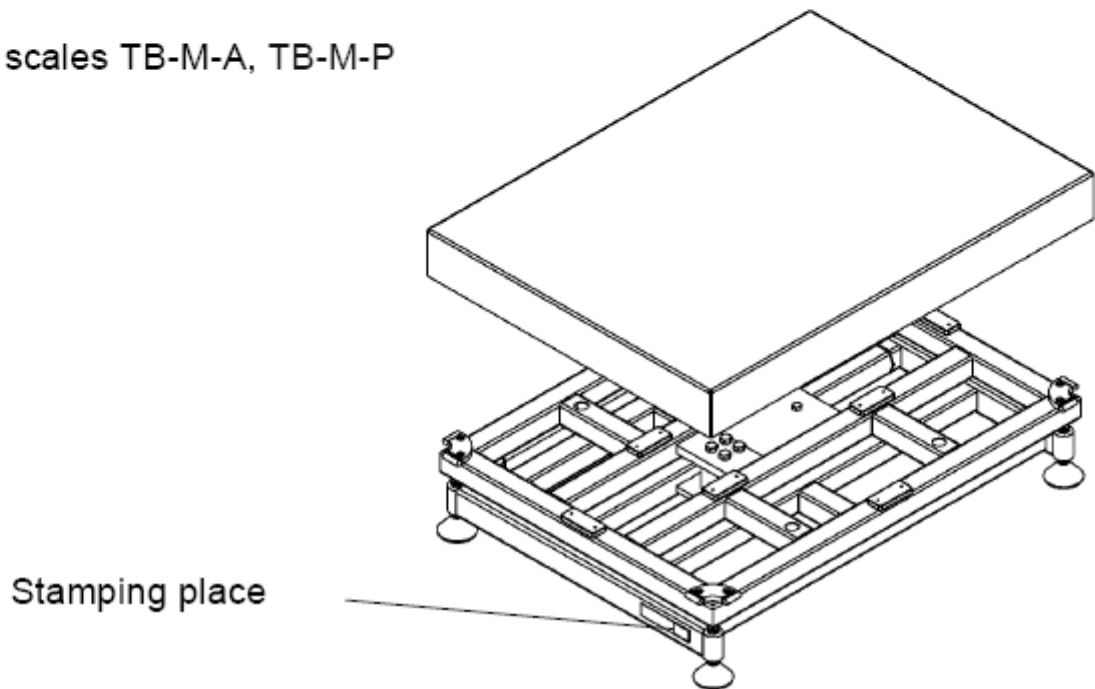


Figure 14. Construction of weighing indicator TB-DD-A-LCD and TB-DD-AM-LCD

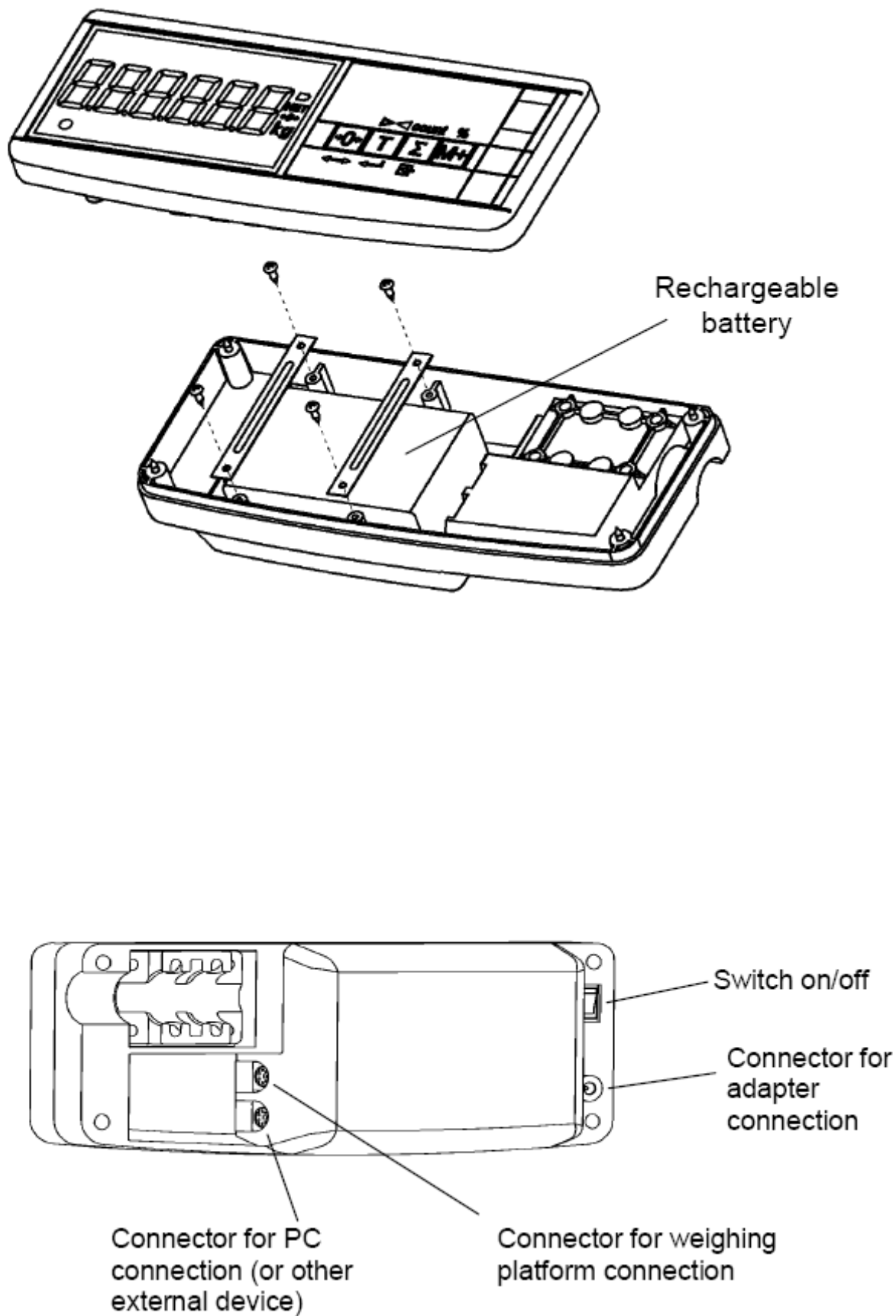


Figure 15. Construction of weighing indicator TB-DD-P-LCD

