EC type-approval certificate of a non-automatic weighing instrument

Issued by	**Inspecta Tarkastus Oy** **Notified Body Number 0424**
In accordance with	The Council Directive 2014/31/EU on Non-automatic Weighing Instruments
Issued to	**Joint Stock Company "MASSA-K", 15 A, Pirogovskaya nab,** **St-Petersburg, Russia**
In respect of	A graduated, self-indicating, electronic, single-interval non-automatic weighing instrument.

Characteristics

Manufacturer	Joint Stock Company "MASSA-K"
Type	MK
Accuracy class	(III)
Number of verification intervals	$n \leq 3\ 200$
Verification scale interval	$e \geq 1$ g
Maximum capacity	3 kg $\leq$ Max ≤ 32 kg

Description and documentation

The principal characteristics and approval conditions are set out in the descriptive Annex to this certificate documented in the documentation folder 230036-2.

Valid until   8th of February 2026

Date of issue   Vantaa, 6th of July 2016

Signatories

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Business Area Manager	Technical Expert

FINAS
Finnish Accreditation Service
I001 (EN ISO/IEC 17020)
(Tyyppi A / Type A)

TRUST & QUALITY www.inspecta.com

DESCRIPTIVE ANNEX
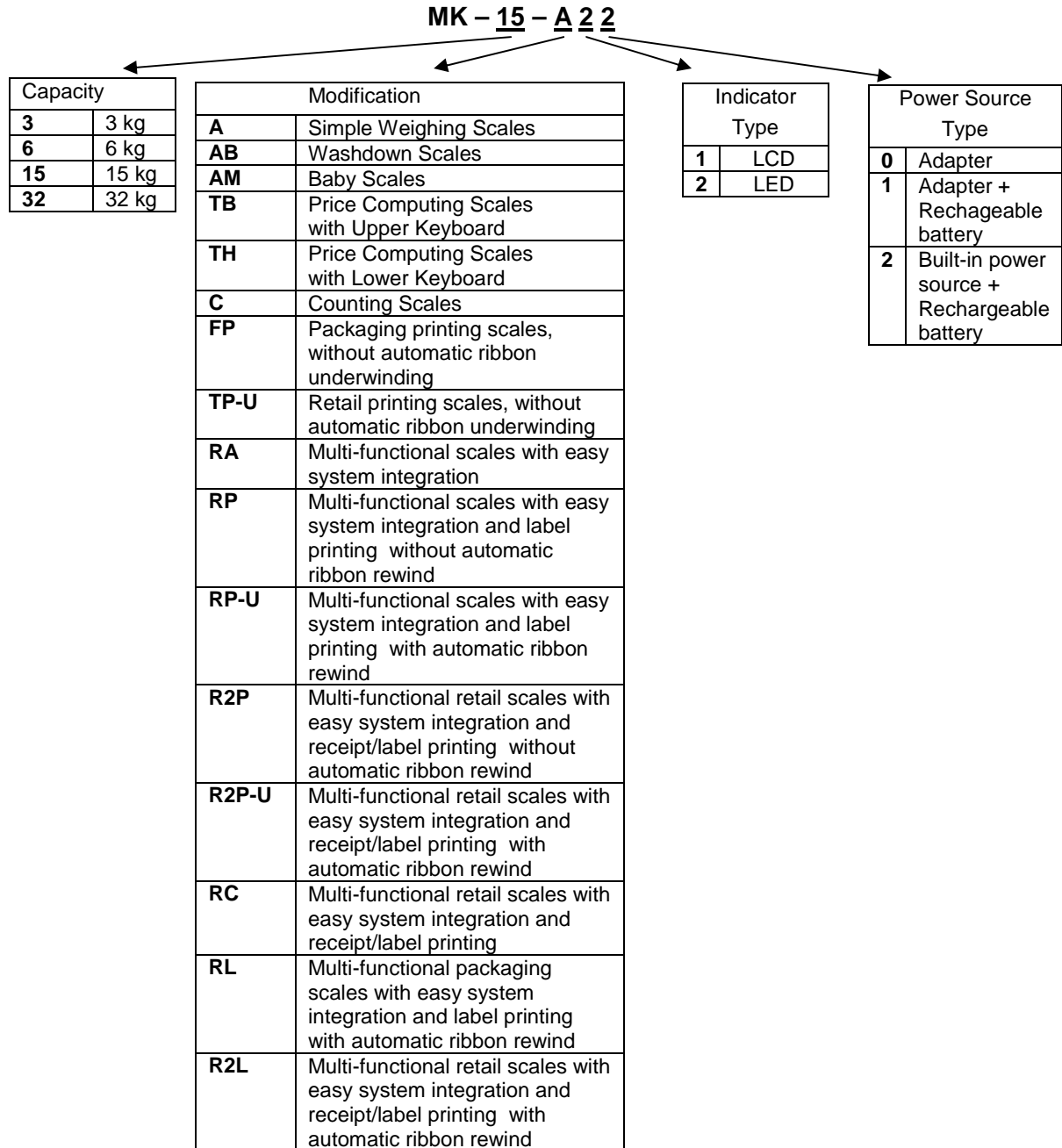## of EC type-approval of a non -automatic weighing instrument

NAME AND TYPE OF INSTRUMENT

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

Model	Purpose
MK-3-A11, MK-6-A11, MK-15-A11, MK-32-A11, MK-3-A21, MK-6-A21, MK-15-A21, MK-32-A21, MK-3-A22, MK-6-A22, MK-15-A22, MK-32-A22	Simple Weighing Scales
MK-3-AB20, MK-6-AB20, MK-15-AB20, MK-32-AB20	Washdown Scales
MK-3-AM11, MK-6-AM11, MK-15-AM11, MK-32-AM11 MK-3-AM21, MK-6-AM21 MK-15-AM21, MK-32-AM21	Baby Scales
MK-3-TB21, MK-6-TB21, MK-15-TB21, MK-32-TB21, MK-3-TB22, MK-6-TB22, MK-15-TB22, MK-32-TB22	Price Computing Scales with Upper Keyboard
MK-3-TH21, MK-6-TH21, MK-15-TH21, MK-32-TH21, MK-3-TH22, MK-6-TH22, MK-15-TH22, MK-32-TH22	Price Computing Scales with Lower Keyboard
MK-3-C11, MK-6-C11, MK-15-C11, MK-32-C11, MK-3-C21, MK-6-C21, MK-15-C21, MK-32-C21, MK-3-C22, MK-6-C22, MK-15-C22, MK-32-C22	Counting Scales
MK-6-FP10, MK-15-FP10, MK-32-FP10	Packaging printing scales, without automatic ribbon underwinding
MK-6-FP-U10, MK-15-FP-U10, MK-32-FP-U10	Packaging printing scales, with automatic ribbon underwinding
MK-6-TP10, MK-15-TP10, MK-32-TP10	Retail printing scales, without automatic ribbon underwinding
MK-6-TP-U10, MK-15-TP-U10, MK-32-TP-U10	Retail printing scales, without automatic ribbon underwinding
MK-6-RA11, MK-15-RA11, MK-32-RA11	Multi-functional scales with easy system integration
MK-6-RP10, MK-15-RP10, MK-32-RP10	Multi-functional scales with easy system integration and label printing without automatic ribbon rewind
MK-6-RP-U10, MK-15-RP-U10, MK-32-RP-U10	Multi-functional scales with easy system integration and label printing with automatic ribbon rewind
MK-6-R2P10, MK-15-R2P10, MK-32-R2P10	Multi-functional retail scales with easy system integration and receipt/label printing without automatic ribbon rewind
MK-6-R2P-U10, MK-15-R2P-U10, MK-32-R2P-U10	Multi-functional retail scales with easy system integration and receipt/label printing with automatic ribbon rewind
MK-6-RC11, MK-15-RC11, MK-32-RC11	Multi-functional retail scales with easy system integration and receipt printing
MK-6-RL10, MK-15-RL10, MK-32-RL10	Multi-functional packaging scales with easy system integration and label printing with automatic ribbon rewind
MK-6-R2L10, MK-15-R2L10, MK-32-R2L10	Multi-functional retail scales with easy system integration and label printing with automatic ribbon rewind

The instrument can in addition have a commercial model designation of their own together with one of the following brand names: "IMBA MK-6-A11" (IMBA ITALY SAS), "OPI MK-15-TB22" (OPI S.R.L.), "TAMTRON MK-6-A11" (Tamtron Oy), "SCALESHOUSE MK-15-TB22" (Scaleshouse Ltd.), "GIROPES MK-32-C22" (Giropes S.L).

MODEL DESIGNATION

MK – 15 – A 2 2

Capacity	
3	3 kg
6	6 kg
15	15 kg
32	32 kg

Modification	
A	Simple Weighing Scales
AB	Washdown Scales
AM	Baby Scales
TB	Price Computing Scales with Upper Keyboard
TH	Price Computing Scales with Lower Keyboard
C	Counting Scales
FP	Packaging printing scales, without automatic ribbon underwinding
TP-U	Retail printing scales, without automatic ribbon underwinding
RA	Multi-functional scales with easy system integration
RP	Multi-functional scales with easy system integration and label printing without automatic ribbon rewind
RP-U	Multi-functional scales with easy system integration and label printing with automatic ribbon rewind
R2P	Multi-functional retail scales with easy system integration and receipt/label printing without automatic ribbon rewind
R2P-U	Multi-functional retail scales with easy system integration and receipt/label printing with automatic ribbon rewind
RC	Multi-functional retail scales with easy system integration and receipt/label printing
RL	Multi-functional packaging scales with easy system integration and label printing with automatic ribbon rewind
R2L	Multi-functional retail scales with easy system integration and receipt/label printing with automatic ribbon rewind

Indicator Type	
1	LCD
2	LED

Power Source Type	
0	Adapter
1	Adapter + Rechageable battery
2	Built-in power source + Rechargeable battery

DESCRIPTION

Construction

The weighing instrument consists of following parts:

-Digital load module DLM-MK (Figure 1.)

4 modules which type is depending on scales modification

-Control module

-Display module

-Power module

-Weighing platter

Modules are connected together by I^2C Internal Bus Interface

Devices

-Device to check the display

-Semi-automatic subtractive tare weighing device

-Semi-automatic zero-setting device

-Automatic zero-setting device

-Initial zero-setting device

-Zero indicating-device

-Memory storage device

-Freezing the indication after stable equilibrium (only baby scales) which may be by-passed by pressing a tare key during the switch on and display checking of the scale

-Sum function device

-Unit weight calculation device (counting scales)

Table of construction of different MK models

Model	Digital Module	Control Module	Display Module	Power Module	Weighing Plater
MK-3(6;15;32)-A11		CD-A-LCD		PU-DC	
MK-3(6;15;32)-A21		CD-A-LED		PU-DC	P-A
MK-3(6;15;32)-A22		CD-A-LED		PU-AC	
MK-3(6;15;32)-AB20		CD-AB-LED		PU-DC	P-B
MK-15-AM11		CD-AM-LCD		PU-DC	
MK-15-AM21		CD-AM-LED		PU-DC	P-M
MK-3(6;15;32)-TB21		CD-TB-LED	DD-TB(TH)LED	PU-DC	
MK-3(6;15;32)-TB22				PU-AC	
MK-3(6;15;32)-TH21		CD-TH-LED		PU-DC	
MK-3(6;15;32)-TH22				PU-AC	
MK-3(6;15;32)-C11		CD-C-LCD		PU-DC	
MK-3(6;15;32)-C21	DLM-MK	CD-C-LED		PU-DC	P-A
MK-3(6;15;32)-C22		CD-C-LED		PU-AC	
MK-3(6;15;32)-FR10			DD-FP-LCD	PU-DC-P	
MK-3(6;15;32)-FR-U10					
MK-3(6;15;32)-TR10			DD-FP-LCD		
MK-3(6;15;32)-TR-U10					
MK-3(6;15;32)-RA11			DD-RA-LCD		
MK-3(6;15;32)-RP10			DD-RP-LCD		
MK-3(6;15;32)-RP-U10					
MK-3(6;15;32)-R2P10			DD-R2P-LCD		P-B
MK-3(6;15;32)-R2P-U10					
MK-3(6;15;32)-RC11			DD-RC-LCD		
MK-3(6;15;32)-RL10			DD-RL-LCD		
MK-3(6;15;32)-R2L10			DD-R2L-LCD		

TECHNICAL DATA

Model	MK-3-A	MK-6-A	MK-15-A	MK-32-A
	MK-3-AB	MK-6-AB	MK-15-AB	MK-32-AB
	MK-3-TH	MK-6-TH	MK-15-AM	MK-32-TH
	MK-3-TB	MK-6-TB	MK-15-TH	MK-32-TB
	MK-3-C	MK-6-C	MK-15-TB	MK-32-C
		MK-6-FP	MK-15-C	MK-32-FP
		MK-6-FP-U	MK-15-FP	MK-32-FP-U
		MK-6-TP	MK-15-FP-U	MK-32-TP
		MK-6-TP-U	MK-15-TP	MK-32-TP-U
		MK-6-RA	MK-15-TP-U	MK-32-RA
		MK-6-RP	MK-15-RA	MK-32-RP
		MK-6-RP-U	MK-15-RP	MK-32-RP-U
		MK-6-R2P	MK-15-RP-U	MK-32-R2P
		MK-6-R2P-U	MK-15-R2P	MK-32-R2P-U
		MK-6-RC	MK-15-R2P-U	MK-32-RC
		MK-6-RL	MK-15-RC	MK-32-RL
		MK-6-R2L	MK-15-RL	MK-32-R2L
			MK-15-R2L	
Maximum capacity, kg	3	6	15	32
Readability, g	1	2	5	10
Maximum subtractive tare, kg	1	2	5	10
Zero setting range, % of Max capacity	20	20	20	20
Platform dimensions, mm	340(W)x244(D)x15(H)*			
Operating temperature range, ℃	-10…+40			
Accuracy class	Ⓘ Ⓘ Ⓘ (III)			
Minimum capacity	Min = 20 e			
Power supply	230 V, 50 Hz or/and battery operated 7-12 VDC			

*Note :   Washdown scales - 340mm(W)x321mm(D)x56mm(H)
              Baby Scales - 540mm(W)x290mm(D)x70mm(H)

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 Annex 1 of the Directive 2014/31/EU.

SEALING

Sealing is described in figures 20, 21, 22 and 23.

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 2014/31/EU 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. Digital Load Module DLM-MK general view
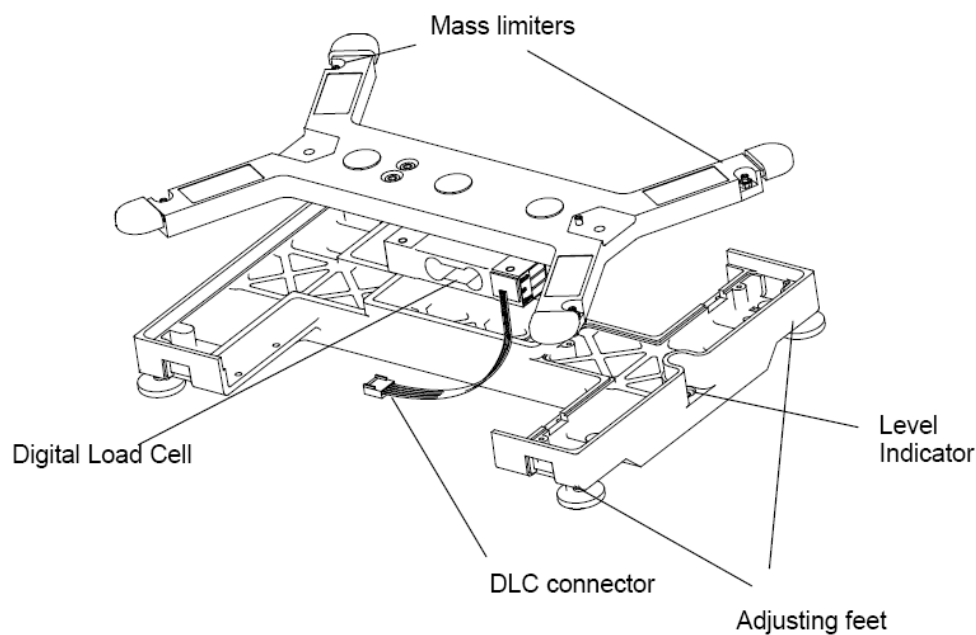
Figure 2. Simple weighing scales MK-A

5.1.2 Assembly

Weighing platter

Power Module
PU-DC (PU-AC)

Rechargeable
battery

Digital Load
Module

Control Module
CD-A-LCD (CD-A-LED)
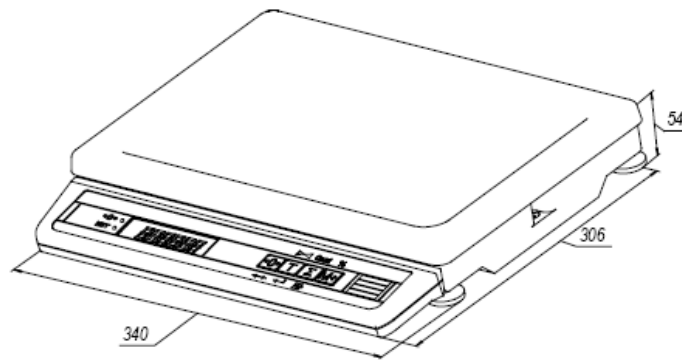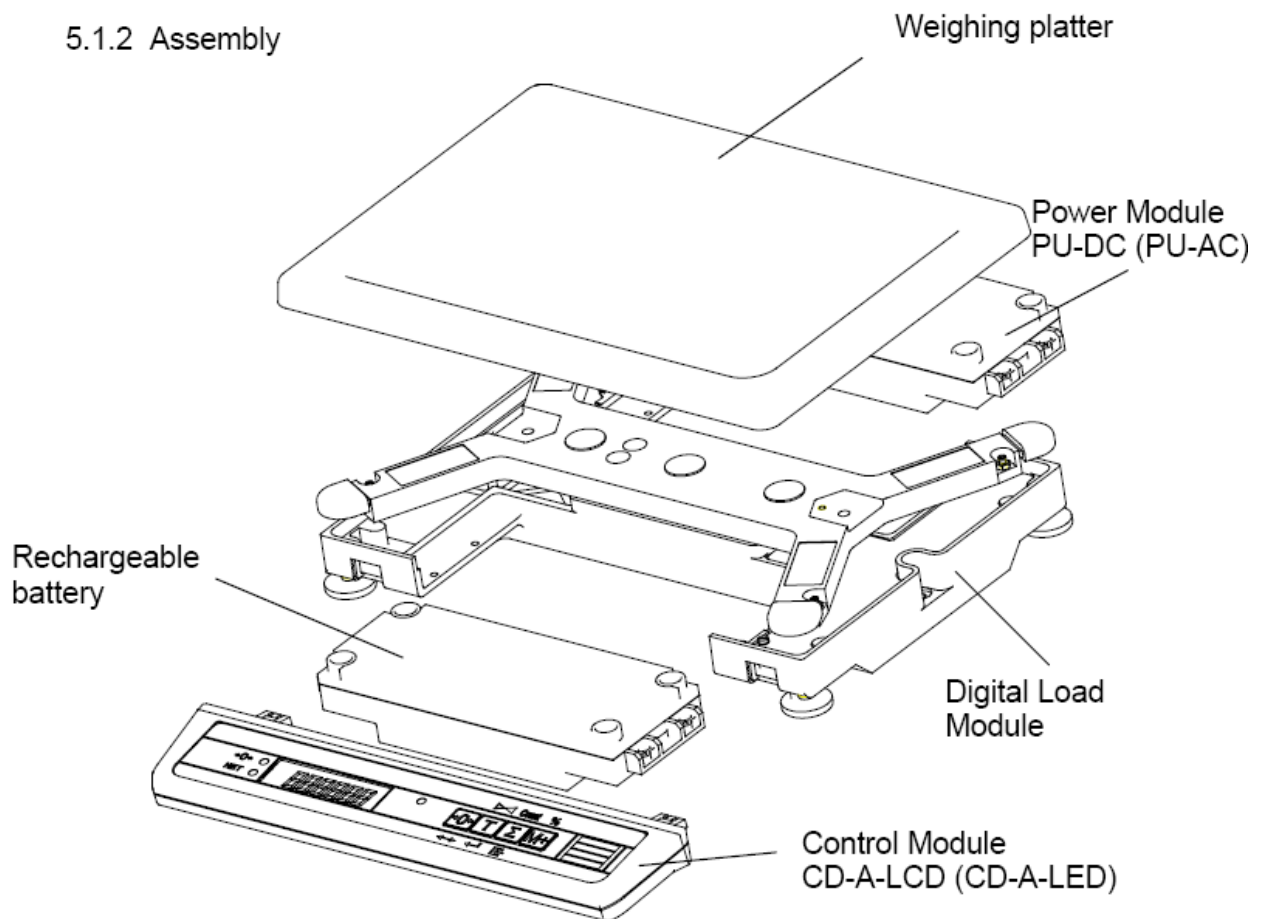
Figure 3. Washdown Scales MK-AB

5.2.2 Assembly

Control Module
CD-AB-LED

Weighing platter

Digital Load
Module DLM-MK
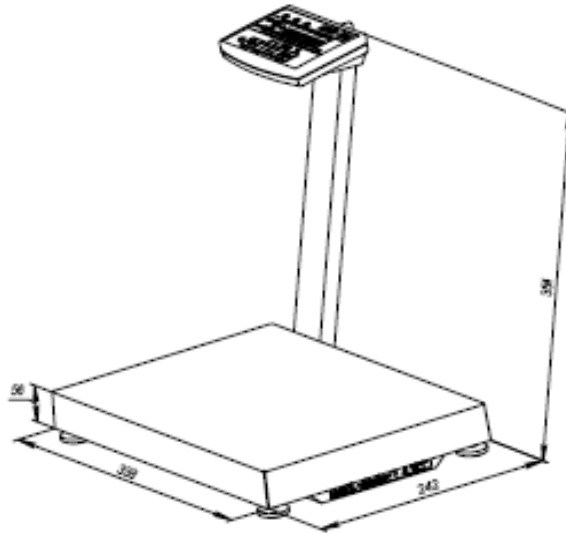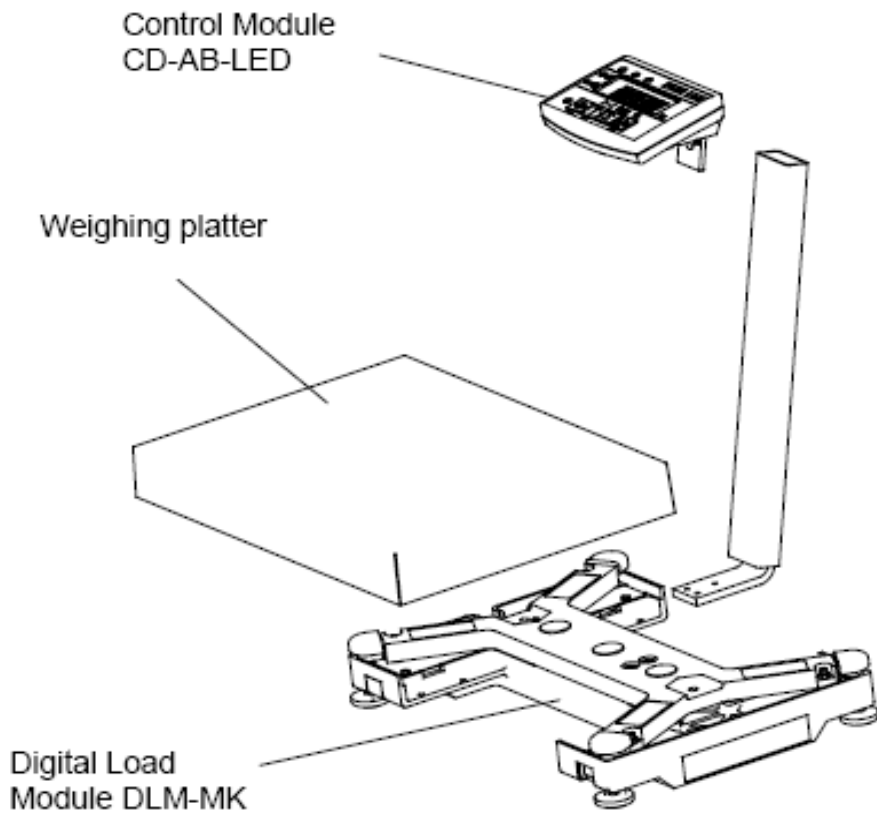
Figure 4. Baby Scales MK-AM
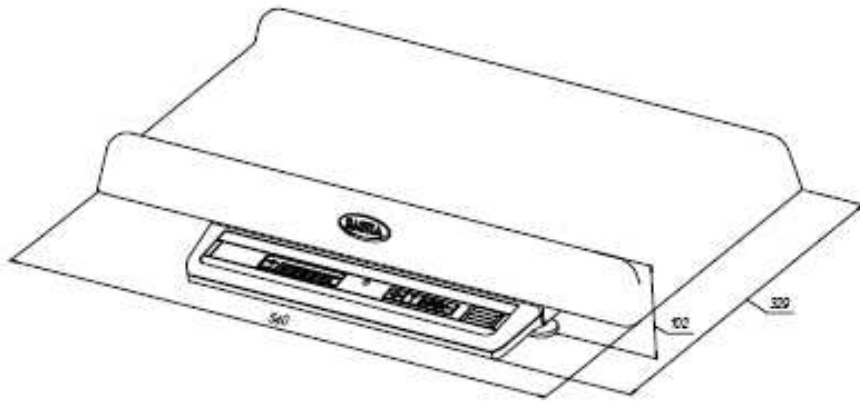
5.3.2 Assembly
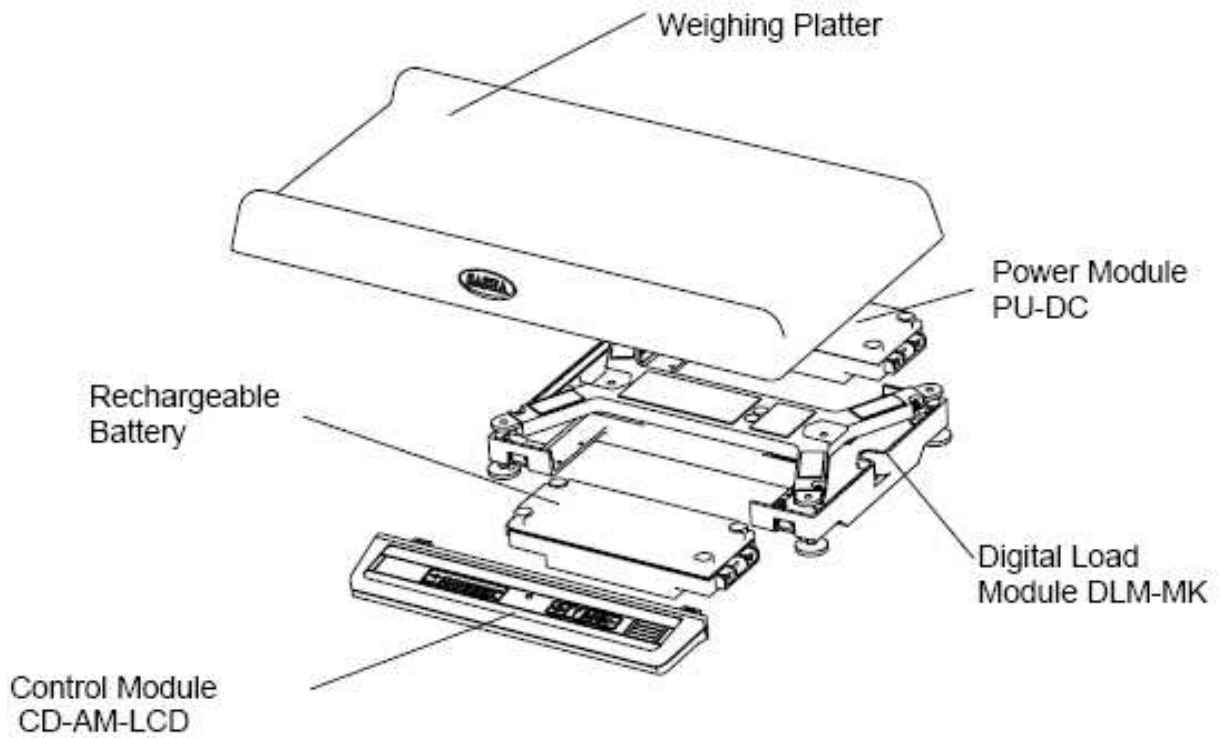
Figure 5. Price Computing scales with upper keyboard MK-TB

5.4.1 General view.
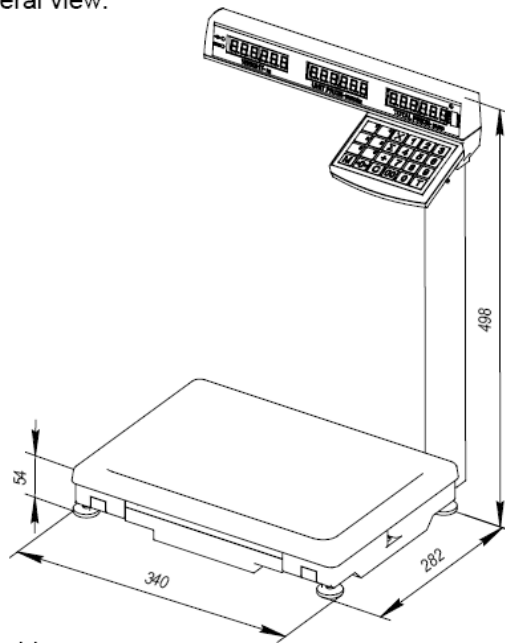
5.4.2 Assembly
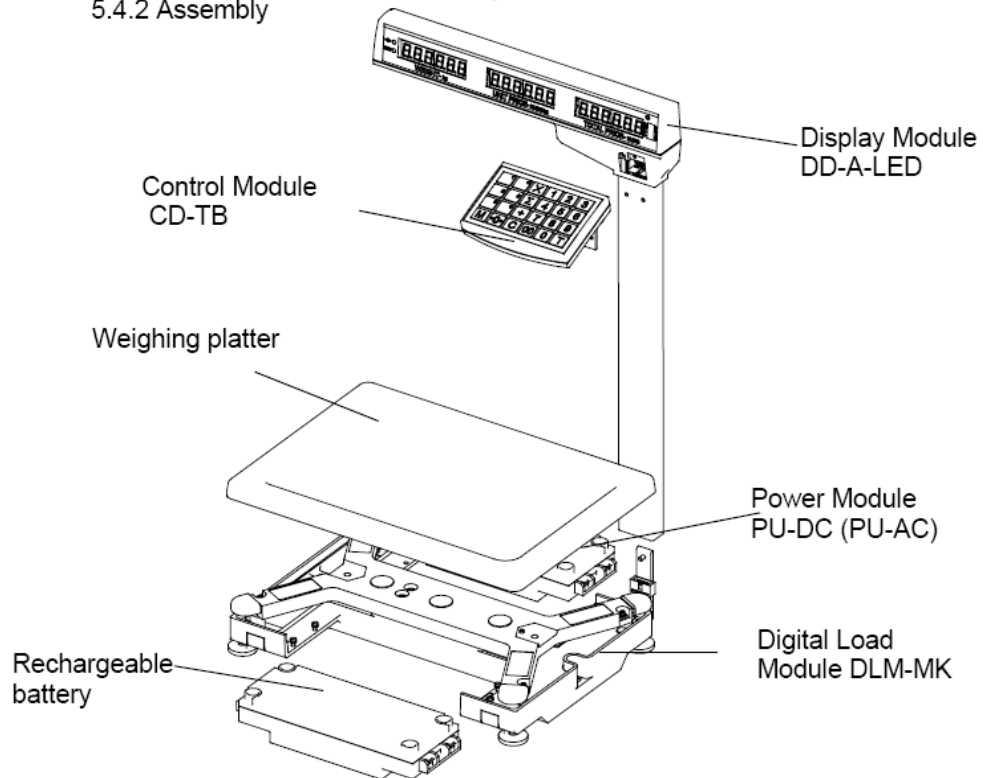
Figure 6. Price Computing scales with lower keyboard MK-TH

5.5.2 Assembly

Display Module
DD-TB(TH)-LED

Weighing Platter

Power Module
PU-DC (PU-AC)

Rechargeable
battery

Digital Load
Module DLM-MK

Control Module
CD-TH
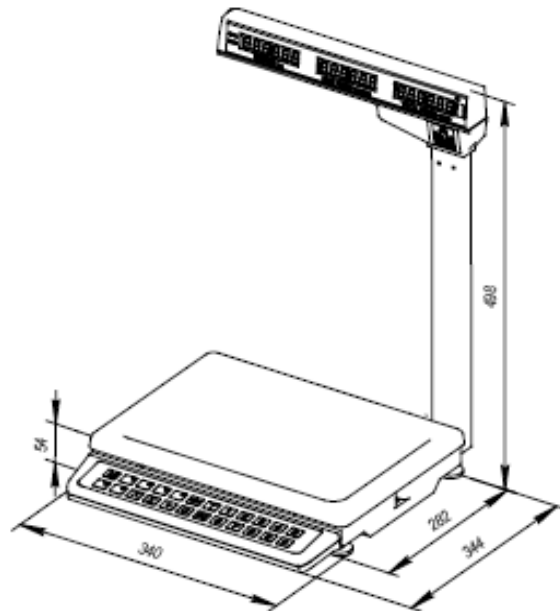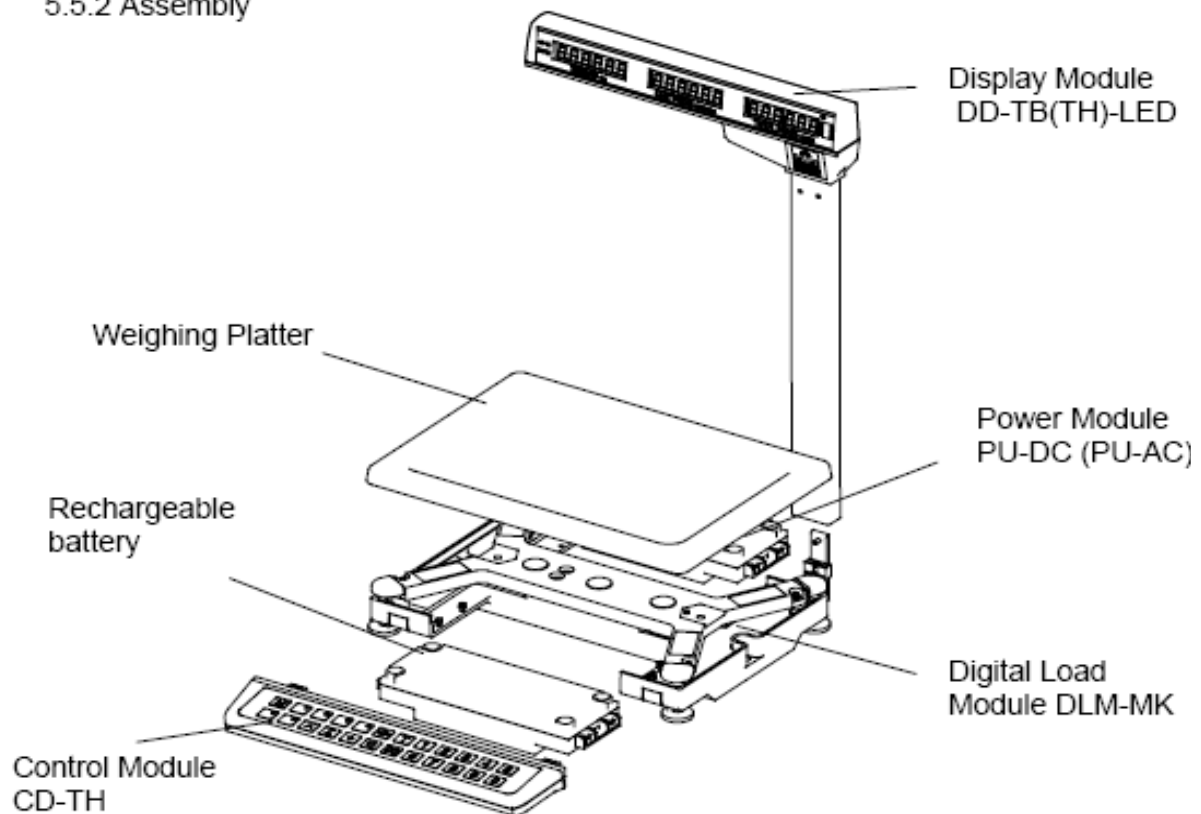
Figure 7. Counting Scales MK-C
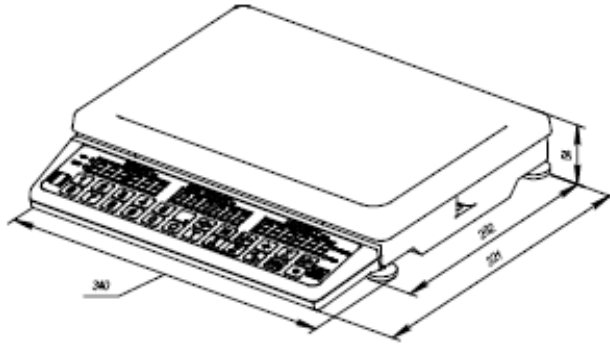
5.6.2 Assembly
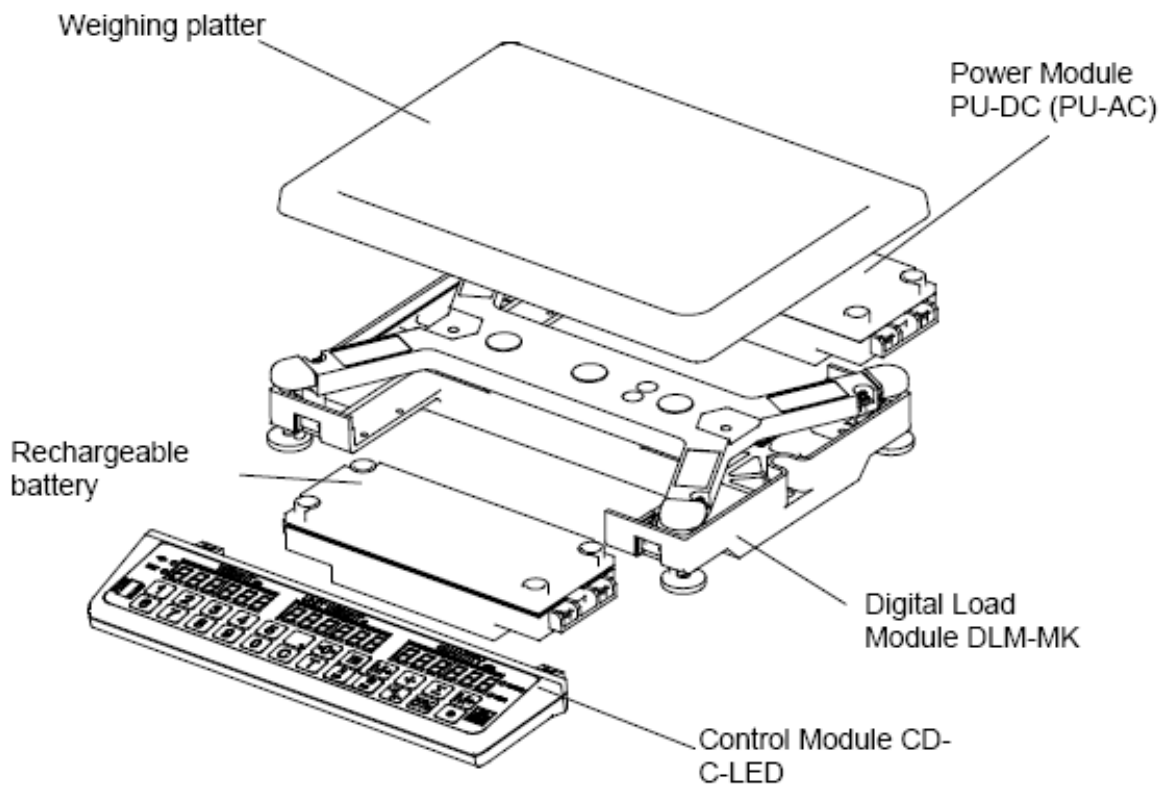
Figure 8. Packaging printing scales FP modification without automatic ribbon under winding
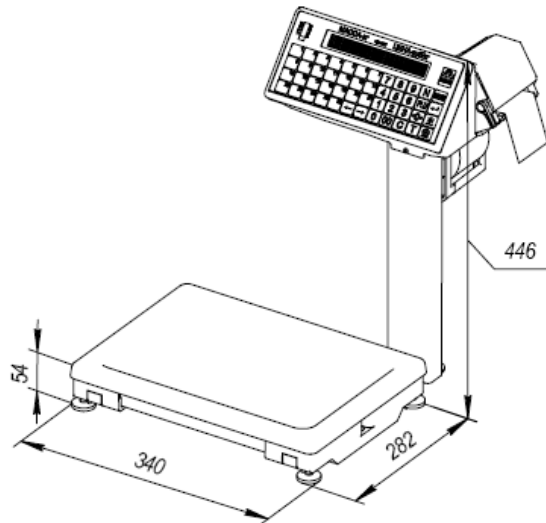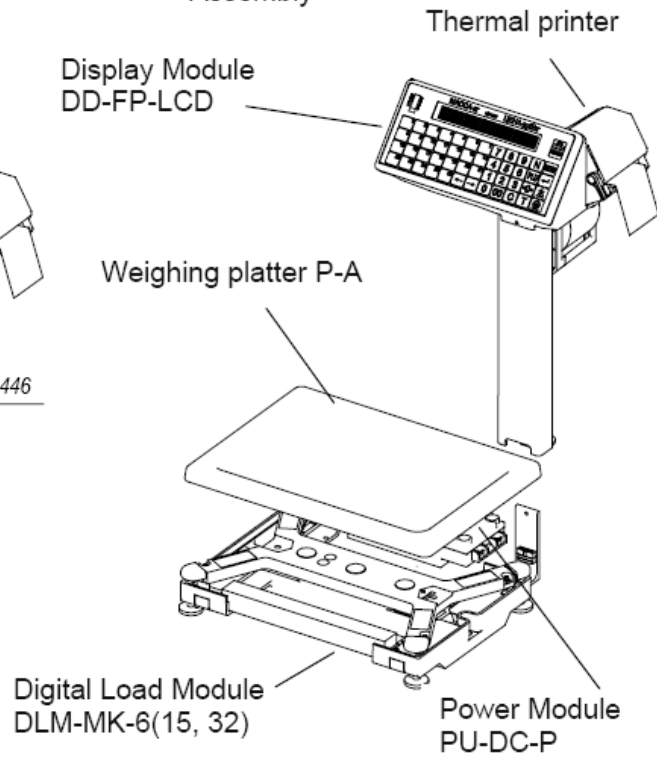
Figure 9. Packaging printing scales FP-U modification with automatic ribbon under winding
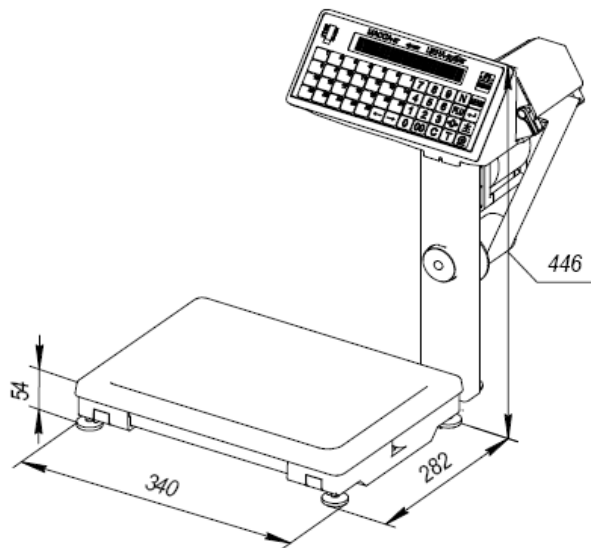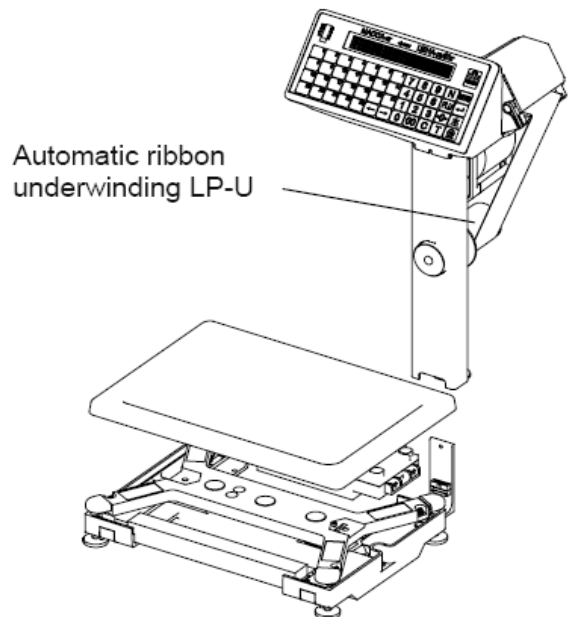
Figure 10. Retail printing scales TP modification without automatic ribbon under winding

General view

Assembly

Thermal printer

Display Module
DD-TP-LCD

Weighing platter P-A

478

54

340

282

Digital load module
DLM-MK-6(15, 32)

Power module
PU-DC-P
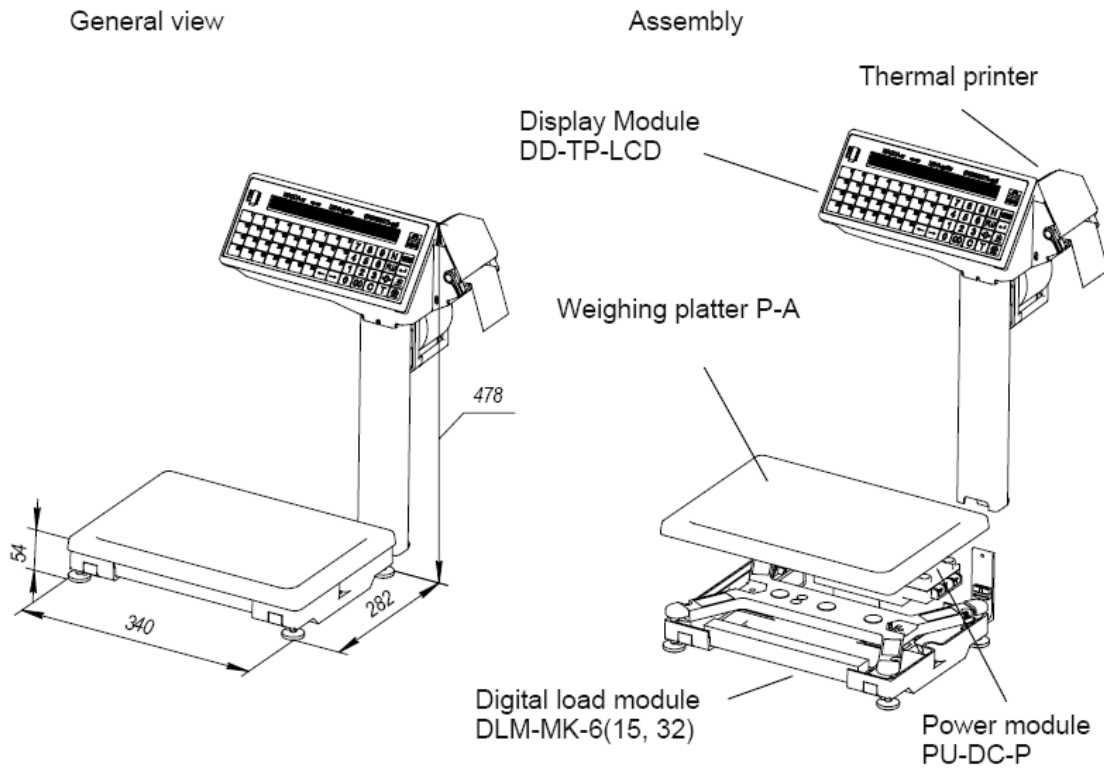
Figure 11. Retail printing scales TP-U modification with automatic ribbon under winding

General view

Assembly

Automatic ribbon
underwinding LP-U

478

54

340

282
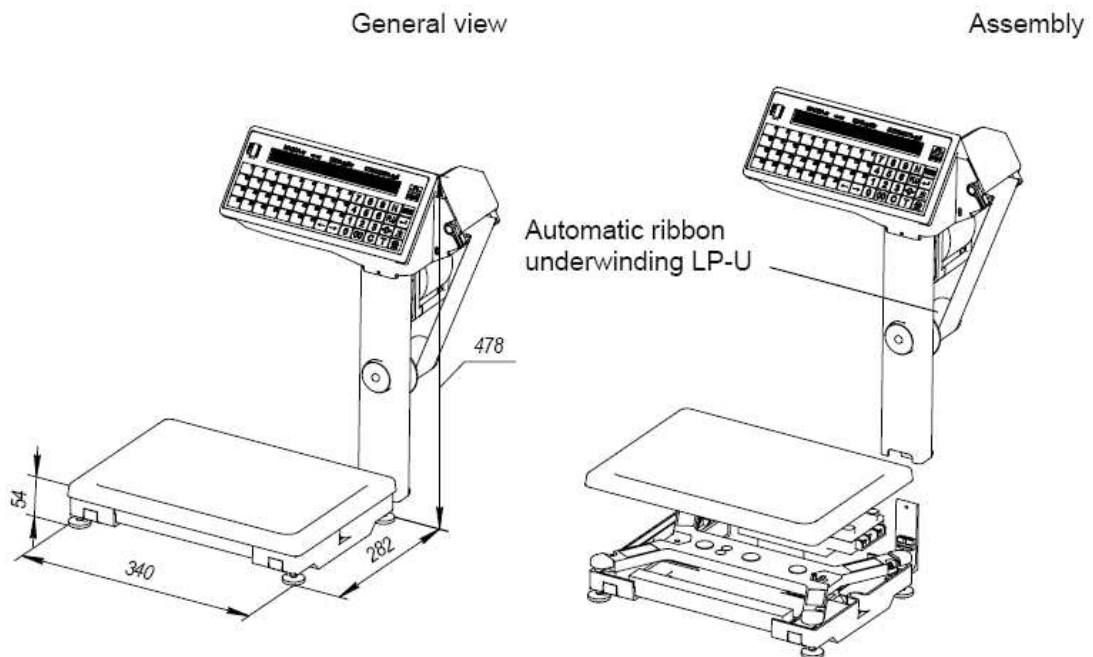
Figure 12. RA Multi-functional scales with easy system integration.
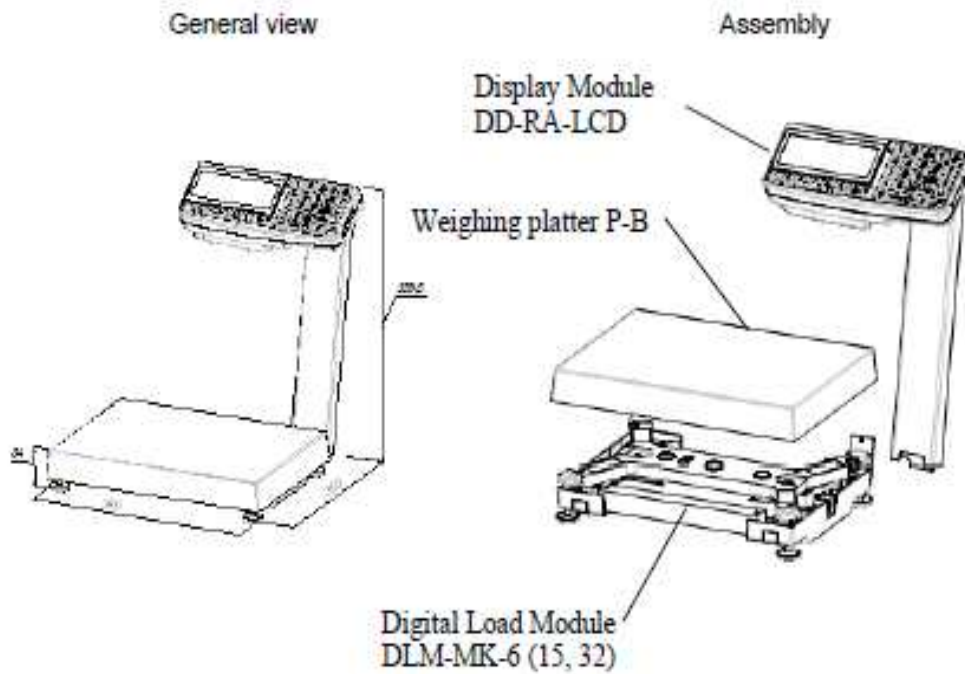
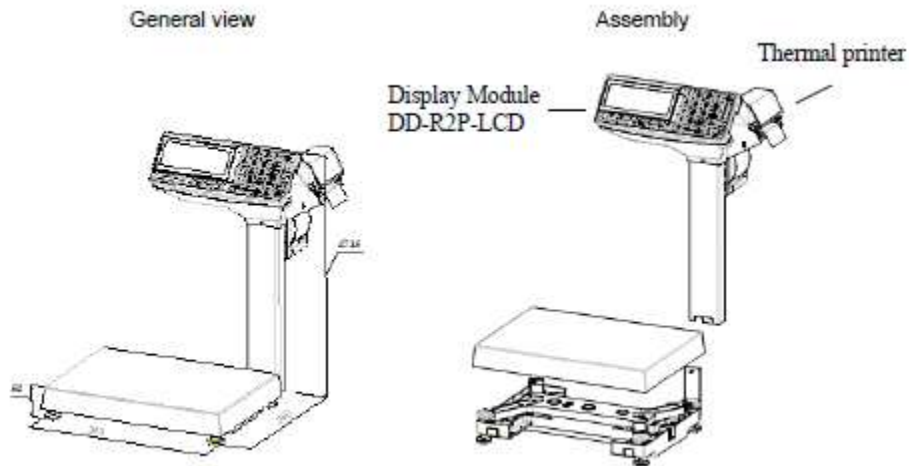Figure 13. RP Multi-functional scales with easy system integration and label printing without automatic ribbon rewind.

General view   Assembly

Thermal printer

Display Module
DD-RP-LCD

Weighing platter P-B

Digital Load Module
DLM-MK-6 (15, 32)
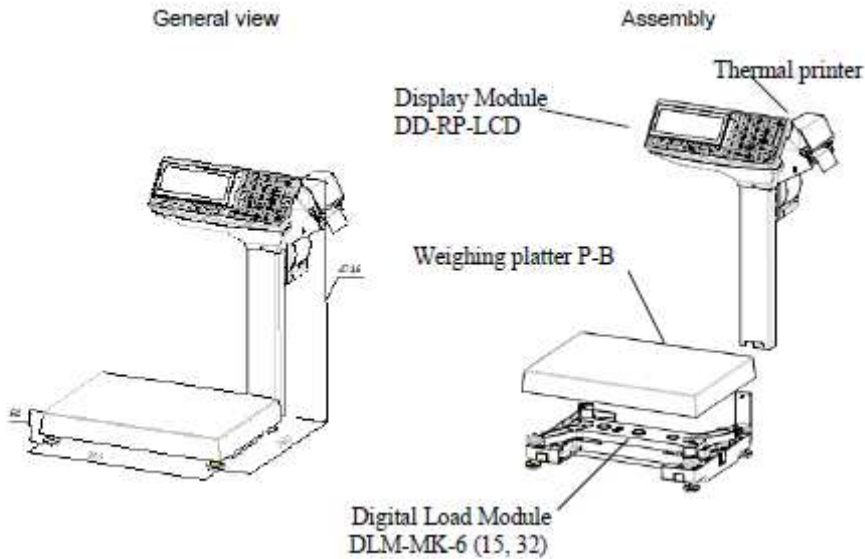
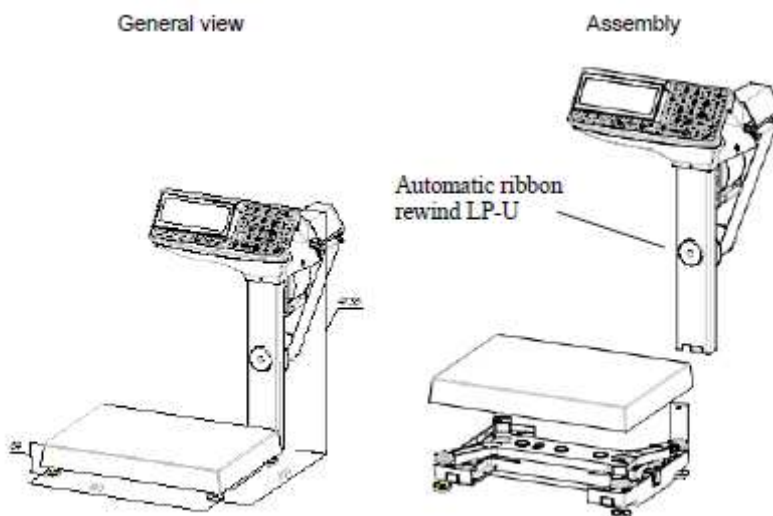Figure 14. RP-U Multi-functional scales with easy system integration and label printing with automatic ribbon rewind.

General view   Assembly

Automatic ribbon
rewind LP-U
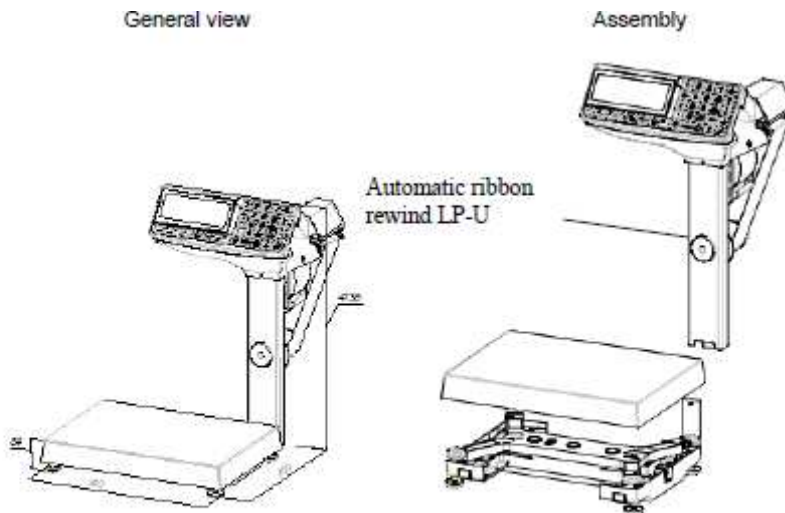
Figure 15. RP2 Multi-functional retail scales with easy system integration and receipt/label printing without automatic ribbon rewind.

Figure 16. RP2-U Multi-functional retail scales with easy system integration and receipt/label printing with automatic ribbon rewind.

Figure 17. RC Multi-functional retail scales with easy system integration and receipt printing.
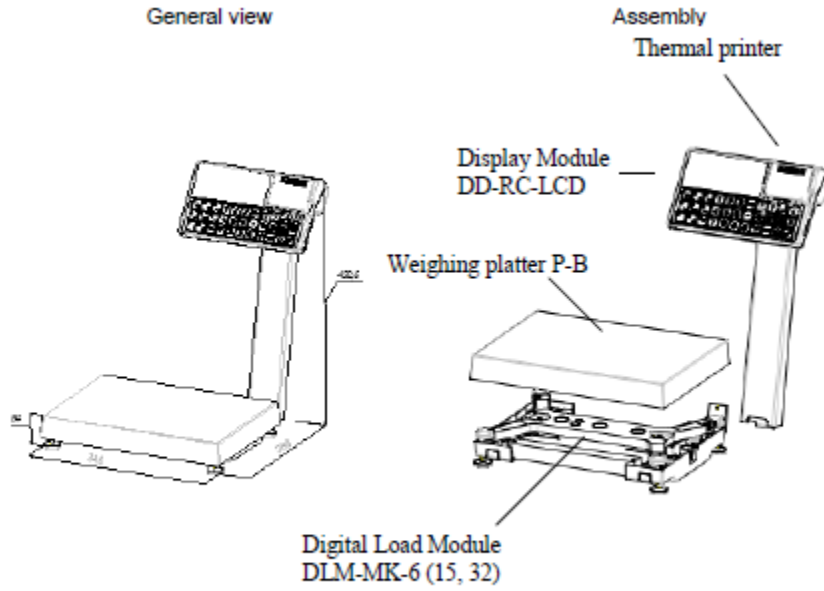

General view

Assembly
Thermal printer

Display Module
DD-RC-LCD

Weighing platter P-B

Digital Load Module
DLM-MK-6 (15, 32)
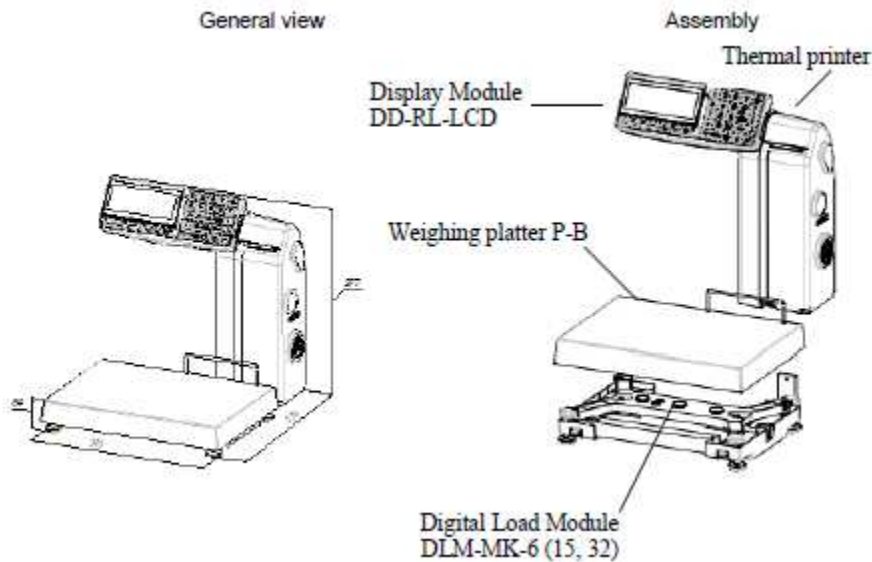
Figure 18. RL Multi-functional packaging scales with easy system integration and label printing with automatic ribbon rewind.

Figure 19. R2L Multi-functional packaging scales with easy system integration and label printing with automatic ribbon rewind.
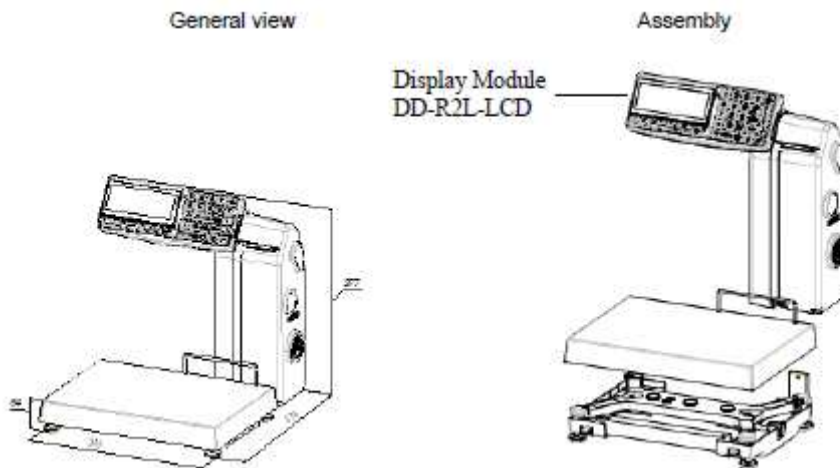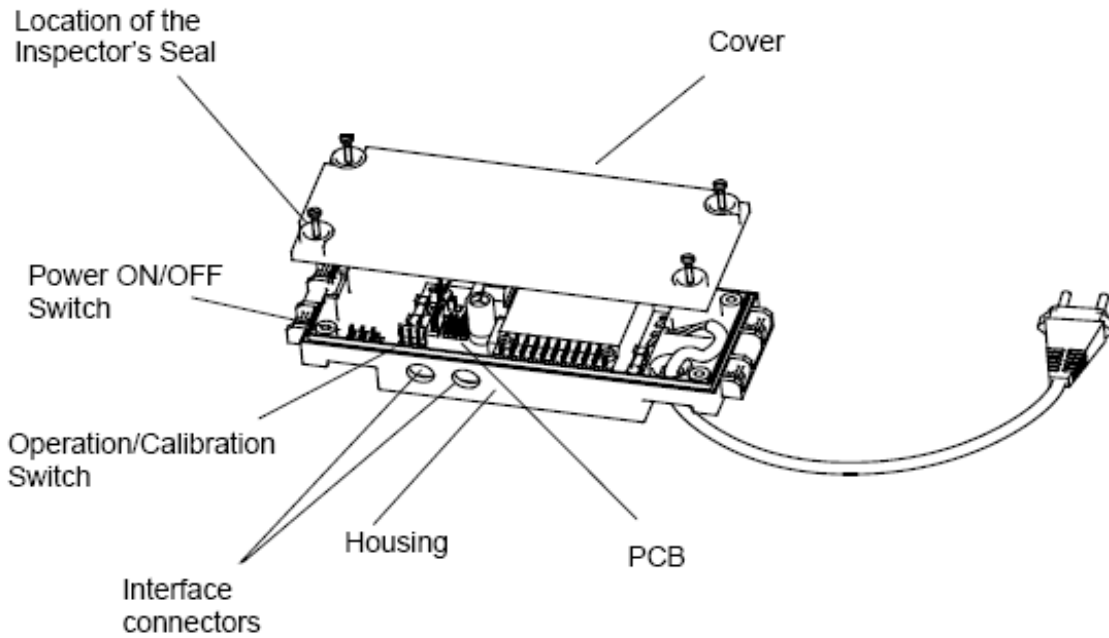
Figure 20. Sealing of the power module (PU-AC)

Location of the
Inspector's Seal

Cover

Power ON/OFF
Switch

Operation/Calibration
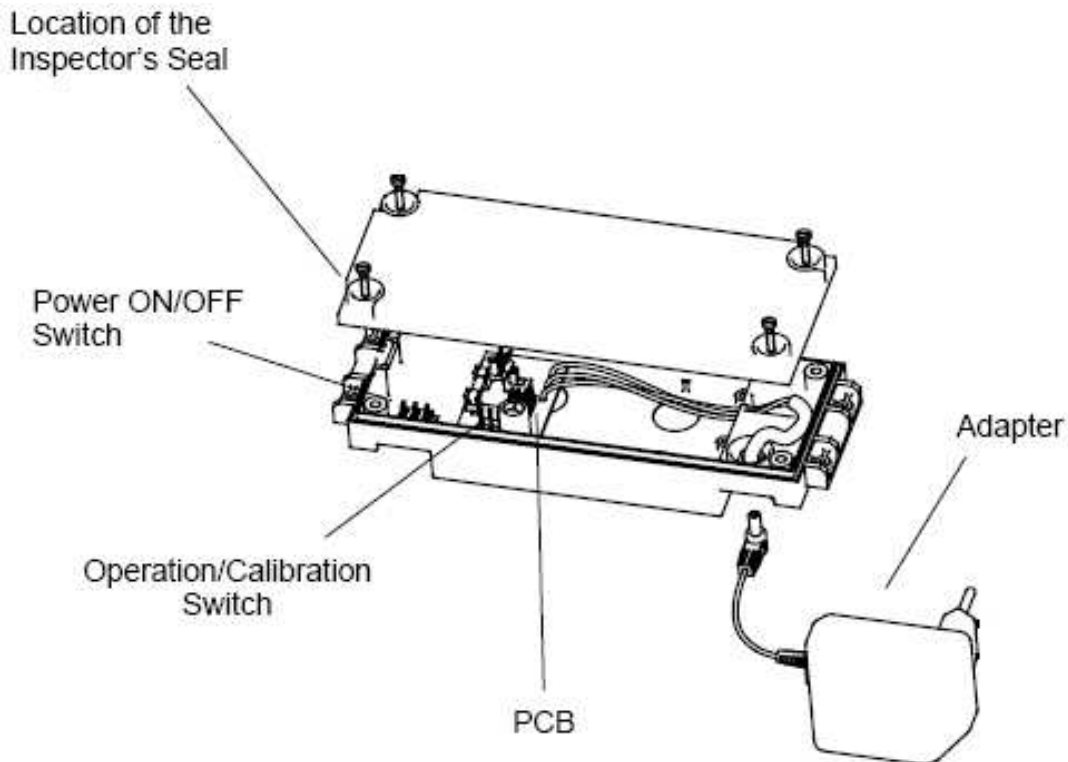Switch

Interface
connectors

Housing

PCB

Figure 21. Sealing of the power module (PU-DC)

Location of the
Inspector's Seal

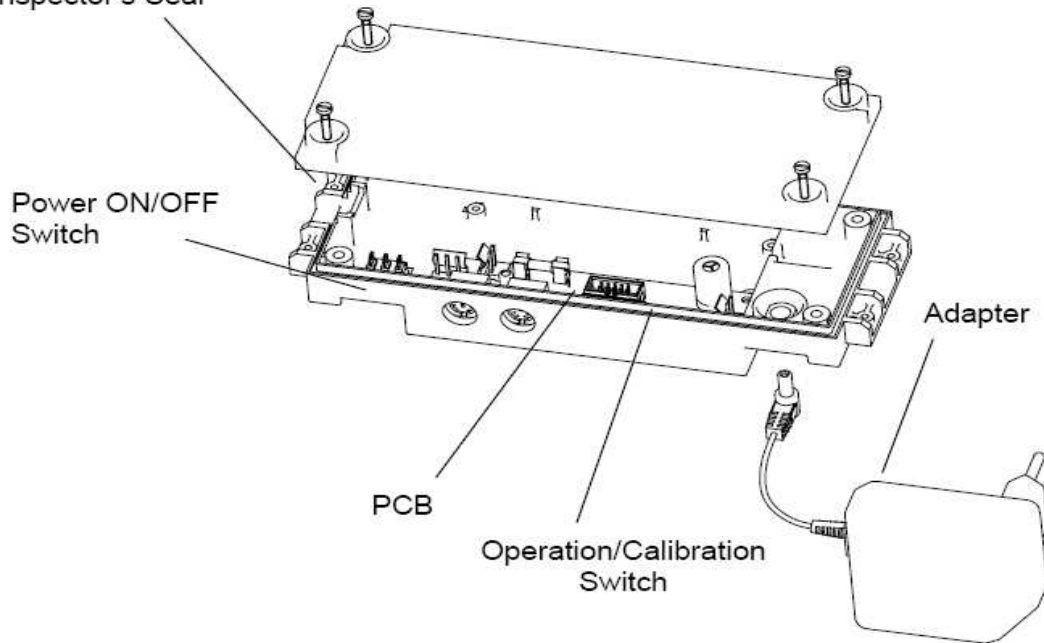Power ON/OFF
Switch

Adapter

Operation/Calibration
Switch

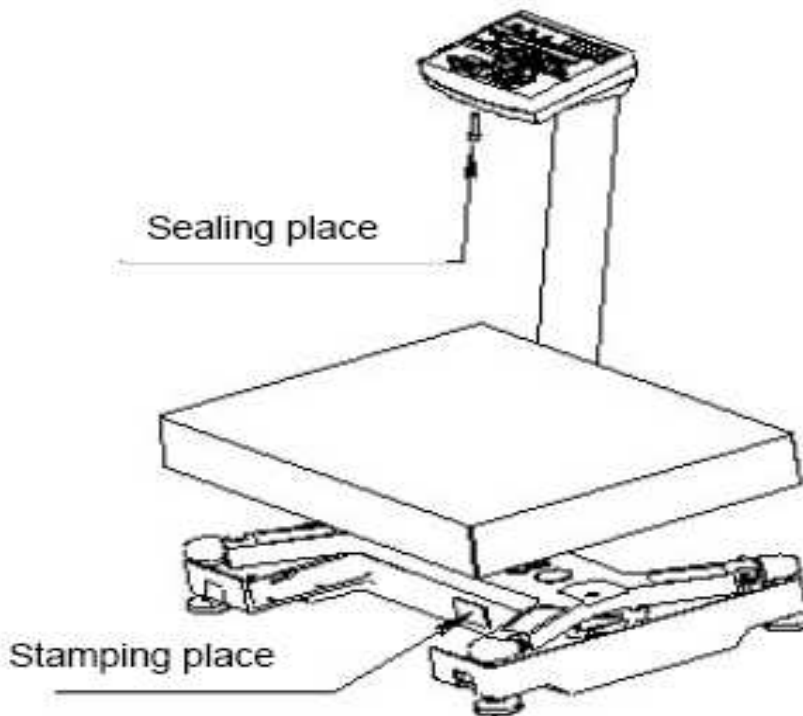PCB

Figure 22. Sealing of power module PU-DC-P

Figure 23. Sealing of the MK-AB

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CERTIFICATE HISTORY

CERTIFICATE NO.	DATE	DESCRIPTION
FI 06.1.01	09.06.2006	Type examination certificate first issued.
FI 06.1.01 Revision 1	07.09.2007	More MK-…-AM models added.
FI 06.1.01 Revision 2	26.02.2009	More models added: MK-…-A21, MK-…-C21, MK-…-FP10, MK-…-FP-U10, MK-…-TP10, MK-…TP-U10. Three new commercial brand names added.
FI 06.1.01 Revision 3	04.02.2016	Validity prolongation for Certificate (10 years).
FI 06.1.01 Revision 4	06.07.2016	More models added: MK-…-RA11, MK-…-RP10, MK-…-RP-U10, MK-…-R2P10, MK-…-R2P-U10, MK-…-RC11, MK-…-RL10, MK-…-R2L10.