

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin



EG-Bauartzulassung

EC type-approval certificate

Zulassungsinhaber: Precisa Gravimetrics AG
Issued to:

Moosmattstr. 32
8953 Dietikon
SCHWEIZ

Rechtsbezug: Richtlinie 2009/23/EG vom 23. April 2009 über nichtselbsttätige
In accordance with: Waagen (ABl. L 122 S. 6), umgesetzt durch die Eichordnung vom
12. August 1988, zuletzt geändert am 13.12.2007 (BGBl. I S. 2930).
Directive 2009/23/EC of 23 April 2009 on non-automatic weighing instruments (OJ L 122 p. 6), implemented by the Verification Ordinance of 12 August 1988, last amended on 13.12.2007 (Federal Law Gazette I, p. 2930).

Bauart: Nichtselbsttätige elektromechanische Präzisionswaage
In respect of: *Non-automatic electromechanical high accuracy weighing instrument*

Typ / Type: Serien 360 EP / 360 ES
Genauigkeitsklasse / *accuracy class* (I) oder / or (II)
Max 120 g ... 12200 g

Zulassungsnummer: D11-09-010
Approval number:

Gültig bis: 11.07.2021
Valid until:

Anzahl der Seiten: 9
Number of pages:

Geschäftszeichen: PTB-1.12-4041643
Reference No.:

Benannte Stelle: 0102
Notified Body:

Ort, Ausstellungsdatum: Braunschweig, 12.07.2011
Date of issue:

Zertifizierer: Bewerter:
Certifier: *Evaluator:*

Im Auftrag Im Auftrag
By order *By order*

Siegel

Seal

Dipl.-Ing. M. Denzel

Werner Baars

Die Hauptmerkmale, Zulassungsbedingungen und Auflagen sind in der Anlage enthalten, die Bestandteil der EG-Bauartzulassung ist. Hinweise und eine Rechtsbehelfsbelehrung befinden sich auf der ersten Seite der Anlage
The principal characteristics, approval conditions and special conditions, if any, are set out in the Annex which forms an integral part of the EC type-approval certificate. For notes and information on legal remedies, see first page of the Annex.

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Certificate history

Certificate release	Date	Essential changes
D11-09-010	12.07.2011	Primary certificate

General

Considering the conditions mentioned in this certificate, the type of instrument described here complies with the Directive 2009/23/EC of the European Parliament and the European Council for non-automatic weighing instruments, dated 23 April 2009.

Requirements

The measuring instruments of the type approved fall under the following legal regulations:

- Directive 2009/23/EC of the European Parliament and the Council of the European Community dated 23 April 2009 on non-automatic weighing instruments (OJ L122/6)

corresponding with:

- the General Regulations of the Verification Ordinance, dated 12 August 1988 (Federal Law Gazette I page 1657), last modified by article 3 § 14 of the act dated 13 December 2007 (Federal Law Gazette I page 2930).
- the Attachment 9 of the Verification Ordinance dated 12 August 1988, last modified by the Fifth Regulation to amend the Verification Ordinance dated 6 June 2011 (Federal Law Gazette 2011 part I No. 27).

Harmonised standard applied:

- DIN EN 45501: 1992 "Metrological Aspects of non-automatic weighing instruments"

1 Type of the instrument

Non-automatic electromechanical upper shell precision and analysis weighing instrument of series 360 EP and 360 ES, as well as multi-interval instrument. The commercial model designation of the weighing instrument is: EP... or ES ...

1.1 Basic design

Weighing instrument with implemented display and foil keyboard. Variant of the weighing instrument as desktop weighing instrument, see figure 2. The power supply is done by an external wall power supply or by battery (12 V DC).

Hinweise

EG-Bauartzulassungen ohne Unterschrift und Siegel haben keine Gültigkeit. Diese EG-Bauartzulassung darf nur unverändert weiterverbreitet werden. Auszüge bedürfen der Genehmigung der Physikalisch-Technischen Bundesanstalt.

Note

EC type-approval certificates without signature and seal are not valid. This EC type-approval certificate may not be reproduced other than in full. Extracts may be taken only with the permission of the Physikalisch-Technische Bundesanstalt.

Rechtsbehelfsbelehrung

Gegen diesen Bescheid kann innerhalb eines Monats nach Bekanntgabe schriftlich oder zur Niederschrift Widerspruch bei der Physikalisch-Technischen Bundesanstalt unter einer der nachstehenden Adressen eingelegt werden:

Information on legal remedies available

Objection may be made to this notification within one month of its receipt either in writing or orally recorded, to the Physikalisch-Technische Bundesanstalt at one of the following addresses:

Physikalisch-Technische Bundesanstalt

Bundesallee 100
38116 Braunschweig
DEUTSCHLAND

Abbestraße 2-12
10587 Berlin
DEUTSCHLAND

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1.2 Measuring sensor

1.2.1 Load receptor and force transmission

Mechanical parallel motion of a pan as load receptor.

1.2.2 Load cell

Load cell with electromagnetic force compensation and modulation of the coil current.

1.3 Messwertverarbeitung

Analogue to digital conversion of the measuring signal, processing within a microprocessor system, displaying and printing of the weighing result.

1.3.1 Indication of software subject to verification

To check whether the correct software subject to legal control is installed, after power up of the instrument a checksum or identification number is displayed beside the intrinsic software version. The software modules subject to legal control are tagged by a module identifier (functional checksum) which are merged to a checksum.

The relevant modules are:

Module	Checksum
WAIT.CPP	0100 _h
MESSWERTE.CPP	0200 _h

In case of a modification of the modules subject to legal control, the index is increased by 1 (i.e. 0100_h becomes 0101_h). Therefore the checksum does not fit to the checksum mentioned in the type-approval documentation and a re-evaluation by the designated notified body is necessary.

During each start-up of the weighing instrument, a checksum is displayed.

Example ES:

1st display row: Bxx-xxxx.Exx

2nd display row: 0300

Example EP:

Start-up window: Axx-xxxx.Exx (0300)

1.4 Indication of the measurement results

See figure 3

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1.5 Permitted functions and devices

	Reference to EN 45501	Type EP 360	Type ES 360
Semi-automatic zero-setting device	(T.2.7.2.2)	•	•
Initial zero-setting device	(T.2.7.2.4)	•	•
Zero-tracking device	(T.2.7.3)	•	•
Tare device	(T.2.7.4)	•	•
Preset tare device	(T.2.7.5)	○	○
Zero indicating device	(4.5.5)	•	•
Levelling device with level indicator	(T.2.7.1)	•	•
Multi-interval instrument	(T.3.2.6)	○	○
Multiple use of indicating devices	(4.4.4)	•	•
Device for detecting significant faults	(5.2)	•	•
In case of weighing instruments with $e > d$, the digit of the auxiliary indication is printed in brackets.		•	•
Initiating functions not subject to verification by the additional keyboard Smartbox		-	•
Internal automatic adjustment device, depending on time and temperature		○	○

- Always present.
- Optionally present.
- Not existing.

1.6 Documentation

The following documents apply:

- List „Precisa Serie 360 EP & ES“, dated 2011-06-20, pages 1 – 23.

1.7 Optional devices and functions being not subject to the Directive

None

2 Technical Data

Accuracy class	I	II
Maximum capacity Max	120 g ... 2220 g	320 g ... 12200 g
Number n of verification scale intervals	$n \leq 420000$	$n \leq 82000$
Tare-balancing range (subtractive)	$\leq 100\%$ of Max	
Preset tare range	$\leq 100\%$ of Max	

The weighing ranges with maximum capacity, minimum capacity, verification scale intervals and number of verification scale intervals may be selected in accordance with Nos. 2 and 3 of

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Appendix I to Directive 2009/23/EC and considering the limiting values of table 1, No. 1 and No. 2.

Table 1, accuracy class (I)

Type	Max	e =	d =	n ≤
...A or ...M	120 g...2220 g	1 mg...10 mg	0,01 mg...1 mg	420000
...A-.. or ...M-..	225 g...1220 g	1 mg...10 mg	0,01 mg...10mg	122000

Table 2, accuracy class (II)

Type	Max	e =	d =	n ≤
...M or ...M-..	320 g...620 g	10 mg	1 mg...10 mg	62000
...C or ...C-..	1200 g...8200 g	0,1 g	0,01 g...0,1 g	82000
...D or ...G	6200 g...12200 g	1 g	0,1 g...1 g	12200

Environmental conditions / influence factors:

- climatic: +15 °C ... +25 °C (I)
+10 °C ... +30 °C (II)
- mechanic: n. a.
- electromagnetic: OIML R76 (2006)

3 Interfaces and peripheral devices

3.1 Interfaces

The following interfaces may be implemented once:

	Type EP 360	Type ES 360
Serial RS232 interface	•	•
USB interface	•	•
Precisa Bus Konverter, type 350-8664	-	○
USB host, type 350-8665	○	-
Wired Ethernet, type 350-8666	○	-
Wireless Ethernet, type 350-8667(not subject to legal control)	○	-
Bluetooth, type 350-8668 (not subject to legal control)	○	-

- Always present.
- Optionally present.
- Not existing.

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3.2 Devices which can be connected

	Type EP 360	Type ES 360
Peripheral devices with test certificate ¹⁾	☐	☐
Peripheral devices without test certificate ²⁾	☐	☐
Additional keyboard Smartbox Type 350-8511	☐	☐

- Always present.
- Optionally present.
- Not existing.

- ¹⁾ The test certificate must be issued by a notified body within the meaning of Directive 2009/23/EC.
- ²⁾ If the requirements according to WELMEC Guide 2.5 (2000), section 3.3, are fulfilled.

4 Requirements on production, putting into use and utilisation

- 4.1 Weighing instruments of accuracy class **I** or **II** with $d \leq 10$ mg must have an appropriate wind shield.
- 4.2 Weighing instruments of accuracy class **I** must be adjusted before weighing, if necessary. If applicable, display values have to be corrected (density of the subject to be weighed, air density etc.). Notes concerning this matter have to be included in the user's manuals.

5 Additional information for EC verification or control of instruments in use

- 5.1 For weighing instruments having an internal adjustment device for span stability, the acceleration of gravity at the location of installation does not need to be regarded.
- 5.2 Devices which can be connected according to No. 3.2 have to be checked for the proper functioning (see WELMEC guide 2.5, No. 3.3).
- 5.3 It has to be checked, whether the software versions according to No. 1.3.1 are loaded. The software version is displayed during the start-up of the weighing instrument.

6 Securing measures

- Self-adhesive labels for securing have to be affixed according to figure 1:
- On the designation plate
 - Over the verification switch for securing of the software

7 Markings

The location for the CE-marking (CE + date of affixing) and the green metrology sticker with the metrology M are on the descriptive plate on the side of the weighing instrument; see figure 1.

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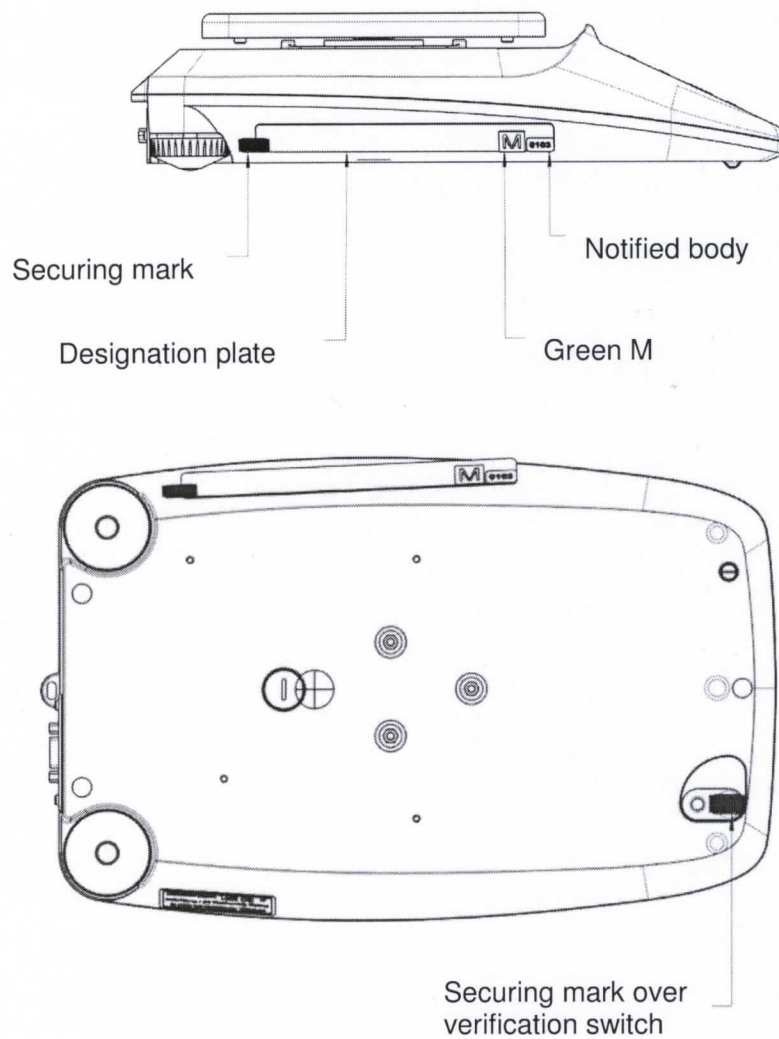
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Figure 1: Self-adhesive labels for securing



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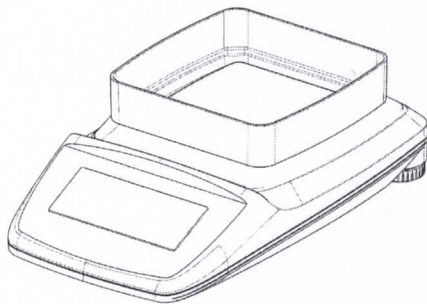
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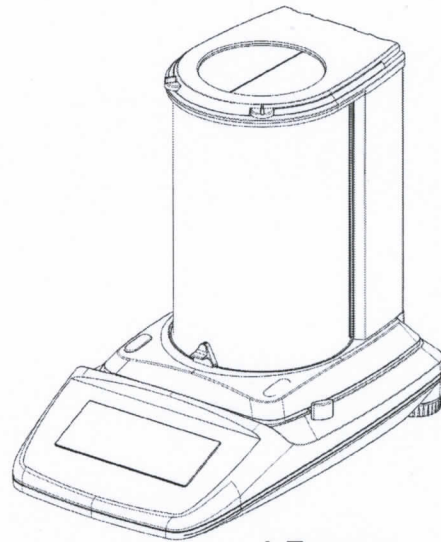
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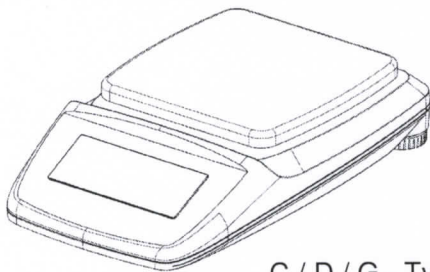
Figure 2: Series 360 EP or 360 ES



M-Types



A-Types



C / D / G - Types

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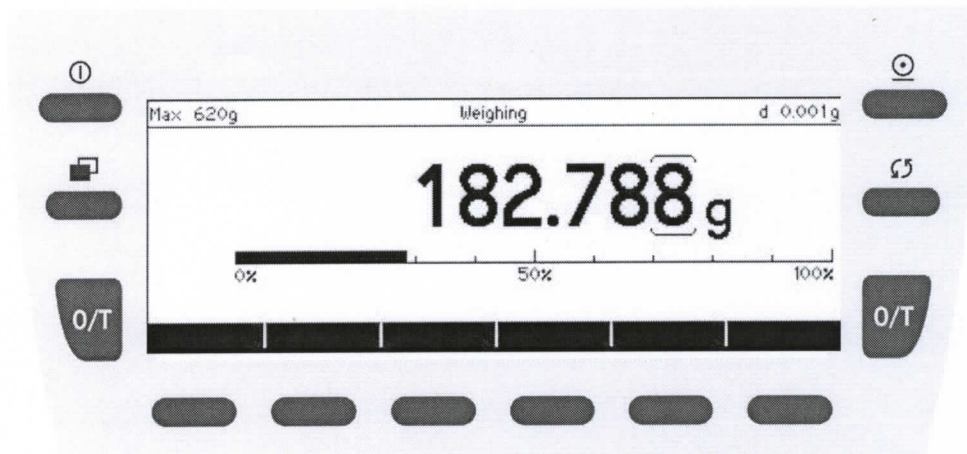
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Figure 3: Measured value display

Series 360 EP with graphic display



Series 360 ES with alphanumeric display

