

EU-type examination certificate UK 3083

Issued by:

NMO

Notified Body Number 0126

In accordance with the requirements of the Non-automatic Weighing Instruments Regulations 2016 (S.I. 2016 No. 1152) which implement, in the United Kingdom Council Directive 2014/31/EU, this EU-type examination certificate has been issued to:

**CAS Corporation
#262, Geurugogae-ro
Gwangjeok-myeon
Yangju-si
Gyeonggi-do
Republic of Korea**

In respect of a family of dual-interval, Class III, non-automatic weighing instruments designated the **Dolphin Series** and having the following characteristics:

Max ≤ 150 kg
Min ≥ 20 g
e ≥ 1 g
n ≤ 3000 (per weighing range)

The necessary data (principal characteristics, alterations, securing, functioning etc) for identification purposes and conditions (when applicable) are set out in the descriptive annex to this certificate.

Issue date: 10 August 2017
Valid until 09 August 2027



G Stones
Technical Manager
For and on behalf of the Head of Technical Services



0135

Descriptive Annex

1 INTRODUCTION

The Dolphin Series is a family of Class III, mains or battery-operated, self-indicating, dual-interval, non-automatic weighing instruments. It comprises the EB, DBII and DB-1H models and their variants (Figures 1 to 4), using the One-Module V4.

The instrument may be used for direct sales to the public.

2 DESCRIPTION

2.1 Construction

2.1.1 Main features

- Steel construction
- Operator's keypad
- Stainless steel load receptor
- Level indicator
- Operator and optional customer displays (may be pole-mounted)

2.1.2 Devices

The instrument may be fitted with the following devices:

- Initial zero setting device ($\leq 20\%$ of Max)
- Automatic zero setting device ($\leq 4\%$ of Max)
- Semi-automatic zero setting device ($\leq 4\%$ of Max)
- Zero tracking device ($\leq 4\%$ of Max)
- Zero indicator
- Net indicator
- Stable weight indicator
- Semi-automatic subtractive tare balancing device
- Printing
- Gravity compensation
- Check weighing (DB-II Model)
- Hold function for weighing unstable samples (DB-II Model)
- Processing of non-weighed items (DB-II Model)
- Price-computing (weighed and non-weighed items) (DB-II Model)
- Totalisation (when connected to a printer)
- Price Clear and Tare Clear functions
- Piece counting (DB-II Model)
- Percentage weighing

2.1.3 Load cell

The instrument is fitted with CAS load cell model BCO or BCA (for DB-II only), $E_{\max} = \text{Max}$ (+ dead load).

2.2 Operation

2.2.1 Switch-on

At switch-on, a display test is performed to ensure that the display has no defect.

2.2.2 Zero-tracking

Zero tracking operates provided that the instrument is within range of not more than 4% of its capacity.

2.2.3 Semi-automatic zero setting

The zero button operates provided that the instrument is within range of not more than 4% of its capacity.

2.2.4 Automatic zero setting

Automatic zero setting operates only when the instrument has been stable below zero for at least 5 seconds.

2.2.5 Over-range and under-range

If the load is less than gross zero, then the display shows a “-” sign before the value. The instrument prevents weight indications below -20d.

The instruments may be set to display weight up to nine divisions above Max. At greater loads the display shows “ERR 03” accompany with warning sound.

2.2.6 Tare

Semi-automatic subtractive tare balancing can be performed, the net indicator is on when a tare is active.

2.3 Model variants and designation

Model	Load Cell Type	Display	Variant designation	Option	Remarks
EB	BCO	LCD	EB	RS232	
			EB-L		Larger weighing platform
DB-1H		VFD	DB-1H PLUS	RS232	Printing mode Weighing unstable samples mode
DBII		LCD	DBII-C	RS232	
		LED	DBII-E		
DBII	BCA	LCD	DBII-C	RS232	
		LED	DBII-E		

3 TECHNICAL DATA

3.1 Rated operating conditions

Model	EB	DBII	DB-1H
Capacities	All	All	All
Display	LCD	LCD/LED	VFD
Voltage	12 VDC *	12 VDC *	230 VAC
Battery	Integrated rechargeable 6V 3.6Ah	Integrated rechargeable 6V 3.6Ah	No

*The instruments operate directly on a 230 V AC supply or via a remote power adaptor (12 V DC), or directly on the integrated battery or set of batteries. Any compatible CE-marked mains adaptor may be used.

The temperature range for the instruments is -10 °C / +40 °C.

3.2 Metrological characteristics

Model	EB / DBII / DB-1H with BCO Load Cell	
Max (kg)	30/60 kg	60/150 kg
Min (g)	200 g	400 g
e (g)	10/20 g	20/50 g
T ≤ (kg)	-29.99 kg	-59.98 kg

Model	DBII with BCA Load Cell		
Max (kg)	3/6	6/15	15/30
Min (g)	20	40	100
e (g)	1/2	2/5	5/10
T ≤ (kg)	-2.999	-5.998	-14.995

3.3 Software

The software identification shall be V4.xx.x, with xx.x reflecting non-legally relevant changes. This information is displayed at power up.

Access to the legally relevant parameters and download of software via the RS232 communication port is only possible by accessing the calibration switch on the main board. Access to this calibration switch is prevented by sealing the enclosure (Section 6.2).

3.4 Documentation and drawings

The instrument is fully described in the technical file held at NMO.

4 PERIPHERAL DEVICES AND INTERFACES

4.1 Interfaces

The instrument may have the following interface types:

- RS232

4.2 Peripheral devices

The instrument may be connected to any peripheral device that has been issued with Parts (Test) Certificate by a Notified Body responsible for Module B under Directive 2014/31/EU and bears the CE marking of conformity to the relevant directives; or

A peripheral device without a Parts (Test) certificate may be connected under the following conditions:

- it bears the CE marking for conformity to the EMC Directive;
- it is not capable of transmitting any data or instruction into the weighing instrument, other than to release a printout, checking for correct data transmission or validation;
- it prints weighing results and other data as received from the weighing instrument without any modification or further processing; and
- it complies with the applicable requirements of EN45501, i.e. 4.2, 4.4, 4.6 and 4.7.

A printing device may print additional information such as date or number to identify the printed weighing result(s) or sets of weighing results.

5 APPROVAL CONDITIONS

This certificate is issued subject to the following conditions:

5.1 Inscriptions

5.1.1 The instrument shall bear the following inscriptions on or near the display:

- Max
- Min
- $e =$

5.1.2 The instrument shall bear the following inscriptions:

- CE marking
- Supplementary metrology marking
- Identification number of the notified body
- Number of the EU-type examination certificate
- Manufacturer's name, registered trade name or registered trade mark and postal address
- Accuracy class
- Type, batch or serial number

and, when applicable:

- for instruments consisting of separate but associated units: identification mark on each unit;
- scale interval if it is different from e , in the form $d = \dots$;
- maximum additive tare effect, in the form $T = + \dots$;
- maximum subtractive tare effect if it is different from Max, in the form $T = - \dots$;
- tare interval if it is different from d , in the form $d_T = \dots$;
- maximum safe load if it is different from Max, in the form Lim $\dots$;
- the special temperature limits, in the form $\dots\text{ }^{\circ}\text{C}/\dots\text{ }^{\circ}\text{C}$;
- ratio between load receptor and load.

The markings and inscriptions shall fulfil the requirements of Article 6, Article 16, Article 17 and Point 1 of Annex III of Directive 2014/31/EU.

6 LOCATION OF SEALS AND VERIFICATION MARKS

6.1 The data plate is located on the instrument, and is secured, either by sealing or by being of a form such that it is destroyed when removed.

6.2 Access to the electronics, load cell and calibration switch is prevented by sealing the enclosure using a tamper-evident method (Figures 5 to 7).

The sealings must bear an official mark, which may be either:

- a mark of the manufacturer and/or manufacturer's representative, or
- an official mark of a verification officer.

7 ALTERNATIVES

7.1 Having the instruments manufactured by the following companies:

CAS (Zhejiang) Electronics Co., Ltd
99# Changjiang Road
Jiashan County, Zhejiang Province
China

CAS Elektronik San. Tic. A.S.
Yukari Dudulu, Bostanci Cad. Mevdudi Sokak No: 34
Umraniye-Istanbul / Turkey

CAS Deutschland AG
Brackestraße 1
38159 Vechelde
Germany

8 ILLUSTRATIONS

Figure 1	EB Model
Figure 2	DBII-C Model
Figure 3	DBII-E Model
Figure 4	DB-1H PLUS Model
Figure 5	EB-L Model
Figure 6	Sealing methods - EB and EBI Models
Figure 7	Sealing methods – DBII and DBI Models
Figure 8	Sealing methods – DB-1H Models

CERTIFICATE HISTORY

ISSUE NO.	DATE	DESCRIPTION
UK 3083	10 August 2017	Type examination first issued.
-	-	No revisions have been issued.



Figure 1 EB Model



Figure 2 DBII-C Model



Figure 3 DBII-E Model



Figure 4 DB-1H PLUS Model



Figure 5 EB-L Model

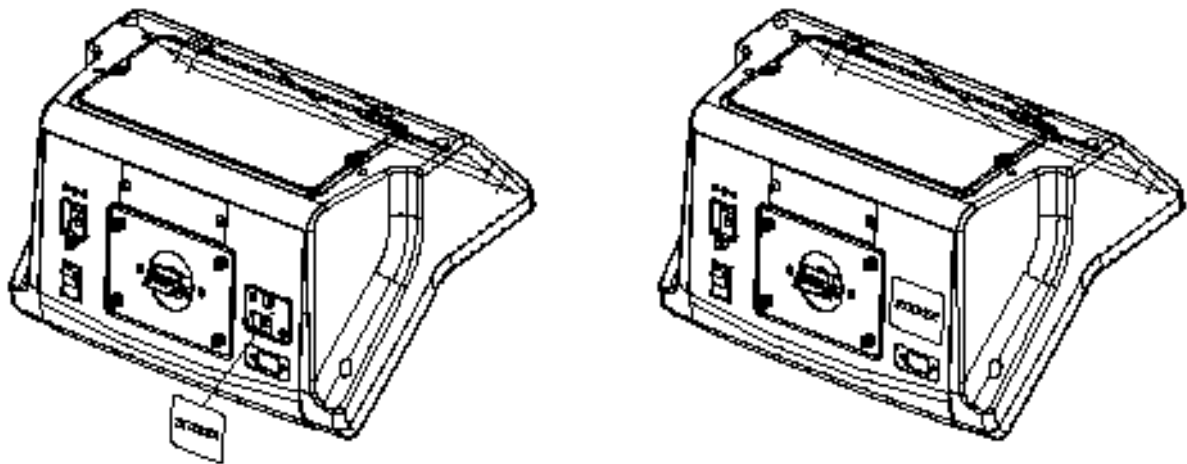


Figure 6 Sealing methods - EB and EBI Models

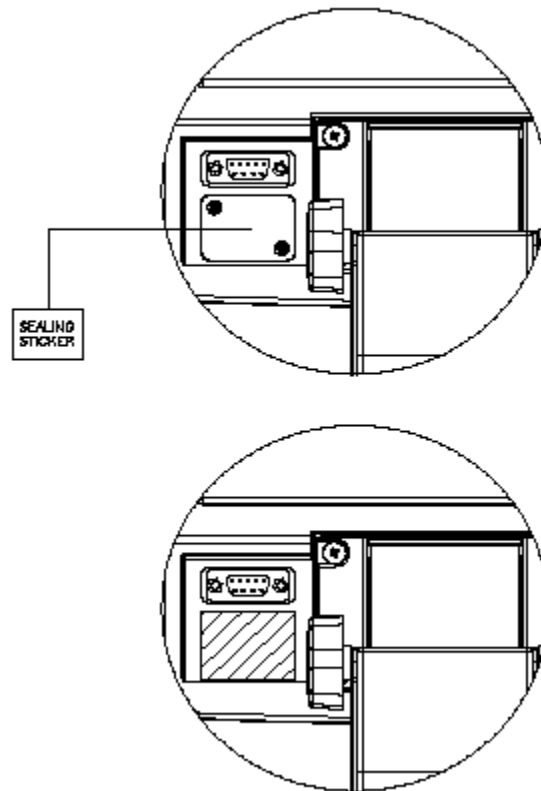


Figure 7 Sealing method – DBII and DBI Models

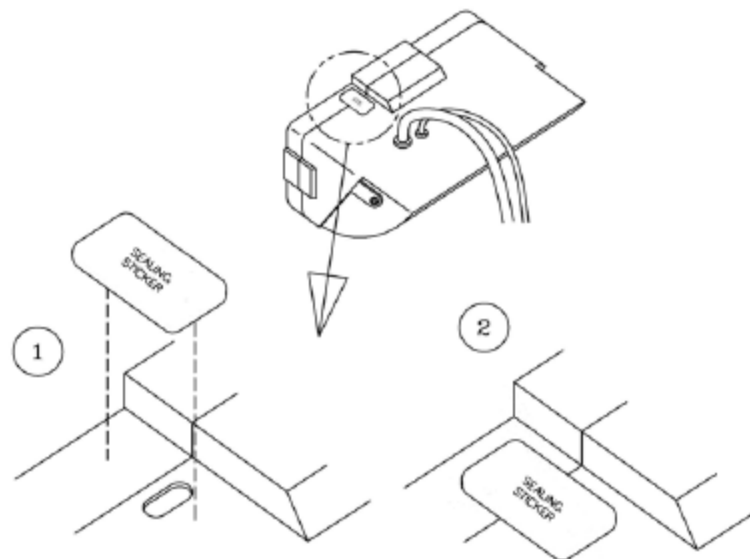


Figure 8 Sealing methods – DB-1H Models