

Member State of OIML  
United Kingdom of Great Britain  
and Northern Ireland

OIML Certificate No  
R51/1996-GB1-04.03  
Revision 1

## OIML CERTIFICATE OF CONFORMITY

Issuing authority: **National Measurement Office**  
Person responsible: **Paul Dixon – Director, Product Certification**  
Applicant: **Digi Europe Ltd  
Digi House  
Rookwood Way  
Haverhill  
Suffolk, CB9 8DG  
United Kingdom**  
Manufacturer: **The applicant**  
Identification of the certified pattern: **HI-700(SF), WI-700(SF), CW-700(SF)**

This certificate attests the conformity of the above-mentioned pattern (represented by the samples identified in the associated test report) with the requirements of the following Recommendation of the International Organisation of Legal Metrology (OIML):

### **OIML R 51 - Edition 2006(E) for accuracy classes Y(a) and XIII(1)**

This certificate relates only to the metrological and technical characteristics of the pattern of the instrument concerned, as covered by the relevant OIML International Recommendation.

This certificate does not bestow any form of legal international approval.

Important note: Apart from the mention of the certificates reference number and the name of the OIML Member State in which the certificate was issued, partial quotation of the certificate or of the associated test report is not permitted, though they may be reproduced in full.

This revision replaces previous versions of the certificate.

**Issue Date: 16 February 2015**  
**Reference No: T1108/0039**



**Signatory: G Stones**  
**for Chief Executive**

The conformity was established by tests and examination described in the associated pattern evaluation report P00849 Revision 1 which includes 19 pages.

### **Characteristics of the instrument:**

This pattern of an automatic catchweigher, designated the HI-700, operates as an automatic weight or weight/price labeller (Category Y). The instrument is designated the CW-700 when configured to operate only as an automatic checkweigher (category X).

The instrument comprises a self-indicating and price-computing weighing machine with associated thermal label printer and mechanical handling facilities. It is designed to weigh packs dynamically with the rate of operation depending upon the pack weight.

Pricing, pack and labelling information is stored in files called PLUs selectable by the operator for the commodity or labels being processed. Labels are printed for the above transaction data and are applied to the packs automatically.

### Construction:

The HI-700 comprises a weigher and a thermal label printer (labeller). The weigher and labeller are mounted on single fabricated floor standing stainless steel frame on adjustable stainless steel feet.

On the frame are mounted the scale conveyor and any additional in-feed and out-feed conveyors, any number may be used. Various conveyor sizes may also be used. In-feed guides may be fitted which are adjustable. Photocells are used for pack detection.

The control cabinet is located beneath the conveyors which houses the electronics and electrical control elements of the instrument. A display console is mounted on a support behind the scale conveyor. The display unit consists of a colour LCD touch screen.

The weighing system comprises a scale conveyor mounted on a load cell. Packs are weighed as they pass over the scale conveyor. The load cell is an HBM PW15.

The thermal label printer module comprises a labelling conveyor and printer mechanism mounted on the frame. The printer mechanism comprises the print head, label feed and applicator. The printer mechanism is located above the out-feed conveyor and has adjustable height, lateral and rotational position. It contains the hardware necessary to print, feed and apply self-adhesive labels from a reel. The label application is powered by pneumatics, with a pressure regulator mounted on the frame of the weigher. The label applicator contains a vacuum device which is used to hold the label in place on the applicator, the label is then placed onto the pack as it reaches the required position.

### Electrical:

The HI-700 weigher comprises the following:

- Teraoka SBC-710 SBC Controller (as detailed in Test Certificate TC5944)
- ADC Power Supply
- DSP A/D conversion PCB

Devices:

- Initial zero-setting device ( $\leq 4\%$  of Max)
- Semi-automatic zero-setting device
- Automatic zero-setting after time interval ( $\leq 15$  mins) or number of packs
- Zero-tracking device
- Preset tare device
- Semi-automatic tare device (subtractive)
- Zero indication
- Rate of operation setting accessible to user
- Static and dynamic calibration not accessible to user
- Price computation

Technical data:

Maximum capacity (Max)	$\leq 6000$ g
Scale interval (e)	$\geq 1$ g
Minimum capacity (Min)	$\geq 50$ g or $20$ e (whichever is higher) (Class Y) $\geq 50$ g (Class X)
Tare (T)	$\leq - 3000$ g
Max operating rate*	$\leq 150$ packs/min
Max conveyor speed	$\leq 71.5$ m/min
Load cell model	: HBM PW15
Load cell capacity	: 15 kg
Climatic environment	: 0 to 30 °C Non-condensing (closed)
Electromagnetic environments	: E1
Power supply	: 220-240 V a.c. / 50-60 Hz single phase
Label applicator pneumatic pressure	: 4-6 bars
Display/keyboard location	: Colour LCD touch screen
Accuracy class	: Y(a) and XIII(1)

\* dependant upon pack weight and instrument configuration

Interfaces:

- USB
- Serial (RS232)
- Ethernet

Sealing:

Access to metrological settings is secured by a switch on the A/D board. The A/D board is enclosed by a metal case and is secured by a tamper-evident seal

Access to the static calibration facility is password protected. The instrument increments a calibration value (audit count number) each time it is re-calibrated. The value is recorded on a tamper evident label on the outside of the metal case protecting the A/D board. The current audit count number can be displayed via the About key in the Main Menu screen. Details of the secure metrological parameters can be displayed via the "Audit Query" programme in the Windows operating screen.

Software:

The software version number is 2.xx.xx.xxxx which is displayed during the power-up sequence of the instrument.

The legal metrological code is contained within a dll file, HI700.dll. The dll file is protected by a checksum which is also displayed during the power-up sequence..

Alternatively, the instrument may use the World View software.

The legally relevant software is contained within two dll files, identified as follows in the “About” screen:

HeaderDisplay.dll	Version 1.0.0.10
HI710.dll	Version 1.0.0.79

Alternatives:

1. Having the instrument configured with the following weighing parameters:

Maximum capacity (Max)	$\leq 12000$ g
Scale interval (e)	$\geq 2$ g
Minimum capacity (Min)	$\geq 100$ g or 20 e (whichever is higher) (Class Y) $\geq 100$ g (Class X)
Tare (T)	$\leq - 6000$ g

The maximum rate of operation is 150 packs/min, which is dependent upon the pack weight and instrument configuration. The load cell is an HBM PW30.

2. Having an alternative model type WI-700, where WI denotes an increased conveyor width.

3. Having an alternative model type MI-700, where MI denotes conveyors mounted on a single stand, the labeller being closer to the weigher and the speed being restricted to a maximum of 100 packs per minute (corresponding to a belt speed of 47,5 meters per minute).

4. Having an alternative construction of the instrument designated the xx-700SF, where xx is the model type HI, WI or CW. The weigher and labeller are combined into a single frame, with the control box location behind the conveyors.

5. Having additional thermal label printer modules connected. Labellers may be mounted beneath the conveyor to apply labels to the underside of packs.

6. Having a “long scale” option, in which case the conveyor length is 650 mm. The maximum throughput is limited to 100 packs per minute for xx-700 versions and 75 packs per minute for xx-700SF versions of the instrument, where xx is the model type HI, WI or CW.

7. Having a sleeving and printing machine connected. The following interlocks shall be provided to ensure correct operation of the instrument:

- All non-weighed packs (underweight, overweight or unstable) pass through the system without a sleeve being applied. Data is not sent to the printer and a “Bad Pack” signal is sent to the sleeving system.
- The system ensures that the correct data is placed on the correct pack.
- If an error occurs with the printer or the sleeving system, the whole system is stopped. The system must be reset and all packs cleared from the system before automatic operation can be restarted.

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8. Having an alternative conveyor assembly and machine construction as shown in Figure 8. The conveyors are modified to allow them to be more easily detached for cleaning purposes, and are now enclosed by two solid stainless steel frames mounted on top of the tubular base frame.
9. Having an alternative version, designated the AP-700 UB, which includes a simple unintelligent printer manufactured by Teraoka Seiko Co. Ltd. The printer may be mounted above or below the conveyer or in a combination of both positions.
10. Having an alternative unit price indication of Price/100g. The instrument provides indications of:
- price per unit weight from £0.01 to £9999.99 per 100g by £0.01 intervals
  - price-to-pay from £0.01 to £9999.99 by £0.01 intervals (rounded to the nearest 1p, with 0.5p rounded up)
11. Having the instrument modified as follows: Teraoka SBC-710 SBC Controller replaced by a Teraoka main board type TPB 02930 and associated power supply unit type TBT 280. This alternative is approved for an E2 electromagnetic classification.
12. Having the instrument modified as follows: Teraoka SBC-710 SBC Controller replaced by a Commel main board type LV-67H and associated TDK-Lambda power supply unit type LS75 and UPS backup type picoUPS-100. This alternative is approved for an E2 electromagnetic classification.
13. Having the instrument fitted with conveyors of various sizes (in-feed, scale and out-feed). The maximum operating rate may be up to 250 packs/min (to be checked at initial verification).

### Certificate History

ISSUE NO.	DATE	DESCRIPTION
R51/2006-GB1-13.04	21 November 2013	Certificate first issued.
R51/2006-GB1-13.04 rev 1	16 February 2015	Certificate re-worded to be in line with the content of UK/0126/0004 rev 3.