



Australian Government  
Department of Industry,  
Innovation and Science

## National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

### Certificate of Approval

### NMI 6/14G/15

Issued by the Chief Metrologist under Regulation 60  
of the  
*National Measurement Regulations 1999*

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Digi Model HI-700 Automatic Catchweighing Instrument

submitted by W W Wedderburn Pty Ltd  
101 Williamson Road  
Ingleburn NSW 2565.

**NOTE:** This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 51, *Automatic Catchweighing Instruments*, dated July 2004.

This approval becomes subject to review on **1/08/16**, and then every 5 years thereafter.

#### DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 6 approved – interim certificate issued	6/07/06
1	Pattern & variants 1 to 6 – certificate issued	15/09/06
2	Pattern & variants 1 to 6 reviewed & updated & variant 7 approved – certificate issued	27/10/11
3	Pattern amended (sealing) & variants 8 to 10 approved – certificate issued	28/05/19

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/14G/15' and only by persons authorised by the submitter.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates No S1/0/A or No S1/0B.

### Special

This approval shall NOT be used in conjunction with General Certificate No 6B/0.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.



**Darryl Hines**  
Manager  
Pattern Approval, Policy and  
Licensing Section

TECHNICAL SCHEDULE No 6/14G/15

<b>1. Description of Pattern</b>	<b>approved on</b>	<b>6/07/06</b>
	<b>amended on</b>	<b>28/05/19</b>

A Digi model HI-700 class Y(a) automatic catchweighing instrument (Figures 1 and 2) which is approved for use to weigh objects while in motion. A static non-automatic weighing mode is also available in which the conveyors do not operate.

### 1.1 Details

The pattern is a single interval class Y(a) automatic catchweighing instrument with a maximum capacity of 3 kg, a verification scale interval of 0.001 kg and a minimum capacity of 0.05 kg.

Instruments are approved for use over a temperature range of 0°C to +30°C and must be so marked.

The instrument operates dynamically (package in motion on the weighing receptor). The maximum belt speed of the weighing receptor is 1.19 m/s (71.5 m/min).

The throughput (packs per minute) is variable and depends on several factors, e.g. size of label, size and weight of pack. The instrument has facilities to detect errors and provide error messages for situations close to and outside the limits.

Instruments may be fitted with sockets (output interfacing capability) for the connection of peripheral and/or auxiliary devices, and for the external programming of PLU and labelling data.

The pattern comprises:

- A terminal/indicator with an LCD touchscreen display/keyboard;
- A weighing unit and conveyor system with associated controller; and
- A printing unit located above the conveyor.

### 1.2 Zero

The instrument has a semi-automatic zero-setting device with a nominal range of not more than 4% of the maximum capacity of the instrument, capable of setting zero to within  $\pm 0.25e$ .

The instrument has an automatic zero-setting device which operates periodically to zero the instrument.

Zero is automatically corrected to within  $\pm 0.25e$  whenever the instrument comes to rest within  $0.5e$  of zero (this may operate whilst the conveyors are operating).

The initial zero-setting device of the pattern has a nominal range of not more than 20% of the maximum capacity of the instrument.

### 1.3 Tare

A semi-automatic subtractive taring device of up to 1.500 kg capacity may be fitted. This device may only be activated (tare obtained) whilst the conveyors are stationary, however the value obtained may continue to be used when the instrument is set into automatic mode (conveyors operating).

The instrument has a pre-set subtractive taring device of up to 1.500 kg capacity. Pre-set tare values are stored in association with product-look-up (PLU) items.

## 1.4 Operation

In dynamic mode, an object to be weighed moves from the infeed and separator conveyors onto the weighing receptor conveyor and is weighed dynamically. After weighing, the object continues onto the outfeed conveyor where a label is then printed and applied to the object.

## 1.5 Terminal/Indicator (Figure 2)

The terminal/indicator is fitted with a touch screen LCD display and keyboard. This is used to control the system and store data such as system parameters (e.g. conveyor speed, printing unit position and label format).

It displays the weight (in kg).

Instruments have unit price to \$9999.99/kg, a product-look-up (PLU) facility and a separate 'tare' display.

## 1.6 Weighing Unit and Conveyor (Figure 3)

The weighing unit which uses an HBM model PW 15 C3 load cell of 15 kg capacity supporting a load receptor which has a belt conveyor of 285 × 470 mm.

The conveyor system comprises an infeed and separator conveyor, the weighing unit/conveyor and an outfeed conveyor, with an associated electric motor and drive arrangement for each conveyor.

Optical sensors are located along the conveyor path. The infeed conveyors space the objects to be weighed, the side guides are manually adjusted to suit the pack size.

## 1.7 Printing Unit

The printing unit is comprised of a thermal printer and a compressed air unit used to apply the label to the weighed object.

## 1.8 Markings

Instruments carry the following markings, grouped together in a clearly visible place on the instrument, either on a descriptive plate fixed near the indicating device or on the indicating device itself.

Manufacturer's mark, or name written in full	Digi Europe Ltd
Importer's mark, or name written in full	WEDDERBURN
Model designation	.....
Serial number	.....
Accuracy class	Y(a)
Pattern approval mark	6/14G/15
Maximum capacity	Max .... kg
Minimum capacity	Min ..... kg
Verification scale interval	e = ..... kg
Maximum subtractive tare	T = - ... kg
Maximum conveyor speed	..... m/min
Special temperature limits	0°C to +30°C

## 1.9 Sealing Provision

Provision is made for the calibration adjustments to be sealed by the application of two destructible adhesive labels over the cover of the controller cabinet beneath the load receptor (Figure 4) to prevent unauthorised access.

Alternatively the instrument is sealed by applying destructible adhesive label(s) over two sides of the A/D assembly unit located within the controller cabinet underneath the load receptor to prevent unauthorised access (Figure 8).

## 1.10 Verification Provision

Provision is made for the application of a verification mark.

### 2. Description of Variant 1 approved on 6/07/06

Single range instruments of certain capacities as listed below having up to 3000 verification scale intervals (and no less than 500 verification scale intervals):

- (i) Of up to 6 kg maximum capacity with a verification scale interval of not less than 1 g; and
- (ii) Of up to 12 kg maximum capacity with a verification scale interval of not less than 2 g.

### 3. Description of Variant 2 approved on 6/07/06

Multi-interval instruments of certain capacities as listed below having two partial weighing ranges, with up to 3000 verification scale intervals (and no less than 500 verification scale intervals) in each partial weighing range. Additionally the requirement that  $Max_1/e_2 \geq 500$  (clause 3.3.3 of R76) shall be satisfied:

- (i) of up to 6 kg maximum capacity, with a smallest verification scale interval ( $e_1$ ) of not less than 1 g; and
- (ii) of up to 12 kg maximum capacity, with a smallest verification scale interval ( $e_1$ ) of not less than 2 g.

Instruments are marked with the 'Maximum capacity' and with the 'Verification scale interval' for both interval ranges, in addition to the other data specified in clause 1.8 **Markings**.

### 4. Description of Variant 3 approved on 6/07/06

Model WI-700 with a load receptor which has a belt conveyor of 400 × 470 mm.

### 5. Description of Variant 4 approved on 6/07/06

Models HI-700 SF (Figure 5) and WI-700 SF which have various components combined.

### 6. Description of Variant 5 approved on 6/07/06

With an additional printer located under the conveyor.

**7. Description of Variant 6** **approved on 6/07/06**

Certain models with a load receptor which has a belt conveyor of 650 mm in length, in which case the approved belt speeds in metres per minute (m/min) are:

- Model HI-700 up to 70 m/min; and
- Models HI-700 SF and WI-700 SF up to 52.5 m/min.

**8. Description of Variant 7** **approved on 27/10/11**

Model MI-700 (Figure 6) which is similar to the model WI-700 (Variant 3) but with a load receptor which has a belt conveyor of 285 × 470 mm and having up to 12 kg maximum capacity with a verification scale interval of not less than 2 g.

The maximum belt speed of the weighing receptor is 47.5 m/min.

**9. Description of Variant 8** **approved on 28/05/19**

The pattern and variants 1 to 2 which have conveyors of various sizes (in-feed, load receptor and outfeed).

The instrument is nominally rated for a maximum throughput of 250 packs per minute.

**10. Description of Variant 9** **approved on 28/05/19**

With modified software, designated World View (Figure 7).

The legally relevant software is contained within two dll files, identified as follows during the power-up sequence:

HeaderDisplay.dll	Version 1.0.0.10
HI710.dll	Version 1.0.0.79

The dll files can only be accessed and modified via the secured switch on the A/D board. The files are protected by a checksum, any modification in the dll files will result in a change in the checksum value and an error being detected.

Access to the Windows operating system is password-protected; the weighing mode is inactive when accessed.

**11. Description of Variant 10** **approved on 28/05/19**

Model HI-700-HS which has a LV-67P main board and associated LS75 power supply unit and picoUPS-100 uninterruptible power supply (UPS).

**11.1 Software**

The software is designated 2.xx.xx (where xx.xx refers to the identification of non-legally relevant software).

The software version and number can be seen in the switch-on display sequence (when the power is first applied to the instrument).

## TEST PROCEDURE No 6/14G/15

Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

### **Maximum Permissible Errors**

The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

### **Tests**

For multi-interval and multiple range instruments with verification scale intervals of  $e_1, e_2 \dots$ , apply  $e_1$  for zero adjustment, and maximum permissible errors apply  $e_1, e_2 \dots$ , as applicable for the load.

Ensure that instruments are only being used within the special temperature limits stated elsewhere in this Technical Schedule.

FIGURE 6/14G/15 – 1



Digi Model HI-700 Automatic Catchweighing Instrument



FIGURE 6/14G/15 – 2



Terminal/Indicator

FIGURE 6/14G/15 – 3



Typical Conveyor

FIGURE 6/14G/15 – 4



Typical Seal Locations



Typical Sealing

FIGURE 6/14G/15 – 5



Model HI-700 SF (Variant 6)

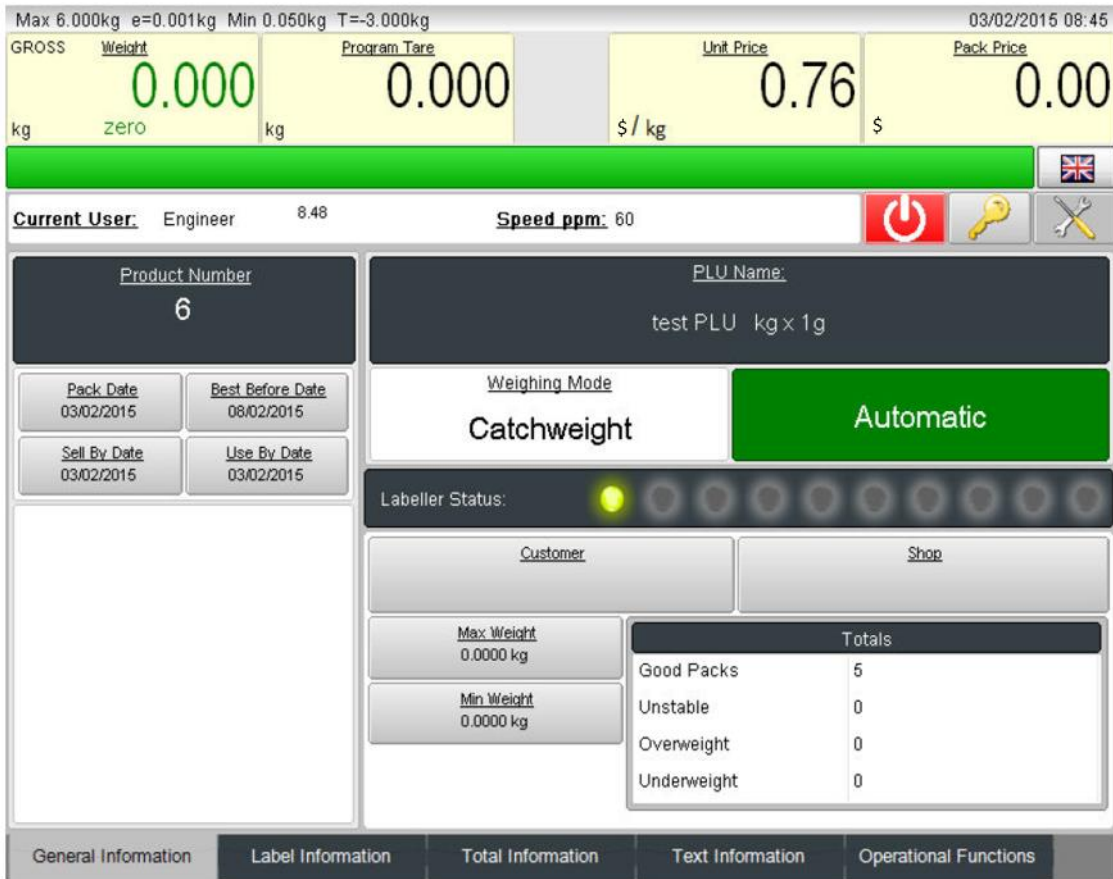


FIGURE 6/14G/15 – 6



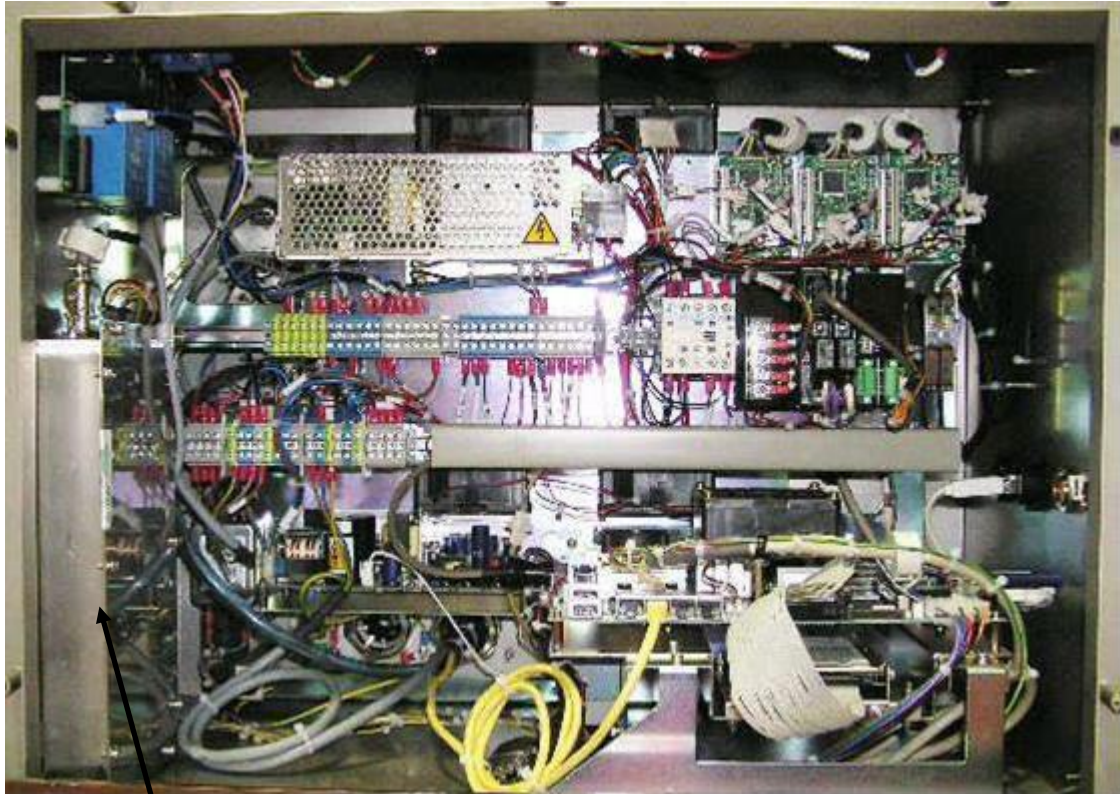
Model MI-700 (Variant 7)

FIGURE 6/14G/15 – 7



Example of World View Operating Screen (Variant 9)

FIGURE 6/14G/15 – 8



A/D Unit

Location of A/D Unit Within Controller Cabinet (A/D Unit to be Sealed)

Alternative Sealing Arrangement

~ End of Document ~