



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval

No 6/14G/23

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

Digi Model LI-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 documents NMI R 51, *Automatic Catchweighing Instruments*, and NMI R 76, *Non-automatic weighing instruments, Parts 1 and 2*, both dated July 2004.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 July 2015, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI 6/14G/23' and only by persons authorised by the submittor.

It is the submittor'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.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

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

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

DESCRIPTIVE ADVICE

Pattern: approved 10 June 2010

- A Digi model LI-700 class Y(a) automatic catchweighing instrument of up to 6 kg maximum capacity.

Variants: approved 10 June 2010

1. Of up to 10 kg maximum capacity.
2. Certain models with an alternative (longer) load receptor.

Technical Schedule No 6/14G/23 describes the pattern and variants 1 & 2.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 6/14G/23 dated 28 June 2010
Technical Schedule No 6/14G/23 dated 28 June 2010 (incl. Test Procedure)
Figures 1 to 3 dated 28 June 2010

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



TECHNICAL SCHEDULE No 6/14G/23

Pattern: Digi Model LI-700 Automatic Catchweighing Instrument

Submittor: W W Wedderburn Pty Ltd
101 Williamson Road
INGLEBURN NSW 2565

1. Description of Pattern

A Digi model LI-700 class Y(a) automatic catchweighing instrument (Figure 1) which is approved for use to weigh objects statically.

Instruments are not for retail counter use, and are so marked.

1.1 Details

The pattern is a single interval class Y(a) automatic catchweighing instrument with a maximum capacity of 6 kg, a verification scale interval of 0.002 kg and a minimum capacity of 0.05 kg.

The instrument may be used as a class III non-automatic weighing instrument when in a static mode in which the conveyors do not operate.

Instruments are approved for use over a temperature range of 0°C to +40°C and must be so marked.

The instrument operates statically (package stops on the weighing receptor). The maximum belt speed of the weighing receptor is 0.67 m/s (40 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 touch screen display;
- 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 3 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 3 kg capacity. Pre-set tare values are stored in association with product-look-up (PLU) items.

1.4 Operation

In start/stop mode, an object to be weighed moves from the infeed and separator conveyors onto the weighing receptor conveyor and then stops to be weighed statically. 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 Digi model DPS-700 is fitted with a colour touch screen LCD display. 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 30 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 Digi model AP-700UB labeller and a compressed air unit used to apply the label to the weighed object. Alternative labeller units (e.g. DEL type 700 labeller), and means of applying the label may be used.

1.8 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of destructible adhesive label(s) over two sides of the cover at the rear of the instrument which provides access within the controller cabinet, so that any access within the controller cabinet will be evident (see Figure 1).

1.9 Verification Provision

Provision is made for the application of a verification mark.

1.10 Markings

Instruments carry the following markings:

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 classes	Y(a) $\text{\textcircled{III}}$
Pattern approval mark	6/14G/23
Maximum capacity	<i>Max</i> kg
Minimum capacity	<i>Min</i>kg
Verification scale interval	<i>e</i> = kg
Maximum subtractive tare	<i>T</i> = - ... kg
Maximum conveyor speed m/min
Special temperature limits	0°C to +40°C

In addition, instruments shall carry a notice stating NOT FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

2. Description of Variants

2.1 Variant 1

Single interval instruments as described for the pattern, but with capacities of up to 10 kg maximum capacity with a verification scale interval of not less than 0.002 kg and approved for use with up to 3000 verification scale intervals (and no less than 500 verification scale intervals).

2.2 Variant 2

Model LI-700 instruments as described for the pattern and variant 1 except that the instrument has a load receptor with a belt conveyor of 285 x 650 mm.

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Uniform Test Procedures.

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

Non-automatic (static) Operation

The maximum permissible errors for increasing and decreasing loads on initial verification for loads, m , expressed in verification scale intervals, e , are:

- $\pm 0.5e$ for loads $0 \leq m \leq 500$;
- $\pm 1.0e$ for loads $500 < m \leq 2\ 000$; and
- $\pm 1.5e$ for loads $2\ 000 < m \leq 10\ 000$.

- With the conveyor switched off, carry out a load test and an eccentricity test.

Automatic Operation

The maximum permissible errors for class Y(a) automatic catchweighing instruments for increasing and decreasing loads on initial verification/certification for loads, m , expressed in verification scale intervals, e , are:

- $\pm 1.5e$ for loads $0 \leq m \leq 500$;
- $\pm 2.0e$ for loads $500 < m \leq 2\,000$; and
- $\pm 2.5e$ for loads $2\,000 < m \leq 10\,000$.

- Prepare two test objects, one close to minimum capacity and the other close to the maximum capacity. The uncertainty of the test masses shall be equal to or better than $0.5e$.
- The tests shall be conducted at the maximum rate at which the system will operate (i.e. introduce packages immediately after each other).
- Vary the position of the test masses across the load receptor.
- Conduct a test to ensure incorrect measurements do not occur due to items being provided to the instrument without adequate spacing.

TESTS – Use the following tests to determine compliance with the maximum permissible errors – n is a whole number.

TEST 1 – Maximum permissible error = $\pm 1.5e$

Test load = ne

Readings:	A: $(n - 2)e$	reject
	B: $(n + 2)e$	reject
	$A < \text{Readings} < B$	accept

TEST 2 – Maximum permissible error = $\pm 2e$

Test load = $(n + 0.5)e$

Readings:	A: $(n - 2)e$	reject
	B: $(n + 3)e$	reject
	$A < \text{Readings} < B$	accept

TEST 3 – Maximum permissible error = $\pm 2.5e$

Test load = ne

Readings:	A: $(n - 3)e$	reject
	B: $(n + 3)e$	reject
	$A < \text{Readings} < B$	accept

FIGURE 6/14G/23 – 1



Digi Model LI-700 Automatic Catchweighing Instrument

FIGURE 6/14G/23 – 2

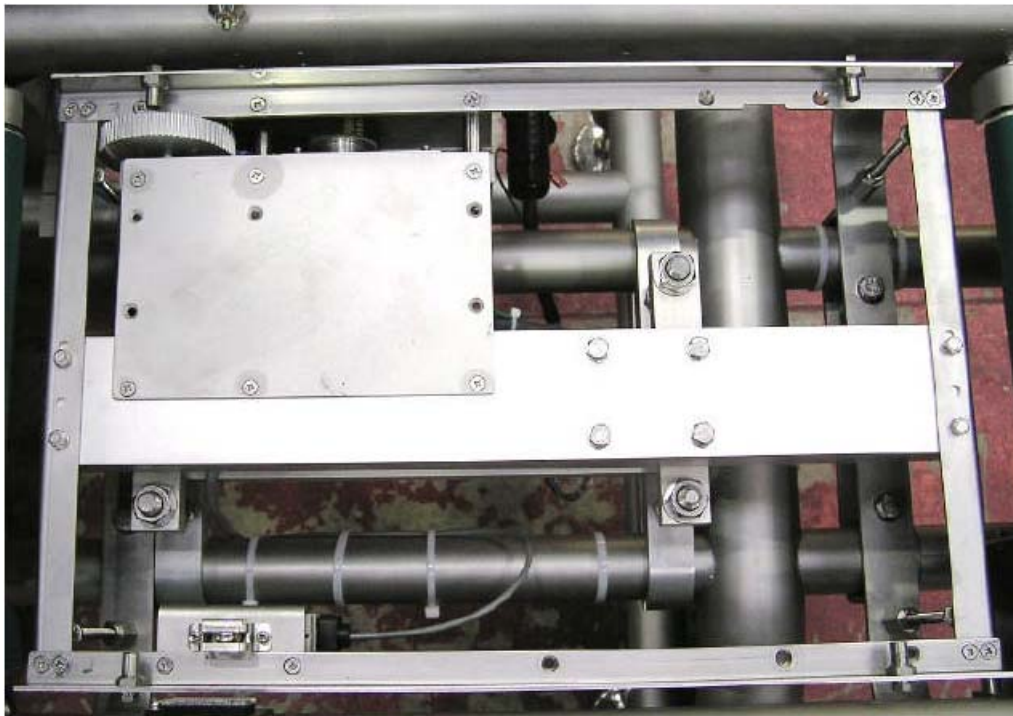


(a) Terminal/Indicator

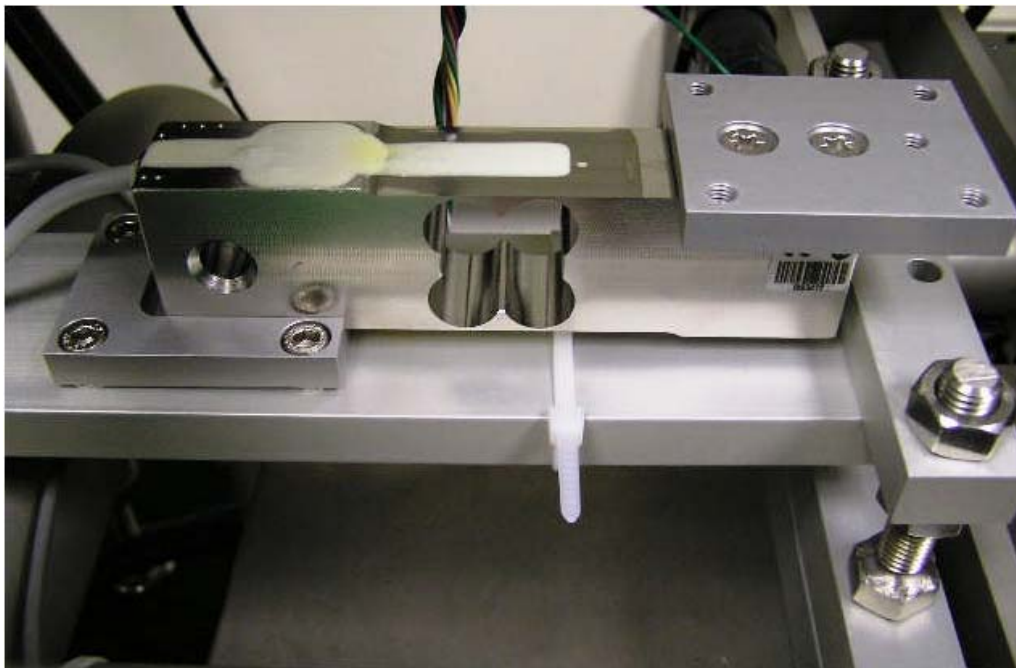


(b) Indicator

FIGURE 6/14G/23 – 3



(a) Model LI-700 – Weighing unit, conveyor removed



(b) Model LI-700 – Weighing unit, conveyor and load receptor removed