S429
5 August 2009

Australian Government

National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Notification of Change
Supplementary Certificate of Approval No S429
Change No 2

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

The following changes are made to the approval documentation for the

Bilanciai Model D800 Digital Indicator

submitted by National Weighing & Instruments Pty Ltd
1/88 Magowar Road
Girraween NSW 2145.

In Supplementary Certificate of Approval No S429 dated 19 February 2007;

1. The Condition of Approval referring to the review of the approval should be amended to read:

   "This approval becomes subject to review on 1 March **2014**, and then every 5 years thereafter."

2. The FILING ADVICE should be amended by adding the following:

   "Notification of Change No 2 dated 5 August 2009"

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

Australian Government
National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

No S429

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

Bilanciai Model D800 Digital Indicator

submitted by National Weighing & Instruments Pty Ltd
now of 1/88 Magowar Road
Girraween NSW 2145.

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 76, *Non-automatic Weighing Instruments, Parts 1 and 2*, dated July 2004.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 March 2009, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NSC S429' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NSC S429' in addition to the approval number of the instrument.

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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.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to an instrument incorporating the pattern approved herein shall be within the limits specified herein and in any approval documentation for the other components.

DESCRIPTIVE ADVICE

Pattern: approved 6 February 2004

- A Bilanciai model D800 digital indicator.

Variant: approved 6 February 2004

1. Model D400 digital indicator.
2. Model D410 digital indicator.

Variant: approved 3 May 2004

3. Model D430 digital indicator.

Technical Schedule No S429 describes the pattern and variants 1 to 3.

Variant: approved 17 December 2004

4. With a 12-24 V DC power supply.

Technical Schedule No S429 Variation No 1 describes variant 4.

Variant: approved 16 February 2007

5. For use with certain approved digital load cells.
6. For use with up to three baseworks.

Technical Schedule No S429 Variation No 2 describes variants 5 and 6.

FILING ADVICE

Supplementary Certificate of Approval No S429 dated 20 December 2004 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Supplementary Certificate of Approval No S429 dated 19 February 2007
Technical Schedule No S429 dated 4 May 2004 (incl. Table 1 and Test Procedure)
Technical Schedule No S429 Variation No 1 dated 20 December 2004
Technical Schedule No S429 Variation No 2 dated 19 February 2007 (incl. Notification of Change)
Notification of Change No 1 dated 6 December 2004
Figures 1 to 6 dated 4 May 2004
Figure 7 dated 19 February 2007

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 S429

Pattern: Bilanciai Model D800 Digital Indicator

Submittor: National Weighing & Instruments Pty Ltd
3/148 Toongabbie Road
Toongabbie NSW 2140

1. Description of Pattern

A Bilanciai model D800 digital mass indicator (Table 1 and Figure 1) which may be configured to form part of:

- A weighing instrument with a single weighing range of up to 6000 (*) verification scale intervals;
- A multi-interval weighing instrument with two partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 4000 (*) verification scale intervals per partial weighing range;
- A multi-interval weighing instrument with up to three partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 3000 (*) verification scale intervals per partial weighing range;
- A multiple range weighing instrument with up to two weighing ranges, in which case it is approved for use with up to 4000 (*) verification scale intervals per weighing range; or
- A multiple range weighing instrument with up to three weighing ranges, in which case it is approved for use with up to 3000 (*) verification scale intervals per weighing range.

The changeover between weighing ranges is automatic.

Instruments may be fitted with output sockets (output interfacing capability) for the connection of auxiliary and/or peripheral devices.

This approval does not include the use of the indicator as an automatic weighing instrument, unless specifically mentioned in a certificate of approval for such an instrument.

TABLE 1 – Specifications

Maximum number of verification scale intervals	6000 (*)
Minimum sensitivity	0.75 µV/scale interval
Excitation voltage	10 V DC
Maximum excitation current	435 mA

1.1 Zero

Zero is automatically corrected to within ±0.25e whenever the instrument comes to rest within 0.5e of zero.

Note: For multi-interval or multiple range operation, zero is automatically corrected to within $\pm 0.25e_1$ whenever the instrument comes to rest within $0.5e_1$ of zero.

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The instrument has a semi-automatic zero-setting device (to set the instrument to within ±0.25e of zero) with a nominal range of not more than 4% of the maximum capacity of the instrument.

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

1.2 Tare

A semi-automatic subtractive taring device of up to the maximum capacity of the instrument may be fitted. A pre-set taring device of up to the maximum capacity (or of up to the Max_1 for multi-interval instruments) may also be fitted.

1.3 Display Check

A display check is initiated whenever power is applied.

1.4 Power Supply

The instrument operates from mains AC power (110-240 V AC nominal).

1.5 Linearisation Facility

Instruments are fitted with a linearisation correction facility having up to two correction points.

1.6 Additional Features

The model D800 indicator may be fitted with input/output cards, or BCD cards which provide input and output signals used by the set point facility of the indicator.

The indicator also has certain additional functions including totalising, setpoints, and batching. Some functions can be assigned to a function key of the indicator. These additional functions also include the facility for delivering a batch consisting of a mixture of products. However this approval does not include the use of the indicator as an automatic weighing instrument, unless specifically mentioned in a certificate of approval for such an instrument.

The additional functions (other than the indications of measured mass, i.e. gross, tare, net, totals, displayed either on the indicator or on an auxiliary or peripheral device) are not approved for trade use.

1.7 Two Baseworks Facility ('Duplex Option')

Up to two baseworks may be connected to a single D800 digital indicator. The instrument may be operated in either an individual or a combined weighing mode.

(a) Individual weighing mode

The function key '>' identified as 'SELSCL' is used to select either 'Scale A' or 'Scale B', as indicated in the top line of the display.

(b) Combined weighing mode

Each basework indicates its weight in a separate display marked ‘Scale A’ or ‘Scale B’. The function key ‘>’ identified as ‘SELSCL’ is used to select either ‘Scale A’ or ‘Scale B’ or the sum of the two baseworks. The selected weight is displayed in a third display marked ‘Scale Selected A, or B or A+B’.

1.8 Markings and Notices

Instruments carry the following markings:

Manufacturer’s mark, or name written in full	Societa Cooperativa Bilanciai Campogalliano a.r.l., Italy
Name or mark of manufacturer’s agent	….....
Indication of accuracy class	
Maximum capacity (for each range)	*Max* ..... kg #1
Minimum capacity (for each range)	*Min* ..... kg #1
Verification scale interval (for each range)	*e* = ... kg #1
Maximum subtractive tare	*T* = - .... kg #2
Serial number of the instrument	….....
Pattern approval mark for the indicator	NSC No S429
Pattern approval mark for other components	..... #3

#1 These markings are also shown near the display of the result if they are not already located there.

#2 This marking is required if *T* is not equal to *Max*.

#3 May be located separately from the other markings.

In addition, instruments not greater than 100 kg capacity shall carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

Note:

For multi-interval and multiple range instruments the markings shall be as above, with the exception of the following (examples are for instruments with two partial ranges):

(i) For multi-interval instruments;

Maximum capacity	*Max* ...../..... kg *
Verification scale interval	*e* = .../..... kg *

(ii) For multiple range instruments, the maximum capacity, minimum capacity and verification scale interval for each range shall be marked, with an indication of the range to which they apply, e.g.

Range	1	2
Max	…. kg	…. kg
Min	…. kg	…. kg
e =	…. kg	…. kg

1.9 Sealing Provision

Provision is made for the calibration adjustments to be sealed by the use of a destructible adhesive label over the screw at the back of the indicator (Figure 2) which provides access to the calibration switch. Sealing of this screw (the screw must be in place) also prevents access within the instrument housing.

1.10 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

2. Description of Variants

2.1 Variant 1

The model D400 (Figure 3) which is similar to the pattern but has basic functions only (namely zero, tare and printing). This model can only be connected to a single basework.

2.1.1 Sealing Provision

Provision is made for the calibration adjustments to be sealed by the use of a destructible adhesive label over the screw at the front bottom of the indicator (shown as item '1' in Figure 4) which provides access to the calibration switch. Sealing of this screw (the screw must be in place) also prevents access within the instrument housing.

2.2 Variant 2

The model D410 (Figure 5) which is similar to variant 1 but has a numeric/functional keyboard and alphanumeric capabilities. This model can only be connected to a single basework.

2.2.1 Sealing Provision

As described in clause 2.1.1 for the model D400 (variant 1).

2.3 Variant 3

The model D430 (Figure 6) which is similar to the model D410 (variant 2) but which has a stainless steel enclosure. This model also has an UNDER/OK/OVER management function which is not approved for trade use.

2.3.1 Sealing Provision

Provision is made for the calibration adjustments to be sealed by preventing access within the instrument case – this is achieved by use of a lead and wire seal between two diagonally opposite sealing screws on the back of the indicator.

TEST PROCEDURE

Instruments should be tested in conjunction with any tests specified in the approval documentation for the instrument to which the pattern is connected, as appropriate, and in accordance with any relevant tests specified in the Uniform Test Procedures.

Maximum Permissible Errors at Verification/Certification

For single range instruments, the maximum permissible errors for increasing and decreasing loads on initial verification/certification 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 $2\,000 < m \leq 10\,000$.

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

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TECHNICAL SCHEDULE No S429

VARIATION No 1

Pattern: Bilanciai Model D800 Digital Indicator

Submittor: National Weighing & Instruments Pty Ltd
3/148 Toongabbie Road
Toongabbie NSW 2140

1. Description of Variant 4

A Bilanciai model D800 digital mass indicator which may accept a 12 – 24 V DC supply and convert it to provide suitable DC power to the indicator. This version incorporates filters to protect against disturbances. The 12 – 24 V DC supply may be provided by an AC/DC mains adaptor or by some other means, e.g. a 12 V battery.

TECHNICAL SCHEDULE No S429

VARIATION No 2

Pattern: Bilanciai Model D800 Digital Indicator

Submittor: National Weighing & Instruments Pty Ltd
1/88 Magowar Road
Girraween NSW 2145

1. Description of Variants

1.1 Variant 5

The pattern (model D800), variant 1 (model D400) and variant 2 (model D410) for use with compatible approved Eurocell (or Bilanciai) digital load cells.

When used with digital load cells, the maximum number of verification scale intervals (VSI) applicable is determined by the number of VSI given in the approval.

1.2 Variant 6

Up to three baseworks may be displayed on a single D800 indicator. The instrument may be operated in either an individual or a combined weighing mode.

Two of the baseworks are connected directly to the D800 indicator (as described in clause **1.7 Two Baseworks Facility** for the pattern). The third basework is connected to a Bilanciai model EV7 digital indicator (as described in approval NMI S426) or a model D400, D410 or D430 digital indicator (see variants 1, 2 and 3 in this approval). This additional indicator displays the weight information regarding the third basework and also transfers the weight information to the D800 indicator through a serial interface, where the information is displayed and may also be summed as described in (b) below.

(a) Individual weighing mode

The function key '>' identified as 'SELSCL' is used to select either 'Scale A' or 'Scale B' or 'Scale C' as indicated in the top line of the display.

(b) Combined weighing mode

Each basework indicates its weight in a separate display marked 'Scale A' or 'Scale B' or 'Scale C'. The function key '>' identified as 'SELSCL' is used to select either 'Scale A' or 'Scale B' or 'Scale C' or the sum of the two or three baseworks. The selected weight is displayed in a fourth display marked 'Scale Selected A or B or C or A+B or A+C or B+C or A+B+C'. See Figure 7.

Note: Each basework shall be clearly identified with the corresponding description (e.g. Scale A, Scale B, Scale C).

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NOTIFICATION OF CHANGE

In Technical Schedule No S429 dated 4 May 2004 and in Technical Schedule No S429 Variation No 1 dated 20 December 2004, all references to the address of the submittor should be amended to read:

"1/88 Magowar Road
Girraween NSW 2145."

S429
6 December 2004

Australian Government

National Measurement Institute

12 Lyonpark Road, North Ryde NSW 2113

Notification of Change
Supplementary Certificate of Approval No S429
Change No 1

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

The following change is made to the approval documentation for the

Bilanciai Model D800 Digital Indicator

submitted by National Weighing & Instruments Pty Ltd
3/148 Toongabbie Road
Toongabbie NSW 2140.

In Technical Schedule No S429 dated 4 May 2004, clause **1.7 (b) Combined weighing mode** should be amended by adding the following:

> "Instruments shall comply with clause **1.11 Requirements for Summing Indicators** of General Supplementary Certificate of Approval No S1/0/A."

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

FIGURE S429 – 1

Bilanciai Model D800 Digital Indicator

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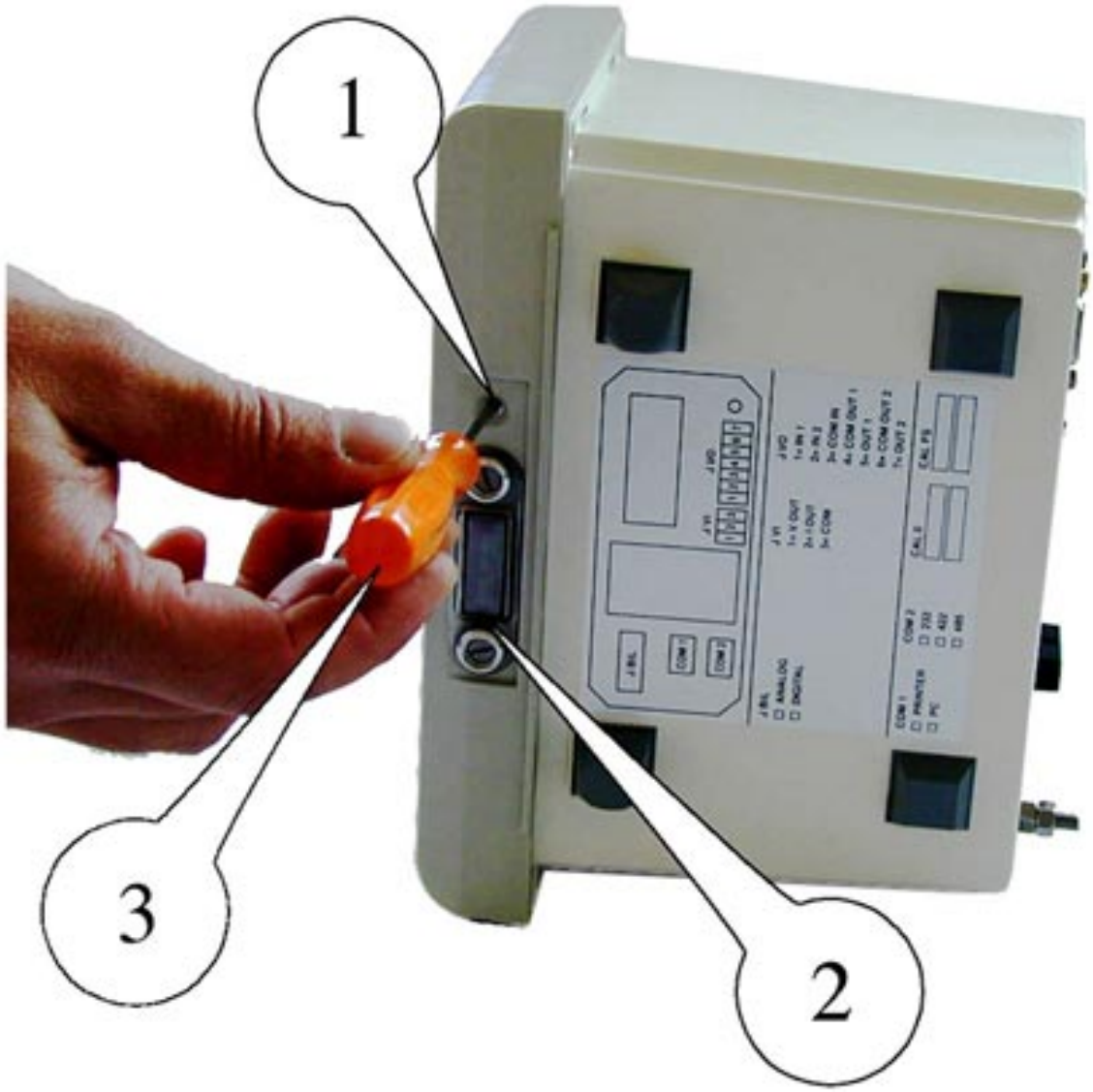
FIGURE S429 – 2

Sealing of Bilanciai Model D800 Digital Indicator

FIGURE S429 – 3

Bilanciai Model D400 Digital Indicator

FIGURE S429 – 4



Sealing of Bilanciai Model D400/D410 Digital Indicators

FIGURE S429 – 5

Bilanciai Model D410 Digital Indicator

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FIGURE S429 – 6

Bilanciai Model D430 Digital Indicator

FIGURE S429 – 7

(a) Typical indication

(b) Showing separate display of third basework