Australian Government
National Measurement Institute

Bradfield Road, West Lindfield NSW 2070

Supplementary Certificate of Approval

No S517

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

Ohaus Model T31XWAU Digital Indicator

submitted by Ohaus Corporation
220 Turner Street
Port Melbourne VIC 3207

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 September 2013, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked with approval number 'NMI S517' and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked 'NMI S517' in addition to the approval number of the instrument.

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.

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

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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 12 August 2008

- Ohaus model T31XWAU digital indicator.

Variant: approved 12 August 2008

1. Ohaus model T31PAU digital indicator.

Technical Schedule No S517 describes the pattern and variant 1.

Variant: approved 16 February 2012

2. Ohaus model T32XWAU digital indicator.

Technical Schedule No S517 Variation No 1 describes variant 2.

FILING ADVICE

Supplementary Certificate of Approval No S517 dated 5 September 2008 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Supplementary Certificate of Approval No S517 dated 17 February 2012
Technical Schedule No S517 dated 5 September 2008 (incl. Table 1 and Test Procedure)
Technical Schedule No S517 Variation No 1 dated 17 February 2012 (incl. Notification of Change)
Figures 1 to 3 dated 5 September 2008
Figure 4 dated 17 February 2012

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 S517

Pattern: Ohaus Model T31XWAU Digital Indicator

Submittor: Ohaus Corporation
220 Turner Street
Port Melbourne VIC 3207

1. Description of Pattern

An Ohaus model T31XWAU 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. The indicator may also be known as "3000 Series Xtreme W".

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	1.67 µV/scale
Excitation voltage	5 V DC
Maximum excitation current	57.5 mA

1.1 Display Check

A display check is initiated whenever power is applied.

1.2 Zero Setting

A zero-tracking device may be fitted.

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

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.

1.3 Tare

A semi-automatic subtractive taring device of up to the maximum capacity of the instrument may be fitted.

1.4 Power Supply

The indicator operates from mains AC power (110–240 V AC, nominal).

1.5 Linearisation Facility

Instruments are fitted with a linearisation correction facility (effectively a two point linearisation facility – linearity adjustments may be applied at 50% capacity and at maximum capacity, in addition to span adjustment which may be at less than maximum capacity). Of course adjustment at no load also occurs.

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1.6 Interfaces

The indicator may be fitted with interfaces for the connection of auxiliary and/or peripheral devices. The interfaces shall comply with clause 5.3.6 of NMI R76 (the basic intent of which is that it shall not be possible to alter weighing results via the interfaces).

Any measurement data output from the instrument or its interfaces shall only be used for trade in compliance with NMI General Supplementary Certificate No S1/0/A (in particular in regard to the data and its format).

Indications 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 for trade use.

Serial interface options (e.g. RS 232) may be fitted.

1.7 Additional Features

The indicator may have additional 'counting' and or 'units' functions (the 'units' function may select indication in 'g' rather than 'kg' – selection of other units, e.g. 'lb', 'oz' shall not be possible). The additional functions (other than the indications of measured mass, i.e. gross, tare, net, displayed either on the indicator or on an auxiliary or peripheral device) are not approved for trade use.

1.8 Sealing Provision

The calibration parameters are protected when an 'LFT' switch located on the main circuit board within the indicator housing, is set to ON. It can be verified that the 'LFT' switch is correctly set by the following procedure:

- Press 'ON/ZERO/OFF' button to turn on the indicator.
- Press and hold the 'Tare/Menu' button until the display of the indicator change from '0.00' to either 'S.E.t.U.P' or 'C.A.L'.
- If the indicator displays 'C.A.L.', then the 'LFT' switch is set to OFF and calibration parameters are not protected. This should be corrected before the instrument is verified/certified and sealed.
- If the indicator displays 'S.E.t.U.P', then the LFT switch is set to ON and calibration parameters are protected. In this case the indicator may be sealed by preventing access within the indicator housing. This may be achieved by applying seal wire through sealing screws as shown in Figure 2a or by applying two destructible adhesive labels over the join in the indicator housing (one at each side of the indicator – as shown in Figure 2b.

1.9 Verification/Certification Provision

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

1.10 Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Ohaus Corporation	
Indication of accuracy class	(III)	
Maximum capacity	*Max* ..... kg	#1
Minimum capacity	*Min* ..... kg	#1
Verification scale interval	*e* = ... kg	#1
Maximum subtractive tare	*T* = - ..... kg	#2
Serial number of the instrument	.....	
Pattern approval mark for the indicator	S517	
Pattern approval mark for other components	.....	#3

#1 These markings shall also be 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 carry a notice stating NOT TO BE USED FOR TRADING DIRECT WITH THE PUBLIC, or similar wording.

2. Description of Variant 1

An Ohaus model T31PAU digital mass indicator (Figure 3a) which may also be known as "3000 Series"). This model is similar to the pattern but has a housing of ABS plastic construction, and may be powered by an internal rechargeable battery and/or by an AC mains adaptor (which also serves to recharge the battery).

The mains adaptor supplied was a Phihong model PSM11R-120 Switching Power Supply (Output: 12 V DC, 0.84 A), the submittor should be consulted regarding the acceptability of alternative power supply units.

Sealing is as described for the pattern, except that sealing methods as shown in Figure 3b may be used.

TEST PROCEDURE

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

Maximum Permissible Errors

The maximum permissible errors are specified in Schedule 12 of the *National Measurement Regulations 1999*.

TECHNICAL SCHEDULE No S517

VARIATION No 1

Pattern: Ohaus Model T31XWAU Digital Indicator

Submittor: Ohaus Corporation
220 Turner Street
Port Melbourne VIC 3207

1. Description of Variant 2

An Ohaus model T32XWAU digital mass indicator (Figure 4) which is similar to the pattern but has a different stainless steel housing, and may be powered by an internal rechargeable battery and/or AC mains.

1.1 Sealing Provision

Sealing is as described for the pattern. Alternatively the indicator is sealed by recording the audit trail counter on verification.

1.2 Configuration And/Or Calibration Counters

The indicator automatically increments a configuration and/or calibration value (audit trail number) each time the indicator is re-configured and/or calibrated.

The value(s) of these counters may be recorded on a destructible adhesive label attached to the instrument (e.g. as CFGxxx, CALyyy).

Any subsequent alteration to the calibration or configuration will be evident as the recorded values and the current counter values will differ.

The instructions for accessing the configuration and calibration audit trail are as follows (starting from the normal weighing mode):

- Press and hold the 'MENU' key until the display shows MENU followed by Audit.
- Release the 'MENU' key when Audit is displayed. The 'CFG' counter value is displayed and followed by the 'CAL' counter value.

NOTIFICATION OF CHANGE

In Technical Schedule No S517 dated 5 September 2008:

(i) the 1st paragraph of the TEST PROCEDURE should be amended as follows;

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

(ii) the paragraph referring to the maximum permissible errors should be replaced by;

"**Maximum Permissible Errors**

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

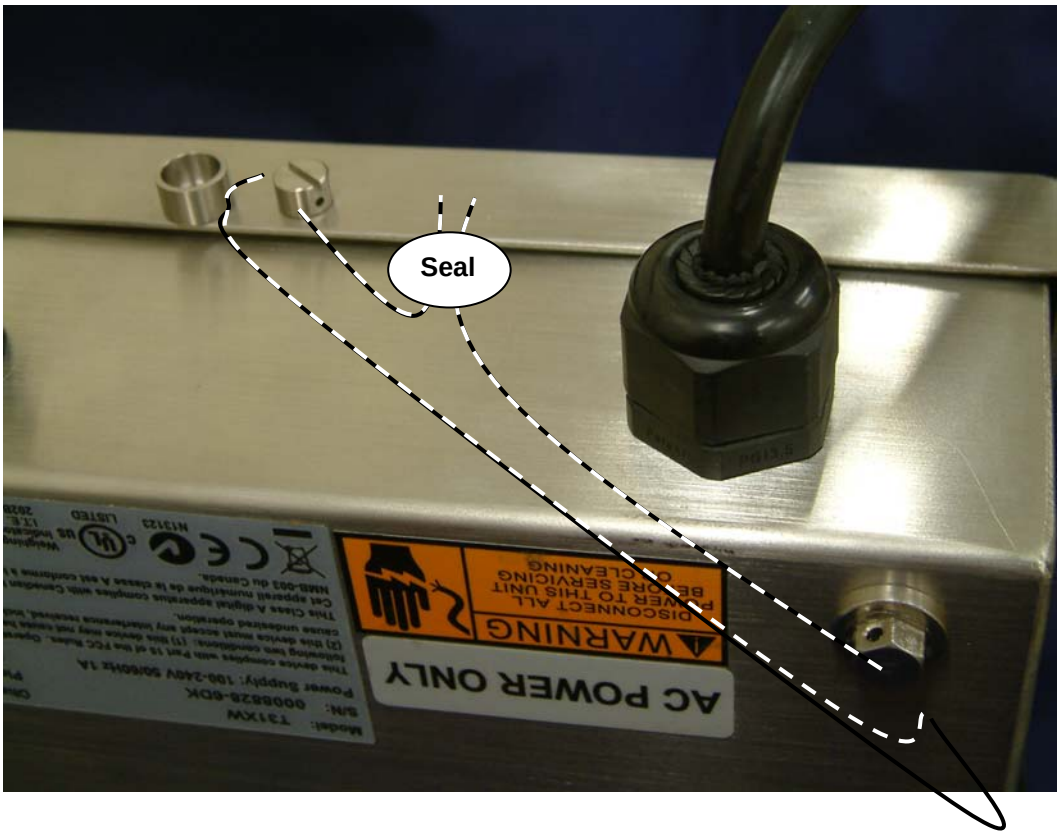
FIGURE S517 – 4

Ohaus Model T32XWAU Digital Indicator (Variant 2)

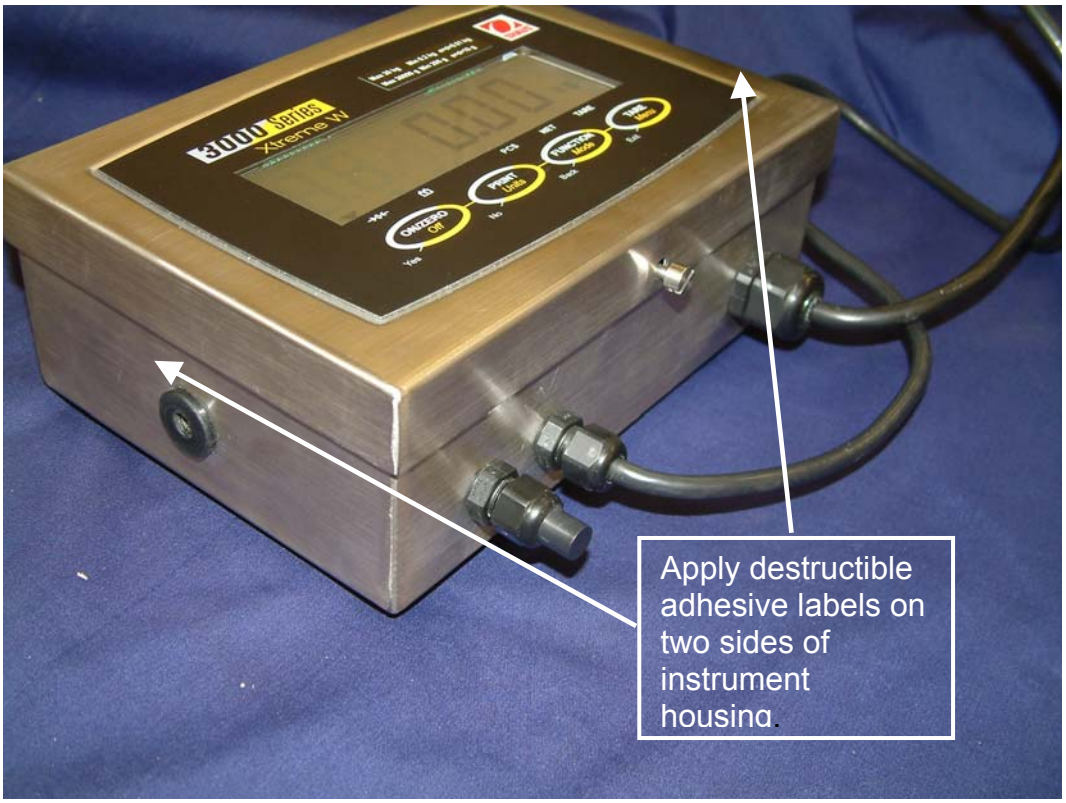
FIGURE S517 – 1

Ohaus Model T31XWAU Digital Indicator
(also known a 3000 Series Xtreme W)

FIGURE S517 – 2



(a) Sealing of Ohaus T31XWAU (lead and wire type seal)



(b) Sealing of Ohaus T31XWAU (destructible adhesive labels)

FIGURE S517 – 3

(a) Ohaus Model T31PAU (also known as 3000 Series).

(b) Sealing of Ohaus T31PAU (lead and wire type seal, or labels)