National Standards Commission

Supplementary Certificate of Approval

No S320

Issued under Regulation 9
of the
National Measurement (Patterns of Measuring Instruments) Regulations

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

Molen Model Univecs T/3000 Digital Indicator

submitted by United Weighing Australia Pty Ltd
Cnr Cranwell & Annesley Streets
Braybrock VIC 3019.

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.

CONDITIONS OF APPROVAL

This approval is subject to review on or after 1 June 2000.
This approval expires in respect of new instruments on 1 June 2001.

Instruments purporting to comply with this approval shall be marked NSC No S320 and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S320 in addition to the approval number of the instrument.

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

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 Commission 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 the Commission's Document 106.

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.

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

DESCRIPTIVE ADVICE

Pattern: approved 3 May 1995

- A Molen model Univecs T/3000 single or multiple-range digital mass indicator.

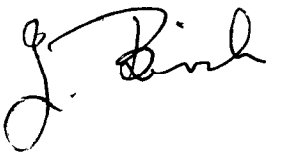
Technical Schedule No S320 describes the pattern.

FILING ADVICE

The documentation for this approval comprises:

Supplementary Certificate of Approval No S320 dated 25 July 1995
Technical Schedule No S320 dated 25 July 1995 (incl. Table 1 and Test Procedure)
Figure 1 dated 25 July 1995

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



National Standards Commission

TECHNICAL SCHEDULE No S320

Pattern: Molen Model Univecs T/3000 Digital Indicator.

Submittor: United Weighing Australia Pty Ltd
Cnr Cranwell & Annesley Streets
Braybrock VIC 3019.

1. Description of Pattern

A Molen model Univecs T/3000 single or multiple-range digital mass indicator (Figure 1 and Table 1) which may be fitted with input/output sockets for the connection of auxiliary and/or peripheral devices. Instruments are approved for use with a maximum of 6000 verification scale intervals per range.

1.1 Zero

Zero is automatically set to within ±0.25e whenever the instrument comes to rest within ±0.5e. If the instrument comes to rest outside that range but within the zero setting range, zero may be set by pressing the zero button. The initial zero-setting device has a range of not more than ±20% of the maximum capacity of the instrument.

1.2 Display Check

A display check is initiated whenever power is applied.

1.3 Tare

A semi-automatic subtractive taring device and/or a keyboard-entered pre-set subtractive taring device, each of up to maximum capacity may be fitted.

1.4 Multiple-range Operation

When configured for multiple-range operation, the instrument may automatically change to the next higher range as the load increases. With decreasing loads the instrument shall not change to a lower range until there is no load on the load receptor and the indication is zero or at a negative net value, at which time the instrument may change only to the lowest range; if tare is in operation, the instrument shall automatically cancel the tare and set zero to within ±0.5e.

1.5 Additional Display

Instruments are fitted with a second display for various management functions and menu options which are not approved for trade use.

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1.6 Linearisation Facility

Instruments may be fitted with a fixed single-point linearisation facility.

1.7 Sealing and Verification/Certification Provision

Provision is made for the calibration adjustments of the instrument to be sealed by securing a plate at the rear of the indicator.

Provision is made for a verification/certification mark to be applied.

1.8 Markings

Instruments are marked with the following data, together in one location:

Manufacturer's name or mark		
Serial number		
Accuracy class		(III)
Maximum capacity (for each range)		Max ..... *
Minimum capacity (for each range)		Min ..... *
Verification scale interval (for each range)		e = ... *
NSC approval numbers	- indicator	NSC No S320
	- other components	NSC No ..... #

* Repeated in the vicinity of each reading face.
\# May be located separately from the other markings.

TABLE 1

Type: Model Univecs T/3000

Maximum number of verification scale intervals per range	6000
Minimum sensitivity	1.0×10^{-3} mV/scale interval
Excitation voltage	10 - 15 V DC
Minimum load impedance	43 Ω
Maximum excitation current	350 mA

TEST PROCEDURE

Instruments shall 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 Inspector's Handbook.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors for increasing and decreasing loads, expressed in terms of verification scale interval (e), with the instrument adjusted to zero within ±0.25e at no load, are:

±0.5e for loads from 0 to 500e;
±1.0e for loads over 500e up to 2000e; and
±1.5e for loads over 2000e.

For multiple-range instruments with verification scale intervals of 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.

FIGURE S320 - 1

Molen Model Univecs T/3000 Digital Indicator