S279 12 July 1994

National Standards Commission



Supplementary Certificate of Approval

No S279

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

Tru-Test Model AG500-03 Digital Indicator

submitted by Tru-Test Distributors Limited 241 Ti Rakau Drive East Tamaki AUCKLAND NEW ZEALAND

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 August 1996. This approval expires in respect of new instruments on 1 August 1997.

Instruments purporting to comply with this approval shall be marked NSC No S279 and only by persons authorised by the submittor.

Supplementary Certificate of Approval No S279

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S279 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 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.

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.

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

DESCRIPTIVE ADVICE

Pattern: approved 30 July 1991

• A Tru-Test model AG500-03 digital mass indicator.

Variant: approved 30 July 1991

1. Model AG500-01 and AG500-02 indicators.

Technical Schedule No S279 describes the pattern and variant 1.

Variant: approved 12 May 1994

2. Model 701, 702 and 703 indicators.

Technical Schedule No S279 Variation No 1 describes variant 2.

Supplementary Certificate of Approval No S279

FILING ADVICE

Supplementary Certificate of Approval No S279 dated 24 December 1991 is superseded by this Certificate and may be destroyed.

The documentation for this approval now comprises:

Supplementary Certificate of Approval No S279 dated 12 July 1994 Technical Schedule No S279 dated 24 December 1991 (incl. Table 1 and Test Procedure) Technical Schedule No S279 dated 12 July 1994 (incl. Table 2) Figures 1 to 4 dated 24 December 1991 Figures 5 and 6 dated 12 July 1994

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.

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National Standards Commission

TECHNICAL SCHEDULE No S279

VARIATION No 1

Pattern: A Tru-Test Model AG500-03 Digital Mass Indicator.

Submittor: Tru-Test Distributors Limited 241 Ti Rakau Drive East Tamaki AUCKLAND NEW ZEALAND

1. Description of Variant 2

A Tru-Test 700 series (Version 1.1) digital mass indicator (refer Table 2).

The indicator may be either a model 701 (Figure 5), model 702, or model 703 (Figure 6), or in alternative housings.

The indicators may have any of the features of the pattern and variant 1, with the model 701 being the basic version while the models 702 and 703 have additional functions.

TABLE 2

Type: Tru-Test Maximum number of verification scale intervals Minimum sensitivity Excitation voltage Minimum load impedance Maximum excitation current Model 701, 702 and 703 3000

1.5 x 10⁻³ mV/scale interval 8 V DC 58.3 ohms 138 mA

NOTIFICATION OF CHANGE

In Technical Schedule No S279 dated 24 December 1991, the following amendments should be made:

- A. In the first paragraph of clause **1.** Description of Pattern, insert "(Version 3.1)" after "model AG500-03".
- B. In clause **2**. Description of Variant **1**, insert "(Version 3.1)" after "model AG500-01" and after "model AG500-02".
- C. On Page 2, add the following new clause;

1.7 Sealing Provision

Provision is made for the calibration adjustments to be sealed by means of the sealing lugs provided in two corners of the indicator body halves.



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TECHNICAL SCHEDULE No S279

Pattern: A Tru-Test Model AG500-03 Digital Mass Indicator.

Submittor: Tru-Test Distributors Limited 241 Ti Rakau Drive East Tamaki AUCKLAND NEW ZEALAND

1. Description of Pattern

A Tru-Test model AG500-03 digital mass indicator (refer Table 1) which may be as shown in Figures 1 and 2, or in alternative housings.

Instruments may be fitted with input/output sockets for the connection of auxiliary and/or peripheral devices. Note: These devices do not affect the live weight indication.

The indicator may be used as either a single-interval (single-range) instrument, in which case it is approved for use with up to 3000 verification scale intervals, or used as a multi-interval (multi-range) instrument, in which case it is approved for use with up to 3000 verification scale intervals per range, within the limits specified below.

1.1 Limits of Ranges

Multi-interval instruments may have up to 3 ranges and shall comply with the following:

- (i) With a maximum of 3000 verification scale intervals per range.
- (ii) <u>Maximum capacity of the lower range</u> \geq 500 Verification scale interval of the next range

1.2 Zero

Zero is automatically set to within \pm 0.25e whenever the instrument comes to rest within \pm 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.

1.3 Display Check

A display check is initiated whenever power is applied.

Technical Schedule No S279

1.4 Tare

Instruments may be fitted with a semi-automatic subtractive taring device and/or a non-automatic taring device each of up to maximum capacity.

1.5 Verification/Certification Provision

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

1.6 Markings

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

Max *
Min *
Τ=
Max*
e = d = *
NSC No S279
#

* Repeated in the vicinity of each reading face.

May be located separately from the other markings.

2. Description of Variant 1

In certain other models viz. AG500-01 and AG500-02 (Figures 3 and 4), with less management functions and without the non-automatic taring device.

TABLE 1

Type: Tru-Test	AG500-03 (also -01 and -02)
Maximum number of verification	3000
scale intervals	
Minimum sensitivity	3 x 10 ⁻³ mV/scale interval
Excitation voltage	8 V DC
Minimum load impedance	87.5 ohms
Maximum excitation current	90 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.

The maximum permissible errors applicable are those applicable to the system to which the instrument approved herein is fitted, as stated in the approval documentation for the system.

1. Load Test (multi-interval instruments)

Test loads are to be applied to the instrument in not less than 9 steps increasing to maximum capacity, followed by decreasing loads in not less than 9 steps to zero load. The loads should be selected such that there are 3 approximately-equal steps in each range, but avoiding the changeover points of the ranges.

National Standards Commission



Notification of Change Supplementary Certificate of Approval No S279 Change No 1

The following change is made to the approval documentation for the

Tru-Test Model AG500-03 Digital Indicator

submitted by Tru-Test Distributers Limited 241 Ti Rakau Drive East Tamaki AUCKLAND NEW ZEALAND.

In Supplementary Certificate of Approval No S279 dated 12 July 1994, the Condition of Approval referring to the expiry of the approval should be amended to read:

"This approval expires in respect of new instruments on 1 August 1998."

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.

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FIGURE S279 - 1

Tru-Test Model AG500-03 Indicator



FIGURE S279 - 2



Model AG500-01 Indicator

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FIGURE S279 - 4

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FIGURE S279 - 5



Tru-Test Model 703 Digital Indicator