

# National Standards Commission



## Certificate of Approval

No 6/9C/248

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 700 Weighing Instrument

submitted by Tru-Test Limited  
241 Ti Rakau Drive  
Pakuranga 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 June 1999.  
This approval expires in respect of new instruments on 1 June 2000.

Instruments purporting to comply with this approval shall be marked NSC No 6/9C/248 and only by persons authorised by the Submitter.

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

It is the Submitter'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 the instrument shall be within the limits specified herein and in any approval documentation for the components where they are approved separately.

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

#### DESCRIPTIVE ADVICE

Pattern: approved 13 May 1994

A Tru-Test model 700 self-indicating multi-interval weighing instrument of 1500 kg maximum capacity.

Variant: approved 13 May 1994

1. In other capacities up to 1500 kg.

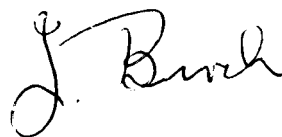
Technical Schedule No 6/9C/248 describes the pattern and variant 1.

#### FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 6/9C/248 dated 4 July 1994  
Technical Schedule No 6/9C/248 dated 4 July 1994 (incl. Test Procedure)  
Figures 1 and 2 dated 4 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.





# National Standards Commission

## TECHNICAL SCHEDULE No 6/9C/248

Pattern: Tru-Test Model 700 Weighing Instrument.

Submittor: Tru-Test Limited  
241 Ti Rakau Drive  
Pakuranga Auckland New Zealand.

### 1. Description of Pattern

A Tru-Test model 700 self-indicating multi-interval weighing instrument (Figure 1) with a verification scale interval ( $e_1$ ) of 1 kg up to a capacity of 1000 kg and with a verification scale interval ( $e_2$ ) of 2 kg from 1000 kg capacity up to the maximum capacity of 1500 kg.

#### 1.1 Basework

The basework has two model HD1010 1010 mm x 75 mm (nominal) load beams (Figure 2) which fully support the load receptor. Each load beam is fitted with two load cells. The load receptor is nominally 1020 mm x 1230 mm, and is positioned above ground, with or without loading ramps.

The load receptor may be fitted with a variety of frames or enclosures.

#### 1.2 Load Cells

Four Precision Transducers model PSB 1000-C1 load cells of 1000 kg capacity are used as described in the documentation of NSC approval No S302.

#### 1.3 Indicator

A Tru-Test model 700 digital indicator is used. This is also described in the documentation of NSC approval No S279.

##### 1.3.1 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.

##### 1.3.2 Display Check


A display check is initiated whenever power is applied.

### 1.3.3 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.

### 1.4 Markings

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

Manufacturer's name or mark	
Serial number	
NSC approval numbers	- instrument NSC No 6/9C/248
	- load cells NSC No S .
	- indicator NSC No S
Accuracy class	
Maximum capacity	Max / . . . . . ‡
Minimum capacity	Min . . . . .
Verification scale interval	e = ..... / s s s s s s s s •

\* These are repeated adjacent to each reading face.

### 1.5 Verification/Certification Provision

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

### 1.6 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.

## 2. Description of Variant 1

In other capacities up to 1500 kg using other model Tru-Test load beams of up to 1010 mm in length.

Platform lengths may range from 400 mm to 2000 mm (load beams are at right angles to the length of the platform). Platform widths may range from 600 mm to 1230 mm.

## TEST PROCEDURE

Instruments should be tested in conjunction with any tests specified in the approval documentation for the indicator used, and in accordance with any relevant tests specified in the Inspector's Handbook.

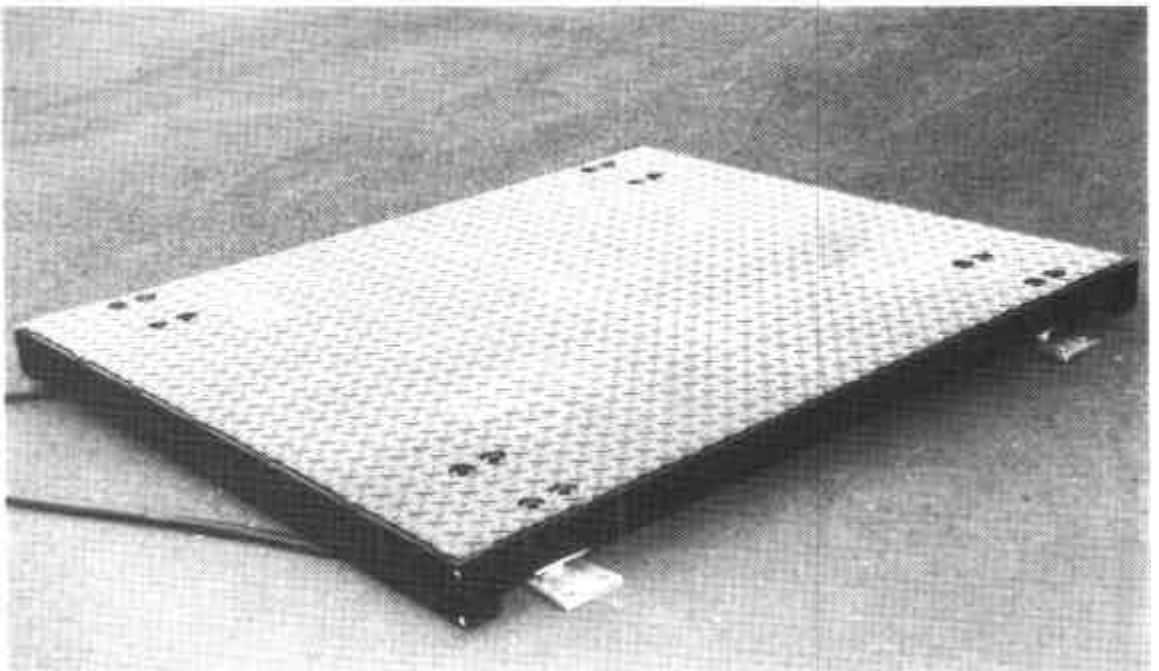
### Maximum Permissible Errors at Verification/Certification

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

- $\pm 0.5e$  for loads from 0 to  $500e$ ;
- $\pm 1.0e$  for loads over  $500e$  up to  $2000e$ ; and
- $\pm 1.5e$  for loads over  $2000e$ .

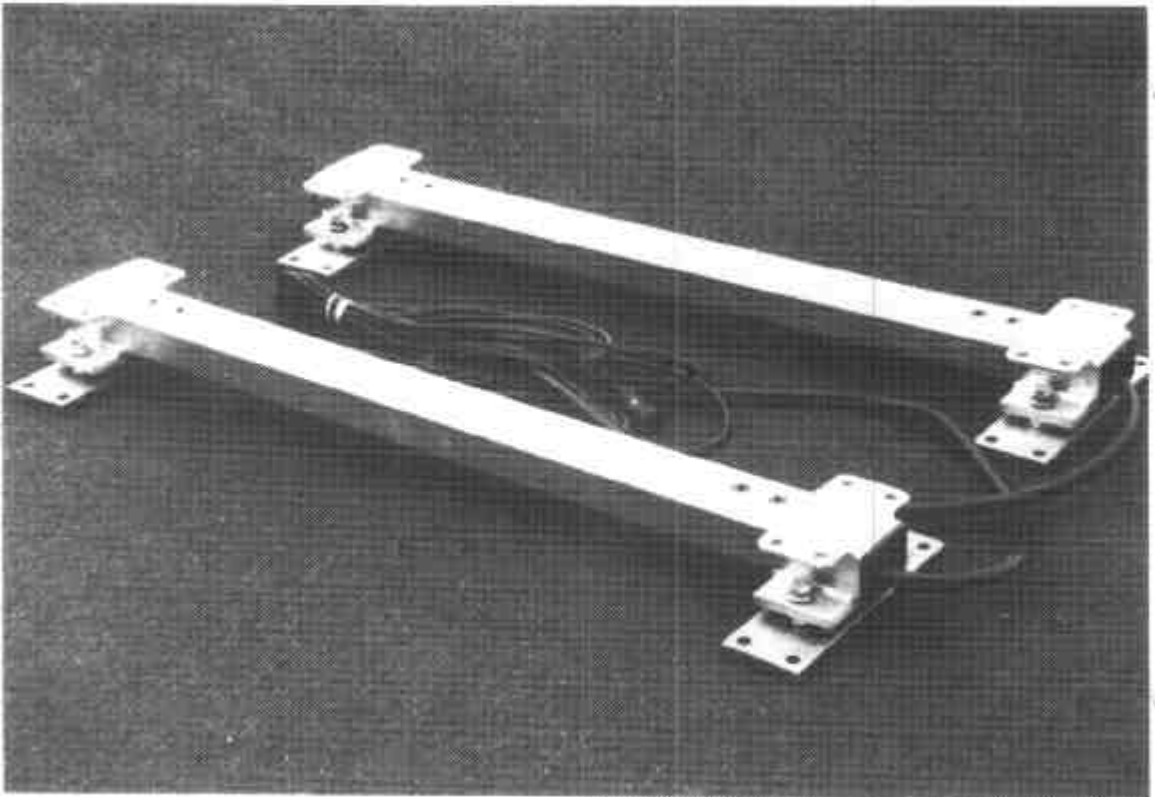
For multi-interval instruments with verification scale intervals of  $e_1, e_2, \dots$  apply  $e_1$  for zero adjustment and for maximum permissible errors apply  $e_1, e_2, \dots$  as applicable for the load.

FIGURE 6/9C/248 1



Tru-Test Model 700 Weighing Instrument

FIGURE 6/9C/248 - 2



Model HD1010 Load Beams