



# NATIONAL STANDARDS COMMISSION

## NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

### REGULATION 9

#### CERTIFICATE OF APPROVAL No 6/4D/241

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

Teraoka Seiko Model HI-6100 Weighing Instrument

submitted by J W Wedderburn & Sons Pty Ltd  
90 Parramatta Road  
Summer Hill NSW 2130.

#### CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/4/91.  
This approval expires in respect of new instruments on 1/4/92.

Instruments purporting to comply with this approval shall be marked NSC No 6/4D/241.

This approval may be withdrawn if instruments are constructed other than in accordance with the drawings and specifications lodged with the Commission.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates Nos S1/0 and/or S2/0, as appropriate.

Signed

Executive Director

#### Descriptive Advice

Pattern: approved 20/3/86

- A self-indicating price-computing weighing and printing instrument of 5 kg capacity with a verification scale interval of 0.005 kg.

Technical Schedule No 6/4D/241 describes the pattern.

Variant: approved 26/8/87

1. Of 7.5 kg capacity with a verification scale interval of 0.005 kg.

Variant: provisionally approved 26/8/87 - approved 4/12/87

2. Of 2 kg capacity with a verification scale interval of 0.002 kg and known as a model HI-6200.

Technical Schedule No 6/4D/241 Variation No 1 describes variants 1 and 2.

Filing Advice

Certificate of Approval No 6/4D/241 dated 19/6/86, is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/4D/241 dated 18/2/88  
Technical Schedule No 6/4D/241 dated 19/6/86  
Technical Schedule No 6/4D/241 Variation No 1 dated 18/2/88  
Test Procedure No 6/4D/241 dated 19/6/86  
Figure 1 dated 19/6/86



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No 6/4D/241

Pattern: Teraoka Seiko Model HI-6100 Weighing Instrument

Submittor: J W Wedderburn & Sons Pty Ltd  
90 Parramatta Road  
Summer Hill NSW 2130

### 1. Description of Pattern

A self-indicating price-computing weighing and label printing instrument (Figure 1) of 5 kg capacity with a verification scale interval of 0.005 kg. The instrument may be used for weighing either statically or dynamically (i.e. conveyor stopped or moving). Figure 1 shows an instrument fitted with an outfeed sorter/roller unit which is a peripheral device which does not form part of this approval.

In addition to the above, the instrument is fitted with a price and tare look-up facility, and has various management facilities including the ability to obtain a sum of a number of weighings. The instrument has price to \$9999.99 and unit price to \$999.99/kg (using the PLU facility) or \$9999.99/kg (when entered directly from the keyboard).

The instrument must be set level when installed and then permanently fixed, and may be fitted with output sockets for the connection of peripheral and/or auxiliary devices.

#### 1.1 Zero

Zero is automatically corrected to within  $\pm 0.25e$  whenever the instrument comes to rest within  $0.5e$  of zero. If the instrument comes to rest outside that range but within the zero reset range, zero may be reset by pressing the zero button. The zero light illuminates whenever zero is set within  $0.25e$ .

#### 1.2 Display Check

A display check is initiated whenever power is applied to the instrument.

#### 1.3 Tare

A semi-automatic subtractive taring device of up to 0.995 kg capacity may be fitted. In addition the instrument incorporates a keyboard-operated digital tare facility, in which a tare value may be entered against an item in the price-look-up table (i.e. the instrument has a price and tare look-up facility).

#### 1.4 Markings

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

Manufacturer's name or mark	
Serial number	
NSC approval number	NSC No 6/4D/241
Accuracy class	(III)
Maximum capacity	Max 5 kg *
Minimum capacity	Min 0.1 kg *
Verification scale interval	$e = d = 0.005 \text{ kg} *$
Maximum subtractive tare	$T = -0.995 \text{ kg}$

In addition, the instrument is marked Not For Retail Counter Use and Caution: Ensure Weighing Section is Clear of Packages Before Starting Belt (or similar wording).

\* These markings are repeated close to the reading face if not already in that vicinity.

1.5 Verification Provision

Provision is made for a verification mark to be applied.

TEST PROCEDURE No 6/40/241

All load applications to the instrument should be in accordance with the Commission's recommended testing procedure for the elimination of rounding error as set out in Document 104.

The maximum permissible errors are:

- ± 0.5e for loads between 0 and 500e;
- ± 1.0e for loads between 501e and 2000e; and
- ± 1.5e for loads above 2000e.

1. Static Tests

1.1 Zero Test

As the automatic device resets zero when the weighing mechanism is in equilibrium within 0.5e of zero, zero should be checked as described in Document 104, with a load equal to, say, 10e on the load receptor. The indications with 0.25e and 0.75e additional mass on the load receptor will be 10e and 11e respectively.

1.2 Zero Range

The maximum range of operation of the zero setting device should not exceed 4% of the maximum capacity (± 2% approximately). With zero balance indicated apply a load of, say, 2.5% of maximum capacity to the instrument and press the zero button; the instrument should not rezero.

1.3 Load Test

Test loads are to be applied to the instrument in not less than 5 approximately equal steps increasing to maximum capacity, followed by decreasing loads in not less than 5 approximately equal steps to zero load.

1.4 Range of Indication

The maximum mass indicated should not exceed the marked maximum capacity by more than 10e; above this indicated mass the indication should be blank or show non-numerical characters.

1.5 Taring

A tare should not be able to be acquired above the marked tare capacity.

The semi-automatic tare function should be able to reset the mass indicator to zero within 0.25e at any load within its capacity. This may be checked as described for Zero Test.

When semi-automatic and digital tare are fitted together, either:

- (a) The selection of one will automatically cancel any previously entered tare, or
- (b) The operation of one will be inhibited once the other has been selected.

2. Dynamic Load Test

As for the static test, however particular attention should be paid to the test method described in Document 104 as methods involving the finding of a changeover point cannot be employed. For the application of these tests sample packages may be required which should be adjusted to the masses required by Document 104.



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6/4D/241  
18/2/88

## TECHNICAL SCHEDULE No 6/4D/241

### VARIATION No 1

Pattern: Teraoka Seiko Model HI-6100 Weighing Instrument

Submitter: J W Wedderburn & Sons Pty Ltd  
90 Parramatta Road  
Summer Hill NSW 2130

#### 1. Description of Variants

##### 1.1 Variant 1

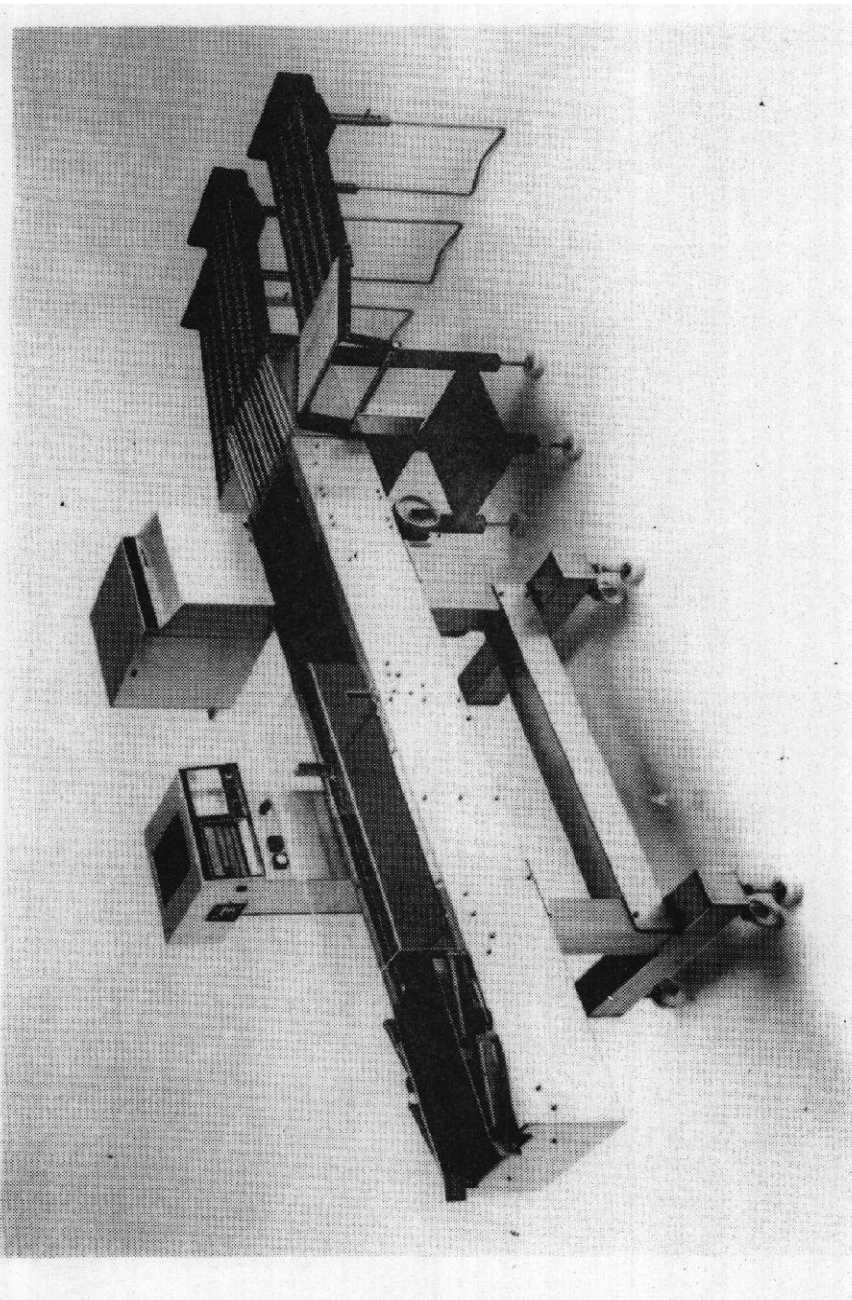
Of 7.5 kg capacity with a verification scale interval of 0.005 kg.

##### 1.2 Variant 2

Of 2 kg capacity with a verification scale interval of 0.002 kg and known as a model HI-6200.

The instrument may be fitted with a non-operational speed switch marked for high and low speeds. The instrument is only approved to operate at the low speed - approximately 0.5 metres per second.

FIGURE 6/4D/241 1



Teraoka Seiko Model HI-6100