



6/4D/244
9/12/87

NATIONAL STANDARDS COMMISSION

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/4D/244

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 SM-15 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 1/10/92.

This approval expires in respect of new instruments on 1/10/93.

Instruments purporting to comply with this approval shall be marked NSC No 6/4D/244.

This approval may be withdrawn if instruments are constructed other than in accordance with the drawings and specifications lodged with the Commission.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 11/9/87

- A dual-interval self-indicating price-computing weighing instrument of 15 kg maximum capacity.

Variants: approved 11/9/87

1. With the load cell and mounting in an alternative housing.
2. With single-interval operation with a maximum capacity of 15 kg and with a verification scale interval of 0.005 kg.
3. With the instruments connected in a network.
4. Displaying mass only.
5. As a single-interval instrument with baseworks and capacities as listed in Table 1.

Technical Schedule No 6/4D/244 describes the pattern and variants 1 to 5.

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Filing Advice

The documentation for this approval comprises:

Certificate of Approval No 6/4D/244 dated 9/12/87
Technical Schedule No 6/4D/244 dated 9/12/87 (incl. Table 1)
Test Procedure No 6/4D/244 dated 9/12/87
Figure 1 dated 9/12/87



NATIONAL STANDARDS COMMISSION

6/4D/244

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TECHNICAL SCHEDULE No 6/4D/244

Pattern: Teraoka Seiko Model SM-15 Weighing Instrument

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

1. Description of Pattern

A dual-interval self-indicating price-computing label or ticket printing weighing instrument (Figure 1) with a verification scale interval of 0.002 kg up to 6 kg and with a verification scale interval of 0.005 kg from 6 kg up to the maximum capacity of 15 kg. The instrument 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 within $0.25e$.

1.2 Display Check

A display check is initiated whenever power is applied.

1.3 Tare

A semi-automatic subtractive taring device of up to 5.998 kg capacity may be fitted.

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/244
Accuracy class	(III)
Low range	
Maximum capacity	Max 6 kg *
Verification scale interval	e = d = 0.002 kg *
High range	
Maximum capacity	Max 15 kg *
Verification scale interval	e = d = 0.005 kg *
Minimum capacity	Min 0.04 kg *
Maximum subtractive tare	T = - 5.998 kg

* Repeated close to each reading face.

1.5 Levelling

The instrument is provided with adjustable feet and adjacent to the level indicator is a notice advising that the instrument must be level when in use.

1.6 Verification Provision

Provision is made for a verification mark to be applied.

2. Description of Variants

2.1 Variant 1

With the weighing unit (load cell and mounting) in an alternative housing.

2.2 Variant 2

With single-interval operation with a maximum capacity of 15 kg and with a verification scale interval of 0.005 kg. A semi-automatic subtractive taring device of up to 7.495 kg may be fitted.

2.3 Variant 3

A number of SM-15 instruments may be connected in a network, to share common PLU data, to transfer transaction data between instruments, and to retrieve management information.

Each individual instrument within the network has the facility for the transaction data to be entered into one of a number of operator memories, with a total ticket being produced at the end of a number of transactions.

In such a system it is essential that the purchaser be provided with a ticket, or tickets, indicating each item in the transaction and the total price for the transaction. The linking of these instruments in a network allows such transaction data to be transferred between instruments.

A number of Teraoka Seiko model SM-40 or SM-50 (see NSC approval No 6/4D/216) weighing instruments, or model SM-60 or SM-60A or SM-60B (see NSC approval No 6/4D/236) weighing instruments may also be included as part of the network.

The network must include at least one of the following as the network controller - SM-60, SM-60A, SM-60B, CB-10 (the CB-10 is a "control box" - it is not a weighing instrument). In addition the network may be interfaced with a computer for the collection of management data, or the downloading of PLU programming data.

Note: The weighing and price-computing functions of each weighing instrument in the network are independent, and the removal, repair or replacement of a particular weighing instrument does not necessitate reverification of any other weighing instrument in the network.

2.4 Variant 4

As a mass only weighing instrument i.e. without price-computing.

2.5 Variant 5

The model SM-15 instrument as a single-interval instrument with baseworks and capacities as listed in Table 1.

TABLE 1

Maximum capacity	30 kg	60 kg	150 kg	300 kg	600 kg
Minimum capacity	0.2 kg	0.4 kg	1 kg	2 kg	4 kg
Verification scale interval	0.01 kg	0.02 kg	0.05 kg	0.1 kg	0.2 kg
Maximum tare capacity	9.99 kg	29.98 kg	74.95 kg	99.90 kg	299.8 kg
Basework models	S-DK DS-410	S-BK S-CK S-DK DS-410	S-BK S-CK DS-410	S-BK S-CK	S-EK
Load cell model	RN 31(#)	RW 60	RW 150	RW 300	RW 600

Note: The DS-410 style baseworks are as described in the documentation of NSC approval No 6/9C/202.

(#) Also known as a model RW 30.

Approved Models and Capacities - Variant 5



NATIONAL STANDARDS COMMISSION

TEST PROCEDURE No 6/4D/244

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 error applicable is that for the range in which the measurement is made, using the scale interval of the range.

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. Zero Range

The maximum range of operation of the zero setting device should not exceed 4% of the maximum capacity. The device shall be capable of both negative and positive adjustments of at least one quarter of the zero adjustment range. With zero balance indicated apply a load of, say, 3.5% of maximum capacity and press the zero button; the instrument should not rezero.

2. Load Test (Dual-interval instruments)

Test loads are to be applied to the instrument in not less than 6 steps increasing to maximum capacity, followed by decreasing loads in not less than 6 steps to zero load. The loads should be selected such that there are 3 approximately equal steps in each range, but avoiding the changeover point of the ranges.

National Standards Commission



NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/4D/244

CHANGE No 1

The following change is made to the approval documentation for the

Teraoka Seiko Model SM-15 Weighing Instrument

submitted by W W Wedderburn Pty Ltd
90 Parramatta Road
Summerhill NSW 2130.

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

A handwritten signature in black ink, appearing to read 'J. Bish'.

In Technical Schedule No 6/4D/244 dated 9/12/87, Table 1 is amended by adding the model S-A basework to the approved models of 30 kg capacity.

National Standards Commission



NOTIFICATION OF CHANGE

SUPPLEMENTARY CERTIFICATE OF APPROVAL No 6/4D/244

CHANGE No 2

The following change is made to the approval documentation for the

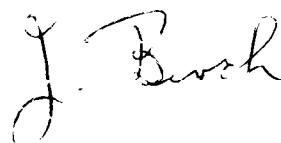
Teraoka Seiko Model SM-15 Weighing Instrument

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

In Certificate of Approval No 6/4D/244 dated 9/12/87, the Condition of Approval referring to the expiry of the approval should be amended to now read:

"This approval expires in respect of new instruments on 1/10/94."

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.





NOTIFICATION OF CHANGE
CERTIFICATE OF APPROVAL No 6/4D/244
CHANGE No 3

The following change is made to the approval documentation for the

Teraoka Seiko Model SM-15 Weighing Instrument

submitted by **W W Wedderburn Pty Ltd**
90 Parramatta Road
Summer Hill NSW 2130.

In Certificate of Approval No 6/4D/244 dated 9 December 1987, the Condition of Approval referring to the expiry of the approval (previously extended by Notification of Change No 2) should be amended to now read:

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

6/40/244
9/12/87

FIGURE 6/40/244 - 1



Teraoka Seiko Model SM-15