



NATIONAL STANDARDS COMMISSION

S194
15/2/89

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

SUPPLEMENTARY CERTIFICATE OF APPROVAL No S194

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

Salter Electroscale Model WML Digital Indicator

submitted by Geo Salter Pty Ltd
16 Grosvenor Street
Abbotsford VIC 3067.

CONDITIONS OF APPROVAL

General:

This approval is subject to review on or after 1/6/90.
This approval expires in respect of new instruments on 1/6/91.

Instruments purporting to comply with this approval shall be marked NSC No S194 in addition to the approval number of the pattern to which they are connected.

This approval may be withdrawn if instruments are constructed other than as described in the drawings and specifications lodged with the Commission.

Special:

The number of scale intervals applicable to any weighing instrument in which this indicator is used shall be no greater than the number of verification scale intervals approved for the basework, or the load cell(s) or the indicator (*) whichever is the smallest.

Note: * 6000e - for single-interval (i.e. single-range) instruments.
* 3000e per range - for multi-interval instruments.

The calculations of Section 6 of General Certificate No 6B/0 shall apply to all ranges and all capacities of multi-interval instruments.

Signed

Executive Director

Descriptive Advice

Pattern: approved 1/5/85

- Salter Electroscale model WML digital Indicator.

Variants: approved 1/5/85

1. Without the tare facility.
2. Without the automatic zero tracking device.
3. In alternative housings.

Technical Schedule No S194 describes the pattern and variants 1 to 3.

Variant: approved 30/11/88

4. As a dual-Interval instrument.

Technical Schedule No S194 Variation No 1 describes variant 4.

Filing Advice

Supplementary Certificate of Approval No S194 dated 3/9/85 is superseded by this Certificate and may be destroyed.

The documentation for this approval now comprises:

- Supplementary Certificate of Approval No S194 dated 15/2/89
- Technical Schedule No S194 dated 3/9/85
- Technical Schedule No S194 Variation No 1 dated 15/2/89 (incl. Test Procedure)
- Test Procedure No S194 dated 3/9/85
- Figure 1 dated 3/9/85



NATIONAL STANDARDS COMMISSION

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TECHNICAL SCHEDULE No S194

VARIATION No 1

Pattern: Salter Electroscale Model WML Digital Indicator.

Submittor: Geo Salter Pty Ltd
16 Grosvenor Street
Abbotsford VIC 3067.

1. Description of Variant 4

As a dual-Interval mass indicator.

1.1 Limits of Ranges

Instruments shall comply with the following:

- (I) With a maximum of 3000 verification scale intervals per range.
- (II) $\frac{\text{Maximum capacity of the low range}}{\text{Verification scale interval of the high range}} \geq 500$

1.2 Markings

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

Manufacturer's name or mark	
Serial number	
NSC approval number	NSC No S194
Accuracy class	III
Maximum capacity	Max kg *
Minimum capacity	Min kg *
Maximum subtractive tare	T = -..... kg
High range: (similarly for low range)	
Maximum capacity	Max kg *
Verification scale interval	e = d =.... kg *

* These are repeated adjacent to each reading face.

TEST PROCEDURE

1. 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

TECHNICAL SCHEDULE No S194

Pattern: Salter Electroscale Model WML Digital Indicator

Submittor: Geo Salter Pty Ltd
16 Grosvenor Street
Abbotsford VIC 3067

1. Description of Pattern

A digital mass indicator (Figure 1) approved for use with up to 6000 verification scale intervals.

The indicator may be provided with output sockets for the connection of auxiliary and/or peripheral devices.

1.1 Zero

- a) The instrument may be zeroed to within 0,25e, indicated by the zero light illuminating steadily, by operating the zero button.
- b) An automatic zero tracking device resets zero to within 0.25e whenever the indicator returns to zero within 0.5e.

1.2 Tare

- a) A semi-automatic subtractive taring device allows a mass on the load receptor of up to maximum capacity to be tared to within 0.25e.
- b) When in gross mode the TARE indicator illuminates and the GROSS indicator extinguishes when the TARE button is pressed.

1.3 Net/Gross Button

When this button is pressed the indicator will display the net or gross mass with the appropriate lamp illuminating.

1.4 Display Check

Applying power initiates a display check.

1.5 Marking

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

Manufacturer's name or mark	
Accuracy class	Ⓜ
Serial number of instrument	
Maximum capacity in the form:	Max*
Minimum capacity in the form:	Min*
Verification scale interval in the form:	e = d = ..*
Maximum subtractive tare in the form:	T = -
NSC approval numbers - Indicator	NSC No S194
- Other components	
Load cell serial number(s)	

* These markings are repeated in the vicinity of each reading face.

1.6 Verification Mark

Provision is made for a verification mark to be applied.

2. Description of Variants

2.1 Variant 1

Without the semi-automatic tare facility.

2.2 Variant 2

Without the automatic zero tracking device.

2.3 Variant 3

In alternative housings.

TEST PROCEDURE No S194

The following tests should be carried out in conjunction with any test procedures in the approval documentation for the instrument to which this indicator is connected.

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. Zero Range

Check that the range of the zero adjustment is not more than 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 adjust the zero control; the instrument should not rezero.

2. Zero Test

- (a) Check by means of Document 104, that when the zero light is lit, zero is set within 0.25e.
- (b) As the automatic zero tracking device resets zero when the weighing mechanism is in equilibrium within 0.5 scale interval of zero, zero should be checked, with a load equal to, say, 10 scale intervals on the load receptor. The indications with 0.25e and 0.75e additional mass on the load receptor will then be 10e and 11e respectively.

3. Range of Indication

- (a) The maximum mass indicated should not exceed the maximum capacity (Max) by more than 10 scale intervals; above this indicated mass the indicator should be blank.
- (b) Below zero the indication may blank or the mass will be indicated, prefixed by a minus sign.

4. Taring

- (a) Attempt to tare a mass above maximum capacity as determined in 3(a). On removal of the mass no tare should have been entered, and the indicator should display all zeroes.
- (b) The tare function should reset the mass indicator to zero within 0.25e at any load within its tare capacity. This may be checked as described under 2(a) - Zero Test.

5. Test Loads

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

6. Multiple Indicators

Where more than one indicating system is used the variation between indications or printings for the same load shall not be greater than the absolute value of the maximum permissible error for that load on the device with the largest verification scale interval.



National Standards Commission

NOTIFICATION OF CHANGE

VARIOUS CERTIFICATES OF APPROVAL

The following changes are made to the approval documentation for the approvals listed below

submitted by Geo Salter Pty Ltd
16 Grosvenor Street
Abbotsford VIC 3067.

- 1) The submittor's name and address should be changed to read:

Salter Weightronix Pty Ltd
1 Apollo Court
Blackburn VIC 3130.

- 2) Any Salter Instrument or component of an Instrument approved in the documentation, may now also be known as "Salter Weightronix" or "Weightronix" or similar.

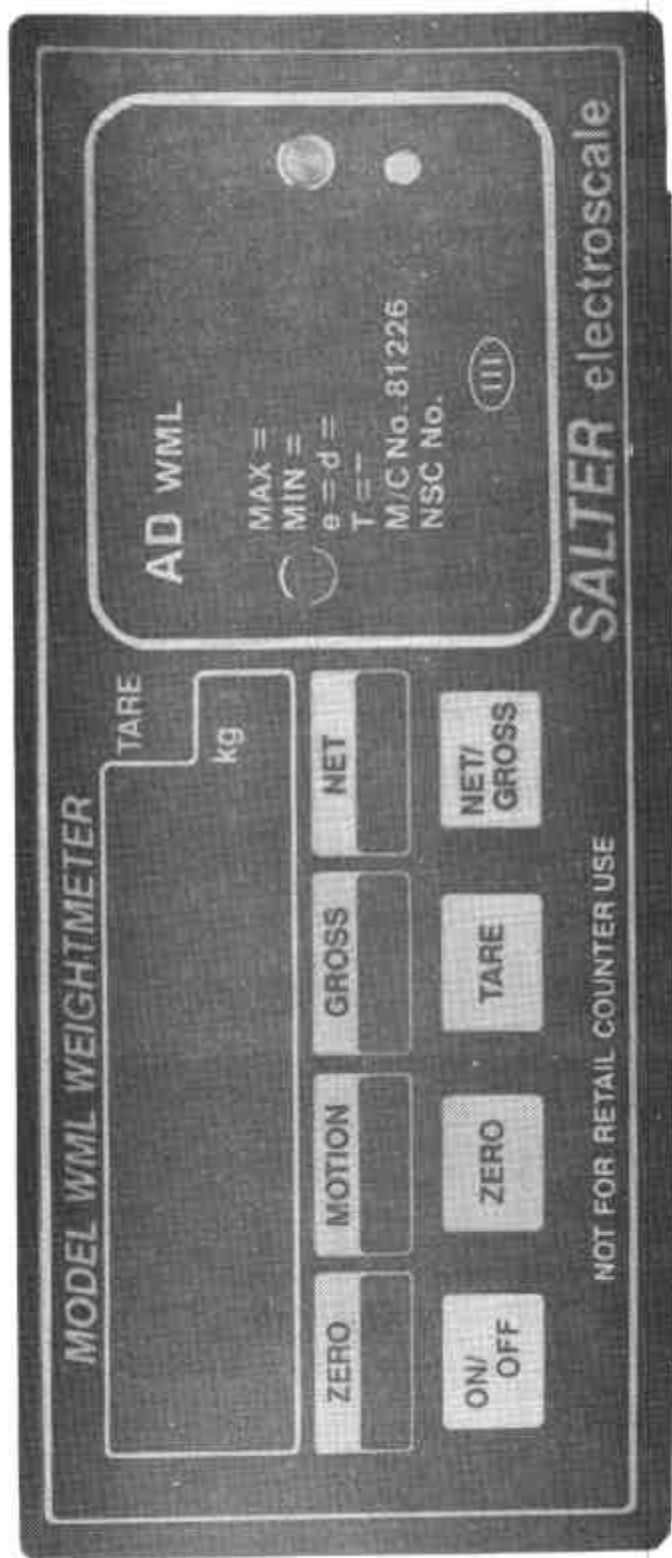
APPROVAL

PATTERN

6/5/12A	Salter Model 610T (freely-suspended) Weighing Instrument
6/9C/203	Salter Model LC2424 (platform) Weighing Instrument
6/9C/211	A & D Model FV 150 (platform) Weighing Instrument
S194	Salter Electroscale Model WML Digital Indicator
S200	Salter Electroscale Model CWM Digital Indicator

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

FIGURE S194 - 1



Salter Electroscaler Model WML Indicator