



# NATIONAL STANDARDS COMMISSION

## WEIGHTS AND MEASURES (PATTERNS OF INSTRUMENTS) REGULATIONS

### REGULATION 9

CERTIFICATE OF APPROVAL No 6/4D/225

CANCELLED

This is to certify that an approval has been granted by the Commission that the pattern and variant of the

Toledo Model 8420 Weighing Instrument

submitted by Toledo Scale Australia Ltd  
525 Graham Street  
Port Melbourne, Victoria, 3207

are suitable for use for trade.

The approval is subject to review on or after 1/10/88.

Instruments purporting to comply with this approval shall be marked NSC No 6/4D/225.

#### Condition of Approval

Instruments shall only be used in accordance with the drawings and specifications lodged with the Commission.

Signed

Executive Director

#### Descriptive Advice

Pattern: approved 12/9/83

- . A self-indicating price-computing weighing instrument of 15 kg capacity by 0.005 kg scale intervals.

Variant: approved 12/9/83

1. The instrument displaying mass only.

Technical Schedule No 6/4D/225 dated 4/10/83 describes the pattern and variant 1.

#### Filing Advice

The documentation for this approval comprises:

Certificate of Approval No 6/4D/225 dated 4/10/83  
Technical Schedule No 6/4D/225 dated 4/10/83  
Test Procedure No 6/4D/225 dated 4/10/83  
Figure 1 dated 4/10/83.

4/10/83



# NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/4D/225

Pattern: Toledo Model 8420 Weighing Instrument

Submittor: Toledo Scale Australia Ltd  
525 Graham Street  
Port Melbourne, Victoria, 3207.

## 1. Description of Pattern

The pattern is a self-indicating price-computing weighing instrument (Figure 1) of 15 kg capacity by 0.005 kg scale intervals with unit price to \$99.99/kg and price to \$999.99. Instruments may be fitted with an output socket for the connection of auxiliary or peripheral devices and may have one or more purchaser's indicators remote from the weighing unit.

### 1.1 Zero

The instrument is automatically set to zero when the zero control is operated.

An automatic zero-correction device is fitted.

### 1.2 Tare

A subtractive taring device may be fitted.

### 1.3 Display Check

Successive operations of the button marked C causes the display to blank or show all eights, while the button is depressed.

### 1.4 Retain Switch

Use of this switch allows the unit price to be retained rather than be cleared automatically on return to zero.

### 1.5 Clear

Pressing the button marked C will clear the unit price and price displays.

### 1.6 Markings

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

Manufacturer's name or mark	Toledo
Serial number	.....
NSC approval number	NSC No 6/4D/225
Accuracy class	III
Maximum capacity	Max .....kg*
Minimum capacity	Min .....kg*
Verification scale interval	e = d = ...kg*
Maximum subtractive tare	T = - .....kg

### 1.7 Verification Provision

Provision is made for a verification mark to be applied.

### 1.8 Levelling

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

## 2. Description of Variant 1

The instrument displaying mass only.

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

TEST PROCEDURE No 6/4D/225

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:

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

1. Zero Range

The maximum range of the zero setting device should not exceed 4% of the maximum capacity ( $\pm 2\%$  approximately). With zero balance indicated, apply a load of, say, 2.5% of maximum capacity to the instrument; it should not be possible to obtain zero by means of the zero adjustment.

2. Zero Test

- (a) Check by means of Document 104 that when the zero light illuminates, zero is set within 0.25e.
- (b) 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 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 indication should be blank.
- (b) The minimum mass indicated should be zero; below this the indication should be blank.

4. Load Test

Test loads are to be applied to the 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.

5. Taring

The 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. A tare should not be able to be acquired above the marked tare capacity. It should not be possible to acquire a tare above the marked tare capacity.

6. Price-computing Accuracy

The indications of mass, unit price and price listed in Table 1 will indicate that the price-computing and mass circuits are functioning correctly. The figures should be indicated exactly as in the table, as rounding is effected within the computer.

Note: This test does not establish correct mass indication; a separate load test in accordance with Document 104 is necessary. This may be carried out in conjunction with the above test.

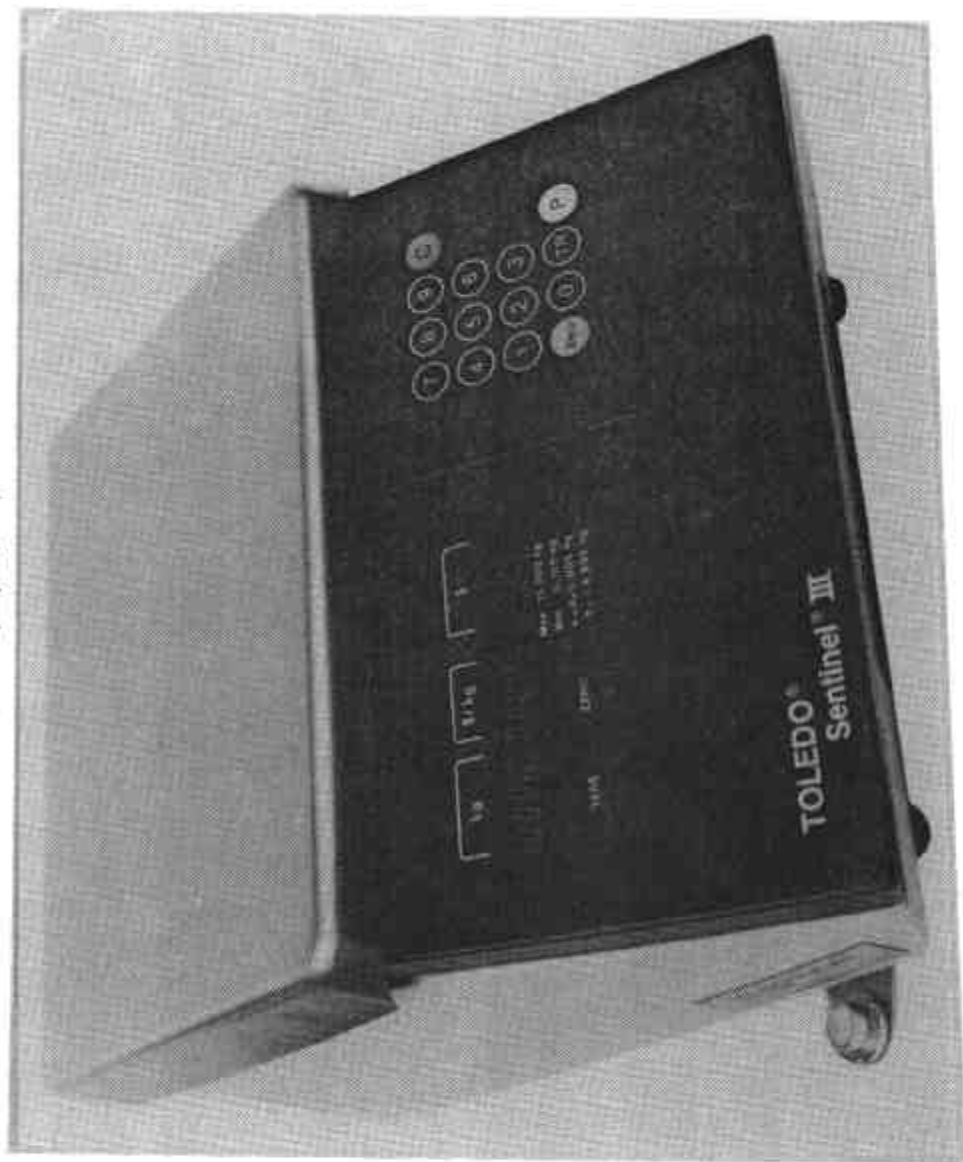
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TABLE 1

<u>Indicated Mass</u>	<u>Unit Price</u>	<u>Price</u>
kg	\$/kg	\$
0.100	9.99	1.00
0.190	49.49	9.40
8.400	70.99	596.32
10.000	96.99	969.90
15.000	9.98	149.70

Price-computing Table

FIGURE 6/4D/225 - 1



Toledo Model 8420

4/10/83