



# NATIONAL STANDARDS COMMISSION

## TECHNICAL SCHEDULE No 6/4D/242

Pattern: Toledo Model 8421 Weighing Instrument

Submittor: Toledo Scale (Australia) Ltd  
525 Graham Street  
Port Melbourne Vic 3207

### 1. Description of Pattern

A self-indicating price-computing weighing instrument of 15 kg capacity with a verification scale interval of 0.005 kg, unit price to \$9999.99/kg and price to \$9999.99. The instrument may be fitted with an output socket for the connection of an auxiliary or a peripheral device, may have the display(s) mounted on a pillar and may be fitted with alternative load receptors.

#### 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 zero reset range, zero may be reset by pressing the zero button. The zero light illuminates whenever zero is within  $\pm 0.25e$ .

#### 1.2 Display Check

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

#### 1.3 Tare

A semi-automatic taring device of up to 9.995 kg capacity may be fitted.

A keyboard-entered digital taring device of up to 9.995 kg capacity may be fitted, in which case the instrument shall be marked NOT FOR RETAIL COUNTER USE (or NOT FOR TRADING DIRECT WITH THE PUBLIC) and shall show mass below zero preceded by a minus sign, when a tared mass is removed.

On instruments with more than one taring device an attempt to enter tare by the use of one device with a tare having already been acquired by use of the other shall have no effect or shall override or cancel the tare already entered.

#### 1.4 Markings

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

Manufacturer's name or mark  
Serial number  
NSC approval number  
Accuracy class  
Maximum capacity  
Minimum capacity  
Verification scale interval  
Maximum subtractive tare

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III

Max ..... kg \*

Min ..... kg \*

e = d = .... kg \*

T = -..... kg

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

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.

2.1 Description of Variants

2.1 Variant 1

Connected to a label printer for use as a prepackaging instrument, in which case it is not for retail counter use and must be so marked.

2.2 Variant 2

With the unit price and price displays covered and/or removed, and the instrument displaying mass only.

TEST PROCEDURE No 6/40/242

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 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.

2. Zero Range

The maximum range of operation 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 and press the zero button; the instrument should not rezero.

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.

4. Range of Indication

- (a) 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.
- (b) Unless marked NOT FOR RETAIL COUNTER USE or NOT FOR TRADING DIRECT TO THE PUBLIC (in which case instruments may display a mass preceded by a minus sign), the minimum mass indicated should be zero; below this the indication should be blank or show non-numerical characters.
- (c) Where the instrument is fitted with a digital taring device it shall display mass below zero as a negative quantity.

5. Taring

The semi-automatic tare function should be able to reset the mass indicator to zero within  $\pm 0.25e$  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.

The digital taring device should reset the mass indicator to zero within  $\pm 0.5e$ .



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## NATIONAL STANDARDS COMMISSION

### NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

#### REGULATION 9

#### CERTIFICATE OF APPROVAL No 6/4D/242

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

Toledo Model 8421 Weighing Instrument

submitted by Toledo Scale (Australia) Ltd  
525 Graham Street  
Port Melbourne VIC 3207.

#### CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/6/91.  
This approval expires in respect of new instruments on 1/6/92.

Instruments purporting to comply with this approval shall be marked NSC No 6/4D/242.

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 27/5/86

- A self-indicating price-computing weighing instrument of 15 kg capacity with a verification scale interval of 0.005 kg.

Variants: approved 27/5/86

1. With a label printer, for use as a prepackaging instrument.
2. Displaying mass only.

Technical Schedule No 6/4D/242 describes the pattern and variants 1 and 2.

Variant: approved 22/10/87

3. As a mass only weighing instrument of either 9.995 kg or 15 kg capacity, and known as a model 8213.

Technical Schedule No 6/4D/242 Variation No 1 describes variant 3.

Filing Advice

Certificate of Approval No 6/4D/242 dated 12/8/86 is superseded by this Certificate and may be destroyed. The documentation for this approval now comprises:

Certificate of Approval No 6/4D/242 dated 14/1/88  
Technical Schedule No 6/4D/242 dated 12/8/86  
Technical Schedule No 6/4D/242 Variation No 1 dated 14/1/88  
Test Procedure No 6/4D/242 dated 12/8/86  
Figure 1 dated 12/8/86  
Figure 2 dated 14/1/88



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## TECHNICAL SCHEDULE No 6/4D/242

### VARIATION No 1

Pattern: Toledo Model 8421 Weighing Instrument

Submittor: Toledo Scale (Australia) Ltd  
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#### 1. Description of Variant 3

As a self-indicating mass only weighing instrument of either 9.995 kg or 15 kg capacity with a verification scale interval of 0.005 kg, and known as a model 8213 (Figure 2). The instrument may be fitted with output sockets for the connection of auxiliary and/or peripheral devices.

The zero button and taring device of the pattern are not fitted. The zeroing and display check functions are both performed whenever the instrument is switched on.

# National Standards Commission



## NOTIFICATION OF CHANGE

### VARIOUS CERTIFICATES OF APPROVAL

The following changes are made to the approval documentation for various approvals

submitted by Toledo Scale (Australia) Ltd  
525 Graham Street  
Port Melbourne VIC 3207.

In the Certificates and Technical Schedules listed overleaf, the following changes should be made: (Note: Only current approvals are listed.)

1. The submitter should be changed to read;  
  
Mettler Toledo Limited  
  
(the address remains unchanged)
2. All references to 'Toledo' instruments or components should be amended to read 'Toledo (or Mettler or Mettler Toledo)'.

NOTE: Any 'Toledo' instrument or component described in the approval documentation may now also be known as 'Mettler or Mettler Toledo'.

APPROVAL NUMBER	PATTERN
6/4C/65	8214 Weighing Instrument
6/4C/68	8215 Weighing Instrument
6/4D/242	8421 Weighing Instrument
6/9C/2A	2191 Weighing Instrument
6/9C/24A	2503 Weighing Instrument
6/9C/28	2020 Weighing Instrument
6/9C/24A	2985 Weighing Instrument
6/9C/76	2295 Weighing Instrument
6/9C/87	2375 Weighing Instrument
6/9C/97	2155 Weighing Instrument
6/9C/98	9118 Weighing Instrument
6/9C/206	6303 Weighing Instrument
6/9C/231	1938 Weighing Instrument
6/10B/46A	7560 Weighing Instrument
6/14B/9A	2352 Hopper Weighing Instrument
6/18/21	2299 Overhead Weighing Instrument
S253	8530 Digital Indicator
S266	8520 Digital Indicator
S283	8510 Digital Indicator
S111A	0721 Load Cell
S112A	0723 Load Cell
S143	0752 Load Cell
S172	0725 Load Cell
S211	0742 Load Cell
S252	0760 Load Cell
S264	0752 Load Cell
S268	RLC 5000 Load Cell

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.

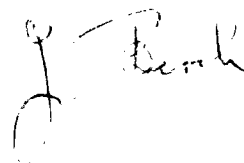


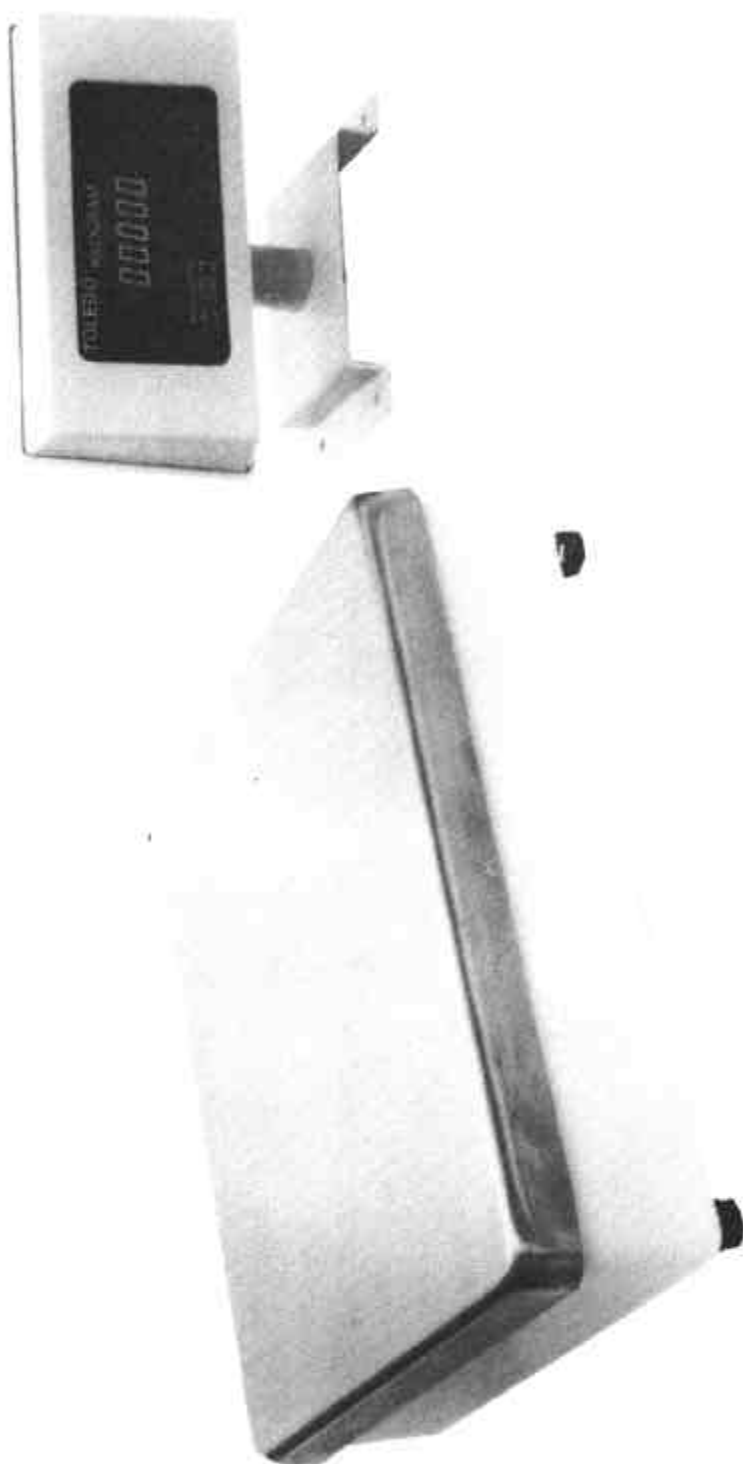


FIGURE 6/40/242 - 1



Toledo Model 8421

FIGURE 6/40/242 - 2



Toledo Model 8213