



6/9C/97
24/2/88

NATIONAL STANDARDS COMMISSION

NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 6/9C/97

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

Toledo Model 2155 Platform 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 1/3/91.
This approval expires in respect of new instruments on 1/3/92.

Instruments purporting to comply with this approval shall be marked NSC No 6/9C/97.

This approval may be withdrawn if instruments are constructed other than as described in the drawings and specifications lodged with the Commission.

The values of the performance criteria (maximum number of scale intervals etc.) applicable to the instrument shall be within the limits specified in this approval or in any approval documentation for the components, where they are approved separately.

The load cells used shall be subject to regular certification by the Commission.

Signed

Executive Director

Descriptive Advice

Pattern: approved 20/2/86

- Toledo model 2155 platform weighing instrument of up to 2000 kg capacity.

Variant: approved 20/2/86

1. In other capacities as listed in Table 1.

Technical Schedule No 6/9C/97 describes the pattern and variant 1.

Variant: approved 10/12/87

2. With an alternative load cell mounting and known as a model 4100.

Technical Schedule No 6/9C/97 Variation No 1 describes variant 2.

Filing Advice

Certificate of Approval No 6/9C/97 dated 2/6/86 is superseded by this Certificate and may be destroyed.

The documentation for this approval now comprises:

Certificate of Approval No 6/9C/97 dated 24/2/88
Technical Schedule No 6/9C/97 dated 2/6/86
Technical Schedule No 6/9C/97 Variation No 1 dated 24/2/88
Test Procedure No 6/9C/97 dated 2/6/86
Figures 1 to 3 dated 2/6/86
Figure 4 dated 24/2/88



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 6/9C/97

Pattern: Toledo Model 2155 Platform Weighing Instrument

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

1. Description of Pattern

A platform weighing instrument (Figure 1 and Table 1) of 2000 kg maximum capacity approved for use with up to 4000 scale intervals.

1.1 Basework

The model 2155 basework has a load cell mounted at each corner of the simply-supported platform (Figure 2). The basework may be permanently fixed above ground, with or without loading ramps, or let into a pit in which case the platform is level with the ground.

1.2 Indicator

The Toledo model 8132 digital indicator (Figure 3) is described in the documentation of NSC approval No S102 and may be marked as specified in that approval or alternatively as specified in 1.4.1 below, when fitted in this instrument.

1.3 Load Cells

Four Toledo model 0725 load cells of 907 kg capacity are used. These are described in the documentation of NSC approval No S172 and may be marked as specified in that approval or alternatively as specified in 1.4.2 below, when fitted in this instrument.

1.4 Markings

1.4.1

The instrument is marked with the following data, in a clearly visible location:

Manufacturer's name or mark	
Approval number	NSC No 6/9C/97
Serial number	
Accuracy class	(II)
Maximum capacity	Max kg *
Minimum capacity	Min kg *
Verification scale interval	e = d = kg *
Maximum subtractive tare	T = - kg
Load cell approval number)	
Headwork approval number) where	
Basework approval number) appropriate	

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

1.4.2

The following is the minimum data required to be marked on the load cells:

Manufacturer's name or mark
Model number
Serial number
Maximum capacity

Load cell serial numbers may alternatively be marked on a nameplate attached to the indicator or marked on metal tags attached to the indicator via a lead and wire seal.

1.5 Verification Mark

Provision is made for a verification mark to be applied.

2. Description of Variant 1

In other capacities as listed in Table 1.

TABLE 1

Type:	Toledo 2155		
Maximum capacity of basework	500 kg	1000 kg	2000 kg
Maximum capacity of load cell	227 kg	454 kg	907 kg
Maximum number of verification	(a) 2500	2000	4000
scale intervals	(b) 2500	2000	2000
Minimum value of verification	(a) 0.2 kg	0.5 kg	0.5 kg
scale interval	(b) 0.2 kg	0.5 kg	1.0 kg

- (a) Instruments with automatic zero track - multi cell applications
(b) Instruments without automatic zero track - multi cell applications

TEST PROCEDURE No 6/9C/97

Instruments should be tested in conjunction with any tests specified in the approval documentation for the indicator used.

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. Load Test

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.

2. Off-centre Load Test

The specified maximum permissible errors shall apply to a test load of approximately 1/3 of maximum capacity, distributed successively over an area of approximately 1/5 of the platform (at the corners of the platform).



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TECHNICAL SCHEDULE No 6/9C/97

VARIATION No 1

Pattern: Toledo Model 2155 Platform Weighing Instrument.

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

1. Description of Variant 2

With an alternative load cell mounting and known as a model 4100.

The ball and cup mounting of the pattern (Figure 2) is replaced by a swivel foot assembly (Figure 4) in which case no support frame is necessary.

Instruments may be used with Commission-approved load cells of up to 1000 kg capacity.

National Standards Commission



NOTIFICATION OF CHANGE

CERTIFICATE OF APPROVAL No 6/9C/97

CHANGE No 1

The following changes are made to the approval documentation for the

Toledo Model 2155 Platform Weighing Instrument

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

In Technical Schedule No 6/9C/97 dated 2/6/86, in para. 1.1 Basework replace the existing 2nd sentence with the following:

"If the instrument is not in a pit or permanently fixed in place, it shall be fitted with a level indicator, adjacent to which is a notice INSTRUMENT MUST BE LEVEL WHEN IN USE, or similar wording."

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.



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 submittor 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)'.

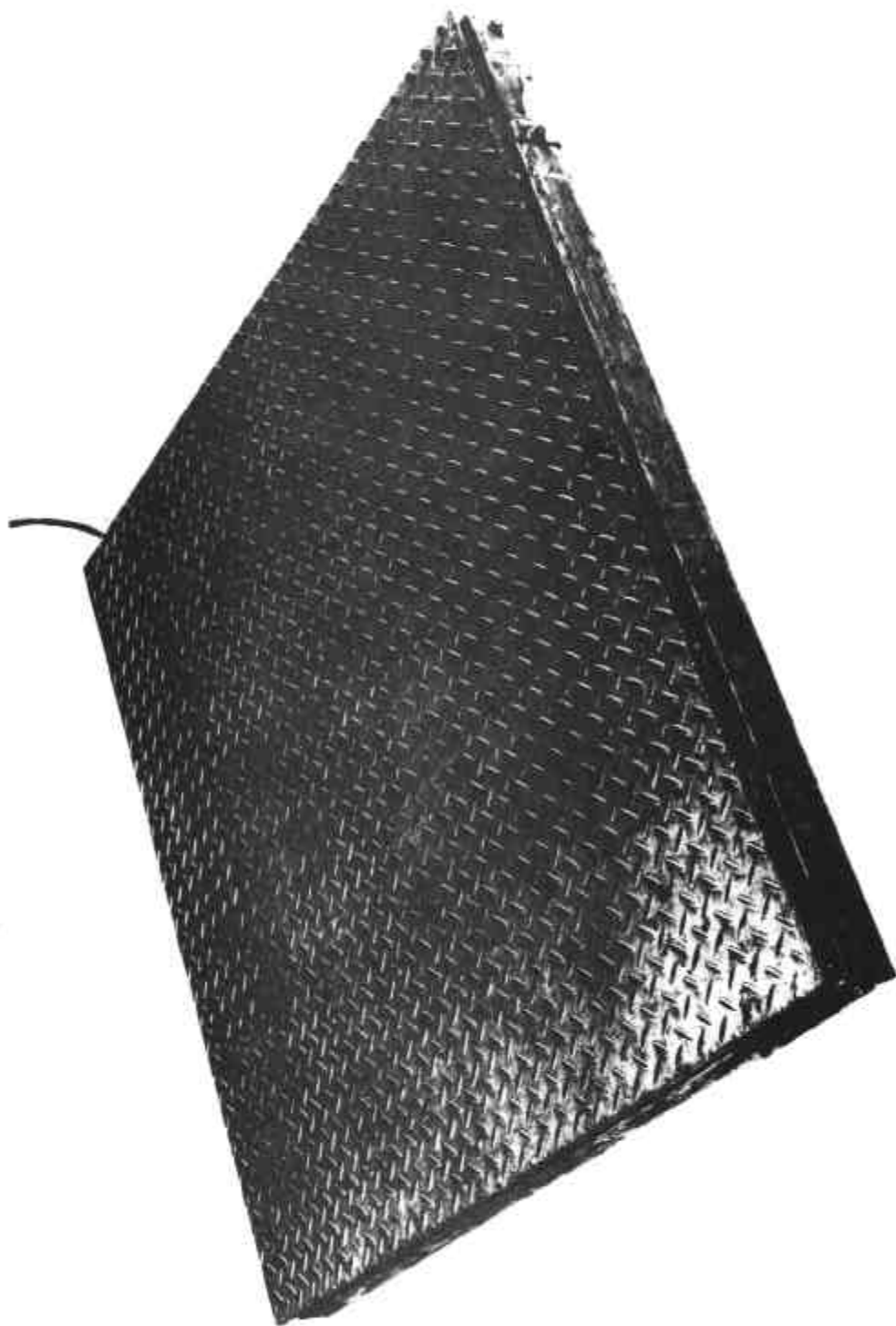
NOTE: Any 'Toledo' instrument or component described in the approval documentation may now also be known as 'Mettler or Mettler Toledo'.

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/2AA44A	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.

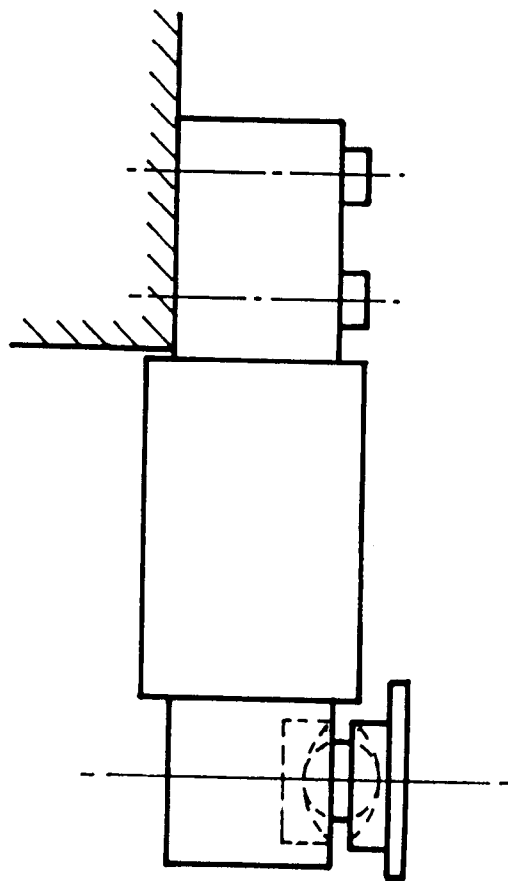
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FIGURE 6/9C/97 - 1



Toledo 2155 Platform

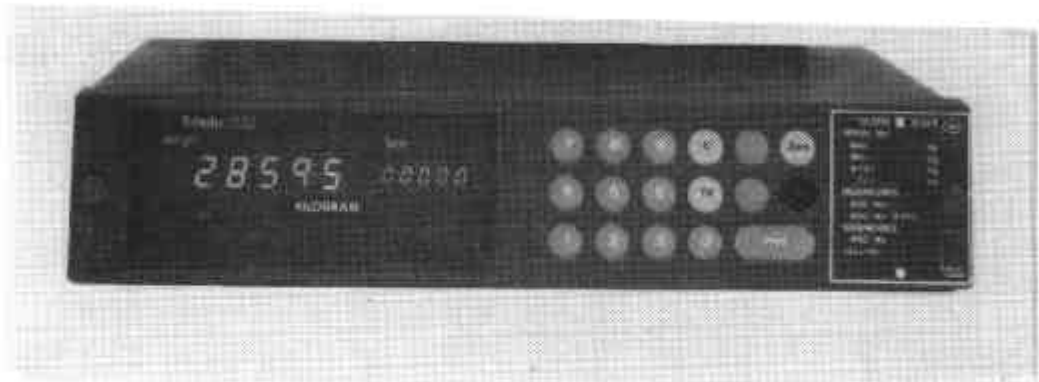
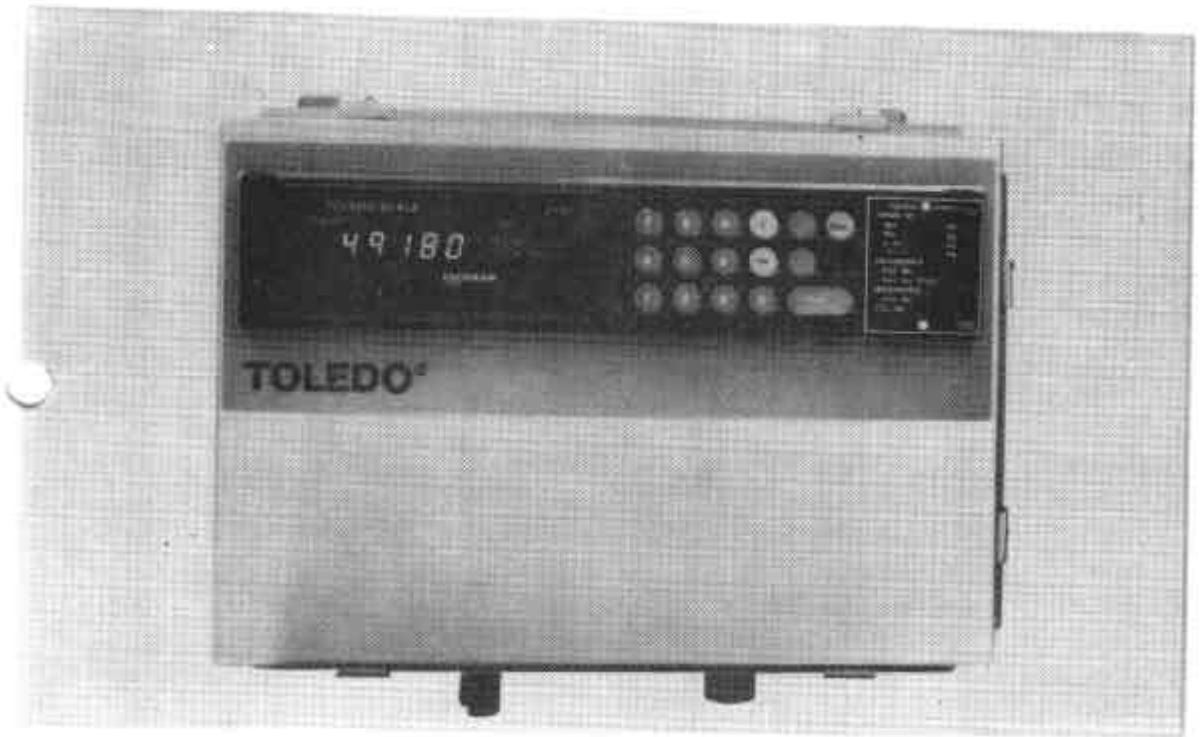
FIGURE 6/9C/97 - 2



Load Cell Mounting

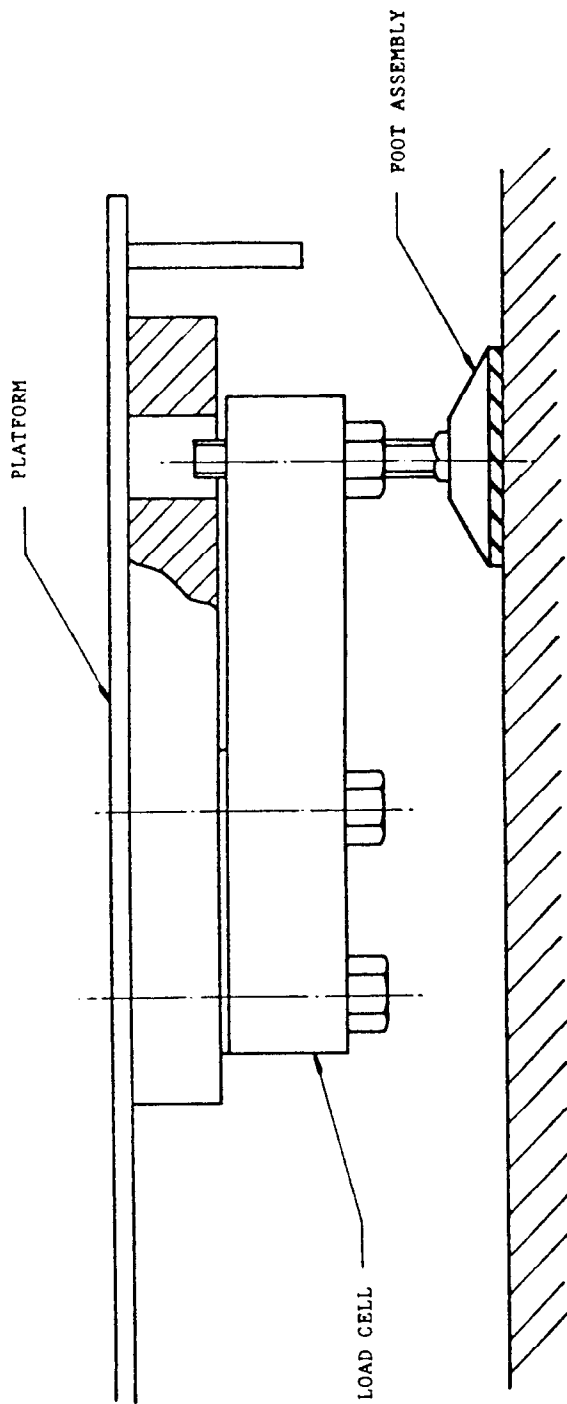
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FIGURE 6/9C/97 - 3



Toledo 8132 Indicator In Alternative Housings

FIGURE 6/9C/97 - 4



Alternative Load Cell Mounting

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