



Australian Government
Department of Industry,
Innovation and Science

National Measurement Institute

Certificate of Approval

NMI 6/9C/247A

Issued by the Chief Metrologist under Regulation 60
of the
National Measurement Regulations 1999

This is to certify that an approval for use for trade has been granted in respect of the instruments herein described.

Associated Scales Model PB3000 Weighing Instrument

submitted by Associated Scale **Services** Pty Ltd
Unit 4, 47 Learoyd Road
Acacia Ridge QLD 4110

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

This approval has been granted with reference to document NMI R 76, *Non-automatic weighing instruments, Parts 1 and 2*, dated July 2004.

This approval becomes subject to review on **01/02/22**, and then every 5 years thereafter.

DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 & 2 approved – interim certificate issued	12/01/99
1	Pattern & variants 1 & 2 approved – certificate issued	30/04/99
2	Variants 3 to 5 approved – interim certificate issued	25/07/03
3	Variants 3 to 5 approved – certificate issued	18/08/03
4	Pattern & variants reviewed – notification of change issued	29/04/05
5	Pattern & variants amended (submitter address) & reviewed – notification of change issued	20/08/10
6	Pattern & variants 1 to 5 reviewed & amended (submitter name, branding, pattern & variants 1, 2 & 4 updated) – certificate issued	31/1/17

CONDITIONS OF APPROVAL

General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI 6/9C/247A' and only by persons authorised by the submitter.

It is the submitter's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the National Measurement Institute (NMI) and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with document NMI P 106.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates No S1/0/A or No S1/0B.

The pattern as approved herein or with substitute approved load cells and/or approved indicators and in other capacities, or with different platform sizes, shall comply with General Certificate of Approval No 6B/0.

Note: New instruments manufactured under this approval shall only use load cells and/or indicators with current Supplementary Certificates of Approval.

Signed by a person authorised by the Chief Metrologist to exercise their powers under Regulation 60 of the *National Measurement Regulations 1999*.



Dr A Rawlinson

TECHNICAL SCHEDULE No 6/9C/247A

1. Description of Pattern **approved on 12/01/99**
updated on 31/01/17

An Associated Scales model PB3000 self-indicating platform weighing instrument (Figure 1) of 3000 kg maximum capacity and approved for use with up to 3000 verification scale intervals. Instruments may be also known as Anyscales model AB3000 or Supply Weigh model SW-B3000.

1.1 Basework

The model PB3000 basework (Figures 1 and 2) has the load receptor directly supported by four load cells which are connected to the baseframe by means of ball-and-cup assemblies (Figure 3). The load receptor is 1800 x 1800 mm.

If approach ramps are provided, care shall be taken to ensure that these do not interfere with the platform.

1.2 Load Cells

Four Kelba model KA-1000-C3 load cells of 1000 kg capacity are used. The load cells are also described in the approval documentation of NSC approval No S155B.

1.3 Indicator

A Rice Lake model 920i digital indicator is used. The indicator is also described in the approval documentation of NMI approval No S711.

1.4 Levelling


Instruments are provided with adjustable feet and a level indicator. Adjacent to the level indicator is a notice stating 'instrument must be level when in use', or similar wording.

1.5 Sealing Provision

Provision is made for the calibration adjustments in the indicator to be sealed as described in the approval documentation for the indicator used.

1.6 Descriptive Markings

Instruments are marked with the following data, together in one location, in the form shown at right:

Manufacturer's mark, or name written in full	Associated Scale Services
Indication of accuracy class	
Pattern approval number for the instrument	NMI 6/9C/247A
Pattern approval mark for the indicator	NMI S...
Pattern approval mark for the load cells	NMI S...
Maximum capacity	Max kg #
Minimum capacity	Min kg #
Verification scale interval	e = kg #
Serial number of the instrument

These markings are also shown near the display of the result if they are not already located there.

1.7 Verification Provision

Provision is made for the application of a verification mark.

2. Description of Variant 1

**approved on 12/01/99
updated on 31/01/17**

A model PL3000 of 600 kg maximum capacity (Figure 4) and approved for use with up to 3000 verification scale intervals.

The model PL3000 basework (Figure 4) has the four load cells directly bolted to the load receptor (Figure 5).

The Model PL3000 may be also known as Anyscales model AL3000 or Supply Weigh model SW-L3000.

3. Description of Variant 2

**approved on 12/01/99
updated on 31/01/17**

Models PB3000 and PL3000 platform weighing instruments in certain other capacities with no less than 4 and with up to 8 NMI-approved load cells as listed below:

- in capacities from 15 000 to 30 000 kg;
- in capacities from 1500 to 14 999 kg; and
- in capacities from 100 to 1499 kg.

4. Description of Variant 3

approved on 25/07/03

Associated Scales PB**** series instruments (where **** represents the capacity in kilograms) in capacities from 15 000 to 149 999 kg, with no less than 4 and with up to 10 NMI-approved load cells. Instruments are approved for use with up to 4000 verification scale intervals (subject to the approval parameters of the load cells and indicator).

Instruments used with more than 3000 verification scale intervals shall be provided with wind protection in accordance with clause **4. Wind Effects** of General Certificate of Approval No 6B/0.

5. Description of Variant 4

**approved on 25/07/03
updated on 31/01/17**

Model PB ****T weighing instruments (which are similar to the model PB**** instruments (variant 3) but are intended for weighing vehicles (i.e. as weighbridges), with no less than 4 and with up to 16 NMI-approved load cells.

5.1 Weighbridge Requirements

Where the instrument is intended to be installed as a weighbridge, it shall be ensured that all relevant weighbridge requirements of the National Measurement Legislation are met (e.g. in relation to weighbridge approaches, visibility and the location of the weighbridge indicator and platform).

This approval does not certify that such requirements have (or can be) met.

The requirements of the National Measurement Legislation regarding the ground or floor under the platform vary according to whether the instrument is installed as a portable weighbridge, weighbridge without a pit or a weighbridge with a pit. However, bolting of the load cell support pads to suitable concrete piers is considered essential to provide a suitable stable base, irrespective of other aspects of instrument installation.

Note that it is important that suitable provision be made for the loading of test masses. For example, clear access for a forklift may be necessary at both sides of the platform.

6. Description of Variant 5 **approved on 25/07/03**

Model PB****HW instruments with the load receptor in the form of a hopper, silo, or bag suspended from a base frame.

Instruments may be in the following capacities:

- in capacities from 100 kg to 1499 kg;
- in capacities from 1500 to 14 999 kg; and
- in capacities from 15 000 to 149 999 kg.

Instruments are either:

- (a) fitted with 3, 4 or 5 NMI-approved load cells (arranged symmetrically to ensure even loading of each cell) where the hopper is a vertical cylindrical or tank-type load receptor directly supported by the load cells; or
- (b) fitted with 4 NMI-approved load cells where the hopper is a non-vertical cylindrical, or other hopper-type load receptor.

Note: Instruments with more than 4 load cells may be acceptable if prior written agreement from NMI is obtained.

In addition suitable provision must be made for the application of suitable verified masses to the instrument as required for verification purposes.

It may be necessary for such masses to be incorporated within the design of the instrument.

TEST PROCEDURE No 6/9C/247A

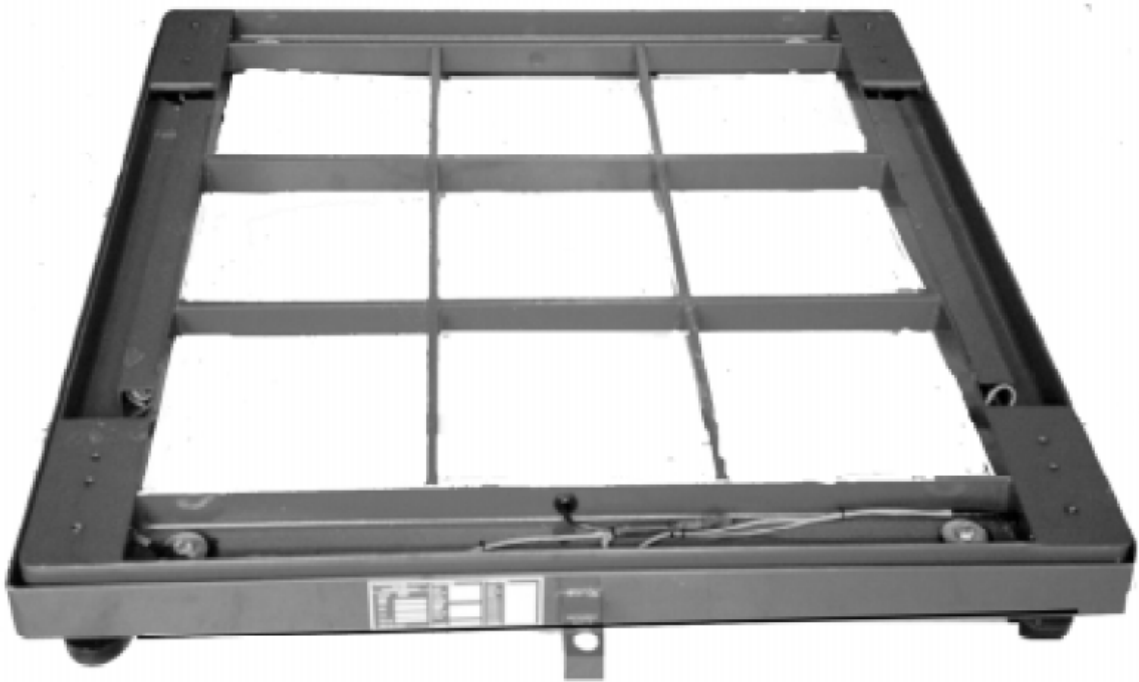
Instruments shall be tested in accordance with any relevant tests specified in the National Instrument Test Procedures.

The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

Maximum Permissible Errors

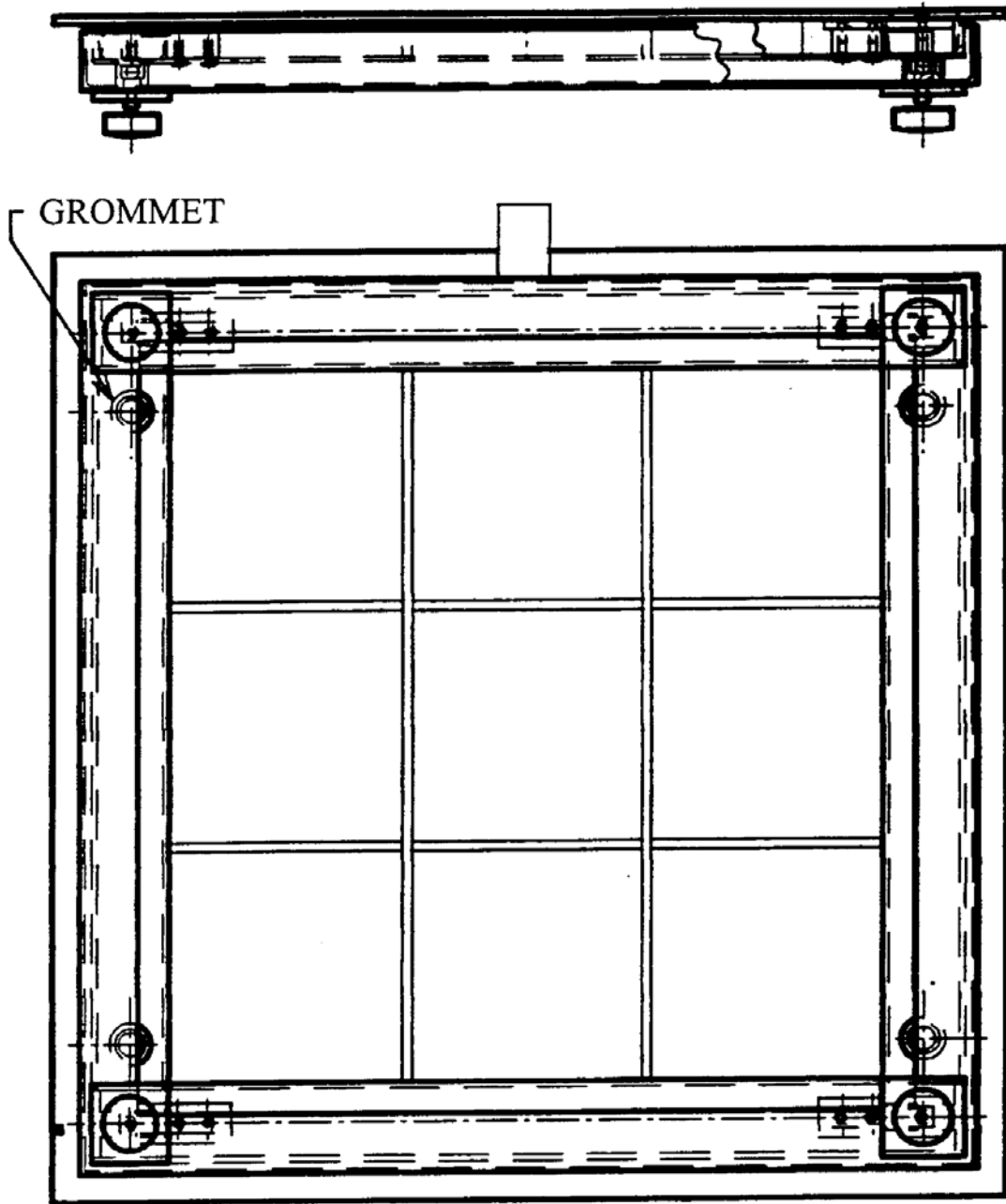
The maximum permissible errors are specified in Schedule 1 of the *National Trade Measurement Regulations 2009*.

FIGURE 6/9C/247A - 1



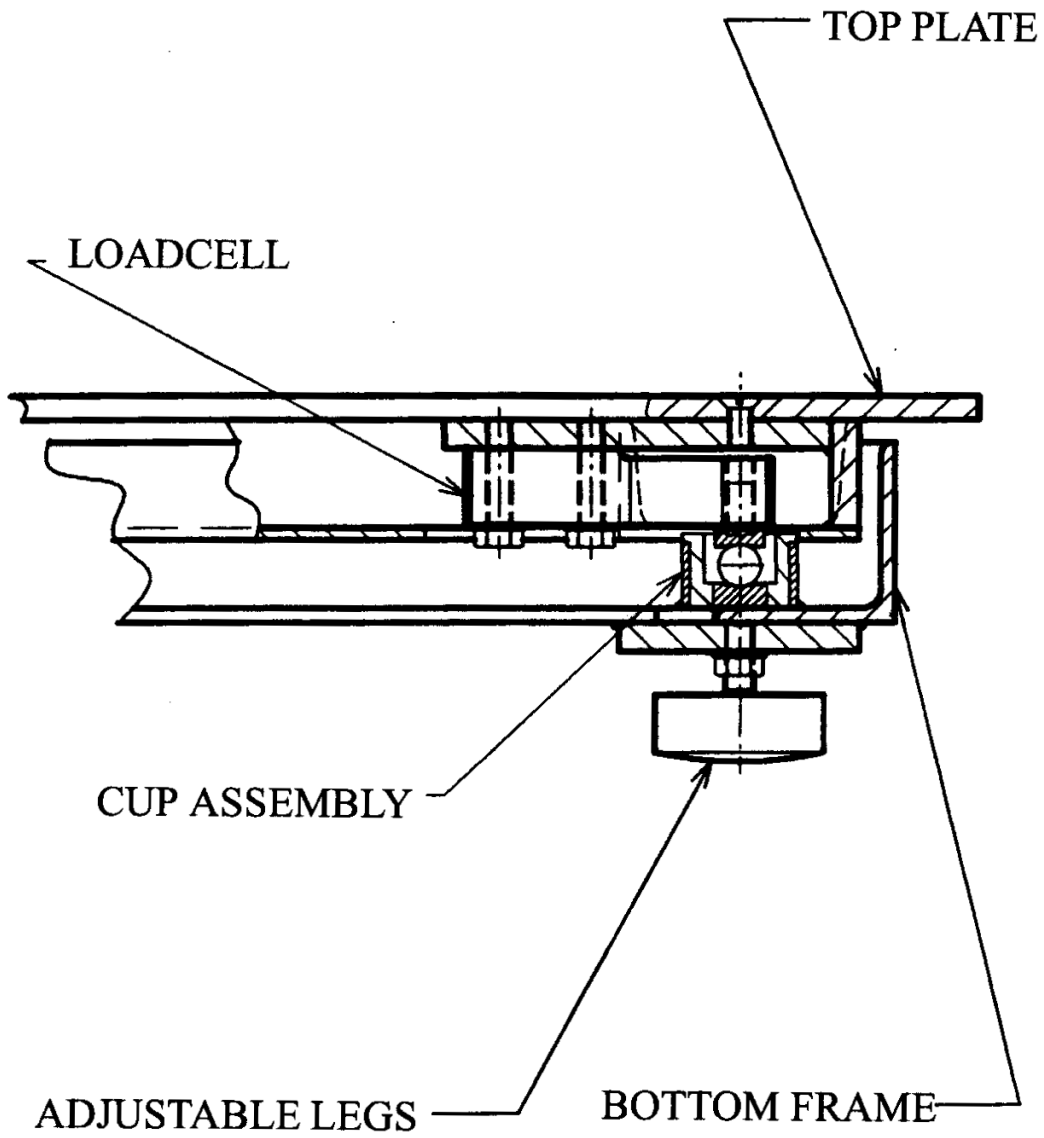
Associated Scales Model PB3000 Basework

FIGURE 6/9C/247A - 2



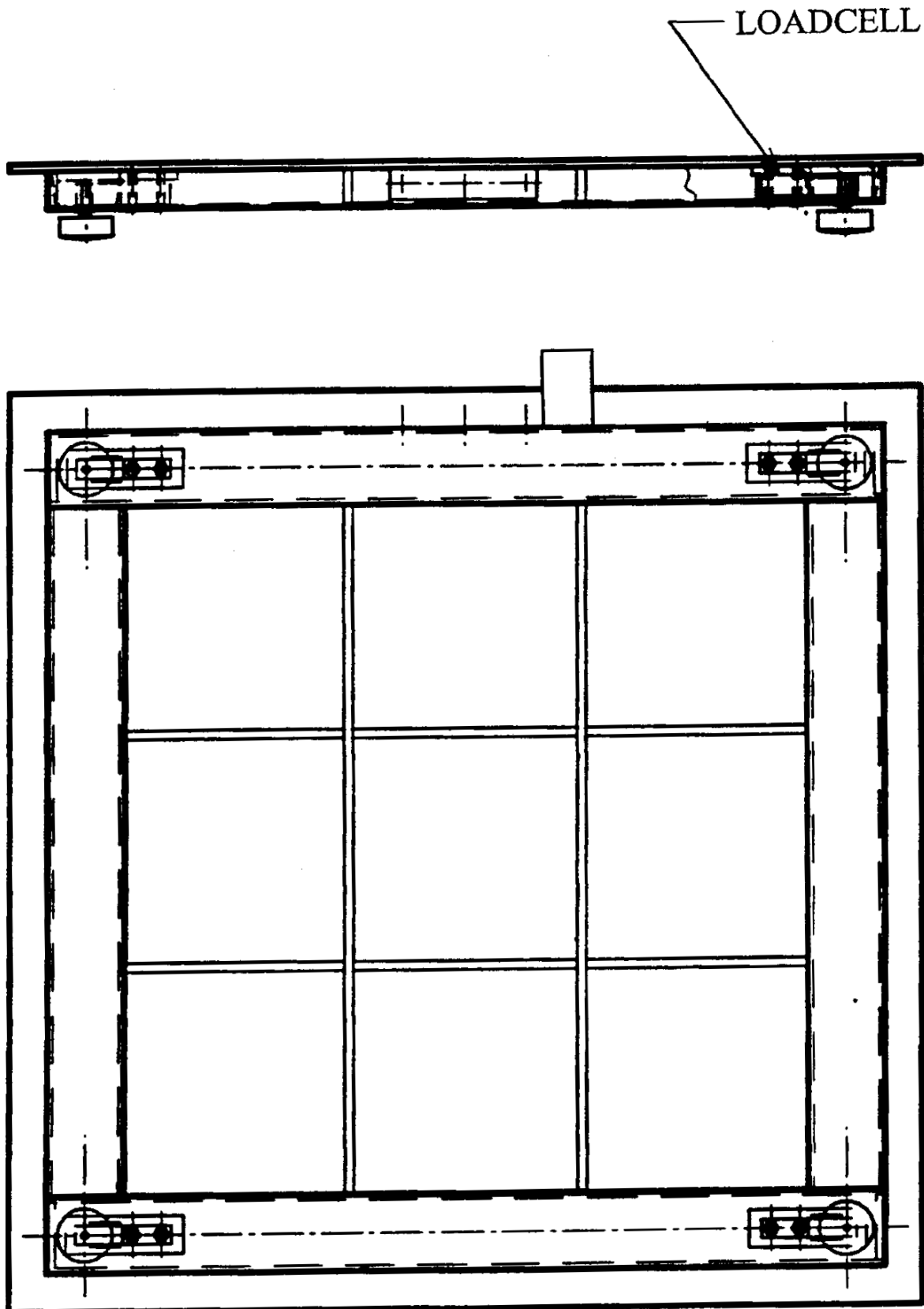
Associated Scales Model PB3000 Basework

FIGURE 6/9C/247A - 3



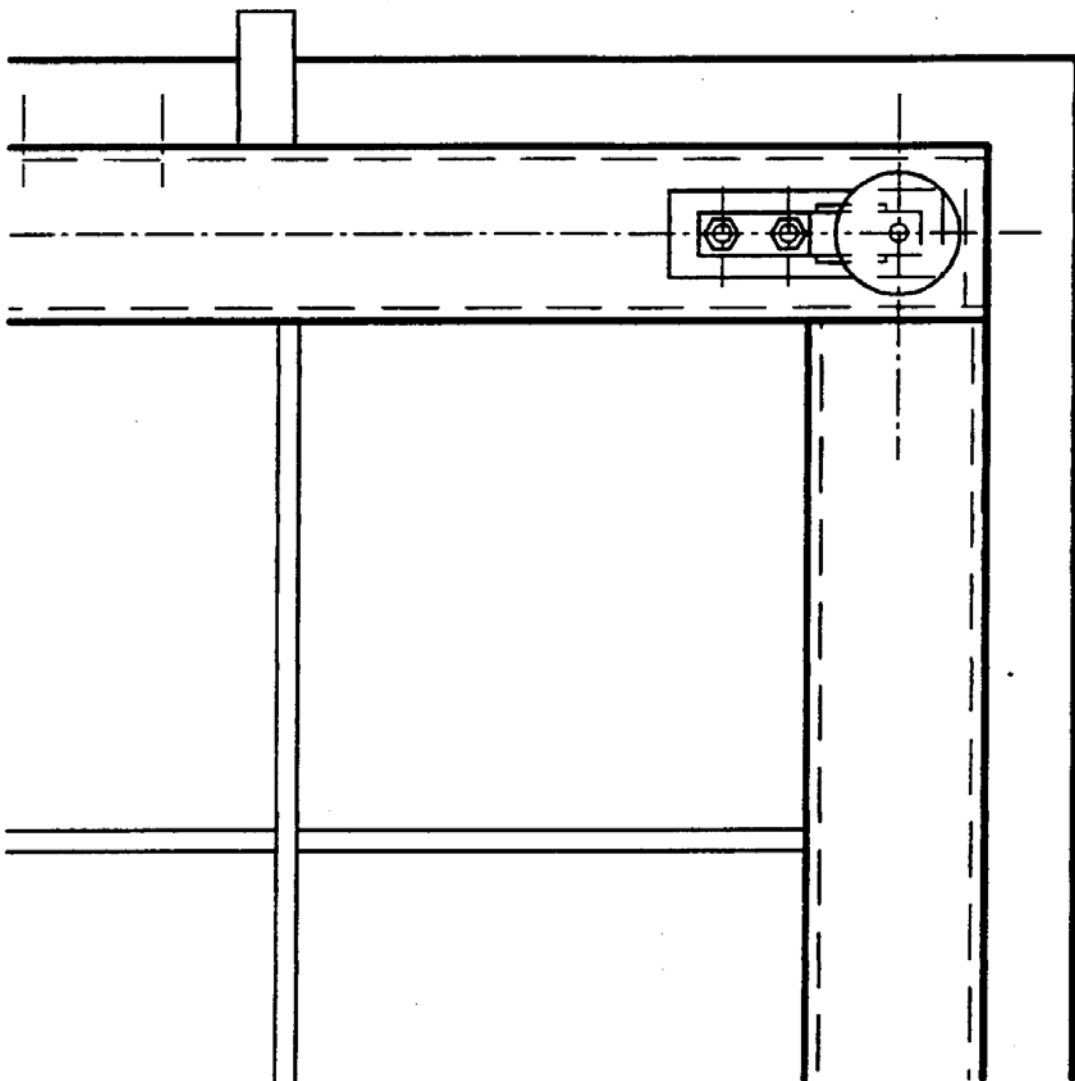
Model PB3000 - Showing Load Cell Mounting

FIGURE 6/9C/247A - 4



Model PL3000 Basework

FIGURE 6/9C/247A - 5



Model PL3000 - Showing Load Cell Mounting

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