



Australian Government  
Department of Industry,  
Innovation and Science

## National Measurement Institute

36 Bradfield Road, West Lindfield NSW 2070

### Certificate of Approval No 6/9C/224B

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.

Wedderburn Model WS004SBH Weighing Instrument

submitted by W W Wedderburn Pty Ltd  
101 Williamson Road  
Ingleburn NSW 2565.

**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 **1/06/22**, and then every 5 years thereafter.

#### DOCUMENT HISTORY

Rev	Reason/Details	Date
0	Pattern & variants 1 to 3 approved – interim certificate issued	18/05/01
1	Pattern & variants 1 to 3 approved – certificate issued	13/06/01
2	Pattern & variants 1 to 3 reviewed – notification of change issued	16/08/06
3	Pattern & variants 1 to 3 reviewed – notification of change issued	28/07/11
4	Pattern & variants 1 to 3 updated – variants 4 to 10 approved – certificate issued	13/13/12
5	Pattern & variants 1 to 10 <b>reviewed</b> – certificate issued	7/12/16
6	Variants 11 to 13 approved – certificate issued	13/12/16
7	Figure 9b amended & variant 14 approved – certificate issued	20/08/19

## CONDITIONS OF APPROVAL

### General

Instruments purporting to comply with this approval shall be marked with pattern approval number 'NMI (or NSC) 6/9C/224B' 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 load cells and/or indicator, and in other capacities, or with different platform sizes, shall comply with General Certificate No 6B/0.

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



**Darryl Hines**  
Manager  
Policy and Regulatory  
Services

## TECHNICAL SCHEDULE No 6/9C/224B

### **1. Description of Pattern** **approved on 18/05/01**

A Wedderburn model WS004SBH self-indicating weighing instrument of 3000 kg maximum capacity and approved for use with up to 3000 verification scale intervals.

Instruments may also be known as various models of the Wedderburn WS01\*\*\* series instruments, where (\*\*\*) is an alphanumeric descriptive code.

#### **1.1 Basework**

The model WS004SBH basework (Figure 1) has the load receptor supported by means of ball-and-cup assemblies on four load cells fixed to the baseframe. The load receptor has nominal dimensions of 2.5 × 2.5 m.

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

#### **1.2 Load Cells**

Four Wedderburn model WSB1-C-1.0t-4B load cells of 1000 kg capacity are used mounted as shown in Figure 2. The load cells and alternative mountings are described in the documentation of approval NMI S488.

#### **1.3 Indicator**

A Teraoka model DI-162 digital indicator is used. The indicator is described in the documentation of approval NMI S501.

#### **1.4 Levelling**

Where instruments are liable to be tilted (i.e. they are not installed in a permanently fixed location) they are provided with adjustable feet.

#### **1.5 Verification Provision**

Provision is made for the application of a verification mark.

#### **1.6 Sealing Provision**

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

## 1.7 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	WEDDERBURN
Indication of accuracy class	Ⓜ
Pattern approval number for the instrument	NMI (or NSC) 6/9C/224B
Maximum capacity	<i>Max</i> ..... kg #1
Minimum capacity	<i>Min</i> ..... kg #1
Verification scale interval	<i>e</i> = ..... kg #1
Maximum subtractive tare	<i>T</i> = -..... kg #2
Serial number of the instrument	.....
Pattern approval number for the instrument	NMI (or NSC) 6/9C/224B
Pattern approval number for the load cells	NMI (or NSC) .....
Pattern approval number for the indicator	NMI (or NSC) .....

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

#2 This marking is required if *T* is not equal to *Max*.

### 2. Description of Variant 1 approved on 18/05/01

With a modified model WS004SBH basework which does not have a baseframe and where self-aligning supporting feet are fitted directly to the load cells which directly support the load receptor (Figures 3 and 4).

### 3. Description of Variant 2 approved on 18/05/01

Having the features of the pattern or variants with up to 3000 verification scale intervals and in various capacities as listed below, provided that instruments comply with General Certificate of Approval No 6B/0:

- from 100 kg up to 1499 kg; and
- from 1500 kg up to 14 999 kg.

### 4. Description of Variant 3 approved on 18/05/01

With a Wedderburn model WS004SL basework which is similar to variant 1, but has the single-plate low profile load receptor directly supported by the four load cells which are fitted with self-aligning supporting feet (Figure 5).

### 5. Description of Variant 4 approved on 13/13/12

The pattern or variants as multi-interval instruments with up to two partial weighing ranges (each with its own verification scale interval) in which case it is approved for use with up to 3000 verification scale intervals per partial weighing range.

Instruments are marked with the 'Maximum capacity' and with the 'Verification scale interval' for both interval ranges, in addition to the other data specified in clause 1.7 Markings.

**6. Description of Variant 5** **approved on 13/13/12**

A single plate trolley version weighing platform scale (Figure 6) which is similar to variant 1 except that it has a low profile load receptor with optional integrated approach ramps.

Note: Care should be taken to ensure that approach ramps do not interfere with the platform.

**7. Description of Variant 6** **approved on 13/13/12**

A fold-up trolley version weighing platform scale (Figure 7) which is similar to the pattern except that it has a low profile load receptor with optional fold up approach ramp(s) which are fitted to the base frame.

Note: Care should be taken to ensure that approach ramps do not interfere with the platform.

**8. Description of Variant 7** **approved on 13/13/12**

An open frame construction weighing scale (Figures 8 and 9) having an alternative construction to the pattern but in the form of a hopper, silo, vessel, platform, suspended bag or suspended platform to be attached to the live frame of the instrument.

Note: 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.

**9. Description of Variant 8** **approved on 13/13/12**

A wash/clean down weighing platform scale (Figure 10) having the features of variant 1 but having a hinged point between the platform and the support frame work and lifts enabling the instruments platform to be raised for cleaning.

**10. Description of Variant 9** **approved on 13/13/12**

An alternative U-shaped construction of variant 1 and having load cells mounted in a U-shaped weighing platform (Figure 11).

The weighing platform scale may be fitted with a handle and wheels for relocation.

Note: Adjustable feet provide levelling, a level indicator shall be provided and the instrument must be levelled following relocation.

**11. Description of Variant 10** **approved on 13/13/12**

An alternative weigh bar construction of variant 1 having pairs of load cells mounted in channels (Figure 12) which are mounted under each end of the load receptor. The weigh bars may be fitted with handles for relocation.

Notes:

1. This variant does not have provision for levelling so shall be installed in a fixed location.
2. Channels shall not be verified individually.
3. Channels shall not be verified without a load receptor i.e. instruments shall only be verified as complete instruments.

**12. Description of Variant 11** **approved on 13/12/16**

An alternative weigh bar construction similar to variant 10 but having adjustable feet instead of mounting feet (Figure 13). This alternative weigh bar set is fitted with a level bubble and handle on each bar.

Notes:

1. Adjustable feet provide levelling, a level indicator must be present and the instrument must be levelled following relocation.
2. Channels shall not be verified individually.
3. Channels shall not be verified without a load receptor i.e. instruments shall only be verified as complete instruments.

**13. Description of Variant 12** **approved on 13/12/16**

A wash/clean down weighing platform scale having the features of variant 1 and variant 8 but having two raised platform sides. The platform is hinged to the support platform to allow limited lift for inspection underneath (Figure 14). Separate ramps may be fitted either side to allow for access to the platform.

**14. Description of Variant 13** **approved on 13/12/16**

A Trolley weighing platform scale having the features of variant 1 but with 3 raised sides on the platform and a separate ramp on the open side for access to the platform (Figure 15).

Note: Care should be taken to ensure that approach ramp does not interfere with the platform operation.

**15. Description of Variant 14** **approved on 20/08/19**

An open baseframe construction weighing scale similar to variant 1 (Figures 16) but mounted in an elevated position with a suspended bag to be attached to the live frame of the instrument.

Note: 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/224B**

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

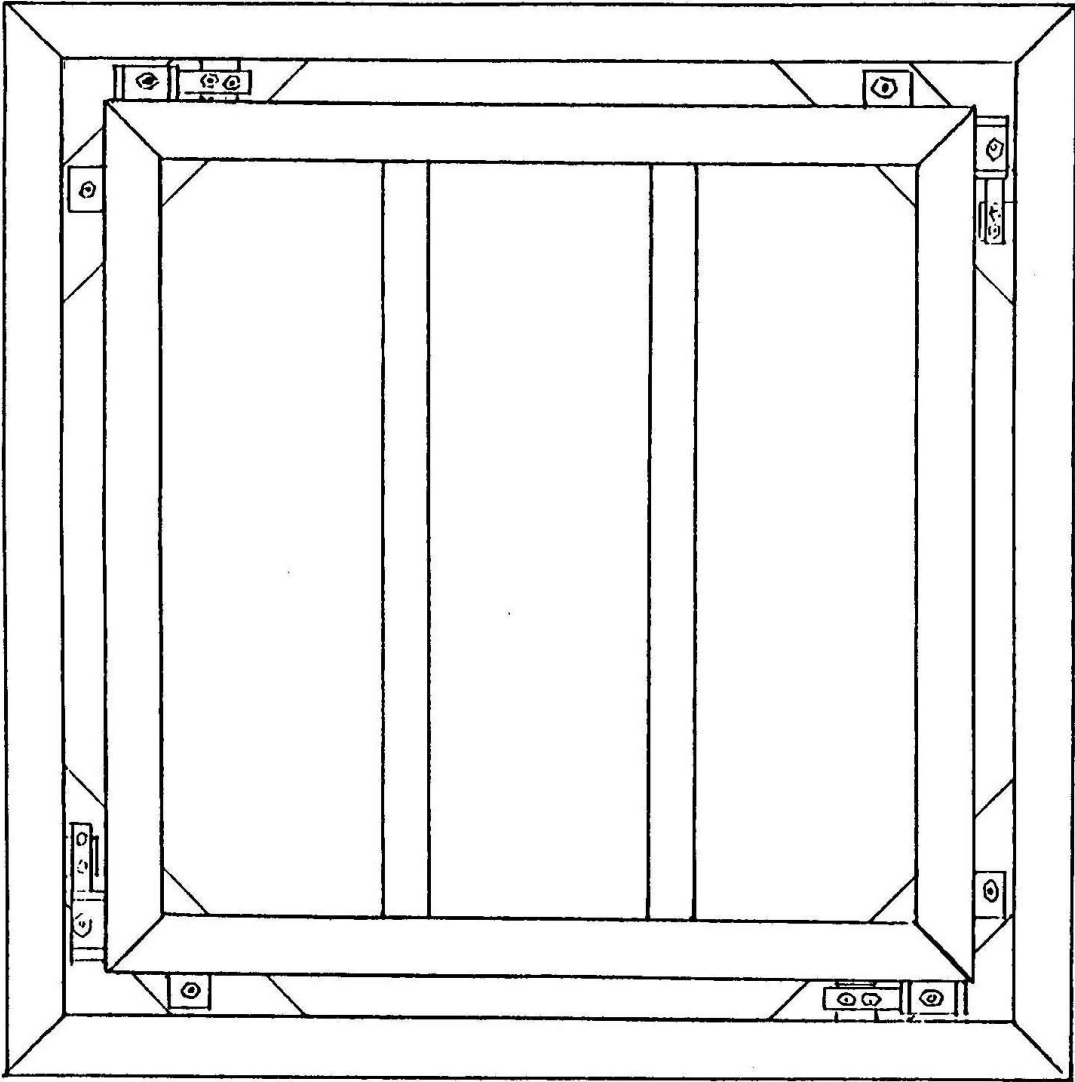
The instrument shall not be adjusted to anything other than as close as practical to zero error, even when these values are within the maximum permissible errors.

**Maximum Permissible Errors**

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

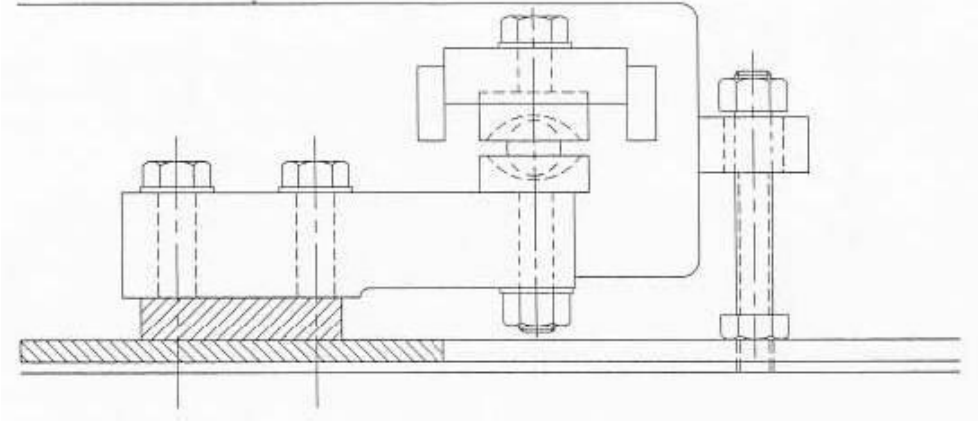
For multi-interval and multiple range instruments with verification scale intervals of  $e_1$ ,  $e_2$  ..., apply  $e_1$  for zero adjustment, and maximum permissible errors apply  $e_1$ ,  $e_2$  ..., as applicable for the load.

FIGURE 6/9C/224B – 1



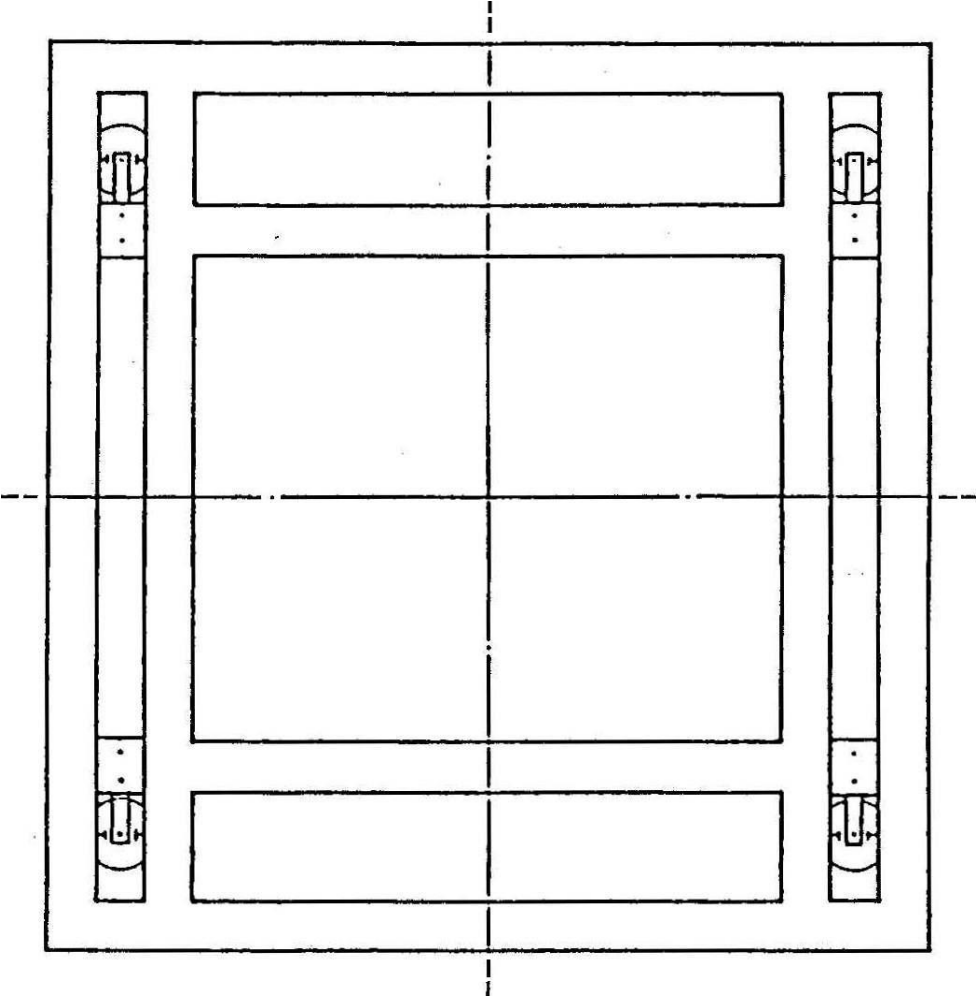
Wedderburn Model WS004SBH Weighing Instrument

FIGURE 6/9C/224B – 2



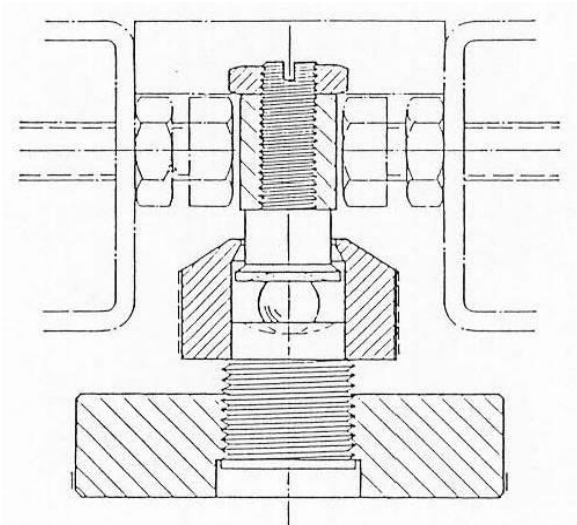
Showing Load Cell Mounting – The Pattern

FIGURE 6/9C/224B – 3



Modified Model WS004SBH Basework – Variant 1

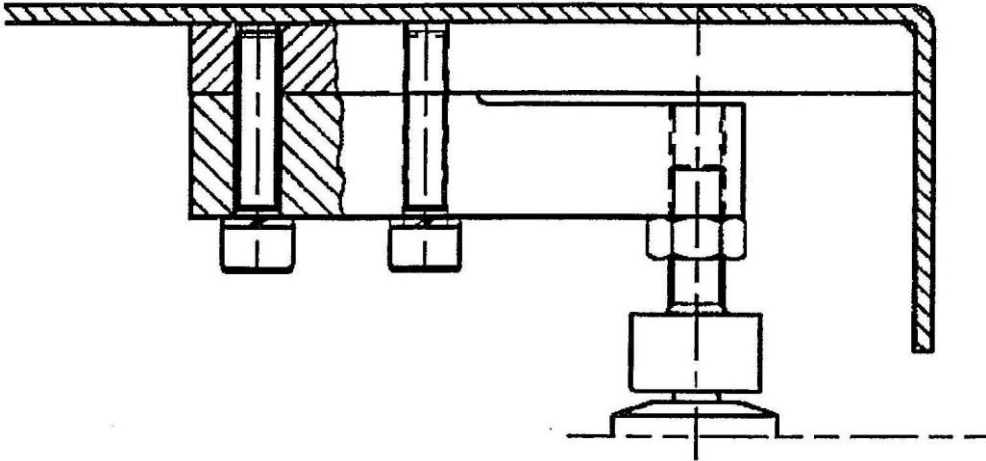
FIGURE 6/9C/224B – 4



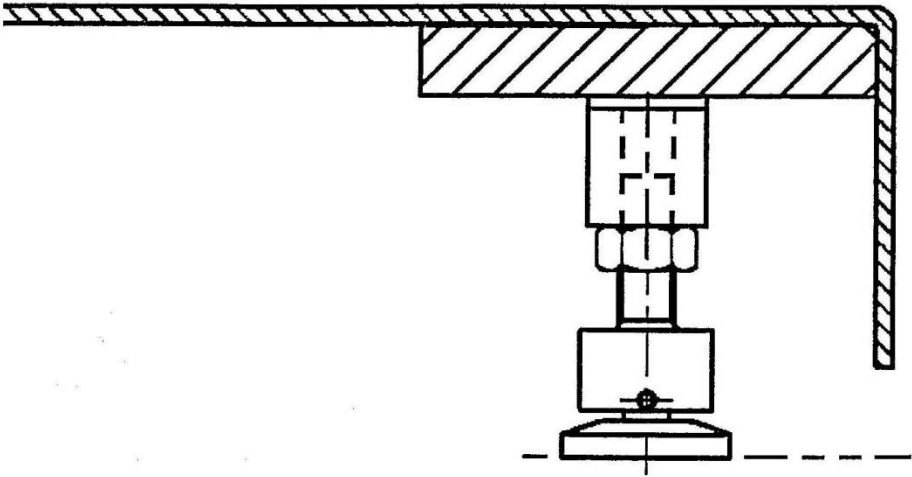
Showing Load Cell Mounting – Variant 1



FIGURE 6/9C/224B – 5



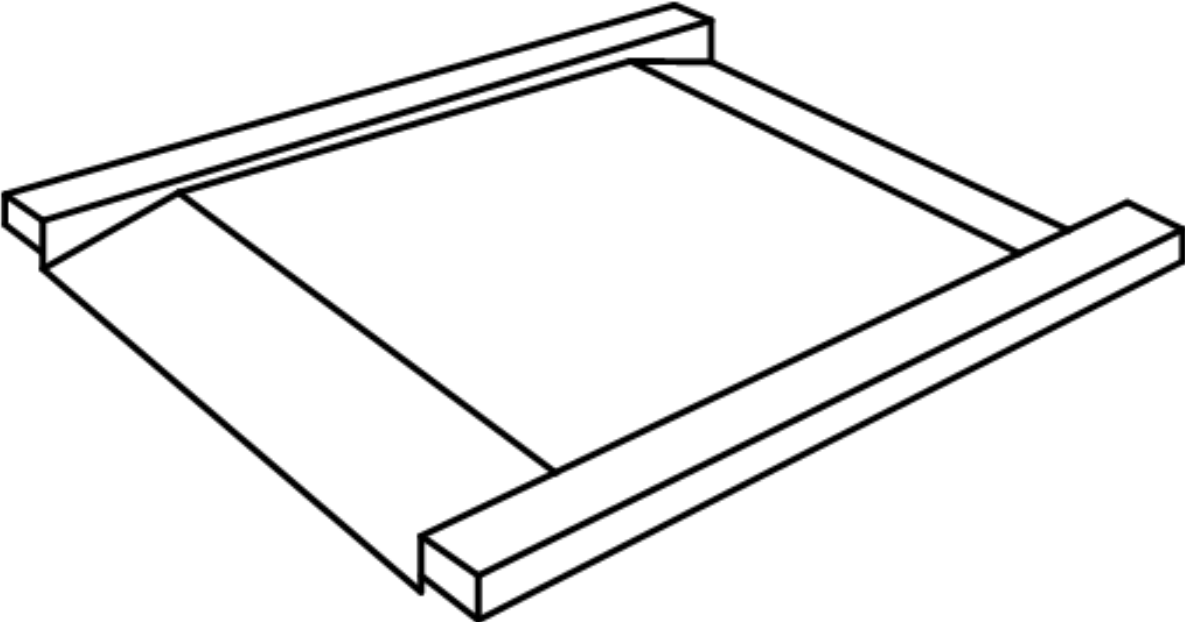
SIDE VIEW



END VIEW

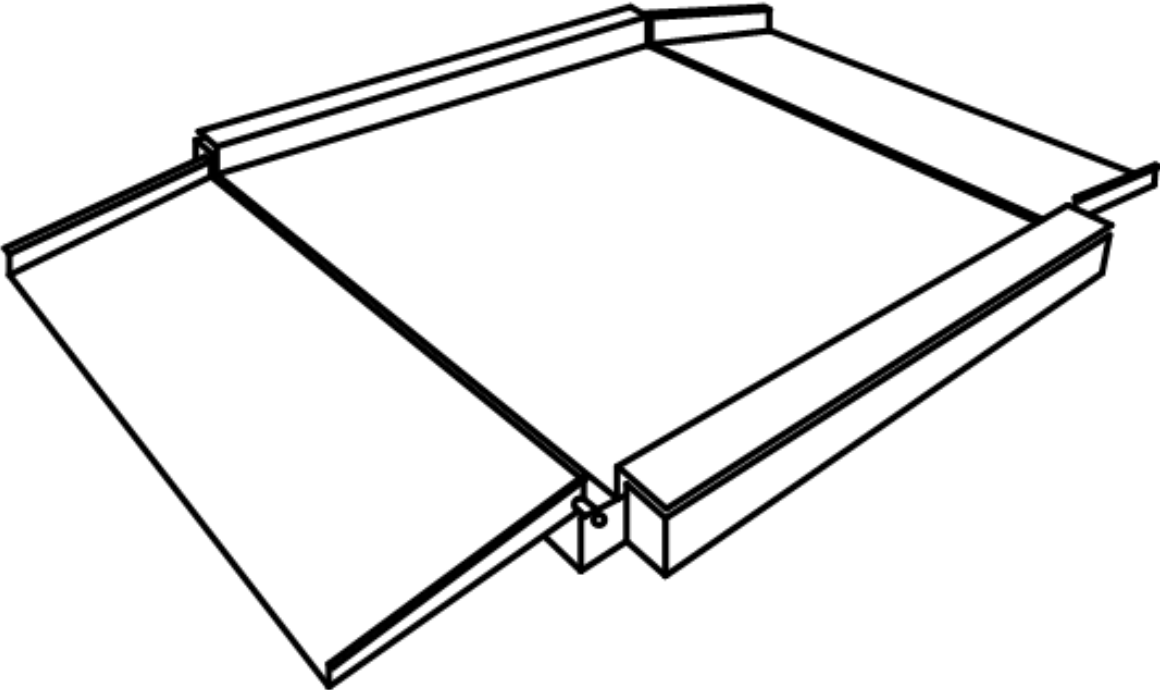
Showing Load Cell Mounting – Variant 3

FIGURE 6/9C/224B – 6



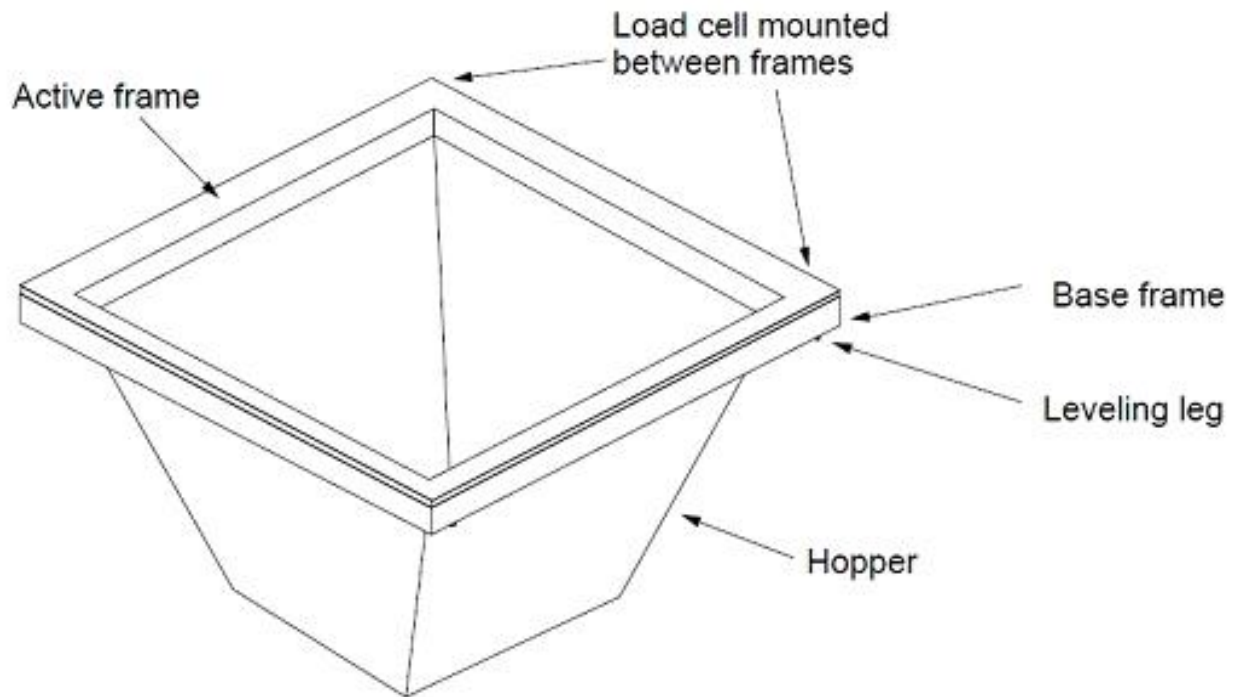
Wedderburn Model WS004SBH – Single Plate Trolley Version – Variant 5

FIGURE 6/9C/224B – 7

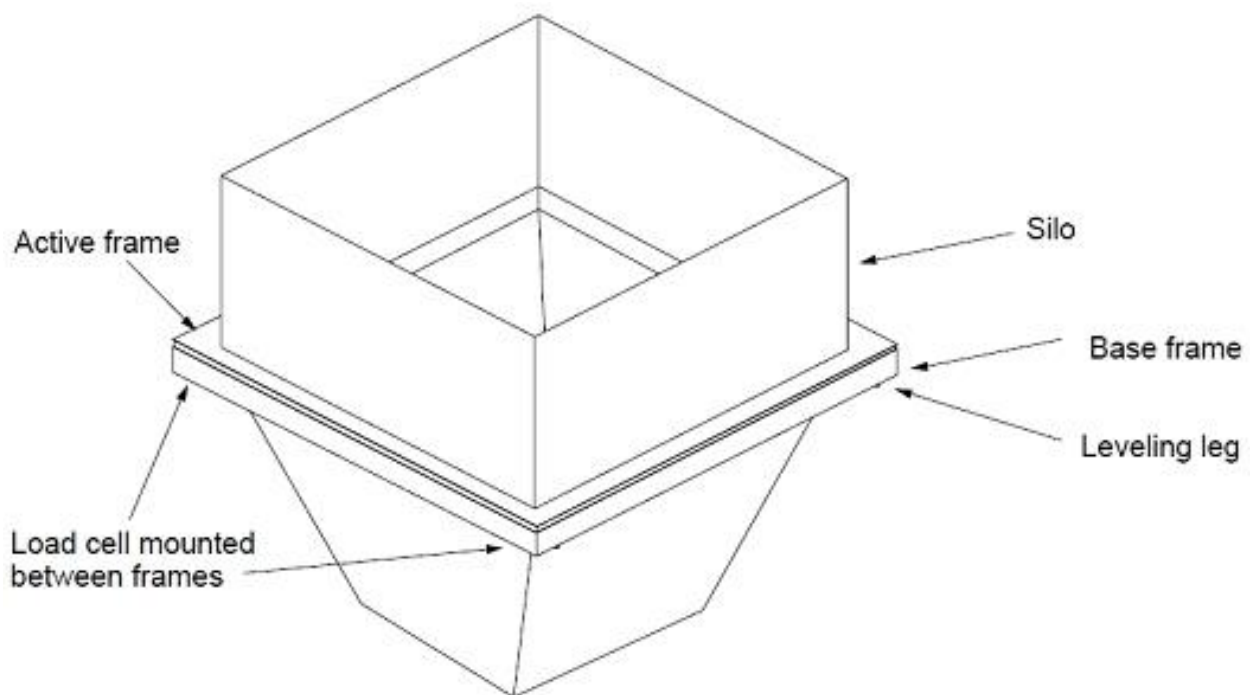


Wedderburn Model WS004SBH – Fold-up Trolley Version – Variant 6

FIGURE 6/9C/224B – 8

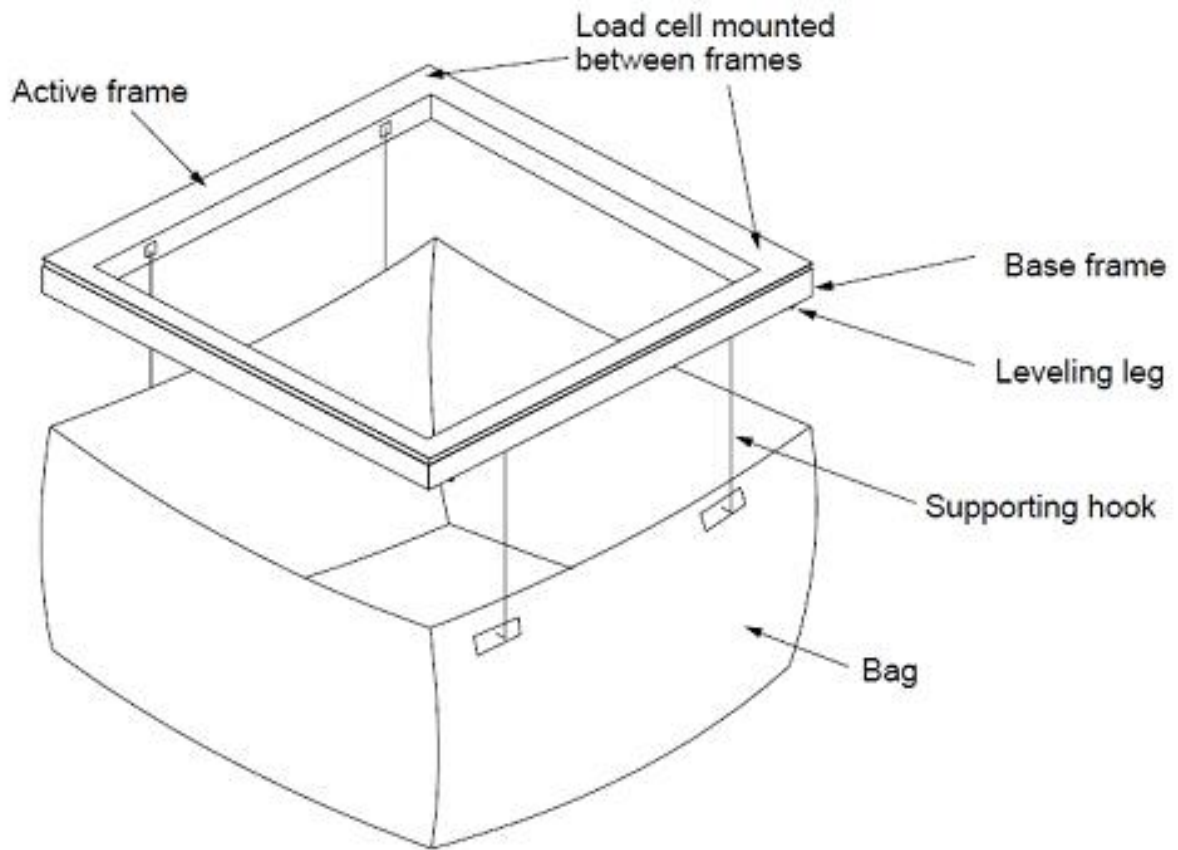


(a) Wedderburn Model WS004SBH – Hopper – Variant 7

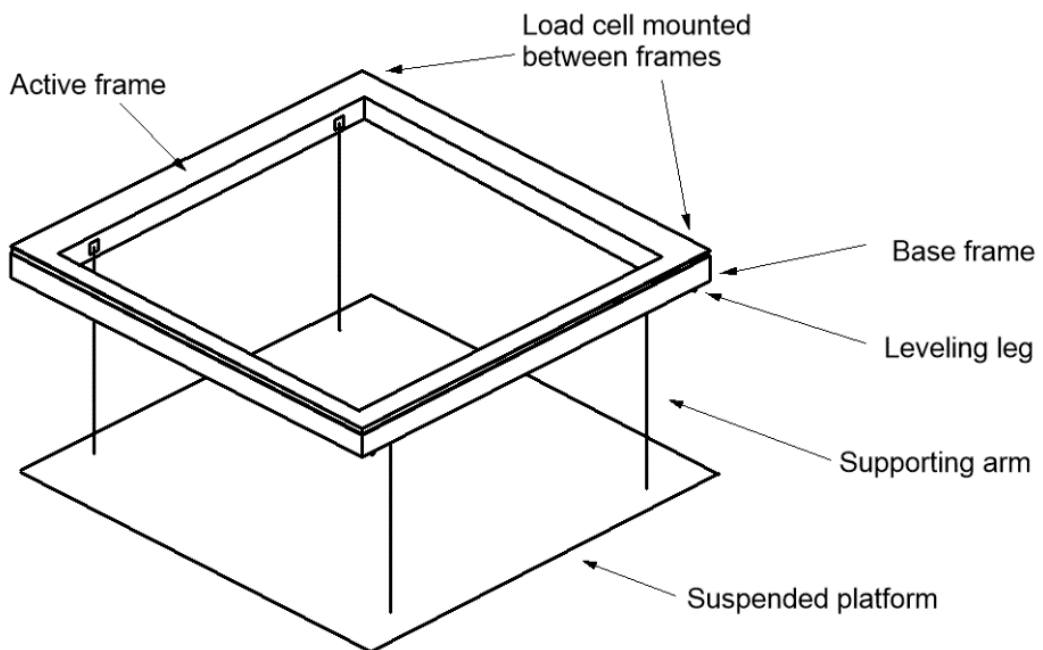


(b) Wedderburn Model WS004SBH – Silo – Variant 7

FIGURE 6/9C/224B – 9

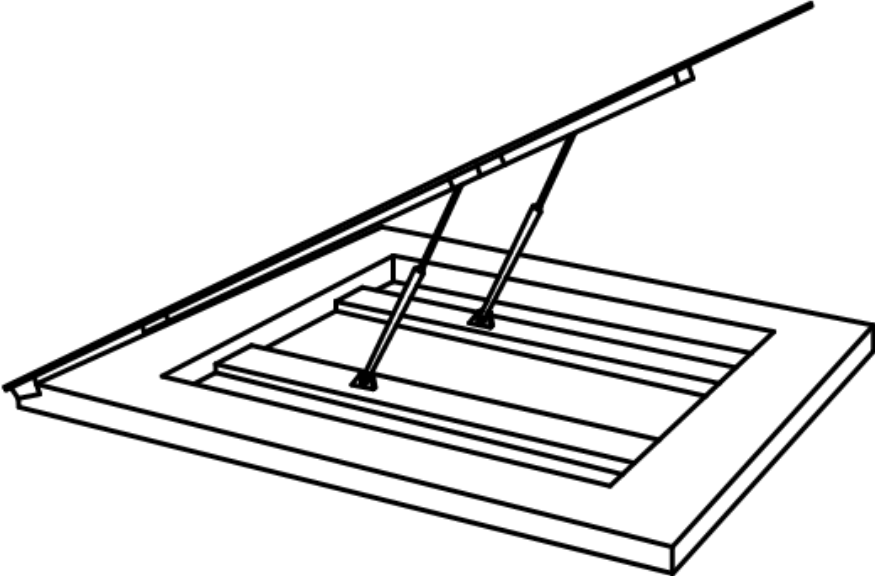


(a) Wedderburn Model WS004SBH – Suspended Bag – Variant 7



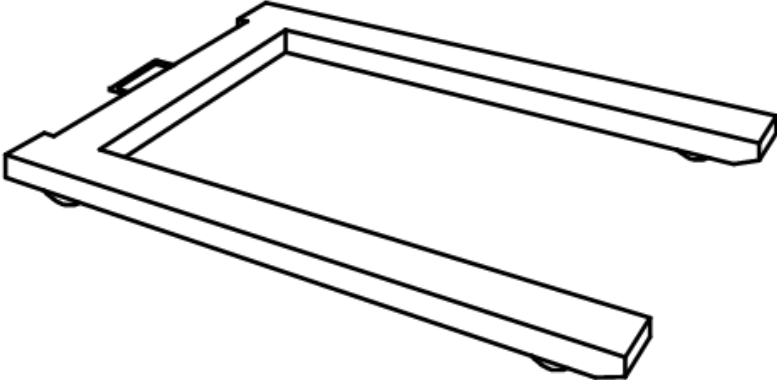
(b) Wedderburn Model WS004SBH – Suspended Platform – Variant 7

FIGURE 6/9C/224B – 10



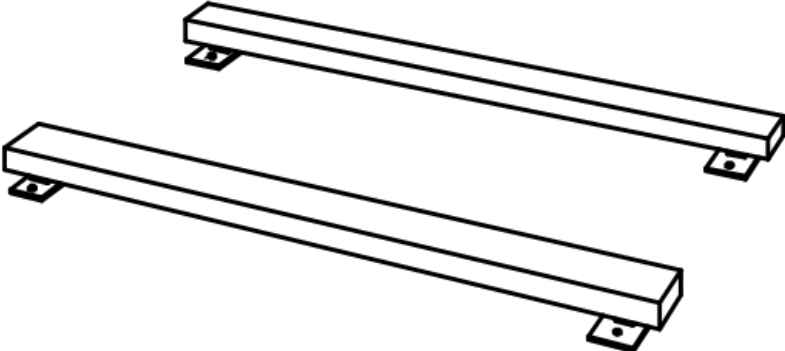
Wedderburn Model WS004SBH – Wash/Clean Down Version – Variant 8

FIGURE 6/9C/224B – 11



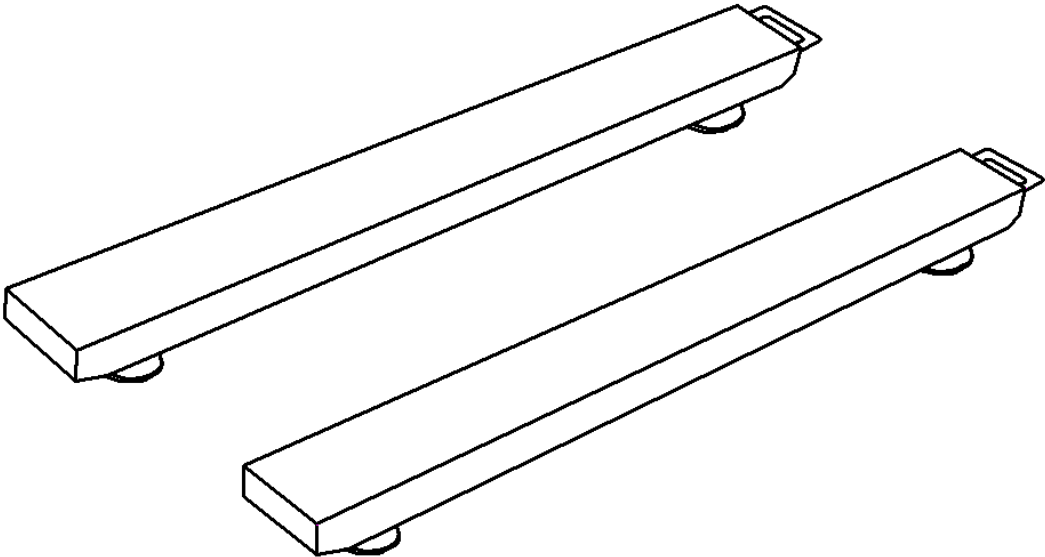
Model WS004SBH – U-shaped Version – Variant 9

FIGURE 6/9C/224B – 12



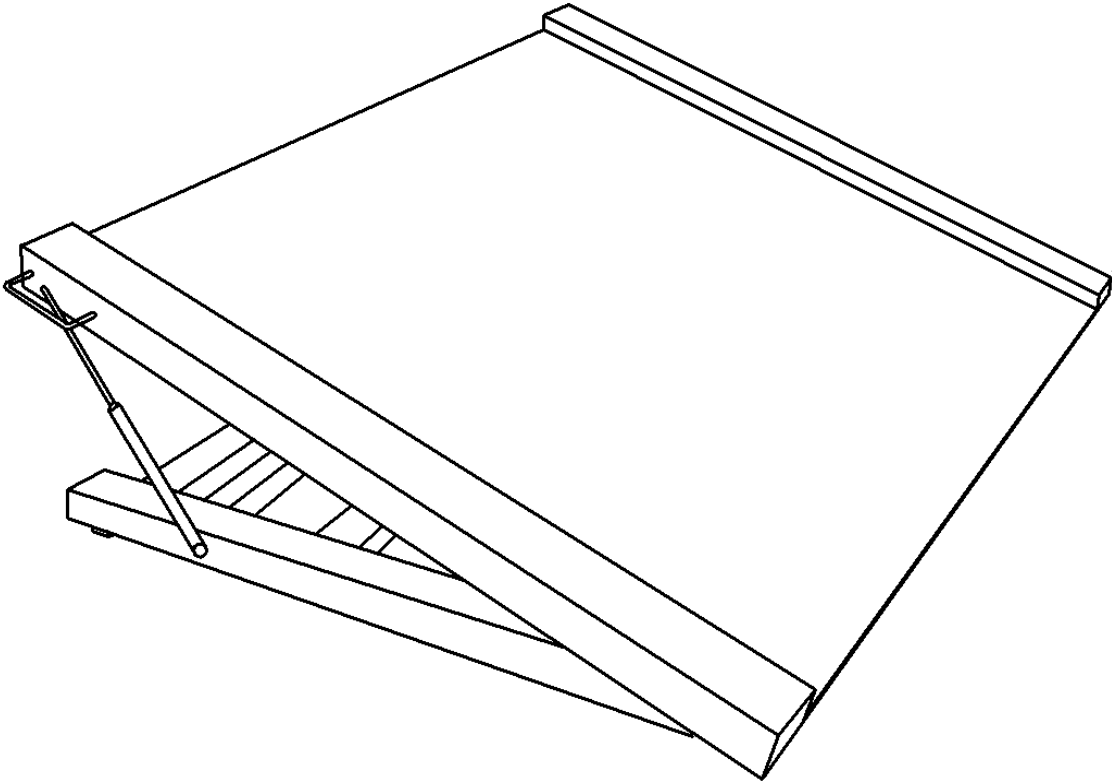
Model WS004SBH – Weigh Bar Version – Variant 10

FIGURE 6/9C/224B – 13



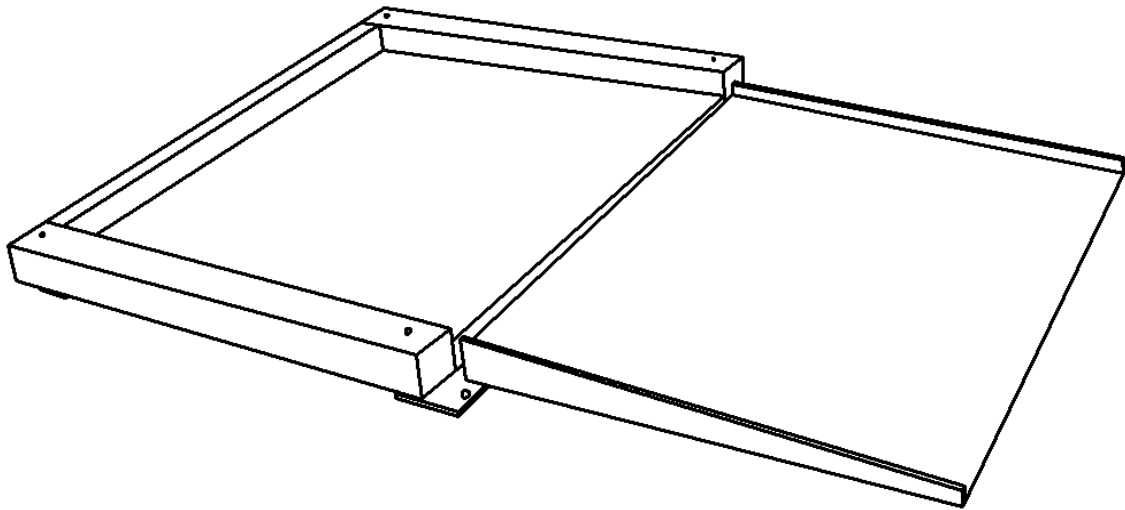
Model WS004SBH – Weigh Bar Version with Adjustable Feet – Variant 11

FIGURE 6/9C/224B – 14



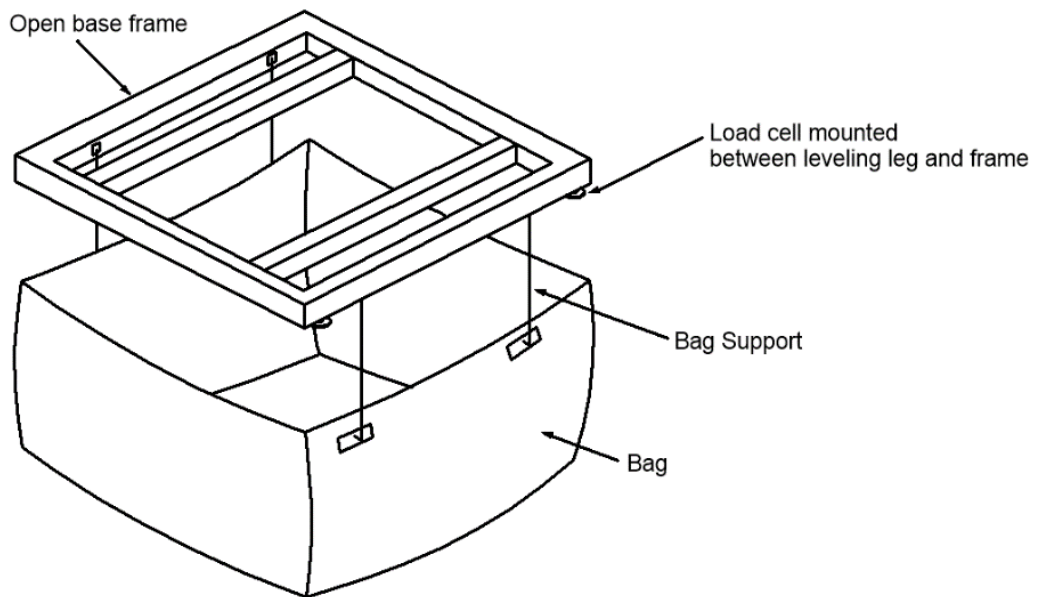
Model WS004SBH – Wash/Clean Down Weighing Platform Scale Having Two Raised Platform Sides – Variant 12

FIGURE 6/9C/224B – 15



Model WS004SBH – Trolley Weighing Platform Scale Version – Variant 13

FIGURE 6/9C/224B – 16



Wedderburn Model WS004SBH – Suspended Bag – Variant 14

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