



Australian Government
**National Measurement
Institute**

Bradfield Road, West Lindfield NSW 2070

Certificate of Approval
No 6/10B/82

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

Complete Weighing Solutions Model CWS-WB Weighing Instrument

submitted by Complete Weighing Solutions
Unit 2, 351 MacDonnell Road
Clontarf QLD 4019.

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.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 June 2013, and then every
5 years thereafter.

Instruments purporting to comply with this approval shall be marked with
approval number 'NMI 6/10B/82' and only by persons authorised by the
submitter.

It is the submittor'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.

The National Measurement Institute reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

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

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

The pattern as approved herein or with substitute load cells and/or indicator and in other capacities and configurations and configurations, shall comply with General Certificate No 6B/0.

Note: New instruments manufactured under this approval shall only use load cells and/or indicators with current NMI supplementary certificates.

DESCRIPTIVE ADVICE

Pattern: approved 15 May 2008

- A Complete Weighing Solutions model CWS-WB self-indicating weighing instrument of 60 000 kg maximum capacity.

Variants: approved 15 May 2008

1. Other CWS-WB series instruments in capacities of not less than 1500 kg.
2. CWS-H series hopper, tank or silo weighing instruments.

Technical Schedule No 6/10B/82 describes the pattern and variants 1 & 2.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 6/10B/82 dated 16 May 2008
Technical Schedule No 6/10B/82 dated 16 May 2008 (incl. Test Procedure)

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



TECHNICAL SCHEDULE No 6/10B/82

Pattern: Complete Weighing Solutions Model CWS-WB Weighing Instrument

Submitter: Complete Weighing Solutions
Unit 2, 351 MacDonnell Road
Clontarf QLD 4019.

1. Description of Pattern

A Complete Weighing Solutions model CWS-WB self-indicating weighing instrument of 60 000 kg maximum capacity and approved for use with up to 3000 verification scale intervals.

1.1 Basework

The model CWS-WB basework has the platform fully supported by 6 load cells.

1.2 Load Cells

Six Precision Transducers model HPC-45 load cells of 45 000 kg capacity are used. The load cells are also described in the documentation of approval NSC S412.

1.3 Indicator

A Rinstrum model 5000 digital indicator is used.

The indicator is also described in the approval documentation of approval NSC S363.

1.4 Descriptive Markings

Instruments carry the following markings:

Manufacturer's mark, or name written in full	Complete Weighing Solutions
Indication of accuracy class	Ⓜ
Maximum capacity	<i>Max</i> kg or t *
Minimum capacity	<i>Min</i> kg or t *
Verification scale interval	<i>e</i> = kg or t *
Serial number of the instrument
Pattern approval mark for the instrument	6/10B/82
Pattern approval mark for the load cells	S...
Pattern approval mark for the indicator	S...

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

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 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

2. Description of Variants

2.1 Variant 1

Other Complete Weighing Solutions CWS-WB series instruments.

The platform is fully supported by no less than 4 and with up to 16 approved load cells. Instruments may be in capacities of:

- 1500 up to 14 999 kg;
- 15 000 kg up to 149 999 kg; and
- 150 000 kg and above,

using approved load cells and an approved digital indicator (in accordance with General Certificate of Approval No 6B/0).

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.

2.2 Variant 2

Complete Weighing Solutions CWS-H series instruments, which have the load receptor in the form of a hopper, tank or silo fully supported by approved load cells. Instruments may be in capacities of:

- 100 kg up to 1499 kg;
- 1500 kg up to 14 999 kg;
- 15 000 kg up to 149 999 kg; and
- 150 000 kg and above,

using approved load cells and an approved digital indicator (in accordance with General Certificate of Approval No 6B/0).

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.

Instruments are either:

- (a) fitted with 3, 4 or 5 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 approved load cells where the hopper is a non-vertical cylindrical, or other hopper-type load receptor.

Note: Instruments with more than the number of load cells mentioned above may be acceptable if prior written agreement from the National Measurement Institute is obtained.

Suitable provision must be made for the application of suitable verified masses to the instrument as required for verification and certification purposes. It may be necessary for such masses to be incorporated within the design of the instrument.

TEST PROCEDURE

Instruments should be tested in accordance with any relevant tests specified in the Uniform Test Procedures.

Maximum Permissible Errors at Verification/Certification

The maximum permissible errors are specified in Schedule 12 of the *National Measurement Regulations 1999*.