

**State of California**  
Department of Food and Agriculture  
Division of Measurement Standards

Certificate Number: 5043(a)-02  
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***California Type Evaluation Program***  
***Certificate of Approval***  
***for Weighing Devices***

**For:**

Indicating Element  
Digital Electronic  
Model: M2000X-XX\*  
n<sub>max</sub>: 10 000

Accuracy Class: III/III L

**Submitted by:**

Western Scale Co. Limited  
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**Standard Features and Options**

\* See Page 2 for model designation

Three independent weighing channels for three separate scales/multi-deck capability  
Support for total mode for displaying all channels summed together as a total  
Semi-automatic (push-button) zero setting mechanism (SAZSM)  
Automatic zero setting mechanism (AZSM)  
Initial zero setting mechanism (IZSM)  
LED display  
Semi-automatic (push-button) and keyboard tare  
Multiple tare memory  
Weigh-in/weigh-out capability  
Gross/net display  
lb/kg conversion (push-button)  
Motion detection  
Time/date capabilities  
Printing capabilities  
Two serial ports supporting RS232 or RS422

**Option:** Digital junction box for load cell summation (Model M2000D-DLC)

Temperature Range: -10 °C to 40 °C ( 14 °F to 104 °F )

This device was evaluated under the California Type Evaluation Program (CTEP) and was found to comply with the applicable requirements of California Code of Regulations for "Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

Effective Date: February 13, 2002

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Mike Cleary, Director

**Western Scale Co. Limited**  
**Indicating Element**  
**Model: M2000X-XX**

**Application:** General purpose indicating element with optional digital junction box for use with a compatible and certified weighing element.

**Identification:** The manufacturer's identification, model number, and serial number are located on the back of the indicating element. The identification information for the optional digital junction box is located on the side of the summing box enclosure and is identified as **M2000D-DLC**.

**Model Designation:**

<b>M2000</b>	<b>X (System Type)</b>	<b>-XX (Enclosure Type)</b>
Basic Model	<b>A</b> = Analog indicator <b>D</b> = Digital system with digital junction box located at the scale	<b>DT</b> = Polished stainless steel <b>SL</b> = Slim line aluminum <b>SS</b> = NEMA 4 polished stainless steel

**Sealing:** The indicator supports a Category 1 audit trail system. To access the audit trail count for the calibration parameters, enter 1000 followed by the "print/select" key. The display will flash the last date (yy:mm:dd) calibration changes were made followed by the current event count value for calibration. A separate event counter for configuration parameters is also displayed. To print the audit trail history, press the "print/select" key again and the calibration history will print to the attached printer. Pressing "clear" will return the indicator to the weighing mode. The initial start of the counter value from the factory is random.

The optional digital junction box is sealed electronically and is part of the Category 1 audit trail system of the indicator. Changes of any kind to the digital junction box will cause a recalibration of the indicator and the event counter to increment.

**Test Conditions:** This certificate supersedes Certificate of Approval Number 5043-00 and is issued to include the addition of an external digital junction box containing the analog to digital converter for summation. The current and original test conditions are listed below.

The Model M2000D-SS indicator with the Model M2000D-DLC digital summing box was submitted for evaluation. The emphasis of this evaluation was on device design, operation, performance, and compliance with influence factor requirements. The junction box and the indicator were interfaced to a load cell simulator. Increasing/decreasing load tests were performed over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). Increasing/decreasing load tests were also conducted with line voltages of 100 VAC and 130 VAC under ambient conditions. Additionally, tests were conducted for compliance with print format, RFI, and tare.

**Certificate of Approval Number 5043-00:** The emphasis of this evaluation was on device design, operation, and compliance with influence factor requirements. For this evaluation, two identical devices were submitted: one in an aluminum enclosure and the other in a stainless steel box. Each device was interfaced with a load cell simulator and several increasing/decreasing load tests were performed over a temperature range of -10 °C to 40 °C (14 °F to 104 °F) and with line voltages of 100 VAC and 130 VAC. Additionally, an indicator was interfaced with a load cell weighing element and a printer for RFI, tare, and weigh-in/weigh-out tests. Then two load cell simulators were interfaced to perform multiple (3) load receiving element tests.

Results of the evaluations indicate the device complies with applicable requirements.

**Type Evaluation Criteria Used:** Title 4, California Code of Regulations, 2002 Edition

**Tested By:** G. Castro and K. Jones (CA) 5043-00; S Boyd (CA) 5043(a)-02