



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Computing Scale
Digital Electronic
Model: OMNI-4000, WM-4000, IP-EMZ, IP-AI, and WM-AI
Series AWS and non-AWS
 n_{max} : 6000
 e_{min} : 0.005 / 0.01 lb, 0.005 kg.
Capacity: 0-15 x 0.005 lb / 15-30 x 0.01 lb; 30 x 0.01 lb;
13 x 0.005 lb; 13 x 0.01 lb; AWS and non-AWS
30kg/60lb x 0.005kg/0.01lb, 30kg/60lb x 0.01 kg/0.02 lb
Accuracy Class: III

Submitted By:

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Standard Features and Options

- Semi-automatic (push-button) Zero Setting Mechanism
- Automatic Zero Tracking (AZT)
- Initial Zero Setting Mechanism (IZSM)
- Semi-automatic (push-button) Tare
- Keyboard Tare
- Programmable (PLU) Tare
- Tare/Gross/Net Display
- LCD Display, Touch Screen
- Unit Conversion (lb, kg)
- AC Power
- Integral Printer
- Network Communications
- Integrated Film Wrapping Machine (OMNI-4000, WM-4000 and WM-AI Series Only)
- Programmable; Unit Price, Commodity Name, UPC Number
- Unit Price and Tare Save (prepack) Key

Load Cell Used: NMB Model CLC-25N, Ishida Model CLC-25L and Ishida Model ZLC-60L

Platform Sizes: 13.25 in x 10.25 in (OMNI-4000), 10.5 in x 9.75 in (comb shaped: WM-4000 and WM-AI Series)
14.5 in x 10.5 in (flat platter: WM-4000 and WM-AI Series) 12.5 in x 15.5 in (AWS) Max: 59 feet per min. (18 m/min)
15.75 in x 9.75 in (IP-EMZ and IP-AI), 15.75in x 10.75in (IP-AI 30kg/60lb)

Temperature Range: -5 °C to 40 °C (23 °F to 104 °F)

This device was evaluated under the National Type Evaluation Program and was found to comply with the applicable technical requirements of "NIST Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices." Evaluation results and device characteristics necessary for inspection and use in commerce are on the following pages.

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Ishida Co., Ltd.

Computing Scale / OMNI-4000, WM-4000, WM-AI Series; IP-EMZ and IP-AI

Application: OMNI-4000, WM-4000 and WM-AI Series are prepackaging scales and consist of a weighing element, printer, and a keyboard console and are used in wrapping machine. They must be marked "For prepackaging use only" or a similar statement. The OMNI-4000 models have two additional versions. Model OMNI-4000STR has an out-feed conveyor to right side and model OMNI-4000STL has one to left side. The scales for the two models use the same metrological components. The IP-EMZ and IP-AI are prepackaging scales. Model WM-4000 has three models WM-4000, WM-4000DF and WM-4000 VF. The WM-4000 has a flat weighing platter, models WM-4000DF and WM-4000VF have a comb shaped platter similar to the OMNI-4000.

Identification: The required information is affixed on the right side of the scale. The tag is the foil adhesive identification which is repeated exposure of the word "VOID" upon removal of the badge and the capacity x division statement is adjacent to the weight display. The capacity x division statement for WM-AI Series and IP-AI is displayed on the digital indication.

Sealing: OMNI-4000, WM-4000 and WM-AI have one sealing location under the platter using two screws and /or void stickers. One screw is to protect access to the calibration save button and the other screw protects the integrity of the case. WM-4000 and WM-AI have one sealing location under the platter using two screws and / or void stickers. OMNI-4000/S/ST has two sealing locations: one wire security seal on the front center of the weighing element and a second pressure sensitive seal over the hole in the base of the weighing element below the first sealing location. Assistance can be requested in gaining access to this second location. The IP-EMZ and IP-AI are sealed by sealing the platform support to the instrument by means of a wire security seal or similar type seal or by sealing the fitting surface of upper and lower cases with destructible adhesive labels to prevent opening the cases and to restrict access to the calibration switch which is located below a cover beneath the platter. IP-AI 30kg is sealed by sealing the fitting surfaces of the upper and lower cases, restricting access to the calibration switch which is located inside of the upper case.

Test Conditions: This Certificate supersedes Certificate of Conformance number 06-029A5 and is issued to add a model WM- AI 13 x 0.01 lb capacity which was missed on the previous Certificate. No additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 06-029A5: This Certificate supersedes Certificate of Conformance number 06-029A4 and is issued to add an Automatic weighing and labeling device (AWS). It is used as AWS and non-AWS. A model WM-AI, 13 x 0.005 lb was used in this evaluation. The device was tested dynamically at an evaluation test site. Performance and shift test were conducted and several increasing/decreasing, shift tests were done statically. After 100 hours of continuous operation the both types of performance tests were repeated.

Certificate of Conformance Number 06-029A4: This Certificate supersedes Certificate of Conformance number 06-029A3 and is issued to add a higher capacity (60 lb, 30kg) to the Model IP-A1. For this evaluation the IP-A1 was interfaced with a UNI-9 XL (NTEP CC 12-121A2) and several increasing/decreasing, shift tests and discrimination tests were conducted. Complete tests were conducted over a temperature range of -5 °C to 40 °C (23 °F to 104 °F). Permanence testing was waived; it was completed during the evaluation of CC 12-121. Previous test results are listed below.

Certificate of Conformance Number 06-029A3: This Certificate supersedes Certificate of Conformance number 06-029A2 and is issued to include the Model WM-4000 series on the certificate. WM-4000 series are similar to Model OMNI-4000 series and consists of the same A/D Board, weighing mechanism, and load cell as the OMNI-4000 series. The new model is slightly smaller in size. Because the two models are metrologically identical no additional testing was deemed necessary. Previous test results are listed below.

Certificate of Conformance Number 06-029A2: This Certificate supersedes Certificate of Conformance number 06-029A1 and is issued to include the Models WM- AI Series and IP-AI on the certificate. A Model WM-AI and a Model IP-AI (prepackage scale) were submitted for purpose of this evaluation. The WM-AI and IP-AI consisted of the same weighing/load receiving element, therefore permanence testing was not deemed necessary. Both have new A/D Boards, therefore several increasing/decreasing, shift tests, and discrimination tests were conducted, and a checklist was completed using Publication 14 DES section.

Certificate of Conformance Number 06-029A1: This Certificate supersedes Certificate of Conformance number 06-029 and is issued to include the Model IP-EMZ on the certificate. A Model IP-EMZ (prepackage scale) was submitted for purpose of this evaluation. The IP-EMZ consists of the same A/D Board, weighing mechanism, and load cell as the OMNI-4000 series. For this evaluation several increasing/decreasing, shift tests, and discrimination tests were conducted, and a checklist was completed using Publication 14 DES section. Because the two models are metrologically identical no other testing was deemed necessary. Previous test results are listed below.



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Computing Scale / OMNI-4000, WM-4000, WM-AI Series; IP-EMZ and IP-AI

Certificate of Conformance Number 06-029: Two samples of the model OMNI-4000 were evaluated in the laboratory. Model OMNI-4000 series are similar to Model OMNI-3000 series which were approved under NTEP CC 95-057 and is a prepackaging scale consisting of an indicator, printer, and weighing element which is used in a package wrapping system. OMNI-4000 (0-15 lb x 0.005 lb /15-30 lb x 0.01 lb) and OMNI-4000 (0-30 lb x 0.01 lb) were submitted for evaluation. One of these scales uses the same load cell and load cell support structure as previously evaluated in model OMNI-3000, so neither influence testing nor permanence tests were conducted, however several increasing, decreasing and eccentric loading tests were conducted to evaluate the performance of the weighing platform. One of these scales used a load cell which was newly developed and electronics including newly developed A/D. On this scale, complete tests were conducted over a temperature range of -5 °C to 40 °C (23 °F to 104 °F). In addition, a load of approximately 1/2 capacity was applied to this scale over 100 000 times. The scale was tested periodically over this time. Additional tests were conducted to evaluate the scale's operation.

Evaluated By: A. McCoy (OH) 06-029, 06-029A1; M. Kelley (OH), J. Morrison (OH) 06-029A2, 06-029A3; J. Gibson (OH) 06-029A4; M. Kelley (OH) 06-029A5; M. Manheim (NCWM) 06-029A6

Type Evaluation Criteria Used: *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2019 Edition. *NCWM Publication 14 Weighing Devices*, 2019 Edition.

Conclusion: The results of the evaluation and information provided by the manufacturer indicate the device complies with applicable requirements.

Information Reviewed By: S. Patoray (NCWM), L. Bernetich (NCWM) 06-029, 06-029A1; J. Truex (NCWM) 06-029A2, 06-029A3 06-029A4; D. Flocken (NCWM) 06-029A5, 06-029A6

Examples of Device:

Model: IP-EMZ



Model: WM-4000





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Computing Scale / OMNI-4000, WM-4000, WM-AI Series; IP-EMZ and IP-AI



Model: IP-AI



Model: WM-AI Series / AWS has infeed & out feed belts