

***National Type Evaluation Program  
Certificate of Conformance  
for Weighing and Measuring Devices***

**For:**

Indicating Element  
Digital Electronic  
Model: 3100  
 $n_{\max}$ : 5 000

Accuracy Class: III

**Submitted by:**

Ravas Europe B.V.  
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**Standard Features and Options**

**Model 3100**

Liquid crystal (LCD) display  
Keyboard calibration, single or three-point capability  
Keyboard tare  
Preprogrammed Tare  
lb/kg push button  
Weight accumulation  
Category I Audit Trail  
Mild steel enclosure

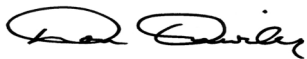
Automatic zero setting mechanism (AZSM)  
DC operation (4 VDC to 14 VDC)  
Semi-automatic (pushbutton) tare  
Semi-automatic (pushbutton) zero  
Gross/net/tare display  
Automatic shut off feature  
Center of zero annunciator

**Options:**

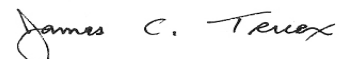
Plastic enclosure  
Stainless steel enclosure  
Set point capabilities  
RS-232 Bidirectional communication  
AC/DC adapter  
Serial output for data recording (printer or computer)  
Time/ date printing

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

This device was evaluated under the National Type Evaluation Program (NTEP) and was found to comply with the applicable technical requirements of 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.



Don Onwiler  
Chairman, NCWM, Inc.



James C. Truex  
Chairman, National Type Evaluation Program Committee

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**Ravas Europe B.V.**  
**Indicating Element**  
**Model: 3100**

**Application:** General purpose indicating element to be used with an approved and compatible weighing element.

**Identification:** The required identification information appears on an adhesive label applied to the side of the indicator.

**Sealing:** Category I Audit Trail: Configuration and calibration audit counters update each time a configuration or calibration change occurs. These counters will return to zero after 1000 changes, individually. The counters may be viewed by powering up the unit:

- The screen will display the configuration audit counter ("CF") and the calibration audit counter ("CA").

**Test Conditions:** A Ravas model 3100 indicator was submitted for evaluation. The emphasis of the evaluation was on device design, operation and compliance with influence factor requirements. The indicator was interfaced with a load cell simulator and an approved scale base for the evaluation. The indicator was tested over a temperature range of -10°C to 40°C (14°F to 104°F). Additionally, tests were conducted using power supplies of 4 and 14 VDC and 100 VAC / 130 VAC.

**Evaluated By:** T. Lucas (OH)

**Type Evaluation Criteria Used:** NIST Handbook 44, 2005 Edition

**Conclusion:** The results of the evaluations and information provided by the manufacturer indicate the devices comply with applicable requirements.

**Information Reviewed By:** S. Patoray, L. Bernetich (NCWM)