



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Weighing/Load Receiving Element
Load Cell Electronic
Models: PBA220 and Xnnnaa
Capacity: 10 lb to 1500 lb (5 kg to 600 kg)
 e_{min} : 0.002 lb (0.001 kg)
 n_{max} : 3000 / 5000
Platform: 9 x 9 in to 24 x 32 in (229 x 229 mm to 600 x 800 mm)
Accuracy Class: III

Submitted By:

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Standard Features and Options

Xnnnaa in the Model Number:

- nnn is for the capacity of the weighing load receiving element
- aa is for the platter size of the weighing load receiving element

Construction:

- Powder Coated Steel construction with Stainless Steel Platter

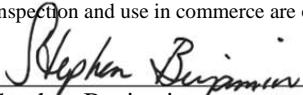
Capacity	e_{min}	n_{max}	Load Cell
15 lb / 6 kg	0.005 lb / 0.002 kg	3000	non-NTEP
30 lb / 15 kg	0.01 lb / 0.005 kg	3000	non-NTEP
60 lb / 30 kg	0.02 lb / 0.01 kg	3000	non-NTEP
150 lb / 60 kg	0.05 lb / 0.02 kg	3000	non-NTEP
300 lb / 150 kg	0.1 lb / 0.05 kg	3000	non-NTEP
600 lb / 300 kg	0.2 lb / 0.1 kg	3000	non-NTEP
1500 lb / 600 kg	0.5 lb / 0.2 kg	3000	non-NTEP
10 lb / 5 kg	0.002 lb / 0.001 kg	5000	MT Series
25 lb / 10 kg	0.005 lb / 0.002 kg	5000	MT Series
50 lb / 25 kg	0.01 lb / 0.005 kg	5000	MT Series
100 lb / 50 kg	0.02 lb / 0.01 kg	5000	MT Series
250 lb / 100 kg	0.05 lb / 0.02 kg	5000	MT Series
500 lb / 250 kg	0.1 lb / 0.05 kg	5000	MT Series

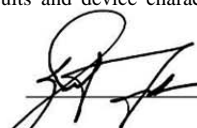
Load Cells Used:

- Mettler Toledo (10 kg to 1000 kg capacity) (non-NTEP) – 3000 n_{max}
- Mettler Toledo (Model MT Series - CC: 11-088) or approved and compatible – 5000 n_{max}

Temperature Range: -10 °C to 40 °C (14 °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.


Stephen Benjamin
Chairman, NCWM, Inc.


Kurt Floren
Chairman, National Type Evaluation Program Committee
Issued: April 24, 2013

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**Mettler-Toledo, LLC**

Weighing/Load Receiving Element / PBA220 and Xnnnaa

Application: For use in general purpose weighing applications when interfaced with a NTEP certified and compatible indicating element.

Identification: The required information is on an adhesive badge located under the scale platter.

Sealing: The weighing element does not have any adjustable components. Sealing of set-up and calibration parameters are done by the indicator which is sealed according to the manufactures instructions for the indicator used.

Test Conditions: This certificate supersedes certificate of conformance 08-011A1 and is issued to increase the n_{max} to 5000 for capacities 10 lb (5 kg) to 500 lb (250 kg) and include NTEP approved load cells in the Standard Feature and Options box. Three weighing elements were submitted for evaluation, 10 lb x 0.002 lb (5 kg x 0.001 kg), 100 lb x 0.02 lb (50 kg x 0.01 kg) and 500 lb x 0.1 lb (250 kg x 0.05 kg). The weighing elements was interfaced with a Mettler Toledo IND780 Indicator (Certificate of Conformance Number 06-017) when submitted for evaluation. Several increasing/decreasing load and shift tests were performed. The scale was tested over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). A load of approximately 1/2 capacity was applied to the scale over 100 000 times. Tests were conducted periodically over this time. After the permanence tests were completed, the shift test, discrimination and zone of uncertainty test were repeated. Previous test conditions are listed below for reference.

Certificate of Conformance 08-011A1: This certificate supersedes certificate of conformance 08-011 and is issued to increase the capacity to 1500 lb / 600 kg. A 1500 x 0.5 lb / 600 x 0.2 kg (24 x 32 in / 600 x 800 mm) weighing element was submitted for evaluation. The weighing elements was interfaced with the Mettler-Toledo IND780 Indicator (Certificate of Conformance Number 06-017) when submitted for evaluation. Several increasing/decreasing load and shift tests were performed. The scale was tested over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). A load of approximately 1/2 capacity was applied to the scale over 100 000 times. Tests were conducted periodically over this time. After the permanence tests were completed, the shift test, discrimination and zone of uncertainty test were repeated.

Certificate of Conformance 08-011: The emphasis of the evaluation was on device design, marking, operation and compliance with influence factor requirements. Three model PBA220 weighing elements were submitted for evaluation, 15 x 0.005 lb (9 x 9 in), 150 x 0.05 lb (24 x 32 in), 600 x 0.2 lb (24 x 32 in). Each of the weighing elements was interfaced with the Mettler-Toledo IND310 Indicator (Certificate of Conformance Number 04-032) when submitted for evaluation. Several increasing/decreasing load and shift tests were performed. The scales were tested over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). A load of approximately 1/2 capacity was applied to each of the scales over 100 000 times. Tests were conducted periodically over this time. After the permanence tests were completed, the shift test, discrimination and zone of uncertainty test were repeated.

Evaluated By: A. McCoy (OH) 08-011; E. Matthews (OH) 08-011A1; J. Morrison (OH) 08-011A2

Type Evaluation Criteria Used: *NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices*, 2013 Edition. *NCWM, Publication 14: Weighing Devices*, 2013 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), 08-011; J. Truex (NCWM) 08-011A1, 08-011A2



Mettler-Toledo, LLC

Weighing/Load Receiving Element / PBA220 and Xnnnaa

Example of Device:

