NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:
Non-Computing Scale
Digital Electronic
Model: FX Series (see table on page 2)
n_{max}: 32 000
e_{min}: see table on page 2
Capacity: see table on page 2
Platform: see table on page 2
Accuracy Class: II

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Standard Features and Options

The FX Series have the following externally selectable units of measure using the "mode" push button: gram (g), ounce (oz), pound (lb), troy ounce (oz t), metric carat (ct), pennyweight (dwt).

"**The counting feature is not legal for trade,**" is labeled on the front of the FX and FX-WP series.

Standard Features:

- Percent Weighing
- Semi-automatic (push-button) Zero
- Semi-automatic Zero Tracking Mechanism (AZTM)
- RS-232 Serial Interface
- AC/DC Adapter
- Level Indicator
- Vacuum Fluorescent Display
- Weight Comparator Mode

Temperature Range: *10 ºC to 30 ºC (50 ºF to 86 ºF)

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.

Tim Tyson
Chairman, NCWM, Inc.

Randy Jennings
Chairman, National Type Evaluation Program Committee
*Editorial Correction Issued: January 13, 2011

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A&D Engineering

Non-Computing Scale / FX Series

Model	Capacity (g)	n_{max}	e (g)	d (g)	pan diameter (mm)
FX-120i	122g	12 200	.01g	.001g	130
FX-120iN	122g	12 200	.01g	.001g	130
FX-120i-P	122g	12 200	.01g	.001g	130
FX-120iWP	122g	12 200	.01g	.001g	130
FX-120iWPN	122g	12 200	.01g	.001g	130
FX-120iWP-P	122g	12 200	.01g	.001g	130
FX-120GD	122g	12 200	.01g	.001g	130
FX-200i	220g	22 000	.01g	.001g	130
FX-200iN	220g	22 000	.01g	.001g	130
FX-200i-P	220g	22 000	.01g	.001g	130
FX-200iWP	220g	22 000	.01g	.001g	130
FX-200iWPN	220g	22 000	.01g	.001g	130
FX-200iWP-P	220g	22 000	.01g	.001g	130
FX-200GD	220g	22 000	.01g	.001g	130
FX-300i	320g	32 000	.01g	.001g	130
FX-300iN	320g	32 000	.01g	.001g	130
FX-300i-P	320g	32 000	.01g	.001g	130
FX-300iWP	320g	32 000	.01g	.001g	130
FX-300iWPN	320g	32 000	.01g	.001g	130
FX-300iWP-P *	320g	32 000	.01g	.001g	130
FX-300GD	320g	32 000	.01g	.001g	130
FX-1200i	1 220g	12 200	.1g	.01g	150
FX-1200iN	1 220g	12 200	.1g	.01g	150
FX-1200i-P	1 220g	12 200	.1g	.01g	150
FX-1200iWP	1 220g	12 200	.1g	.01g	150
FX-1200iWPN	1 220g	12 200	.1g	.01g	150
FX-1200iWP-P	1 220g	12 200	.1g	.01g	150
FX-1200iGD	1 220g	12 200	.1g	.01g	150
FX-2000i	2 200g	22 000	.1g	.01g	150
FX-2000iN	2 200g	22 000	.1g	.01g	150
FX-2000i-P	2 200g	22 000	.1g	.01g	150
FX-2000iWP	2 200g	22 000	.1g	.01g	150
FX-2000iWPN	2 200g	22 000	.1g	.01g	150
FX-2000iWP-P	2 200g	22 000	.1g	.01g	150
FX-2000GD	2 200g	22 000	.1g	.01g	150
FX-3000i	3 200g	32 000	.1g	.01g	150
FX-3000iN	3 200g	32 000	.1g	.01g	150
FX-3000i-P	3 200g	32 000	.1g	.01g	150
FX-3000iWP *	3 200g	32 000	.1g	.01g	150
FX-3000iWPN	3 200g	32 000	.1g	.01g	150
FX-3000iWP-P	3 200g	32 000	.1g	.01g	150
FX-3000GD	3 200g	32 000	.1g	.01g	150
FX-300CT	62g	32 200	.002g	.002g	90
FX-600CT	122g	12 200	.01g	.001g	90

*** Models Tested**

P = Prescription **WP** = Moisture and Dustproof **WP-P** = Moisture and Dustproof and Prescription Scale with Counting Feature **GD** = Grams Only Feature Weighing **CT** = Jewelry Scale with Carat and Grams Only Feature **i** = General Use **N and WPN** = marketing identifiers with no metrological significance

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Non-Computing Scale / FX Series

Application: General purpose top loading balance. The FX series of balances are suitable for use as a jeweler's scale. The FX-xxxiWP-P is suitable for prescription weighing and counting. FX-xxxCT is suitable for carat and grams weighing only.

Identification: The device markings are on a pressure sensitive, tamper evident label located on the right side of the scale.

Sealing: The device can be sealed by threading a wire security seal through two screws on the RS-232 serial interface plate and scale housing. This prevents access to the calibration switch inside the device.

Test Conditions: This Certificate supersedes Certificate of Conformance 08-045A1 and is issued to add 12 new model designations ending with a suffix "N" or "WPN". All models were added without additional testing based on information supplied by the manufacturer indicating that this is a change of model numbers not a new design. The N and WPN suffixes have no metrological significance. Previous models remain listed on the certificate to recognize devices previously manufactured. Previous test conditions are listed below for reference.

Certificate of Conformance Number 08-045A1: This Certificate supersedes Certificate of Conformance 08-045 and is issued to add 20 new models. All models were added without additional testing based on information supplied by the manufacturer.

Certificate of Conformance Number 08-045: A FX-300i WP-P and FX-3000iWP were submitted for evaluation. The emphasis of the evaluation was on device design, general performance, print function and compliance with influence factor requirements. Several increasing/decreasing load and shift tests were conducted. Each scale was tested over a voltage range of 100VAC to 130 VAC and at a DCV of 5 VDC to 13.2 VDC. Influence factor tests were conducted over a temperature range of 10°C to 30°C (50°F to 86°F). Additionally, a load of one-half capacity was placed on each scale more than 100 000 times. The device was tested for accuracy and functionality. Results of the evaluation indicate the devices comply with applicable requirements.

Evaluated By: S. Boyd (CA) 08-045; S. Muñoz (CA) 08-045A1

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2009. NCWM, Publication 14: Weighing Devices, 2009.

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

Information Reviewed By: S. Patoray, L. Bernetich (NCWM) 08-045; J. Truex (NCWM) 08-045A1, 08-045A2

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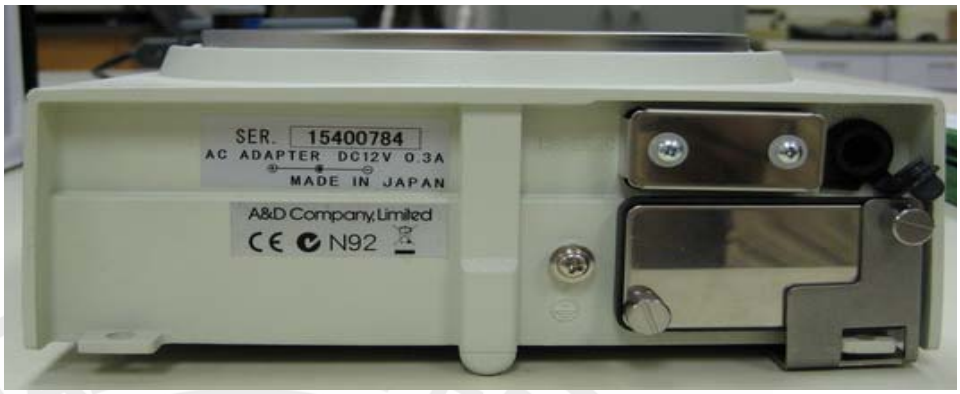
Non-Computing Scale / FX Series

Examples of Device:

Model FX 3000iWP-P – Front View



Model FX 3000iWP-P – Rear View

Function Buttons – on/off, cal, mode, scan, print and zero

Model FX 3000iWP-P – Calibration Plate and Screws View