



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance

for Weighing and Measuring Devices

For:

Non-Computing scale
 Digital Electronic
 Model: HV-C, HV-CP & HV-CWP Series
 n_{max} : 3000
 Capacity: 15 kg (30 lb), 60 kg (150 lb), 220 kg (500 lb)
 Platform: See Table Below
 Accuracy Class: III

Submitted By:

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Standard Features and Options

Model	Platform	Capacities with Multiple Intervals and Division Sizes		
HV-15KC HV-15KCP HV-15KCWP	250 mm x 250 mm	0 to 3 kg x 0.001 kg 3 to 6 kg x 0.002 kg 6 to 15 kg x 0.005 kg	0 to 6 lb x 0.002 lb 6 to 15 lb x 0.005 lb 15 to 30 lb x 0.01 lb	0 to 96 oz x 0.05 oz 96 to 240 oz x 0.1 oz 240 to 480 oz x 0.2 oz
HV-60KC HV-60KCP HV-60KCWP	330 mm x 424 mm	0 to 15 kg x 0.005 kg 15 to 30 kg x 0.01 kg 30 to 60 kg x 0.02 kg	0 to 30 lb x 0.01 lb 30 to 60 lb x 0.02 lb 60 to 150 lb x 0.05 lb	0 to 480 oz x 0.2 oz 480 to 960 oz x 0.5 oz 960 to 2400 oz x 1 oz
HV-200KC HV-200KCP HV-200KCWP	390 mm x 530 mm	0 to 60 kg x 0.02 kg 60 to 150 kg x 0.05 kg 150 to 220 kg x 0.1 kg	0 to 150 lb x 0.05 lb 150 to 300 lb x 0.1 lb 300 to 500 lb x 0.2 lb	0 to 2400 oz x 1 oz 2400 to 4800 oz x 2 oz 4800 to 8000 oz x 5 oz

- Multi-Interval Operation
- Gross/Net Display
- Unit Conversion (lb, kg, oz)
- Semi-automatic (push-button) Zero Setting Mechanism (SAZSM)
- Power supply: AC to DC transformer/ DC battery (4 D cell)
- External printer Model: HV-C / Built in printer Model HV-CP
- Command Mode allows external control of zero, tare, unit switching.
- Piece counting: "The counting feature is not legal for trade" is labeled on the indicators left side.
- Semi-automatic (push-button) Tare
- RS-232 Serial Interface/ USB port
- Initial Zero Setting Mechanism (IZSM)
- Automatic Zero Tracking (AZT)
 - Pole mounted or remote cabled indicator display
- Weight Accumulation
- Wash down model / WP (waterproof)

Load cells used: A&D 1LC202-15 kg, 1LC203-60 kg, 1LC204-220 kg (non-NTEP Certified)

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.

Craig VanBuren
 Chairman, NCWM, Inc.

Brett Jurney
 Committee Chair, NTEP Committee
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A&D Weighing

Non-Computing Scale / HV-C, HV-CP & HV-CWP Series

Application: General purpose weighing applications.

Identification: All required marking information is on a tamper evident label affixed in a recessed area located on the right side of the indicator (top of indicator for HV-CWP Series).

Sealing: The device is sealed by a lead and wire security seal threaded thru two drilled fillister head screws and two plastic posts on the back cover of the indicator that prevent access to the retaining screw and calibration switch located under the removable cover. The Philips head retaining screw to the left of the calibration switch under the cover must be installed before sealing the indicator. If it is not installed the indicator halves can be disassembled with the security seal intact.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 17-099 and was issued to add the HV-CWP Series Digital scale. A model HV-60KCWP was submitted for evaluation. Multiple increasing/decreasing load and shift tests were performed. The devices were tested over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). Tests were also conducted with a power supply of 100 VAC and 240 VAC. No other testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 17-099A1: This certificate supersedes Certificate of Conformance Number 17-099 and was issued to correct the model numbers stated on the certificate. No changes were made to the device so no additional testing was deemed necessary. Previous test conditions are listed below for reference.

Certificate of Conformance Number 17-099: The emphasis of the evaluation was on device design, marking, performance, and compliance with influence factor requirements. Three models were submitted for evaluation: an HV-CP 15 kg, an HV-C 60 kg and a HV-C 220 kg. Multiple increasing/decreasing load and shift tests were performed. The devices were tested over a temperature range of -10 °C to 40 °C (14 °F to 104 °F). A load of approximately one-half capacity was applied to the scales over 100 000 times with accuracy tests performed after every 25 000 weighments. Tests were also conducted with a power supply of 100 VAC and 240 VAC and 6 VDC for battery powered scale and 9 VDC for AC/DC transformer powered scale.

Evaluated By: J. Gibson (OH) 17-099; M. Kelley (OH) 17-099A2

Type Evaluation Criteria Used: *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2019 Edition. *NCWM Publication 14 Measuring 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: J. Truex (NCWM) 17-099; D. Flocken (NCWM) 17-099A1, 17-099A2



A&D Weighing
Non-Computing Scale / HV-C, HV-CP & HV-CWP Series

Examples of Device:

HV-15KCP (15 kg) internal printer



HV-60KC (60 kg) with pole mounted indicator



HV-60KC (60 kg) with remote cabled indicator



HV-200KC (220 kg)





A&D Weighing
Non-Computing Scale / HV-C, HV-CP & HV-CWP Series

Retaining screw/calibration switch



Sealing Method



HV-200KCWP of the
HV-CWP Series