

National Conference on Weights and Measures

1135 M Street, Suite 110 • Lincoln, NE 68508

Certificate Number: 07-022A2

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

For:

Weighing/Load Receiving Element, Platform
Load Cell Electronic
Model: HFS-4xx & HFS-5xx Series (See Below)
 n_{\max} : 5 000 e_{\min} : 1 lb
Capacity: See Below
Platform: See Below

Accuracy Class: III

Submitted by:

CAS (USA) Corporation
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Standard Features and Options

Model	Capacity	e_{\min}	Platform Size
HFS-405	5 000 lb/2 200 kg	1 lb/0.5 kg	4 ft x 4 ft
HFS-410	10 000 lb/4 400 kg	2 lb/1.0kg	4 ft x 4 ft
HFS-505	5 000 lb/2 200 kg	1 lb/0.5 kg	5 ft x 5 ft
HFS-510	10 000 lb/4 400 kg	2 lb/1.0 kg	5 ft x 5 ft

Platform: Devices evaluated 4 ft x 4 ft. and 5 ft x 5 ft. The device may have platform areas up to but not larger than that evaluated, with lengths or widths no greater than 125 percent of either dimension tested.
(e. g. 6 ft x 4 ft)

Construction: Mild Steel

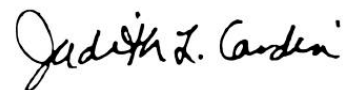
Load Cells used: HFS-405 & HFS-505: 4 CAS (USA) Single ended bending beam model BSA-2.5K capacity (Certificate of Conformance Number 96-072A1) or certified metrological equivalent.
HFS-410 and HFS-510: 4 CSA (USA) Single ended Bending beam model BSA-5K capacity (Certificate of Conformance Number 96-072A1) or certified metrological equivalent.

Temperature range: -10 °C to 40 °C (14 °F 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.



Jack Kane
Chairman, NCWM, Inc.



Judith L. Cardin
Chairman, National Type Evaluation Program Committee

Issued Date: June 5, 2009

Note: The National Conference on Weights and Measures does not "approve," "recommend," or "endorse" any proprietary product or material, either as a single item or as a class or group. Results shall not be used in advertising or sales promotion to indicate explicit or implicit endorsement of the product or material by the NCWM.

CAS (USA) Corporation
Weighing/Load Receiving Element, Platform
Model: HFS-4xx and HFS-5xx Series

Application: General purpose weighing/load-receiving element when connected to a certified and compatible indicating element.

Identification: The engraved identification badge is riveted to the side of the platform.

Sealing: The load cell junction box can be sealed with a wire security seal threaded through two screws on the cover.

Operation: Use of said scale shall be in such a manner as to conform with manufacturer specifications and all rules and regulations of NIST Handbook 44, which includes REASONABLE TESTING ACCESS of said scale to corners for proper testing procedures as per NIST Handbook 44.

Test Conditions: This Certificate supersedes Certificate of Conformance Number 07-022A1 and is issued to increase the size of the weighing element and add additional models. A 5 ft x 5 ft (Model HFS-510) 10 000 X 2 lb load receiving element was submitted for evaluation. The load receiving element was interfaced with a CAS Model CI-2001A indicating element (Certificate of Conformance Number 98-103A1). The emphasis of this evaluation was on the device design, marking requirements, and performance. Several increasing/decreasing load tests were conducted up to 10 000 lb. Corner shift tests were conducted using 2 500 lbs of certified weights during the initial evaluation. A follow up permanence test was conducted, subjecting the device to the same tests conducted during the initial evaluation. Previous test conditions are listed below for reference.

Certificate of Conformance Number 07-022A1: This Certificate supersedes Certificate of Conformance Number 07-022 and is issued to add an additional model of increased capacity to the Certificate. A 10 000-lb, 4 ft x 4 ft (Model HFS-410) 10 000 X 2 lb was submitted for evaluation. The weighing/load receiving element was interfaced with a CAS Model CI-2001A indicating element (Certificate of Conformance Number 98-103). The emphasis of this evaluation was on the device design, marking requirements, and performance. Several increasing/decreasing loads up to 10 000 lbs of certified test weights and, corner shift tests were conducted using 2 500 lbs of certified test weights during the initial evaluation. After the performance test was conducted and 300 weighments were made following the time between tests a permanence test was conducted. The device was subjected to the same tests conducted during the initial evaluation.

Certificate of Conformance Number 07-022: A 4 ft x 4 ft (Model HFS-405) 5 000 x 1 lb scale was submitted for evaluation. The weighing/load receiving element was interfaced with a CAS Model CI-2001A indicating element (Certificate of Conformance Number 98-103A1). The emphasis of this evaluation was on the device design, marking requirements, and performance. Several increasing/decreasing loads up to 5 000 lb, and corner shift tests were conducted using 1 250 lbs of certified weights during the initial evaluation. After the initial performance test was conducted and at least 300 weighments were made a follow up permanence test was conducted. The device was subjected to the same tests conducted during the initial evaluation.

Evaluated By: T. Davis (KS) 07-022, 07-022A1 and 07-022A2

Type Evaluation Criteria Used: NIST Handbook 44, 2009 Edition; NCWM Publication 14, 2009 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 (NCWM), L. Bernetich (NCWM) 07-022, 07-022A1; J. Truex (NCWM) 07-022A2

Example of Device:

