



## NATIONAL TYPE EVALUATION PROGRAM

# Certificate of Conformance

for Weighing and Measuring Devices

**For:**

Crane Scale  
 Digital Electronic  
 Model: MSI-6260CS & MSI-9300  
 $n_{\max}$ : 5000  
 $e_{\min}$ : 1.0 lb  
 Capacity: See Table Below  
 Accuracy Class: III L

**Submitted By:**

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**Standard Features and Options****MSI-6260CS and MSI-9300**

Semi-automatic (push-button)	AC/DC adapter
Automatic zero setting mechanism (AZSM)	Battery power supply
Keyboard tare	Remote print capability
Semi-automatic (push-button)	Gross/net display
Multiple tare memories	Gross/tare/net display (MSI-9300 only)
Remote indication capability (MSI-9750A and MSI-3750CS)	Alpha-numeric LED display
Battery saving features (sleep mode and auto shut-off)	Initial zero setting mechanism (IZSM)
Wireless remote control (calibration and configuration)	

**Capacities**

(lb)	$e_{\min}$ (lb)	$n_{\max}$
5000*	1	5 000
10 000	2	5 000
20 000	5	4 000
30 000	10	3 000
50 000*	10	5 000
70 000	20	3 500

\*Capacity evaluated.

**Load Cell:** Non-NTEP resistive strain-gauge in tension load

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  
 Committee Chair, National Type Evaluation Program Committee

Issued: January 29, 2007

**Application:** General purpose crane scale for high-capacity weighing operations.**1135 M Street, Suite 110 / Lincoln, Nebraska 68508**

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## Measurement Systems International (MSI)

Crane Scale / MSI-6260CS and MSI-9300

**Identification:** A metal identification plate is riveted to the top of the scale above the display.

**Sealing:** Wire security seals may be threaded through a tab and a plug with holes in them and near the main display of the crane scale. This prevents access to the push-button calibration switch inside. The wireless remote controls (MSI-9750A or MSI-3750CS) are used to configure and calibrate the scale. The scale is inoperable while in the calibration mode.

**Operation:** The MSI-9300 and MSI-6260 are part of a group of high capacity crane scales designed to transmit and receive weight information using radio frequencies. The devices may transmit information up to 1 000 feet away to the hand-held remote indicator (MSI-9750A) or to a fixed-mount indicator (MSI-3750CS) (NTEP CC 99-114) programmed to the same radio frequency. Remote controls may be used to access the calibration and configuration parameters of the crane scale. However, only one remote device may be used to configure and calibrate the scale while it is in the calibration mode.

**Test Conditions:** The MSI-6260 and MSI-9300 are similar to the MSI-4260 (NTEPCC 88-098A1) in design and capacities. The Model MSI-9300 crane scale was submitted for this evaluation. The emphasis of the evaluation was on device design, performance, marking requirements, and compliance with influence factor requirements. The MSI-9300 was set up with all the necessary peripherals, MSI-9000 (primary weight processing module), MSI-9020 (modem), MSI-9750A (hand-held remote), and MSI-3750CS (fixed mount display) to simulate its use in the field. Several increasing/decreasing load tests were performed over a temperature range of -10 °C to 40 °C (14 °F to 104 °F) and with line voltages of 100 VAC and 130 VAC. Additionally, a load of approximately one-half scale capacity was applied to the scale 300 times and all displayed indications (primary and remote) were checked for accuracy before and after this test. Remote devices were verified at a range of up to 1 000 feet. Previous test conditions for the 50 000 lb capacity scale are listed below for reference.

The 50 000 lb x 10 lb version (n=5 000) crane scale was submitted for influence factor testing. The electronics are identical to the 20 000 lb x 10 lb (n=2 000) version that received an NBS Report of Test Number 580. The scale was tested for accuracy and time dependence over a temperature range of -10 °C to 40 °C. Additionally, the 50 000 lb x 10 lb version was tested to capacity on a dead weight test machine. The scale was placed into service and used for approximately 60 days before it was retested.

**Evaluated By:** S. Boyd (CA)

**Type Evaluation Criteria Used:** *NIST Handbook 44 Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*, 2006 Edition. *NCWM Publication 14 Weighing Devices*, 2006 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)

**Example(s) of Device:** see page 3



**Measurement Systems International (MSI)**  
Crane Scale / MSI-6260CS and MSI-9300

Example(s) of Device:

MSI-9300



Manufacturer's Logo and Identification Plate

LED Display

Calibration Plug

Weight Hanging Hook

MSI-9750A



Alpha-numeric Keyboard

Communication Port