



NATIONAL TYPE EVALUATION PROGRAM

Certificate of Conformance
for Weighing and Measuring Devices

For:

Retail Motor Fuel Dispenser (RMFD)
Compressed Natural Gas (CNG), Electronic Computing
Models: L-CNG Series
Maximum Total Price Capacity: \$9999.99
Maximum Total Volume Capacity: 999.999*
Maximum Unit Price: \$9.999
Accuracy Class: 2.0 (Handbook 44, Mass Flow Meters Code)


Submitted By:

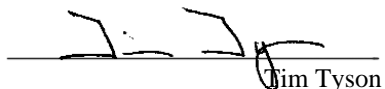
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Standard Features and Options

- Compac KG80 Mass Flow Meter with ¾" Inlet
- Compac C4000 Processor Board/Electronic Computing Head
- Backlit 7 Segment Liquid Crystal Display
- Legend Dispenser Flow from 2 lb/min (1.0 kg/min) to 194 lb/min (88 kg/min)
- Laser Dispenser Flow from 2 lb/min (1.0kg/min) to 194 lb/min (88 kg/min)
- Design Pressure: maximum 5 000 PSI
- Fill Pressure: 3600 and 3000 PSI
- Single or Dual Hose on Each Dispenser with Varying Combinations of Flow as Stated Above (see model designation)
- Temperature Compensation Fill
- Gasoline Gallon Equivalent (GGE) or Gasoline Liter Equivalent (GLE)

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.


Kurt Floren
Chairman, NCWM, Inc.


Jim Tyson
Chairman, National Type Evaluation Program Committee
Issued: February 16, 2012

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**Compac Industries, Ltd.**

Retail Motor Fuel Dispenser / L-CNG Series

Application: For use as a stand-alone dispenser in retail motor fuel service stations measuring CNG as an automotive fuel.

Identification: The identification plate is located inside the cabinet just below the display.

Sealing: Calibration is controlled through a K-Factor switch. Configuration is controlled by a software (EPROM) chip and a memory chip that are configured at the factory. All are located on the C4000 processor board (see Fig. 4) in an enclosed housing within the cabinet (see Fig. 3). A wire security seal is threaded through holes in the cover and housing, attaching the cover to the housing (see Fig. 2). The measuring sensor has no adjustable components that require the use of a security seal.

Operation: The software version may be viewed by using the parameter switch located on the C4000 processor board. Idle the dispenser by placing the nozzle in its holster. Press and release the parameter switch once or until a segmented **P** is displayed in the total price display.

The system enters a diagnostic mode whereby it displays the software program version and performs a display segment test. It cycles through this program for approximately 10 seconds before reverting to the normal display. Program version data will display a segmented **P** in the total price and **XXXXXX** in the GGE (GLE) display, where **XXXXXX** is the abbreviated program version number. For example, software version HIA29.26.0CNG will display segments 29260.

To read dispenser totals, quickly press the start button or nozzle switch five times on the side of the display you wish to view the totals. The value occupies eight digits, the two most significant digits displayed in the total price, then wraps to the GGE (GLE) display showing the six least significant digits.

Total dollars will be displayed first for 10 seconds, showing a segmented **d** followed by the 8 digit total. Total GGE (GLE) will be displayed next for 10 seconds, showing a segmented **L** followed by the 8 digit total.

Dual dispenser totals are differentiated by an A or B in the unit price display.

To display the mass after a delivery, press the parameter switch only once and release. The display will follow the sequence:

1. Display the program number
2. Display side A mass (lb or kg)
3. Display side B mass (lb or kg)
4. Performs a display segment test
5. Repeats steps 1 to 4
6. Display is restored to displaying the last delivery

Test Conditions: The model Laser L-CNGD80-15 dual hose dispenser, with the model KG 80 mass flow meter and C 4000 electronic head was submitted for evaluation at the manufacturer's facility. The emphasis of the evaluation was on device design, operation, performance, receipt format, and permanence. Initial tests were conducted by dispensing over 20 drafts at flows from 5 lb/min. up to 155 lb/min. on the A side hose. In addition, the B side hose was performance tested by dispensing several drafts ranging from 2 lb/min. up to 33 lb/min. The device was sealed and retested after approximately 90 days and 1 900 pounds of CNG throughput.

Evaluated By: N. Ingram (CA)

Type Evaluation Criteria Used: NIST, Handbook 44: Specifications, Tolerances and Other Technical Requirements for Weighing and Measuring Devices, 2012. NCWM, Publication 14: Measuring Devices, 2011.

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)



Compac Industries, Ltd.

Retail Motor Fuel Dispenser / L-CNG Series

Examples of Device:



Fig. 1 Legend and Laser CNG Dispensers



Fig. 2 Sealing of C4000 Processor Cover

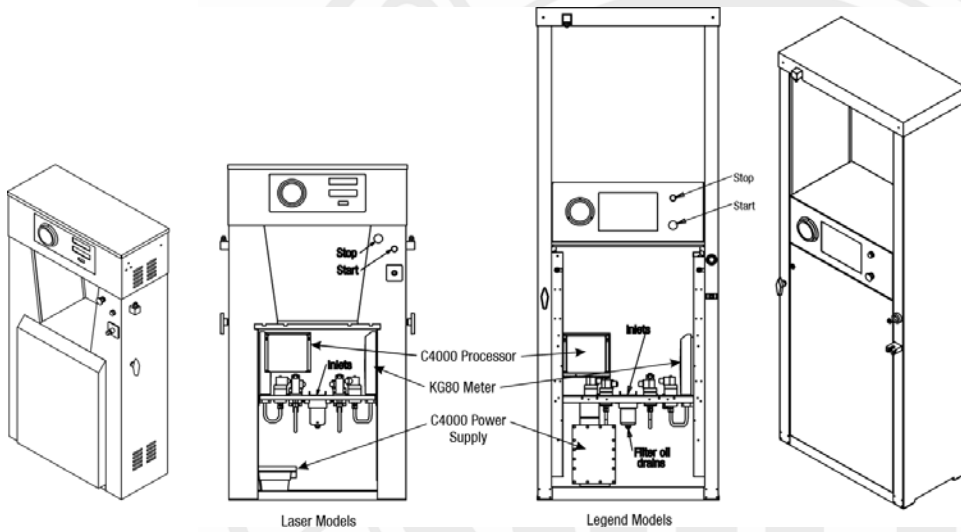


Fig. 3 Main Components of Laser and Legend Models

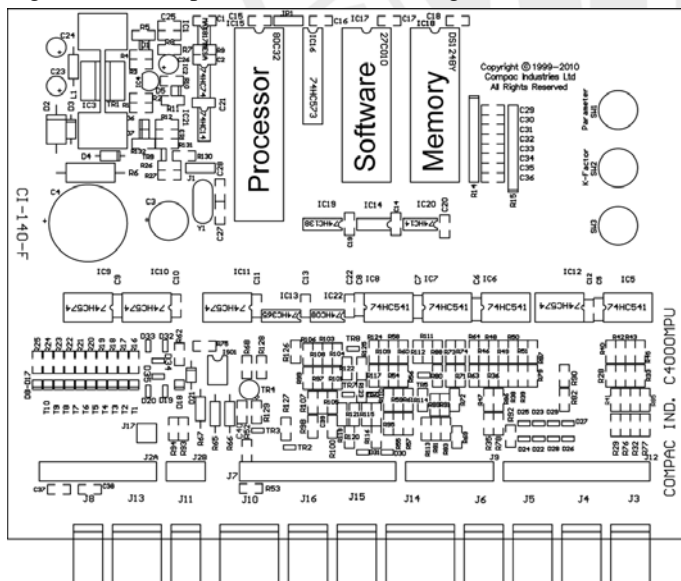


Fig. 4 C4000 Processor Board