

(2926)

BIS

Department for
Business Innovation
& Skills

III(2)

Certificate

Pursuant to section 12 of the Weights and Measures Act 1985

Certification No 2926

Valid Until 30 April 2022

In accordance with the provisions of section 12 of the Weights and Measures Act 1985, the Secretary of State for Business, Innovation and Skills hereby certifies as suitable for use for trade a pattern of a liquid measuring instrument, as described in the descriptive annex to this Certificate, and having the following characteristics:-

A spirit-measuring instrument for use in dispensing intoxicating liquor in fixed quantities of either 25 ml or 35 ml. The instrument uses a bottle fed reservoir to deliver liquor to the dispensing spout via a flow meter. Correct measure for each product is achieved by means of precise control of the flow meter. A dispense is initiated by the momentary depression of a button situated on the unit keypad.

Note: This certificate relates to the suitability of the equipment for use for trade only in respect of its metrological characteristics. It does not constitute or imply any guarantee as to the safety of the equipment in use for trade or otherwise.

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Signatory: P R Dixon
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Issue Date: 01 May 2012
Valid Until: 30 April 2022
Reference No: TS0501/0004

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1 INTRODUCTION

This liquid measuring instrument is for use in dispensing intoxicating liquor (e.g. Vodka) in fixed quantities of either 25 ml or 35 ml. The instrument is supplied from a reservoir fed by inverted bottles.

The model designation for this instrument is the iFont.

The instrument has two dispense points. Control of the delivered quantity is achieved by an electrically powered pump dispensing the spirit through two separate flow meters. The flow is controlled by solenoid valves.

A dispense is activated by pressing a push button on the membrane keypad of the control panel, situated at the base of the dispense font which initiates the cycle and thereby the delivery of the measure.

2 CONSTRUCTION

2.1 General

2.1.1 The flow meter and solenoid valves are contained within the base unit, a cable from the base unit connects to the control box on the dispense font. This cable allows the control box to send a signal to open the solenoid valve(s) and initiate the pouring cycle. A general view is shown in Figure 1, and a schematic diagram of the system is shown in Figure 2.

2.1.2 The device is designed to be installed vertically onto a flat surface using the integrated screw clamp. The base unit is designed to be positioned underneath. A pipe with a diameter 6 mm and a length not exceeding 5 m, connects the base unit to the dispense font.

2.1.3 The base unit contains a cooling system and a spirit reservoir. There are two connecting docks for insertion of product bottles which are connected via a unique screw-on valve. These are positioned to allow product to drain into the reservoir and keep at a specific level.

2.2 Mechanical

2.2.1 The base unit houses the spirit reservoir, compressor, cooling system reservoir, pumps, solenoid valves, a “low level” float switch and flow meters. There is approximately 8m of 6mm diameter pipe inside the cooling system.

2.3 Electrical

2.3.1 The base unit is powered by a 240V AC supply.

2.3.2 The control box is powered by a 12V DC supply from the base unit.

2.4 Electronics

2.4.1 The control box, which comprises of the main CPU and control circuit, has inputs from:

- the flow meters
- the power supply
- the solenoid valve, and
- the float switch.

The keypad membrane has buttons:

- for Left spout dispense
- for Right spout dispense
- labelled 'A' and 'B', used for various program functions

A central display panel indicates information such as:

- Quantity of programmed dispense
- Password activation
- Daily and total dispense logs.
- System or component error messages.

2.4.2 The flow meter is manufactured by WWB, model number MAC 415.

2.5 Interlocks

2.5.1 The following interlocks will prevent the system from initiating a dispense:

- Liquid level too low (insufficient liquid for a correct dispense) prior to a dispense request.
- The same dispense button will not re-activate until previous delivery has completed.
- Left and Right spout dispense buttons cannot be activated at the same time.
- Pump failure.
- Solenoid failure, "error" on display
- Flow meter failure, "error" on display.

2.5.2 The liquid float sensor is positioned such that there is still sufficient liquid in the reservoir to prevent an under-dispense. To ensure only complete volumes are dispensed, the reservoir level is checked by the level float. If a low level is detected during a cycle, that cycle is allowed to finish but any further dispensing is prevented until the reservoir is re-filled.

2.6 Legends

2.6.1 The instrument shall bear the following legends:

- The number of the certificate of approval preceded by the words 'Certification No', or 'Cert No', legibly and durably marked: **2926**
- The nominal quantity conspicuously and legibly displayed in plain block characters: **25 ml or 35ml**
- The name of its manufacturer or supplier, legibly and durably marked: **Lancer Europe**

The above will be in the form of an adhesive label, Figure 8, which shall be destroyed/voided if removed. The nominal quantity shall also be visible on the keypad display, when ready to dispense.

2.7 Securing (sealing)

2.7.1 The following items are to be secured with a tamper evident seal, Figure 8:

- Keypad controller.

2.7.2 The enclosure of the keypad cannot be opened, without first removing the 'VOID' stickers. These are uniquely marked with the manufacturer's identifications.

3 OPERATION

3.1 System set-up

3.1.1 The accuracy of dispense is achieved through software which is programmed to start the pump, open the solenoid cut-off valve and to count pulses generated by the flowmeter before actuating the solenoid cut off valve and cessation of the internal pump to halt the flow of liquid.

3.2 Dispensing

3.2.1 When the reservoir is full and ready to dispense, the keypad display will indicate the specific delivery volume that has been programmed, i.e. either '25ml' or '35ml'.

3.2.2 The dispense button is pressed momentarily, to initiate the dispense. The solenoid valve is activated, in tandem with the pump.

3.2.3 When the correct number of pulses have been detected the solenoid valve closes and the pump stops.

3.2.4 There is a small amount of liquid held in the spout by the meniscus effect. To further prevent any loss when not in the process of a dispense, there is a one-way check valve placed on the inlet pipe at the base of the font unit.

4 AUTHORITY ALTERNATIVES

4.1 Having a dispense font with a single spout, see Figure 6, which includes the following:

- A single bottle reservoir with no integrated cooling system, Figure 7.
- Keypad controller which is identical to the dual font keypad controller, where the left and right dispense buttons are configured to initiate a single dispense, i.e. either 25ml or 35ml.

The interlocks described in section 2.5.1 shall apply.

5 RECOMMENDED TESTS

In addition to those tests specified in Regulations the following tests may be performed to check for conformity to the pattern.

5.1 Accuracy

5.1.1 Accuracy tests shall be carried out to verify that the amount dispensed from each measure is within the specified accuracy limits.

Note: For verification purposes, water may not be suitable. To avoid contamination of the instrument before delivery to the customer, tests may be performed using vodka.

5.2 Interlocks

5.2.1 Verify the operation of the interlocks described in Section 2.5.

5.3 Labels and markings

5.3.1 Verify that the label bearing the certificate number; nominal quantity and the name of the manufacturer, described in Section 2.6, is present on the instrument.

5.4 Securing

5.4.1 On completion of tests, verify that the securing described in Section 2.7 is in place.

6 ILLUSTRATIONS

Figure 1	General views of unit
Figure 2	Schematic diagram of the system
Figure 3	Typical Top view of dual/single spout keypad
Figure 4	Typical Underside view of dual spout keypad with connectors.
Figure 5	Dual spout base unit.
Figure 6	Authorised alternative views
Figure 7	Example of 'VOID' if removed stickers.

CERTIFICATE HISTORY

CERTIFICATE NUMBER	DATE	DESCRIPTION
2926	01 May 2012	Certificate first issued.



Back view



Front view

Figure 1 General view of font

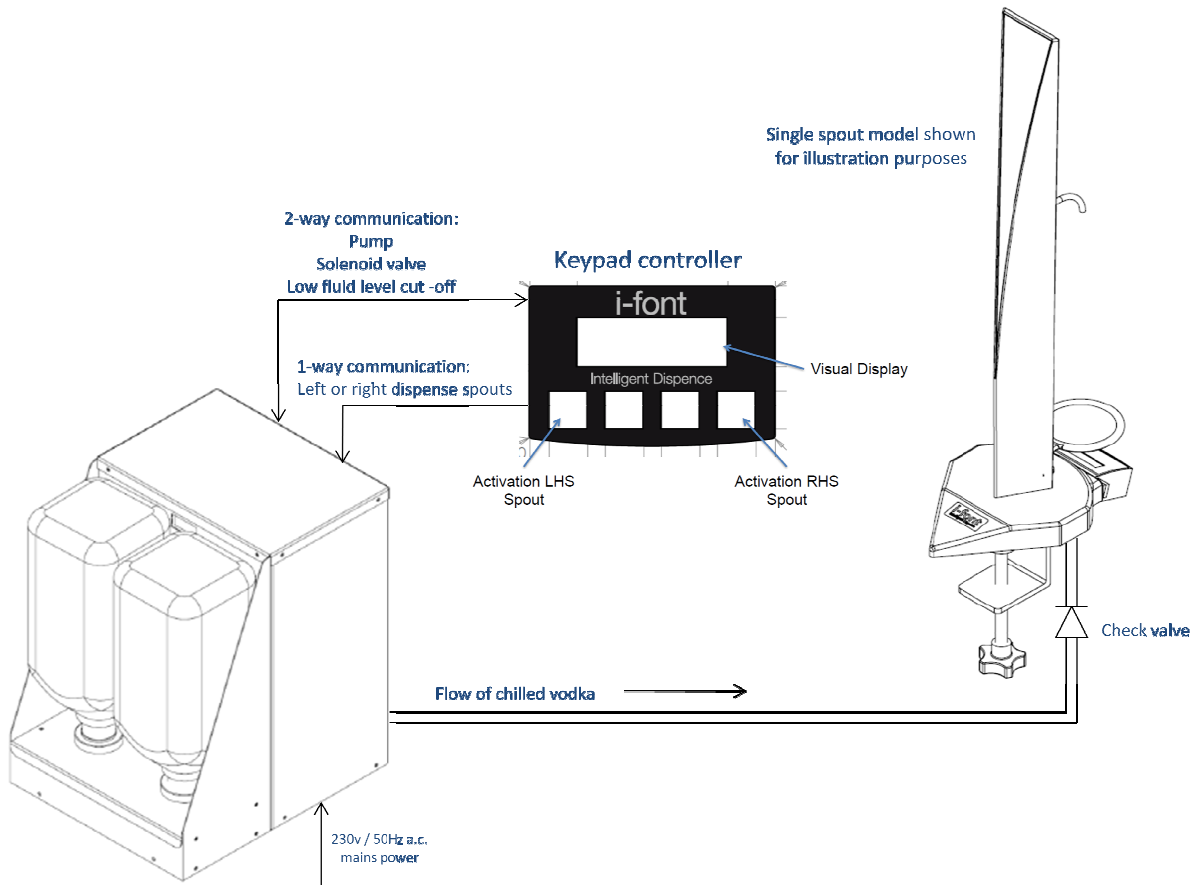


Figure 2 - Schematic diagram of the system

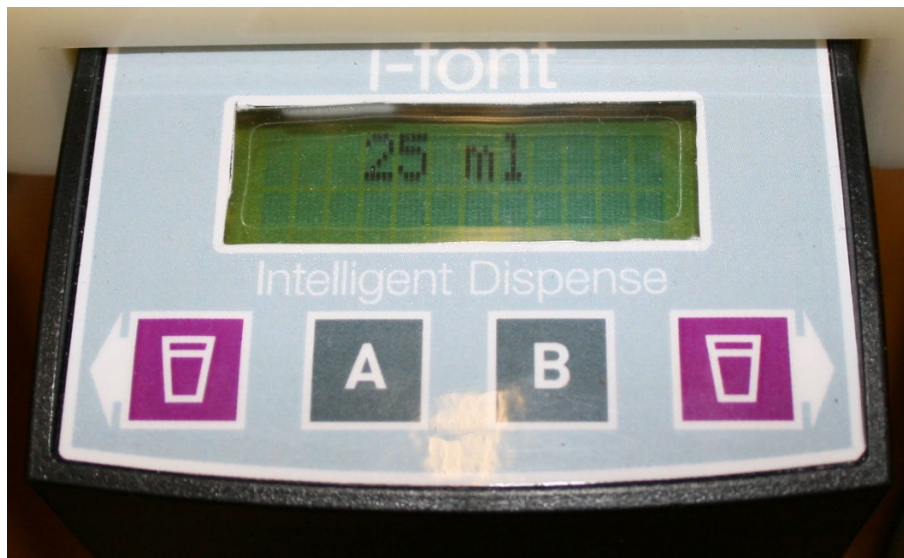


Figure 3 Typical Top view of dual/single spout keypad

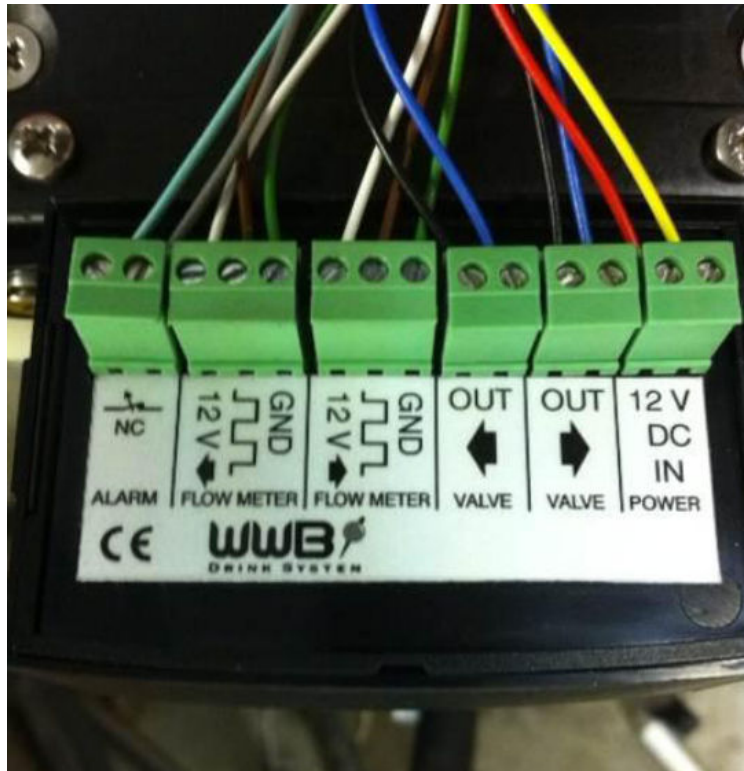


Figure 4 Typical Underside view of dual spout keypad with connectors



Figure 5 Dual spout base unit



Alternative single spout general view



Alternative single spout base unit

Figure 6 Authorised alternative views

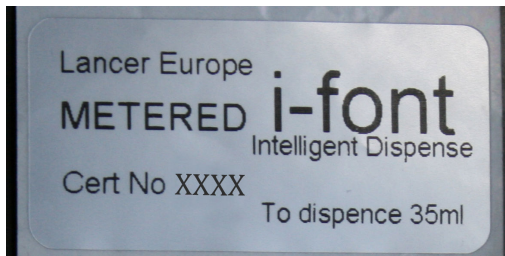


Figure 7 Example of 'VOID' if removed stickers