5/6S/8
5 December 2003

Australian Government

National Standards Commission

12 Lyonpark Road, North Ryde NSW 2113 Australia

Cancellation

Certificate of Approval No 5/6S/8

This is to certify that the approval for use for trade granted in respect of the

Bezzera Automation Model EUROMASTER Remote-storage Spirit Dispenser

submitted by EMSTEK Pty Ltd
D/50 Rosebery Avenue
Rosebery NSW 2018

has been cancelled in respect of new instruments as from 1 January 2004.

Signed by a person authorised under Regulation 60 of the National Measurement Regulations 1999 to exercise the powers and functions of the Commission under this Regulation.

National Standards Commission

Certificate of Approval

No 5/6S/8

Issued under Regulation 9
of the
National Measurement (Patterns of Measuring Instruments) Regulations

This is to certify that an approval for use for trade has been granted in respect of the

Bezzera Automation Model EUROMASTER Remote-storage Spirit Dispenser

submitted by EMSTEK Pty Ltd
D/50 Rosebery Avenue
Rosebery NSW 2018.

NOTE: This Certificate relates to the suitability of the pattern of the instrument for use for trade only in respect of its metrological characteristics. This Certificate does not constitute or imply any guarantee of compliance by the manufacturer or any other person with any requirements regarding safety.

CONDITIONS OF APPROVAL

This approval becomes subject to review on 1 March 2002, and then every 5 years thereafter.

Instruments purporting to comply with this approval shall be marked NSC No 5/6S/8 and only by persons authorised by the submittor.

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It is the submittor's responsibility to ensure that all instruments marked with this approval number are constructed as described in the documentation lodged with the Commission and with the relevant Certificate of Approval and Technical Schedule. Failure to comply with this Condition may attract penalties under Section 19B of the National Measurement Act and may result in cancellation or withdrawal of the approval, in accordance with the Commission's Document 106.

The Commission reserves the right to examine any instrument or component of an instrument purporting to comply with this approval.

DESCRIPTIVE ADVICE

Pattern: approved 13 February 1997

- A Bezzera Automation model EUROMASTER remote-storage spirit dispenser.

Variant approved 13 February 1997

1. With one or more model DRINKOMAT lever-activated electro-mechanical bottle-mounted spirit dispensers.

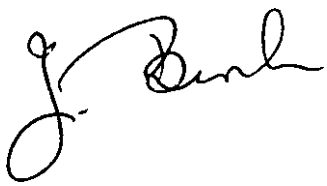
Technical Schedule No 5/6S/8 describes the pattern and variant 1.

FILING ADVICE

The documentation for this approval comprises:

Certificate of Approval No 5/6S/8 dated 13 November 1997
Technical Schedule No 5/6S/8 dated 13 November 1997 (including Test Procedure)
Figures 1 to 6 dated 13 November 1997

Signed and sealed by a person authorised under Regulation 9 of the National Measurement (Patterns of Measuring Instruments) Regulations to exercise the powers and functions of the Commission under this Regulation.



TECHNICAL SCHEDULE No 5/6S/8

Pattern: Bezzera Automation Model EUROMASTER Remote-storage Spirit Dispenser.

Submittor: EMSTEK Pty Ltd
D/50 Rosebery Avenue
Rosebery NSW 2018.

1. Description of Pattern

A Bezzera Automation model EUROMASTER computer controlled remote-storage spirit dispenser (Figure 1) approved to deliver brandy (including cognac and armagnac), gin, rum, vodka or whisky (whiskey).

1.1 The System

The equipment integrates several functions besides the dispensing of spirits, such as the dispensing of beer, wine and non-alcoholic beverages. These functions are not the subject of this approval.

The spirit dispensing system (Figure 2) is approved to deliver quantities of 15, 30 and 60 mL and consists of:

- Bulk spirit supply tanks, one or more connected in parallel for each spirit, pressurised from a bottled gas supply which maintains a pressure between 150 and 550 kPa. Each supply tank is fitted with a non-return valve which prevents spirit from returning to the tank.
- Spirit supply lines, one for each supply tank, of at least 6 mm internal diameter and 2 m in length, fitted with a dry-break coupling for connection to the bulk spirit supply non-return valve and fitted with a gas detection/ bleeder (Figure 3).
- Electronic cut-off devices, one for each supply tank, monitor the gas detection/liquid level probe installed in the spirit supply line and interact with the on-board computer to prevent a delivery if gas is present or the liquid supply is insufficient. The cut-off device communicates with the computer and, by means of an LED display visible to the operator, indicates the following states: Power On, Empty or Full.
- DIGMESA Type FHK turbine flowmeters, one for each spirit, and which generate a minimum of 2300 pulses/litre (Figure 4).

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- An operating unit (Figure 1) which consists of a cabinet having a front panel with various push-buttons and an LED display. The operating unit contains a modular on-board computer and one or more O.D.L. S.R.L. Type PM-3167 dispensing heads.

  The dispensing heads may incorporate up to three independent spirit delivery units, each comprised of a solenoid-operated valve, a flow rate control adjustment screw and a delivery outlet spout.

  The modular on-board computer controls the dispensing operation and is connected to a central control computer (personal computer). Calibration parameters are downloaded from the central control computer into the on-board computer.

- An LED purchaser's indicator located in a position clearly visible to the purchaser (Figure 1) and which shows the type of spirit being dispensed and the pour size.
- An optional printer for printing the calibration data and log files and optional receipts for the purchaser.

1.2 Operation

A delivery cycle is initiated by pressing a button in the front panel of the operating unit. The on-board computer receives this signal and opens the solenoid-operated valve at the dispensing head. Pressurised spirit from the supply tank starts to flow in the supply lines causing the rotation of the rotor in the flowmeter. The computer counts the pulses produced by the flowmeter until a pre-selected number of pulses is reached. When the correct number of pulses is detected, the computer closes the valve and the delivery is complete.

The size of the pour is determined by the number of pulses downloaded from the central control computer to the on-board computer during the calibration process. If the spirit supply in the supply line or tank is insufficient for a full delivery, the electronic cut-off device transmits the information to the on-board computer and prevents any delivery.

A delivery once started cannot be stopped by the operator and all buttons corresponding to all the spirits are rendered inoperative throughout this cycle. A further delivery cannot be started until the cycle is completed.

Note: Under normal operation the supply line is full at all times. The LED display at the operating unit alerts the operator when the supply tank is nearly empty and must be replenished.

1.3 Markings

(a) Instruments are marked with the following, together in a prominent position:

Manufacturer's mark, or name written in full
Serial number of the instrument
Pattern approval mark for the instrument NSC No 5/6S/8

(b) In addition the spirit being dispensed and the pour size, expressed in mL is clearly displayed on the purchaser's indicator and the LED display on the front panel of the operating unit and is printed on the optional purchaser's receipt. Also each supply tank, supply line and flowmeter are marked with the type of spirit they are supplying.

1.4 Verification/Certification Provision

Provision is made for the application of a verification/certification mark.

1.5 Sealing Provision

The calibration adjustment is secured by software password. Access to the calibration function is evident by automatic update of the relevant log and data files, which can be viewed through the central control computer.

2. Description of Variant 1

With one or more model DRINKOMAT lever-activated electro-mechanical bottle-mounted spirit dispensers (Figures 5 and 6) for delivery of 15 or 30 mL of any spirit approved for the pattern.

It consists of a measuring chamber with an electronically-controlled switch and solenoid-operated valving mechanism. The instrument incorporates a bottle lock device which interlocks the bottle to the dispenser to prevent any spillage when the bottle is positioned.

The bottle lock device is fitted with two conductivity probes, which sense the spirit level and prevent delivery via connection to the central control computer, if the spirit supply is insufficient to fill the measuring chamber.

2.1 Operation

A delivery cycle is initiated by an upward push on the operating lever, whereupon a full quantity of spirit is measured. When the lever is pushed, the mechanical movement of various components cause the electronic switch to activate the solenoid which closes the intake valve and opens the delivery valve.

Once the delivery is complete, the solenoid closes the delivery valve and opens the intake valve, allowing the replenishment of the measuring chamber. The solenoid activates both intake and delivery and only one of these operations can occur at any time; this as well as built-in interlocks, ensures that a delivery, once started, cannot be stopped by the operator until completed and that the next delivery cannot be started until the measuring chamber is full.

2.2 Markings

The measuring chamber of the instrument is clearly and permanently marked “15 or 30 mL”. In addition, the instrument is clearly marked, either on a permanently attached nameplate or, as part of the instrument with the following information:

Manufacturer’s mark, or name written in full
Serial number of the instrument
Pattern approval mark for the instrument NSC No 5/6S/8
Quantity .... mL

2.3 Verification/Certification Provision

Provision is made on the cover of the instrument for a verification/certification mark to be applied by means of a destructible label.

2.4 Sealing Provision

Provision is made for sealing the calibration adjustment by means of destructable labels and by resin filling the screw cavities in the instrument cover.

TEST PROCEDURE

Instruments should be tested in conjunction with any relevant tests specified in the Inspector's Handbook.

Maximum Permissible Error at Verification/Certification

The maximum permissible error applied during a verification/certification test is:

±0.6 mL for deliveries of 15 mL;
±1.0 mL for deliveries of 30 mL; and
±1.5 mL for deliveries of 60 mL.

1. Delivery Completion Test

Whilst a delivery is being made, press the same operating button (remote-storage) or push the same lever (bottle-mounted) a second time; no further delivery should take place until the initial delivery is completed.

2. Low-level Cut-out Test

(a) Remote-Storage Dispenser

Select the supply line corresponding to the spirit to be tested, disconnect it from the pressurised supply tank and temporarily connect the supply line to a modified non-return valve provided so as to introduce an air bubble approximately 2 cm long into the line.

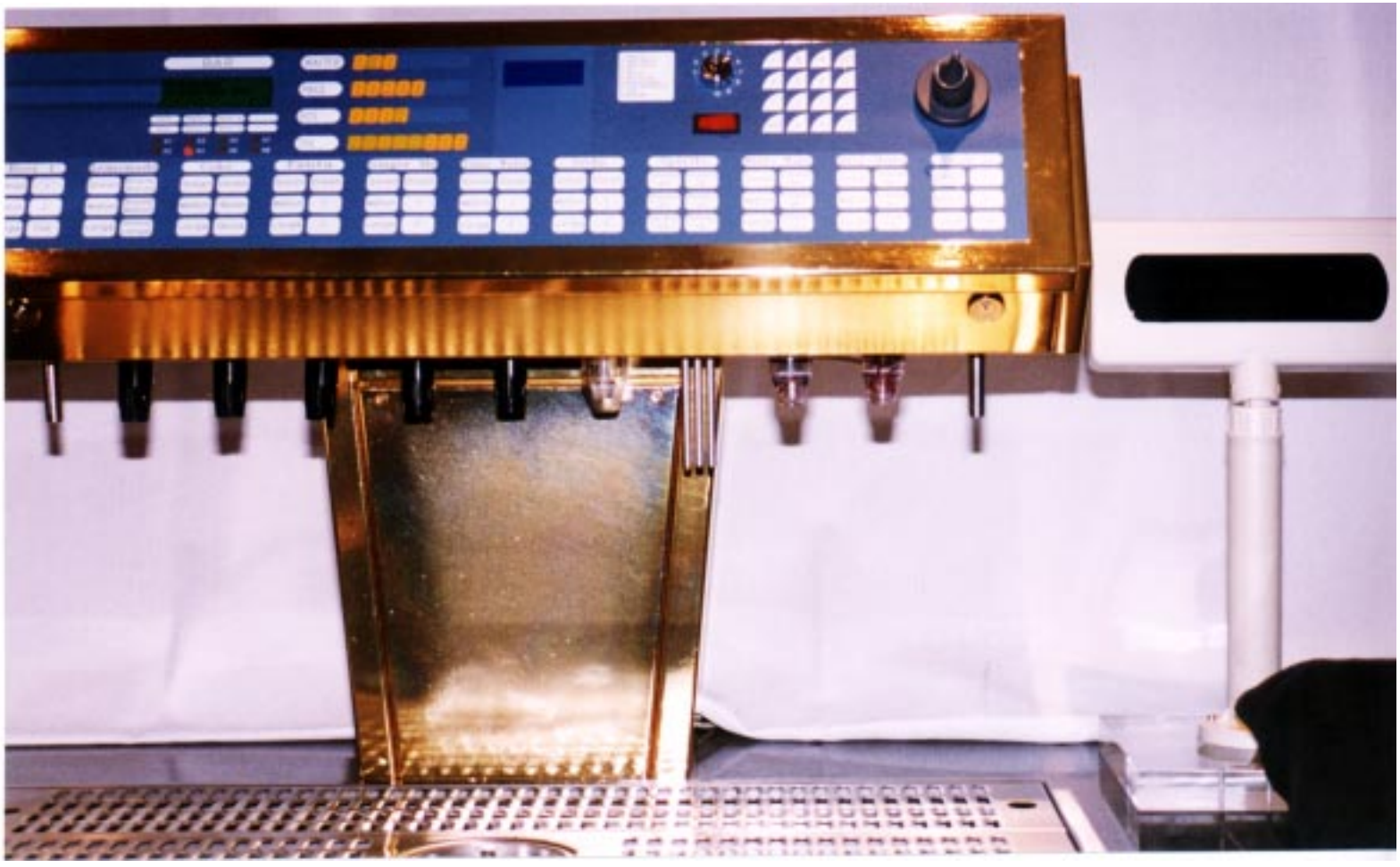
Reconnect the supply line.

Dispense deliveries continuously until the low-level cut-out device causes the instrument to stop operating. Check that all deliveries made are within the maximum permissible error.

(b) Bottle-mounted Dispenser

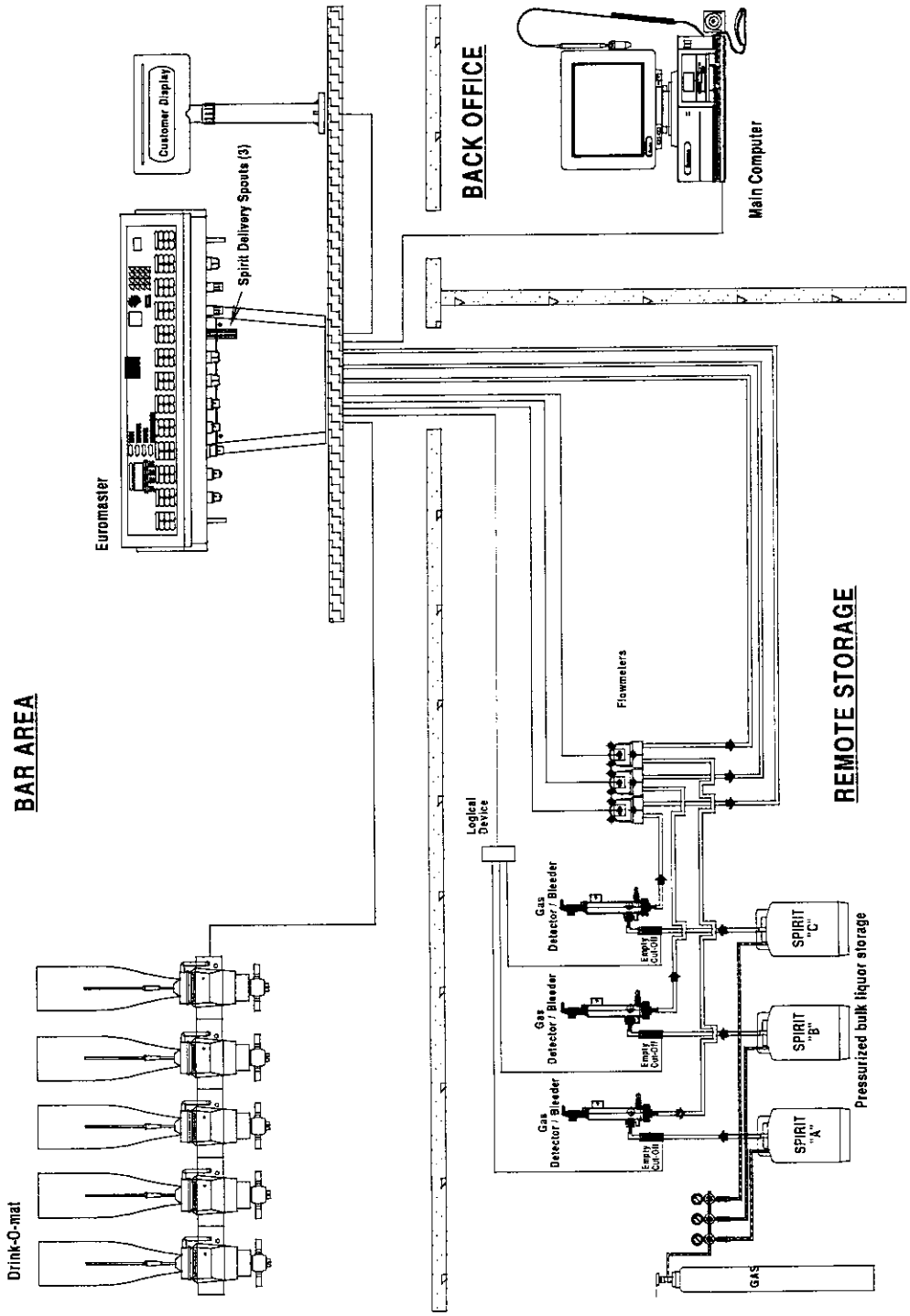
Dispense deliveries continuously until the low-level cut-out device causes the delivery lever to be disabled and no further deliveries are possible. Check that the last delivery made is within the maximum permissible error.

FIGURE 5/6S/8 - 1



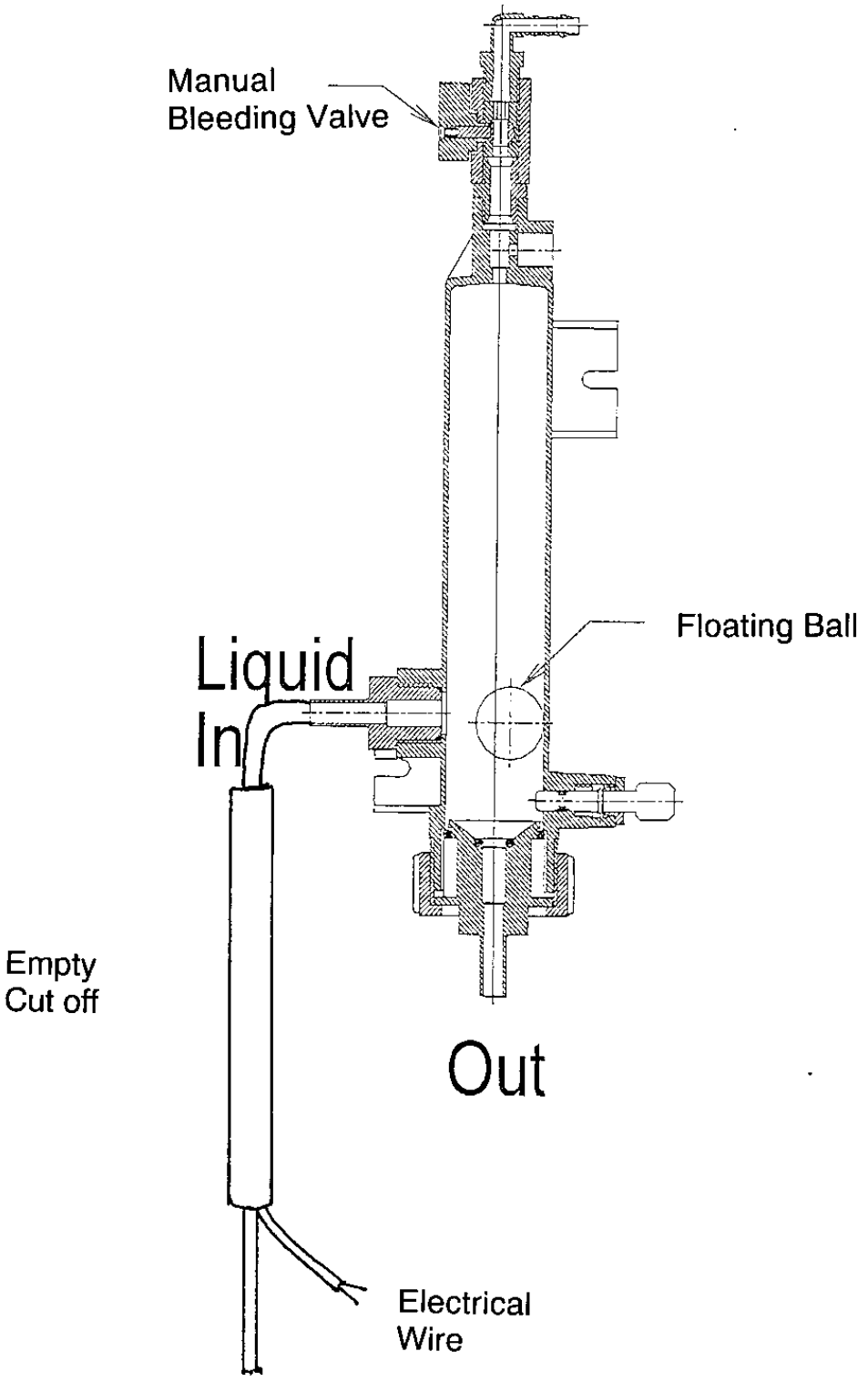
Bezzera Automation Model EUROMASTER Remote-storage Spirit Dispenser

FIGURE 5/6S/8 - 2



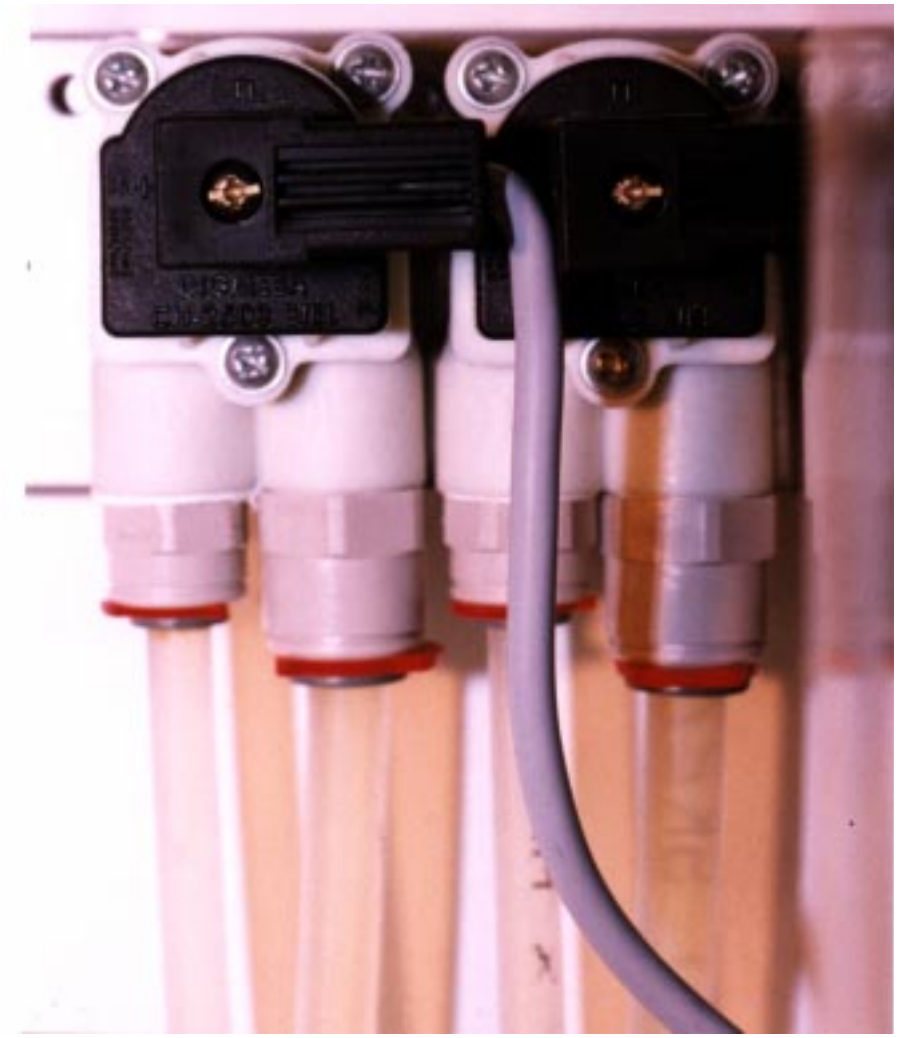
Model EUROMASTER Remote-storage Spirit Dispenser

FIGURE 5/6S/8 - 3



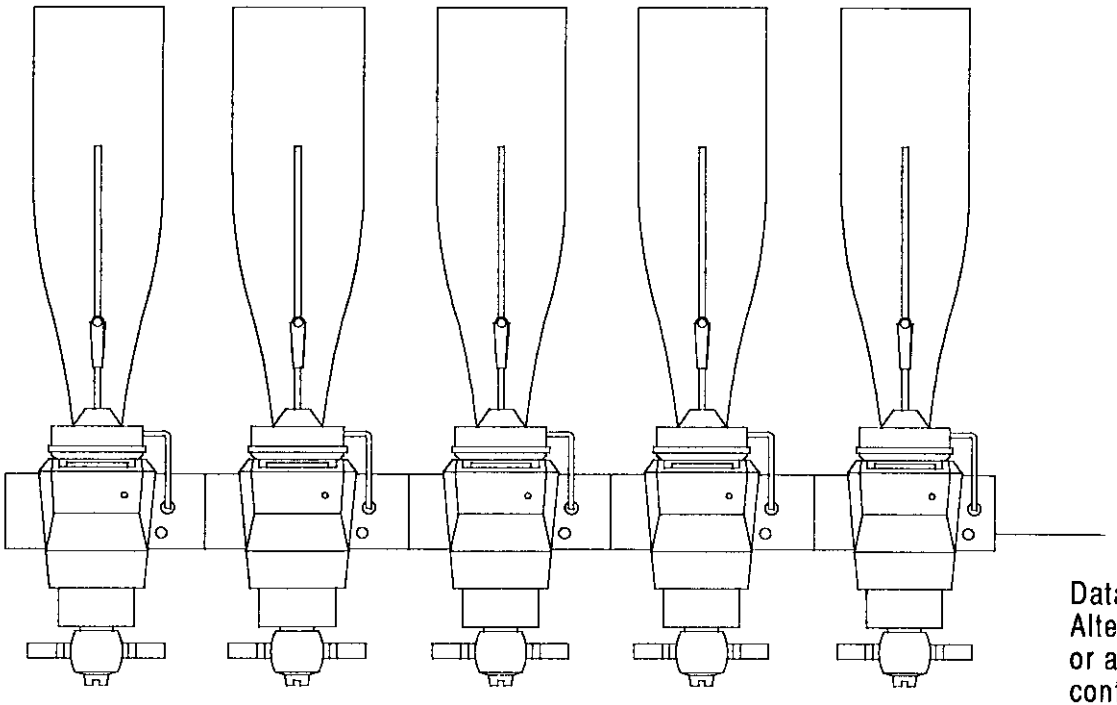
Gas Bleeder/detector

FIGURE 5/6S/8 - 4



DIGMESA Type FHK Turbine Flowmeter

FIGURE 5/6S/8 - 5



Model DRINKOMAT Bottle-mounted Spirit Dispenser

FIGURE 5/6S/8 - 6

Model DRINKOMAT Bottle-mounted Spirit Dispenser