



5/6E/8
24/8/87

NATIONAL STANDARDS COMMISSION
NATIONAL MEASUREMENT (PATTERNS OF INSTRUMENTS) REGULATIONS

REGULATION 9

CERTIFICATE OF APPROVAL No 5/6E/8

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

Vortex Model E83s-02RP Milk Flowmeter

submitted by Foxboro Pty Ltd
Maroondah Highway
Lilydale Vic 3140.

Conditions of Approval

This approval is subject to review on or after 1/7/89.

This approval expires in respect of new instruments on 1/7/90.

Instruments purporting to comply with this approval shall be marked NSC No 5/6E/8.

This approval may be withdrawn if instruments are constructed other than as described in the drawings and specifications lodged with the Commission.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificates Nos S1/0 and/or S2/0, as appropriate.

Signed

Executive Director

Descriptive Advice

Pattern: approved 19/6/84

- Vortex model E83s-02RP flowmeter for use in milk metering systems.

Technical Schedule No 5/6E/8 describes the pattern.

Variant: approved 4/5/87

1. Model E83s-03RP milk flowmeter.

Technical Schedule No 5/6E/8 Variation No 1 describes variant 1.

Filing Advice

Certificate of Approval No 5/6E/8 dated 30/11/84 is superseded by this Certificate and may be destroyed.

The documentation for this approval now comprises:

Certificate of Approval No 5/6E/8 dated 24/8/87
Technical Schedule No 5/6E/8 dated 30/11/84
Technical Schedule No 5/6E/8 Variation No 1 dated 24/8/87
Test Procedure No 5/6E/8 dated 30/11/84
Figures 1 and 2 dated 30/11/84



NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 5/6E/8

Pattern: Vortex Model E83s-02RP Milk Flowmeter

Submitter: Foxboro Pty Ltd
Maroondah Highway
Lilydale, Victoria, 3140

1. Description of Pattern

Vortex model E83s-02RP milk flowmeter (Figure 1(a)) with an inbuilt amplifier which produces a square wave pulse rate signal proportional to the flow rate. The meter is located in a straight unobstructed pipeline (Figure 2) and the signal output may be connected to a Foxboro 99D series totaliser/indicator (Figure 1(b)).

The system is approved for use with maximum and minimum flow rates of 648 L/min and 240 L/min respectively, and with a minimum delivery of 5000 litres.

1.1 System

The system includes:

- (i) A flow straightener installed not less than 2 m upstream of the meter.
- (ii) A pump located upstream of the flow-straightener.
- (iii) Some means of preventing reverse flow and syphoning.
- (iv) A strainer may be located downstream of the pump.

1.2 Marking

Instruments are marked with the following data, together in one location:

Manufacturers name or mark	
Meter model number	E83s-02RP
Meter serial number	
NSC approval number	NSC No 5/6E/8
Maximum flow rate	648 L/min
Minimum flow rate	240 L/min
Nominal flow rate (when flow rate is within $\pm 5\%$ of nominal)	
Minimum delivery	5000 L
Priming quantity (refer Test Procedure)	

1.3 Sealing and Verification

Provision shall be made for sealing of the mechanical calibration device.

Provision shall be made for the application of a verification mark.

TEST PROCEDURE No 5/6E/8

Complete one or more deliveries and check the volume indicator against the actual delivered volume. The results shall be within the maximum permissible errors as set out in Document 118.

The instrument is to be tested with milk.

1. Empty Compartment Test

It will be necessary to allow the supply tank to run dry during a test delivery; then stop the pump motor and refill or change the supply tank, then start the pump motor to allow the delivery into the proving measure to continue.

Note: This test should only be carried out where it could be expected that a tank will be completely emptied during a normal day's delivery.

2. Syphoning Test

To test for syphoning or gravitational feed, stop the pump during a delivery and observe that flow of milk has stopped.

Note: The quantity required to prime the system shall be determined at verification and shall be then stamped on the nameplate.

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NATIONAL STANDARDS COMMISSION

TECHNICAL SCHEDULE No 5/6E/8

VARIATION No 1

Pattern: Vortex Model E83s-02RP Milk Flowmeter

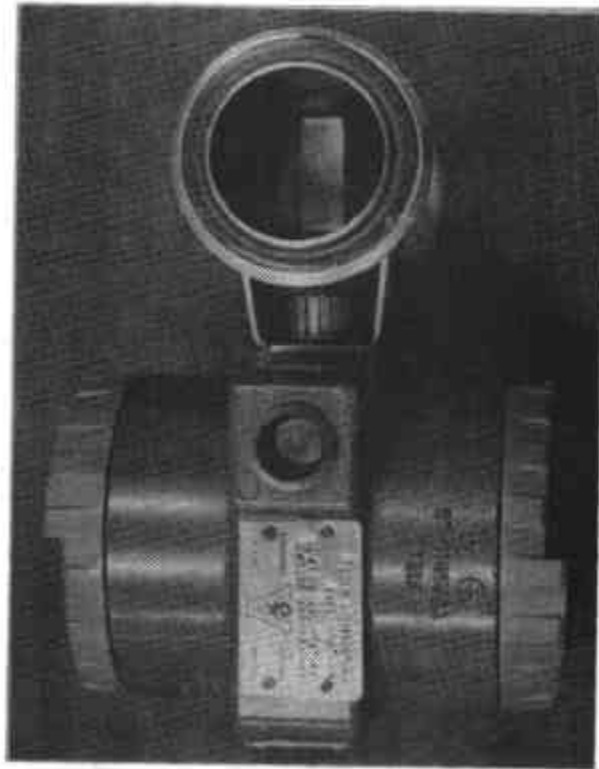
Submittor: Foxboro Pty Ltd
Maroondah Highway
Lilydale Vic 31140

1. Description of Variant 1

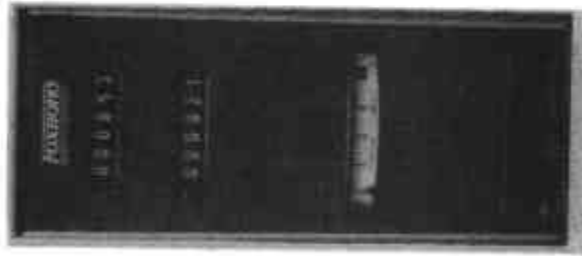
Vortex model E83s-03RP milk flowmeter maintaining the same characteristics as the pattern and interfaced with a Foxboro model 75 TUA Flowexpert computing totaliser/indicator using touch panel keyboards and alphanumeric displays.

The maximum and minimum flow rates are 1500 L/min and 450 L/min respectively.

FIGURE 5/6E/8 - 1

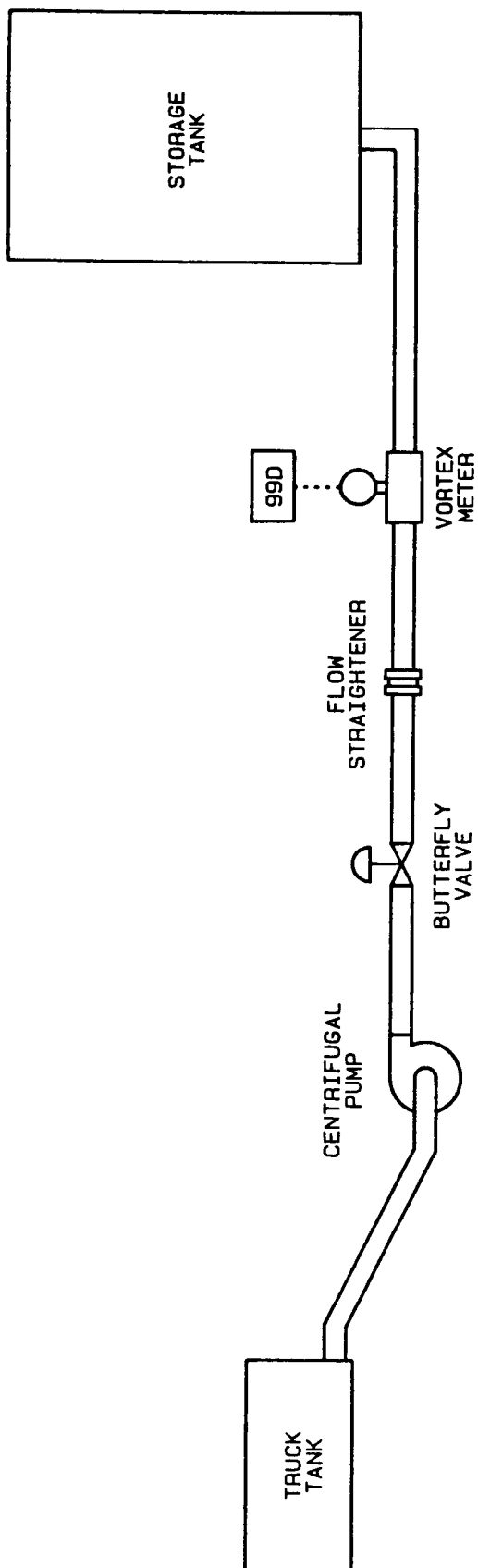


(a) Vortex Meter



(b) Totoliser/Indicator

FIGURE 5/6E/8 - 2



Vortex Flowmetering System