National Standards Commission

Supplementary Certificate of Approval

No S222

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

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

Production Engineering Model EFPEC Driveway Flowmeter Control Console

submitted by Production Engineering (Aust.) Pty Ltd
Suite 403
270 Pacific Highway
Crows Nest NSW 2065.

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

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CONDITIONS OF APPROVAL

This approval is subject to review on or after 1/12/91.
This approval expires in respect of new instruments on 1/12/92.

Instruments purporting to comply with this approval shall be marked NSC No S222 and only by persons authorised by the submittor.

Instruments incorporating a component purporting to comply with this approval shall be marked NSC No S222 in addition to the approval number of the instrument.

It is the submittor's responsibility to ensure that all instruments marked with th approval number are constructed as described in the drawings and specifications 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.

Auxiliary devices used with this instrument shall comply with the requirements of General Supplementary Certificate No S1/0/A.

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

Special:

Consoles may only be used for central unit price setting of driveway flowmeters which have been Commission-approved for use with that facility.

DESCRIPTIVE ADVICE

Pattern: approved 1/12/86

. A Production Engineering model EFPEC driveway flowmeter control console.

Technical Schedule No S222 describes the pattern.

Variant: approved 11/9/87

1. For use with Commission-approved driveway flowmeters incorporating Gilbarco Calcopac or Electroline-type indicators.

Technical Schedule No S222 Variation No 1 describes variant 1.

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Variant: approved 28/3/88

2. For use with Commission-approved driveway flowmeters incorporating Email model Eclipse MVR79R or MVR79S indicators.

Technical Schedule No S222 Variation No 2 describes variant 2.

Variant: approved 23/9/88

3. For use with various Commission-approved Gilbarco multi-product or Highline series driveway flowmeters.

Technical Schedule No S222 Variation No 3 describes variant 3.

Variant: provisionally approved 19/1/89 - approved 4/12/89

4. Up to three EFPEC consoles connected in a network.

Technical Schedule No S222 Variation No 4 describes variant 4.

Variant: approved 23/5/89

5. For use with Commission-approved Email E series driveway flowmeters.

Technical Schedule No S222 Variation No 5 describes variant 5.

Variant: approved 27/7/89

6. For use with a combination of certain Commission-approved driveway flowmeters or driveway flowmeters fitted with certain Commission-approved indicators.

Technical Schedule No S222 Variation No 6 describes variant 6.

Variant: approved 7/8/90

7. For use with Commission-approved Gilbarco T077, T078 and T079 series multi-product driveway flowmeters.

Technical Schedule No S222 Variation No 7 describes variant 7.

FILING ADVICE

Supplementary Certificate of Approval No S222 dated 26/2/90 is superseded by this Certificate, and may be destroyed. The documentation for this approval now comprises:

Supplementary Certificate of Approval No S222 dated 26/10/90
Technical Schedule No S222 dated 18/2/87
Technical Schedule No S222 Variation No 1 dated 24/11/87
Technical Schedule No S222 Variation No 2 dated 20/6/88
Technical Schedule No S222 Variation No 3 dated 5/12/88
Technical Schedule No S222 Variation No 4 dated 19/5/89 (incl. Test Procedure)
Technical Schedule No S222 Variation No 5 dated 24/7/89
Technical Schedule No S222 Variation No 6 dated 26/2/90
Technical Schedule No S222 Variation No 7 dated 26/10/90
Test Procedure No S222 dated 18/2/87
Test Procedure No S222 Variation No 1 dated 24/11/87
Figure 1 dated 18/2/87

TECHNICAL SCHEDULE No S222

Pattern: Production Engineering Model EFPEC Driveway Flowmeter Control Console

Submittor: Production Engineering Pty Ltd
56 Berry Street
North Sydney NSW 2060.

1. Description of Pattern

The pattern is a Production Engineering model EFPEC control console (Figure 1) which may replace the control console in any Commission-approved driveway flowmeter system using Production Engineering Empec 80 driveway flowmeters or any driveway flowmeters fitted with Production Engineering Retron 80 indicators (as described in the documentation of NSC approval No S101).

1.1 Features

The console may be used with up to 32 driveway flowmeters and with other facilities including:

- an integral cash register and associated facilities
- a vendor's indicator and a purchaser's indicator
- a pump status display and operator information display
- a magnetic card reader for managerial functions
- a printer for the vendor's record and purchaser's receipt
- a prepay or postpay facility
- a central unit price setting facility
- a facility for setting up to 10 grades of fuel
- a pump stop button and an all pumps emergency stop button.

1.2 Verification Provision

Provision is made for a verification mark to be applied.

1.3 Markings

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

Manufacturer's name or mark
Model number
NSC approval number NSC No S222
Serial number

TEST PROCEDURE No S222

The following tests should be conducted in conjunction with any tests specified in the approval documents for the driveway flowmeters to which this instrument is connected.

1. Postpay Operation

At the console, authorise one or more driveway flowmeters.

(i) Deliver sufficient liquid to cause the price and volume indicators to move significantly off zero.

(ii) Stop the pump motor by returning the nozzle to its hang-up position.

(iii) Remove the nozzle from its hang-up position and check that the computer does not reset to zero and that the pump motor does not start.

(iv) At the console, check that the price and volume displayed are the same as the price and volume recorded from the driveway flowmeter.

(v) Repeat steps (i) to (iv) for a number of driveway flowmeters.

2. Prepay Operation

(i) Conduct a suitable prepay test on one or more driveway flowmeters. Observe that the flowmeter stops at the preset value.

(ii) For a partially completed delivery, observe that the driveway flowmeter cannot be authorised for 3 minutes after the nozzle has been hung up.

A REFUND notice appears on the display, after the nozzle is hung up if a prepay delivery is not fully completed.

3. Price Setting

(i) Conduct a price change for one or more grades of fuel. Observe that the displays on the corresponding driveway flowmeter blank for one minute after the price change, and that the driveway flowmeter cannot be authorised during this period.

(ii) Changing the price of a grade of fuel whilst a delivery is in progress shall not take effect until 15 seconds after the delivery is completed.

4. Segment Check

To perform a segment check;

(i) Press digit 4, then digit 8.

(ii) Press the MENU key.

To end segment check and return the console to normal operation, press the CLEAR key five (5) times.

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TECHNICAL SCHEDULE No S222

VARIATION No 1

Pattern: Production Engineering Model EFPEC Driveway Flowmeter Control Console

Submittor: Production Engineering (Aust.) Pty Ltd
Suite 403
270 Pacific Highway
Crows Nest NSW 2065

1. Description of Variant 1

A Production Engineering model EFPEC control console which may replace the control console in any Commission-approved driveway flowmeter system using any driveway flowmeters fitted with Gilbarco Calcopac or Electroline-type indicators.

The central unit price setting facility shall be disabled when the console is used with flowmeters fitted with Calcopac indicators.

TEST PROCEDURE No S222

VARIATION No 1

The following test is in addition to Test 3 in Test Procedure No S222 dated 18/2/87, which should be conducted in conjunction with any tests specified in the approval documents for the driveway flowmeters to which this instrument is connected.

3. Price Setting

(iii) If there are flowmeters fitted with Calcopac indicators connected to the console, press "3", "2" and then "menu". The message USER NOT AUTHORISED FOR THIS MENU or similar, should be displayed to verify that the central unit price setting facility is not operational.

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VARIATION No 2

Pattern: Production Engineering Model EFPEC Driveway Flowmeter Control Console.

Submittor: Production Engineering (Aust.) Pty Ltd
Suite 403
270 Pacific Highway
Crows Nest NSW 2065.

1. Description of Variant 2

A Production Engineering model EFPEC control console which may replace the control console in any Commission-approved driveway flowmeter system using any driveway flowmeters fitted with Email model Eclipse MVR79R or MVR79S indicators.

TECHNICAL SCHEDULE No S222

VARIATION No 3

Pattern: Production Engineering Model EFPEC Driveway Flowmeter Control Console.

Submittor: Production Engineering (Aust.) Pty Ltd
Suite 403
270 Pacific Highway
Crows Nest NSW 2065.

1. Description of Variant 3

A Production Engineering model EFPEC control console which may replace the control console in any Commission-approved driveway flowmeter system using any of the following Gilbarco driveway flowmeters:

Multi-product - models T087A, T087B, T088A or T088B

Highline series - T080 series

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TECHNICAL SCHEDULE No S222

VARIATION No 4

Pattern: Production Engineering Model EFPEC Driveway Flowmeter Control Console.

Submittor: Production Engineering (Aust.) Pty Ltd
Suite 403
270 Pacific Highway
Crows Nest NSW 2065.

1. Description of Variant 4

Up to three EFPEC consoles connected in a network enabling the following operations to be processed by any console:

- flowmeter status and authorisation;
- pump stop and emergency stop; and
- sales transactions, including memory.

The network includes one standard EFPEC console as the network controller, and up to two modified consoles which can only communicate to the driveway flowmeters via the master console. The master console enables central unit price setting (refer to Conditions of Approval) and various management functions, in addition to the operations listed above.

TEST PROCEDURE

The following tests should be conducted in conjunction with any tests specified in the approval documents for the driveway flowmeters to which this instrument is connected, and are in addition to those specified in Test Procedure No S222 dated 18/2/87 and its Variation No 1 dated 24/11/87.

1. Sale Processing

Make a delivery at a driveway flowmeter.

Process the delivery at a console, but do not finalise (pay-off) the transaction.

Attempt to process the transaction at another console; this should not be possible, as indicated by the error message "Sale Already Taken" being displayed.

Complete the transaction at the first console. Check that the delivery is no longer available for processing at any console.

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TECHNICAL SCHEDULE No S222

VARIATION No 5

Pattern: Production Engineering Model EFPEC Driveway Flowmeter Control Console.

Submittor: Production Engineering (Aust.) Pty Ltd
Suite 403
270 Pacific Highway
Crows Nest NSW 2065.

1. Description of Variant 5

A Production Engineering model EFPEC control console which may replace the control console in any Commission-approved driveway flowmetering system using Email E series driveway flowmeters.

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TECHNICAL SCHEDULE No S222

VARIATION No 6

Pattern: Production Engineering Model EFPEC Driveway Flowmeter Control Console.

Submittor: Production Engineering (Aust.) Pty Ltd
Suite 403
270 Pacific Highway
Crows Nest NSW 2065.

1. Description of Variant 6

For use with a combination of the following Commission-approved driveway flowmeters or driveway flowmeters fitted with any of the indicators listed below:

Email	Eclipse MVR79 series indicators Multi-product - MPP series indicators E series driveway flowmeters
Gilbarco	Calcopac indicators (see Special Condition of Approval) Electroline-type indicators Multi-product indicators - models T087A, T087B or T088B Highline - T080 series indicators
Production Engineering	Retron 80 indicators Empec 80 indicators Multi-product indicators - model MHP

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TECHNICAL SCHEDULE No S222

VARIATION No 7

Pattern: Production Engineering Model EFPEC Driveway Flowmeter Control Console.

Submittor: Production Engineering (Aust.) Pty Ltd
Suite 403
270 Pacific Highway
Crows Nest NSW 2065.

1. Description of Variant 7

For use with any Commission-approved model of the Gilbarco T077, T078 and T079 series (low profile) multi-product driveway flowmeters.

This variant may also be used in conjunction with other variants of this approval.

FIGURE S222 - 1

Production Engineering EFPEC Console