



EC TYPE-EXAMINATION CERTIFICATE

Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

Certificate Number: **Sira 04ATEX1242X** Issue: **1**

Equipment: **Rotary Vane Petrol Pumps**

Applicant: **Tuthill Transfer Systems**

Address: 8825 Aviation Drive
Fort Wayne IN 46809
United States of America

This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 14.2.

Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

EN 50014:1997 (inc amendments A1 and A2)	EN 13463-1:2001
EN 50018:2000 (inc amendments A1)	EN 13463-5:2003

If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

This EC type-examination certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

The marking of the equipment shall include the following:

II 2 G c T4 or T5 or T6
EEx d IIA T4 or T5 or T6
(see schedule for applicable temperature classes)

Project Number 51A17658
C. Index 09

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C Ellaby
Certification Officer

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The Rotary Vane Petrol Pumps are motor operated, positive displacement devices designed for use with diesel, gasoline (petrol), kerosene, mineral spirits, heptane and hexane. There are models designed for use with 12 Vdc, 24 Vdc or 230 Vac 50/60 supplies.

The flameproof enclosure of these pumps consists of two compartments, a motor compartment and a separate terminal compartment.

All of the terminal compartments provide an M20 threaded entry with flying leads for power and internal earth connections. A Burndy Type KLU35TP terminal is provided for external earthing.

All of the motor compartments use a spigot joint for each endbell with either internal or external tie-rods to secure the endbells to the stator housing. One endbell contains the rotary vane fluid pump and the other endbell contains a cemented lead-seal where the conductors enter the terminal box.

On the dc motors, the terminal compartment is secured with four, M5, class 8.8, socket-head cap screws and the stator is secured with two, M6, class 8.8, socket-head cap screws. On the FR700 series motors, the terminal compartment is secured with four, M6, class 8.8, hex-head cap screws and the stator is secured with four M8, class 10.9, hex-head cap screws. A Special Condition for Safe Use requiring the use of M6, class 8.8 and M8, class 10.9 fasteners on the FR700 series of motors applies.

Model Structure

Motor/Pump Series: FR1200

Temperature Class: T6

Specific Model	Description
FR1205CE	Basic Pump
FR1210CE	Basic Pump, Hose, Nozzle, Suction Pipe
FR1210CEA	Basic Pump, Hose, Automatic Nozzle, Suction Pipe
FR1211CE	Basic Pump, Hose, Suction Pipe, Gallon Meter
FR1211CEL	Basic Pump, Hose, Nozzle, Suction Pipe, Litre Meter
FR1211CEA	Basic Pump, Hose, Automatic Nozzle, Suction Pipe, Gallon Meter
FR1211CELA	Basic Pump, Hose, Automatic Nozzle, Suction Pipe, Litre Meter

Motor/Pump Series: SD1200

Temperature Class: T6

Specific Model	Description
SD1205E	Basic Pump
SD1202E	Basic Pump, Hose, Manual Nozzle, Suction Pipe
SD1202EA	Basic Pump, Hose, Automatic Nozzle, Suction Pipe



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Motor/Pump Series: FR2400

Temperature Class: T6

Specific Model	Description
FR2405CE	Basic Pump
FR2410CE	Basic Pump, Hose, Nozzle, Suction Pipe
FR2410CEA	Basic Pump, Hose, Automatic Nozzle, Suction Pipe
FR2411CE	Basic Pump, Hose, Nozzle, Suction Pipe, Gallon Meter
FR2411CEL	Basic Pump, Hose, Nozzle, Suction Pipe, Litre Meter
FR2411CEA	Basic Pump, Hose, Automatic Nozzle, Suction Pipe, Gallon Meter
FR2411CELA	Basic Pump, Hose, Automatic Nozzle, Suction Pipe, Litre Meter

Motor/Pump Series: FR4200

Temperature Class: T5

Specific Model	Description
FR4205DE	Basic Pump
FR4210DE	Basic Pump, Hose, Nozzle, Suction Pipe
FR4210DEB	Basic Pump, Hose, High Flow Automatic Nozzle, Suction Pipe
FR4211DE	Basic Pump, Hose, Nozzle, Suction Pipe, Gallon Meter
FR4211DEL	Basic Pump, Hose, Nozzle, Suction Pipe, Litre Meter
FR4211DEB	Basic Pump, Hose, High Flow Automatic Nozzle, Suction Pipe, Gallon Meter
FR4211DEBL	Basic Pump, Hose, High Flow Automatic Nozzle, Suction Pipe, Litre Meter

Motor/Pump Series: FR4400

Temperature Class: T5

Specific Model	Description
FR4405DE	Basic Pump
FR4410DE	Basic Pump, Hose, Nozzle, Suction Pipe
FR4410DEB	Basic Pump, Hose, High Flow Automatic Nozzle, Suction Pipe
FR4411DE	Basic Pump, Hose, Nozzle, Suction Pipe, Gallon Meter
FR4411DEL	Basic Pump, Hose, Nozzle, Suction Pipe, Litre Meter
FR4411DEB	Basic Pump, Hose, High Flow Automatic Nozzle, Suction Pipe, Gallon Meter
FR4411BDEBL	Basic Pump, Hose, High Flow Automatic Nozzle, Suction Pipe, Litre Meter

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Motor/Pump Series: FR700

Temperature Class: T4

Specific Model	Description
FR705VE	Basic Pump
FR700VE	Basic Pump, Hose, Nozzle
FR700VEA	Basic Pump, Hose, Automatic Nozzle
FR701VE	Basic Pump, Hose, Nozzle, Gallon Meter
FR701VEL	Basic Pump, Hose, Nozzle, Litre Meter
FR701VEA	Basic Pump, Hose, Automatic Nozzle, Gallon Meter
FR701VEAL	Basic Pump, Hose, Automatic Nozzle, Litre Meter
FR708VER	Basic Cabinet Pump, Gallon Meter
FR708VELR	Basic Cabinet Pump, Litre Meter
FR708VERU	Basic Cabinet Pump, Gallon Meter, Universal Boot
FR708VELRU	Basic Cabinet Pump, Litre Meter, Universal Boot
FR702VER	Basic Cabinet Pump, Gallon Meter, Hose, Nozzle
FR702VELR	Basic Cabinet Pump, Litre Meter, Hose, Nozzle
FR702VERU	Basic Cabinet Pump, Gallon Meter, Hose, Automatic Nozzle, Universal Boot
FR708VELRU	Basic Cabinet Pump, Litre Meter, Hose, Automatic Nozzle, Universal Boot

Variation 1 - This variation introduced the following changes:

- i. The following modifications to the models identified below were recognised:

SERIES FR1200 Drawing G9441D

- The modification of the conduit entry thread to M20 x 1.5 6H.
- The introduction of a Burndy type KLU35TP external bonding terminal.
- The corrections and rationalisation of model numbers.

SERIES SD1200 Drawing G9438D

- The introduction of a Burndy type KLU35TP external bonding terminal.
- The modification of the conduit entry thread to M20 x 1.5 6H.
- The rationalisation of model numbers.

SERIES FR2400 Drawing G9440D

- The modification of the conduit entry thread to M20 x 1.5 6H.
- The introduction of a Burndy type KLU35TP external bonding terminal.
- The rationalisation of model numbers.

SERIES FR4200 Drawing G9439D

- The introduction of a Burndy type KLU35TP external bonding terminal.
- The modification of the conduit entry thread to M20 x 1.5 6H.
- The rationalisation of model numbers.

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SERIES FR4400 Drawing G9437D

- The introduction of a Burndy type KLU35TP external bonding terminal.
- The modification of the conduit entry thread to M20 x 1.5 6H.
- The rationalisation of model numbers.

SERIES FR700 Drawing G9436D

- The introduction of a vacuum breaker to the pump outlet.
- The model numbers of pump outlet incorporating a vacuum breaker to the to include a "V".
- The correction to the motor shell and motor shaft part numbers.
- The modification of the conduit entry thread to M20 x 1.5 6H.
- The introduction of a Burndy type KLU35TP external bonding terminal.
- The corrections and rationalisation of model numbers.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	16 November 2004	R53F12030A	The release of the prime certificate.
1	10 March 2008	R51A17658A	This Issue covers the following changes: <ul style="list-style-type: none">• All previously issued certification was rationalised into a single certificate, Issue 1, Issue 0 referenced above is only intended to reflect the history of the previous certification and has not been issued as a document in this format.• The introduction of Variation 1.

15 SPECIAL CONDITIONS FOR SAFE USE (denoted by X after the certificate number)

15.1 Only the following types of fasteners shall be used with the FR700 Series of Rotary Vane Petrol Pumps:

- The M8 fasteners used for securing the stator housing shall be Class 10.9
- The M6 fasteners used for securing the terminal compartment shall be Class 8.8

16 ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

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Certificate Annexe

Certificate Number: Sira 04ATEX1242X
Equipment: Rotary Vane Petrol Pumps
Applicant: Tuthill Transfer Systems



Issue 0

Number	Sheet	Rev.	Date	Description
G9436D	1 of 1	4	26 Oct 04	Series FR700E Certification Dwg - ATEX
G9437D	1 of 1	4	26 Oct 04	Certification Drawing Series FR4400 Pump Assembly for ATEX
G9438D	1 of 1	4	26 Oct 04	Certification Drawing Series SD1200 Pump Assembly for ATEX
G9439D	1 of 1	4	25 Oct 04	Certification Drawing Series FR4200D Pump Assembly for ATEX
G9440D	1 of 1	4	26 Oct 04	Certification Drawing Series FR2400 Pump Assembly for ATEX
G9441D	1 of 1	4	26 Oct 04	Certification Drawing Series FR1200C Pump Assembly for ATEX

Issue 1

Number	Sheet	Rev.	Date	Description
G9436D	1 of 1	6	27 Feb 08	Series FR700VE Certification Dwg - ATEX
G9437D	1 of 1	6	27 Feb 08	Certification Drawing Series FR4400 Pump Assembly for ATEX
G9438D	1 of 1	6	27 Feb 08	Certification Drawing Series SD1200 Pump Assembly for ATEX
G9439D	1 of 1	6	27 Feb 08	Certification Drawing Series FR4200D Pump Assembly for ATEX
G9440D	1 of 1	6	27 Feb 08	Certification Drawing Series FR2400 Pump Assembly for ATEX
G9441D	1 of 1	6	27 Feb 08	Certification Drawing Series FR1200C Pump Assembly for ATEX

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