



EC-Type Examination Certificate

- (1)
(2) **Equipment or Protective Systems Intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC**

(3) EC-Type Examination Certificate Number:

FTZÚ 05 ATEX 0185

(4) Equipment or protective system: **Liquid fuel dispenser, type series V-line 899x.xxx**

(5) Manufacturer: **ADAMOV – SYSTEMS, a.s.**

(6) Address: **Mírová 2, 679 04 Adamov, Czech Republic**

(7) This equipment or protective system and any of acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

(8) The Physical Technical Testing Institute, notified body number 1026 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential Report N°

05/0185 dated 5 August 2005

(9) Compliance with Essential Health and safety requirements has been assured by compliance with:

ČSN EN 13617-1:2004

(10) If the sign „X” is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and testing of the specified equipment or protective system in accordance to the directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

(12) The marking of the equipment or protective system shall include following:

 **II 2G IIA T3**

This EC-Type Examination Certificate is valid till: **31 of August 2010**

Responsible person:

Dipl. Ing. Šindler Jaroslav

Head of certification body



Date of issue: 05 of August 2005

Number of pages: 6

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(14) **EC-Type Examination Certificate N° FTZÚ 05 ATEX 0185**

(15) Description of Equipment or Protective System:

The liquid fuel dispensers, type series V-line 899x.xxx, are intended for dispensing of liquid oil products – gasoline, diesel oil and kerosene (flammable liquids of I. to IV. fire hazard classes) with filling rate from $2 \text{ dm}^3 \cdot \text{min}^{-1}$ to $200 \text{ dm}^3 \cdot \text{min}^{-1}$.

The dispensers of above mentioned series are designed for coincidental dispensing of max. two medium types at two dispensing points. The fuel dispenser construction consists of these basic modules: - frame, hydraulic module, vapour recuperation line and electrical apparatus.

The dispenser type series 899x.xxx/S – suction system of dispenser with own pumping assembly for each medium in dispenser.

The dispenser type series 899x.xxx/P – pressure system of dispenser without pumping assembly in dispenser – for connection to the central pipelines of petrol station.

Classification of hazardous area in dispenser and outside of dispenser is defined in accordance with ČSN EN 13617-1.

Inner space of hydraulic part housing - zone 1

Inner space of side column of dispenser - zone 1

Outside space of hydraulic part housing and side column of dispenser up to distance of 50 mm upward top and up to distance 200 mm from top of dispenser in all direction as far as to ground level - zone 2

Electronics (counter) housing is separated by vertical barrier type 1, the housing has a degree of protection IP 67/ IP 54 / IP 43 according to EN 60 529

- inside and outside of housing is non-hazardous area.

Electronics (counter) housing of dispenser V-line 8991.6x3 and V-line 8997.6x3 is separated by horizontal barrier type 1, the housing has a degree of protection IP67/IP54 according to EN 60529

- inside and outside of housing is non-hazardous area.

Technical parameters of dispenser are given in annex 1 of this certificate.

(16) Report No. : FTZÚ No. 05/0185


(17) Special conditions for safe use: none

(18) Essential Health and Safety Requirements:

18.1 According to Directive 94/9/EC Annex 2, cl. 1.0.6 and Instruction for use No. OÚ/001/2005/CZ the dispenser can't be installed in hazardous area according to EN 60079-10:2003 and for installation at petrol station the national legislation must be observed.

18.2 The other essential health and safety requirement of Directive 94/9/EC, are covered by standard mentioned in (9).

Responsible person:


Dipl. Ing. Sindler Jaroslav
Head of certification body



Date of issue: 05 of August 2005

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LIST OF DOCUMENTATION

- Technical description - instruction No. 1178/2005 27.05.2005
- Instruction for service, maintenance and installation - document No. OÚ/001/2005/CZ 02.06.2005
- Zone and dispenser ventilation diagrams - drawing No. 4492 16735 02.06.2005
- Zone and dispenser ventilation diagrams - drawing No. 4492 16736 02.06.2005
- Dispenser assembly DUPLEX - drawing No. 4492 16818 02.06.2005
- Dispenser assembly MONO - drawing No. 4492 16819 02.06.2005
- Dispenser assembly DUO - drawing No. 4492 16820 02.06.2005
- Hydraulic dispenser schema for series 8991, 8994, 8996, 8997, 8998
- Hydraulic dispenser schema for series 8993, 8995
- Hydraulic dispenser schema for series 8990

- Dispenser POPULÁR, type V-line 8991.420/... - drawing No. 4493 16805 02.06.2005
- piece list No. 4493 16805 02.06.2005
- Dispenser frame MONO - drawing No. 4452 16806 02.06.2005
- piece list No. 4452 16806 02.06.2005
- Column cover MONO - drawing No. 4453 16549 02.06.2005
- piece list No. 4453 16549 02.06.2005
- Hydraulic unit MONO - drawing No. 4452 16706 02.06.2005
- piece list No. 4452 16706 02.06.2005
- Pump assembly P 640.50/1 - drawing No. 4591 00507d 02.06.2005
- piece list No. 4594 00575 02.06.2005
- Measuring instrument with sensor 8530.25EP - drawing No. 4692 01305 02.06.2005
- piece list No. 4692 01305 02.06.2005
- Filter -30µm - drawing No. 4293 01050a 02.06.2005
- piece list No. 4293 01050b 02.06.2005
- Connection piece 280-CP - drawing No. 4453 16526 02.06.2005
- Suction POPULÁR, MONO - drawing No. 4453 16808 02.06.2005
- piece list No. 4453 16808 02.06.2005
- El. installation of dispenser - drawing No. 4891 04703 02.06.2005
- piece list No. 4891 04703 02.06.2005
- El. assembly schema of dispenser - drawing No. 4811 04684 02.06.2005

- Dispenser POPULÁR, type V-line 8995.420/... - drawing No. 4493 16476 02.06.2005
- piece list No. 4493 16476 02.06.2005
- Dispenser frame DUO - drawing No. 4452 16475 02.06.2005
- piece list No. 4452 16475 02.06.2005
- Column cover DUO - drawing No. 4453 16507 02.06.2005
- piece list No. 4453 16507 02.06.2005
- Hydraulic unit DUO - drawing No. 4452 16705 02.06.2005
- piece list No. 4452 16705 02.06.2005
- Pump assembly P640.50/2/B - drawing No. 4594 00577 02.06.2005
- piece list No. 4594 00577 02.06.2005
- Measuring instrument with sensor 8530.25EP - drawing No. 4692 01305 02.06.2005
- piece list No. 4692 01305 02.06.2005





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|--|-----------------------------|------------|
| • Suction POPULÁR, DUO | - drawing No. 4453 16749 | 02.06.2005 |
| | - piece list No. 4453 16749 | 02.06.2005 |
| • El. installation of dispenser | - drawing No. 4891 04588 | 02.06.2005 |
| | - piece list No. 4891 04588 | 02.06.2005 |
| • El. assembly schema of dispenser | - drawing No. 4811 04579 | 02.06.2005 |
| • Dispenser POPULÁR, type V-line 8994.420/... | - drawing No. 4492 16650 | 02.06.2005 |
| | - piece list No. 4492 16650 | 02.06.2005 |
| • Dispenser frame DUPLEX | - drawing No. 4452 16628 | 02.06.2005 |
| | - piece list No. 4452 16628 | 02.06.2005 |
| • Hydraulic unit 100 | - drawing No. 4452 16704 | 02.06.2005 |
| | - piece list No. 4452 16704 | 02.06.2005 |
| • Pump assembly P 640.100/1 | - drawing No. 4591 00509d | 02.06.2005 |
| | - piece list No. 4594 00576 | 02.06.2005 |
| • Measuring instrument with sensor 8530.25EP | - drawing No. 4692 01305 | 02.06.2005 |
| | - piece list No. 4692 01305 | 02.06.2005 |
| • Hydraulic unit 50 | - drawing No. 4452 16703 | 02.06.2005 |
| | - piece list No. 4452 16703 | 02.06.2005 |
| • Pump assembly P 640.50/1 | - drawing No. 4591 00507d | 02.06.2005 |
| | - piece list No. 4594 00575 | 02.06.2005 |
| • Suction POPULÁR | - drawing No. 4453 16748 | 02.06.2005 |
| | - piece list No. 4453 16748 | 02.06.2005 |
| • El. installation of dispenser | - drawing No. 4891 04710 | 02.06.2005 |
| | - piece list No. 4891 04710 | 02.06.2005 |
| • El. assembly schema of dispenser | - drawing No. 4811 04683 | 02.06.2005 |
| • Approval documentation | - document č. TÚ 009/05 | 01.08.2005 |
| • Zone and dispenser ventilation diagrams | - drawing No. 4492 17059 | 01.08.2005 |
| • Dispenser assembly MINOR | - drawing No. 4492 17116 | 01.08.2005 |
| • Hydraulic dispenser schema for series 8991, 8994, 8996, 8997, 8998 | | 01.08.2005 |
| • Dispenser MINOR, type V-line 8991.623/... | - drawing No. 4493 16857 | 01.08.2005 |
| | - piece list No. 4493 16857 | 01.08.2005 |
| • Dispenser frame MINOR | - drawing No. 4452 16858 | 01.08.2005 |
| | - piece list No. 4452 16858 | 01.08.2005 |





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- Housing assembly - presetting MINOR
 - drawing No. 4453 16864 01.08.2005
 - piece list No. 4453 16864 01.08.2005
- Mask MINOR
 - drawing No. 4453 16867 01.08.2005
 - piece list No. 4453 16867 01.08.2005
- Hydraulic unit 50
 - drawing No. 4452 16703 01.08.2005
 - piece list No. 4452 16703 01.08.2005
- Suction MINOR
 - drawing No. 4453 16870 01.08.2005
 - piece list No. 4453 16870 01.08.2005
- El. installation of dispenser
 - drawing No. 4891 04916 01.08.2005
 - piece list No. 4891 04916 01.08.2005
- El. installation of dispenser
 - drawing No. 4891 04920 01.08.2005
 - piece list No. 4891 04920 01.08.2005
- El. assembly schema of dispenser
 - drawing No. 481104918 01.08.2005
- El. assembly schema of dispenser
 - drawing No. 481104919 01.08.2005

- List of Ex components for dispenser type series V-line 899x.xxx
($T_A = -20^{\circ}\text{C} \dots +40^{\circ}\text{C}$)
 - document No. TÚ/1052/2005/H 02.06.2005
- List of Ex components for dispenser type series V-line 899x.xxx
($T_A = -20^{\circ}\text{C} \dots +50^{\circ}\text{C}$)
 - document No. TÚ/1053/2005/H 02.06.2005
- List of Ex components for dispenser type series V-line 899x.xxx
($T_A = -40^{\circ}\text{C} \dots +60^{\circ}\text{C}$)
 - document No. TÚ/1054/2005/H 02.06.2005





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Electric data

- Supply voltage:
 - Electronics 230 V \pm 10%; 50 Hz; 50 VA
 - Electric motor 3 x 230/400 V \pm 10%; 50 Hz
- Electric motor of hydraulic unit 0,55 kW; 0,75 kW; 1,1 kW
- vacuum pump 0,18 kW; 0,37 kW

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Technical data

- Measurement accuracy \pm 0,25 %
- Maximum suction lift:
 - 55 kPa for gasoline
 - 85 kPa for diesel oil
- Maximum service pressure P_{max} 0,25 MPa
- Nominal inside diameter DN 40 or DN 50 (depends on dispenser filling rate)
- Filling rate according to dispenser type and medium: 30; 40; 60; 70; 130; 150 or 200 dm³.min⁻¹
- Service ambient temperature
 - 20°C ... +40°C basic version
 - 20°C ... +50°C - standard version
 - 40°C ... +60°C - pro extreme climatic conditions





Supplement No. 1 to EC-Type Examination Certificate

Equipment or Protective Systems Intended for use
in Potentially Explosive Atmospheres
Directive 94/9/EC

(3) EC-Type Examination Certificate Number:

FTZÚ 05 ATEX 0185

(4) Equipment: **Liquid fuel dispenser, type V-line 899x.xxx**

(5) Manufacturer: **Adast Systems, a.s.**

(6) Address: **Mírová 2, 679 04 Adamov, Czech Republic**

(7) This supplement of certificate is valid for:

- Modification of certified apparatus
- Verification according to a new standard
- Change of manufacturer address

(8) Modification of certified apparatus (protective system) and any of its approved variants are specified in documentation, a list of which is mentioned in the schedule of this certificate.

(9) This supplement to type examination certificate is valid only for type examination of design and construction of product sample in accordance with Annex 3 Paragraph 6) of Directive No. 94/9/EC. The Directive contains other requirements which the manufacturer shall fulfil before products are placed on the market or introduced in service.

(10) Safety requirements of modified parts were fulfilled by satisfying the following standards:


EN 13617-1:2004+A1:2009

(11) Marking of equipment shall contain symbols:

Ex II 2G IIA T3

(12) This type examination certificate is valid till: **05.11.2015**

Responsible person:


Dipl. Ing. Šindler Jaroslav
Head of certification body



Date of issue: 05.11.2010

Number of pages: 2
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Supplement No. 1 to
EC-Type Examination Certificate N° FTZÚ 05 ATEX 0185

(15) Description of Equipment or Protective System:

This supplement of certificate verifies alternative dispenser assembly layout and the equipment is verified according new standard EN 13617-1:2004+A1:2009. For special alternative design of dispenser the range of ambient temperatures was expanded to -30°C to +60°C.

The following new types of devices and components can be applied in the dispenser assembly layout: Terminal box GENERI, terminal box Bartec, terminal box AB controls and technology, magnetic encoders ELTOMATIC, magnetic encoder Metra Blansko, electromotors ELPROM, electromagnetic valves Danfoss, temperature sensors ZPA Nová Paka and JSP Nová Paka, flow gas measure system FAFNIR, gas sensor Bürkert Werke GmbH & Co.KG, flowmeter GILBARCO, fuel supply hose ELAFLEX HIBY, coaxial fuel supply hose ELAFLEX HIBY, spheric cock W plus. All above mentioned alternative devices and components were separately verified for conformity with essential requirements or their relevant properties were verified after their instalation in dispenser assembly.

(16) Report No. : 05/0185/1

dated 04.11.2010


(17) Special conditions for safe use: none

(18) Essential Health and Safety Requirements: Remain unchanged

(19) LIST OF DOCUMENTATION

- List of Ex components for dispenser type series V-line 899x.xxx (T_A -20 + +40°C)
- document No. VTÚ/058/2010 20.05.2010
- List of Ex components for dispenser type series V-line 899x.xxx (T_A -20 + +50°C)
- document No. VTÚ/059/2010 20.05.2010
- List of Ex components for dispenser type series V-line 899x.xxx (T_A -30 + +60°C)
- document No. VTÚ/060/2010 20.05.2010
- List of Ex components for dispenser type series V-line 899x.xxx (T_A -40 + +60°C)
- document No. VTÚ/061/2010 20.05.2010
- Instruction for use, maintenance and instalation
- document No. OÚ/001/2005/A 05.2010

Responsible person:


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