



**EC type-examination certificate
UK/0126/0119**

issued by:

**The National Measurement Office
Notified Body Number 0126**

In accordance with the requirements of the Measuring Instruments (Non-Prescribed Instruments) Regulations 2006 which implement, in the United Kingdom, Council Directive 2004/22/EC, this certificate of EC type-examination has been issued to:

**Dem. G. Spyrides S.A.
24 Athinon Avenue
10441 Athens
Greece**

in respect of a LPG dispenser designated M5200

Accuracy class: 1.0

The necessary data (principal characteristics, alterations, securing, functioning etc) for identification purposes and conditions (when applicable) are set out in the descriptive annex to this certificate.

**Issue Date: 17 January 2012
Valid Until: 16 January 2022
Reference No: TS0901/0017**

**Signatory: P R Dixon
for Chief Executive**



BIS

**Department for Business
Innovation & Skills**

Descriptive Annex

1 INTRODUCTION

The M5200 LPG dispenser is for use in attended or unattended mode. The housing comprises a hydraulics enclosure with an electronics enclosure above it. Hose connections are made at the hydraulic housing with an example arrangement shown in Figure 1.

2 CHARACTERISTICS

Accuracy Class	1.0
Mechanical Environment Class	M1
Electromagnetic Environment Class	E1
V _{min}	5 litres (often determined by national re-verification practices)
Temperature Range Liquid	-10 °C to 50 °C
Temperature Range Ambient	-25°C to 55 °C

3 CONSTRUCTION

3.1 Prime Components and Characteristics

3.1.1 The dispenser is constructed from the following prime components:

Table 1 Prime Component Summary

Manufacturer	Type	Evaluation Certificate
Meters		
Yenen.	YGM	TC7300
Electronic Calculator		
Dem G Spyrides S.A.	AK6	GB-1427
Self-service devices		
-	-	-

3.3 Optional Components and Arrangements

3.3.1 Optional Chassis Construction

3.3.1.1 The electronics enclosure facia may be constructed of steel, aluminium, or plastic, or a combination of these materials.

3.3.1.2 The dispenser may be combined with one or more liquids other than water dispensers, which may also share the calculating device.

3.4 Options not critical to metrology

3.4.1 The following items may be included within the hydraulic circuits, typical examples of both single and double nozzle configurations are shown in figures 2 and 3 respectively:

- Check Valves
- Safety Relief Valves
- Differential Valves
- Gas Separator
- Pressure Gauge/Manometer
- Excess Flow Valves
- Filters
- Purge Valves

3.4.2 The following items may be included within the electronics housing without being included in component evaluation certificates

- Any electronics not associated with the sales transaction and not connected to circuits of the calculator, and which will not impact the EMC characteristics of the enclosure.

4 APPROVAL CONDITIONS

The certificate is issued subject to the following conditions:

4.1 Markings

4.1.1 Markings are in accordance with the WELMEC Guide 10.5 Issue 1. An example is shown in figure 4. Initial verification labels including the CE mark and supplementary metrology mark are added to this nameplate; but may be removed at subsequent field verifications. The height of the CE mark and the rectangle containing the letter “M” and year code are greater than 5mm.

4.1.2 The markings and inscriptions shall fulfil the requirements of Paragraph 9 of Annex I of the Directive 2004/22/EC.

4.2 Data Sheet

4.2.1 The datasheet format is in accordance with the WELMEC Guide 10.5 Issue 1. An example is shown in figure 5.

4.3 Displays and Legends

4.3.1 Displays and legends are configured to meet the requirements of the country of installation. The text associated with the volume and price is greater than 10mm high.

The text associated with unit price(s) is greater than 4mm high

4.3.2 Text is included on or near the primary display to indicate the minimum delivery for the dispenser.

5 LOCATION OF SEALS

5.1 Securing is detailed in the Evaluation Certificates for the individual components.

5.2 Components may additionally be sealed to the dispenser frame, or alternatively, may be specifically listed by serial number on a datasheet which remains with the dispenser in the calculator enclosure.

6 SUPPORTING DOCUMENTATION

6.1 Documentation File Trim File TS0901/0017/4

7 ALTERNATIVES

7.1 There are as yet no alternatives.

8 ILLUSTRATIONS

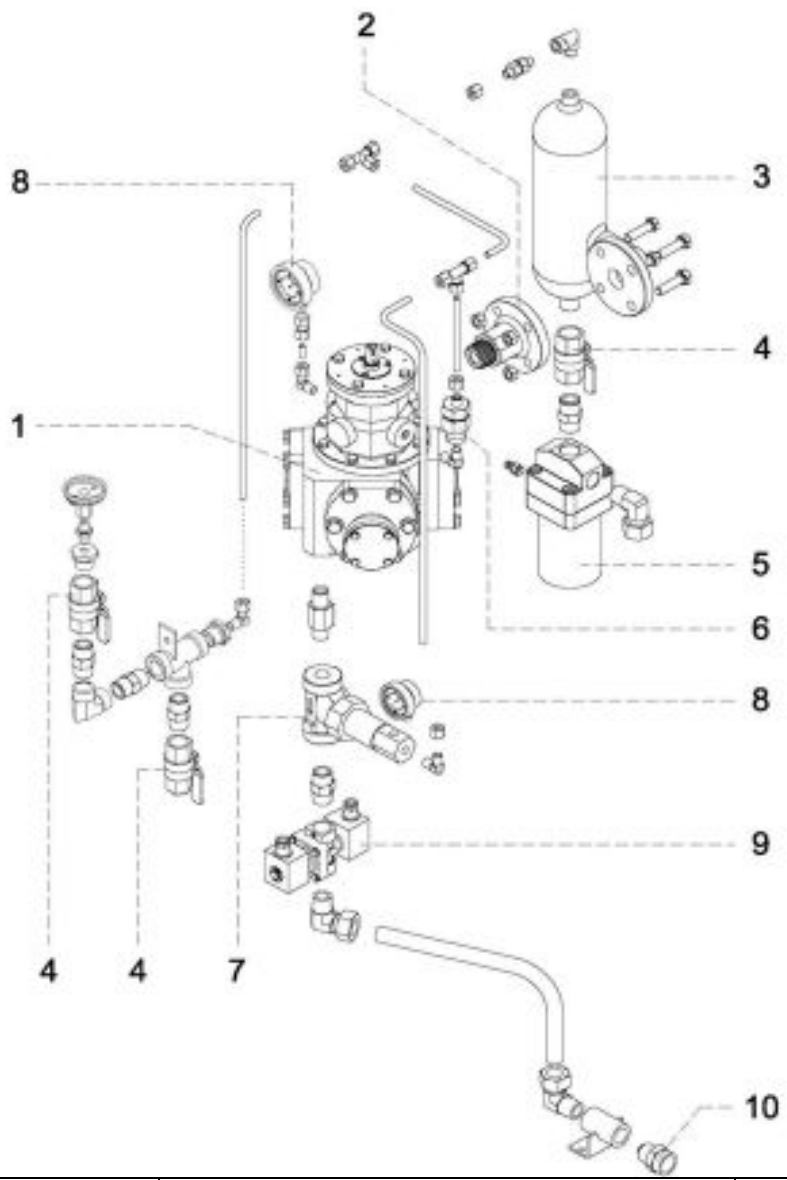
Figure 1 Typical arrangements
Figure 2 Single Nozzle Configuration
Figure 3 Double Nozzle Configuration
Figure 4 Nameplate – typical arrangements,
Figure 5 Datasheet

9 CERTIFICATE HISTORY

ISSUE NO.	DATE	DESCRIPTION
UK/0126/0119	17 January 2012	Type examination certificate first issued.

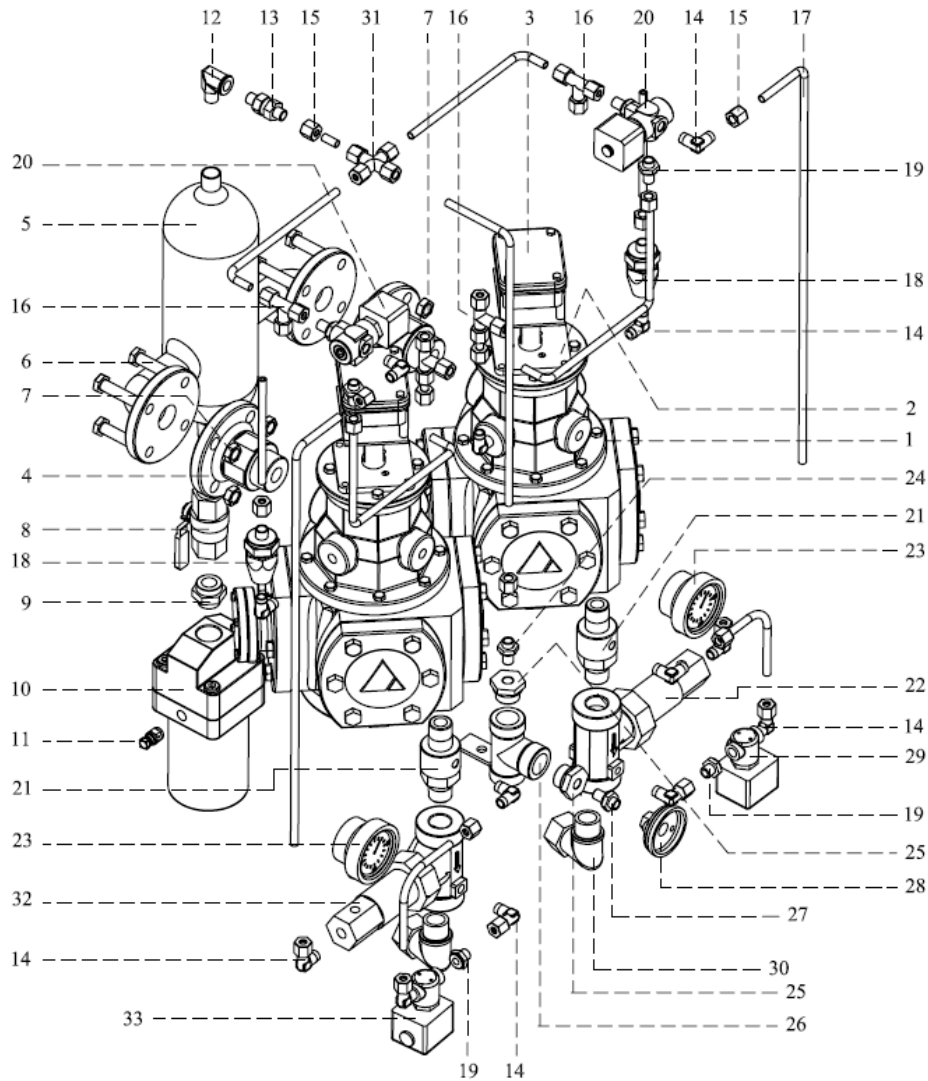


Figure 1 Typical arrangement



Item number	Description	Quantity
1	Flow meter outlet (bottom)	1
2	1" DIN check valve	1
3	Gas separator	1
4	3/4" PN valve	3
5	Filter with 1/4" purge screw	1
6	Safety relief valve	1
7	Differential valve	1
8	Pressure gauge	1
9	2-Way dual flow solenoid valve	1
10	3/4" Excess flow valve	1

Figure 2 Single Nozzle Configuration



Item number	Description	Quantity	Item number	Description	Quantity
1	Flow meter	2	18	Safety relief valve	2
2	Pulser mounting bracket	2	19	1/4" Reverse	4
3	Pulser	2	20	3-Way solenoid	2
4	1" check valve with DIN flange	2	21	3/4" Special fittings	2
5	Gas separator (double)	1	22	Differential valve	1
6	Bolt M12x55	8	23	Manometer 63x40	2
7	M12 Nut	8	24	1/4" Flat seal	5
8	3/4" PN40 valve	1	25	1/4" - 3/4" Reduction	2
9	3/4" NPT - 3/4" NPT nipple	1	26	3/4" T with angle	1
10	Filter	1	27	1/4" Nipple	1
11	1/4" Purge valve	1	28	1/4" Nozzle connector	1
12	1/4" Elbow	1	29	2-Way solenoid	2
13	1/4" Check valve	2	30	3/4" NPT thread	1
14	1/4" NPT Elbow	14	31	3/4" Cross	1
15	Pipe connection Nut 8	39	32	Differential valve	1
16	1/4" T with ring	4	33	Coil 230V (AC)	4
17	8mm hydraulic pipe	4m			

Figure 3 Double Nozzle Configuration

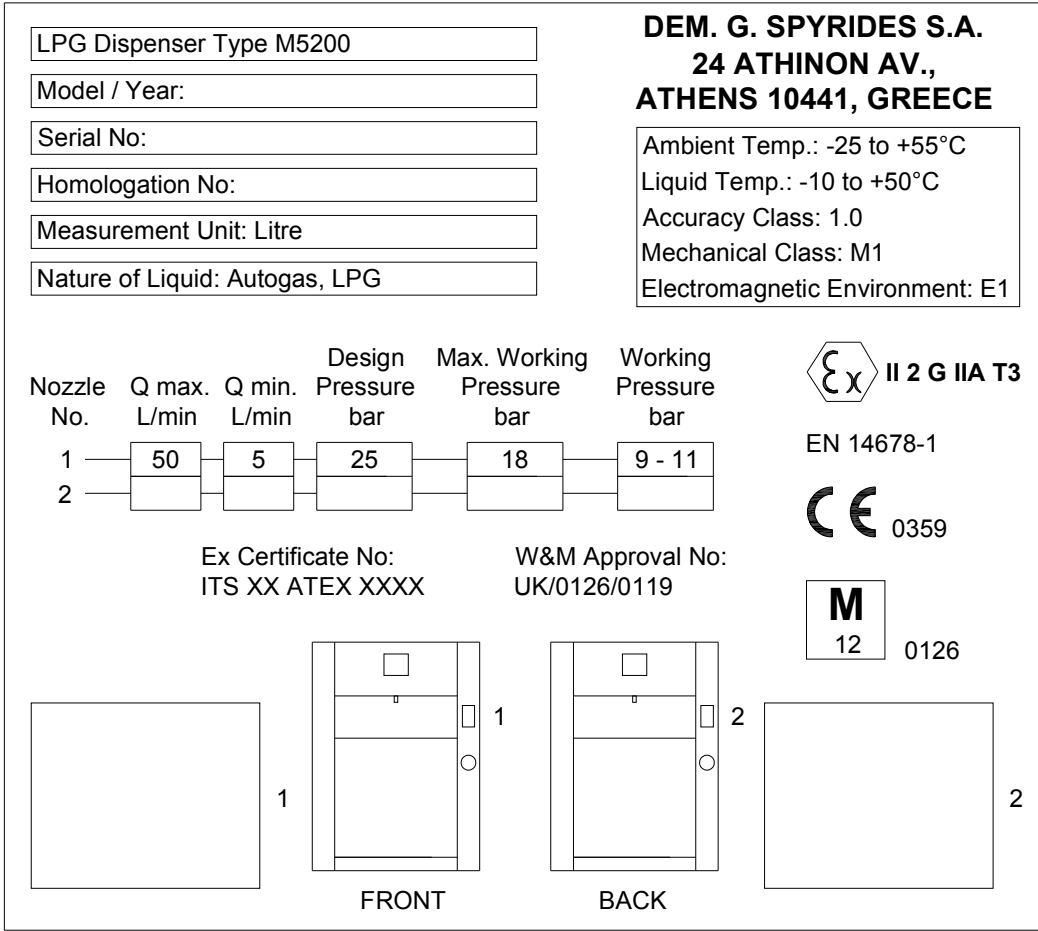
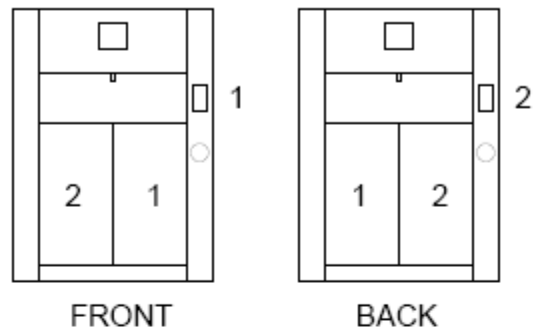


Figure 4 Nameplate – typical arrangements

Data Sheet LPG Dispenser M5200

The drawing below identifies each nozzle with its associated hydraulics



	1	2
MEASUREMENT TRANSDUCER		
VOLUME SENSOR		
Manufacturer	YENEN	YENEN
Type	YGM	YGM
Test Report No.	TC7300	TC7300
Serial No.		
Stamp / Sticker		
Qmax [L/min]	60	60
Qmin [L/min]	6	6
Pmax [bar]	17.8	17.8
PULSER		
Manufacturer	SPYRIDES	SPYRIDES
Type	P100	P100
Test Report No.	GB-1427	GB-1427
Serial No.		
GAS ELIMINATION DEVICE		
Manufacturer	YENEN	YENEN
Type	YGM	YGM
Test Report No.	TC7300	TC7300
Serial No.		
Stamp / Sticker		
Qmax [L/min]	60	60
Qmin [L/min]	6	6
Pmax [bar]	17.8	17.8
ELECTRONIC CALCULATOR / INDICATING DEVICE		
Manufacturer	SPYRIDES	SPYRIDES
Type	AK6	AK6
Test Report No.	GB-1427	GB-1427
Serial No.		

Figure 5 Datasheet