





## EU Type Examination Certificate CML 14ATEX9100X Issue 3

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **SK700-II / Horizon Liquid fuel Dispenser**  
(a.k.a SK700-2 / Horizon or Horizon or Encore)
- 3 Manufacturer **Gilbarco GmbH**      **Gilbarco China Co.**      **Gilbarco Veeder Root**  
(Formerly known as **Ltd**      **India Pvt Limited**  
**Gilbarco GmbH &**  
**Co. KG)**
- 4 Address Ferdinand-Henze      Jianshe W. Street      PDP Manufacturing Facility  
Straße 9,      Binhe Industrial Zone      SF NO 628/2 & 627/2  
D-33154 Salzkotten,      Pinggu District      W4 Coimbatore Campus  
Germany      Beijing      Eachanari  
China      China      Chetipalayam Road  
Malumichampatti  
Coimbatore 641021  
Tamilnadu  
India
- 5 The equipment is specified in the schedule of this certificate and the documents to which it refers.
- 6 Certification Management Limited, Unit 1 Newport Business Park, New Port Road, Ellesmere Port CH65 4LZ, UK, Notified Body Number 2503, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:  
  
EN 13617-1:2012      EN 14678-1:2013      EN 1127-1:2011
- 10 The equipment shall be marked with the following:  
**Petrol Dispensing with Vapour Recovery**      **Petrol or LPG Dispensing without Vapour Recovery**  
 II 1/2/3 G       II 2/3 G  
EN 13617-1:2012      EN 13617-1:2012 and EN 14678-1:2013



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## **11 Description**

The SK700-II / Horizon (a.k.a SK700-2 / Horizon or Horizon or Encore) Liquid Fuel Dispenser is a high-hose, multi-product device, rated at 230 Vac nominal (single phase). It consists of an 'H' frame design formed by a steel frame and panels to form a hydraulic housing, columns and canopy.

The hydraulic housing contains up to four hydraulic circuits. Each of these comprises a "monoblock" pumping and air elimination unit, driven by a suitably certified electric motor, interconnecting pipework, electrically actuated flow control valves, hoses and metering unit. The outlet pipes pass into the columns and are connected in the canopy to suitable fuel dispensing hoses. Each hose is fitted with a suitably certified dispensing nozzle and as an option, a safe break coupling.

Above the hydraulic cabinet and between the columns, an electronic/display enclosure is mounted. The enclosure cover extends below the hydraulics cover and is separated by an air gap.

All electric components are suitably certified apparatus and cabling is suitable for petroleum dispensing as specified on the schedule drawings. The electrical circuit and enclosure metalwork is suitably earthed.

The nozzles fit into suitable 'boots' mounted either side of the display enclosure and actuate magnetic proximity sensors as they are removed or replaced. Fuel vapour from the pump and gas separators vented to atmosphere via a valve that prevents the ejection of liquid fuel. The vent outlet may be located either within or outside the hydraulic housing; when outside, a flame arresting gauze is fitted. Ventilation is provided by means of slots in, and spacing around the housing cover panels.

The dispenser operates at a flow rate of 40 l/min (nominal) and may dispense up to four discrete products with only one product being dispensed from each side at one time. The dispenser may be attendant operated, attended self-service or unattended with remote or local operation.

### **Design Options**

- Alternative rating of electrical circuits up to 400 Vac (nominal), 3 phase.
- Alternative High Flow variant (80 l/min nominal) or Ultra-High Flow variant (140 l/min nominal). These variants may also have two speed options (i.e. 40/80 or 40/130 or 120/140 l/min nominal).
- Omission of any of the hydraulic circuits, as well as the associated hose, nozzle and nozzle boot.
- Alternative Satellite dispenser arrangement. This arrangement is used to fuel large vehicles with fuel tanks on either side and consists of a 'satellite' dispenser linked to and fed from a 'host' dispenser via an underground fuel line. The satellite dispenser has no electrically driven components other than a nozzle switch, side select switches and an optional display module powered from the host via an underground cable. The host dispenser is fitted with a satellite selection switch in the display head.
- The fitting of a multi-media display unit beneath the canopy.



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- The fitting of vapour recovery system, this comprises of:
  - A vapour recovery pump driven by an electrical motor, which is energised by a variable speed controller. Both pump and motor are suitably certified and the pump is fitted with suitable flame arresters at both inlet and outlet. The two-sided dispensers have two pump/motor arrangements, which are jointed together downstream of the pump outlet flame arresters.
  - Steel or copper internal pipework whose bore does not exceed 15mm
  - Suitable twin concentric delivery hose(s) and splitter device(s) are fitted
  - Suitable dispenser nozzle(s) are fitted with a vapour inlet stop valve
  - Optional vapour flow meter
- Alternative submersible pump variant, the housing having the pump and associated motor omitted. A suitable shear valve is fitted at the dispenser inlet pipe.
- The inclusion, on the control enclosure, of a pre-set transaction panel, a reading terminal and/or information (or advertising) display screen and loudspeaker to the display unit.
- The addition of a hose retractor arrangement, the hoses being restrained and returned by a spring cord in the upper column.
- The alternative fitting of moulded plastic panels to the control enclosure.
- The use of the equipment to dispense ethanol blended fuels up to 90% ethanol. The substitution of any hydraulic system by an LPG dispensing assembly. Each LPG hydraulic circuit comprises of inlet and vapour return shear valves, a filter unit, a vapour separator vessel, a meter, a differential valve and interconnecting pipework. Manual and electrical valves are provided to enable isolation and flow control. Non-return valves and excess pressure valves maintain the circuit integrity. The outlet pipes pass directly from the base of the hydraulic housing and are connected to suitable dispenser hoses. Each hose is fitted with a breakaway coupling and dispenser nozzle.

Fuel is delivered to the dispenser by a remote LPG pump. Vapour is separated from the liquid in the separator vessel, the vapour being returned to the storage tank. Positive liquid/vapour pressure is maintained by the differential valve fitted at the meter outlet. Normal operating pressure is dependent on tank and temperature conditions, and is between 4 and 18 bar. The maximum system pressure is 25 bar and safety valves are set to vent such that this pressure is not exceeded.

The nozzles are located in suitable “boots”, fitted on either or both sides of the display head and actuate magnetic proximity sensors or switches as they are removed or replaced. Fuel delivery is only maintained whilst a manual ‘dead man’s switch’ is activated. A five second ‘time-out’ facility, coupled to the dead man’s switch, augments the existing systems electronics. The dispenser may be attendant operated, attended self-service or unattended with remote or local operation.

- Use of the equipment in increased ambient temperatures up to +45°C, +50°C, or +55°C, internal components being suitably selected.
- The substitution of the hydraulic systems on one side, by an ‘Adblue’ dispensing system. The design is intended for dispensing urea based fluid and utilises common parts with the liquid fuel dispensers.



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### Variation 1

The variation introduces the following modifications:

- i. The introduction of the alternative polycarbonate enclosure facia material.
- ii. To include an alternative larger air gap in the central section
- iii. Addition of an alternative calculator arrangement (ARM calculator).
- iv. To provide clarification to some current drawings.
- v. To include an alternative manufacturing location

### Variation 2

This variation introduces the following modifications:

- i. To change the manufactures name from Gilbarco GmbH & Co. KG to Gilbarco GmbH (Formerly known as Gilbarco GmbH & Co. KG).
- ii. To update the certificate reference to the 2014//34/EU Directive.

## 12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	19 Dec 2014	R345E/00	Issue of prime certificate
1	07 July 2015	-	Clarification of model references
2	18/12/2015	R911A/00	The introduction of Variation 1
3	01 Sep 2017	R11324A/00	To introduce Variation 2

Note: Drawings that describe the equipment or component are listed in the Annex.

## 13 Conditions of manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- 13.1 Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.
- 13.2 The electrical circuit of each SK700-II / Horizon Fuel Dispenser shall be subjected to the following routine electrical tests:
  - Liquid Fuel dispensers shall be subjected to the tests required by EN 13617-1:2012, clause 6.2.1
  - Automotive LPG fuel dispensers shall be subjected to the tests required by EN 14678-1:2013, clause 6.1
- 13.3 The hydraulic circuit of each SK700-II / Horizon Fuel Dispenser shall be subjected to the following tests:
  - Liquid Fuel dispensers shall be subjected to the tests required by EN 13617-1:2012, clause 6.2.2. Where gauge accuracy cannot be guaranteed, the test shall be increased to compensate.



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- Automotive LPG fuel dispensers shall be subjected to one of the following tests. There shall be no leakage during the test. Where gauge accuracy cannot be guaranteed, the test shall be increased to compensate:
  - Tested at 1.1 x the maximum working pressure (27.5 bar) with pressure relief valves removed. The pressure gauge may be removed for this test.
  - Tested at 0.9 x the relief valve opening pressure with the relief valves fitted.

In both cases, it shall be confirmed that the working pressure of the relief valves does not exceed 25 bar.

- 13.4 Any separately certified electrical equipment fitted shall be installed in accordance with the 'Special Conditions of Safe Use' and take into account the ambient temperature range to be marked.
- 13.5 The setting of the pumping unit fitted in the SK700-II / Horizon Liquid Fuel Dispensers shall not exceed a maximum pumping pressure of 3.5 bar.

#### **14 Special Conditions for Safe Use (Conditions of Certification)**

The following conditions relate to safe installation and/or use of the equipment.

- 14.1 The SK700-II / Horizon Automotive LPG Fuel Dispensers shall be supplied from a remote pressure source not exceeding 25 bar.
- 14.2 A vapour return path to the storage tank shall be provided for each Automotive LPG Fuel Dispenser.
- 14.3 When used for ethanol dispensing, the fuel shall not be in excess of 90% Ethanol, with minimum water content.
- 14.4 The equipment shall be installed in accordance with the manufacturer's instructions, particularly with regard to the prevention of possible leakage of fuel into the ground.
- 14.5 Where petrol fuel dispensers are shipped without nozzles, the equipment shall be fitted with nozzles complying with EN 13012 prior to being put into use.
- 14.6 Where petrol fuel dispensers are shipped without hoses, the equipment shall be fitted with hoses complying with EN 1360 or EN 13483 prior to being put into use.

## Certificate Annex



**Certificate Number** CML 14ATEX9100X  
**Equipment** SK700-II / Horizon Liquid Fuel Dispenser  
(a.k.a SK700-2 / Horizon or Horizon or Encore)  
**Manufacturer** Gilbarco GmbH & Co. KG

The following documents describe the equipment or component defined in this certificate:

### Issue 0

Drawing No	Sheets	Rev	Approved date	Title
M13839	1 of 21	B	19 Dec 2014	General Arrangement & Requirements For Installer
M13839	2 of 21	B	19 Dec 2014	Zoning And Ventilation
M13839	3 of 21	B	19 Dec 2014	Airgap, Nozzle Boot, Electronics Facia
M13839	4 of 21	B	19 Dec 2014	General Assembly & Pipe Connections For Installation
M13839	5 of 21	B	19 Dec 2014	Typical Electrical Arrangement (Non-IS)
M13839	6 of 21	B	19 Dec 2014	Typical Electrical Arrangement (IS)
M13839	7 of 21	B	19 Dec 2014	Safety Critical Component Tabulation Petrol/Diesel
M13839	8 of 21	B	19 Dec 2014	Vapour Recovery Details
M13839	9 of 21	B	19 Dec 2014	Vapour Recovery Details – Sheet 2
M13839	10 of 21	B	19 Dec 2014	Typical Hydraulic Schematics – Petrol/Diesel
M13839	11 of 21	B	19 Dec 2014	Typical Hydraulic Schematics – Ultra High Flow
M13839	12 of 21	B	19 Dec 2014	LPG Dispenser
M13839	13 of 21	B	19 Dec 2014	LPG Hydraulic Joints
M13839	14 of 21	B	19 Dec 2014	Safety Critical LPG Component Tabulation
M13839	15 of 21	B	19 Dec 2014	Aqueous Urea Solution Dispenser
M13839	16 of 21	B	19 Dec 2014	Hose Retractor Version and ALT Hose Connection
M13839	17 of 21	B	19 Dec 2014	Alternative Hose Retraction System
M13839	18 of 21	B	19 Dec 2014	Large Multimedia Display Option. TurPak Printer
M13839	19 of 21	B	19 Dec 2014	Alternative High Hose Connection. Alternative Facia
M13839	20 of 21	B	19 Dec 2014	Additional Options Zoning Details
M13839	21 of 21	B	19 Dec 2014	Typical Electrical Arrangement Apollo Calculator

### Issue 1

No new drawings

## Certificate Annex



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**Equipment** SK700-II / Horizon Liquid Fuel Dispenser  
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**Manufacturer** Gilbarco GmbH & Co. KG

### Issue 2

Drawing No	Sheets	Rev	Approved date	Title
M13839	1 of 22	C	18 Dec 2015	General Arrangement & Requirements For Installer
M13839	2 of 22	C	18 Dec 2015	Zoning And Ventilation
M13839	3 of 22	C	18 Dec 2015	Airgap, Nozzle Boot, Electronics Facia
M13839	4 of 22	C	18 Dec 2015	General Assembly & Pipe Connections For Installation
M13839	5 of 22	C	18 Dec 2015	Typical Electrical Arrangement (Non-IS)
M13839	6 of 22	C	18 Dec 2015	Typical Electrical Arrangement (IS)
M13839	7 of 22	C	18 Dec 2015	Safety Critical Component Tabulation Petrol/Diesel
M13839	8 of 22	C	18 Dec 2015	Vapour Recovery Details
M13839	9 of 22	C	18 Dec 2015	Vapour Recovery Details – Sheet 2
M13839	10 of 22	C	18 Dec 2015	Typical Hydraulic Schematics – Petrol/Diesel
M13839	11 of 22	C	18 Dec 2015	Typical Hydraulic Schematics – Ultra High Flow
M13839	12 of 22	C	18 Dec 2015	LPG Dispenser
M13839	13 of 22	C	18 Dec 2015	LPG Hydraulic Joints
M13839	14 of 22	C	18 Dec 2015	Safety Critical LPG Component Tabulation
M13839	15 of 22	C	18 Dec 2015	Aqueous Urea Solution Dispenser
M13839	16 of 22	C	18 Dec 2015	Hose Retractor Version and ALT Hose Connection
M13839	17 of 22	C	18 Dec 2015	Alternative Hose Retraction System
M13839	18 of 22	C	18 Dec 2015	Large Multimedia Display Option. TurPak Printer
M13839	19 of 22	C	18 Dec 2015	Alternative High Hose Connection. Alternative Facia
M13839	20 of 22	C	18 Dec 2015	Additional Options Zoning Details
M13839	21 of 22	C	18 Dec 2015	Typical Electrical Arrangement Apollo Calculator
M13839	22 of 22	C	18 Dec 2015	Typical Electrical Arrangement ARM Calculator

### Issue 3

**No new drawings**