

**OIML Member State**  
The Netherlands

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Issuing authority  
Person responsible: NMi Certin B.V.  
M.Ph.D. Schmidt

Applicant  
Gilbarco Veeder Root  
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Manufacturer  
Gilbarco Veeder Root  
Coimbatore Campus, Coimbatore Ind. Estate  
Coimbatore 641021, Tamil Nadu, India

Identification of the certified type  
**A fuel dispenser and/or Adblue dispenser**  
Type: Sprint

Characteristics  
See page 2 and further

This OIML Certificate is issued under scheme A.

This Certificate attests the conformity of the above identified type (represented by the sample(s) identified in the OIML Type Evaluation Report) with the requirements of the following Recommendation of the International Organization of Legal Metrology (OIML):

**R 117:2019** "Dynamic measuring systems for liquids other than water"

Accuracy class 0,5

This Certificate relates only to the metrological and technical characteristics of the type of measuring instrument covered by the relevant OIML International Recommendation identified above. This Certificate does not bestow any form of legal international approval.

This certificate and supporting reports comply with the requirements of OIML-CS-PD-07 clause 6.2.

Important note: Apart from the mention of the Certificate's reference number and the name of the OIML Member State in which the Certificate was issued, partial quotation of the Certificate and of the associated OIML Type Evaluation Report(s) is not permitted, although either may be reproduced in full.

Issuing Authority  
**NMi Certin B.V., OIML Issuing Authority NL1**  
10 March 2022

#### Certification Board

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The conformity was established by the results of tests and examinations provided in the associated reports:



For evaluation of the complete fuel dispenser:

- NMI-2550303-01 dated 29 January 2021 that includes 65 pages.

For the mechanical meter sensors, brand Gilbarco Veeder-Root and type C+, V and V+ meter:

- CVN-10119469 dated 2 March 2001 that includes 56 pages;
- CVN-202211 dated 16 May 2003 that includes 49 pages;
- TR:1327 dated 15 April 2015 that includes 12 pages;
- TR:0561 dated 22 October 2009 that includes 14 pages;
- TR:0587 dated 29 September 2010 that includes 14 pages;
- TR:748 dated 10 May 2017 that includes 10 pages.


For the electromagnetic measurement sensors, brand KROHNE and type BATCHFLUX 3200 C:

- NMI-16200528-01 dated 19 August 2016 that includes 46 pages;
- NMI-16200528-02 dated 19 August 2016 that includes 20 pages;
- NMI-1901321-01 dated 27 July 2017 that includes 9 pages.

For the electronic calculating and indicating device, brand Gilbarco Veeder-Root and type Tulip:

- NMI-2630143-01 dated 10 March 2022 that includes 60 pages;
- NMI-2475566-01 dated 3 December 2020 that includes 83 pages;
- NMI-2475566-02 dated 14 December 2020 that includes 28 pages;
- SN:1386 dated 9 August 2017 that includes 22 pages;
- SN:1410 dated 1 December 2017 that includes 23 pages;
- SN:1438 dated 20 December 2018 that includes 22 pages;
- SN:1441 dated 24 January 2019 that includes 4 pages;
- SN:1450 dated 12 July 2019 that includes 24 pages.




For the gas separator, brand Gilbarco Veeder-Root and type GPU90

- TR:740 dated 24 February 2017 that includes 11 pages;
  - R117/1995-NL1-04.04 dated 24 January 2005 that includes 50 pages.
- 

### Characteristics of the dispenser

In Table 1 the general characteristics of the measuring instrument are presented.

The construction of the measuring instrument is recorded under the type evaluation reports mentioned here above and the documentation folder number NMI-2550303-01-2 and consists of 22 pages.



**Table 1 General characteristics**

|                                 | Fuel dispenser  | Adblue / DEF dispenser        |
|---------------------------------|---|-------------------------------|
| Minimum – maximum flow rate     | 1,6 – 40 L/min<br>Viscosity range 0,4 – 1,0 mPa·s.  | 2 – 40 L/min                  |
|                                 | 2,0 – 80 L/min<br>Viscosity range 1,1 – 8,0 mPa·s.  |                               |
| Minimum measured quantity       | 2, 5 and 10 L   | 2 L                           |
| Maximum pressure                | 3,5 bar(g)  | 10 bar(g)                     |
| Accuracy class                  | 0,5   | 0,5                           |
| Environmental classes           | M1 / E1   | M1 / E1                       |
| Ambient temperature range       | -25 – +55 °C  | -10 – +55 °C                  |
| Product temperature range       | -25 – +50 °C  | -10 – +40 °C                  |
| Intended for the measurement of | Hydrocarbon oils (Gasoline, Gasoline up to 86% ethanol or MTBE, Gasoline up to 5% methanol, Diesel or Biodiesel up to 100%) | Adblue (Diesel Exhaust Fluid) |

Each measuring system consists at least of:

- One combined pump and gas eliminator device (gas separator);
- If no gas separator (\*) is used on the measurement system, provision shall be taken to prevent gas passing through the meter sensor.
- One or more meter sensor (meter);
- One calculating/indicating device (calculator).

The characteristics of the mentioned parts of the fuel/Adblue dispenser are presented at table 2 and higher.

The dispenser can be equipped with optional features and functions listed, see documentation number 2550303-01/1-04. Utilizing these features and functions do not have impact on the metrological data and functioning of the dispenser.

The same housing of the dispenser can comprise of one or more measuring systems. When more than one measuring systems are in one housing, one calculating/indicating device may be a common part of the measuring systems.

For multi-product dispensers it is only possible to deliver one product at the same time on one side of the dispenser.

The maximum flowrate once installed may be limited, but for fuels shall be greater than 10 times the minimum flowrate. For Adblue/DEF the maximum flowrate shall be greater than 5 times the minimum flowrate.

Table 2 gives an overview of flow characteristics of the configurations of the family of instruments.

**Table 2 Flow characteristics of the configurations**

| Configuration fuel dispenser   | Flow rate range | Remarks  |
|--|-----------------|--|
| 1 x gas separator*<br>1 x meter sensor,<br>type C+, V or V+                                | 1,6 – 40 L/min  | Intended for the measurement of hydrocarbon oils with viscosity range 0,4 – 1,0 mPa·s.   |
| 1 x gas separator*<br>1 x meter sensor,<br>type C+, V or V+                                | 2,0 – 80 L/min  | Intended for the measurement of hydrocarbon oils with viscosity range 1,1 – 8,0 mPa ·s.<br>Optionally a feature to allow Qmax to be limited to 40 L/min.   |
| 1 x gas separator*<br>2 x meter sensors,<br>type C+, V or V+,<br>one per dispenser<br>side | 1,6 – 40 L/min  | Intended for the measurement of hydrocarbon oils with viscosity range 0,4 – 1,0 mPa·s.<br>The gas separator of this measuring system is suitable for use with two meter sensors. Each meter sensor is considered as part of an individual measuring system. Flowrate reduces to 40 L/min with both meter sensors operating.<br>Optionally a feature to allow Qmax to be limited to 40 L/min with a single meter sensor operating.                    |
| 1 x gas separator*<br>2 x meter sensors,<br>type C+, V or V+,<br>one per dispenser<br>side | 2,0 – 80 L/min  | Intended for the measurement of hydrocarbon oils with viscosity range 1,1 – 8,0 mPa·s.<br>The gas separator of this measuring system is suitable for use with two meter sensors. Each meter sensor is considered as part of an individual measuring system. Flowrate reduces to 40 L/min with both meter sensors operating.  |
| 2 x gas separators*<br>2 x meter sensors,<br>type C+, V or V+                              | 2,0 – 130 L/min | Intended for the measurement of hydrocarbon oils with viscosity range 1,1 – 8,0 mPa·s.<br>A Qmax of 130 L/min is reached by connecting two gas separators and two meter sensors in parallel with delivery through a single transfer point.<br>Optionally a feature to allow Qmax to be limited to 80 L/min.<br>Optionally a feature to allow one of the gas separators and one of the meter sensors to operate as the configuration described above. |

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| Configuration<br>Adblue<br>dispenser                            | Flow rate<br>range | Remarks  |
|---|--------------------|--|
| 1 x measurement<br>sensor type<br>KROHNE<br>BATCHFLUX 3200<br>C | 2 – 40 L/min       | Intended for the measurement of Adblue (Diesel Exhaust Fluid). |

### Parts of the measuring system

The conformity of the following parts was established by the results of tests and examinations provided in the associated report(s):

Part: Measurement sensor  
 Producer: Gilbarco Veeder Root  
 Type: C+  
 Reports: No. CVN-10119469 dated 2 March 2001 that includes 56 pages;  
 No. CVN-202211 dated 16 May 2003 that includes 49 pages;  
 No. TR:1327 dated 15 April 2015 that includes 12 pages;  
 No. TR:748 dated 10 May 2017 that includes 10 pages.

**Table 3 General characteristics of the measurement sensor type C+**

|                                 |  |  |
|---------------------------------|--|--|
| Flow rate range [L/min]         | 1,6 – 40 L/min   | 2,0 – 80 L/min   |
| Intended for the measurement of | Hydrocarbon oils with a viscosity of 0,4 mPa·s – 1,0 mPa·s | Hydrocarbon oils with a viscosity of 1,1 mPa·s – 8,0 mPa·s |
| MMQ                             | 1 L  | 1 L  |
| Maximum pressure                | 3,5 bar  | 3,5 bar  |
| Environmental classes           | M1 / E1  | M1 / E1  |
| Ambient temperature range       | -40 °C / +55 °C  | -40 °C / +55 °C  |
| Product temperature range       | -40 °C / +50 °C  | -40 °C / +50 °C  |

Part: Measurement sensor  
 Producer: Gilbarco Veeder Root  
 Type: V, V+  
 Reports: No. TR:0561 dated 22 October 2009 that includes 14 pages;  
 No. TR:0587 dated 29 September 2010 that includes 14 pages.

**Table 4 General characteristics of the measurement sensor type V and V+**

|                                 |  |  |
|---------------------------------|--|--|
| Flow rate range [L/min]         | 1,6 – 40 L/min   | 2,0 – 80 L/min   |
| Intended for the measurement of | Hydrocarbon oils with a viscosity of 0,4 mPa·s – 1,0 mPa·s | Hydrocarbon oils with a viscosity of 1,1 mPa·s – 8,0 mPa·s |
| MMQ                             | 2 L  | 2 L  |
| Maximum pressure                | 3,5 bar  | 3,5 bar  |
| Environmental classes           | M1 / E1  | M1 / E1  |
| Ambient temperature range       | -25 °C / +55 °C  | -25 °C / +55 °C  |
| Product temperature range       | -25 °C / +50 °C  | -25 °C / +50 °C  |

Part: Measurement sensor  
 Producer: KROHNE Altometer  
 Type: BATCHFLUX 3200 C  
 Reports: No. NMI-16200528-01 dated 19 August 2016 that includes 46 pages;  
 No. NMI-16200528-02 dated 19 August 2016 that includes 20 pages;  
 No. NMI-1901321-01 dated 27 July 2017 that includes 9 pages.

**Table 5 General characteristics of the measurement sensor type BATCHFLUX 3200 C**

|                                 |                                       |
|---------------------------------|---------------------------------------|
| Meter size                      | DN15                                  |
| Flow rate range [L/min]         | 2 - 40 L/min                          |
| Intended for the measurement of | Adblue (Diesel Exhaust Fluid)         |
| MMQ                             | 2 L                                   |
| Maximum pressure                | 10 bar                                |
| Environmental classes           | M1 / E1                               |
| Ambient temperature range       | -40 °C / +55 °C                       |
| Product temperature range       | -40 °C / +55 °C                       |
| Software version                | ER1.0.0_ / ER1.0.1_                   |
| Checksum                        | 6C3F9F91 / C019A476                   |
| Power supply                    | 20,4 - 27,6 VDC (grounding mandatory) |

Adblue/DEF is only suitable for dispensing between -10 °C / +40 °C.

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The BATCHFLUX 3200 C meter body is mounted with an Pt1000 temperature sensor close to the measurement tube. The temperature sensor parameter should be set in units Kelvin (K) whilst the low cut-off value should be not higher than 20% of the defined minimum flowrate in units L/min. The BATCHFLUX 3200 C meter communication protocol is optionally connected with the type Tulip calculating and indicating device via a secure protocol converter device.

Part: Calculating/indicating device  
 Producer: Gilbarco Veeder Root  
 Type: Tulip  
 Reports: No. NMI-2630143-01 dated 10 March 2022 that includes 60 pages.  
 No. NMI-2475566-01 dated 3 December 2020 that includes 83 pages;  
 No. NMI-2475566-02 dated 14 December 2020 that includes 28 pages;  
 No. Sn:1386 dated 9 August 2017 that includes 22 pages;  
 No. Sn:1410 dated 1 December 2017 that includes 23 pages;  
 No. Sn:1438 dated 20 December 2018 that includes 22 pages;  
 No. Sn:1441 dated 24 January 2019 that includes 4 pages;  
 No. Sn:1450 dated 12 July 2019 that includes 24 pages.

**Table 6 General characteristics of the calculating/indicating device type Tulip**

|                           |                                      |
|---------------------------|--------------------------------------|
| Maximum volume indication | 7 digits (9999999; floating decimal) |
| Maximum unit price        | 6 digits (999999; floating decimal)  |
| Maximum price to pay      | 7 digits (9999999; floating decimal) |
| Environmental classes     | M1 / E1                              |
| Ambient temperature range | -25 °C / +55 °C                      |
| Impulse encoder or pulser | ST73662 and Evolve 2.1               |

Software version and Checksum of the calculating/indicating device type Tulip

| Software versions | CRC Checksum | Remarks                       |
|-------------------|--------------|-------------------------------|
| 906.06.451        | 5776280E     | WELMEC Guide 7.2 (Issue 2019) |
| 906.06.002        | 19A8F60A     | WELMEC Guide 7.2 (Issue 2019) |
| 901.06.500        | 335B73FF     | WELMEC Guide 7.2 (Issue 2019) |

Part: Gas elimination device (gas separator)  
 Producer: Gilbarco Veeder Root  
 Type: GPU90  
 Reports: No. TR:740 dated 24 February 2017 that includes 11 pages;  
 No. R117/1995-NL1-04.04 dated 24 January 2005 that includes 50 pages.

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**Table 7 General characteristics of the gas elimination device type GPU90**

|                                 |  |
|---------------------------------|--|
| Maximum flow rate               | 90 L/min   |
| Minimum pressure                | 1,4 bar  |
| Maximum pressure                | 3,0 bar  |
| Environmental classes           | M1   |
| Ambient temperature range       | -40 °C / +55 °C  |
| Product temperature range       | -40 °C / +50 °C  |
| Intended for the measurement of | low-viscosity mineral oils with a viscosity of 0,4 mPa·s – 8,0 mPa·s |

**Certificate history:**

This revision replaces the previous version.

| Revision | Date            | Description of the modification   |
|----------|-----------------|---|
| Initial  | 29 January 2021 | -   |
| 1        | 10 March 2022   | The Tulip calculating and indicating device can be connected with the Krohne BATCHFLUX 3200C meter via a secured protocol converter device. |