OIML Certificate

OIML Member State
The Netherlands

Number R117/2019-A-NL1-21.02
Project number 2550303

Issuing authority Person responsible:	NMi Certin B.V. M. Boudewijns
Applicant	Gilbarco Veeder Root Crompton Close, Basildon Essex SS14 3BA, United Kingdom
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**
29 January 2021

Certification Board

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INSPECTION RvA I 122

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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:
- No. 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:
- 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:0561 dated 22 October 2009 that includes 14 pages;
- No. TR:0587 dated 29 September 2010 that includes 14 pages;
- No. TR:748 dated 10 May 2017 that includes 10 pages.

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

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

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

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-2550303-01-1 and consists of 18 pages.

Table 1 General characteristics

	Fuel dispenser	Adblue / DEF dispenser
Minimum – maximum flow rate	1,6 – 40 L/min Viscosity range 0,4 – 1,0 mPa·s.	2 – 40 L/min
	2,0 – 80 L/min 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	-10 – +55 °C	-10 – +55 °C
Product temperature range	-10 – +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 2550303-01/0-06. 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* 1 x meter sensor, 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* 1 x meter sensor, 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. Optionally a feature to allow Qmax to be limited to 40 L/min.
1 x gas separator* 2 x meter sensors, type C+, V or V+, one per dispenser side	1,6 – 40 L/min	Intended for the measurement of hydrocarbon oils with viscosity range 0,4 – 1,0 mPa·s. 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. Optionally a feature to allow Qmax to be limited to 40 L/min with a single meter sensor operating.
1 x gas separator* 2 x meter sensors, type C+, V or V+, one per dispenser side	2,0 – 80 L/min	Intended for the measurement of hydrocarbon oils with viscosity range 1,1 – 8,0 mPa·s. 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* 2 x meter sensors, 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. 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. Optionally a feature to allow Qmax to be limited to 80 L/min. Optionally a feature to allow one of the gas separators and one of the meter sensors to operate as the configuration described above.

Configuration Adblue dispenser	Flow rate range	Remarks
1 x measurement sensor type KROHNE BATCHFLUX 3200 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	-10 °C / +55 °C	-10 °C / +55 °C
Product temperature range	-10 °C / +50 °C	-10 °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	-10 °C / +55 °C	-10 °C / +55 °C
Product temperature range	-10 °C / +50 °C	-10 °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.

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.

Part: Calculating/indicating device
Producer: Gilbarco Veeder Root
Type: Tulip
Reports: 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
Software version	906.06.451
Checksum	577628OE
Impulse encoder or pulser	ST73662 and Evolve 2.1

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