OIML Certificate

OIML Member State
The Netherlands

Number R117/2019-A-NL1-21.06 revision 3
Project number 3970363

Issuing authority	NMi Certin B.V. Person responsible: M.Ph.D. Schmidt
Applicant	Gilbarco Veeder Root Burnt Mills Road, Basildon Essex SS13 1DT United Kingdom
Manufacturer	Gilbarco Inc. 7300 W. Friendly Ave. Greensboro, NC27420 United States of America
Identification of the certified type	A **fuel dispenser** Type: ENCORE
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.
The conformity was established by the results of tests and examinations provided in the associated reports:

Issuing Authority **NMi Certin B.V., OIML Issuing Authority NL1**
18 September 2025

Certification Board

NMi Certin B.V.
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For evaluation of the complete fuel dispenser:
- No. NMi-2537261-02 dated 21 April 2021 that includes 59 pages.

Characteristics of the fuel dispenser

In Table 1 the general characteristics of the measuring instrument are presented.
The construction of the measuring instrument is recorded in the documentation folder no. NMi-2537261-02-1.

Table 1 General characteristics

Minimum – maximum flow rate	1,6 – 40 L/min; Viscosity range 0,4 – 1,0 mPa·s.
	2,0 – 80 L/min; Viscosity range 1,1 – 8,0 mPa·s.
Minimum measured quantity	2, 5 and 10 L
Maximum pressure	3,5 bar(g)
Accuracy class	0,5
Environmental classes	M1 / E1
Ambient temperature range	-10 – +55 °C
Product temperature range	-10 – +50 °C
Intended for the measurement of	Hydrocarbon oils

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 dispenser are presented at table 2 and higher.

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 shall be greater than 10 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	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.

The complete family of dispensers consists of one family (which are of similar construction) and have the flow characteristics indicated in table 2.

Parts of the measuring system

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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+
Documentation folder:	TC7144-3
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+
Documentation folder:	TC7144-3
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: Calculating/indicating device
Producer: Gilbarco USA
Type: Sandpiper-III
Documentation folder: NMi-2537261-01-3Reports: No. NMi-2537261-01 dated 12 April 2021 that includes 80 pages.
No. NMi-3639811-01 dated 15 August 2023 that includes 45 pages.
No. NMi-3970363-01dated 16 September 2025 that includes 15 pages.

Table 5 General characteristics of the calculating/indicating device type Sandpiper-III (USA)

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 identification	See table below.
Impulse encoder or pulser	TE CA – 1174

Table 6 Software versions and checksum of the calculating/indicating device type Sandpiper -III

Software versions	**CRC Checksum**
04.0.66P (displayed as P04066)	DF5C
04.1.27P (displayed as P04127)	7E5A
05.0.16P (displayed as P05016)	0BB5
06.0.37P (displayed as P06037)	4370

The software version is displayed during the power up sequence or through command code 1, whilst the checksum can be displayed through command code 2.

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Part: Gas elimination device (gas separator)
Producer: Gilbarco Veeder Root
Type: GPU90
Documentation folder: TC7146-4Reports: No. TR:740 dated 24 February 2017
that includes 11 pages.

N0. R117/1995-NL1-04.04 dated 24 January 2005 that includes 50 pages.

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	21 April 2021	-
1	15 August 2023	Update of the Sandpiper-III hardware
2	17 September 2025	Update of the Sandpiper-III hardware
3	18 September 2025	Correction typo in software version