OIML Certificate

OIML Member State
The Netherlands

Number R139/2018-A-NL1-21.01 revision 1
Project number 3922975

Issuing authority	NMi Certin B.V. Person responsible: M.Ph.D. Schmidt
Manufacturer	HAM Criogénica S.L. Poligono Industrial Sant Ermengol Parcela 11 08630 Abrera (Barcelona) Spain
Identification of the certified type	A **compressed gas (CG) dispenser** Type: SH********
Characteristics	See following page(s)

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 139-1 (2018) "Compressed gaseous fuel measuring systems for vehicles"

Accuracy class 1,5

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**
17 February 2025

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 report:

- No. NMi-2224544-01 dated 4 March 2021 that includes 28 pages.

Characteristics of the measuring instrument
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-2224544-01-1.

Table 1 General characteristics

Accuracy class	1,5
Minimum – maximum flow rate	1,3 to 77 kg/min
Minimum measured quantity	1 kg
Maximum storage pressure	200 – 300 bar(g)[1]
Maximum operating pressure	200 – 250 bar(g)[1]
Environmental classes	M2/ E2
Ambient temperature range	-40 – +55 °C; non-condensing humidity
Product temperature range	-25 – +55 °C
Intended for the measurement of	Compressed Natural Gas
Power supply voltage	230 – 110 V AC; 50/60 Hz

Each measuring instrument consists at least of:

- One measurement transducer (meter);
- One calculating/indicating device (calculator).

The characteristics of the mentioned parts of the dispenser are presented at Table 3 and 4.

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.

[1] Depends on the national regulation in the country of use.

Table 2 Dispenser type name denomination

SH	*	*	*	*	*	*	*	*
SH	Fluid	Position LNG 1	Position LNG 2	Recovery gas	Position CNG 1	Position CNG 2	Display	Inlets
	L: LNG	**E**: Left	**E**: Left	**A**: with recovery	**E**: Left	**E**: Left	**1**	**R**: Rear
	G: CNG	**D**: Right	**D**: Right	**S**: without recovery	**D**: Right	**D**: Right	**2**	**B**: Below
	M: LNG & CNG	**0**: not applicable	**0**: not applicable		**0**: not applicable	**0**: not applicable		

The CNG dispenser can be used with or without sequential control.
The CNG dispenser can be built as a single stage system or as a multi-stage (2 or 3) system.

- Single stage systems have one supply of gas;
- Multi-stage systems are connected to 2 or 3 gas supplies, which differ in pressure. Depending on the programmed low flow rate conditions, the instrument switches to the next higher pressure stage or ends the delivery.

The CNG is delivered from a high-pressure storage tank or from a high-pressure compressor. The gas is measured by the measurement transducer; the measured quantity from the meter together with the price to pay are displayed and registered by the electronic counter/calculator.

In Table 3 the overview of the essential parts of the measuring system are presented.

Table 3 Overview parts of the measuring instrument

Part	Producer	Type	OIML certificate	OIML Reports	Remarks
Measurement transducer	Emerson Process Management Flow B.V	CNG050	R139-2018-A-NL1-24.03R0	-	-
Calculating / indicating device	Cetil Dispensing Technology, S.L.	EAS2	-	See Table 4	-

Table 4 General characteristics of the calculating/indicating device type EAS2

Producer	Cetil Dispensing Technology, S.L.
Type	EAS2
Documentation folder	TC8491-3
Reports	- No. NMi-13200749-1 dated 1 May 2014 that includes 77 pages. - No. NMi-13200749-2 dated 1 January 2014 that includes 15 pages - No. NMi-15200617-01 dated 14 April 2016 that includes 85 pages. - No. NMi-15200617-02 dated 14 April 2016 that includes 20 pages. - No. NMi-15200617-04 dated 14 April 2016 that includes 34 pages.
Accuracy class	0.5
Maximum volume indication	8 positions 99999999
Maximum unit price	8 positions 99999999
Maximum price to pay	8 positions 99999999
Environmental classes	M3 / E2 / H3
Ambient temperature range	-40 °C / +55 °C
Power supply voltage	230 AC; 50 Hz
Software identification	See Table 5

Table 5 Software versions of the calculating and indicating type EAS2

Device	Identification	Checksum
MCON	01-02 11-04-14	F06F405F
	01-04 31-10-14	CA8DD289
	01-05 17-02-15	CC84A0AD
	01-10 26-02-16	0xD8AB9A77
	01-11 15-07-16	667D7E1B
	01-13 23-09-16	702278F2
	01-14 24-11-16	1ADD7BB2
	01-15 18-04-17	5B43F929
	01-16 07-07-17	DB202DD2
	01-17 24-04-18	A99774BF
	01-19 23-11-18	5887E0CB
	01-20 18-03-19	C7573D31
	01-21 01-04-19	FD0C4AE7
	01-22 02-08-19	15615C2F
	01-24 10-01-20	8A974FFB

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Device	Identification	Checksum
	01-25 30-07-20	7B9DA776
	01-26 28-10-20	BC2C476A
	01-27 10-08-21	98EFF953
	01-28 18-03-22	A394DE72
	01-29 09-08-23	50B0364F
	01-30 31-12-23	B45F5DB0
	01-31 28-02-24	CD705316
MMED	01-02 11-04-14	0947E0DE
	01-04 31-10-14	1836FB4F
	01-05 17-02-15	3CE9B953
	01-10 26-02-16	0x7BF0F604
	01-11 15-07-16	37A61307
	01-13 23-09-16	9B79E9AF
	01-14 24-11-16	B9A1C6C5
	01-15 18-04-17	E85F99A0
	01-16 07-07-17	85411193
	01-17 24-04-18	040F4BF9
	01-19 23-11-18	3A2801C5
	01-20 18-03-19	300976F7
	01-21 01-04-19	1AE9F6F9
	01-22 02-08-19	613BED73
	01-24 10-01-20	A4FF5598
	01-25 30-07-20	1AAE501D
	01-26 28-10-20	967E90D1
	01-27 10-08-21	E0E517D6
	01-28 18-03-22	AF45E885
	01-29 09-08-23	1B1F5B14
	01-30 31-12-23	11CFB5D3
	01-31 28-02-24	74F35C40
MVIS	01-02 11-04-14	3F2A5C82
	01-04 31-10-14	DF83CF5B
	01-05 17-02-15	2070CEE3
	01-10 26-02-16	0x9850F12E
	01-11 15-07-16	AB4A41A7
	01-13 23-09-16	999A6FE0
	01-14 24-11-16	B2FDD15C
	01-15 18-04-17	1959E9A8
	01-16 07-07-17	FB8BC300
	01-17 24-04-18	D1D3FF71
	01-19 23-11-18	1CF49503
	01-20 18-03-19	3F2C7517
	01-21 01-04-19	4E97A5C6
	01-22 02-08-19	B253CBC9

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Device	Identification	Checksum
	01-24 10-01-20	6BB72102
	01-25 30-07-20	44D12CEE
	01-26 28-10-20	784C3480
	01-27 10-08-21	1C155300
	01-28 18-03-22	443F5142
	01-29 09-08-23	2453FD67
	01-30 31-12-23	5FF11C3D
	01-31 28-02-24	634C40DE
MEES	01-10 26-02-16	0xEEB805DE
	01-11 15-07-16	5CF96D68
	01-13 23-09-16	35B5A20C
	01-14 24-11-16	4CBF0297
	01-15 18-04-17	83932367
	01-16 07-07-17	18898D87
	01-17 24-04-18	32743806
	01-19 23-11-18	AE33C392
	01-20 18-03-19	4678B259
	01-21 01-04-19	B9FAD9EE
	01-22 02-08-19	1D72487B
	01-24 10-01-20	E73816E6
	01-25 30-07-20	41518F40
	01-26 28-10-20	FE0C06E3
	01-27 10-08-21	CE06C5F8
	01-28 18-03-22	288F422C
	01-29 09-08-23	51D6AA27
	01-30 31-12-23	56F2A8AC
	01-31 28-02-24	999363E4
M420	01-10 00-02-16	0x5FE0FEF9
	01-11 00-07-16	32F11CE4
	01-13 00-09-16	44043F49
	01-14 00-11-16	C32C150E
	01-15 18-04-17	15F7104A
	01-16 07-07-17	9D6365A5
	01-17 00-04-18	AAA11519
	01-19 00-11-18	B525DA43
	01-20 00-03-19	7F0CF98E
	01-21 00-04-19	44C251DA
	01-22 00-08-19	30DFD0FA
	01-24 00-00-80	9DE0A1D9
	01-25 00-07-20	93461053
	01-26 00-10-20	AF6E2936
	01-27 00-08-21	590B70BD
	01-28 00-03-22	97DEC08E
	01-29 00-08-23	F052F0EA

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Device	Identification	Checksum
	01-30 00-12-23	FA5BBEAD
	01-31 00-02-24	F702894B

Certificate history:

Revision	Date	Description of the modification
Initial	4 March 2021	-
1	17 February 2025	Software update