


Issued by	NMi Certin B.V., designated and notified by the Netherlands to perform tasks with respect to conformity modules mentioned in article 17 of Directive 2014/32/EU, after having established that the Measuring instrument meets the applicable requirements of Directive 2014/32/EU, to:
Manufacturer	Common S.A. Aleksandrowska 67/93 91-205 LODZ Poland
Measuring instrument	A Rotary Displacement Gas Meter Type : CGR-FX Destined for the measurement of : Gas volume Accuracy class : Class 1,0 Environment classes : M2 / E2 Gas temperature range : -25 °C / +70 °C Ambient temperature range : -25 °C / +70 °C Location : Open Further properties are described in the annexes: – Description T10569 revision 3; – Documentation folder T10569-3.
Valid until	2 August 2023
Remarks	This revision replaces the earlier versions, including its documentation folder.

Issuing Authority **NMi Certin B.V., Notified Body number 0122**
24 February 2017



C. Oosterman
Head Certification Board

NMi Certin B.V.
Hugo de Grootplein 1
3314 EG Dordrecht
The Netherlands
T +31 78 6332332
certin@nmi.nl
www.nmi.nl

This document is issued under the provision
that no liability is accepted and that the
applicant shall indemnify third-party liability.

Reproduction of the complete
document only is permitted.

The designation of NMi Certin BV.as Notified
Body can be verified at [http://
ec.europa.eu/enterprise/newapproach/nando/](http://ec.europa.eu/enterprise/newapproach/nando/)

1 General information about the gas meter

All properties of the gas meter, whether mentioned or not, shall not be in conflict with the legislation.

1.1 Essential parts

1.1.1 Measuring part

The dimensions of the rotors are presented in the table below, while also the appertaining volumes are indicated.

rotor height [mm]	rotor thickness [mm]	rotor length [mm]	volume (V) [dm ³]
71	32	50	0,23
71	32	69	0,31
71	32	110	0,50
71	32	180	0,81
71	32	276	1,24
110	50	120	1,29
110	50	185	2,00
110	50	310	3,34

A drawing of the measuring part is presented in document no. 10569/0-04.

1.1.2 Bearings of the rotors

The bearings of the rotors are presented in drawing no. 10569/0-01.

The bearings which are used have the following characteristics:

Nominal diameter [mm]	Volume (V) [dm ³]	Bearing characteristics			
		Main shaft [mm]	Bearing type	Dynamic load rating C _r [N]	Static load rating C _{0r} [N]
7 / 14 / 5	0,23 / 0,31 / 0,50	10	Rolling bearings	1186	505
7 / 19 / 6	0,81 / 1,24	10		2522	1057
10 / 22 / 6	1,29 / 2,0 / 3,34	14		2555	1129

1.2 Essential characteristics

1.2.1 The meter has the following characteristics:

Aluminium bodies

G-value	Q_{\max} [m ³ /h]	minimum Q_{\min} [m ³ /h]	Q_t [m ³ /h]	volume V [dm ³]	diameter [mm]
10	16	0,16	0,80	0,23	40 / 50
16	25	0,16	1,25	0,23	40 / 50
16	25	0,16	1,25	0,31	40 / 50
25	40	0,16	2,00	0,23	40 / 50
25	40	0,16	2,00	0,31	40 / 50
25	40	0,25	2,00	0,50	40 / 50
40	65	0,25	3,25	0,31	40 / 50 / 65
40	65	0,25	3,25	0,50	40 / 50 / 65
40	65	0,40	3,25	0,81	40 / 50 / 65
65	100	0,40	5,00	0,50	50 / 65 / 80
65	100	0,40	5,00	0,81	50 / 65 / 80
65	100	0,40	5,00	1,24	50 / 65 / 80
100	160	0,65	8,00	0,81	50 / 80
100	160	0,65	8,00	1,24	50 / 80
100	160	0,65	8,00	1,29	80 / 100
100	160	1,00	8,00	2,00	80 / 100
160	250	1,00	12,5	1,24	80
160	250	1,00	12,5	1,29	80 / 100
160	250	1,00	12,5	2,00	80 / 100
160	250	1,60	12,5	3,34	80 / 100
250	400	1,60	20,0	2,00	80 / 100
250	400	1,60	20,0	3,34	80 / 100
400	650	2,50	32,5	3,34	100

Cast iron bodies

G-value	Q_{\max} [m ³ /h]	minimum Q_{\min} [m ³ /h]	Q_t [m ³ /h]	volume V [dm ³]	diameter [mm]
10	16	0,25	0,80	0,50	40 / 50
16	25	0,25	1,25	0,50	40 / 50
25	40	0,25	2,00	0,50	40 / 50
40	65	0,25	3,25	0,50	40 / 50 / 65
40	65	0,40	3,25	0,81	40 / 50 / 65
65	100	0,40	5,00	0,50	50 / 65 / 80
65	100	0,40	5,00	0,81	50 / 65 / 80
65	100	0,65	5,00	1,24	50 / 65 / 80
100	160	0,65	8,00	0,81	50 / 80
100	160	0,65	8,00	1,24	50 / 80
100	160	1,00	8,00	2,00	80 / 100
160	250	1,00	12,5	1,24	80
160	250	1,00	12,5	2,00	80 / 100
160	250	1,60	12,5	3,34	80 / 100
250	400	1,60	20,0	2,00	80 / 100
250	400	1,60	20,0	3,34	80 / 100
400	650	2,50	32,5	3,34	100

The maximum pressure for aluminium bodies is 20 bar, the maximum pressure for cast iron bodies is 25 bar. The maximum pressure for the HTB version is 16 bar.

1.2.2 Flow rate range

The flow rate range shall fulfil the following conditions:

Class	Q_{\max}/Q_{\min}	Q_{\max}/Q_t
1,0	≥ 20	≥ 5

1.3 Essential shapes

1.3.1.1 The nameplate is bearing at least, good legible, the following information:

- CE marking including the supplementary metrological marking (M + last 2 digits of the year in which the instrument has been put into use);
- Notified Body identification number, following the supplementary metrological marking;
- EU-type examination certificate no. T10569;
- manufacturer's name, registered trade name or registered trade mark;
- manufacturer's postal address;
- serial number of the meter and year of manufacture;
- mechanical environment class;
- electromagnetic environment class;
- Q_{max} , Q_t and Q_{min} ;
- maximum working pressure p_{max} ;
- cyclic volume;
- ambient temperature range;
- accuracy class;
- pulse values of HF and LF frequency outputs;
- indication of the flow direction, e.g. an arrow on casing.

An example of the markings is shown in document no. 10569/3-08.

1.3.2 Sealing: see chapter 2.

1.4 Conditional parts

1.4.1 Construction

In addition to the essential parts as mentioned at 1.1, the meter contains at least the following conditional parts:

- housing;
- transmission;
- register;
- front and back cover;
- synchronisation wheels;
- pressure measuring points;
- mechanical drive shaft (optional).

A drawing of the transmission unit can be found in document no. 10569/0-05.

1.4.2 Housing

The gas meter has a housing, which has sufficient tensile strength. The meters housing is made of aluminium or cast iron. Examples of the housings are shown in document 10569/0-04

1.4.3 Transmission

The transmission between the measuring part and the register is executed by means of a magnet coupling. The register is adjustable via adjustment wheels. An overview of the gear transmission and a gear ratio table are presented in drawing no. 10569/3-01 and 10569/3-02. A drawing of the transmission unit can be found in document no. 10569/0-05.

1.4.4 Register

The measured volume is presented by means of a mechanical register. Two types of registers are available. Examples are stated in document no. 10569/3-04. The technical data including LF and HF pulse value of the different registers is stated in no. 10569/3-05.

The register can be rotated over a maximum of 350° for horizontal and vertical flow directions. The register can be rotated without breaking a metrological seal.

The register is built up as follows:

size	number of drums		control-element [m ³]
	before the comma	behind the comma	
G10 – G65	6	2 or 3	0,002 or 0,0002
G100 – G400	7	1 or 2	0,02 or 0,002

1.4.5 Front and rear cover

The entrance to the transmission from the measuring part to the register is shielded by the front cover and the index housing.

1.4.6 Synchronization wheels

The rotors are coupled together mechanically by means of a pair of synchronization wheels.

1.4.7 Pressure tapplings

The housing contains a pressure tapping to determine the inlet pressure. This pressure tapping is provided with the indication "p_m". A second pressure tapping at the outlet is provided with the indication "p".

1.4.8 Mechanical output shaft (optional)

The meter can optionally be equipped with a mechanical output shaft. The maximum permissible load torque on the shaft is 0,25 Nmm. The rotation speed of the output shaft is equal to the speed of the fastest drum of the counter. See document no. 10569/3-03 for a drawing of the mechanical output shaft.

1.5 Non-essential parts

1.5.1 Pulse sensor(s) (optional)

Low frequency pulse sensor(s) and/or high frequency pulse sensor(s). The pulse sensors are replaceable documentation on the replace ability can be found in document no. 10569/3-06 and 10569/3-07

1.5.2 Oil filling plug, drain plug and sight glass for lubrication and checking oil level in the meter

1.5.3 Temperature points

1.5.4 Encoder (optional)

External encoder type "CWSL-N" connected to the output shaft on the mechanical index. A straight or angled adapter can be placed between the two devices to create a different mounting angle of the encoder.



Description

Number **T10569** revision 3
Project number SO16204398
Page 6 of 6

2 Seals

The following items of the meter are sealed:

- The nameplate of the meter.
- A seal prevents the register from being dismantled from the meter.
- The entrance to the measuring part is sealed with one or more seals.
- The entrance to the register is sealed with one or more seals.
- If a separate nameplate is used to show the pulse value this nameplate has to be sealed.

See drawing no. 10569/0-08 for an example of the sealing.

3 Installation conditions

For this rotary meter are no specific installation conditions applicable.