

Issued by NMI Certin B.V.,
designated and notified by the Netherlands to perform tasks with respect to
conformity assessment procedures 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 Truck & Trailergroep Noordoost B.V.
Kwinkweerd 15
7241 CW LOCHEM
The Netherlands

Measuring instrument A **measuring system** for milk
Manufacturer's mark or name : TTG LOCHEM or MAGYAR
Type designation : TTG VMI or MAGYAR VMI
Accuracy class : 0,5
Destined for the measurement of : Milk

Further properties are described in the annexes:

- Description T10958 revision 2;
- Documentation folder T10958-2.

Valid until 27 January 2027

Remarks

- This revision replaces the previous revisions;
- The documentation folder replaces the previous documentation folder.

Issuing Authority

NMI Certin B.V., Notified Body number 0122
21 January 2021

Certification Board

NMI Certin B.V.
Thijsseweg 11
2629 JA Delft
The Netherlands
T +31 88 636 2332
certin@nmi.nl
www.nmi.nl

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

The designation of NMI Certin B.V. as Notified
Body can be verified at
[http://ec.europa.eu/growth/tools-
databases/nando/](http://ec.europa.eu/growth/tools-databases/nando/)

Reproduction of the complete
document only is permitted.

This document is digitally
signed and sealed. The digital
signature can be verified in the
blue ribbon at the top of the
electronic version of this
certificate.

1 General information about the measuring system

Properties of this measuring system, whether mentioned or not, shall not conflict with the legislation.

1.1 Essential parts

Producer	Type	Evaluation / Parts Certificate	Remarks
Measurement sensor			
GEA Diessel GmbH	IZM "XX"	TC7520	-
Proces-Data A/S	PD 340 Extended version Cxx	TC7204	-
Electronic calculating/indicating device			
GEA Diessel GmbH	ZD-flash™	TC7521	-
EBNER	ARS Compact	A0445/4159/2008	-
Bartec GmbH	MAK 3002	A0445/4063/2009	-
Bartec GmbH	MAK 3003	-	See details in chapter 2.1 of this description.
Ebner electronic GmbH	ARS Smart	T07-0337	-
Gas separator			
TTG LOCHEM or MAGYAR	TTG AEV or MAGYAR AEV	TC10959	-

1.2 Essential characteristics

In addition to the characteristics on page 1 of this EU-type examination certificate, the following characteristics apply to the measuring system:

1.2.1 Flow rate range (Q_{\min} – Q_{\max})

- For measuring systems with one flow meter:
 - Q_{\min} : Shall not be smaller than any Q_{\min} of the components making up the measuring instrument;
 - Q_{\max} : Shall not be larger than any Q_{\max} of the components making up the measuring instrument.
- The ratio Q_{\max}/Q_{\min} shall be:
 - At least 5:1.

1.2.2 Minimum measured quantity (MMQ)

The MMQ value shall have the form 1×10^n , 2×10^n or 5×10^n , with n being any integer or zero. The MMQ is the largest of:

- The MMQ stated in the Evaluation Certificate of the measurement sensor;
- 200 times the largest display scale interval (see table below);
- 200 times the printed scale interval (see table below);
- 100 times the additional effect of the pipe work between measurement sensor and transfer point due to variations in temperature, equal to 10°C for exposed pipes and 2°C for insulated or underground pipes;
- In case the pipe work between measurement sensor and transfer point is not always full of liquid during shutdown periods, the following shall be taken into account regarding the liquid which is not measured or not delivered:
 - If not corrected, the MMQ is 200 times the volume or mass of this liquid;
 - If corrected, the MMQ is 200 times the estimated variance in the corrected volume or mass of this liquid.

1.2.3 Maximum operating pressure (P_{\max})

- The maximum operating pressure of the measuring system shall not exceed the P_{\max} of its components.

1.2.4 Temperature range liquid

- $-5^\circ\text{C} / +35^\circ\text{C}$

1.2.5 Temperature range ambient

- $-25^\circ\text{C} / +55^\circ\text{C}$

1.2.6 Environment classes

- M3 / E3

1.3 Essential shapes

1.3.1 Configuration

Accuracy class	Type of measuring system	Schematic drawing	Remarks
0,5	Measuring systems for milk	10958/0-01	-

- The essential parts stated in paragraph 1.1 can be applied in each desired combination as long as there is no conflict with the concerning Evaluation or Parts Certificates.
- This system is designed for reception of milk; the transfer point is the constant level in the gas separator upstream of the meter.
- A hose reel can be connected to the installation of the supplier.
- The milk is collected using a vacuum system.
- The air separator with a controlled level.
- The measured volume is transmitted to the indicating device using volume pulses.

1.3.2 Inscriptions

- The following information is clearly visible on the nameplate:
 - 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 number T10958;
 - Manufacturer's name, registered trade name and/or registered trade mark;
 - Manufacturer's postal address;
 - Type designation;
 - Year of manufacture and serial number;
 - Accuracy class;
 - Minimum and maximum flow rate;
 - Maximum pressure;
 - Name(s) or nature(s) of the product(s) to be measured;
 - Mechanical and electromagnetic environment class;
 - Ambient temperature range;
 - Liquid temperature range;
 - Serial numbers of all essential parts stated in paragraph 1.1 (optional, see clause 2).

Remarks:

The nameplate must be clearly visible without removing the covers.

In general it is preferred that the name plate layout is such that Safety, Metrological and common markings are logically arranged to cover also other relevant information, coming from other legislation.

An example of the nameplate is given in documentation no. 10958/0-02.

- Further inscriptions:
 - The inscription "Minimum Measured Quantity ... L" in the vicinity of the display of the calculating and indicating device and/or on the nameplate;
 - The inscriptions on the essential parts as mentioned in the applicable Evaluation Certificates or Parts Certificates.

1.4 Conditional parts

1.4.1 Printing device

A printer is connected to the flow computer and is used for printing the reports (deliveries), events and alarms. The printer can be of any brand and type under the condition that it is equipped with a paper out detection and that the communication with the printer is safeguarded.

1.4.2 Flow control valve

An on/off valve or a flow control valve is located upstream and/or downstream of the measurement sensor and is used to control the flow rate through the measurement sensor.

1.5 Conditional characteristics

1.5.1 Elimination of air or gases

- During a delivery no air or gas shall pass through the measuring sensor;
- The gas separator device as mentioned in paragraph 1.1 is used within its operating parameters, to ensure that the above condition is met;

1.5.2 Complete filling of the measuring system

- When starting with an (partly) empty system, the base volume shall be added to the measured volume. So the totally delivered volume is equal to the measured volume plus the basis volume;
- The calculation of the correction shall be covered by the approval of the flow computer mentioned in paragraph 1.1.

1.6 Conditional shapes

The construction shall be such that no air or gas pockets remain after the air is released by the vent-off valves.

1.7 Non-essential parts

- Pipe work and connections;
- Valves;
- Vent-off valve(s);
- Hose(s);
- Filter/strainer;
- Drain valves;
- Pump;
- Milk sample system.

2 Information on the main components of the measuring system

2.1 Electronic calculating and indicating device (flow computer) of make Bartec-Benke GmbH, type MAK3003

2.1.1 Essential characteristics of the flow computer

- Accuracy class: 0.5
- Maximum volume indication: 99999,9
- Temperature range ambient: -25 °C / +55 °C
- Environment class: M3/E3
- Power supply: 24 VDC
- Software specifications:
 - Software type P;
 - Risk Class C;
 - Extension L, T, S and D.

Software module	Software Version	Checksum
emfx	1.0.14	37d2c2
umg	1.1.2	b0a3d0
lib3003db	1.1.0	aab9e7
m-hmi	1.1.0	1ee1f1
m-mid	1.1.0	f20c46
m-kmif-mak	1.1.0	422a01
m-print	1.0.8	749906

The software version and the checksum can be read on the device through the following procedure:

Menu → Configuration → Basic Settings → Program Mode → Signatures

The flow computer is capable of indicating several quantities. Use for Weights and Measures related purposes is allowed for the following quantities:

- Uncorrected volume.

The following input(s) can be used for legally relevant data:

- Pulse input via P-NET of the PD340 flow meter.
- Pt100 Temperature measurement via RTD cable.

The following output(s) can be used for legally relevant data:

- Display;
- Printer.

2.1.2 Essential shapes of the flow computer

- Inscriptions:

The following information is clearly visible on the nameplate:

- Manufacturers name and/or trade mark;
- The type;
- Serial number.

- Sealing:

See explanation of securing and drawing of the sealing in documentation no. 10958/2-01.

3 Seals

The following items of the measuring system are sealed:

- Nameplate to the frame of the measurement system. Removal of the nameplate without destroying it or without breaking a seal shall not be possible;
- If the serial numbers of the essential parts stated in paragraph 1.1 are not mentioned on the nameplate, the essential parts have to be sealed against removal;
- For sealing of the essential parts, see the applicable Evaluation Certificates or Parts Certificates;
- The mechanical connections between the meter sensor and the pulser;
- Valves installed between the measurement sensor and the transfer point that allow diversion of the measured product from the normal path, are sealed against opening. This requirement is not applicable if opening of the valve (during a delivery) leads to an alarm.

4 Conditions for conformity assessment

The initial verification of the measuring system shall include at least the following steps:

1. Examination for conformity of the measuring system according to this EU-type examination certificate.
2. Essential parts covered by an Evaluation Certificate or Parts Certificate shall be constructed and set-up according to the applicable Evaluation/Parts Certificate.
3. The parts used for the measurement of process conditions (such as temperature and/or pressure) are mandatory when used for conversion and correction calculations.
4. In case the measurement is non-repeatable and one of the trading parties is absent, a printing device and/or memory device shall be used for the registration of the measurement data.
5. Verification of the correct parameter settings of the essential parts.
6. The zero-offset (at zero flow) of the meter is checked (if applicable).
7. The measurement accuracy of the measuring system is verified.

This can be done:

- Directly on site of installation by comparing the measurement result with a calibrated master (e.g. master meter; weighing bridge).
or
- In a test lab on a liquid with similar properties (density and viscosity) as the liquid to be measured.
The result of this investigation is a calibration report, which states the results and the correct settings of all parameters, which are directly involved in the measurement (as a result of this investigation, they may have to be changed in respect of the original factory settings).
or
- See 'Conditions for conformity assessment' of the applicable measurement sensor.