

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

ASSYTECH S.r.l.
Via Val d'Aosta 169
23018 Talamona (SO)
Italy

Measuring instrument

A fuel dispenser

Manufacturer's mark or name : ASSYTECH

Type designation : AT...

Accuracy class : 0,5

Destined for the measurement of : See § 1.2 of the description

Further properties are described in:

- Description T10820 revision 2;
- Documentation folder T10820-3.

Valid until

31 October 2026

Remarks

- This revision replaces the previous revisions;
- The documentation folder replaces the previous documentation folder;
- The fuel dispenser may be combined with one or more LPG- and/or gasoline oil dispensers and/or measuring systems for AdBlue, which make use of the same or separate calculating/indicating device(s);
- The fuel dispenser may be combined with the self-service devices as mentioned in § 1.1 of the description.

Issuing Authority

NMi Certin B.V., Notified Body number 0122

27 June 2019


C. Oosterman
Head Certification Board

1 General information about the fuel dispenser

Properties of this fuel dispenser, whether mentioned or not, shall not conflict with the legislation.

1.1 Essential parts

Producer	Type	Evaluation / Parts Certificate	Remarks
Measurement transducer			
Petrotec	PTF 25-80	TC7293	-
Total Control Systems	TCS-700-xx	TC8176	-
Electronic calculating/indicating device (including pulser)			
Coptron Soc. Coop.	CPTH02	TC7308	-
Electronic volume calculating and converting device			
Technisch Ingenieursbureau E. Meurs B.V.	TVC	TC7231	-
Gas elimination device (gas separator)			
Petrotec	RTF	TC7294	Optionally is a submerged pump is used, see paragraph 1.4 about pumping units.

The specific pulser type for the application shall be mentioned in one of the Evaluation or Parts Certificates as mentioned in the table above.

The fuel dispenser may be connected to a Self Service Device which is described in:

- any Parts Certificate issued by a Notified Body that acts under module B of the MID for ANNEX VII (MI-005);
- and under the condition that the applied communication protocol is stated in the Evaluation or Parts Certificates of both the applied electronic calculating/indicating device and self-service device.

1.2 Essential characteristics

In addition to the characteristics as is stated on page 1 of this EU-type examination certificate the following characteristics apply to the fuel dispenser:

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

The flow rate range can be freely chosen if the following conditions are fulfilled:

- 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.
- For measuring systems with multiple parallel operating 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 the sum of Q_{\max} of each measurement sensor as stated in the Evaluation Certificate of the measurement sensor and for the gas elimination device the conditions of paragraph 1.5.1 shall be met.
- The ratio Q_{\max}/Q_{\min} shall be at least 10:1.

1.2.2 Minimum measured quantity (MMQ)

- 2, 5 or 10 Litres
- In case the Q_{\max} of the measuring system is less than 60 L/min, the MMQ shall not exceed 5 Litres.
- In case the Electronic volume calculating and converting device is used, the MMQ shall be 5 Litres or higher.

1.2.3 Product range (density and/or viscosity)

- See the applicable Evaluation Certificate of the measurement sensor for the product density and/or viscosity range or the table below.
- The meter metrological characteristics are unchanged when materials are selected for high blend ethanol fuels, or bio-diesel.

Measurement transducer	Q_{\min} – Q_{\max}
PTF 25-80	2,5 - 50 L/min Viscosity range 0,4 - 8,0 mPa·s 2,5 - 130 L/min Viscosity range 1,1 - 8,0 mPa·s
TCS-700-xx	Depending on meter size (see applicable evaluation certificate).

Gas separator	Q_{\max}
RTF	80 L/min Viscosity range 0,4 - 8,0 mPa·s 130 L/min Viscosity range 1,1 - 8,0 mPa·s

- 1.2.4 Maximum operating pressure (P_{max})
 - 3,5 bar(g)
- 1.2.5 Temperature range liquid
 - See the applicable Evaluation Certificate of the measurement sensor for the approved temperature ranges.
- 1.2.6 Temperature range ambient
 - Depend on the used parts forming the measurement instrument. See the Evaluation Certificates of each component for the approved ambient temperature ranges.
- 1.2.7 Environment classes
 - M1 / E1
- 1.2.8 Multiple flow meters (optional)
 - Flow meters can be mounted in parallel
 - In case of two parallel connected gas separators and measurement transducers with one delivery hose, the maximum flow rate can be 160 L/min, 200 L/min or 260 L/min with viscosity range of 1,1 - 8,0 mPa.s.

Please note that:

- It is not mandatory that all meters operate simultaneously.
- The meter size can be different.
- Measures shall be taken to ensure that the minimum and maximum flow rate of each individual meter is not exceeded.
- If the delivered total of the meters is summated and presented by the calculating and indicating device mentioned in paragraph 1.1, the whole installation can be considered as one fuel dispenser and only one name plate is present. In all other cases, every individual measurement sensor is to be considered an individual measuring instrument, and the appropriate number of name plates has to be present for each fuel dispenser.
- When measuring the same product through one transfer point, the delivered amount is the total of all meters and therefore this amount can be mass or volume at metering or base conditions.

- 1.2.9 Total price indication (optional)
The total price indication together with the unit price indication is optional.

1.3 Essential shapes

- 1.3.1 Configuration
 - 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.
 - The fuel dispenser may be combined with one or more LPG- and/or gasoline oil dispensers and/or measuring installations for AdBlue, which make use of the same or separate calculating/indicating device(s). If the same calculator/indicating device is used, depending on the calculator/indicating device, the delivery is possible separately or simultaneously;
 - The fuel dispenser is provided with a separate or a common supply system for several dispensers.

- When applying one gas separator with two measurement transducers and each measurement transducer is destined to deliver separately, this configuration has to be considered as two fuel dispensers;
- If two gas separators working simultaneously with two measurement transducers in parallel and with only one delivery point (with one common calculator/indicating device), both measurement transducers must be considered as parts of one and the same fuel dispenser;
- In case of two delivery outlets are permanently installed and operate simultaneously or alternately, the requirements in paragraph 5.1.7 of OIML R117-1 edition 2007 shall be fulfilled;
- When using the electronic calculating/conversion device, one device could be used for two hoses with the same product.
- A self-service device can be integrated in the same frame (housing) of the dispenser or connected from a remote place.

A schematic drawing of the installation is given in documentation no. 10820/2-01.

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 T10820;
 - 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 chapter 2).

Remarks:

The nameplate must be clearly visible without removing the covers.

An example of the name plate is given in documentation no. 10820/0-02.

- Further inscriptions:
 - The inscription "Minimum Measured Quantity ... L" or " V_{min} L" on the indicator face of the calculating/indicating device (on both sides if applicable);
 - The inscriptions on the essential parts as mentioned in the applicable Evaluation Certificates or Parts Certificates.
- Data sheet (optional)
A data sheet can be available with markings belonging to individual components (e.g. the measurement transducer) in case this information is not stated on the component itself.

When the data sheet contains mandatory information that is not present on the name plate, it shall be fixed in a permanent manner to the frame of the housing.
Also a drawing identifying each nozzle with its associated hydraulics can be printed on the data sheet.

1.4 Conditional parts

- 1.4.1 Pumping unit
The fuel dispenser can be operated with a suction pump or a remote pumping system (submerged pump or barrel pump, or remote pump). One remote pumping system can be connected to several meters delivering the same product. In case of a submerged pump the gas separator is optional.
- 1.4.2 Filter
A filter is normally part of the gas separator assembly. If the gas separator is not present the filter is fitted upstream of each measurement transducer.
- 1.4.3 Mechanical volume totalizer (optional)
The mechanical volume totalizer(s), driven by the measurement transducer, can be present.
- 1.4.4 Electro-mechanical volume totalizer (optional)
The electro-mechanical volume totalizer(s), as a part of the calculating/indicating device, can be present.
- 1.4.5 Check valve or non-return valve (optional)
An optionally valve (of various manufacturers) fitted upstream of the gas separator and measurement transducer to prevent the reverse flow of the liquid into the storage tank. This valve is mandatory if the gas separator is not present.
- 1.4.6 Cut off valve
A valve (of various manufacturers) fitted up- or downstream of the measurement transducer used to stop/block the flow of the liquid and can also have the function as preset valve. This valve is optional if the cut-off in is secured another way.
- 1.4.7 Pre-set valve (optional)
A valve (of various manufacturers) fitted up- or downstream of the measurement transducer used for stopping the flow on the entered quantity (volume or price). The function of the cut off valve and preset valve can be combined in one valve.
- 1.4.8 Control valve (optional)
A valve (of various manufacturers) fitted up- or downstream of the measurement transducer used for changing the flow e.g. from the minimum flow rate to the maximum flow rate.
- 1.4.9 Manual operated valves (optional)
Manual operated valves fitted up- or downstream of each measurement transducer in case of two measurement transducers in parallel, if there is no possibility to calibrate each measurement transducer separately.
- 1.4.10 Several delivery points of the same measurement transducer
Each delivery point has its own hose, nozzle and cut-off valve, the cut-off valve can be fitted in the housing of the dispenser or in a so-called "satellite".

1.5 Conditional characteristics

1.5.1 Elimination of air or gases

- Before a delivery is started, the system shall be free of air or gas;
- During a delivery no air or gas shall pass through the measuring sensor;
- The gas elimination device in paragraph 1.1 may be used within its operating parameters, to ensure that the above conditions are met;
- The gas elimination device is optional in the case of either air intake or gas release will not occur in the liquid upstream of the meter.

1.5.2 Flow rate

In case of the presence of several points of delivery the flow rate of these points will comply with Q_{min} and Q_{max} of the essential parts, with the remark, that in case the parts are working parallel, twice the Q_{max} and the Q_{min} (of the parts) for the fuel dispenser is permitted.

1.6 Non-essential parts

- Housing of the dispenser;
- Pipe work and connections;
- Hose(s);
- Nozzle(s);
- The dispensers may optionally be provided with several safety provisions, which shall not influence the metrological properties.

1.7 Non-essential characteristics

- Flow changing (optional);
- Flow changing in stages to Q_{max} .

2 Seals

The following items of the fuel dispenser are sealed:

- Nameplate to the frame of the fuel dispenser. Removal of the nameplate without destroying it or without breaking a seal shall not be possible;
- Data sheet (if applicable) to the frame of the fuel dispenser. Removal of the data sheet 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 or data sheet, 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 (if applicable);
- The pulsers of the meter against removal (if applicable);

3 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 Part Certificate shall be constructed and set-up according to the applicable Evaluation/Part Certificate.
3. Verification of the correct parameter settings of the essential parts.
4. The zero-offset (at zero flow) of the meter is checked (if applicable).

5. 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.