EC type-examination Certificate

Number **T10496** revision 1
Project number SO13202122

Issued by	NMi Certin B.V., designated and notified by the Netherlands to perform tasks with respect to conformity modules mentioned in article 9 of Directive 2004/22/EC, after having established that the Measuring instrument meets the applicable requirements of Directive 2004/22/EC, to:
Manufacturer	Netmil Trading Ltd. 2 Sofouli Str. Chanteclair Building 3rd floor, Flat/Office 303 P.C 1096 Nicosia Cyprus
Measuring instrument	An interruptible **measuring system** for truck loading

Type	:	MC5XX (XX see paragraph 1.2 of the description)
Destined for the measurement of	:	Hydrocarbon based oils with maximum viscosity of 20 mPa.s at 20°C
Accuracy class	:	0,5
Environment classes	:	M3 / E2
Temperature range liquid	:	-25 °C / +55 °C
Temperature range ambient	:	-25 °C / +55 °C
Q_{min} - Q_{max}	:	See § 1.2 of the description
Minimum measured quantity	:	See § 1.2 of the description

Further properties are described in:
– Description T10496 revision 1;
– Documentation folder T10496-1.

Valid until	30 July 2022
Remarks	This revision replaces the earlier version, except for its documentation folder.
Issuing Authority	**NMi Certin B.V., Notified Body number 0122**

20 June 2013

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

1 General information about the measuring system

All properties of this measuring system, whether mentioned or not, shall not be in conflict with the legislation.

In all circumstances, the pressure at the pump inlet is always greater than the atmospheric pressure plus the saturated vapour pressure of the liquid.

1.1 Essential parts

Manufacturer	Type	Evaluation Certificate / Parts Certificate	Remarks
Measurement transducer			
Netmill Co Ltd.	MC505; MC507; MC515; MC530	-	See the Documentation no. 10496/0-06
Calculating/indicating device			
Veeder Root	7887; 7888; 7889	-	-
Dem. G. Spyrides S.A.	Meter Guard AK6	GB-1427	-
Veeder Root	EMR^3	GB-1285	-
Gas extractor & special gas extractor			
Netmill Co Ltd.	AE50 (gas extractor)	-	See the Documentation no. 10496/0-07
Netmill Co Ltd.	AE50 (special gas extractor)	-	Is a gas extractor AE50 in combination with a special valve and gas tube.

1.2 Essential characteristics

In addition to the characteristics as stated on page 1 of this EC type-examination Certificate, the following characteristics apply:

- $Q_{min} – Q_{max}$
  Within the flow range specified in the table below for a certain meter size, a minimum and maximum flow rate can be chosen under the condition that the ratio is at least 1 : 4.

- The minimum measured quantity (MMQ) of the instrument is the largest value of:
  - The MMQ mentioned for the sensor; see overview table of the meter sizes.
  - 200 times the display of the scale interval.
  - 200 times the printed scale interval.

1.2.1 Meter sensor

- Flow characteristics of the sensor

Type	M5 xx			
	MC505	**MC507**	**MC515**	**MC530**
Size [mm / (inch)]	38 / (1 ½)	51 / (2)	76 / (3)	102 / (4)
Cyclic volume [L]	0,309	0,681	1,839	5,102
Q_{max} [L/min]	227	380	757	1320
Q_{min} [L/min]	22	38	78	132
MMQ [L]	50	50	100	200
Rotation shaft [L/rev]*	2,4748	5,4516	7,3575	40,813
P(e) max [bar]	10	10	10	10

* Transmission of the ratio of adjuster (3,997) is included.

- Adjustment
  The adjustment can be performed by a mechanical adjuster. The entire range of adjustment is 5% of the cyclic volume. Adjustments can be performed with steps of 1%, 0,1% and 0,02%.

  A drawing of the meter sensor is given in the Documentation no. 10496/0-06.

1.2.2 Gas extractor

- Device used to extract air or gases accumulated in the supply line of the meter in the form of pockets that are no more than slightly mixed in the liquid.

  A description of the gas extractor is given in the Documentation no. 10496/0-07.

1.2.3 Special Gas extractor.

- Is a gas extractor in combination with a air activated/differential check valve. The air accumulated in the head of the gas extractor provides the pressure that is used for partially closing of the differential valve. If the pressure is big enough the valve will be fully closed.

  A description of the differential check valves is given in the Documentation no. 10496/0-08.

1.2.4 Mechanical indicating device

The mechanical counter (unit set as Liter) has the following characteristics:

- Maximum indication delivery display 99999 (5 elements)
- Scale interval 0,1 Liter, marked with number after 1 liter.
- A full revolution of the first element is equal to 10 liter.
- Equipped with a zero setting device.
  During the zeroing the display is blinded, after zeroing this blinding is removed.

1.2.5 Mechanical printer

- Printed scale interval 0,01 m^3.
- The delivery is printed in two steps, start value and stop value of the delivery is printed. Each printed value is six or seven digit number.
- The first step of the delivery also zeros the mechanical counter.
  Optionally this step also zeros the printer; in this case the start value on the ticket consists of zeros.
- In addition to the volume; a two-letter code in combination with a 3-digit sequence number is printed. The sequence number is automatically increased after one full revolution of the first element of the printer; in this case after 100 L.Maximum indication delivery display 99999 (5 elements)

1.2.6 Mechanical preset device

The mechanical counter (unit set as Liter) has the following characteristics:

- Pre-set scale interval 0,01 m^3.
- Maximum pre-set 99,99 m^3 (4 elements) or 999,99 m^3 (5 elements).
- During the delivery the pre-set indication counts back to zero.

1.3 Non-essential characteristics

The mechanical counter is equipped with a total counter with the following characteristics:

- Maximum indication
  - 99999999 unit (8 elements) The unit is liter
- Scale interval
  - 1unit. (unit is liter)
- Not resettable to zero

1.4 Essential shapes

1.4.1 Configuration

- The measuring instrument is constructed in such a way that air cannot enter the instrument.

- If the gas extractor is installed below the level of the meter, a non –return valve shall be incorporated to prevent the pipe work between the two components from emptying.

The configuration of the measuring instrument is given in the Documentation no. 10496/0-01, 10496/0-02 and 10496/0-03.

1.4.2 Inscriptions
The following information is clearly visible on the nameplate:

- CE marking
- the type approval mark no. T10496;
- manufacturer's identification mark or trade mark
- type designation
- serial number and year of manufacture
- accuracy class
- Q_{min} - Q_{max}
- P_{max}
- nature of liquids to be measured (viscosity)
- mechanical environment class
- electromagnetic environment class
- ambient temperature range
- the temperature range of the dispensed liquid

An example of the nameplate is shown in the Documentation no. 10496/0-05.

Remarks:
- The name plate must be clearly visible without removing the covers.

Furthermore the following inscriptions/plate are applied:
- The inscription "minimum measured quantity ... L" on the indicator face of the calculating/indicating device or on the name plate.
- At least T10496 and the serial number of the measurement sensor.
- At least T10496 and the serial number of the (special) gas extractor.
- At least T10496 and the serial number of the calculating/indicating device.

2 Seals

The following items 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;
- The measurement sensor as mentioned in the Documentation no. 10496/0-06;
- The calculating / indicating device as mentioned in the belonging Documentation folder;
- The mechanical connection between the calculating/indicating device and the measurement sensor;

An example of the sealing of the installation is given in the Documentation no. 10496/0-04.

3 Conditions for conformity assessment

- For applications the measuring instrument must be constructed in accordance with this Examination certificate and the appertaining documentation.