



EU-TYPE EXAMINATION CERTIFICATE

Number: TCM 142/07 - 4537

Addition 6

This addition replaces all previous versions of this certificate in full wording.

Page 1 from 7 pages

- In accordance:** with Directive 2014/32/EU of the European Parliament and of the Council on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments (implemented in Czech Republic by Government Order No. 120/2016 Coll.).
- Manufacturer:** Bermad CS LTD
Kibbutz Evron
2280800 Kibbutz Evron
Israel
- For:** water meter – woltmann
Type: Turbo Bar E
- Accuracy class: 2
Temperature class: T30
- Valid until:** 4 August 2027
- Document No:** 0115-CS-A028-07
- Description:** Essential characteristics, approved conditions and special conditions, if any, are described in this certificate.
- Date of issue:** 11 May 2026

Certificate approved by:



RNDr. Pavel Klenovský

1 Characteristics of instrument

The water meters type Turbo Bar E are designed to measure, memorise and display the volume at metering conditions of water passing through the measurement transducer in the sense of the Directive 2014/32/EU of the European Parliament and of the Council of the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments (implemented in Czech Republic by Government Order No. 120/2016 Coll.), as amended.

The water meters type Turbo Bar E are based on the Woltmann principle, the helical blades of the turbine rotate about the axis of flow. The turbine impeller drive is magnetically connected to a dry control head. The measuring unit is connected to the body by a flange cover which is fixed by four screws and sealed by a rubber o-ring.

The water meters type Turbo Bar E are equipped with an electronic indicating device formed by LCD displays. The adjustment is realized by adjusting screw.

The water meter shall be installed to operate in horizontally position with the indicating device positioned at the top.

2 Main characteristics

Manufacturer:	Bermad CS LTD
Model number:	Turbo Bar E
Nominal diameter:	40
Type details:	
Q_1 [m ³ /h]:	0.500
Q_2 [m ³ /h]:	0.800
Q_3 [m ³ /h]:	25.00
Q_4 [m ³ /h]:	31.25
Q_3/Q_1 :	50
Q_2/Q_1 :	1.6
Q_4/Q_3 :	1.25
Measuring principle:	Woltmann
Accuracy class:	2
Temperature class:	T30
Water pressure class:	MAP 16
Pressure loss class:	ΔP 16
Maximum admissible temperature [°C]:	30
Maximum admissible pressure [MPa]:	1.6
Orientation limitation:	horizontal position with the indicating device positioned at the top
Resolution of the indicating device [dm ³] ² :	-
Indicating range [m ³] ² :	-
Resolution of the device for rapid testing pulses/liter] ² :	-
Resolution of the indicating device [dm ³] ¹ :	0.001
Indicating range [m ³] ¹ :	99 999
EUT testing requirements (OIML R 49-2:2013, 8.1.8):	
Category:	Positive displacement water meters
Case:	E
Installation details:	
Connection type (screw thread):	flanges

Minimum straight length of inlet pipe [mm]:	0
Minimum straight length of outlet pipe [mm]:	0
Flow profile sensitivity class:	U0D0
Flow conditioner (details if required):	No
Mounting:	in-line
Orientation:	horizontal position with the indicating device positioned at the top
Length [mm]:	260
Reverse flow ¹ :	Not designed to measure
Reverse flow ² :	-
Mechanical environment class (OIML R 49-1:2013/ Directive 2014/32/EU): ¹	B, O / M1
Electromagnetic environment: ¹	E2
Temperature range ambient:	-25 °C / 55 °C
Power supply ¹ :	
Type (battery, mains AC, mains DC) ¹ :	battery
U_{max} (V) ¹ :	3.7
U_{min} (V) ¹ :	2.7
Frequency ¹ :	-
Minimum battery lifetime [years] ¹ :	8 (optionally)
Software version ¹	
Software version (of legally relevant SW) ¹ :	-
CRC checksum (of legally relevant SW) ¹ :	0045012D
Ancillary devices (not certified):	
Reed sensor power supply (U_{max} / I_{max}):	The reed sensor is an internal component operating within a voltage range of 1.8V to 5.5V, with a maximum current consumption of 2 μ A. The overall product consumes up to 180 μ W at its peak, corresponding to 50 μ A at 3.6V.
Power supply (U_{max} / I_{max}) ² :	
K-factor [pulse/Litres]:	1; 5; 10; 50; 100; 1000
Reed sensor power supply (U_{max} / I_{max}):	-
Information specified by the manufacturer (information in the table below are not certified)	
-	-

¹ Applicable for water meters equipped with electronic device.

² Applicable for water meters equipped with mechanical register.

³ The ratio Q_3 / Q_1 shall be chosen according to paragraph 4.1.4 of OIML R 49-1:2024

3 Tests

Technical tests of the water meters type Turbo Bar E were performed in compliance with the International Recommendation OIML R 49 Edition 2013 (E) with conformity to EN ISO 4064:2017, Type Evaluation report No. 0511-ER-V036-23 (with related test reports No. 6015-PT-P0015-25, No. 6011-PTSW010-25, No. 8551-PT-E0216-23, 6015-PT-P0005-26).

4 Conformity marks and inscription

The water meters type Turbo Bar E shall be clearly and indelibly marked with the following information:

- Water meter type
- Unit of measurement (m^3)
- Numerical value Q_3 in m^3/h ($Q_3 \times \times$) and the ratio Q_3 / Q_1 ,
- EU-type examination certificate number
- Manufacturer's name, registered trade name or registered trade mark
- Post address of manufacturer
- Year of manufacture, two last digits of the year of manufacture, or the month and year of manufacture
- Serial number (as near as possible to the indicating device)
- Direction of flow, by means of an arrow (shown on both sides of the body or on one side only provided the direction of flow arrow is easily visible under all circumstances)
- Maximum admissible pressure (MAP $\times \times$)
- Letter H \uparrow (horizontal position with the indicating device at the top)
- The temperature class (T $\times \times$)
- The pressure loss class ($\Delta P \times \times$)
- The installation sensitivity class (U \times D \times)
- CE marking and metrology marking in line with the Directive 2014/32/EU

There are additional data required for water meter with the electronic indicating device:

- For a non-replaceable battery: the latest date by which the meter shall be replaced
- Environmental classification (B or O)
- Electromagnetic environmental class (E2)
- Software version / checksum (on digital display)

There are additional data required if the water meter is equipped with an ancillary device:

- Output signals for ancillary devices (type / levels)
- External power supply requirements (voltage – frequency)
- Sensor reading (impulse / L)

These markings shall be visible without dismantling the water meter after the instrument has been placed on the market or put into use. Examples are in Figure 3.

The environmental classification and electromagnetic environmental class may be given on a separate datasheet, unambiguously related to the meter by a unique identification, and not on the meter itself.

5 Additional specifications

The water meters type Turbo Bar E shall be put onto the market in line with the procedure of conformity assessment according to the Module D or F of the Directive 2014/32/EU as well as in compliance with the technical description of this report and shall be tested in accordance with the requirements determined in EN ISO 4064-1:2017, respectively OIML R 49-1:2013.

A metrological test may only be performed by a producer, or a notified body respectively in line with the conformity assessment procedure by the D or F Modules of the Directive 2014/32/EU, respectively.

6 Ensuring the integrity of the instruments

One of the screws connecting the water meter body and the flange cover and the housing of the indicating device has to be sealed (Figure 2, Figure 3). For sizes where the adjusting screw can be approached from outside the adjusting screw has to be sealed. The seals are realized by a wire with a lead or plastic seal.

If the meter is equipped by the reed impulse transmitter, the screws fixing the transmitter to the meter have to be sealed.

7 Drawing of the instruments

Water meters type Turbo Bar E are manufactured according to the technical documentation of manufacturer. Technical documentation contains the following drawings:

Document reference	Date	Brief description
S42\015-WPH_FL (3 documents)	5.11.07	WPH 40mm (1.5") Turbo bar

History of additions

Addition No.	Description
Addition 0	Issuing certificate
Addition 1	Administrative changing
Addition 2	Changing ratio and permanent flowrates (DN40, DN80 and DN100)
Addition 3	Administrative changing
Addition 4	Added new marking
Addition 5	Revision according to the Directive 2014/32/EU
Addition 6	Complete revision according to ISO 4064-1:2024, respectively OIML R 49-1:2024.

Figure 1: View of the water meter Turbo Bar E



Figure 2: Sealing 1 - of the water meter Turbo Bar E

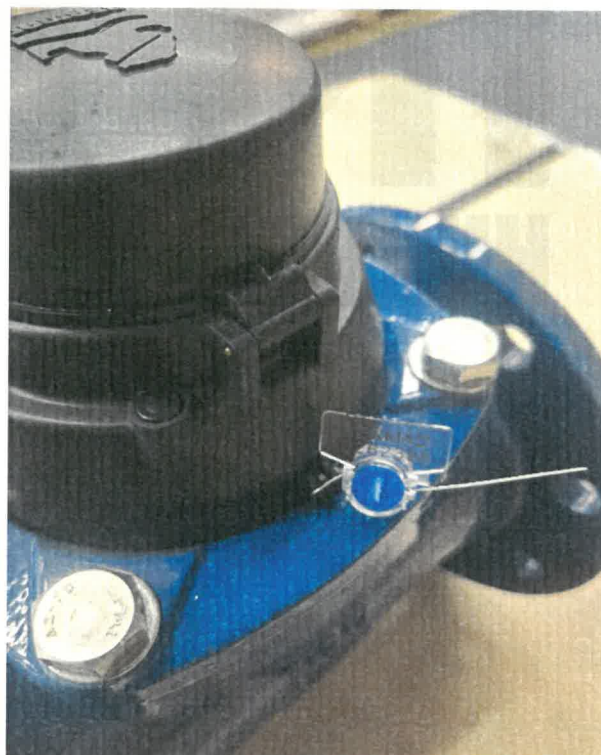


Figure 3: Sealing 2 - of the water meter Turbo Bar E

