



EU-TYPE EXAMINATION CERTIFICATE

Number: TCM 142/18 - 5538

Addition 1

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

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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: JANZ – Contagem e Gestão de Flúidos, S. A.
Avenida Infante D. Henrique, 286
1950-421 Lisboa
Portugal

For: water meter – multi jet
Type: JT200

Accuracy class: 2
Temperature class: T30 and T50

Valid until: 29 January 2028

Document No: 0511-CS-A003-18

Description: Essential characteristics, approved conditions and special conditions, if any, are described in this certificate.

Date of issue: 19 February 2018

Certificate approved by:




RNDr. Pavel Klenovský

1. Characteristics of instrument:

The Multi jet water meters type JT200 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 Multi jet water meters type JT200 are velocity meters. The meters consist of a brass body with connecting threads, a wet hydraulic chamber with propeller inside spinning around metal axles, plastic magnet holder with a ball made of hard metal touching a sapphire stone on the side of the register, a magnetic coupling realized by two magnets - one on the dry and one on the wet side, an indicating device, a register cap and clamp on cover connecting the indicating device to the body and covering the indicating device, a regulation screw sealed with the body.

The possible realizations of the indicating device are following:

1. Dry flat register,
2. Dry inclined register
3. Super-dry register with a copper housing and a glass cap.

Each of the registers can be formed by numbered rollers consisting of (a) four black drums displaying volume in cubic meters, two red drums and two red rotary pointers displaying smaller submultiples of cubic meters or (b) five black drums displaying volume in cubic meters, two red drums and two red rotary pointers displaying smaller submultiples of cubic meters or (c) five black drums displaying volume in cubic meters, three red drums and one red rotary pointer displaying smaller submultiples of cubic meters or (d) four black drums displaying volume in cubic meters, three red drums and two red rotary pointers displaying smaller submultiples of cubic meters. There is a star wheel with six arms in the mechanical indicating device, which can be used for rapid testing.

The water meters can be equipped by a reed impulse transmitter or an inductive sensor (both programmed electronically) or by other devices, all can be certified optionally.

2. Main characteristics:

Basic technical data of water meters type JT200:

<i>Nominal diameter:</i>	15	20
Q_1 [m ³ /h]:	flowrates are shown in Table <i>Basic metrological data (flowrates)</i>	
Q_2 [m ³ /h]:		
Q_3 [m ³ /h]:	2.5	4
Q_4 [m ³ /h]:	3.13	5
Q_3/Q_1 :	80; 63; 50; 40 for horizontal position with the dial at the top 50; 40 for horizontal position with the dial at the side	
Q_2/Q_1 :	1.6	
Q_3/Q_4 :	1.25	
Accuracy class:	2	
<i>Maximum permissible error for the lower flowrate zone (MPE_l):</i>	±5%	
<i>Maximum permissible error for the upper flowrate zone (MPE_u):</i>	±2% for water having a temperature ≤ 30 °C ±3% for water having a temperature > 30 °C	
Temperature class:	T30 or T50	
Water pressure class:	MAP 16	
<i>Pressure loss class:</i>	ΔP 40	ΔP 40
<i>Indicating range [m³]:</i>	9 999 or 99 999	
<i>Resolution of the indicating device [dm³]:</i>	0.02	0.02
<i>Resolution of the device for rapid testing [L]:</i>	52,2	39,2
Connection type (screw thread):	G ³ / ₄ "B or G1"B	G1"B or G1"1/4 B
Flow profile sensitivity class:	U0D0	
Mounting:	in-line	

Orientation:	Horizontal with the dial at the top (H↑) Horizontal with the dial at the side (H→)	
Length [mm]:	110 to 190	165 to 190
Ancillary devices (not certified):		
Type	Reed sensor	
Power supply:	max. 48 V DC / AC / 50 mA	
K-factor [pulse/Litres]:	programmed electronically	
Type	Inductive sensor	
Power supply:	max. 24 V DC / 20 mA	
K-factor [pulse/Litres]:	programmed electronically	
Environmental class: ¹	C	
Electromagnetic environment: ¹	E1	
Mechanical environment: ¹	M1	

¹ Valid for water meter with an electronic device; if it is equipped, these classes are set in combination with parameters of ancillary device.

Basic metrological data (flowrates)

Manufacturer:	JANZ – Contagem e Gestão de Fluidos, S. A.							
Model number:	JT200							
Nominal diameter:	15	20	15	20	15	20	15	20
Type details:								
Q_1 [m ³ /h]:	0.031	0.050	0.040	0.063	0.050	0.080	0.063	0.100
Q_2 [m ³ /h]:	0.050	0.080	0.063	0.102	0.080	0.128	0.100	0.160
Q_3 [m ³ /h]:	2.5	4.0	2.5	4.0	2.5	4.0	2.5	4.0
Q_4 [m ³ /h]:	3.1	5.0	3.1	5.0	3.1	5.0	3.1	5.0
Q_3/Q_1 :	80	80	63	63	50	50	40	40

3. Tests

Technical tests of the water meters type JT200 were performed in compliance with the International Recommendation OIML R 49:2013 and EN ISO 4064-1:2017 with conformity to the Directive 2014/32/EU, Test Report No. 6015-PT-P0005-18.

4. Conformity marks and inscription:

The water meters type JT200 shall be clearly and indelibly marked with the following information:

- Water meter type
- Unit of measurement (m³)
- Numerical value Q_3 in m³/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 $\times \times$)
- The temperature class (T $\times \times$)
- The pressure loss class ($\Delta P \times \times$)
- CE marking and metrology marking in line with the Directive 2014/32/EU

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.

5. Additional specifications:

The water meters type JT200 shall be put onto the market in line with the procedure of conformity assessment according to the Annex 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 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 Annexes of the Directive 2014/32/EU, respectively.

6. Ensuring the integrity of the instruments:

The sealing is realized by embedding of the clamp on cover of the meter to the body of the meter and by connecting the adjusting screw with the water meter body (Figure 1). The cover can be removed only destroying this part. The cover has to be equipped with save guarding marks.

If the meter is equipped by the reed impulse transmitter or the inductive transmitter, the screws fixing the transmitter to the meter have to be sealed. The location and type of the seal is described in Figure 2.

7. Drawing of the instrument:

Water meters type JT200 are manufactured according to the technical documentation of manufacturer. Technical documentation contains following drawings:

Document reference	Date	Brief description
9 0016 0162 f1	22.4.2016	General assembly (Q3=2,5/4)
9 0016 0162 f2	22.4.2016	External view and sealing (Q3=2,5/4)
9 0016 0162 f3	22.4.2016	Sensors and sealing (Q3=2,5/4)
9 0016 0162 f4	22.4.2016	Flat register alternative (Q3=2,5/4)
9 0016 0162 f5	22.4.2016	Superdry register alternative
9 0016 0162 f6c	18.1.2018	Printing marks (Q3=2,5/4)
9 0016 0162 f7c	18.1.2018	Printing marks (Q3=2,5/4)
9 0016 0162 f8c	18.1.2018	Superdry printing marks (Q3=2,5/4)

History of additions

Addition No.	Description
Addition 0	Issuing certificate
Addition 1	Text modification

Figure 1: The water meter type JT200 – view and sealing:

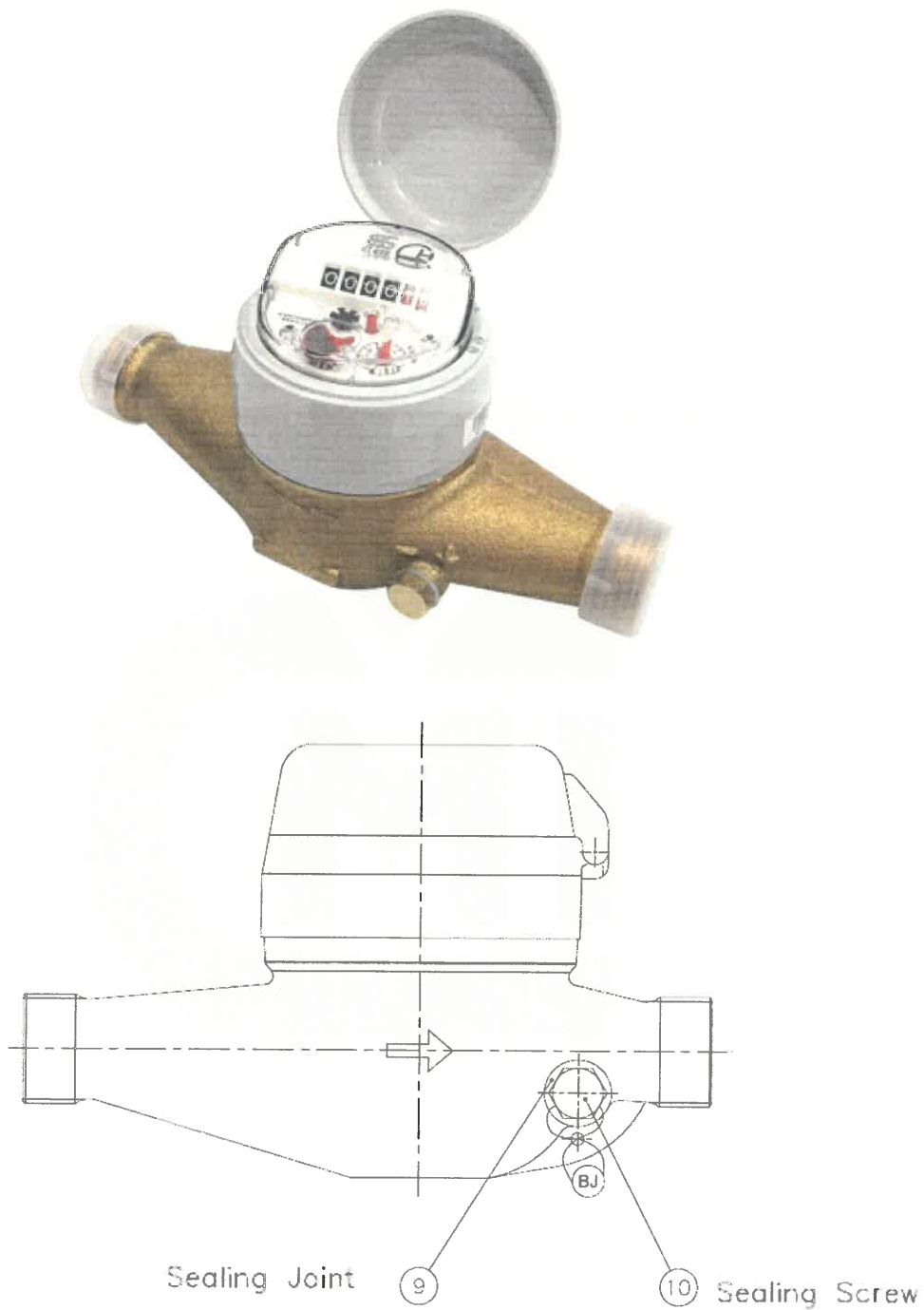


Figure 2: The water meter type JT200 with reed impulse and inductive sensors – view and sealing:

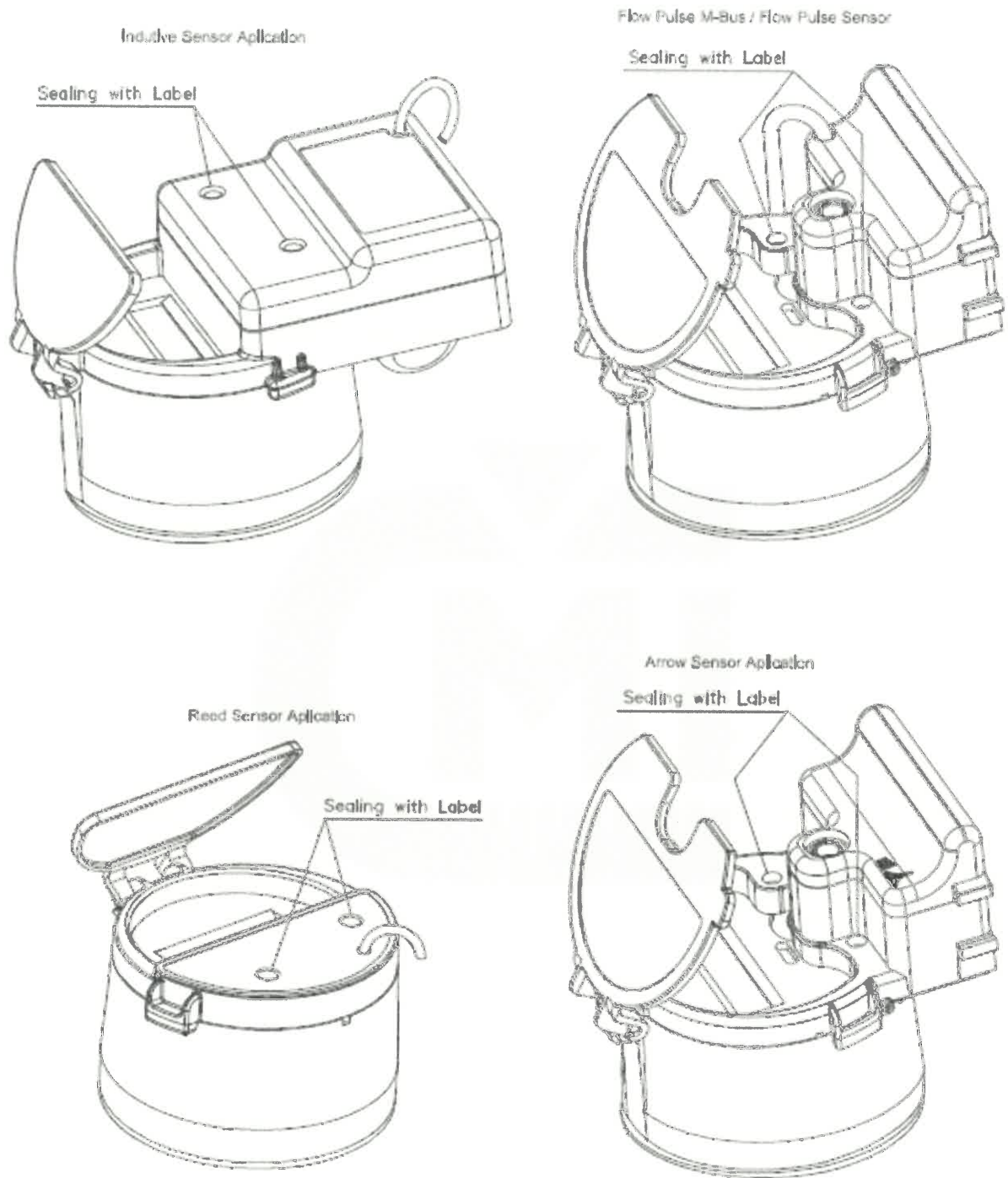
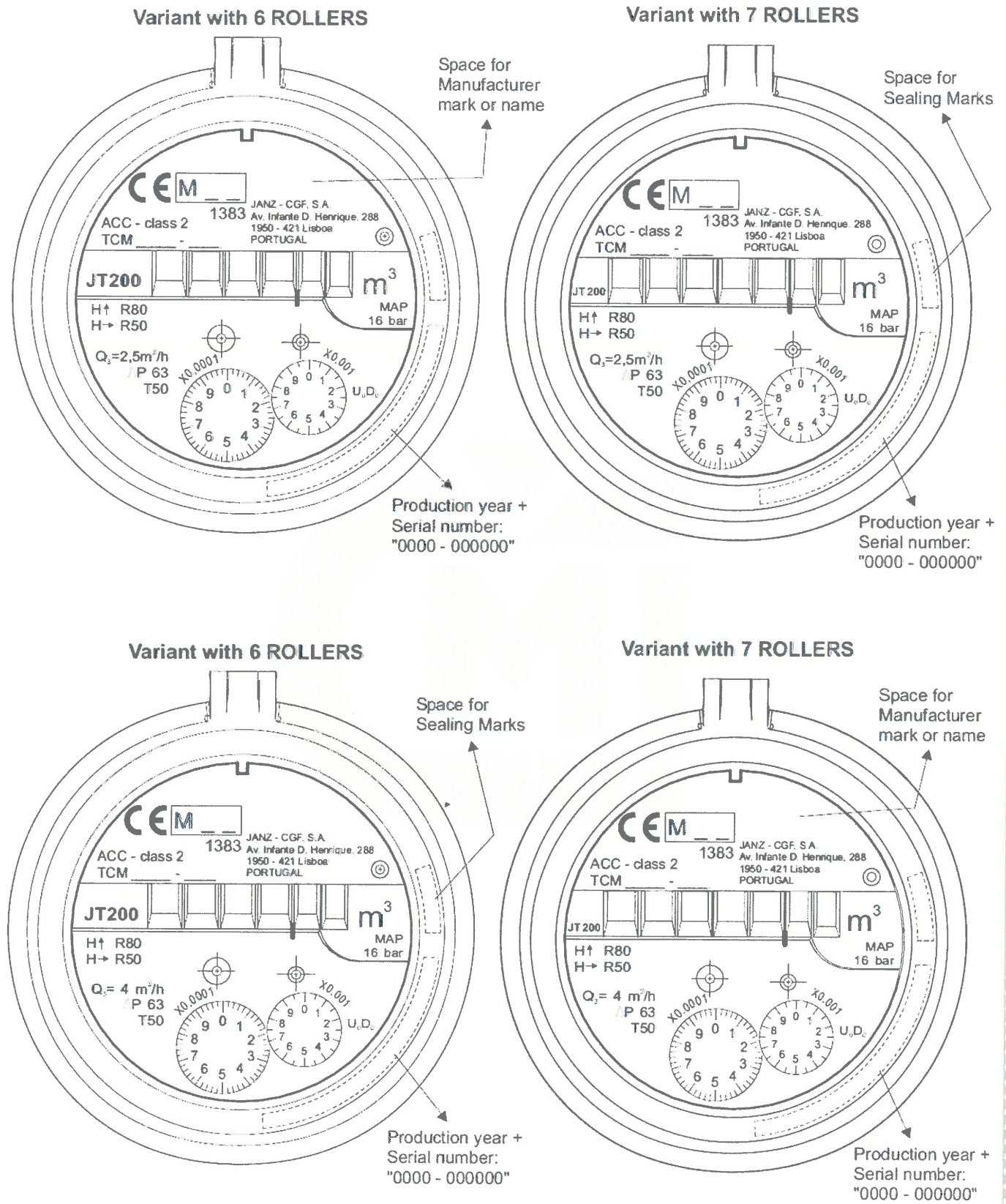
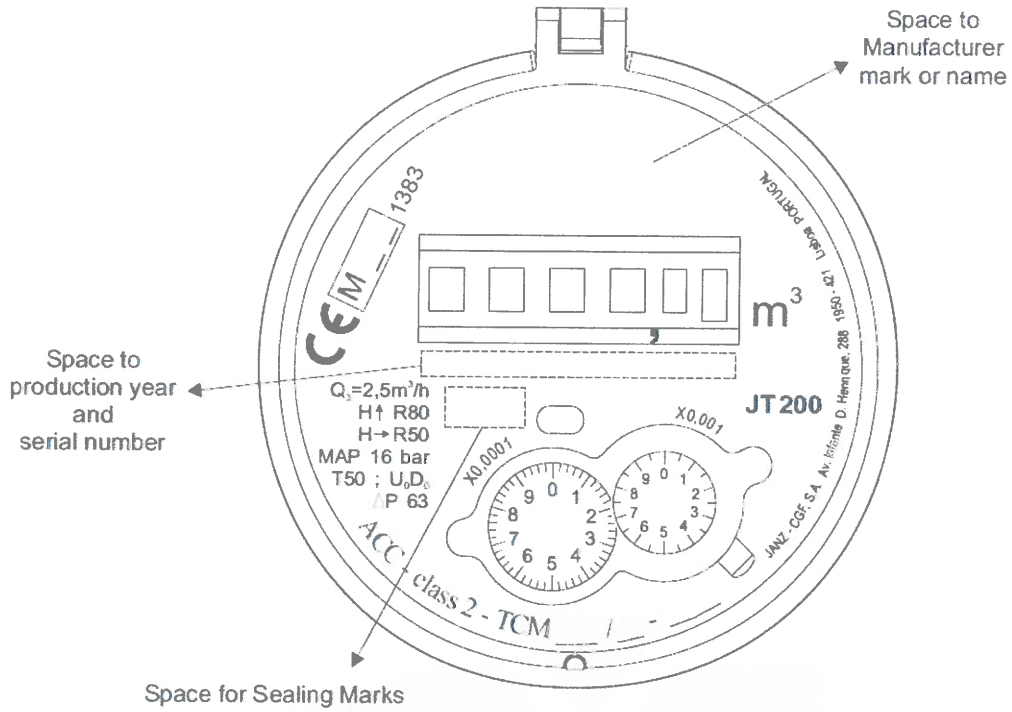


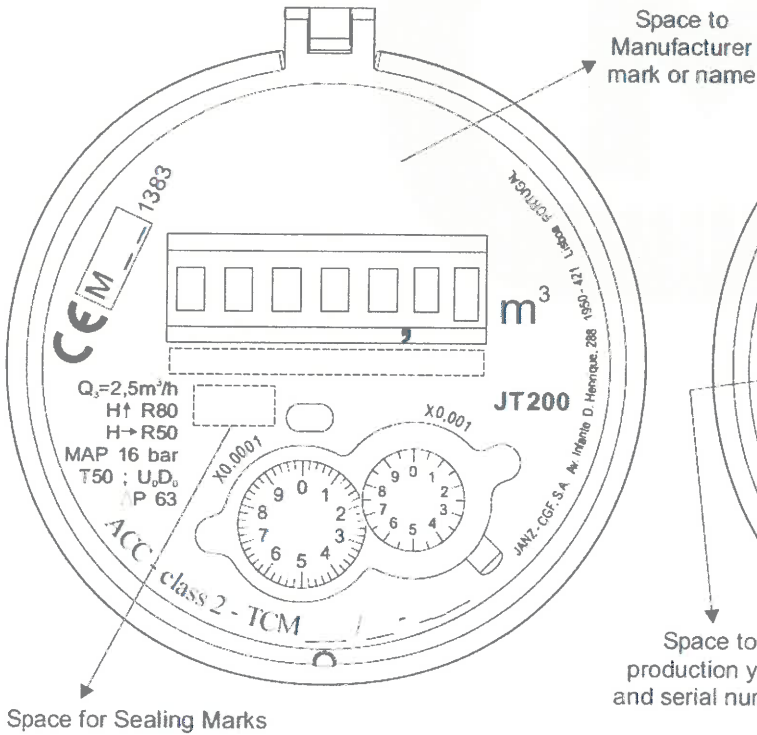
Figure 3: The examples of dial plates of the water meter type JT200:



Variant with 6 ROLLERS



Variant with 7 ROLLERS



Variant with 8 ROLLERS

