BONEGA®

Water- Meters

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CHARACTERISTICS

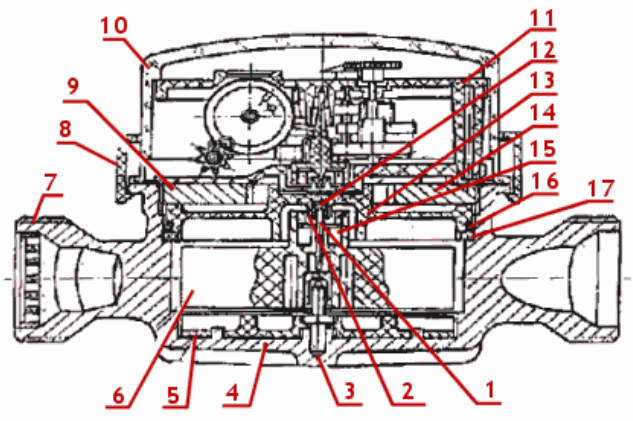
The BONEGA water-meter - S/13 (20) or T/13 (20) is the single-inlet bladed house water-meter for cold and warm water, with internal gate regulation and dry-running counter with a wheel for photometric reading. The water-meter state can be read with precision to 1 litre.

The water-meter is designed to be installed into the water ductings be means of screw joints. The water flows through the water-meter beginning at the inlet where it strikes the water-meter turbine, causes its rotation and flows to the outlet. By means of the magnetic couple the turbine motion is transmitted onto the counter. With this solution we have avoided the turbine with the counter to be mechanically interconnected. Such interconnection could cause water leakage into the turbine space. The turbine is the only movable part touched by water.

The counter attached to and sealed with irremovable sealing fastening ring of red colour for warm water-meters and blue colour for cold water-meters.

The surface is nickel-coated because of anticorrosive features and better appearance what is the best corrosion protection.

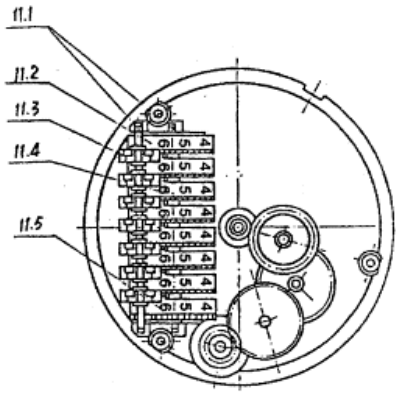
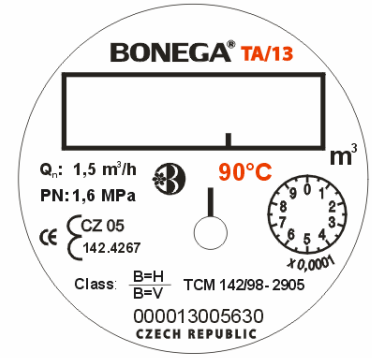
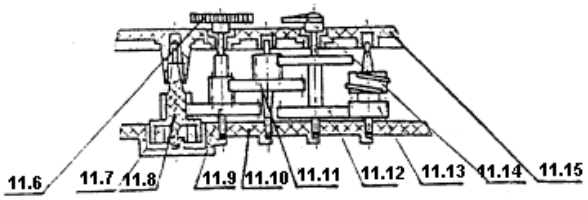
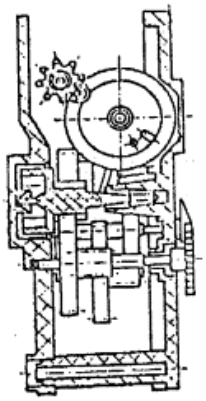
The BONEGA house water-meter complies with the standards ISO 4064, class B and CSN 257801.



#	PART	MATERIAL
1	TURBINE SPINDLE	STAINLESS STEEL
2	TURBINE BUSH	NYLON 12
3	SHAFT (COUNTER PIVOT)	POLYETHYLEN+STAINLESS STEEL SHAFT
4	BODY	BRASS
5	BOTTOM PLATE	NORYL 731
6	TURBINE	POLYPROPYLEN
7	FILTER	POLYPROPYLEN
8	COUNTER FASTENING RING	POLYETHYLEN
9	BLOCKING NUT	BRASS
10	TRANSPARENT COVER	POLYCARBONATE
11	COUTNER	(SET) SEE ENCLOSURE
12	BEARING	RUBY
13	CONTROL PANEL	NORYL 731
14	CONTROL PANEL BUSH	NYLON 66+GLASS FIBRE
15	MAGNET	CERAMIC
16	O-RING	RUBBER
17	GASKET	ABS+GLASS FIBRE

SPECIFICATION AND GENERAL DATA			
Description	**Unit**	**Specification and dimensions**	
Nominal inner diameter DN	mm	13	20
	inch	1/2"	3/4"
Overloading rate of flow Qmax "Qs"- maximum peak capacity (short-time)	m3/h	3	5
Qn - nominal (continous) rate of low	m3/h	1,5	2,5
Minimum rate of flow Qmin - the first precision limit have to be incl. error ± 5%	l/h	30	50
Transition rate of flow Qt - the second precision limit have to be incl. max. error ± 3%	l/h	120	200
Max. operational pressure	MPa	1,6	1,6
P with Qmax.	MPa	0,074	0,096
Counter capacity (maximum reading)	m3	100 000	100 000
Value of scala division (minimum reading)	l [dm3]	0,05	0,05
L - cnstructional length (without crew joint)	mm	110	130
l	mm	190	228
H - height	mm	70,6	
h -	mm	18	
B - width	mm	75	
Weigth (without connections)	kg	0,445	0,465
Weigth (incl connections)	kg	0,675	0,695
Metrological class as the vertical and horizontal position	ISO	B	B
Maximum operational temperature for cold water (S) and warm water (T) S/T	°C	30/90	30/90
Pulse number with Qn	rev./100 litrů	1.125,00	712,74
Turbine revolutions per 1 m3	rev./m3	3.037,5	1.924,4
Number of teeth /turbine	pce.	10	10
Number of teeth / gear wheel 1.	pce	VIII.27	XI.27
Number of teeth / gear wheel 2.	pce	X.30	X.28
Number of teeth - gear wheel 3.	pce	30	28/30

GEAR WHEEL TEETH AND TURBINE REVOLUTIONS					
Qn	**TURBINE**	**Gear wheel # 1**	**Gear wheel # 2**	**Gear wheel # 3**	**Turbine revolutions / 100**
1,5	10	VIII.27	X.30	30	3037,5
2,5	10	XI.27	X.28	28/30	1924,4

VIEW WITHOUT COVER	COUNTER
	
GEAR SYSTEM	**GEAR SYSTEM**
	

COMPONENTS		
No.	**DESCRIPTION**	**MATERIAL**
11.I	SHAFT	STAINLESS STEEL
11.II	THE LAST WHEEL WITH DIGITS	ABS
11.III	PINIONS FOR WHEEL WITH DIGITS	ABS
11.IV	MIDDLE WHEELS WITH DIGITS	ABS
11.V	THE FIRST WHEEL WITH DIGITS	ABS
11.VI	DETECTION SPIDER (PULSE)	POLYETHYLEN
11.VII	MAGNET	CERAMIC
11.VIII	CENTRAL GEAR WHEEL	POLYETHYLEN
11.IX	GEAR WHEEL # 1	POLYETHYLEN
11.X	BOTTOM PLATE	NORYL 731
11.XI	GEAR WHEEL # 2	POLYETHYLEN
11.XII	GEAR WHEEL # 3	POLYETHYLEN
XI.13	CONTINOUS GEAR WHEEL	POLYETHYLEN
XI.14	RED POINTER	POLYETHYLEN
XI.15	UPPER PLATE	NORYL 731

BENEFITS

1. Quality

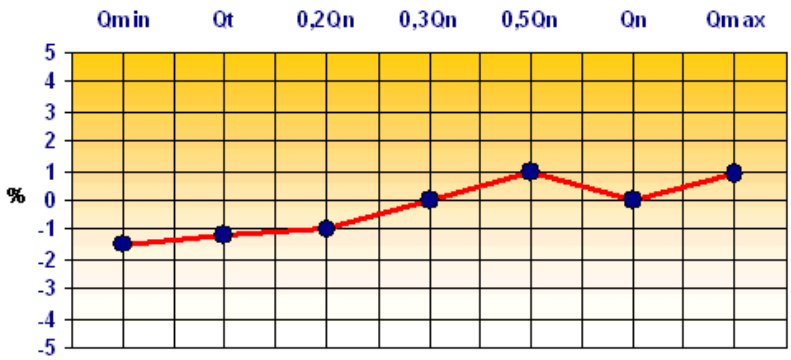
- It complies with the ISO 40 64.1, CSN 25 78 01
- 48 month warranty
- Certificates for the Czech and Slovak republics
- High supply-line pressure resistance, mechanical ruggedness, corrosion and wear resistance (material of high quality - stainless steel, plastics)
- The body surface is nickel-coated (the best corrosion protection)

2. Easy run

- The bladed wheel is supported on the stainless shaft on the ruby bearing

3. The very high precision of measurement

- Measurement error over the whole range from Qmin to Qmax oonly in the range of +/- 2% The CSN allows the tolerance up to +/- 5%.



Key:

Qmin	= minimum rate of flow
Qt	= transition rate of flow
0,2 Qn	= 20 % of nominal rate of flow
0,3 Qn	= 30 % of nominal rate of flow
0,5 Qn	= 50 % of nominal rate of flow
Qn	= nominal rate of flow (1,5 m3/h)
Qmax	= maximum rate of flow

4. Mounting positions

- To be mounted horizontally as well as vertically (without influence on precision of measurement - still the precision of B class)

5. Easy and detailed reading

- Cylindrical water-meter counter works with three decimal places which means the precision for liltres
- The counter is free to rotate which enables the reading can be done with all positions

- The counter cover is plastic, transparent
- For calibration it is possible to read on the dial of rotation pointer with the precision of up to 0,05 litres
- For calibration according to the pulse number, the photometrical wheel can be used

6. Sealing of the inlet screw joint

- The inlet screw joint can be sealed onto the shaped hole riser on water-meter body (the mounting is simplificated significantly and the bad sealing is avoided)

7. Counter sealing

- The ring securing the counter body enables an easy sealing with the gauge after verification, and the possibility of its free rotation

8. Fastening against angular displacement

- Water-meter fastening against angular displacement, when screw joint fitting, only by means of open-end wrench No. 21 (it avoids the counter to be damaged, when being mounted or when using complicated assembly jigs)

9. Sieve

- Plastic sieve at the water-meter inlet (impurity protection)

10. Materials

- Materials declared suitable for use for health reasons

11. Magnetization limiting

- Plastic bladed wheel - turbine made of the quality polypropylen (magnetization disabled)

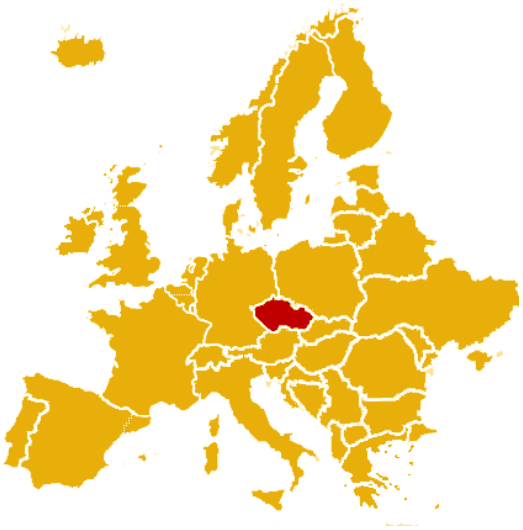
12. Service

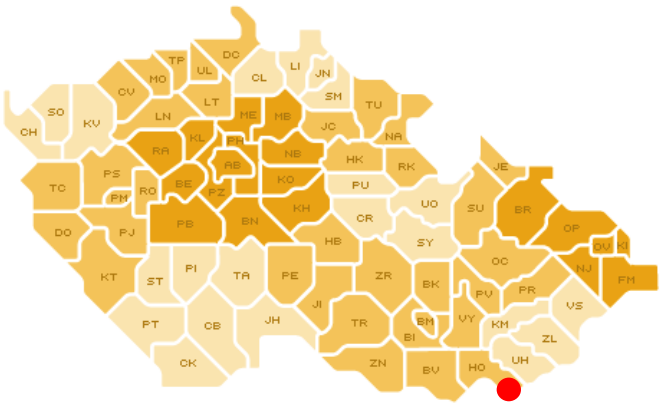
- Secured guarantee and after-guarantee service and sufficient quantity of spare parts

13. Warranty

- 4 years - water-meters for hot water
- 6 years - water-meters for cold water

CONTACTS





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