

Dry-dial vane-wheel single-jet water meter

JS-02 SMART+

DESCRIPTION

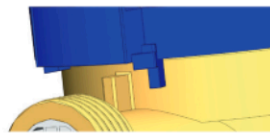
Smart+ is a single-jet dry water meter intended to measurement of flow and quantity of cold water of the temperature up to 30°C or hot water of the temperature up to 90°C. Thank to moderen construction is adapted to the assembly of RF frontend, which enables remote readings of indication and also it is the best protected dry water meter against activity of strong magnetic field. The constructuon of the water meter gices the possibility of its assembly both as in horizontal position with the counter directed upward (H) and in vertical position with the counter directed aside (V). Thanks to the use of rotary counter enabling easy readings. It perfectly proves itself in different assembly positions.



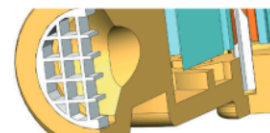
USAGE

Cold water supply systems operating at temperatures up to 50°C or hot water supply systems operating at temperatures up to 90°C in single and multi-family housing. The rotating counter facilitates reading of the water meter in specified operating positions. For installation in horizontal piping with the counter upward (h) or to either side (H) nad in vertical piping with the counter sideways (V)

Protection against external mechanical interference into the counting mechanism, which was obtained by the use of a seal on the clamp terminal and by a strengthened construction of counter housing



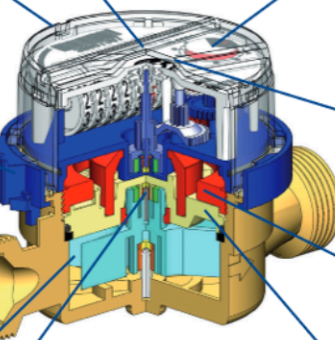
A rotation blockade of the counting mechanism by the rotation by the angle more than 358°



Strainer on the water meter's inlet which builds the protection against penetrating the measuring body by dirt

Mutually bearing rotor (by the application of high pins and bearing stones) provides exploitation in the time betwvwn legalizations, with retaineng the normative legalization parameters

A hermetic counter (which increased tightness) resistant to fogging

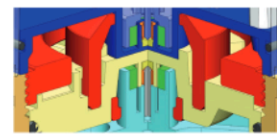


Very high resistance ti rupture of the magnetic clutch, obtained by suitable distance between frontal surfaces if the magnetic clutch



Total resistance of the data transmission system against the influence of external magnetic field obtained by the application of pointer with a reflection as an optical element of data transfer from the water meter to the RF fronted

Protection from external tampering - a counter disc with an indicator of the force applied to compress the counter glass



Very high resistance of the water meter Smart to the influence of the external magnetic field SN+, resulting from application of special magnetic screen and of 4-pole magnet of a magnetic clutch

Protection limiting the results of water freezing in form of a special formed sealing plate

ADVANTAGES AND FEATURES

- Resistance to strong, external magnetic field - currently the best protected dry water meter against influence of the external magnetic field on the market. The resistance to the influence of the external magnetic field is above the requirements of the norm PN-EN 14154
- Remote readings - water meter adapted to the assembly of the RF fronted for the communication in standards like Wireless M-Bus or pulse communication without interference into the water meter both as during the first installation and as the operation
- Possibility of alarm signalling - a water meter with RF fronted has the possibility of signalling e.g. Dismantling of rupture of the fronted, work interferences of the fronted, retrograde flow, leakage, etc.
- Metrological properties - fulfilment of newest metrological requirements MID
- Indication reliability by:
 - Division of the water meter into the wet part measuring body and the dry part with counting mechanism
 - Solid and tested and simultaneously permanently improved construction
 - High service life
- Easy reading by:
 - Hermetic counting resistant to fogging
 - Legible digits on the barrels in two colours, enabling the accurate reading
 - Counter rotation within 358°
- Protection against mechanical external interference - by the strengthened construction of the counting mechanism housing

COMPATIBILITY WITH NORMS AND REGULATIONS

- Directive 2004/22/EC of The European Parliament and the Council of Europe dated on March, 31st, 2004 regarding measuring instrument
- PN-EN-14154:2005 - water meters, part 1 ÷ 3
- OIML R49:2004 and 2006 - water meters intended to measurement of cold drinking water and of hot water
- Certificate of analysis, type WE - cold water number SK09-M1001-SMU007, hot water number SK09-M1001-SMU009, hot water R100 number TCM 142/11-4832
- Classification of environmental, climate and mechanical conditions: Class B (ref. PN-EN 14154-3:2005:A1)
- Classification of mechanical environment conditions: Class M1 (ref. Polish Regulation JoL. 2007.3.27)
- Classification of electromagnetic environment conditions: Class E1 (ref. Polish Regulation JoL. 2007.3.27)

All materials used during the production of water meter Smart have proper Hygienic Clearance allowing the product to contact with the drinking water.

TECHNICAL DATA

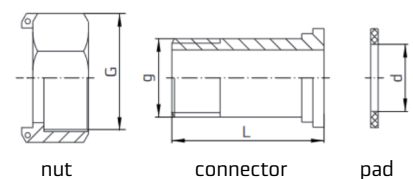
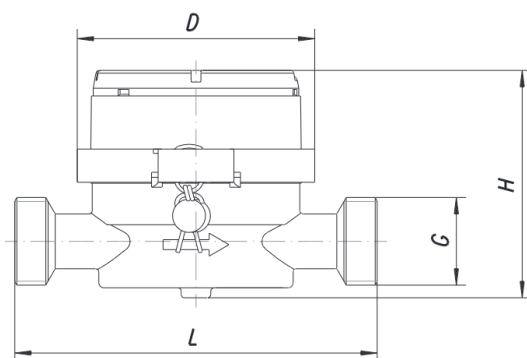
Parametr		JS 1,6-02 JS 1,6-03 JS90 1,6-02* JS90 1,6-03	JS 2,5-02 JS 2,5-03 JS90 2,5-02* JS90 2,5-03	JS 2,5-G1-02 JS90 2,5-G1-02*	JS 4-02 JS90 4-02*		
Nominal diameter		DN	mm	15	20		
Continuous flow rate		Q ₃	m ³ /h	1,6	2,5	4	
Max flow rate		Q ₄	m ³ /h	2	3,125	5	
Indirect flow rate	Cold water	H R100 V R50	Q ₂	dm ³ /h	25,6 51,2	40 80	64 128
	Hot water	H R80 or R100** V R40 or R50**			32 or 25,6** 64 or 51,2**	50 or 40** 100 or 80**	80 or 64** 160 or 128**
Minimum flow rate	Cold water	H R100 V R50	Q ₁	dm ³ /h	16 32	25 50	40 80
	Hot water	H R80 or R100** V R40 or R50**			20 or 16** 40 or 32**	31,25 or 25** 62,5 or 50**	50 or 40** 100 or 80**
Starting flow		-	dm ³ /h	6	8	15	
Ratio Q ₂ /Q ₁		-	-	1,6			
Temperature class (nominal working temperature)		-	-	T30/T90			
Resistance classes to flow profiles		-	-	U0, D0			
Indication range		-	m ³	105			
Indication correctness		-	m ³	0,00005			
Max pressure		P _{max}	MPa	1,6			
Max pressure loss for Q ₃		Δp	kPa	63			
Permissible boundary error at the range: Q ₂ ≤ Q ≤ Q ₄		ε	%	± 2 for cold water ± 3 for hot water			
Permissible boundary error at the range: Q ₁ ≤ Q ≤ Q ₂		ε	%	± 5			
Connector thread		G	cal	G ³ / ₄	G1		
Height		H	mm	68,5			
Length		L	mm	110	110	130	130
Diameter		D	mm	72			
Mass (without connection elements)		-	kg	0,5	0,5	0,6	0,6

Execution O2 - eight-barrel counter, brass body, water meter adapted to the assembly of radio, impulse and M-Bus modules

Execution -03- eight-barrel counter, composite body (applies to JS 1,6 and JS 2,5; length 110mm, R100 for cold water, R80 for hot water)

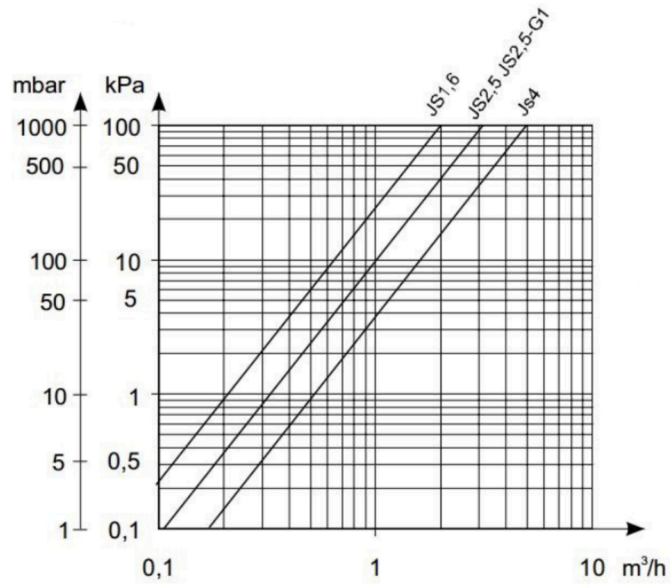
*The O2-S version of the water meter is also available - with hard bearings (water meters for hot water circulation systems).

**On request only version - O2 (brass body)

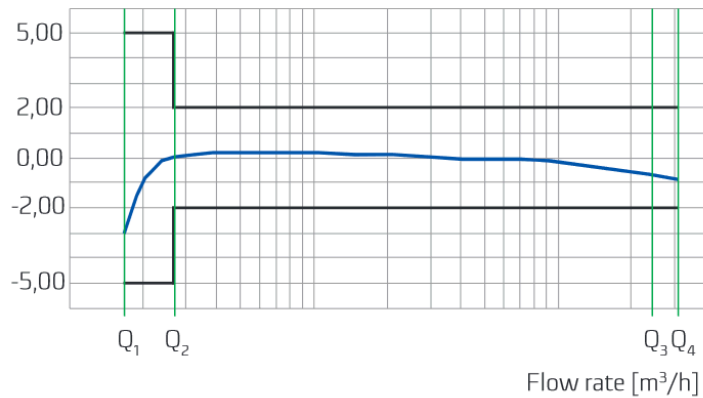


DN	G	g	D	L
	inch	inch	mm	mm
15	3/4	1/2	17	37,5
20	1	3/4	23	45,6

PRESSURE LOSS CHART



TYPICAL ERROR CHART



CONTACTS

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Your distributor:

The manufacturer reserves the right to change design, technical specification and accessories without prior notice.

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