APATOR

SV-RTK

Volumetric dry water meter for cold water DN15÷40

SV-RTK is a volumetric dry water meter and is designed for precise measuring of supplied water use. Due to advanced structural solutions, the water meter is fully compatible to be integrated with a remote reading system. Moreover, it is very well protected against strong magnetic field impact. The water meter complies with the MID Directive for the measurement range corresponding to the value of R= 200, 315, 500, 800.*

APPLICATION

Water supply systems for cold water up to 30°C or water up to 50°C for single or multifamily houses, public buildings and metering points. The water meter design allows it to be installed in any position without the loss of metrological parameters. Thanks to a rotary counter enabling easy read-out of indications, the water meter works unfailingly in different installation positions. Constituting a part of a metering unit, it enables to determine the water consumption profile in buildings.

*details in table 1. Technical data

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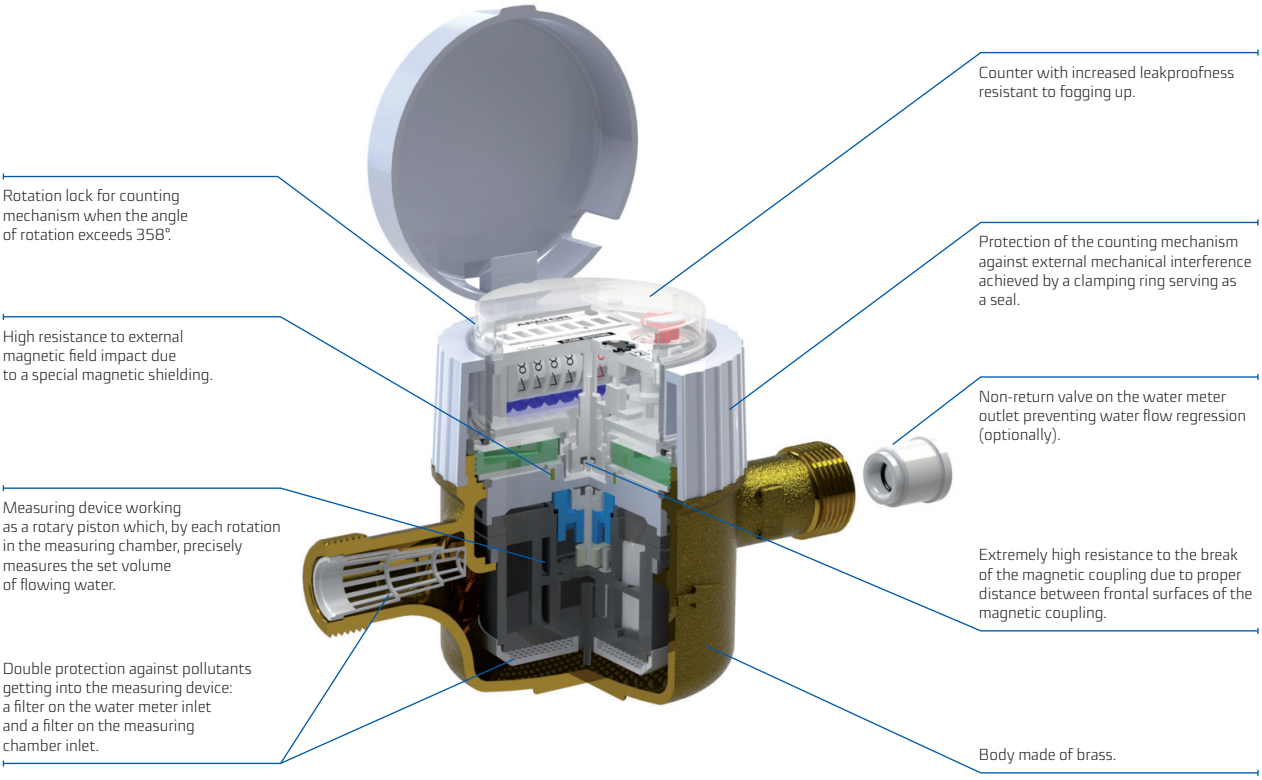


Advantages

COST SAVING:

- Accurate measurement even of the smallest volume of flowing water determined by the R.
- Preserving invariable metrological parameters regardless of the water meter position.
- Starting value for the water meter: DN15 = 1,5 l/h, DN20 = 2 l/h, DN25 = 3 l/h, DN32 < 10 l/h, DN40 < 20 l/h.
- Protection against:
  - strong magnetic field interference (magnetic shielding),
  - mechanical interference (a clamping ring serving as a seal),
  - multiple counter rotation by an angle exceeding 358°.

CONVENIENCE OF USE:

- Possibility of remote readings.
- Ease of reading due to:
  - eight-roller counter,
  - placing the counter in any position within 358°,
  - hermetic counter resistant to fogging up.
- Design enabling remote reading.

RELIABILITY:

- Proven and solid construction composed of materials of highest quality, resistant to wear and tear.
- Double protection against pollutants getting into measuring device.

Characteristic features

- Low starting value allowing to detect even the smallest flows (from 1,5 l/h for DN15).
- Measuring device working as a rotary piston.
- Quiet water meter mechanism.

Compliance with standards and regulations

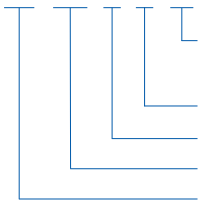
- Directive 2014/32/EC of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments
- Polish Act of 13/04/2016 on market surveillance and compliance assessment systems
- OIML R 49-1:2006 – Water meters intended for the metering of cold potable water and hot water. Part 1: Metrological and technical requirements
- OIML R 49-2:2004 – Water meters intended for the metering of cold potable water and hot water. Part 2: Test methods
- OIML R 49-2:2013 – Water meters intended for the metering of cold potable water and hot water. Part 2: Test methods
- OIML R 49-3:2013 – Water meters intended for the metering of cold potable water and hot water. Part 3: Test report format
- EN 14154-1:2005+A2:2011 – Water meters. Part 1: General requirements
- EN 14154-2:2005+A2:2011 – Water meters. Part 2: Installation and conditions of use
- EN 14154-3:2005+A2:2011 – Water meters. Part 3: Test methods and equipment
- EN ISO 4064-1:2017 – Water meters for cold potable water and hot water. Part 1: Metrological and technical requirements
- EN ISO 4064-2:2017 – Water meters for cold potable water and hot water. Part 2: Test methods
- EN ISO 4064-5:2017 – Water meters for cold potable water and hot water. Part 5: Installation requirements
- EU type test certificate – Cold water, no. SK08-MI001-SMU002
- Mechanical class according to OIML D 11:2013 (E) - M1
- Electromagnetic class according to OIML D 11:2013 (E) - E1, E2
- Climate class according to EN ISO 4064: 2017 (E) – B (installation in a building).

All materials used to manufacture the SV-RTK water meter have appropriate Hygienic Certificates allowing the product to come into contact with drinking water.

Sample order

Indication

SV-RTK - Q3 - DN - L - R - W



version (for example with a non-return valve, brass body)
measuring range (for example R200)
mounting length (for example L=165)
nominal diameter (for example DN15)
Q3 flow (for example 2,5)

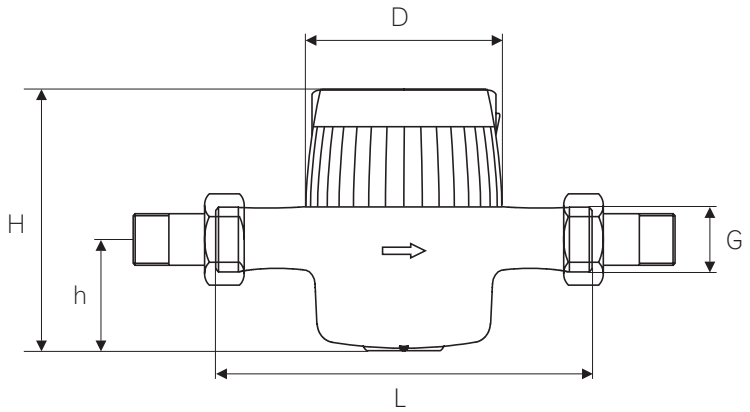
Additional information:
- brass body (in a standard version, all sizes).
- protection degree - IP65 in a standard version.

The following elements are supplied on additional request:
- Connectors to water meters without a non-return valve.
- Disposable clamps with snap-in seals made of plastic with individual, unique numbering (preventing mechanical manipulation of water meter connectors).

Table 1. TECHNICAL DATA

Parameter				SV-RTK				
				SV-RTK-2,5	SV-RTK-4,0	SV-RTK-6,3	SV-RTK-10	SV-RTK-16
Nominal diameter		DN	mm	15 or 20*	20	25	32	40
Continuous flow rate		Q_3	m^3/h	2,5	4,0	6,3	10,0	16,0
Overload flow rate		Q_4	m^3/h	3,125	5,0	7,875	12,5	20,0
Transitional flow rate	R200**	Q_2	dm^3/h	20	32	50,4	80	128
Minimum flow rate	R200**	Q_1	dm^3/h	12,5	20	31,5	50	80
Starting flow rate		–	dm^3/h	<1,5	<2	<3	<10	<20
Q_3/Q_1 ratio - standard version		–	R	200 in all installation positions				
Q_2/Q_1 ratio		–	–	1,6				
Temperature class (nominal temperature class)		–	–	T30 / T50				
Flow profile sensitivity classes		–	–	U0, D0				
Indications range		–	m^3	99 999,999				999 999,99
Resolution of reading		–	m^3	0,00002				0,0002
Maximum pressure		P_{max}	MPa	1,6				
Maximum pressure loss		Δp	kPa	63				
Admissible limiting error within: $Q_2 < Q < Q_4$		ε	%	±2 for cold water (T ≤ 30°C), ±3 for water (T > 30°C)				
Admissible limiting error within: $Q_1 < Q < Q_2$		ε	%	±5				
Protection degree of the water meter counter		–	–	IP65				
Thread of connection pipe, input and output		G	cal	G¾	G1	G1¼	G1½	G2
Height		h	mm	40	55	60	75	85
		H	mm	110	130	150	160	175
Length		L	mm	110 or 165	190	260	260	300
Diameter		D	mm	80	90	120	150	175
Weight (without connection elements)		–	kg	1,0 / 1,4	1,3	3,2	4,6	6,9

*SV-RTK-2,5 DN20 for lenght 165 mm only
**The purchase of water meters with a higher R than 200 depends on the size of the order:
- up to R800 for DN15, Q_3=2.5 m^3/h
- up to R500 for DN20, Q_3=4 m^3/h
- R315 for DN25, 32, 40



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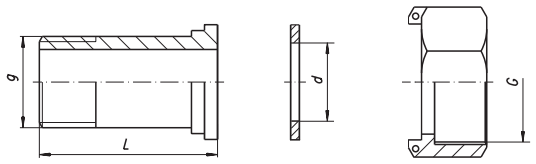
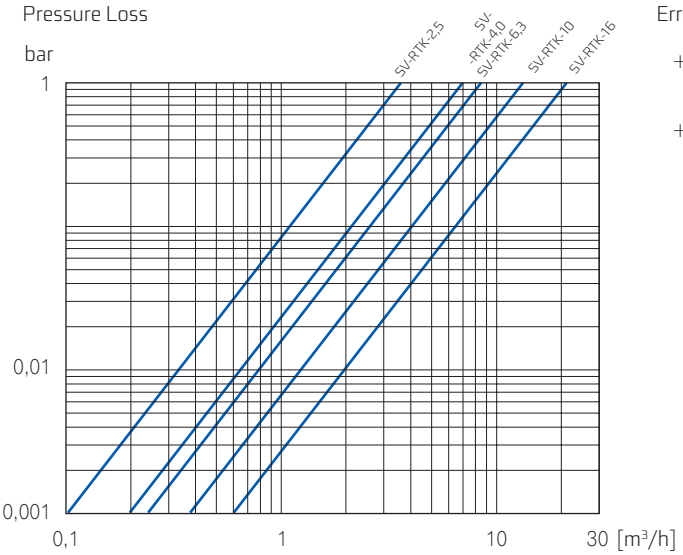
CONNECTING ELEMENTS



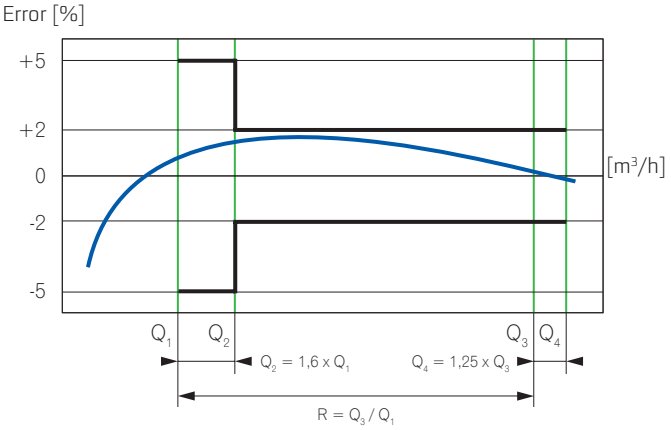
connector seal nut

DN	G	g	d	L
15	¾"	½"	17	37,5
20	1"	¾"	23	45,6
25	1¼"	1"	29	46,5
32	1½"	1¼"	36	56,0
40	2"	1½"	43	66,0

PRESSURE LOSS CHART



TYPICAL ERROR CHART



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