

## Single-jet vane-wheel water meters

# JS-02 SMART C+

### DESCRIPTION

Smart C+ single-jet vane wheel water meter is designed for precise measurement of delivered water. Thanks to the newest construction solutions the water meter is adapted to installing the radio module which enables the remote reading of indications. It is the best secured vane-wheel water meter, resistant to the external magnetic field. The water meter is designed on the basis of the MID directive with the indicating range corresponding the value of R=160 (previously named as C metrological class).

### USAGE

Cold water supply systems operating at temperatures up to 50°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) and in vertical piping with the counter sideways (V).



Hermetic counter (with a increased tightness) resistant to mist over

Protection against the external mechanical interference in the counting device, obtained by using the seal on the clamp and the guard with the element of external pressure detection



Interlock of the counting device rotation, with a higher rotation than the 358° angle

Very high resistance to the magnetic coupling, thanks to using the appropriate distance between spot face of the magnetic coupling

Bilaterally impeller bearing (with a usage of a high quality pivots and stone bearings) it ensures the running within the legalization period with saving the normative legalization parameters



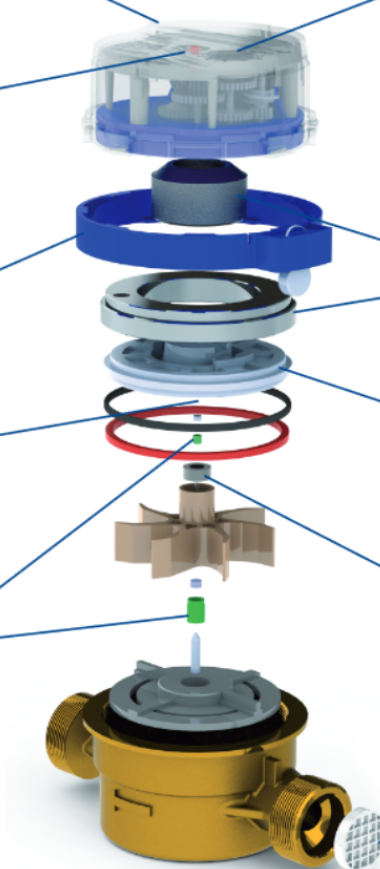
The full resistance of the data transmission device to the external magnetic field achieved thanks to the retro-reflective pointer as an element of the optical data transfer from the water meter to the radio module

Very high resistance of the water meter Smart C+ to the activity of the external magnetic field SN+ resulting from using special magnetic screens

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High resistance of the magnetic coupling to the activity of the external magnetic field by using double multi-field magnets

Strainer in the water meter inlet making the protection against any foulness which could get in the counting organ



## **ADVANTAGES AND FEATURES**

- Precise measurement R160 - H
- The highest resistance in the scale of the house single-jet vane-wheel water meters to the activity of the external magnetic field
- Adapted to remote readings
- Easy reading thanks to the possibility of free setting the rotating counter
- Alarm signalization - the water meter is equipped with the radio module which has the possibility of informing about: de-installation or taking off the radio module, work interferences of the module, back flow, leaks etc.
- Easy readings thanks to: hermetic counter resistant to mist, readable numerals on barrels in two different colours which allow for an accurate reading, counter 358°
- Protection against the mechanical interference through the use of the pin, which is deforming the counter's shield leaving the mark of the unapproved temper

## **ACCORDANCE WITH NORMS AND REGULATIONS**

- Directive 2004/22/WE of the European Parliament and of the Council dated at 31 March 2004 about the measuring instruments
- OIML R49: 2004 i 2006 - water meters meant for cold drinking water and hot water
- PN-EN-14154:2011 - Wodomierze. Część 1 ÷ 3
- EN-14154:2011 - water meters part 1 ÷ 3
- Certificate of the WE examination - No. SK09-MIU007 rev. 5
- Classification of the environment, climatic and mechanic conditions - B class according to PN-EN-1454-3-:2005:A1
- Classification of the environment and mechanical conditions - M1 class - according to RMG from 18.12.2006
- Classification of the environment and electromagnetic conditions - E1 class - according to 18.12.2006

All the materials used in constructing the Smart C+ water meter have a Hygienic Certificate allowing the product to contact with drinking water.

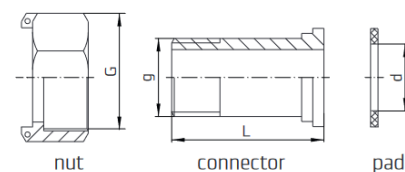
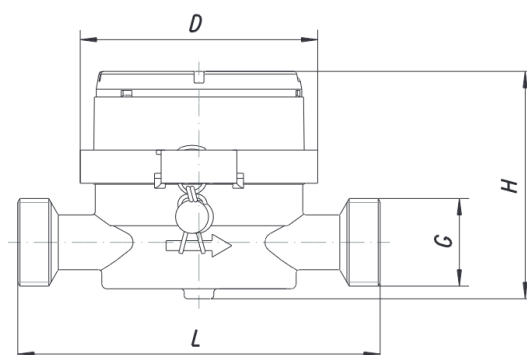
## TECHNICAL SPECIFICATION

| Parametr                                                             |                 |                  | Smart C+           |                                                                                        |              |         |           |
|----------------------------------------------------------------------|-----------------|------------------|--------------------|----------------------------------------------------------------------------------------|--------------|---------|-----------|
|                                                                      |                 |                  | JS 1,6-02          | JS 2,5-02                                                                              | JS 2,5-G1-02 | JS 4-02 |           |
| Nominal diameter                                                     |                 | DN               | mm                 | 15                                                                                     |              | 20      |           |
| Permanent flow rate                                                  |                 | Q <sub>3</sub>   | m <sup>3</sup> /h  | 1,6                                                                                    | 2,5          |         | 4         |
| Overload flow rate                                                   |                 | Q <sub>4</sub>   | m <sup>3</sup> /h  | 2                                                                                      | 3,125        |         | 5         |
| Transitional flow rate                                               | H R160<br>V R63 | Q <sub>2</sub>   | dm <sup>3</sup> /h | 16<br>40                                                                               | 25<br>63     |         | 40<br>102 |
| Minimal flow rate                                                    | H R160<br>V R63 | Q <sub>1</sub>   | dm <sup>3</sup> /h | 10<br>25                                                                               | 16<br>40     |         | 25<br>63  |
| Starting flow                                                        |                 | -                | dm <sup>3</sup> /h | 5                                                                                      | 6            |         | 12        |
| Ration Q <sub>2</sub> /Q <sub>1</sub>                                |                 | -                | -                  | 1,6                                                                                    |              |         |           |
| Temperature class (nominal temperature class)                        |                 | -                | -                  | T30, T50                                                                               |              |         |           |
| Flow profile sensitivity classes                                     |                 | -                | -                  | U0, D0                                                                                 |              |         |           |
| Indicating range                                                     |                 | -                | m <sup>3</sup>     | 99999                                                                                  |              |         |           |
| Resoluton of reading                                                 |                 | -                | m <sup>3</sup>     | 0,00005                                                                                |              |         |           |
| Max pressure                                                         |                 | P <sub>max</sub> | MPa                | 1,6                                                                                    |              |         |           |
| Max pressure los                                                     |                 | Δp               | kPa                | 63                                                                                     |              |         |           |
| Advisable error in the scale of:<br>Q <sub>2</sub> ≤Q≤Q <sub>4</sub> |                 | ε                | %                  | ±2 for water temperature from 0.1 to 30°C<br>±3 for water temperature higher than 30°C |              |         |           |
| Advisable error in the scale of:<br>Q <sub>1</sub> ≤Q<Q <sub>2</sub> |                 | ε                | %                  | ±5                                                                                     |              |         |           |
| Tightness class of the water meter counter                           |                 | -                | -                  | IP65                                                                                   |              |         |           |
| Dimensions                                                           |                 | G                | cal                | G¾                                                                                     | G¾, G⅞       | G1      | G1        |
|                                                                      |                 | H                | mm                 | 68,5                                                                                   |              |         |           |
|                                                                      |                 | L                | mm                 | 110                                                                                    | 110*         | 130     | 130       |
|                                                                      |                 | D                | mm                 | 72                                                                                     |              |         |           |
| Weight (without the connection elements)                             |                 | -                | kg                 | 0,5                                                                                    | 0,5          | 0,6     | 0,6       |

The water meter construction:

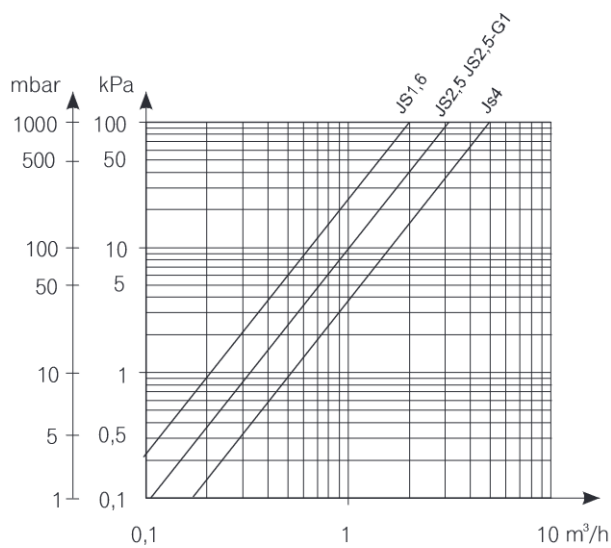
-02 (with the 8 barrel counter, adjusted for radio module installation)

\*On special ordering are available over standard variants of the main casing thread (input and output) and the length L=115 mm

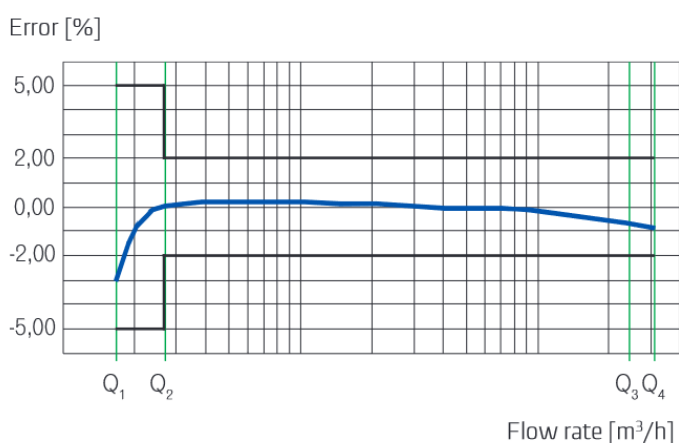


| DN | G             | g             | D  | L    |
|----|---------------|---------------|----|------|
|    | inch          | inch          | mm | mm   |
| 15 | $\frac{3}{4}$ | $\frac{1}{2}$ | 17 | 37,5 |
| 20 | 1             | $\frac{3}{4}$ | 23 | 45,6 |

## PRESSURE LOSS CHART



## TYPICAL ERROR CHART



## CONTACTS

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Your distributor:

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

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