

Vane-wheel single-jet dry water meter

## JS IMPERO IP68/IP65 (DN50-100)

### DESCRIPTION

JS Impero is a single-jet vane-wheel dry water meter for precise measurement of large water supply consumption. The advanced design engineering ensures a high dynamic response to metering conditions and a high resistance to strong magnetic fields. The water meter is compatible with clip-on communication modules for automatic wired or wireless meter reading. The water meter is designed and manufactured to the MID (Measuring Instruments Directive) and in compliance with EN 14154, OIML R49 and ISO 4064 for the measurement range of R315.



Cold water supply systems (max. 30°C) and hot water supply systems (max. 50°C) in multifamily housing, industrial facilities, public facilities, and metering stations. The maximum admissible pressure (MAP) is 16 bar. Install the water meter horizontally with the counter upright (H↑). The rotating counter of the water meter facilitates manual readout directly from the dial. The water meters designed to IP68 are excellent for operation in difficult ambient conditions, and the standard version is compatible with universal induction communication modules which feature #UTIP (Universal TI Plug). The IP65 water meters are compatible with optical and induction communication modules.

### JS Impero IP68

Robust counter safety cover for protection against external affects in the water meter's working environment

The data transmission system is immune to interference from external electromagnetic fields; the EM field immunity is provided by induction detection of counter readings

Measurement characteristics adjustable without the drain duct

The precision of finish and the modular design of the inlet duct and metering chamber for precise measurements with a high MID approval of R315

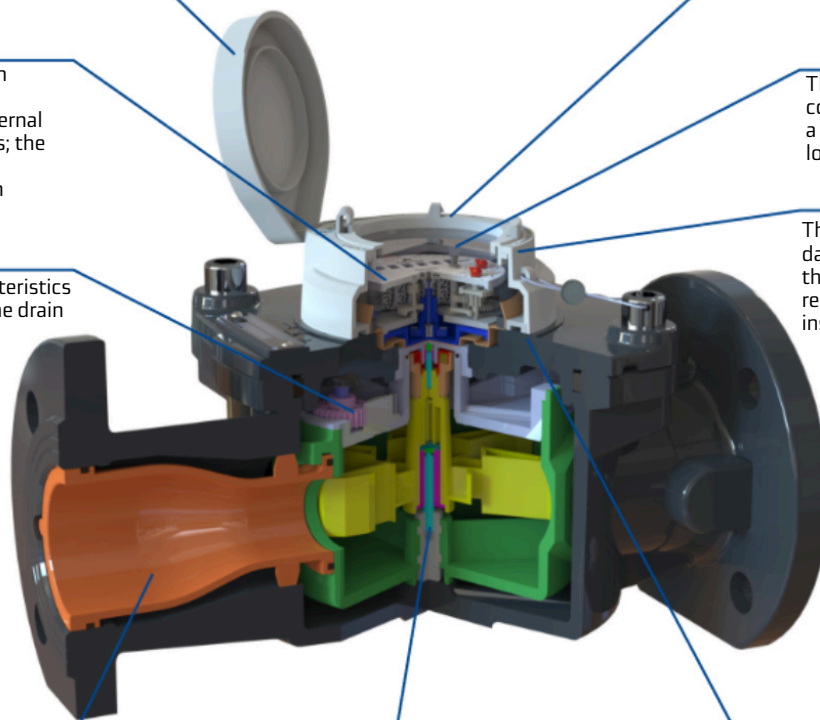
The materials and the bearings on both side of the rotor ensure stable metrological characteristics over a wide measurement range

The product is compatible with universal induction communication modules by supporting #UTIP

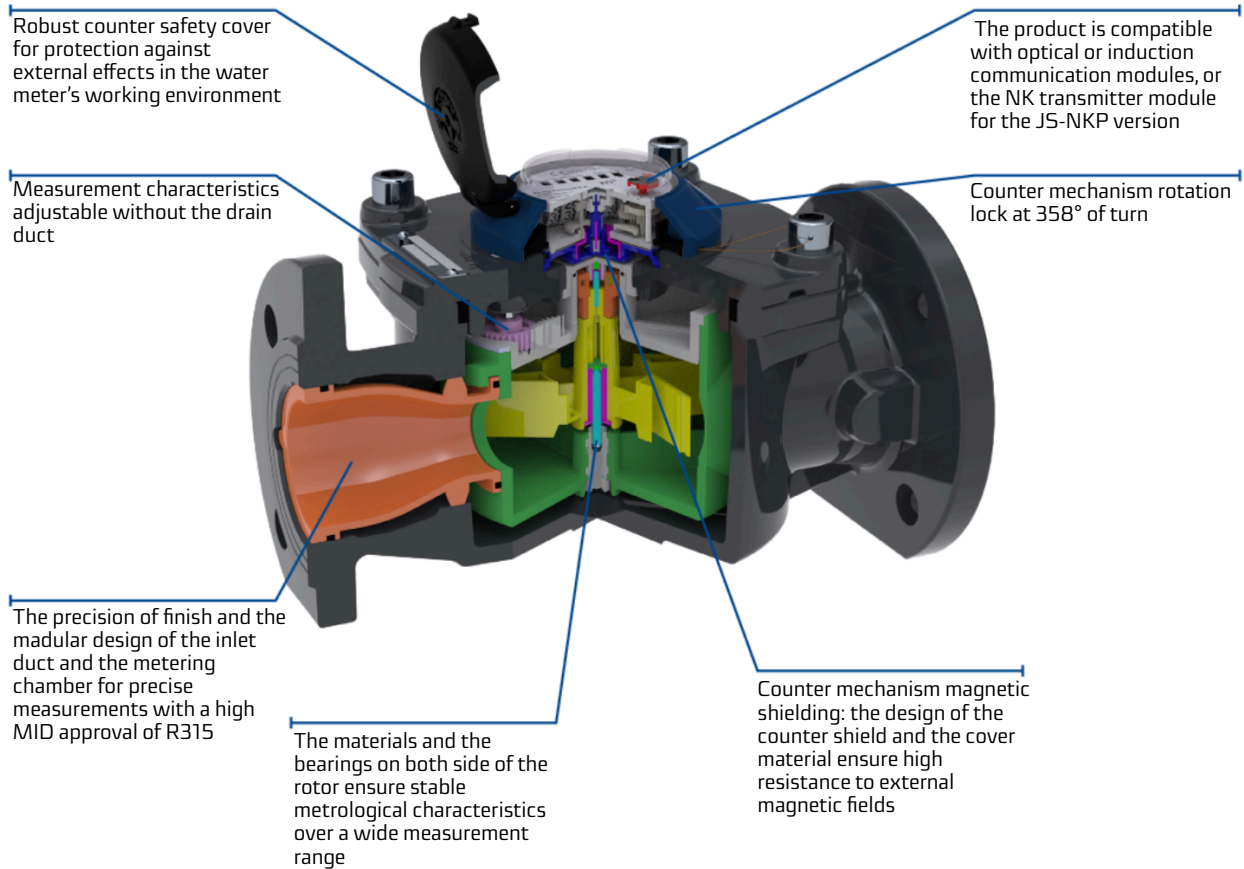
The hermetically sealed counter is IP68 rated and with a counter mechanism rotation lock at 358° of turn

The water meter identification data can be easily read form the counter cover even with a remote reading module installed

The body cover materials and the outer dimensions of the guard of the counter ensure resistance to external EM fields



## JS Impero IP65



### ADVANTAGES

- Precise measurements at R315 - H ↑
- Low starting flow
- Does not require upstream and downstream straight pipework runs
- May replace compound water meters (restrictions apply)
- Protected by design against:
  - Strong magnetic field interference per EN 14154
  - Mechanical tempering (with a robust, tamper-proof counter and cover design)
  - Multiple rotations of the counter by more than 358°
- The standard water meter version is AMR (automatic meter reading) (MDMS) capable, while the IP 68 version is provided with #UITP for compatibility with induction communication modules
- Easy reading of indications and parameters by:
  - Any orientation of the counter mechanism within 0 to 358° in the IP68 NKOP/NK version, the standard IP65 version, and the JS-NKOP version adapted for the NO and NK transmitter modules
  - Hermetically sealed, non-fogging counter in the IP68 version
  - Location of water meter parameter legend on the top surface of the counter cover in the IP68 version
- Remote wireless indication reading with a portable terminal or a stationary reading systems
- Wireless-system based indication reading with:
  - Induction communication modules (TI): IN-WMBUS, IN-GSM for IP68 and IP65
  - Optical communication module (IR): APT-O3A-4 for IP65
- Wired system based indication reading with:
  - Induction communication modules (TI): IN-PULSE for IP68 and IP65
  - Optical communication modules (IR): APT-MBUS-NA-4 and AT-MBUS-NE-01 for IP65
  - NK and/or NO reed relay pulse transmitter for IP65
- Alarm output capability: the meter with a universal induction communication module is capable of remote indication of any removal of or damage to the module, disruption of operation, reverse flows, leakages, and more
- Long operating life

## KEY FEATURES

- MID-compliant EC type examination certificate
- IP68 rating; the meter is capable of operation in extremely difficult ambient conditions (and also when fully immersed in water), also with a data communication module installed
- Highly aesthetic droplet-shaped design for the counter safety cover and guard
- Stable flow rate inlet bore design
- Double-sided rotor bearings
- Removable measuring insert
- Potable water approved materials
- Duct-parallel rotor axis
- Magnetic coupling

## REGULATORY AND STANDARD COMPLIANCE

- 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 rev. 2013(E): Water meters for cold potable water and hot water. Part 1: Metrological and technical requirements
- 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 4064-1:2014 - Water meters for cold potable water and hot water. Part 1: Metrological and technical requirements
- EN ISO 4064-5:2014 - Water meters for cold potable water and hot water. Part 5: Installation requirements
- WELMEC Guidelines 11.1 - Measuring instruments, Directive 2004/22/EC. Common regulations for measuring instruments (rev. 5:2014)
- WELMEC Guidelines 11.3 - Guidelines for measuring instruments (rev. 1:2012)
- EU type test certificate - Cold water, no. SK 15 - 103 MI-001
- PZH National Institute of Hygiene certificate (all materials used in JS Impero water meters have Hygiene Certificates for use with potable water)
- Classification of environmental climate and mechanical conditions: Class B (ref. EN-ISO 4064-1:2014 (E))
- Classification of mechanical environment conditions: Class M1, as per Directive 2014/32/EC of the European Parliament and of the Council of 26 February 2014
- Classification of electromagnetic environmental conditions: Class E1, E2, as per Directive 2014/32/EC of the European Parliament and of the Council of 26 February 2014

**TECHNICAL DATA**

Parametr			JS Impero IP68/IP65				
			J550 J550-08* J550-XX**	J565 J565-08* J565-XX**	J580 J580-08* J580-XX**	J5100 J5100-08 J5100-XX**	
Nominal diameter	DN	mm	50	65	80	100	
Permanent flow rate	Q <sub>3</sub>	m <sup>3</sup> /h	25	40	63	100	
Maximum flow rate	Q <sub>4</sub>	m <sup>3</sup> /h	31,25	50	78,75	125	
Transitional flow rate	Q <sub>2</sub>	m <sup>3</sup> /h	0,127	0,203	0,32	0,508	
Minimum flow rate	Q <sub>1</sub>	m <sup>3</sup> /h	0,079	0,127	0,2	0,317	
Starting flow rate	-	m <sup>3</sup> /h	0,025	0,04	0,04	0,07	
Maximum instanteneous flow rate in case of fire <2h	-	m <sup>3</sup> /h	50	60	90	135	
Measurement range R=Q <sub>3</sub> /Q <sub>1</sub>	-	-	315				
Q <sub>2</sub> /Q <sub>1</sub> ratio	-	-	1,6				
Temperature class (rated operating temperature)	-	-	T30/T50				
Flow profile sensitivity class	-	-	U0, D0				
Indicating range	-	m <sup>3</sup>	10 <sup>6</sup>				
Resolution of reading	-	m <sup>3</sup>	0,00005				
Maximum pressure	P <sub>max</sub>	MPa	1,6				
Operating pressure range	-	bar	0,3 to 16				
Maximum pressure loss	Δp	kPa	63				
Connection ends	-	-	Flanged***				
Operating orientation	-	-	H ↑				
Maximum permissible error range: Q <sub>1</sub> ≤ Q ≤ Q <sub>4</sub>	ε	%	± 2 for 0,1°C T30°C Cold water; ±3 for T>30°C water				
Maximum permissible error range: Q <sub>1</sub> ≤ Q ≤ Q <sub>2</sub>	ε	%	±5				
Reed relay pulse transmitter NK (for IP65 only)	-	dm <sup>3</sup> /pulse	100 (standard pulsing) 10 (available on request)				
Optoelectronic pulse transmitter NO (for IP65 only)	-	dm <sup>3</sup> /pulse	1				
Height	L	mm	270****/ 300*****	300	300****/ 350*****	360****/ 350*****	
		h	mm	70,5	80,5	89,5	105
	Height - for IP68	H	mm	181,5	191,5	200,5	217
		H1	mm	190	199	208	224,5
	Height - for IP65	H2	mm	266,1	276,1	285,1	301,6
		H	mm	170,6	180,6	189,6	205
		H1	mm	175,6	185,6	194,6	210,6
		H2	mm	238	248	257	213
Length	L	mm	270*/300**	300	300*/350**	360*/350**	
Diameter	D	mm	165	182	200	220	
Wight (w/o connection fittings)	-	kg	11,8	16,6	20	23,5	

\*Version -08 - IP68 - rated counter mechanism and cover; the water meter supports readout with induction communication modules (Ti)

\*\*IP65 version; NKOP - water meter ready for installation of reed relay and/or optoelectronic pulse transmitters

\*\*\*Connection flange bolt hole pattern:

Standard: PN-EN 1092-2 (PN10), DIN 2532, DIN2501 (PN10), BS4504 (PN10)

Special: PN-EN 1092-2 (PN16) (available on request)

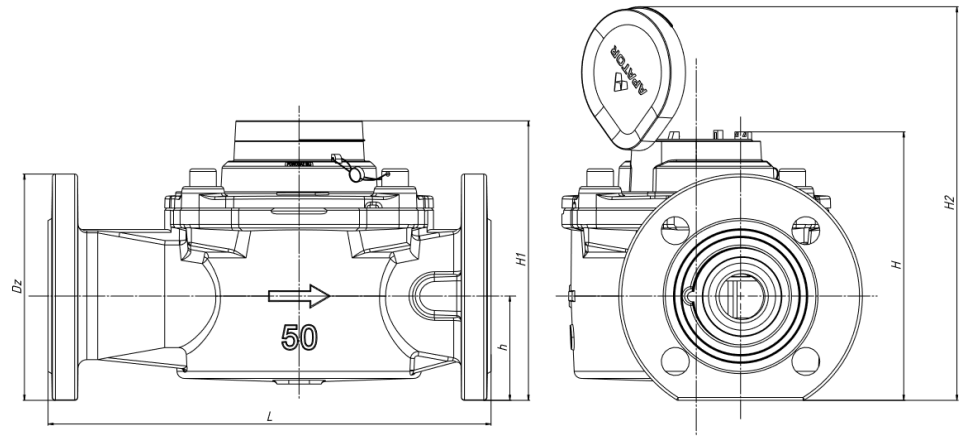
Extra: ANSI B16.5 Class 150 (DN40-300) (available on request)

\*\*\*\*DIN 19625 overall length

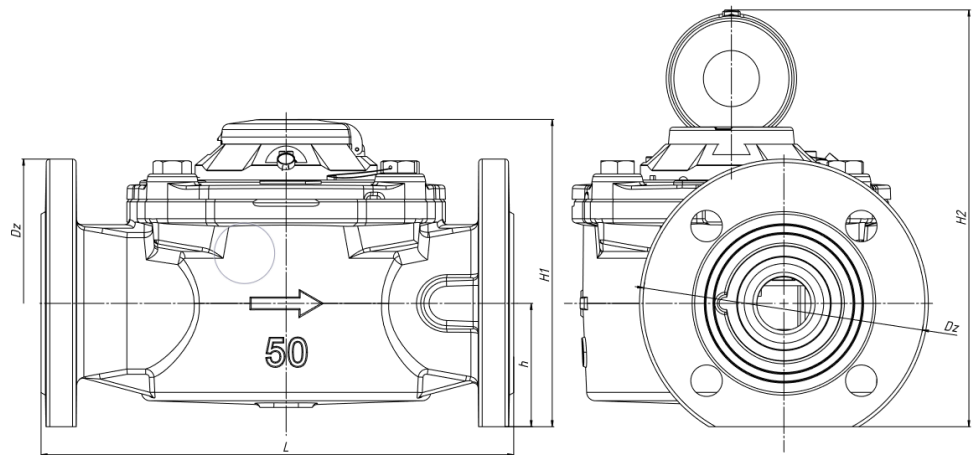
\*\*\*\*\*ISO 4064 overall length

**DIMENSIONAL DRAWINGS**

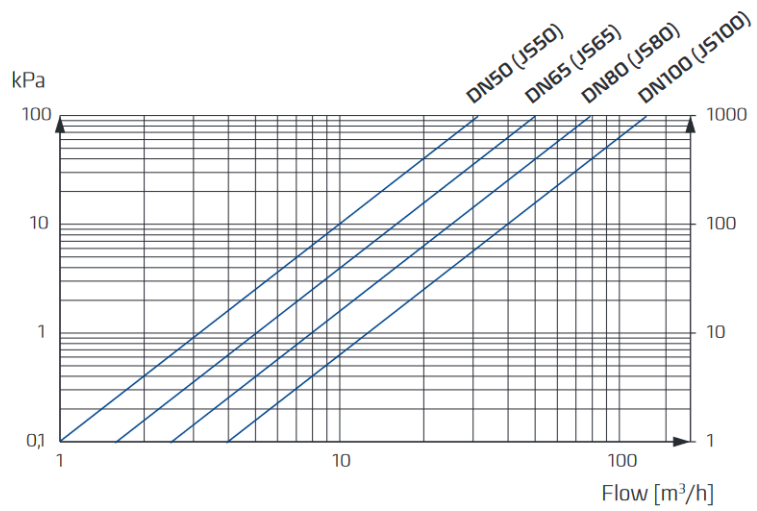
JS Impero IP68 version



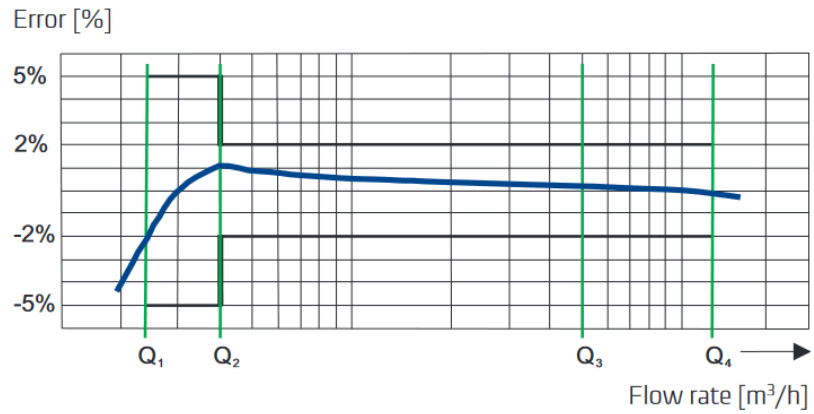
JS Impero IP65 version



## PRESSURE LOSS CHART



## TYPICAL ERROR CHART



## CONTACTS

### APATOR METRA s.r.o.

Havlíčková 919/24

787 01 Šumperk

Czech Republic

Tel.: +420 583 718 261

E-mail: [prodej@metra-su.cz](mailto:prodej@metra-su.cz)

Web: [www.metra-su.cz](http://www.metra-su.cz)

Your distributor:

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

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