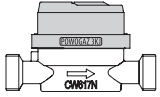
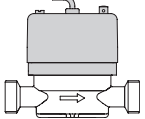
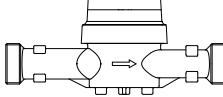
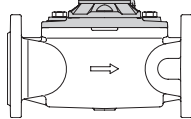
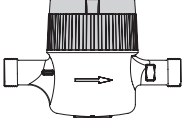
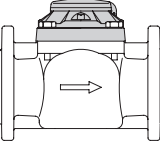
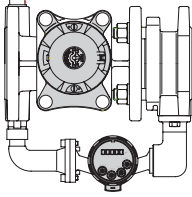
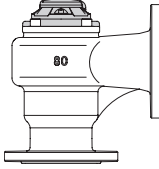
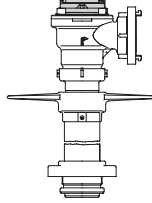
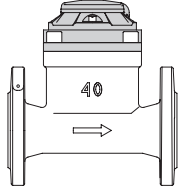




NOTE! The full installation manual is available at www.apator.com in the water meters section.

WATERMETER TYPES

<p>Vane-wheel water meters JS Smart+, JS Smart C+, JS Smart D+ DN15-20</p>  <p>CE, MID, HC, IP65, IP68</p>	<p>Vane-wheel water meters with impulse transmitters JS-NK DN15-20</p>  <p>CE, MID, HC, IP65, IP68</p>	<p>Vane-wheel water meters JS Master+, JS Master C+, JS Master D+ DN25-40</p>  <p>CE, MID, HC, IP65, IP68</p>	<p>Vane-wheel water meters JS Impero DN50-100</p>  <p>CE, MID, HC, IP65, IP68</p>	<p>Volumetric water meters SV-RTK DN15-40</p>  <p>CE, MID, HC, IP65, IP68</p>
<p>Propeller water meters with horizontal water axes MWN DN40-300</p>  <p>CE, MID, WRAS, HC, IP65, IP68</p>	<p>Compound water meters with spring valve DN50-150</p>  <p>CE, MID, HC, IP65, IP68</p>	<p>Well water meters MK DN50-150</p>  <p>CE, MID, HC, IP65, IP68</p>	<p>Propeller water meters JS16-H, MWN50-GH, MH DN40-65</p>  <p>CE, MID, HC, IP68</p>	<p>Meters for irrigation water WI DN40-250</p>  <p>CE, HC, IP68</p>




SHIPPING AND STORAGE

Protect against shock and vibration

Store between 0°C and 55°C



SAFE OPERATING CONDITIONS

 Do not touch hot surface	 Do not touch sharp edges	 Do not touch damaged equipment	 Risk of crushing	 Do not apply extra load to equipment
 Install/remove equipment only with shut-off valves closed	 Risk of injury during installation, removal, or handling of the equipment	 Possible leakage of cold or hot water under high pressure	 Do not dispose of equipment with household waste	 Prevent access to the equipment by unauthorized persons (including unsupervised children), or persons with reduced mental or physical abilities



BASIC INFORMATION



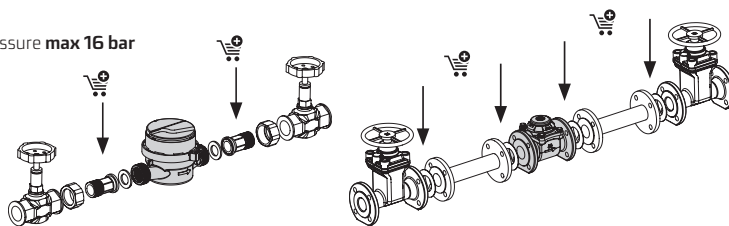
Max 30-50°C Types of water meters: JS, SV-RTK, MWN, MK, MH, JS16-H, MWN50-GH, MWN/JS-S
Max 90-130°C Types of water meters: JS90, JS130, MWN130



Ambient temperature **5-55°C**



Operating pressure **max 16 bar**



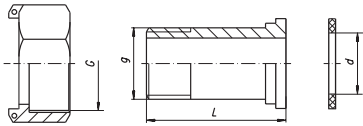
	* [mm]		[Nm]
DN15	17	29	25
DN15**	17	29	15
DN20	23	36	30
DN25	30	46	35
DN32	36	53	40
DN40	44	66	45
DN40-125	24	24	* Wrench size required for installation. The actual installation may feature other connection fitting dimensions.
DN150-200	30	30	
DN250-300	36	36	

** Body made of composite material



ESSENTIAL INSTALLATION COMPONENTS

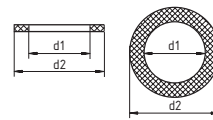
Half-unions available from Apator Powogaz S.A.



	G ["]	g ["]	d [mm]	L [mm]	Index
Set of half-unions DN15 mm	¾	½	17	37,5	0616-101-015
Set of half-unions DN20 mm	1	¾	23	45,5	0616-101-020
Set of half-unions DN25 mm	1¼	1	30	46,5	0616-101-025
Set of half-unions DN32 mm	1½	1¼	44	56,0	0616-101-032
Set of half-unions DN40 mm	2	1½	55	74,5	0616-101-040
Set of half-unions DN50 mm	2½	2	55	74,5	0616-101-050

A complete set of gaskets, appropriately matched to the water meter diameter and made of EPDM rubber or FIBER, should be added to the set of union nuts.

Gaskets for flange connections compliant with PN-EN 1514-1:2001



	d1 [mm]	d2 [mm]
DN40	49	92
DN50	61	107
DN65	77	127
DN80	89	142
DN100	115	162
DN125	141	192
DN150	169	218
DN200	220	273
DN250	273	329
DN300	324	384



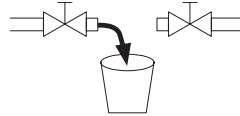
INSTALLATION AND OPERATING RECOMMENDATIONS



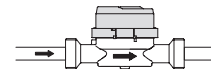
This product should be installed by a professional licensed for servicing and operation of water and sewage systems



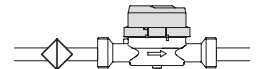
Close the upstream and downstream valves before installing/removing the product



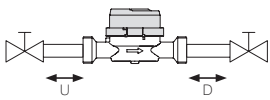
When installing or removing the water meter, place a container to collect the liquid, clean the threaded ends, and flush the system section the water meter will be installed in



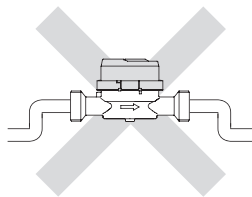
Mind the indicated direction of water flow



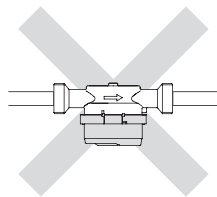
Install a separating filter upstream of the water meter



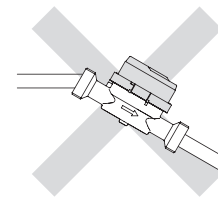
Keep the straight line sections upstream and downstream of the water meter as shown in the table below



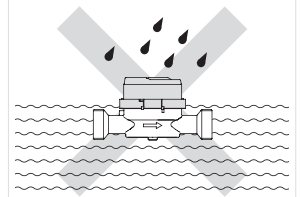
Protect from air pockets; do not install in the highest points of the system



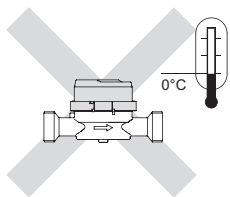
The water meter should not be installed with the counter facing downward



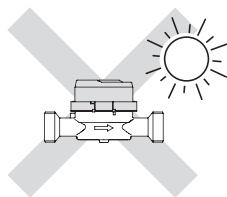
Prevent stresses from misalignment with the pipeline



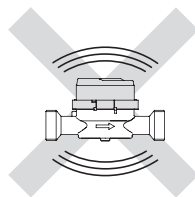
Protect from flooding



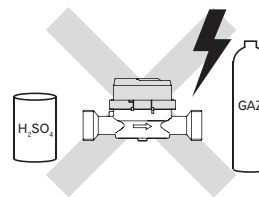
Protect from freezing



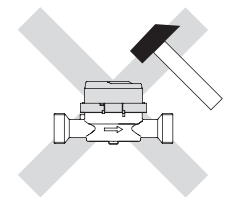
Protect from high temperature and UV light



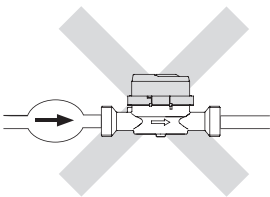
Protect from vibration



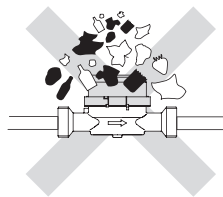
Do not use near sources of acids, gases and/or electrical systems



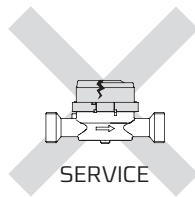
Protect from shocks



Protect from hydraulic shocks



Keep the installation site clean



SERVICE

Have the water meter serviced if defective




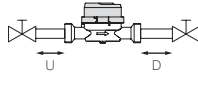
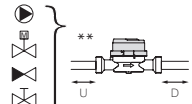


Do not dispose of the device with household waste. Bring the device to a selective waste collection point. Please recycle.

NOTE: See www.apator.com for detailed information about the operating principle and conditions.



COMPATIBILITY AND INSTALLATION REQUIREMENTS

Water meter / meter types	Water Meter / Meter Installation Positions*			Flow Profile Accuracy Class	
	 Horizontal with the counter pointing upwards H ↑	 Horizontal with the counter pointing sideways H →	 Vertical with the counter pointing sideways V	 CE-compliant	 Per manufacturer
JS, JS90, JS130	✓	✓	✓	U0 D0	U5 D3
JS (DN50-100)	✓	–	–	U0 D0	U3 D2
SV-RTK	✓	✓	✓	U0 D0	U5 D3
MWN, MWN130, MWN50GH	✓	✓	✓	U0 D0	U3 D2
MWN/JS	✓	–	–	U0 D0	U6 D4
WI	✓	✓	✓	U5 D3	U10 D6
MH, JS16-H	✓	–	–	U0 D0	–
MK	✓	–	–	U0 D0	–

* The tolerance of the flow axis position for all meters—horizontal, vertical, and inclined—is $\pm 5^\circ$ in accordance with the PN-EN ISO 4064-2 standard.

** If there is any fitting other than standard connectors before or after the water meter (which may disturb the flow), it is recommended to extend the straight sections to the lengths specified in the table. In the case of fittings that strongly disturb the flow profile, these values can be increased two- to threefold.



CLASSIFICATION OF ENVIRONMENTAL CONDITIONS

Mechanical class according to OIML D 11:2013 (E) - **M1**

Electromagnetic class according to OIML D 11:2013 (E) - **E1, E2**

Climatic class according to EN ISO 4064:2017 (E) - **B** (indoor installation)

WARNINGS:

This manual is the property of Apator Powogaz S.A., and all rights to this document are reserved. Any copying or distribution of this manual is strictly prohibited. As this manual is part of the device, it should be kept with the device to ensure access to information for both the user and qualified service personnel. It is recommended to read this manual before first using the device to ensure safe and proper operation.

Apator Powogaz S.A. shall not be held liable for any personal injuries, indirect damages, or material losses resulting from improper installation or incorrect use of the device, inconsistent with its intended purpose.

PROHIBITED:

The device must be used in accordance with this manual, and any modifications, attempts at self-repair, or improper use of the device are prohibited. In case of malfunction or suspected issues with the device, contact qualified service personnel.

Apator Powogaz S.A. has the right to modify and improve the manufactured equipment without prior notice.



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