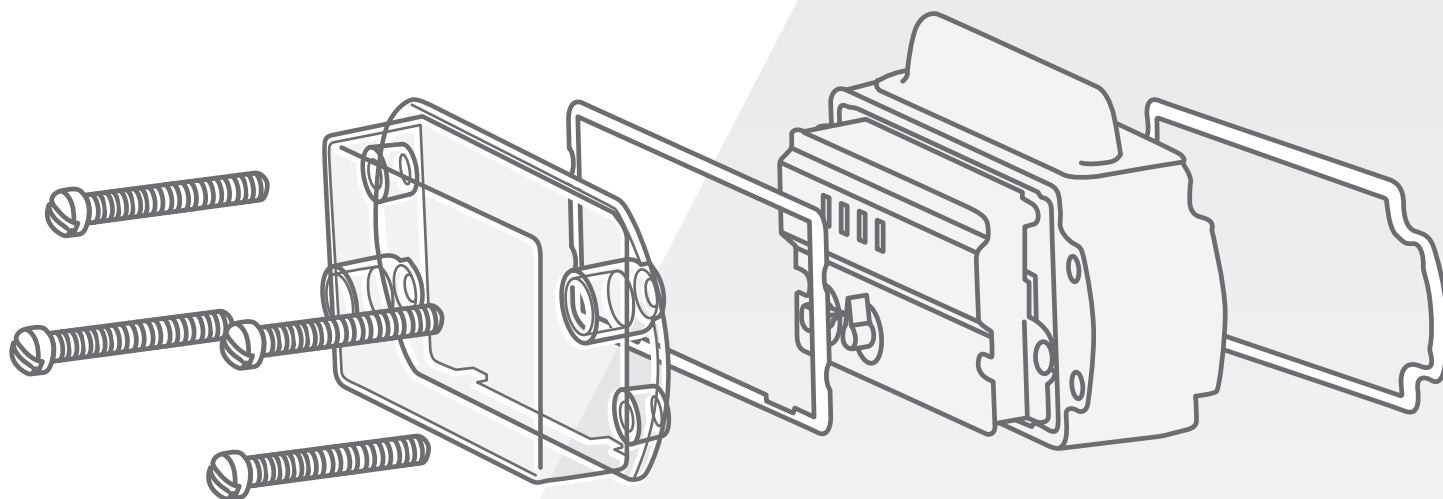


## Installation Procedure

# Smart Volumetric Adapter for Diaphragm Gas Meter

### Volumetric Meter

**Models: VM3010, VM3020**



**Do not  
pressure wash**

**WARNING** In order to guarantee a safe, explosion-proof environment and ensure conformity to the Certifications (page 1), the below requirements must be fulfilled without fail: 1. Ambient temperature range is  $-40^{\circ}\text{C} \leq T_{\text{amb}} \leq +60^{\circ}\text{C}$ , 2. The device shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge (under certain extreme circumstances, the plastic enclosure may store an ignition-capable level of electrostatic charge), 3. **DO NOT RUB**. The equipment shall only be cleaned with a damp cloth.

**INSTALLATION** Always follow your local regulations and standards. If locally required, consult a certified expert to ensure your installation is compliant.

## **Support**

+1 (514) 673-0244

+1 (844) 763-3344 (toll-free)

[support@otodata.com](mailto:support@otodata.com)

[otodatatankmonitors.com/support](https://otodatatankmonitors.com/support)

## **Emergency Support**

Available 24/7

1-833-529-9499

## Specifications

### Smart Volumetric Adapter for Diaphragm Gas Meter

## Volumetric Meter

### Models: VM3010, VM3020

#### Input

Hall effect detection of turns on gas meter's axle

#### Reporting & Outputs

|                   |   |
|-------------------|---|
| Reporting         | Gas consumption in cubic feet<br>Low battery<br>Temperature                                     |
| Data Interface    | API<br>Email (to supplier and/or consumer)<br>Raw data<br>Online dashboard<br>Client mobile app |
| Automated Testing | Network status<br>Battery status  |

#### Radio Specifications

|              |   |
|--------------|---|
| Technologies | VM3010: Bluetooth BLE<br>VM3020: Bluetooth BLE, LTE-M, NB-IoT |
|--------------|---|

#### Environmental Specifications

|   |                 |                  |
|---|-----------------|------------------|
| Operating and storage temperature range | -40 °C to 60 °C | -40 °F to 140 °F |
| Relative humidity range                 | 0% to 100%      |                  |
| Enclosure rating                        | IP68            |                  |
| Warranty                                | 2 years         |                  |

#### Features

Ready to install, long lasting battery, hardware installation included.

#### Certifications

##### Hazardous Location Classification

Otodata's volumetric gas meters are certified by QPS Evaluation Services Inc. for use in North America. I.S. Class I, Div 1, Groups CD, T3. Class I, Zone 0, AEx ia IIB T3 Ga. *Standards applied:* UL 60079-0:2019; Ed. 7 and CSA C22.2 NO. 60079-0:19, UL 60079-11:2013; Ed.6 and CSA-C22.2 NO. 60079-11:14, UL/CSA 61010-1-12.

Volumetric gas meters are certified by *Ośrodek Badań Atestacji i Certyfikacji OBAC* for use in the European Union and internationally.

##### IECEX

Classification: Ex ia IIB T3 Ga, Certificate: IECEX OBAC 23.0007X, Standards applied: IEC 60079-0:2017 – IEC 60079-11:2011

##### ATEX

Classification: II 1G Ex ia IIB T3 Ga, Certificate: OBAC ATEX 0311X Standards applied: EN 60079-0:2017 – EN 60079-11:2011

##### Radio Certifications

FCC ID: 2ADQFVM30X0, IC ID: 12649A-VM30X0

#### Adapter Dimensions

Height: 13.9 cm (5.5 in), Width: 8.4 cm (3.3 in),  
Depth: 3.6 cm (1.4 in)

#### Ordering Options

VM3020-VSXX-CBLK\*

Smart Volumetric Adapter for gas meter with Bluetooth interface and cellular network modem.

VM3010-VOXX-CBLK\*

Smart Volumetric Adapter for gas meter with Bluetooth interface.

\* Replace "XX" with the appropriate regional code. If available, replace "CBLK" with client branding code.

**This device complies with part 15 of the FCC Rules.** Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. **This device is compliant with Industry Canada's RSS standards for license-exempt radio apparatuses.** Authorized use depends on the following two conditions: (1) the device must not create radio interference, and (2) the device user must accept all radio interference, even if this interference could potentially impair its functioning. **This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules.** These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: —Reorient or relocate the receiving antenna. —Increase the separation between the equipment and receiver. —Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. —Consult the dealer or an experienced radio/TV technician for help. **To comply with FCC/ISED RF exposure compliance recommendations, a separation distance of at least 20 cm must be maintained between the antenna of this device and all persons.**

## Safety requirements

**Prior to installation and use, it is essential to read and understand this instruction manual; paying particular attention to the Ex marking,\* special conditions of use, and technical parameters.**

The device can only be connected to equipment with proper, fitted, intrinsically-safe parameters.

NEVER carry out any service manipulations in the presence of an explosive atmosphere.

The Volumetric Meter (VM3010 or VM3020) is delivered with connected batteries.

Start-up of the device requires only proper use of user interface.

Activities related to starting up of the device do not have influence on Ex safety.

This device was not designed to be maintained or repaired. This device was not design to be adjusted.

During installation or deinstallation, it is imperative to protect the device from building an electrostatic charge on its surface.

The device is designed for fixed mounting.



**Otodata VM3010 and VM3020 are ONLY compatible with the following diaphragm gas meters:**

**AC-250, AM-250, AT-210/250, AL-425, AC-630**



**Otodata VM3010 and VM3020 are NOT compatible with the following diaphragm gas meters:**

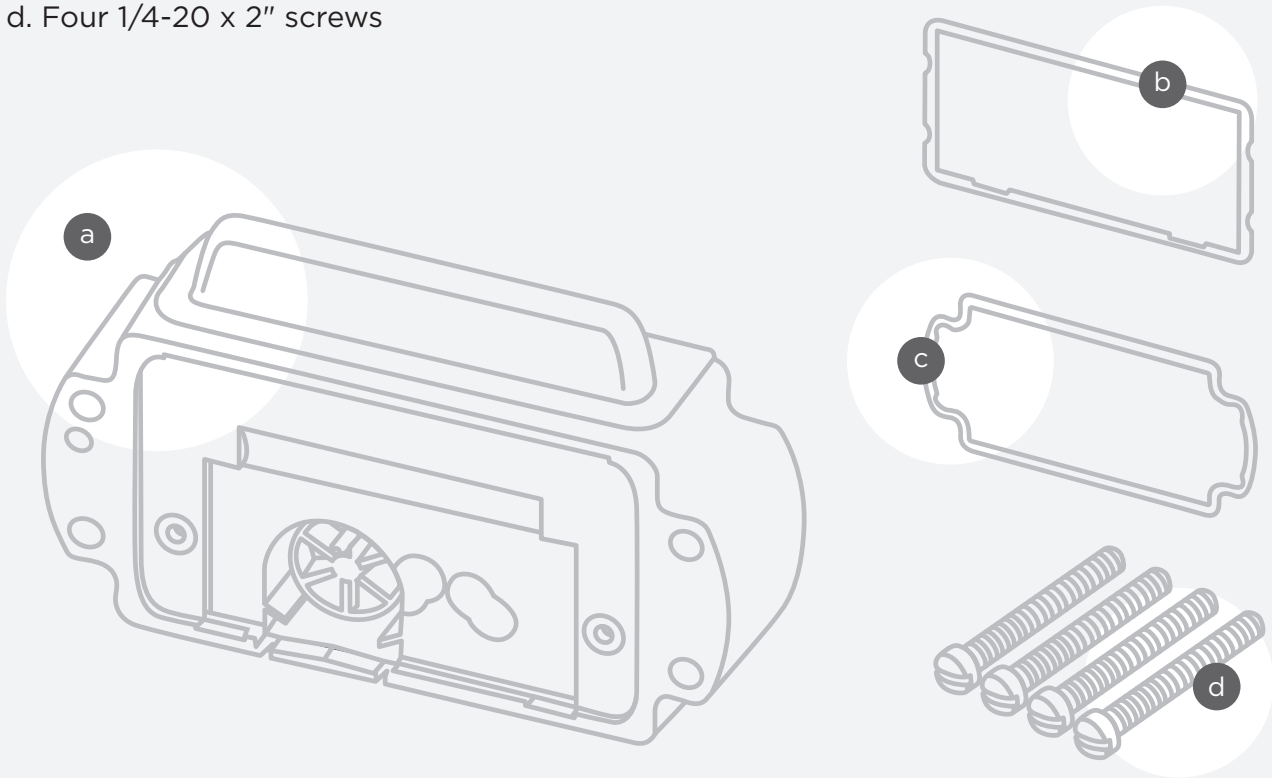
**AC-250NX, BK-250, BK-G4**

**No other model or brand of gas meter are considered in the scope of this product.**

## Device Anatomy

Your volumetric Meter kit will contain the following items:

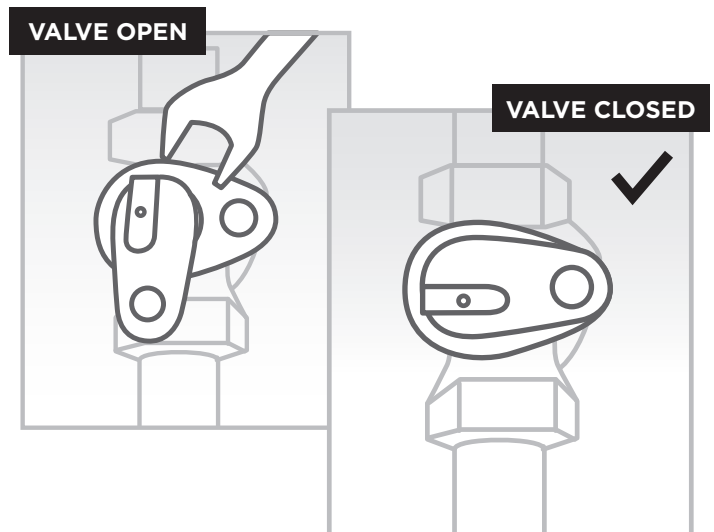
- a. One pulsar adapter
- b. One front seal
- c. One rear seal
- d. Four 1/4-20 x 2" screws



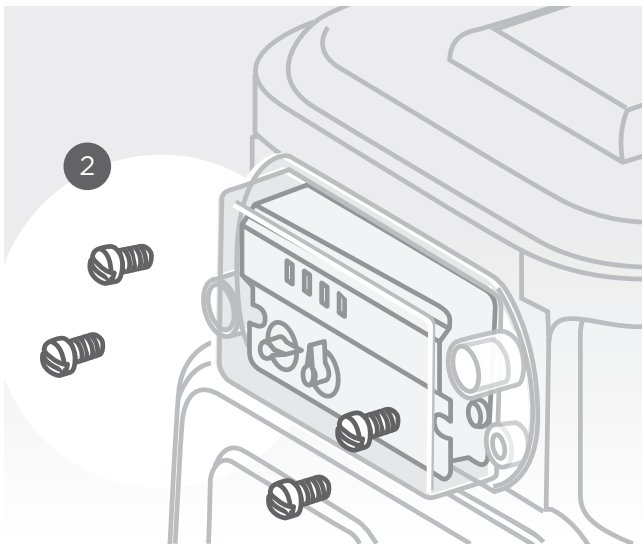
**THE INSTALLATION OF THIS DEVICE IS RESERVED ONLY FOR PROPERLY TRAINED PERSONNEL, AND MUST BE APPROVED BY THE SAFETY BODY HAVING JURISDICTION.**



**IMPORTANT**  
**FOR FIELD INSTALLATIONS,**  
**ENSURE TO SHUT OFF THE**  
**MAIN GAS VALVE BEFORE**  
**ATTEMPTING ANY WORK!**



## Installation Instructions



### 1. Inspect for safety concerns

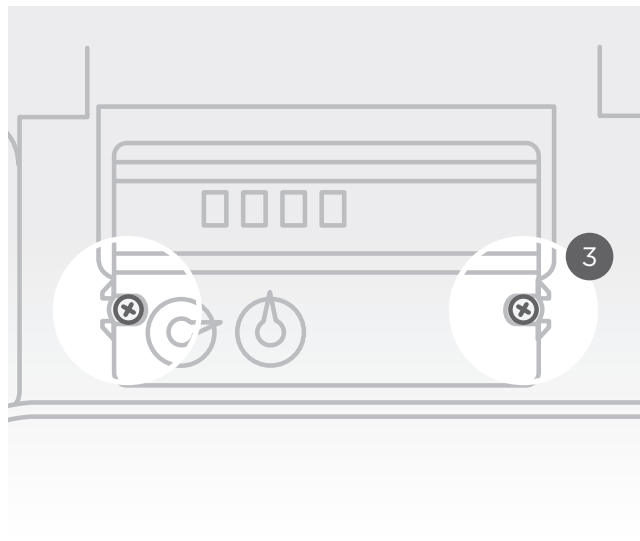
- a. **IMPORTANT** Turn off the flow of gas. Ensure ALL equipment using gas is secured.
- b. Remove any debris, dirt, or other contaminants from the area of the gas meter register.
- c. Carefully inspect the device for possible safety concerns such as a leak (or any other issue that could compromise safety).  
DO NOT proceed if anything concerning is found. Report immediately.

### 2. Remove screws

Remove all four screws using a slotted screwdriver then carefully pry off the transparent cover.

If a *lock seal* is attached to the gas meter screws, ensure you have permission to remove it before proceeding.

You may also be required to break a seal on a bolt.



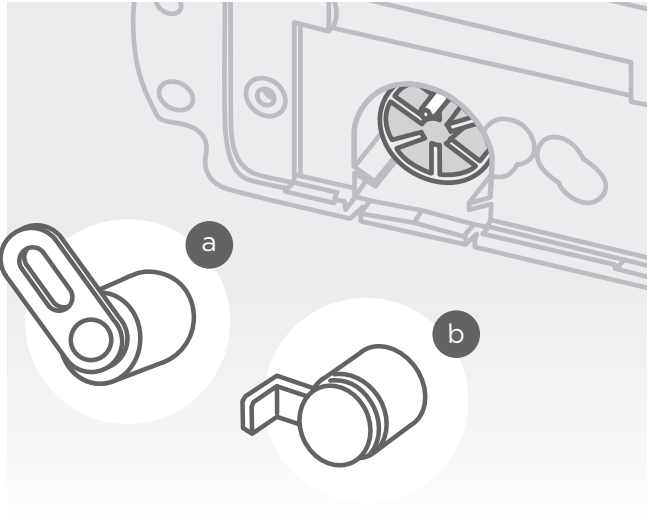
### 3. Remove register

Proceed to remove the two small screws that secure the register in place. Then, carefully detach the device.

Ensure you do not let the register or screws to fall.

### 4. Clean interior

Clean the interior area.



## 5. Determine axle compatibility

Identify the gas meter's axle type:

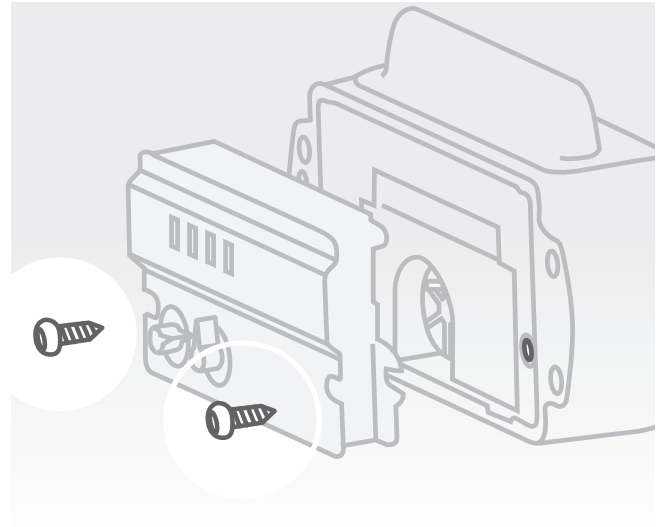
**a.** Female (Oblong hole) or **b.** Male (Square tab).

Front side: Otodata's Volumetric Meter has the ability to mate with both female and male axles. It has a prong that can be mated with the oblong hole (female), and, 5 cavities in the wheel where the square tab (male) can be inserted.

Back side: Similarly, the Volumetric Meter can mate with both female and male axles.

## 6. Activate device

To activate the device, spin the wheel at least three times. The device will wake up and start looking for a connection automatically.

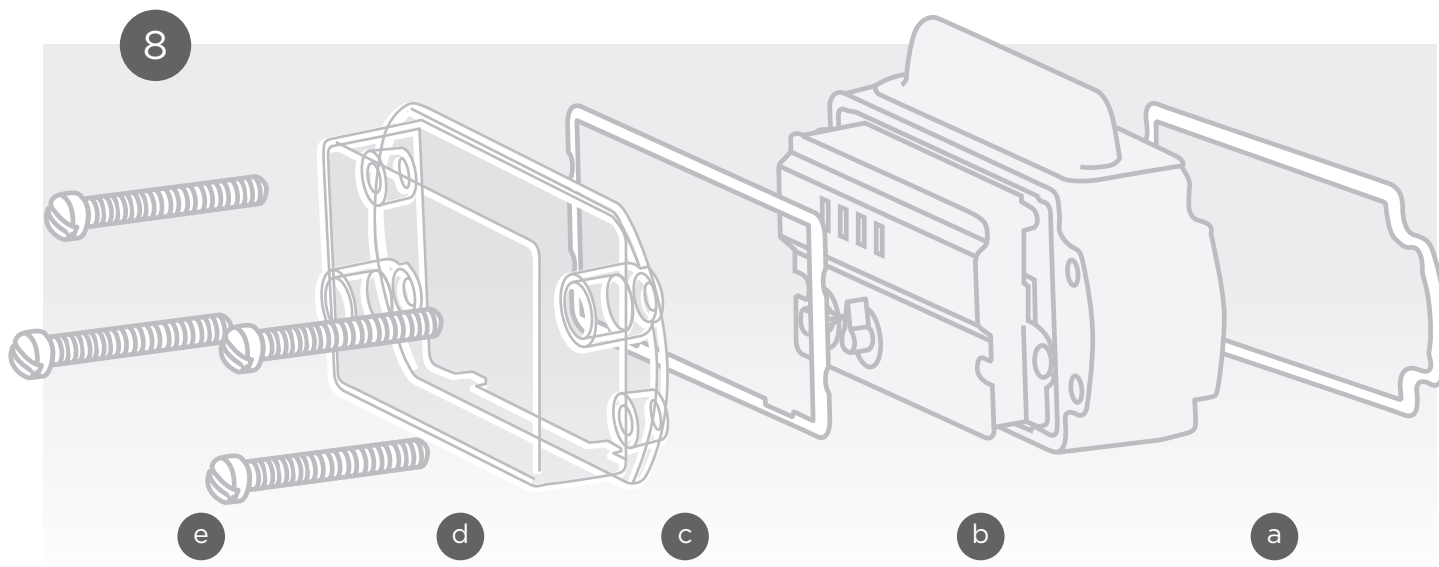


## 7. Reinstall register

Attach the register to the Volumetric Meter.

Use special care to properly mate the register's axle with the wheel. You may turn the wheel to adjust the alignment.

Secure the register in place using the two screws previously removed.



#### 8. Assemble device components

Assemble all components forming a single piece.

**a.** Rear seal, **b.** Pulse adapter, **c.** Front seal,  
**d.** Transparent cover, **e.** 1/4-20 x 2" screws.

#### 9. Attach to gas meter

Attach the assembled device to the gas meter.

*Take special care to ensure the axles couple correctly.*

#### 10. Secure with screws

Using a Nonsparking slotted screwdriver, gently screw the device in place. DO NOT overtighten.

#### 11. Inspect installation

Ensure everything is correctly installed.

Then, open the shut valve and check for any leaks near the index or the surroundings.







**Members can watch  
step-by-step installation  
videos and shop online**



**Sign up free today**

**[otodatatankmonitors.com/membership](https://otodatatankmonitors.com/membership)**

Members can purchase monitors and accessories like gauges, leads, mounting equipment and more via our online store.

# IMPORTANT

Please take a moment to carefully read the installation instructions included with your monitors, and ensure you understand and respect local regulations.

## ABOVE-GROUND TANKS

**Do not install monitors  
under lids.**

## UNDERGROUND TANKS

**Plastic lid suggested.  
Metal lids will obstruct signal.**

Reading installation instructions will ensure maximum monitoring performance on all your tanks and installations.