VATA VERKS
water and gas intelligence for buildings

Non-Invasive, Whole-Building
Water / **D**iaphragm Gas / **R**otary & Turbine Gas
VV – 302 – XX – W/D/R

EXTREME KIT

The Extreme is a battery powered, strap-on, real-time, hi-res answer to the Water and Gas usage data problem with 5 – 7 years of continuous battery powered tracking. The Extreme is factory pre-configured, and with a single switch, ready to solve your most difficult problems in the most unforgiving environments.
No configuration, no complexity, no disruption.

Deploy and say your goodbyes.
It could be 7 years before the battery needs replacing.

VV-302

Applications

- Whole building applications
- Disruption-restricted locations
- Approved for secure / government locations
- ESG, LEED and other efficiency reporting
- Cost and usage tracking
- Leak and anomaly detection
- Building security and oversight
- Continuous and Ongoing Commissioning

Features

- Radio Agnostic, compatible with any pulse counting radio: LoRa-Wan, Wi-Fi, Cellular, 900MHz
- Indoor / Outdoor / Under ground or Water
- Single ON switch activation.
- Non-invasive, disruption-free deployment
- No plumber or utility involvement
- Auto calibrate / Auto track / Auto re-calibrate
- Low profile / inconspicuous probe
- Compatible with all meter sizes
- Compatible with >95% of installed utility meters
- Subscription Free

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**VV – 302
DATA SHEET
Wireless - Ready**

Building owners and facility managers need building Water and Gas usage data to track costs, detect anomalies and leaks, oversee operations, to improve efficiency, for boiler upgrades or CHP baseline studies, and as required by certifications such as LEED and some regional regulations.
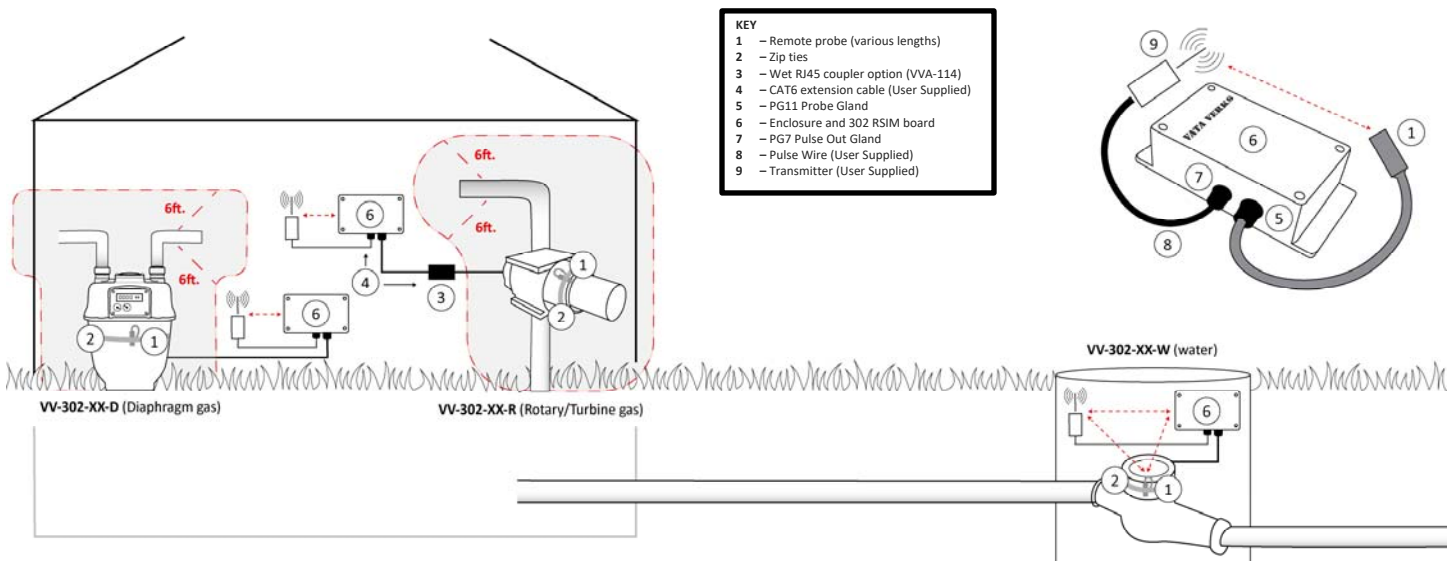
Plumbed utilities, Water and Natural Gas are not like other tracked variables.

Until now usage tracking cost thousands in plumbers and disruption to building operations, off-hour installation, and delays of weeks.

This is disruptive to project flow, requires property managers to participate in project coordination of multiple site visits, is expensive, and results in low-quality, "dirty" data. **A movie we have all seen before.**

Vata Verks leverages the meters that already exist, eliminating both hardware, and specialized installation. The sensor simply straps to the side of the Water or Natural Gas meter and resolves hi-resolution, real-time flow information.

No special installation skills or hardware.
No disruption to project flow or building operation.
No 3rd party involvement or coordination.

KEY
1 – Remote probe (various lengths)
2 – Zip ties
3 – Wet RJ45 coupler option (VVA-114)
4 – CAT6 extension cable (User Supplied)
5 – PG11 Probe Gland
6 – Enclosure and 302 RSIM board
7 – PG7 Pulse Out Gland
8 – Pulse Wire (User Supplied)
9 – Transmitter (User Supplied)

VV-302-XX-D (Diaphragm gas)

VV-302-XX-R (Rotary/Turbine gas)

VV-302-XX-W (water)

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Meter Compatibility

Water Optimized Version

Most positive displacement, compound, multi + single-jet, piston utility meters

Gas Optimized Version

Most diaphragm, rotary, and turbine utility meters

Compatible with over 95% of installed meters

Not compatible with solid state meters such as ultra-sonic meters
For Sensus Omni water meters, see models VV-210, 230.

*Contact Vata Verks about extended peak flows or compound meters

Data Communication

Pulse Features

- Pulse Width: 10 – 100 msec   (50 msec default)
- Pulse K-factor 1.0 rev min   (1.0, 10.0 default)
- Pulses over Max rate are accrued until flow slows
- To change Pulse Settings: Accessory AC-301

Pulse Specification

- Transistor Collector (dry contact)

Radio

- See User Supplied Components

Typical Data Accuracy*

- Water: > 95%
- Natural Gas: > 95%

*Maximum accuracy when k-factor field measured

Data Ownership

- Owned and directly controlled by the user.
- Suitable for government or secure locations

Sensors are used to acquire Water/Gas utility meter flow data.
Vata Verks assumes no liability for their use beyond cost of repair or replacement within warranty period. See Warranty for full details.

Included Components / Limits

Full Kit
  - o   Indoor / Outdoor
  - o   -40C to 60C
  - o   Not for hazardous locations
- Sensor Probe with attached PG11 Gland
  - o   Indoor / Outdoor burial, submersible safe
  - o   2M, 7M or 15M long direct burial CAT6 AWG 23, RJ45 terminated, Pin out T568B
  - o   User extendable to 15M / 50 ft
       *Contact with Vata Verks when longer probes required
  - o   (1) indoor RJ45 Coupler
- Enclosure / Board   (7-5/8" L x 3-1/2" W x 2-1/2" H)
  - o   Indoor / Outdoor
  - o   Locate at least 2M / 6 ft from gas dist. or storage.
- Zip Ties (2)
- Desiccant (1)
- PG7 Gland for User Supplied Pulse Cable
- Battery: 17Ahr Lithium-Metal D-cell
  - o   5 – 7 year life battery.   Non-rechargeable
  - o   See battery mft. for safety information

User Supplied Components / Options

- Pulse Counting Radio
  - o   Dragino Model CPL01 LoRa-wan Radio
  - o   Monnit Pulse Counting Radios
  - o   Others
  Maximize Radio / Probe separation. See Instruction
- Pulse Cable (typically included with radio)
  - o   Jacketed 2-conductor 3.0 – 6.5mm cable
  - o   Example: Alpha Wire Xtra-Guard 5261C
- CAT6 probe extension
- VVA-114 RJ45 Wet Coupler
- AC-301 Configuration Kit.
- AC-104 Installation Convenience Kit

Certifications

Supplier's Declaration of Conformity
47 CFR § 2.1077 Compliance

Product: VV-302
<u>Responsible Party</u>
Vata Verks Inc
28 School St. Arlington, MA 02476
info@vataverks.com

FCC Compliance Statement
This device complies with Part 15 of the FCC Rules. 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.

VataVerks reserves the right to alter product offerings and specifications at any time without notice and is not responsible for errors that may appear in this document.