

# VATA VERKS

## water and gas intelligence for buildings

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 baseline studies for boiler or CHP sizing, and as required by certifications such as LEED and some regional regulations.

Water and Natural gas are not like other tracked variables.

Until now, Water and Natural Gas data required plumbers and cut pipes, and disruption to building operations to install a private Water or Natural Gas meter, OR the utility installation of a second Pulse output on the existing meter.

This was disruptive to project flow, required property managers to participate in project coordination, was often expensive and in the end resulted in low resolution data.

Vata Verks was formed with the idea that there must be a better way forward.

Vata Verks leverages the meters that already exist in the building, eliminating hardware, and specialized installation. The sensor simply straps to the side of, and detects the internal mechanical movements of the Water or Natural Gas meter, and from this movement, resolves high-resolution, real-time flow data.

No special installation skills or hardware. No disruption to project flow or building operation.

No 3<sup>rd</sup> party involvement.

Vata Verks integrates into most commercial data systems and BMS.



# PRODUCT SPECIFICATION



A Cheap and Simple real-time hi-res whole-building **WATER** and **NATURAL GAS** intelligence, which integrates into any building monitoring or building management system.  
Data which the user can leverage to protect occupants and buildings from leaks.  
Track usage and costs. Drive conservation and savings.  
A non-invasive, plumber-less, disruption-free, installation.  
No cut pipes or dripped drops.  
Cheap and Simple

## Compatibility

**Water:** Positive displacement, multi-jet meters, piston, most turbine  
Residential, Commercial, Compound  
**Gas:** Diaphragm, Rotary, and Turbine meters

*Solid state meters are not compatible*

## Data and Transmission Options

- Modbus TCP via Ethernet
- Modbus RTU via RS485 (Coming)
- Telnet Client
- MQTT via Ethernet
- Analog Output (Coming)
- Pulse Output (volume programmable)
- To onboard memory
- Wireless (as required)

## Resolution

### Standard Resolution

Water: ex: residential = 4.500 tablespoons = 64.0 grams

Gas: ex: residential = 0.11 ft<sup>3</sup>

### Optional Resolution

Water: ex: residential = 0.045 tablespoons = 0.64 grams

Gas: ex: residential = 0.0011 ft<sup>3</sup> = ~ 1 BTU

**NOTE: Examples. Maximum resolution is meter size dependent.**

**Data Rate** User programmable to any data rate. (1 data point /second max)

**Control** Local: via serial connection to laptop  
Remote: via telnet or onboard web server

**Accuracy:** Sensor accuracy: ~ 100% fidelity to meter  
Meter accuracy: Utility meters are 99% - 101% accurate

## Installation Limits

### Standards Limits

-20C to 40C

10% - 95% RH non-condensing

18" sensor reach

### Optional Limits

-20C to 40C

Submersible

10' to 150' sensor reach

**Data Ownership** Owned and controlled by the user

## Power Consumption

300mA Max

## Power Options

5V via USB to wall power

5V via Terminal Block: +5VDC 1Amp max (5.5VDC max)

**Backup Battery:** 3.7V Li-ion Battery (~12 hours of operation)

**Certifications** FCC Part 15