

# Dedicated.



Maintain Precise Control of Aeration,  
Digestion, and Cogeneration.

**BioTrak**<sup>™</sup>  
*Thermal Mass Flow Meter*



# All the Meter You Need.

Sierra's BioTrak™ thermal mass flow meter meets the rugged demands of municipal and industrial wastewater plants where aeration, digestion, and cogeneration play pivotal roles. BioTrak makes operators smarter and their processes more reliably efficient. And we're always here if you need us—Sierra's promise to customers for 50 years.

BioTrak is designed specifically for plant engineers focused on renewable wastewater processes where healthy microbial growth is crucial. It provides the precise measurements and control required to optimize aerobic and anaerobic treatment and produce biogas.



## Simple. Fast. Effective.

With AC or DC power input, optional hot tap capability, and remote configuration, BioTrak is easy to install, operate and adjust in the field to avoid costly and time-consuming delays.

Have a look at its digital platform: DigiSense™, BioSelect™, and BioView™. They gather, preview, and deliver the data that supports your processes and meets regulations.

Sierra BioTrak's proven technology makes trust possible. And with reduced maintenance over the lifetime of the instrument, BioTrak significantly lowers cost.



# BioTrak 645i INSERTION / 745i INLINE

## DEDICATED ACCURACY

- BioSelect™ menu provides field selectable air, methane, and digester gas
- Air:  $\pm 1\%$  of reading  $\pm 0.2\%$  of full scale  
Other gases:  $\pm 1.5\%$  of reading  $\pm 0.5\%$  full scale
- AC or DC input power available
- Optional hot tap packing gland and retractor
- Insertion and inline versions
- Integrated and remote electronic configurations
- DigiSense™ robust sensor design
  - Sensing elements supported at both ends
  - Swivel probe  $\pm 180^\circ$  into four positions
- Gross Heating Value and Density Calculations of Gas Mix
- Measures gas flow rate in SCFM, MSCFD, KG/HR, and many more units
- Wide measurement range up to 1000:1 turndown; 100:1 typical

- Negligible pressure drop
- Provides two galvanically isolated 4-20mA analog outputs, HART communication (optional), a pulse output, switch input, and Modbus RTU (RS485) (optional)
- Welded, 316 SS sensor construction
- Stainless or carbon steel inline flow bodies optional
- Low-end sensitivity for wastewater applications
- FM (U.S.) and FMc (CANADA) approved for Class I, Div 1; ATEX/IECEX approved for Zone 1
- NEMA 4X and CE Mark

## FIELD FLEXIBILITY

- Microprocessor based, field-programmable electronics
- Standard on-board 2 line x 16 character, backlit display with configuration panel
- Free BioView™ software available
- USB port to connect to a PC is standard
- BioCal™ calibration validation
- NIST traceable calibration

### Remote Configuration



### Optional AC Power Input



### Hot Tap with Retractor



## DigiSense Sensor

DigiSense is the state-of-the-art sensor technology used in BioTrak. Unlike other thermal flow sensors, it interfaces directly with the BioTrak microprocessor for greater control, precision, and programmability. DigiSense accurately responds to changes in process variables (gas flow rate, pressure, and temperature) to determine mass flow rate, totalized flow, and temperature. DigiSense's correlation algorithms allow the meter to be calibrated on a single gas in the factory while enabling the user to select other gases in the BioSelect menu.

## BioSelect Gas Selection Menu

BioSelect allows users rapid gas selection or digester gas mixing from a pre-calibrated list of gases, including air, methane, and digester gas mix in the field. With an on-board 2-line x 16-character backlit display, operators can view flow rate, total, elapsed time, process gas temperature, and alarms. The display is also used with the configuration panel to access flow meter settings, such as 4-20mA and pulse output scaling, pipe diameter, low flow cutoff, flow filtering (damping), display options, and high or low alarm limits.

## BioView Software

Sierra's BioView advanced software is a free PC-compatible application available for download from Sierra's website. Connect your Windows-based laptop or PC to the meter using the USB port interface to access meter data and configure the meter's settings.

## BioView Features

- Quick access to all configuration parameters with pop-up windows and pull-down menus
- Selection of measurement units, flow and temperature ranges, alarm settings and more
- Print or save a BioCal™ Calibration Validation Certificate
- Set alarms; display alarm codes
- Simulation mode used to align 4-20mA output with the input to the customer's PLC/DCS
- Raw data to be viewed to diagnose or troubleshoot your meter
- Data logging to an Excel® spreadsheet

## BioCal Calibration Validation

For customers needing a quick and easy way to verify the meter's calibration in the field, BioTrak offers BioCal. Initiate this feature through the meter's display configuration panel or the BioView software. The test takes less than five minutes to run and produces a pass/fail result afterwards. A fail result may indicate either a dirty sensor or the need to recalibrate.

Using the BioCal test with BioView software, you can produce a Calibration Validation Certificate upon conclusion. The certificate will show the date and time of the test along with meter data such as firmware version and meter serial number. This in-situ calibration validation helps operators comply with environmental mandates and eliminates the cost and inconvenience of annual factory calibration.

## Measureably Different™

Our primary goal at Sierra is to help make you smarter and more productive with the precision flow measurement tools we design and build to meet your unique needs.



5 Harris Court, Building L / Monterey, CA 93940

**LEARN:** [sierrainstruments.com/biotrak-wastewater](http://sierrainstruments.com/biotrak-wastewater)

**CONTACT:** [sierrainstruments.com/contactus](http://sierrainstruments.com/contactus)

**CALL:** 831.373.0200