

# FOX APPLICATION GUIDE

## Meet Air Quality Management Requirements

### TYPICAL APPLICATIONS INCLUDE:

- Emission reduction systems
- Emissions monitoring systems
- Industrial boilers
- Compressed air systems
- Fuel flow monitoring
- Natural gas flow monitoring

## Totalizing Fuel Flow Meters Help Meet Air Quality Management Requirements

Implementing accurate compressed air flow meters is an effective first step in controlling energy costs. The Federal Clean Air Act (FCAA) requires the U.S. EPA to set national ambient air quality standards to ensure public health. State agencies, as well as regional and metropolitan air quality management districts are responsible for ensuring attainment and maintenance of these standards. These agencies have published rules and regulations regarding NOx and CO emissions from industrial, institutional and commercial boilers, steam generators and process heaters.

Owners or operators of units subject to these regulations may install a non-resetting totalizing fuel flow meter (TFF) to measure the total of each fuel used by each individual unit. The regulations specify mass flow measurement of fuel usage and if a volumetric flow meter is installed it must compensate for pressure and temperature using integral gauges.

Thermal mass flow meters deliver a direct reading of mass flow rate of natural gas and other fuel gases – without temperature and pressure compensation – and provide a simple, reliable and cost-effective method for tracking and reporting fuel consumption.

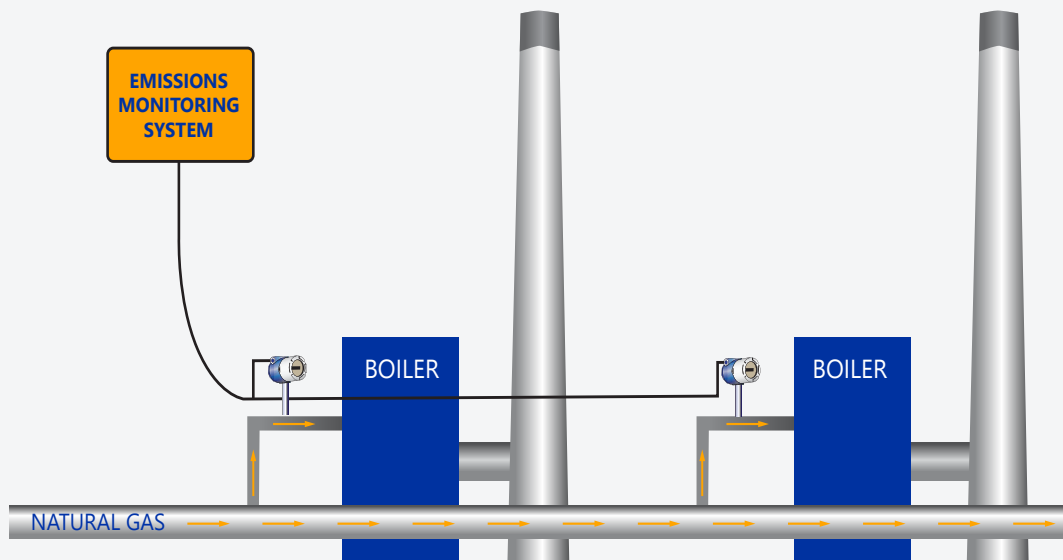
### Flow Meter Features

Thermal mass flow meters from Fox Thermal offer these primary features:

- Non-resetting totalizer meets air quality management equipment requirements
- A variety of analog and digital output signals to easily interface with emissions management system
- No pressure or temperature compensation requirements
- Broad measurement range (100 to 1 typical) including very low velocity flow



Get emissions under control with accurate flow measurement instrumentation from Fox Thermal.



Natural gas measurement by totalizing fuel flow (TFF) meters used in an emissions monitoring system to calculate total emissions.

## Direct Mass Measurement

Mass flow measurement is fundamentally more accurate than volumetric flow measurement because mass is not affected by changes in process pressure and temperature. The Fox Thermal flow meter measures gas flow directly in mass units including Standard Cubic Feet per Minute (SCFM), Normal Cubic Meters per Hour (NM<sup>3</sup>/ Hr), Pounds Per Hour (lbs/hr) or Kilograms per Hour (Kg/Hr). Pressure and temperature compensation is not required.

Changes in process pressure and temperature can cause significant measurement errors in volumetric flow meters. The rule of thumb is that a 10 PSI change in process pressure will result in a 10 percent measurement error. A direct mass measurement is your best solution.



Model FT4A is an ideal choice for measuring natural gas used to fuel boilers in an emissions monitoring system.



399 Reservation Road | Marina, CA 93933

Office: 831.384.4300 | Fax: 831.384.4312

[foxthermal.com](http://foxthermal.com)