

Wilkinson Combustion Management Systems by Autoflame®

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“The boiler is great. Autoflame is great. I don’t have to sit in front of them like I did with my old boilers. They were 41 years old. This is like heaven compared to what I used to have. Wilkinson is an exceptional company to deal with. Their attention to detail was a lot better than anyone else’s.”

Chief Engineer
Midtown Hotel

- ▼ **Combustion efficiency**
- ▼ **Automatic control**
- ▼ **Energy savings**
- ▼ **Improved comfort**

Here is the combustion equation you’ve been looking for:

Autoflame® Mark VI™
Combustion Management System =

- Greater energy efficiency
- + Less fuel burned
- + Less environmental pollution released
- + Lower costs
- + Fast payback



Specialists in Advanced Combustion Technology Since 1951

George T. Wilkinson, Inc.
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The Autoflame® Mark VI™ is the world leader in combustion management systems.

Wilkinson is the exclusive representative of Autoflame® in southern New England.



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Walter Wells,
a George T. Wilkinson, Inc. service advisor with more than 20 years of experience, makes sure the new state-of-the-art low emissions steam boiler at Northeastern University is running perfectly.

Wilkinson partnered with Gordon-Piatt and Autoflame to produce a boiler that uses two types of fuel, yet meets the low emissions rate of a single-fuel boiler.

Everyone wants to spend less money on operations. George T. Wilkinson, Inc. can help you save energy and lower your costs by installing the Autoflame® Mark VI™ Combustion Management System on your burner.

Autoflame® Technology Center

George T. Wilkinson, Inc. is the Autoflame® expert in central New England. Wilkinson employees regularly attend Autoflame® training programs to stay current on the technology. An authorized Autoflame® Technology Center, Wilkinson has the skilled employees to install and provide the highest quality service and technical support you need.

With an Autoflame® Mark VI™ Combustion Control and Management System installed on your burners, you will burn fossil fuels more efficiently – within constantly decreasing limits – saving you money.

The Mark VI™ burner management system can achieve and maintain an 82-percent combustion efficiency on natural gas and 86 percent when firing on #2 oil.

Autoflame® Mark VI™ Combustion Management System

Old Technology

The Mark VI™ is a fully integrated state-of-the-art combustion control system. Before its development, boiler operators and technicians adjusted linkages for full modulation on multiple fuels manually. They were generally successful at setting low and high fire set points, but all the set points in between were inaccurate. Still in use, this 30-year-old technology is more than 20 degrees inaccurate, which translates to 7 percent to 12 percent excessive fuel use each year.



Mark VI™ Technology

The Mark VI™ system ends these inaccuracies. It performs on boilers similarly to the way an electronic fuel management system performs on automobiles. The Mark VI™ uses 17 programmable firing rate set points (commissioning curves) from low fire to

high fire while maximizing the fuel-to-air ratio. These curves are plotted by a start-up engineer in conjunction with either the optional Autoflame® Exhaust Gas Analyzer (EGA) or a mobile EGA. Once programmed, the microprocessor micro modulates to within 1 degree angular (900 positions) while using 3 parameter trim. This creates a more efficient combustion process that uses less fuel and emits less pollution.

Fast Payback

If, for example, you burn \$50,000 in fuel a year and your equipment is more than 10 years old, you should see a two year payback after installing the Mark VI™ Combustion Control System. In addition, many local utilities offer rebates that will drive down the payback period even more.

Free Analysis Shows Savings

For a better example, George T. Wilkinson, Inc. will provide a free, no obligation payback analysis for you, using your own statistics. Find out how much money and fuel you can save by taking advantage of utility rebates and installing the Mark VI™ system on your burners.

Wilkinson/Autoflame® Mark VI™

Features and benefits

Display

- ▼ 4" x 3" VGA screen
- ▼ 13 viewable screens for data review
- ▼ Fuel flow metering – instantaneous and totalized readings
- ▼ Gas pressure monitoring and valve proving
- ▼ Selectable trim channel
- ▼ Internal calendar clock display and logging functions

Combustion Control

- ▼ Integrated full-flame supervision with self-check diagnostics
- ▼ Six channels: four positioning motors, two variable speed drive interfaces
- ▼ Internal micro modulating PID controller for steam or hot water use
- ▼ Complete combustion control with purge timing and display
- ▼ User-definable combustion limits on all CO₂, O₂ and CO values

Options

- ▼ Feedwater level control software
- ▼ FGR volatile emissions limitation software
- ▼ Emissions calculator software

Boiler Management

- ▼ Intelligent boiler sequencing (IBS) increases in-service efficiency
- ▼ 16-incident lockout memory – time, date, function reset
- ▼ Fuel totalization for all fuels used
- ▼ Single-point change capabilities
- ▼ Data transfer interface for remote operation

EGA

- ▼ 3 parameter trim; O₂, CO₂ and CO (standard)
- ▼ Combustion efficiency calculations – net or gross
- ▼ Trims air control to further limit emissions
- ▼ Full display of exhaust temperature and efficiency
- ▼ NO, SO₂ monitoring (optional)
- ▼ Continuous emissions monitoring system software

System Operation

- ▼ Two fuel servomotors, one air damper servomotor, one flue gas recirculation servomotor
- ▼ Outside temperature compensation with night setback
- ▼ Infrared communications port for upload and download of commissioned data

For a free, no obligation payback analysis, call George T. Wilkinson, Inc. at 800-777-1629



Wilkinson converted an existing two-year old problem into an energy-efficient, modern solution using Autoflame at AstraZeneca R&D Boston. (Photo courtesy of AstraZeneca R&D Boston)



The Fairmont Copley Plaza Hotel, one of the oldest and most luxurious in Boston, upgraded its boiler plant by installing two Wilkinson Centurian™ steel firebox boilers featuring Autoflame advanced combustion technology.



Dean College is saving more than \$40,000 a year on energy bills thanks to a Wilkinson-engineered solution that includes Autoflame technology. (Photo courtesy of Dean College)