

Miller-Proctor-Nickolas

Commercial and Industrial Boiler Room Equipment

Ultra High Efficiency Condensing Boilers

Greetings from MPN

This is the second of a series of monthly informational e-mails from Miller Proctor Nickolas. Please feel free to forward these e-mails to others, or to send us the e-mail addresses of new subscribers.

Condensing Boilers – An exciting product if applied correctly.

Condensing boilers are a tool in the fight to reduce energy consumption and operating expenses. Condensing boilers have been shown to reduce energy consumption by up to 60% in properly designed systems and building conversions. Please let me know if you would like a copy of a study from the Mid-West detailing these conversions and the results.

Like any other piece of equipment, condensing boilers must be applied correctly, or many of their benefits will be lost. The most important consideration is water temperature.

Condensing boilers fire natural gas or propane. When natural gas burns, water vapor is formed. If this water vapor can be condensed inside the boiler, a significant amount of energy can be recovered. Normally, this energy just goes up the stack and is lost.

Since the dew point of typical natural gas combustion products is about 140°F, this requires that some part of the boiler be at a temperature somewhat cooler than 140°. European hydronic systems operate at relatively low temperatures and can return water to the boiler at temperatures of 100°F to 120°F.



Cleaver Brooks Clearfire Modular Boiler Design

Since we are so used to the “American” standard of 180°F out to the system and 160°F back to the boilers, we need to change our thinking to get any extra efficiency boost out of a condensing boiler. Operating at these water temperatures,

there is no way to condense natural gas combustion products. The efficiency of the boiler will be no higher (and in some cases actually lower) than the efficiency of a more conventional hot water boiler.

Another aspect of condensing boilers is that they are most efficient at low loads. The wet combustion products have more time in the boiler to condense. This means that in multiple boiler installations, we want as many boilers operating as possible without exceeding the demand for heat.

At MPN, we offer a broad selection of condensing boilers; the Cleaver Brooks Clearfire, the Fulton Pulse, the quiet running Fulton Pulse QT, and the Fulton Vantage. The Vantage is unique as a condensing boiler that can fire fuel oil (in non-condensing mode) as a back-up.

Please call or e-mail us for more information about any of our products. We welcome the opportunity to work with you to help your clients reduce their energy costs while protecting the environment. Let us know of anyone who would like to receive this product newsletter.

“Why” MPN is ...the intelligent choice

- Modular boiler design offering sizes from 750-1800 MBH
- Rugged stainless steel construction with 20 year thermal shock guarantee
- Ultra-high performance (full condensing) with efficiencies to 98%
- Fully modulating burner with variable speed fan
- “Whisper” quiet operation with a decibel rating of <70 dB at high fire
- Low emissions; NOx levels to sub-10 ppm
- Sealed combustion capability
- No minimum flow or water temperature requirements
- Low waterside pressure drop

"Why" MPN is ...the intelligent choice

With over 40 years of experience in Sales, Engineering and Service, *MPN* is a dominant force for industrial and commercial heating equipment in the New York Metropolitan area. Distributing such equipment as: Cleaver-Brooks boilers, Nebraska Boilers, Natcom Burners, Profire Burners, Hays Cleveland energy management systems, BFS Industries fuel transfer systems and boiler feed systems, Raypak atmospheric gas fired boilers and water heaters, Fulton vertical tubeless boilers, Containment Solutions fiberglass and steel petroleum storage tanks, and Selkirk Metalbestos stacks, *MPN* has a product suitable for all your heating requirements.

MPN's association with our clients doesn't end with the purchase of equipment. We have long been known for our service after the sale, and our dedication to customers' overall satisfaction. *MPN's* expansive field services also include critical BOILER PLANT SYSTEM SURVEYS. These surveys are designed to evaluate all elements of an existing heating system for efficient operation and component condition. Typical surveys include examination of the pressure vessel for integrity, ultrasonic testing of tubes, as well as detailed combustion and control system efficiency analysis.

Whatever your needs, from simplified tank gauging or fuel handling to extensive new heating system design, *MPN* is available, with a highly capable staff of 25 field service engineers, ready to assist with your job requirements. Our facilities, located in Westchester and Long Island, carry extensive stock of spare parts to help reduce

your downtime. *MPN's* experience, professionalism and commitment to quality, makes us your number one choice for all your boiler system needs.

We Service What We Sell ...

...and also provide service for products sold by others. This eliminates the headache of having to rely on different service companies for various brands of equipment. *MPN's* field service technicians are available for a variety of tasks: Repairs, Spare Parts, Installation, Start-up Services, Personnel Training, Efficiency Tuning, Preventative Maintenance, Fire-side and Waterside Cleaning and Inspection, as well as Boiler Plant Energy Conservation Audits.

Repair and Parts Installation ...

...factory trained field service technicians will visit your jobsite and provide trouble-shooting and analytic services. Any standard materials or parts needed for repair are readily available from our warehouses in Sleepy Hollow or West Babylon, NY. Responding efficiently to your specific parts and repair needs, we can arrange for delivery of materials prior to our field engineer's visit.

Major Repairs ...

...senior mechanics are on staff and available for comprehensive services such as: Refractory Re-

building, Piping Work, Boiler Retubing and Welding, Heating Plant Modernization and Upgrading, as well as a variety of support services.

Starting Services ...

... A *MPN* field service technician will visit your jobsite and provide diagnostic and corrective services to assure trouble-free performance of your equipment. Our factory trained specialist will then start up the unit, readjust the controls to suit the particular fuel to be used, check all details of system operation, and take CO₂ readings under plant load. We will train your operator on the proper maintenance and operation procedures for your equipment. Our field service technician will make sure that all system equipment is adjusted to perform at peak efficiency before signing off on a job. Thirty-two (32) items are included on our checklist for oil operation and sixteen (16) for gas. Our technician will make a service report to be signed by your boiler plant personnel, which will provide you with immediate information on the work performed. The report will be given to your attending personnel before our technician leaves your location. This is just another way *MPN* assures complete customer satisfaction.



Cleaver Brooks Clearfire
Modular Boiler Design

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