



MULCAHY CO.

NOVEMBER 2005

VOLUME 6, ISSUE 4

Since 1929

# MULCAHY MINUTE

ENGINEERED FLUID HANDLING AND HVAC SOLUTIONS

## INSIDE THIS ISSUE:

NEW LINE 1

NEW EMPLOYEE 2

TECH TALK  
ENCLOSURE

COUNTERPOINT  
ENCLOSURE



## B & G INTRODUCES NEW LINE OF BPX

The new BPX product line offers:

- World Class Lead-times
- Fully Configurable Product Offering
- Advanced Software Tools
- High Quality Product
- Unique Product Features
- New Code requirements
- Dedicated Resources
- AND.....COMPETITIVE PRICING!

**IN STOCK  
AT MULCAHY**

BJM NOW REPRESENTS

# HydroTherm®

## In Stock Locally!

# Introducing the KN Boiler!

water temperatures as high as 180F.



It's difficult not to see an article these days discussing the increase in natural gas prices. One way to offset these extra costs is to invest in some new high efficient boilers. Boilers like the Hydrotherm KN series have third party tested peak efficiencies in the high 90%'s that can offer a high return on investment. Be careful though, merely putting in a piece of high efficient equipment will not achieve the payback to justify the investment. Some of the pitfalls that can occur in applying high efficient (condensing) boilers in real world systems include:

Selecting the wrong boiler – As efficient as any piece of equipment is, if it is grossly oversized, it won't operate efficiently. Cycling losses can quickly add to the losses of a system. Proper sizing of the boiler is the first step. The Hydrotherm KN series of boilers are available in inputs of 600 mbh, 1,000 mbh, and 2,000 mbh. Consider modules, this way you can control

the boilers on line at all times

Firing Sequence- Even if great pains are taken to properly size the boiler, it will be oversized on less than design days. On-Off firing of even the most efficient and properly sized boilers will not operate efficiently. Boilers which utilize full modulation can match their output to the exact demands of the system. The KN series of boilers operate at turndown ratios as high as 5:1. Beware of the marketing of turn down as well. Ratios published beyond 5:1 are often not "real world" conditions.

Reading the Fine Print – Many less than scrupulous manufacturers claim efficiencies in the high 90's but only under certain conditions. One trick used by manufacturers to artificially boost the efficiency of their units is to operate their units at ultra-low entering and leaving water temperatures. All high efficient boilers need low return water temperatures to achieve a higher efficiency, but some manufacturers list their efficiencies at an 80 degree Fahrenheit leaving water temperature. It's difficult to heat buildings with 80 degree F water! Hydrotherm is up front about what it takes to get the efficiency out of its boilers. The KN series can be operated in the 90+% efficient range with leaving

Trading a Gas Bill for a Repair Bill- A high efficient boiler will likely have more components than an old fashioned atmospheric boiler. Many of these components have mandated replacement periods that must be followed in order to keep the boiler operational and the manufacturer's warranty intact. One manufacturer requires approximately \$3,000 in annual preventative maintenance in order to guarantee the operation of their boiler. That annual maintenance bill rarely is brought up when discussing how much natural gas the boiler will save. Saving gas money only to get high repair bills doesn't help the bottom line. The KN series of boilers utilizes a 'set and forget' gas valve arrangement and a reliable Honeywell ultraviolet ignition control module. Annual maintenance is much more comparable to what is necessary with a standard boiler.

With Green building initiatives and high gas prices the new paradigm in HVAC, high efficiency condensing boilers are becoming much more popular. There are important considerations to make in your system design, in boiler maintenance costs, and equipment longevity to ensure you obtain the paybacks you desire. Condensing boilers are a "marketers haven" so don't forget to read the fine print....

## Introducing NRF-VS

### DESCRIPTION

The NRF-VS is a variable speed control for use in hydronic heating and cooling applications. The temperature of the water is controlled by regulating the speed of the pump which injects water from a different temperature water loop (Primary loop) into a controlled loop (Secondary loop). As the speed of the pump increases, more water is sent into the Secondary loop, resulting in a secondary loop water temperature change. The NRF-VS can be used with an external analog signal (4-20mA or 2-10V) or with a sensor as a set point control.

### CONSTRUCTION

The NRF-VS controls are solidly constructed, easy to mount units featuring printed circuit board design in a Noryl plastic electrical enclosure.

### OPERATIONAL LIMITS

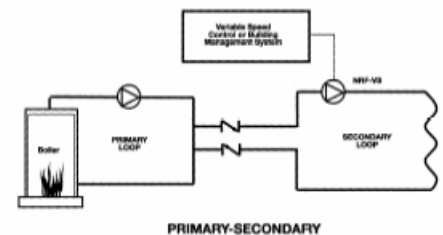
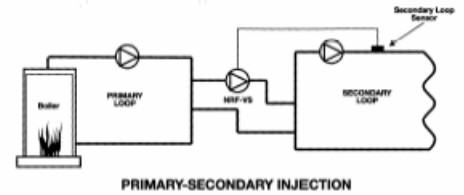
These controls are to be used on pumps designed to pump liquids compatible with their cast iron, bronze or stainless steel body constructions.

### MAXIMUM OPERATING PRESSURE:

150 PSI (10 bars).

### Electrical Rating:

NRF-VS is suitable for NRF, NBF, and SSF pumps with less than 1.2 amps.



## NEW EMPLOYEE



Bell & Gossett



Jeff Bennett joined our team in June. Jeff spent 3 months at the Little Red Schoolhouse in Chicago. He has a BS degree in Mechanical Engineering and a Business Management Minor. He interned with Seagate Technology and Q. Electric. Jeff currently works in customer service and quotations and is eager to take your calls! You can contact him at [jbennett@mulcahyco.com](mailto:jbennett@mulcahyco.com) or 651-686-8580.

Jeff also happens to be a Packer Backer ~ although we are working on converting him, your help will be appreciated!!!

New website!!

[www.mulcahyco.com](http://www.mulcahyco.com)

ENGINEERED FLUID HANDLING AND HVAC SOLUTIONS



We've Modified Our Look!

Check out our new website at [www.mulcahyco.com](http://www.mulcahyco.com)

Also please change our email domain in your address books to [mulcahyco.com](http://mulcahyco.com)