

MULCAHY MINUTE



Volume 2, Issue 2
April 2001

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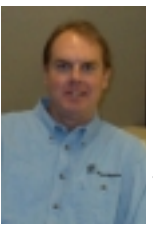
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Extra, Extra, Extra?

NEW ADDITIONS TO THE BJM STAFF



In our continued effort to provide excellent service, we have added three new people to our staff. In November of 2000 we hired [Denny Harpestad](#) to help with the heavy workload our Customer Service department experiences on a daily basis. Denny comes from a local plumbing representative where he worked for 13 years. His knowledge of our product was limited to the plumbing side of the industry, but he's learning our hydronic and steam products quickly. It won't be long before he is ready to handle any call. Denny's direct dial number is (651) 256-2469, and his e-mail address is dharpestad@bjmulcahy.com.



In January of this year we hired [Steve Statz](#) to assist with our growing boiler and water heater sales. He has had 25 years of experience in the HVAC field and has a strong background in hydronic heating and chilled water systems. His initial role was to enhance the sales of our R.B.I. line of products, but he is already picking up on several of our other product lines. Steve is joining our outside sales team using his past experience with a local competitor in the copper tube boilers, water heaters, and pool heaters arena to expand our product base. Steve can be reached directly at (651) 256-2470, and his e-mail address is sstatz@bjmulcahy.com.



And most recently we brought [Greg Olson](#) on to further assist with our expansion of variable frequency drives. Greg's career in the HVAC industry spans 22 years. First with a local corporation in their central control division, and spending the last 12 years focusing on variable frequency drives while working with a local competitor. Greg's expertise is in the application, start-up, diagnostics, and service of VFD's while continually seeking ways to maximize the drive's capabilities. Greg can be reached directly at 651-256-2471, and his e-mail address is golson@bjmulcahy.com.

Thinking outside the tank!

by Dan Chudecke

Domestic hot water is the only system all buildings require. From our lowly homes to the mighty skyscrapers and everything in between, they all need hot water. Most homeowners get their hot water from a tank style water heater. Typically 40 gallons of storage coupled with a 35,000 btu/hr input burner (Why 40 gallons and 35,000 btu/hr isn't really known, other than it is the standard for residential construction). These units are often referred to as "Charger Units" because they build up a sufficient amount of hot water in storage to satisfy the systems demands for a short period of time. Large "draws" impose an instantaneous load that far exceeds the capacity of the heater but does not impose a load that sufficiently overwhelms the stored energy of the heater/tank combination. These units work great for a residential

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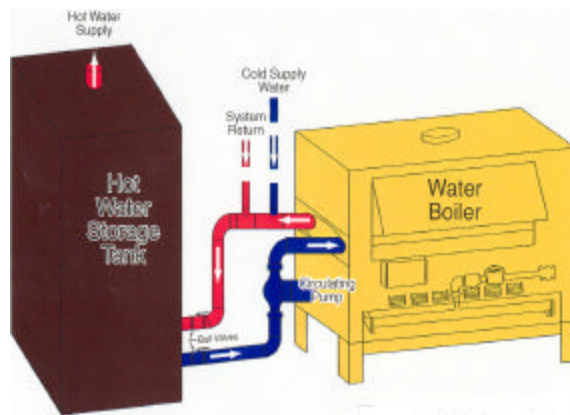
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installation because quite frankly they are cheap, reasonably efficient and again... cheap. However, as this style of unit is enlarged to satisfy larger demands, the flaws of this system start to show. First of all, larger systems require larger tanks. They also tend to operate at elevated water temperatures to both increase the energy stored in a given tank size and to eliminate the risk of legionella bacteria growth. This is where the laws of physics come in to play. As you heat water, scale begins to come out of solution. (Ex. a system that uses 2100 gallons of hot water a day stored at 150F will produce over 30 lbs of lime deposits a year) The scale especially likes to form where the velocities are low (basically anywhere in where the water is the hottest (on the heater element). The scale on the hot surfaces causes the most problems. It acts as an insulator around the heat exchanger, which is trying to extract as much heat out of the hot flue gases. The more heat it can extract, the more efficient the system. A suffi-

cient amount of scale can form in 12-18 months to turn an 80% atmospheric water -70% efficient unit. The efficiency continues to drop over time (1/4" thick scale reduces the efficiency to 42%). With commercial units requiring large heat loads, the drop in efficiency over time becomes extremely costly to operate.

Now there is another option to



Typical Storage Tank, Pump, and Separate Heater.

meet your domestic hot water demands. This is to use a separate hot water heater and storage tank with a small low wattage pump to circulate water between the two. The advantage here is that the much higher velocity in the water heater prevents scale from forming on the heat exchanger and decreasing efficiency, the pump actually scours any sediment from building up in the tubes. The unit maintains its efficiency over time rather than dropping as it does with a tank style unit. Other inherent advantages such as design flexibility, greater redundancy and ease of maintenance also exist with utilizing a separate heater and tank design. If you have a project that you want to consider using this better option, contact BJM and we'll help you out.

B.J. Mulcahy Company is currently carrying several sizes of RBI atmospheric boilers and water heaters in stock at our warehouse in Eagan. We also have the tanks and pumps to complete the system, ready to ship.

Pool Heaters also available.