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Interesting Facts

- Venus is the only planet that rotates clockwise.
- The lion costume in the Wizard of Oz film was made from real lions.
- Try This! While sitting at your desk make clockwise circles with your right foot. (go ahead no one will see you) While doing this, draw the number "6" in the air with your right hand. Your foot will change direction.

May Dates to Remember

- May 8 - ASHRAE Meeting
- May 13 - Mothers Day
- May 15 - ASHRAE Rochester Mtg
- May 16 - ASPE Meeting
- May 22 - MASMS/NSPMA Trade Show
- May 28 - Memorial Day

NEW Products



Lochinvar Armor Condensing Water Heater

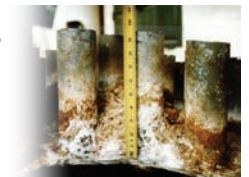
Same great features as the Knight, but in a Water Heater Version. ([More Info](#))

- Up to 98% Thermal Efficiency
- Full Modulating with 5:1 Turndown
- Stainless Steel Heat Exchanger
- PVC Vented (100 equivalent feet Intake & Exhaust)
- Smart System Controller with Cascading Sequencer - Controls up to 8 Units
- Models - 150, 199, 285, 399 & 500 MBH Input



Water Heating - A Better Idea!

Lime scale build-up can cause traditional tank type water heaters to fail in as little as 2-5 years. It also insulates water from the heat source, so more energy is needed to heat the water. Just 1/4 inch of lime scale build-up can increase operating costs as much as 25%!



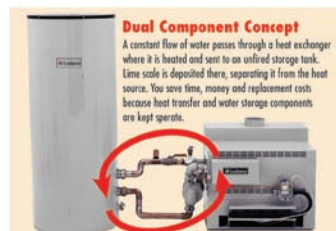
The Better Idea System is a dual component concept that works like this: A constant flow of water passes through a heat exchanger where it is heated and sent to an unfired storage tank. Lime scale is deposited there, separating it from the heat source. This circulating tank approach prevents lime scale from building up on the heat exchanger and decreasing efficiency.

Lower Replacement Costs

When you replace a tank type system, you pay for a complete unit plus the labor to install it - an average of \$2,500 or more. With the Better Idea method, you only replace individual, less expensive components such as cartridge type heat exchanger, pump or storage tank.

Greater Draw Capacity

Draw capacity is the amount of usable hot water you can draw from your storage tank. The Better Idea System delivers 90% draw capacity compared to 65% from a typical tank type unit. That means a 100 gallon tank type provides 65 gallons of usable hot water, while a 80 gallon tank in the Better Idea System will provide 72 gallons.



([More Info](#))

Boiler Controls 101

Basic boiler control involves a flame safeguard, operating control, high limit, and modulating control. While some newer boilers may combine these into a single control, the overall concept is identical.

FLAME SAFEGUARD

The purpose of a flame safeguard is to detect the presence or absence of a safe flame so that the burner operation may be continued if conditions are safe, and interrupted if they are not safe. The flame detection may be accomplished through a use of a flame rod or photocell type of detector. It will stop the firing process if an unsafe condition is detected. The flame safeguard does not turn the boiler on, nor does it reset the water temperature.



OPERATING CONTROL



An operating control is generally an on-off controller that makes or breaks a circuit when the pressure or water temperature reaches a certain point.

In a very basic boiler control system, a drop in water temperature, or steam pressure, would “make”, the operating control circuit, initiating the flame safeguard to start the burner firing. Once the water temperature or steam pressure is up to set-point, the operating control would stop the flame safeguard from firing the boiler.

HIGH LIMIT CONTROL

A high limit control is similar to an operating control. Rather than turning the boiler on and off, it is designed to turn the boiler off permanently if the water temperature or steam pressure rises too far above the operating control set-point. A “red” manual reset button needs to be pushed to restart the boiler.



MODULATING CONTROL

The boiler modulating control modulates the boiler firing rate. The modulating control is usually a separate control from the operating control. To work effectively,



the modulating control needs to be set “close” to the operating control. For instance, an operating control set substantially below a modulating control, may cause the burner to cycle only on high fire, and never operate on low fire.

OUTDOOR RESET ON MODULATING BOILERS

Outdoor reset is a very useful way to lower the operating temperature and increase energy savings. However, as mentioned above, lowering the operating control without lowering the modulating set-point will cause short-cycling of the boiler. Short cycling is harmful to the boiler, and boiler performance. Therefore, when considering outdoor reset of modulating boilers, remember to use a control to reset both the operating and modulating set-points.



Two excellent products that accomplish resetting of modulating boilers are Heat-Timer’s MultiMod and Fulton’s ModSync boiler controls. They can control multiple boilers, rotate boiler lead stage,

and reset both the operating and modulating set-points on a boiler.

Thanks to *Flame Safeguard Controls - A Honeywell Textbook* for some of this information.

NEW from Fulton

- Multiple Boiler Sequencer
- Lead/Lag with Auto or Manual Rotate
- Outdoor Reset
- Touch Screen Interface
- ModBus RS-485 Communication
- Interfaces with Building Management Systems



English



Aldrich

