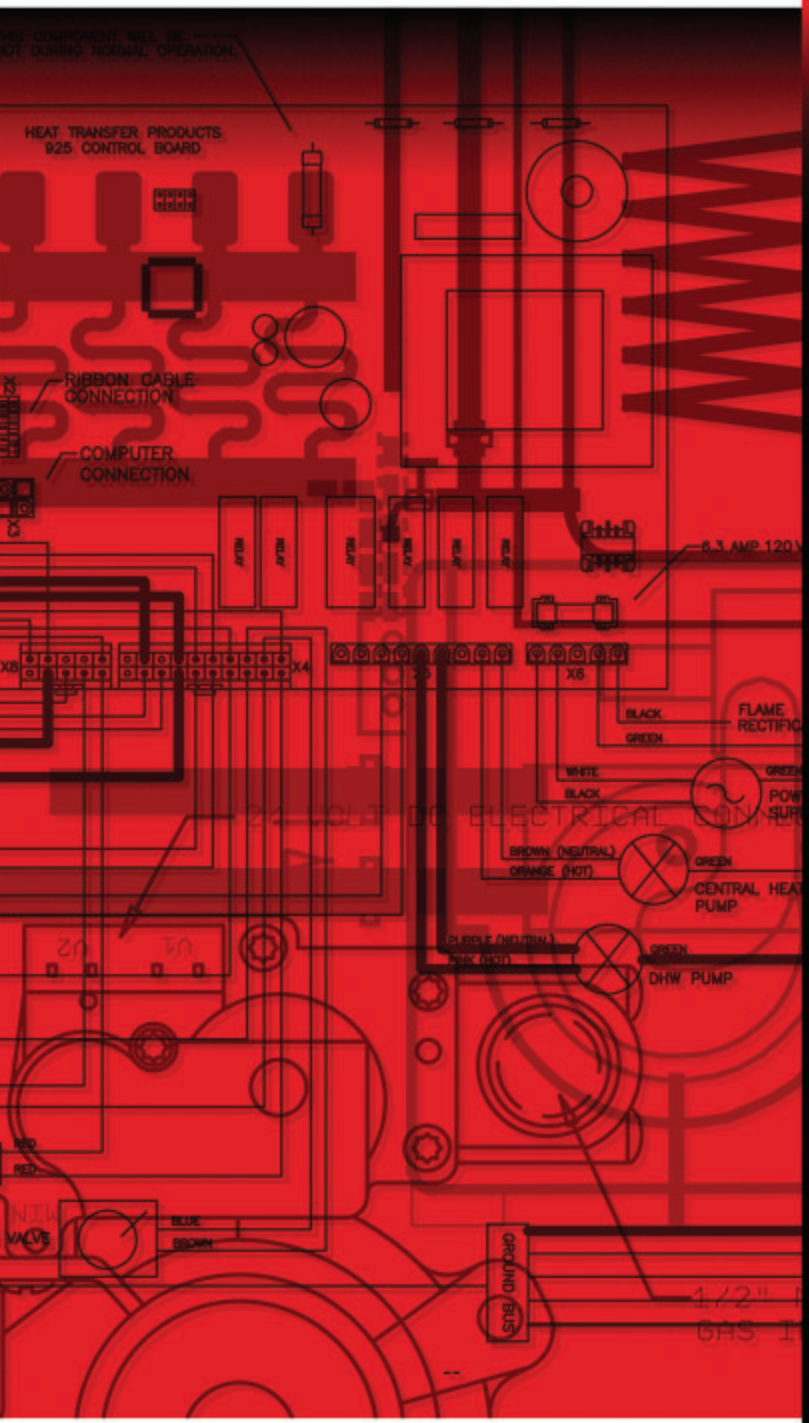
VISION 1

Setting the standard for comfort and efficiency for your heating and hot water system.



EASY TO INSTALL AND MAINTAIN

- *Only factory trained contractors are allowed to Install the Vision I System.*

SYSTEM MONITORING

- *Software available to monitor system history, parameters, fault history and run time of the Munchkin Boiler.*

SYSTEM FEATURES

- *Personalized Outdoor Reset Curve*
- *Adjustable Temperature Set Point and Differential Adjustment for both Central and Indirect Heating*
- *Indirect Priority Functions*
- *Post Purge Circulator Functions*
- *Two circuit temperature capability with high temperature for the Indirect or Fan Coil and low temperature for Radiant Heat.*
- *Warm Weather Shut Down*
- *Indirect Sensor that eliminates standard mechanical controls.*
- *Outdoor Sensor, a highly accurate sensor that measures outdoor temperature to adjust the Munchkin's firing rate and supply temperature automatically.*

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HOW THE VISION I WORKS

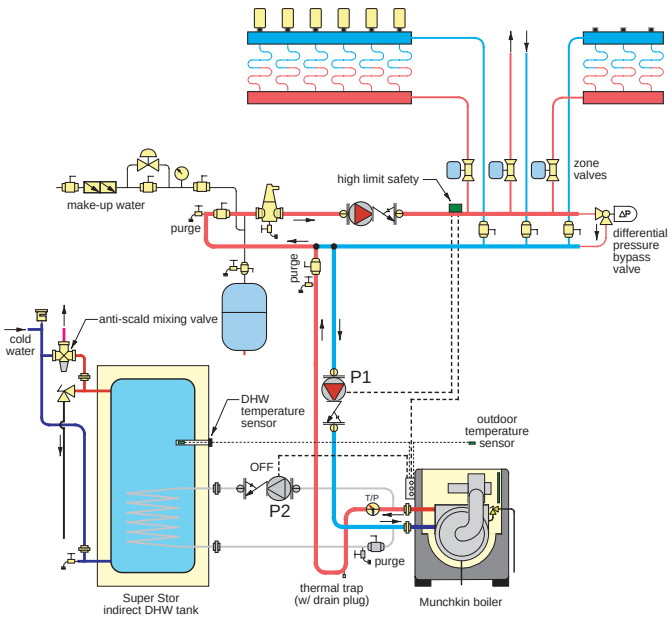
The Vision I System is the first truly advanced control system that eliminates the need for those expensive auxiliary controls. The Vision I System will allow the installing contractor to take the highly efficient modulating 92% AFUE Munchkin Heater and make it even more efficient by controlling the temperature delivered to the central heating circuits based on the outside temperature. The Vision I system is also a two temperature system, one temperature for Central Heating and the other temperature to the Super Stor Ultra Indirect water heater. This allows the user to increase the temperature supplied to the Super Stor Ultra indirect water heater to get a fast recovery by prioritizing the flow at a higher temperature than may be needed for the Central Heating Circuits (this will require two separate circulators). Once the Super Stor Ultra Indirect is satisfied, the Vision I system will switch back to the Central Heating Circuit to continue to heat the living space at a temperature based on outside temperature. This gives you a higher comfort level and further increases the efficiency of the Munchkin Heater. Only factory authorized trained contractors are qualified to install the Vision I system to assure quality of the installation for each system. If you have any questions, please call your factory representative.

SYSTEM OPERATION

Modulation during the central heating operation is based on the supply temperature. The set point used for the control depends upon the programmed central heating curve. The slope of the heating curve can be changed by the installer of the Munchkin in the sense that both turning points of the curve can be moved. If the outside temperature sensor is not connected, the set point is the user set point for the central heating. When the heater calls for heat, a minimum “burner on” time is defined. If, during this time the temperature exceeds the set point temperature, the burner will remain fired until the timer has ended. This is done to give the heater a chance to start modulating after ignition. This can be very useful in cases where there is a low heat request.

As soon as the supply temperature exceeds the set point of the central heating curve or user set point, the burner will switch off. The circulator will continue to run (Note: This will occur only if thermostats are calling). The anti-cycling timer begins at the completion of a heating cycle (either the indirect fired water heater or central heat.) There is a one minute anti-cycling timer that prevents the burner from coming on unless there is a call from either the indirect fired water heater or central heat. The purpose of the anti-cycling feature is to prevent the burner from erratic cycling. Regulation is based upon set point central heating. The maximum capacity of the Munchkin can be limited by step modulation. The Munchkin has a 6-step function programmed into the controller. (Note: This 6-step function **cannot** be changed.) When the Munchkin burner is activated, the burner output is regulated in one minute intervals. This feature helps the Munchkin from overshooting the heat set point and minimizes short cycling. As soon as the central heating is active (including pre-purge), step modulation begins. When in operation, the step will be increased. Once the heating demand is satisfied the step modulation will start again from the beginning of its cycle.

Munchkin VISION I system (zoning with valves) Space heating mode



Munchkin VISION I system (zoning with valves) Domestic water heating mode