Wet Dog Glass Equipment Gas Usage

All WDG gas furnaces make use of hot air recuperators. Room temperature air for the burner is passed through the recuperator, making use of waste heat from the flue. When the air enters the burner it is at ~650 degrees F. Using preheated air improves the efficiency of the combustion process, resulting in approximately 25% less gas usage over a non-recuperated system.

All WDG gas equipment uses a variable speed blower to control the temperature. When the door of the equipment is opened and more heat is needed, the blower speeds up. When the door is closed the blower slows down to put less heat into the equipment. This is paired with a ratio regulator that automatically keeps the volumes of gas and air in balance with each other. This allows the equipment to be tuned for a neutral (Balanced gas and air) flame which is the most efficient use of gas. Because the equipment balances this automatically, no user input is needed to maintain the most efficient flame at all times and at all heat outputs.

Recuperated Glory Holes are also an option we provide. This option provides approximately 18-20% savings on gas usage over our standard non-recuperated glory holes. The lower gas savings compared to a furnace is due to the non continuous nature of using a glory hole. When the unit is first turned on in the morning, the recuperator will be cold and not provide reduced gas usage. One hour after turn on, the recuperator will be approximately 500F, and 3 hours after turn on it will reach its top stable temperature of 600F. Once the recuperator is up to full temperature, it provides similar gas savings to a furnace. Calculations are based on 8 hour usage periods, 6 days a week. Recuperated Glory Holes will pay for their increased manufacturing costs in 3-5 years.