

HEAT EXCHANGER

The heart of your furnace is the heat exchanger. Its job is to keep combustion gases separated from your household air. When there's a call for heat, the burners ignite and natural gas flows into the heat exchanger. The gas is burned and the exhaust fumes are vented up the flue into the outside air. Your blower motor circulates household air past the heat exchanger where it picks up the heat and warms your home.



The by-products of combustion are water vapor, CO², and **carbon monoxide**. If there's a hole or crack in the heat exchanger, fumes are vented directly inside the home – usually with tragic results. There is **NOTHING** more important than determining the safety of your furnace each year through an **Infrared Camera Inspection** of your heat exchanger.

An **infrared inspection** generally demonstrates that the heat exchanger is intact. The furnace can then be operated with complete safety and peace of mind. However, should a hole or crack be discovered, only two courses of action are allowed.

The **first option** is to replace the heat exchanger. If the furnace is already old, a replacement heat exchanger might no longer be available. Even if available, the installation costs are typically



around \$1,000. Careful consideration should be given prior to installing a *new* heat exchanger in an *old* furnace since all the other parts are still old.

The **second option** is to replace the furnace. In most cases this is the best choice. New furnaces are very durable and extremely safe, not to mention more energy-efficient to operate. The current *minimum* efficiency now available is 80% with efficiencies as high as 97%. The big development in recent years is the production of a heat exchanger which is both energy-efficient AND highly durable. The best heat



exchanger currently available is the **Tubular Heat Exchanger** offered by most manufacturers. This new design has exceeded 1.8 million heating cycles without failure. As a reference, the average residential furnace will only experience 100,000 cycles in its lifetime! Many manufacturers use one-piece stainless steel with no seams, welds, or joints along its path. It effectively transfers the heat without the risk of seams breaking open. For your information, all the other “clam shell” heat exchangers now on the market have over 40 feet of seams which crack and spread open without notice. Best of all, the stainless steel Tubular Heat Exchanger has a **Lifetime**

Replacement Guarantee when installed in a 90% + efficiency furnace (20 years in 80% efficiency models). In addition, most installers provide additional warranties on top of the manufacturer's guarantee!

All professionally licensed HVAC companies are dedicated to ensuring the safety of your heating system. Why would you trust the future safety of your new equipment to anyone else?