

## GWS ECO-CLAMP



The GWS Eco-Clamp™ Fuel Saver is a proven way to reduce industrial, commercial and residential fuel costs! The patent-pending **GWS System** saves money and reduces emissions by increasing the combustion efficiency of the fossil fuels (such as propane and natural gas) that power our home furnaces, water heaters, household appliances, boiler systems and commercial/institutional/industrial motors, pumps, appliances and machinery.

## THE GWS ECO-CLAMP

The ECO-CLAMP is a **MAGNETIC HYDROCARBON TREATMENT DEVICE** that, through testing and usage over many years, has proven significant savings in fuel costs, along with a reduction in carbon monoxide (CO) emissions. Continuous savings year after year means that we can recommend the GWS ECO-CLAMP System to reduce the fuel costs and lower emissions of any company which utilizes equipment that uses fossil fuels, such as gas, diesel, and propane.

WITH ANY TYPE OF EQUIPMENT THAT CONSUMES FOSSIL FUELS, **YOU CAN ANTICIPATE A 100% RETURN ON YOUR INVESTMENT IN AS LITTLE AS ONE YEAR.**

Along with expected fuel savings in the 10-15% range, your equipment doesn't work as hard to combust the fuel, and therefore requires less service and maintenance. Combine this with lowered emissions, and the GWS System checks all the boxes.



Currently regulated gas emissions from motor vehicles are unburned hydrocarbon (HC), carbon monoxide (CO), and oxides of nitrogen (NOx). Unburned HC and NOx react in the atmosphere to form photo-chemical smog. Smog is highly oxidizing in the environment and is the prime cause of eye and throat irritation, bad odor, plant damage, and decreased visibility. Oxides of Nitrogen are also toxic. CO impair blood capability to carry oxygen to the brain, resulting in slower reaction times and impaired judgement.

## HOW THE ECO-CLAMP SYSTEM REDUCES FUEL COSTS AND EMISSIONS

METHANE (CH<sub>4</sub>) IS THE SIMPLEST ORGANIC COMPOUND FOUND IN FOSSIL FUELS. HYDROGEN COMES IN TWO FORMS PARA AND ORTHO, CHARACTERIZED BY THEIR ELECTRON ORBITAL SPINS.

What makes Hydrogen so special is the fact that it possesses two distinctive forms; Para-Hydrogen and Ortho-Hydrogen. Para-Hydrogen occurs when the electron is spinning in the opposite direction as the nucleus. When the electron is spinning in the same direction as the nucleus it is called Ortho-Hydrogen. The research conducted by Simon Ruskin found that the conversion of Hydrogen from Para- to Ortho- was done by magnetic means. Ortho-Hydrogen is much more combustible than Para-Hydrogen. In fact, for safety reasons the liquid hydrogen used as a propellant for the space shuttle is stored in its less volatile Para-Hydrogen state. In the Ortho-Hydrogen state, Methane (CH<sub>4</sub>) is highly unstable, which allows Oxygen to associate more freely with the Hydrogen atoms (as seen below). The ECO-CLAMP SYSTEM targets the Para-Hydrogen and energizes them to form Ortho-Hydrogen as did Ruskin thus creating a more efficient combustion.

The concept of electron spin is similar to our concept of spin in the everyday non-quantum world. In physics, there is a fundamental law that states momentum cannot simply appear and disappear, since angular momentum is always conserved in any physical process. When magnetic force is applied, the atomic moments of the molecules tend to align with the direction of the field. As the axis of the electrons become aligned with the external magnetic field the angular momentum no longer averages out to zero. Consequently, the reactivity of the atom and related molecules are enhanced.

By altering the spin properties of the electron, we can enhance the reactivity of the fuel and related combustion process. Due to the breakthrough in magnetic technology and the development of a new generation of permanent magnets with high enough flux density, it is now possible to build Magnetic Fuel Conditioners that substantially change the hydrocarbon molecule from its para state to the higher energized ortho state. This higher spin state shows a higher potential (reactivity) which attracts additional oxygen. Combustion engineering teaches that additional oxygenation increases combustion efficiency resulting in fuel economy (i.e. turbo chargers, chemical oxidizing agents put into gasoline, etc.). Magnetic Fuel Conditioners providing a sufficient magnetic energy product and residence time, therefore increase the fuel's ability to further oxidize. The results are more complete combustion, cleaner exhaust and fuel economy.

*"I was the Director of Operations at Boston Pizza and was introduced to the commercial Eco-Clamp™. These clamps were put on our gas lines and ensured a cleaner gas burn and deterioration of carbon build up on the pipes. We installed these at our corporate location and over 30 Boston Pizza's and we have saved anywhere from 10-20% and that's a fact. Keep in mind these are newer buildings compared to our original 8, so we might save more at the older locations.*

*I've seen this product in action and our cooking flames became bluer and hotter. Any equipment that ran on gas operated better and hotter."*

**Tony Pereira, Operating Partner** Fire Inspired Foods



<b>GWS</b> GLOBAL WASTE SOLUTIONS	 <p><i>Lower your facility costs.</i></p>
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