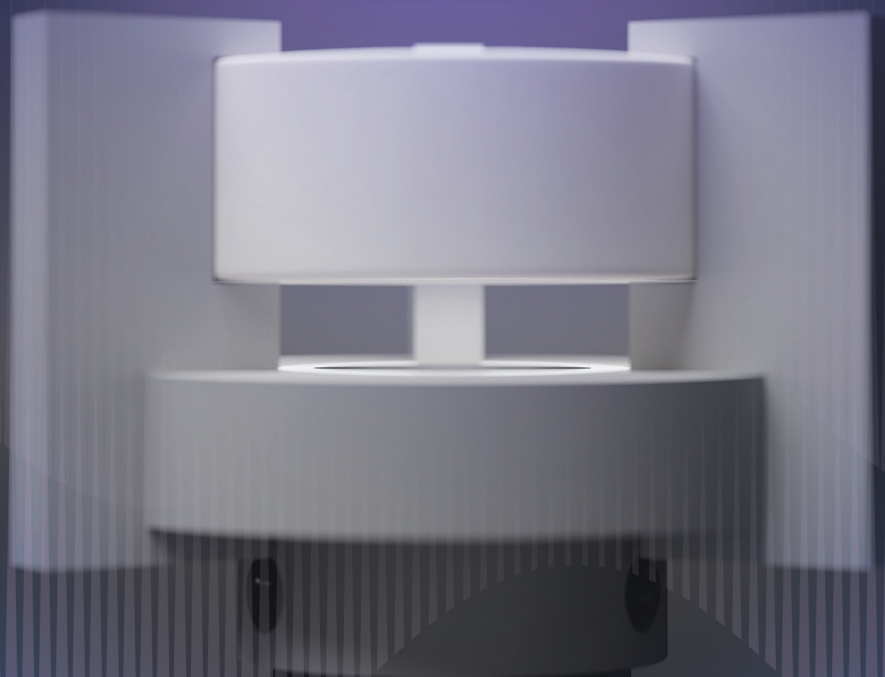




THE REVOLUTION IN PLASMA TECHNOLOGY



www.radomcorp.com

CERAWAVE™ Plasma Technology for Human Missions to Mars

Momentum is steadily building toward the most significant and achievable goal in space within the next several decades - sending human missions to Mars. The effort is spearheaded not only by NASA and space agencies from Europe, China, Japan, United Arab Emirates, and Russia, but also by private enterprises, such as SpaceX, Blue Origin, Virgin Galactic, Boeing, and Lockheed Martin. The scientific significance of

the human exploration of Mars is outmatched only by the prospects of establishing a permanent presence for humans on another planet.

Plasma is one of the critical technologies that will make in-situ resource utilization (ISRU) on Mars practical. Plasma is a highly reactive gas, characterized by very high electron and/or gas temperatures, not unlike those on the surface of the

Sun. Plasmas can create the necessary feed-stock and base chemicals for producing oxygen fuels, breathing oxygen, rocket propellants, building materials, and fertilizers. They can also serve as versatile tools, such as plasma torches and welders, for mining and construction on Mars.

Radom's patented **CERAWAVE™** plasma technology offers unique advantages for Mars ISRU applications: Offering the largest plasma volume, residence time, and scalability for chemical processing; reduced weight; repeatable plasma ignition under autonomous operation; and material compatibility with vacuum and extreme temperatures.

Plasma Technology with High Power Torch

The 100kW power level opens new and extensive possibilities for our plasma torch in large scale industrial and environmental applications as the plasma power translates directly into increased material throughputs and overall system efficiency. Custom attachments, such as nozzles, tuyeres, and heat exchangers, can be readily incorporated to meet the requirements of a specific process.

CERAWAVE™ technology harnesses RF energy providing powerful and sustainable high-performance plasma, allowing instruments and machinery in a variety of industries to achieve outstanding results.



Designed and Assembled in the USA



HIGH POWER TORCH

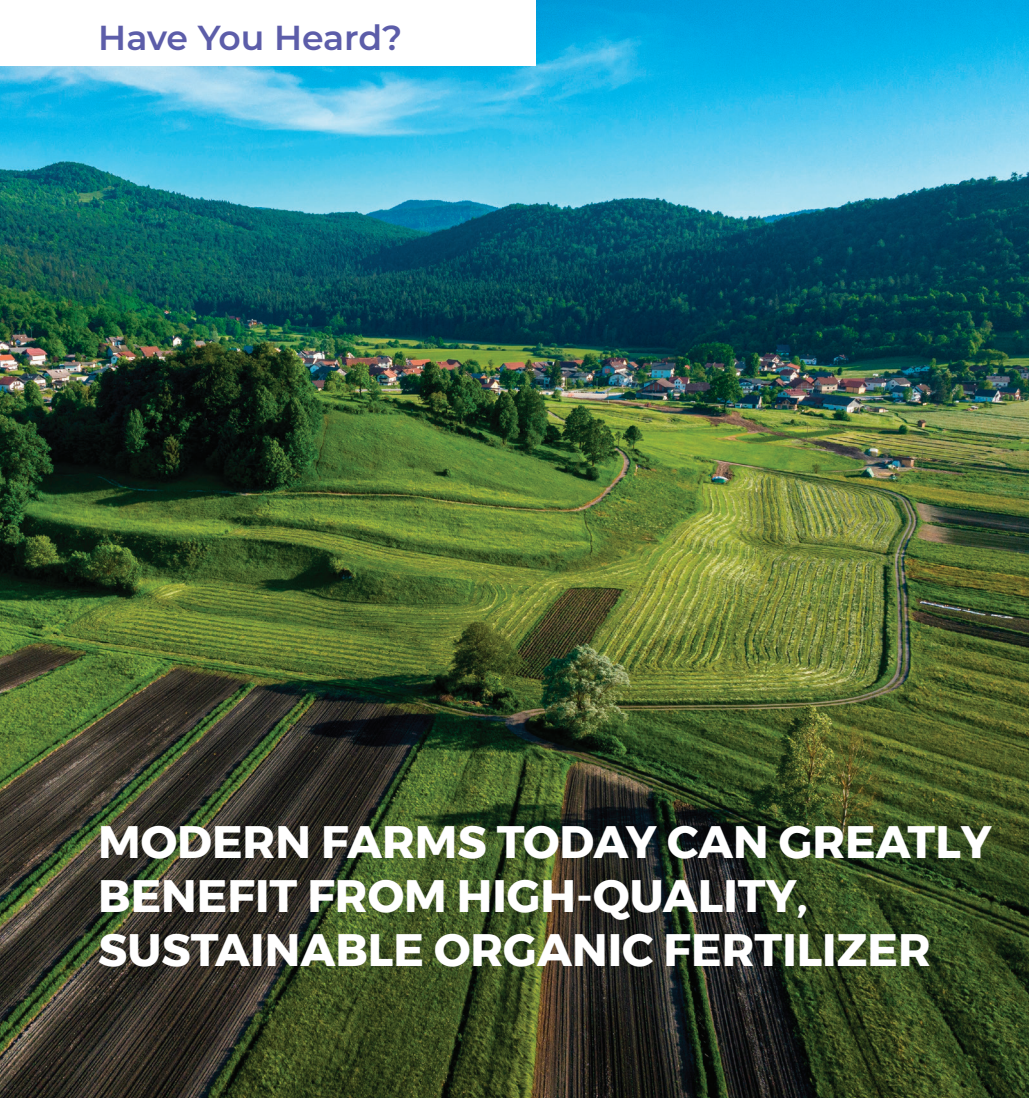
Highly-efficient and scalable air-cooled plasma torches up to 100kW power. Multi-torch systems up to 2MW.



OXYGEN

GENERATED ON MARS

Have You Heard?



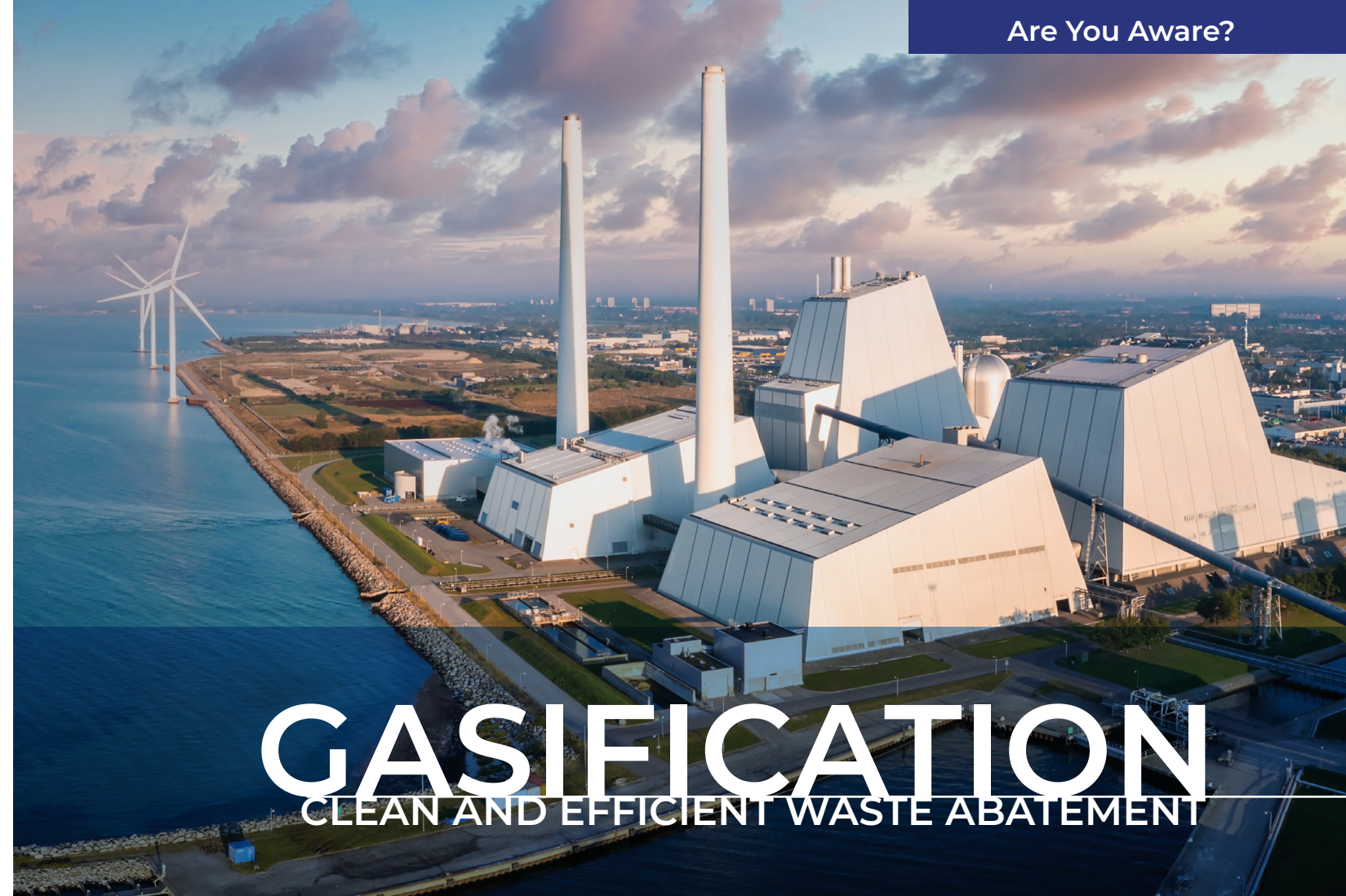
MODERN FARMS TODAY CAN GREATLY BENEFIT FROM HIGH-QUALITY, SUSTAINABLE ORGANIC FERTILIZER

Produce Nitrogen-Rich Fertilizer

- CERAWAVE™ technology increases nitrogen content in organic fertilizer using only electricity and air.
- It Increases crop yields, lowers agricultural ammonia emissions, ensures fertilizer availability and price stability, and improves farm profitability.



Are You Aware?



GASIFICATION

CLEAN AND EFFICIENT WASTE ABATEMENT



NITROGEN FIXATION FOR FARMS

NITROGEN FIXATION



Hazardous and Non-Hazardous Waste Advance Plasma Gasification

- High temperature microwave plasma with CERAWAVE™ torch technology.
- Electrode-free operation allows for lower maintenance requirements and lower operating costs.
- Modular and scalable design enables numerous deployment configurations.
- Plasma-generated syngas can be used to produce electricity, hydrogen and renewable fuels.



CERAWAVE™ in Atomic Spectroscopy Delivers Immediate Cost Savings and Lowers Carbon Footprint.

Radom has commercialized MICAP-OES 1000, the first portable nitrogen-based atomic emissions spectrometer instrument. This innovative product replaces the traditional argon plasma technology, eliminating water cooling and significantly lowering the carbon footprint.

CERAWAVE™ enables robust sample introduction, including high Total Dissolved Solids and 100% organic solvents, while achieving parts-per-billion detection limits and using a standard quartz torch. It makes possible the operation in remote locations without access to argon or nitrogen supply chain.

Coupled to a simultaneous echelle based spectrometer with an air cooled CMOS detector, it quickly and simultaneously captures multiple elements in a single image and removed the need for water cooling.

SPECTROSCOPY

COST SAVINGS & LOW CARBON FOOTPRINT



EXPANDED APPLICATIONS

The World's Smallest ICP

The World's Smallest ICP
Smaller. Cleaner.
Onsite Results.

Microwave Inductively Coupled Atmospheric Plasma. (MICAP)

Radom's MICAP-OES 1000 is significantly smaller than the dimensions of similar technology. It is compact, easy-to-use and install.



Mobility Possibility

MICAP-OES' small footprint, robustness, as well as ease of deployment and use:

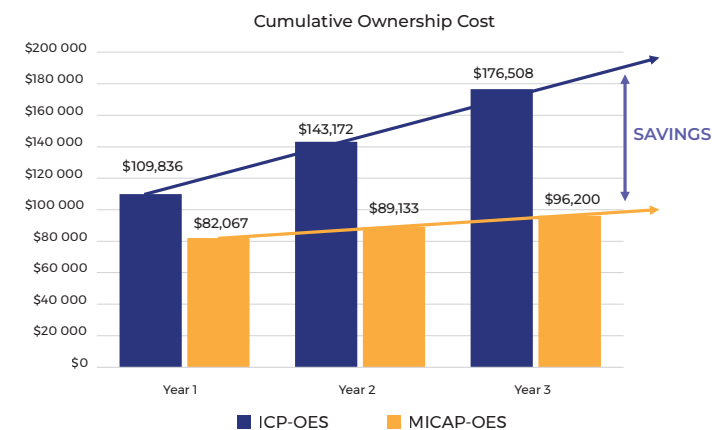
- Expands atomic spectroscopy applications in mining, energy, and tribology.
- Enhanced mobile lab capabilities.
- Improved operating capabilities by allowing in-field decision making.
- Lowers the ownership costs and the carbon footprint for laboratories.

- ★ Easy set-up
- ★ Low energy use
- ★ Low maintenance
- ★ Remote operation



Nitrogen Technology

- ★ Less expensive
- ★ Readily available
- ★ Can be generated on-site
- ★ Safe to use



Lowest Total Cost of Ownership

MICAP-OES 1000 pays for itself in less than 3 years and saves the owner over \$200k during its product life.



Radom Corporation is a global leader in advanced plasma technologies.

Radom develops and commercializes sustainable and innovative plasma solutions for industries in low-carbon-footprint analytical instrumentation, zero-waste gasification, renewable hydrogen generation, and organic fertilizer enhancement.

Our products and instruments lead to safer processes, faster performance, and reduced pollution with the promise of detoxifying the Earth.

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