VIKING OZONE TECHNOLOGY, LLC

The **SUPERIOR** choice for
CLEAN, ECONOMICAL & EFFICIENT
Medical Waste Treatment

VKIN-300

INTRODUCTION

Viking Ozone Technology (“Viking Ozone”) is a revolutionary advancement in the world of waste treatment, providing an environmentally sustainable and cost-effective alternative to incineration, chemical treatment, autoclave and heat treatments for regulated medical waste, bio-hazardous waste and general waste.

Viking Ozone reduces the amount of energy required to process medical waste, which conserves resources and operating costs, and reduces greenhouse gas emissions.

Its modular design and low profile allows multiple configurations and savings for civil work at the site.

The processed waste has a high calorific value and is classified as a renewable resource in many locations around the globe.

Highest Level of Efficacy Standard:

Repeatable Biological Indicator testing by accredited laboratories, consistently demonstrating 6 log 10 reduction.

The only medium-large ozone medical waste disinfection technology known to pass French standard NFX 30-503-1, the most stringent global standard for infectious waste treatment machines.

Significant Greenhouse Gas (“GHG”) Emissions Reduction:

Viking Ozone’s VKIN-300 will allow an average hospital to reduce GHG emissions by 590 tons/year as compared to incineration.

Additionally, Viking Ozone’s system will reduce waste volume by up to 80%, significantly reducing GHG emissions associated with waste transportation.

Cost of Ownership:

Viking Ozone’s lower energy consumption and increased output significantly lowers cost per ton.

By combining this increased efficiency with the highest-grade components, Viking Ozone’s system provides both reliability and longevity.

Validated Technology. Established Market Presence.

- ✓ ***Proven to meet one of the world’s most stringent standards:***

  Independent, accredited laboratory testing conducted in France confirmed compliance with NFX 30-503-1 efficacy standards

- ✓ ***Clean, safe and sustainable technology for waste treatment***
- ✓ ***Fully-engineered, ready-for-market***
- ✓ ***Established distribution arrangements in the U.K., Switzerland, France, Italy, Germany, and French speaking countries of West Africa***

SUPERIOR TECHNOLOGY

vs. OTHER METHODS

Viking Ozone Surpasses Current Industry Competitors:

- ✓ Practically zero emissions
- ✓ Significantly lower operating costs than industry alternatives
- ✓ Higher processing capacity (effectively treats more waste in less time)
- ✓ No heat (waste is treated at room temperature)
- ✓ Modular design allows multiple configurations
- ✓ Safer to operate
- ✓ Kills essentially all known pathogens, bacteria, fungi and viruses (6 log 10)
- ✓ Ability to process bio-hazardous waste into a valuable renewable resource
- ✓ Virtually odorless

AUTOCLAVE

- Single pass treatment
- 45 min or longer process time
- Expensive operating costs
- Venting to environment
- Employee safety concerns
- Unpleasant odors, emissions and VOCs
- Siting of autoclaves is an issue in many locations due to emissions

MICROWAVE

- Very low porosity
- Single pass treatment
- Hot and odorous final product
- Limited capacity due to slow process
- High energy demand
- Employee safety concerns
- Offensive odors

INCINERATION

- Hot and odorous final product
- Expensive installation
- Expensive operation
- Employee safety concerns
- Damaging to the environment
- Ash waste can be harmful to people and the environment

	AUTOCLAVE	MICROWAVE	INCINERATOR	VKIN
LOW HEAT PROCESSING	X	X	X	✓
HIGH CAPACITY	X	X	X	✓
SAFE TO OPERATE	X	X	X	✓
LOW ENERGY DEMAND	X	X	X	✓
HIGH POROSITY	X	X	X	✓
LOW OPERATING COST	X	X	X	✓
LOW ODOUR	X	X	X	✓
ENVIRONMENTALLY RESPONSIBLE	X	X	X	✓

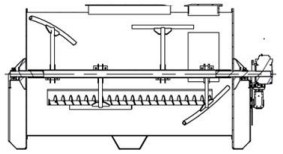
SUPERIOR TECHNOLOGY

vs. OTHER OZONE SYSTEMS

Why We're Superior to other Ozone Systems:

- ✓ **The only** medium-large ozone medical waste disinfection technology known to **pass French efficacy standard NFX 30-503-1**, the most stringent global standard for infection waste treatment machines.
- ✓ Years of meticulous design and engineering work spent to develop a high-performance quality system.
- ✓ Operates using regulated levels of concentrated quality ozone.
- ✓ High treatment capacity (300 to 1,000 kg/hr).
- ✓ Superior operating system.

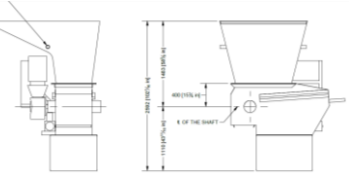
High Porosity Treatment Combined with Quality Ozone:



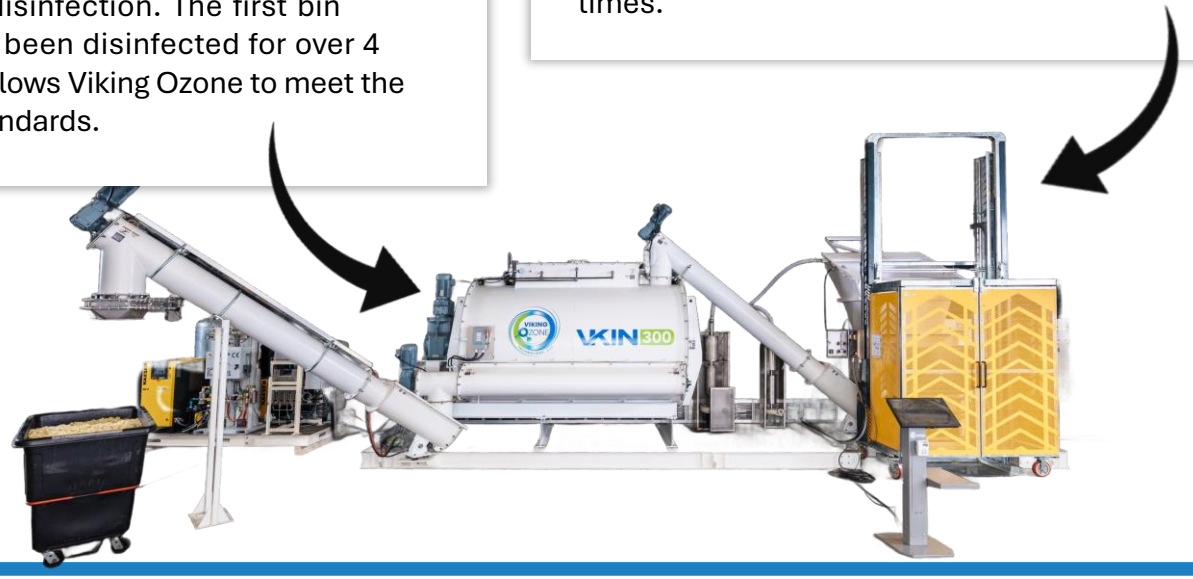
Viking Ozone's treatment chamber process enables regulated medical waste to be treated in a high porosity environment with increased outputs.

During the treatment process, a concentrated and regulated flow of quality ozone is pumped into the treatment chamber. After the last bin is shredded and dumped, 30 minutes of dwell time is allowed to ensure complete disinfection. The first bin dumped has already been disinfected for over 4 hours. This process allows Viking Ozone to meet the highest of efficacy standards.

Hopper Design & Increased Efficiency:

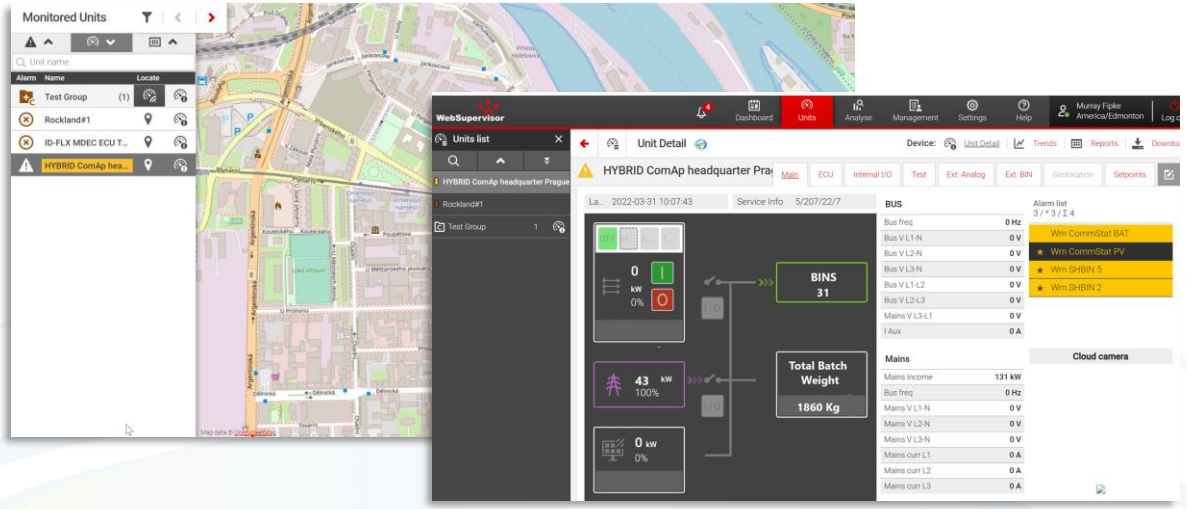


The semi-continuous process of shredding and dumping a 660L/770L or 1000L bin every 5-7 minutes in the case of the VKIN-300, allows it to process up to 33 bins or approximately 1,900kg in less than 5 hours. The unique design of Viking Ozone's shredder hopper is fundamental to the system's high input volume and fast cycle times.



SUPERIOR OPERATING SYSTEM

- ✓ User-friendly Human Machine Interface (“HMI”) allows waste to be processed at the touch of a button.
- ✓ Complete microprocessor-controlled process with real-time data collection.
- ✓ Ability to pre-program process parameters.
- ✓ Tracks multiple metrics including outputs & power consumption.
- ✓ Process developed around prioritizing worker safety. Safety interlocks and emergency stops are installed on HMI and physical E-Stop buttons are installed on strategic components.
- ✓ Ambient monitoring has both audio and visual alarms and are programed to halt O_3 production if certain thresholds are exceeded.



- ✓ Password and user access protected.
- ✓ Remote login allows users to snapshot process information.
- ✓ Can be used to track logged outputs and power consumption.
- ✓ Key maintenance schedules can be relayed by our service group through a troubleshooting app.

VIKING OZONE TECHNOLOGY, LLC

INITIAL TARGET MARKETS & DISTRIBUTION ARRANGEMENTS

Phase 1:

- Europe
- Middle East
- Africa

Phase 2:

- North America

Existing distribution arrangements are in place for the following locations:

✓ Switzerland
✓ France
✓ Italy
✓ Germany
✓ U.K.
✓ French-speaking countries of West Africa

Our U.K. distributor is an approved vendor within the NHS (approximately 1,000 hospitals under management within the NHS).

An independent, accredited laboratory in France has verified that the VKIN-300 complies with the NFX 30-503-1 standard.

OUR TEAM

Santokh Sahota, P.ENG is a power solutions expert. Starting his career in the Power Generation Business in 1980 his first job was with Indian Air Force managing power systems for Guided Weapons Systems. He then moved into hydro power generation where he was heading operation and maintenance of power plants. Mr. Sahota also oversaw renovation of hydro power plants, switchyard equipment and transmission systems. He joined Simson Maxwell in 2001 after immigrating to Canada and has held different Senior Management since that time, including overseeing the operations of Engineering, Manufacturing and Projects departments and undertaking Project Development initiatives to introduce new product lines into the market and support high level project sales. Santokh is an Engineering graduate from The Institution of Engineers, with a Bachelor of Science in Electrical Engineering and holds a diploma in Electrical Engineering from Electrical & Instrumentation Institute. He is a Registered Professional Engineer and a member of EGBC (Engineer's & Geologists of BC), APEGA (Association of Professional Engineers & Geoscience of Alberta), NAPEG (Northwest Territories and Nunavut Association of Professional Engineers & Geoscientists including Temporary License for Engineers Quebec.

Daryl Kruper has more than 40 years experience in power systems and power plant design and construction. Mr. Kruper founded Adco Power, an industrial electrical mechanical firm that specializes in design and construction of power plants, and for approximately twenty years served as CEO and Chairman of Simson Maxwell Ltd, a power systems company that specializes in the design, manufacture, sales and service of generators and associated equipment. The combination of Adco Power and Simson Maxwell provided a full-service power system / power plant solution for customers in the markets they serve. He began his career working in Canada's high Arctic upgrading and modifying power plants for dozens of northern settlements and subsequently expanded into designing and constructing power systems / power plants throughout North America, South America Central America and the Caribbean.

Mr. Kruper received his Electrician Certification from the Northern Alberta Institute of Technology in 1981, his Master Electrician Certificate from Northern Alberta Institute of Technology in 1984 and his Management Development Certificate from the University of Alberta in 1995. He previously served on the Commercial Solutions Board, an Edmonton public company, as well as on the board of governors for the Northern Alberta Institute of Technology.

Steve Paquette is a Technical Sales Specialist with a proven track record of advancing new technologies and enhancing customer satisfaction. With a knack for executing various sales strategies for over 35 years at key positions that encompass training and achieving customer expectations, he has continuously demonstrated an ability to provide tailored solutions and foster key relationships.

Steve has amassed extensive sales and marketing experience across a variety of industry sectors, including while serving as a Master Distribution Representative in Canada of new technologies for an international HVAC/R and Gas Detection manufacturer, as Sales Manager in North America for a global OEM, and as Marketing Director for a multi-dealership automotive group. Over the years Steve has devoted significant attention toward technical sales, product troubleshooting and equipment maintenance training.

CONTACT:

Viking Ozone Technology, LLC
Attn: James Doris
jdoris@vikingenergygroup.com
(281) 404-4387
www.vkin-ozone.com