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INDUSTRY'S ORIGINAL CONTROL Since 1938

The Dispatch

"An Insect-O-Cutor® and Germ-O-Ray® Newsletter"



SUMMER 1998

From the Editor:

1998 marks the 60th year of the Insect-O-Cutor® trade name. You know you've come a long way when your product name becomes a generic term for similar devices (like Xerox for photocopying and Kleenex for tissue).

Many developments have occurred over the past six decades; from designing the first FDA/USDA accepted "escape-proof" unit to most recently addressing federal lighting regulation with our energy efficient models. A few of our innovations and industrial solutions are presented on the accompanying "timeline".

To celebrate our 60th anniversary, we sponsored a contest searching for the oldest operating Insect-O-Cutor®. And while we didn't locate a unit from the 1930's, we think you'll be surprised by the winning entrant.

Besides Insect-O-Cutor® information, this issue of The Dispatch presents a "case study" on our newest product line — Germ-O-Ray® air disinfection fixtures. If you spend much time indoors or use air in a production process, then please look over this Germ-O-Ray® information; it could prove helpful.

1938 to 1998! We couldn't have made it without you, our good customers. Thank you! We hope we can continue to meet your needs.

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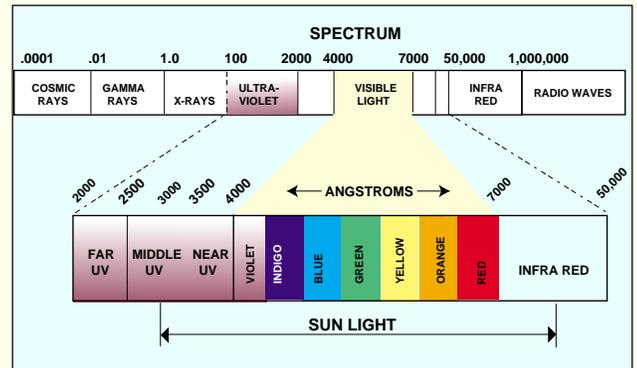
This Newsletter is published as a service exclusively for the use of Insect-O-Cutor® / Germ-O-Ray® customers and their agents, representatives, etc. Not for resale. Copyrighted material contained herein is for the private use of the recipient and is not to be copied nor otherwise distributed without the express written consent of Insect-O-Cutor®. Germ-O-Ray® is a registered product name for Air Disinfection Fixtures (duct, wall and custom mount) manufactured solely and exclusively in Stone Mountain, Georgia, U.S.A.

Putting A Little LIGHT on The Subject — A Semi-Technical Discussion... By J.E. Harris

"So how does this thing work?" is a question we're often asked. With this article, we would like to explain the "secret" of our equipment. That "secret" is a shared technology on which both Insect-O-Cutor® and Germ-O-Ray® products operate — ultraviolet light.

Ultraviolet (UV) light is a specific part of the entire light spectrum. The light spectrum contains all classifications of light — visible, UV, X-ray, and others. Specific classifications within the spectrum are determined by the wavelength of a particular light energy. Wavelengths — the distance between a wave's "peaks" or its "troughs" — are measured in units called Angstroms and nanometers.

Now within a specific light classification, light energy can be further classified. In regard to ultraviolet light, there are three further classifications: Near UV (UVA), Middle UV (UVB) and Far UV (UVC).



Insect-O-Cutor® equipment employs UV lamps that emit light energy within the Near UV range (UVA), measuring 350 to 400 nanometers. This particular wavelength is proven to elicit a positive response from flying insects. Insects rely on UVA light energy for orientation (like a ship to a lighthouse) and as a source for warmth (remember: insects are "cold blooded").

Continued on Page 3

A Brief History: Insect-O-Cutor® Milestones From 1938 To Date...

The Insect-O-Cutor® trade name is first registered...followed by the "Mr. Insect-O-Cutor" logo.

MR. INSECT-O-CUTOR



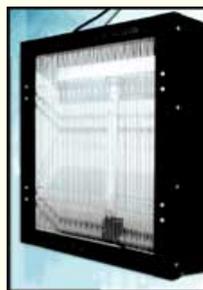
1938



Electric window screens made... especially for agricultural use.

1940's

Electric window screens evolved into the first wall mount insect traps ever!



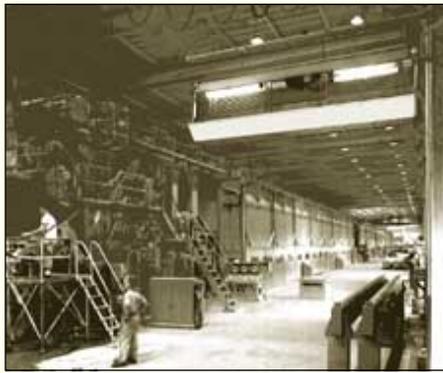
Many Insect-O-Cutor® Models Now — And THEN

From our early agricultural devices, a variety of models emerged to meet many different industrial needs such as: pharmaceutical, food and beverage concerns; dairy, meat, poultry, and seafood processors; medical; hospitality; paper and film converters; educational; governmental; food wholesale and retail operations; and many more.

1950's

**Industrial,
Commercial/
Institutional Use**

Full size IOC® models came into widespread use — for industrial, commercial and institutional applications. Shown at right is an early Insect-O-Cutor® Model 512T protecting a paper mill production line.



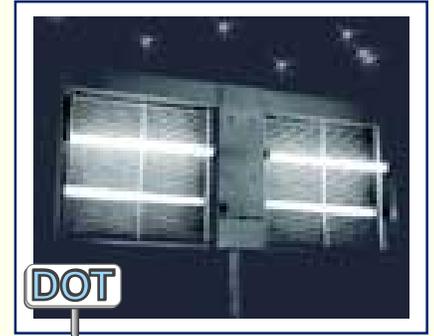
1950's continued

1966



1ST
IOC® introduces the innovative “black light” and “black light blue” lamp combination. Various insects (day-flying and night-flying) in varied environments (hot and cold) are more responsive to this lamp combination. Still in use today, this unique black light combination is unequalled anywhere in the world.

1960's technology broadens the IOC® product line — then the most extensive anywhere. Interior horizontal hanging models were now complemented by exterior IOC® post mount models (designed for state department of transportation toll plazas).

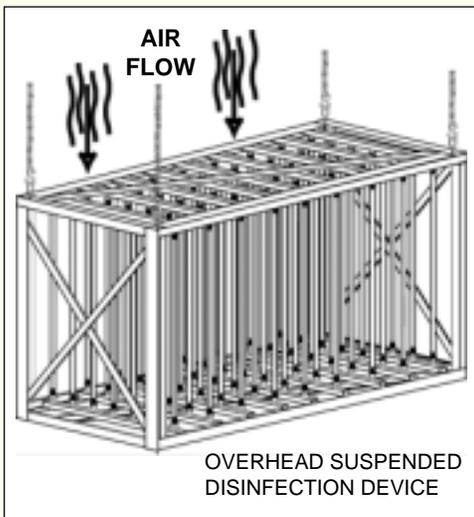


1960's

Air Quality... A Germ-O-Ray® “Case Study”

Insect-O-Cutor® has long been associated with quality assurance (QA) programs. And with the Germ-O-Ray® product line, Insect-O-Cutor® continues to develop effective QA tools.

Germ-O-Ray® air disinfection fixtures were developed after a hospital's general contractor discovered the need for germicidal light fixtures to be used within the hospital's HVAC system. From that special request, an entire line of “standard” air disinfection fixtures is now offered. And although standard devices (in-room and in-duct) are being used in a number of “regular” settings, it is customized Germ-O-Ray® fixtures and installations that QA professionals and facility managers may find most interesting.



As an example, one such customized fixture is installed at a sugar refinery. Sugar, like other granular products, is partially processed with air; air conveys the product from one point to another. If this air is contaminated, then the product is contaminated. Contaminating agents can include mold, viruses, and bacteria. To best understand the refinery's needs, IOC® Systems Design Engineers worked closely with the refinery's QA and Engineering staffs. These discussions identified specific

contaminants and determined acceptable load presence/levels for those particular contaminants.

Also addressed were environmental concerns such as humidity and temperature variances. Large temperature swings as well as high humidity levels greatly affect lamp performance. These environmental concerns are of paramount importance.

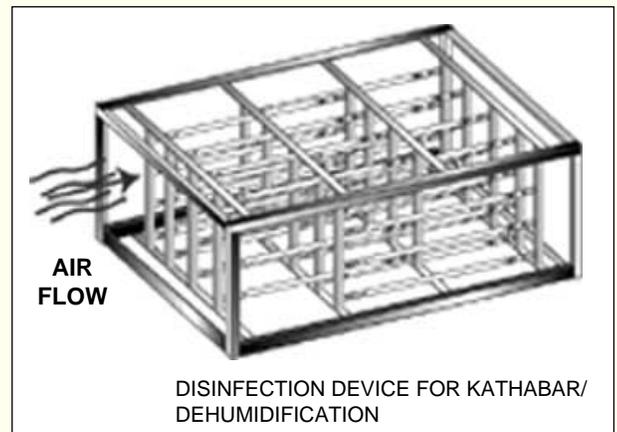
After working various formulas, the exact number of germicidal lamps required to effect a predetermined control level was computed.

With contaminant control and environmental issues adequately addressed, special consideration was now paid to mechanical and process concerns such as: air system stress levels, air speed (volume), and possible installation locations.

These factors determine the size and the orientation of the customized Germ-O-Ray® installation. Not until all parties and their associated concerns were completely satisfied did actual manufacture of the customized fixture[s] start.

Actual installation was handled by the refinery. To follow up on the installation, Systems Design Engineers reviewed the installation on site. Also, product samples (taken prior to and after fixture installation) were sent for independent testing by the refinery. And to ensure that each Germ-O-Ray® installation is maintained with effective lamps, each Germ-O-Ray® customer receives a semi-annual lamp replacement quotation.

Both “standard” and customized Germ-O-Ray® fixtures are proving valuable to companies proactively concerned with good manufacturing practices (GMP) and product quality. Should you share these concerns and assess the need for better air quality at your facility, please call on us.





The first "escape-proof" electrocutor ...accepted by both USDA and FDA for "in-processing areas" was an original IOC® unit (Series 712). In 1990, IOC® Series 1890/2591 would again be designated as "escape-proof" by USDA and FDA.

1ST

To increase black light emission, which increases insect attraction, Insect-O-Cutors® become double-ballasted.



1973

Global Sales and Service



Due to demand, Insect-O-Cutors® are licensed in the United Kingdom for eastern hemisphere distribution.

1975

Light Years Ahead!

As early as 1977, IOC® units incorporated T-8 diameter lamps (Series 912). Did we know something then everyone else learned later?
—See 1994—



1977

1ST

You Gotta Need?
We Aim to Please...



VERSATILE PORTABLE:

This multi-purpose IOC® model was designed at the request of a major snack foods processor. If you have a special request, please call on us. We'll be happy to try and help.

1983

First Again ?

Advanced Scatterproof! This design withstood stringent wind testing conducted by the USDA [Beltsville, MD] and was deemed to be virtually scatterproof. Based on these tests, the FDA designated Series 1890 and 2591 as "scatter-free"... perfect for food prep areas.



1990

And the Winner Is...

Insect-O-Cutor® turned 60 this year — 1938 to 1998. And to celebrate this milestone, we sponsored a search for the "oldest operating Insect-O-Cutor®".

Over the past few months, we've been sincerely surprised by the overwhelming number of "old" Insect-O-Cutor® units still operating today. And we would like to thank everyone who submitted units for consideration. However, as with most contests, there can only be one winner. And what a winning unit we found.

The year was 1969 (twenty-nine years ago); the space race was under way; and **Ellison Bakery** of Fort Wayne, IN needed to address flying insect elimination/pest control concerns. To address those concerns, Ellison Bakery called upon Insect-O-Cutor®. Then, like now, Insect-O-Cutor® built quality equipment designed for the "long haul". Ellison Bakery understood the importance of quality and value. The rest is history... nearly *three decades* of reliable product performance.



MODEL 312T FROM 1969

Second place honors go to **Hershey Pasta and Grocery Group** of Lebanon, PA. It was September of 1972 when Hershey installed their winning Model 312. And from the unit's appearance, it looks as good as new twenty-five years later!

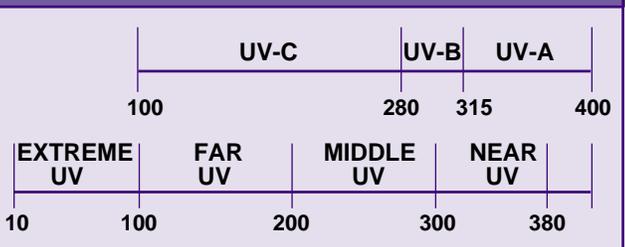
Coming in third place was **The Industrial Fumigant Company** (IFC) of Olathe, KS. Their winning unit is a Model 412T from August of 1979! As their name suggests, IFC provides industrial pest control and sanitation solutions. And to protect their own operations, the IFC relies on Insect-O-Cutor®.

To all who entered our search and to all who continue to recognize the importance of value and quality for equipment within their operations, we'd like to say "thank you". And of course, we'd like to especially thank Ellison Bakery... keep on bakin' guys; thank you for your support.

Light — Continued from Page 1

Germ-O-Ray® equipment employs UV lamps that emit light energy within the Far UV range (UVC), measuring 100 to 280 nanometers. This particular wavelength is commonly referred to as "germicidal light". Germicidal light is capable of penetrating cellular structures. When used for air disinfection, germicidal lamps emit energy to pierce an airborne contaminant's cellular structure. This alters that cell's DNA, rendering it sterile and virtually harmless.

ULTRAVIOLET LIGHT CLASSIFICATIONS



Both UVA and UVC light energy is available through fluorescent lamp technology. Simply, fluorescent lamps are vacuum-filled glass tubes with specific minerals, phosphors, and gases enclosed in the tubes. These agents, charged with electricity to emit energy at a given wavelength, gradually decay over several hundred hours of lamp operation. This gradual decay is of particular importance because many people do not realize that lamps have an effective life-span; UVA lamps average 7000 hours and UVC lamps average 5000 hours before emissions decrease to unacceptable levels. For this reason, it is of paramount importance that "bug lamps" and germicidal lamps be replaced on at least an annual basis (if not semiannual).

There are many other details to discuss for a better understanding of light and its various applications. However with this limited space, we hopefully offered an initial understanding to our "secret".

A breakthrough that won't break through!



Air disinfection fixtures for enhanced indoor air quality (IAQ) are developed at the request of an Insect-O-Cutor® customer!

Germ-O-Ray® devices are custom-designed; in-duct and wall mounts available too.



SHATTER - PROOF LAMPS

Insect-O-Cutor's full line of black light lamps is expanded to include safety-coated lamps protecting people, product and the workplace.

Responding to both federal lighting legislation and industrial demand, a complete line of Energy Efficient Models is introduced.



1991

1994

1997

1998

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PLEASE DIRECT TO THE ATTENTION OF

