Environmentally Friendly

#chemicalfreeworld

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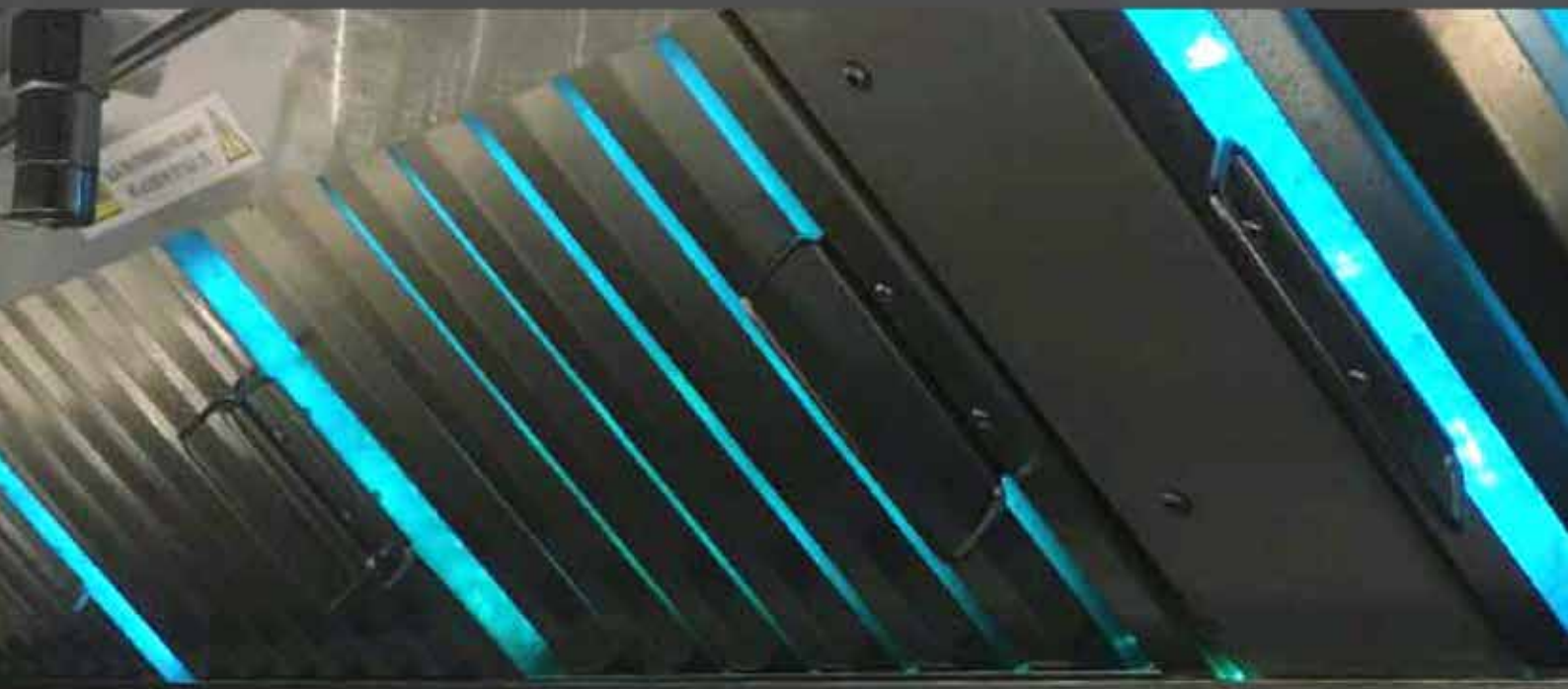
UVC & OZONE TECHNOLOGY

Odour & Grease Control in Commercial Kitchens



JIMCO UV-C & OZONE Technology

www.elginbay.co.uk

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Innovation and Drive

Jimco A/S is the company behind some of the world's most unique air and waste-water purification and sterilisation solutions.

Since designing its very first air-cleaning unit in 1993, Jimco A/S has not looked back. Today, the company supplies its products to a large number of industries and institutions worldwide. Its customer base comprising factories within the food industry, commercial kitchens, schools and nursing homes. In brief, Jimco A/S undertakes all types of projects – large and small.

Jimco A/S combines common sense with innovative thinking as the basis of the company's unique products. It is no coincidence that Jimco A/S supplies air-treatment units to some of the biggest chains in the world – including Marriott, Hilton, Hyatt, Jollibee, KFC, TGI Fridays, Burger King, Radisson, Google and of course a lot of McDonalds restaurants.

Odour & grease control in Commercial Kitchens

JIMCO A/S specialises in odour and grease control in commercial kitchens by using patented UV-C & Ozone technology.

Cleaner ducting, minimised risk of fire when cooking – the exhaust fan will operate more efficiently.

For a number of years, JIMCO A/S has developed and manufactured air-cleaning systems specifically for the reduction of grease and aromatic compounds in exhaust air with high temperatures (frying, boiling and deep frying processes).

JIMCO systems are based on UV-C & Ozone Technology that results in the cold incineration of organic matter from a process called photolytic oxidation. The process leaves no harmful residues.

Due to increasingly higher hygiene demands in the food processing industry, the use of UV-C light to eliminate microorganisms e.g. bacteria, fungi and vira is becoming more and more commonly used.

Using UV-C light to eliminate microorganisms in the air is a technique that has been known for decades. UV-C light reduces the total amount of microorganisms in the room by breaking the DNA bonds in the organisms.

UV-disinfection – based on an exact calculated radiation rate – keeps the process air free of microorganisms and thus complies with local regulations.

Mission

To increase the awareness of environmentally friendly solutions and to accelerate their implementation thus striving to make the world chemical-free without compromising the result.

JIMCO A/S use the forces of nature to re-create an environmentally friendly chemical-free process for air purification, water purification and surface disinfection which is applicable in many different industries.

We fight VOC's, bacteria, viruses, mold, yeast, food waste, chemicals, fire risk, bad odor through our environmentally friendly solutions and our customers can achieve far better results using our products than using chemicals.

QUALITY TESTED

THE ORIGINAL KPC PRODUCT

RELIABLE PARTNER

25 YEARS EXPERIENCE

Vision

To make our environmentally friendly solutions available all over the world for all industries and households.

To educate people, governments, and authorities on the substitute solutions with better, faster and environmentally friendly results rather than chemicals.

To have a chemical-free world without compromising the result.

Location Location Location...

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In a world where the popularity of small local restaurants are increasing and the possibility to find new suitable locations is becoming more and more difficult, restaurant and fast food chains are struggling.

The competition for the customer is becoming more fierce. The experience of the customer is very important to succeed but being in the right location is critical.

Availability is one of the fundamental keys to success!

Around the world new city parts are being planned and we see an increasing willingness to ban the construction of restaurants and fast food chains in these city parts. Neighbours will no longer tolerate cooking odors close to their homes.

JIMCO's technology opens the opportunity to actively look for locations in sensitive areas and because of JIMCO's certified documentation and proven odor reduction, authorities will give any restaurant building permission in any odor sensitive area. With JIMCO's technology you can exhaust at street level, in parking garages and close to neighbours without receiving any complaints.

The JIMCO KPC-equipment uses a process called photolytic oxidation – combining photolysis and ozonolysis. Photolysis is a process of photo-decomposition where the organic molecules (e.g. fat, grease and oil) are broken down by photons, when exposed to UV-C light. Ozonolysis is the process of oxidation of the photo-decomposed molecules which, when exposed to ozone (produced by the lamps) is incinerated by means of cold incineration. The end result is grease and odor reduction from kitchen exhaust.

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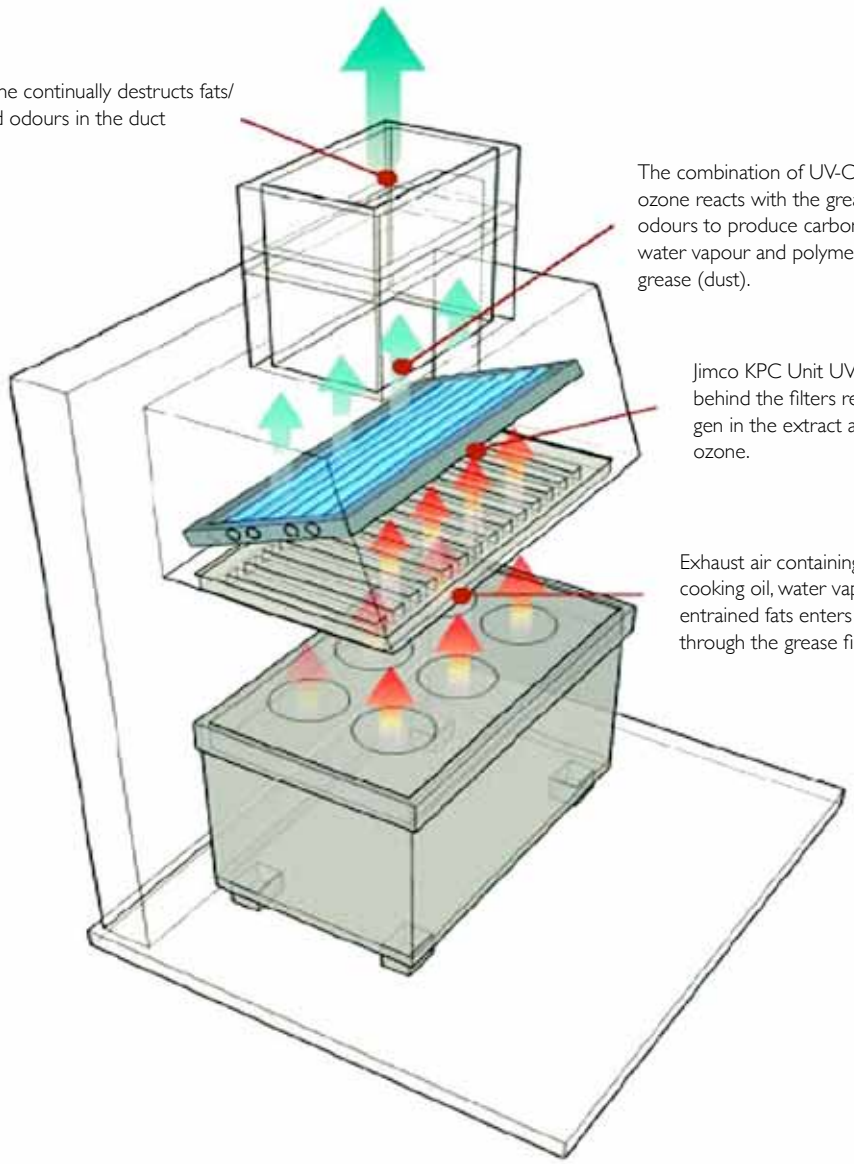
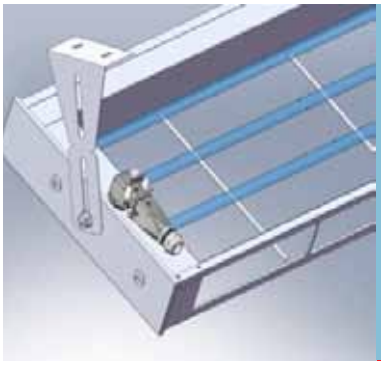
Typical Jimco KPC Canopy Unit





The JIMCO lamps are placed in a steel frame, which is installed behind the grease filters in the hood or, in case where this is not possible due to lack of space, in an enclosure immediately above the hood. Exposure to intensive UV-C light and ozone oxidation causes contaminants in the air to be destroyed, resulting in the reduction of odour emissions to the surroundings and no grease deposits in the ductwork.

This process reduces the odour emitted to the surroundings. At the same time, a small quantity of excess of ozone is generated to maintain the ducts in a clean condition and to destroy previously existing grease deposits within the ductwork.

We recommend that ducts be manually cleaned before installing a KPC system.

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The Process

The oxidized substances are removed through the duct system

The organic substances are oxidized

The Ozone combines with the organic substances in the air

The Oxygen converts into Ozone

The UV-C rays break down the organic molecules

The contaminated air passes through the KPC unit

Hood **WITH** JIMCO Technology - Not cleaned for 6 months

Hood **WITHOUT** JIMCO Technology - Not cleaned for 6 months

BENEFITS USING JIMCO TECHNOLOGY

Tested and documented by an accredited institute, certified documentation, dependable system and amazing results

- ✓ Grease & fat reduction between 50-85 %
- ✓ Eliminates the need of regularly cleaning inside the hood and ductwork
- ✓ Clean ductwork results in improved exhaust efficiency: Reduced power consumption from the fan
- ✓ Optimizing heat recovery thanks to clean air
- ✓ Decreased fire risk
- ✓ Possible insurance rate reduction
- ✓ Odour reduction to the surroundings between 44-91 %
- ✓ Exhaust can be placed at street level
- ✓ No complaining neighbors
- ✓ Authorities allow restaurants to be located in areas that are sensitive to odour *(Because of Jimco's documentation)*
- ✓ Catalyst durability more than 1½ year
- ✓ Clean environmentally friendly technology
- ✓ No bacteria growth in hoods or ducts
- ✓ Low operation and maintenance costs

JIMCO specializes in odour and grease control in commercial kitchens, using patented UV-C & Ozone technology.

Inspection hatch **WITH** JIMCO Technology - Not cleaned for 60 months

Inspection hatch **WITHOUT** JIMCO Technology - Not cleaned for 6 months

PAYBACK

- ✓ Less duct and heat exchanger cleaning
- ✓ Less cleaning of hoods
- ✓ Fewer bag filter replacements
- ✓ Lower power consumption on fan
- ✓ Optimization of heat recovery
- ✓ High odour reduction
- ✓ Reduced insurance rate
- ✓ Less maintenance hours for staff
- ✓ Less damage to inventory
- ✓ No cleaning of roof

Payback time for a medium sized restaurant is between 24-36 months

All pictures are taken in restaurants belonging to one of the world's largest fast food chains.

Grill duct **WITH** JIMCO Technology
- Not cleaned for 60 months

Fryer duct **WITH** JIMCO Technology
- Not cleaned for 60 months

Duct **WITHOUT** JIMCO Technology - Not cleaned for 12 months

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Keep your hood clean reduce fire risk




The above pictures show how grease quietly disappears with JIMCO elements mounted in the hood.

The advantages of using a JIMCO KPC system means the traditional problems with air filtration are eliminated.

Examples are: high chimneys, electrostatic filters, activated carbon filters, scrubbers, deodorizing oils etc.

The number of particles from 1 charbroiled burger creates more particles than a truck driving 235 km.

3% of produced meat in restaurants is exhausted into the atmosphere in particles.

Source: Huffington Post 09.19.2012

Case Study

HOTEL ODEON

Hotel Odeon has been built to the same extent as urban development in Odense, which aims to be more environmentally friendly. For this purpose, a 4 lane road that went through the city has been closed and the result of this can already be seen today with Hotel Odeon and its 234 rooms in the heart of the historical part of Odense.

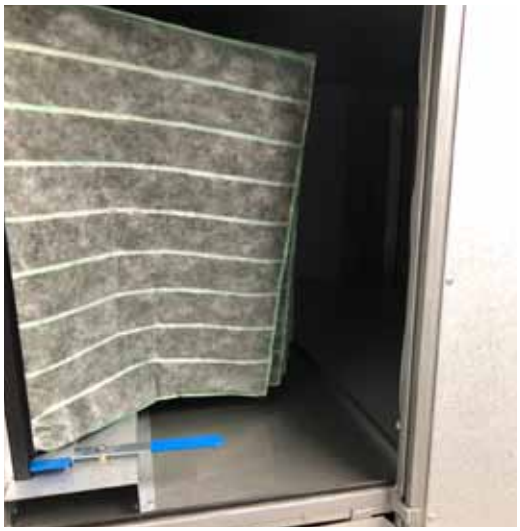
Challenge:
Inappropriate placement of air inlet and outlet channels, where the risk of cross-contamination is high.

JIMCO A/S remedied this by installing Kitchen Pollution Control (KPC) in the kitchen hoods.

Air Inlet channels

Air outlet from the kitchen

Bag filters from exhaust air ventilator



No bad complaints about the smell either in or outside Hotel Odeon

" It is amazing that the air outlet located close to the supply air does not cause any odor problems "

" Neighbors has not complained about odors, especially when we fry bacon and you have no doubt about this smell "

" We are very pleased with the result of JIMCO's technology "

Mads Andersen, Technical Supervisor at Hotel Odeon.

JIMCO KPC systems are modular and it is very easy to combine all our products and achieve the demand of each customer.

New JIMCO KPC plug n' play solution - contact us for more information.

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KPC system components

200.xxx
KPC UV-C FRAME - Ballast Inside
Quantity lamps 2-6

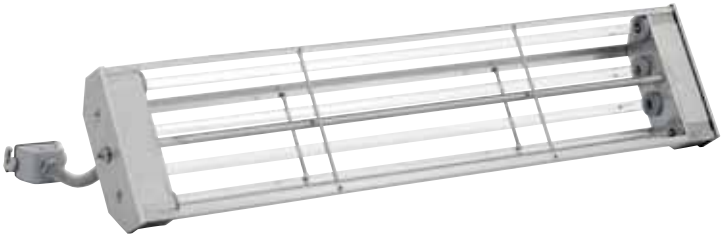
Lenght: 446-1714 mm
Height: 178-304 mm
Depth: 72-105 mm

200.xxx
KPC UV-C FRAME
Quantity lamps 2-8

Lenght: 446-1722 mm
Height: 129-337 mm
Depth: 70-154 mm

200.xxx
KPC UV-C FRAME - Trinagular
Quantity lamps 2-6

Lenght: 920-1765 mm
Height: 135 mm
Depth: 222 mm



200.xxx
KPC UV-C FRAME - HEX
Quantity lamps: 4

Lenght: 780-1714 mm
Height: 201 mm
Depth: 73-143 mm

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KPC system components

500.xxx
KPC Ballast Box
428 x 190 x 150mm - IP20

300.380
STO-TOUCH
With touch display
Can have slaves connected
2300 W
Display: 124,9 x 90,4 x 38,8mm - IP65 (front)
400 x 300 x 150mm - IP66
*STO-TOUCH UV-C system meets **EN16282-8:2017***

300.501
STO-Multi-IB EN
1-3x230V+N+PE 50/60Hz, 6000W
347 x 305 x 190 mm - IP 55

300.511
STO-Mini, EN
1x230V+PE 50/60Hz
200 x 280 x 60 mm - IP66
2300 W

300.520
STO-Mini, Stainless Steel
1x230V+PE 50/60Hz
250 x 300 x 80 mm - IP66

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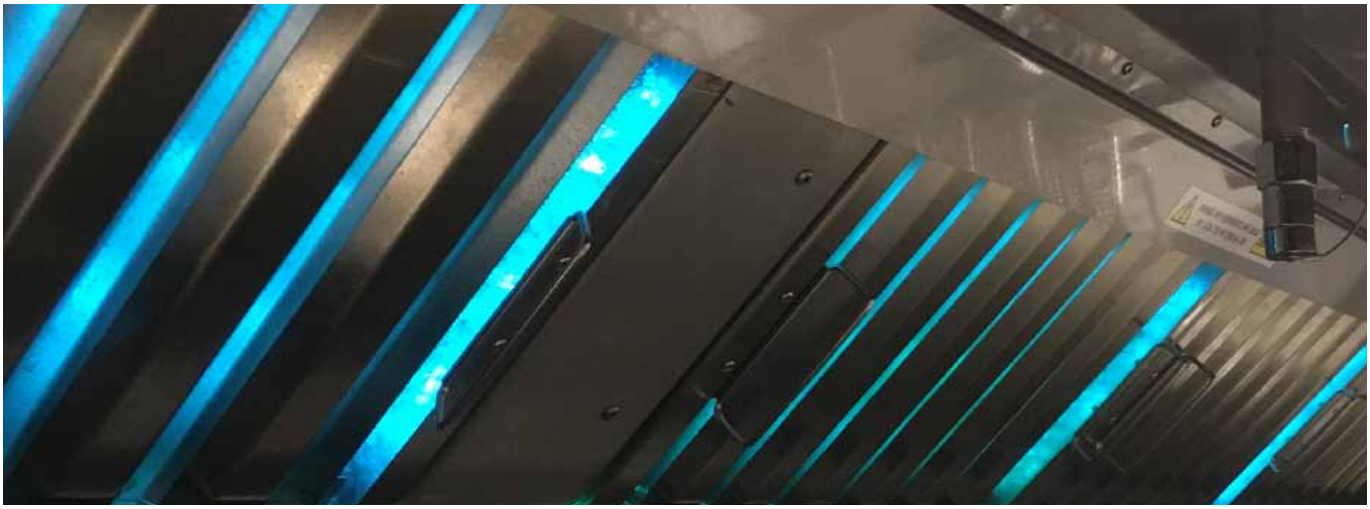
KPC system components

300.570
STO-MASTER
UL approved control box - File No: E499033
With remote display
1-3x230V+N+PE 50/60Hz · 6000W
160 x 100 x 82mm - IP67
305 x 240 x 110mm - IP66

300.526
STO-Mini Remote Wall, EN
Wall mounted remote display (Plastic) + Control
Display: 147 x 96 x 38mm - IP54
Box: 289 x 239 x 107mm - IP65
1x230V+PE 50/60Hz · 2300 W

300.546
STO-Mini Remote Hood, EN
Flush remote display for hood (Steel front) + Control
Display: 15 x 124 x 40mm - IP54
Box: 289 x 239 x 107mm - IP65
1x230V+PE 50/60Hz · 2300 W



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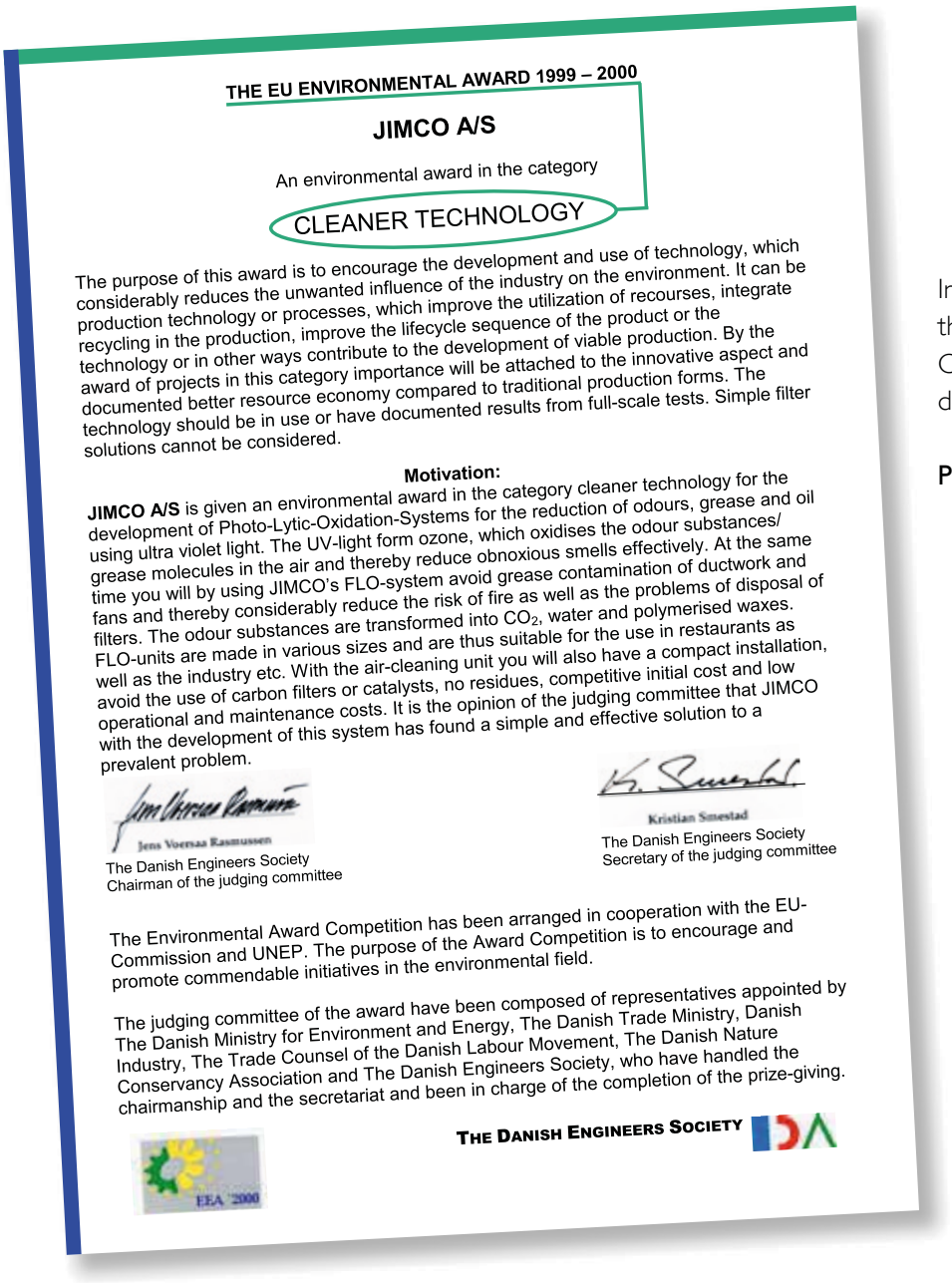
Awards and verification



THE EU ENVIRONMENTAL AWARD 1999 – 2000

JIMCO A/S

An environmental award in the category

CLEANER TECHNOLOGY

The purpose of this award is to encourage the development and use of technology, which considerably reduces the unwanted influence of the industry on the environment. It can be production technology or processes, which improve the utilization of recourses, integrate recycling in the production, improve the lifecycle sequence of the product or the technology or in other ways contribute to the development of viable production. By the award of projects in this category importance will be attached to the innovative aspect and documented better resource economy compared to traditional production forms. The technology should be in use or have documented results from full-scale tests. Simple filter solutions cannot be considered.

Motivation:

JIMCO A/S is given an environmental award in the category cleaner technology for the development of Photo-Lytic-Oxidation-Systems for the reduction of odours, grease and oil using ultra violet light. The UV-light form ozone, which oxidises the odour substances/ grease molecules in the air and thereby reduce obnoxious smells effectively. At the same time you will by using JIMCO's FLO-system avoid grease contamination of ductwork and fans and thereby considerably reduce the risk of fire as well as the problems of disposal of filters. The odour substances are transformed into CO_2, water and polymerised waxes. FLO-units are made in various sizes and are thus suitable for the use in restaurants as well as the industry etc. With the air-cleaning unit you will also have a compact installation, avoid the use of carbon filters or catalysts, no residues, competitive initial cost and low operational and maintenance costs. It is the opinion of the judging committee that JIMCO with the development of this system has found a simple and effective solution to a prevalent problem.

Jens Voersaa Rasmussen
The Danish Engineers Society
Chairman of the judging committee

Kristian Smestad
The Danish Engineers Society
Secretary of the judging committee

The Environmental Award Competition has been arranged in cooperation with the EU-Commission and UNEP. The purpose of the Award Competition is to encourage and promote commendable initiatives in the environmental field.

The judging committee of the award have been composed of representatives appointed by The Danish Ministry for Environment and Energy, The Danish Trade Ministry, Danish Industry, The Trade Counsel of the Danish Labour Movement, The Danish Nature Conservancy Association and The Danish Engineers Society, who have handled the chairmanship and the secretariat and been in charge of the completion of the prize-giving.

EEA '2000

THE DANISH ENGINEERS SOCIETY

In February 2000, JIMCO A/S received the EU Environmental Award for Cleaner Technology for the development of the:

PHOTOLYTIC OXIDATION SYSTEM

THE ONLY KPC PRODUCTS IN THE WORLD WITH ETV VERIFICATION

JIMCO KPC products are certified by the ETV (EU Environmental Technology Verification).

More information about ETV can be found at: http://iet.jrc.ec.europa.eu/etv/

ETV

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UV-C & OZONE
Technology

UV-C and ozone solutions for the future

Europe | South America | USA | Asia | Middle East

JIMCO technology users:

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