

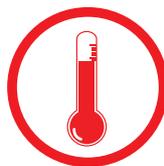


ENVIRONMENTALLY FRIENDLY

# ODOR AND GREASE CONTROL IN COMMERCIAL KITCHENS



SIGNIFICANTLY REDUCED  
FIRE RISK



OPTIMIZED HEAT  
RECOVERY



NO GREASE DEPOSITS



STREET LEVEL  
EXHAUST POSSIBLE





## INNOVATION AND DRIVE

JIMCO A/S is the company behind some of the world's most unique air and wastewater purification and sterilization solutions.

Since designing its very first air cleaning unit in 1993, JIMCO has not looked back. Today, the company supplies its products to a large number of industries and institutions world-wide. Its customer base comprises factories within the food industry, commercial kitchens, schools, and nursing homes.

In brief, JIMCO undertakes all types of projects – large and small.

JIMCO A/S combines common sense with innovative thinking as the basis for the company's unique products. It is no coincidence that JIMCO 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 McDonald's restaurants.

## ODOR AND GREASE CONTROL IN COMMERCIAL KITCHENS

JIMCO specialises in odor and grease control in commercial kitchens by using patented UV-C & Ozone technology.

Among the advantages are cleaner ducting and minimized risk of fire when cooking, and the exhaust fan will operate more efficiently.

For a number of years, JIMCO 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 such as bacteria, fungi, and viruses is becoming more and more common.



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

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

JIMCO uses 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, and bad odor through our environmentally friendly solutions because our customers can achieve far better results using our products than using chemicals.

**QUALITY  
TESTED**

**THE ORIGINAL  
KPC PRODUCT**

**RELIABLE  
PARTNER**

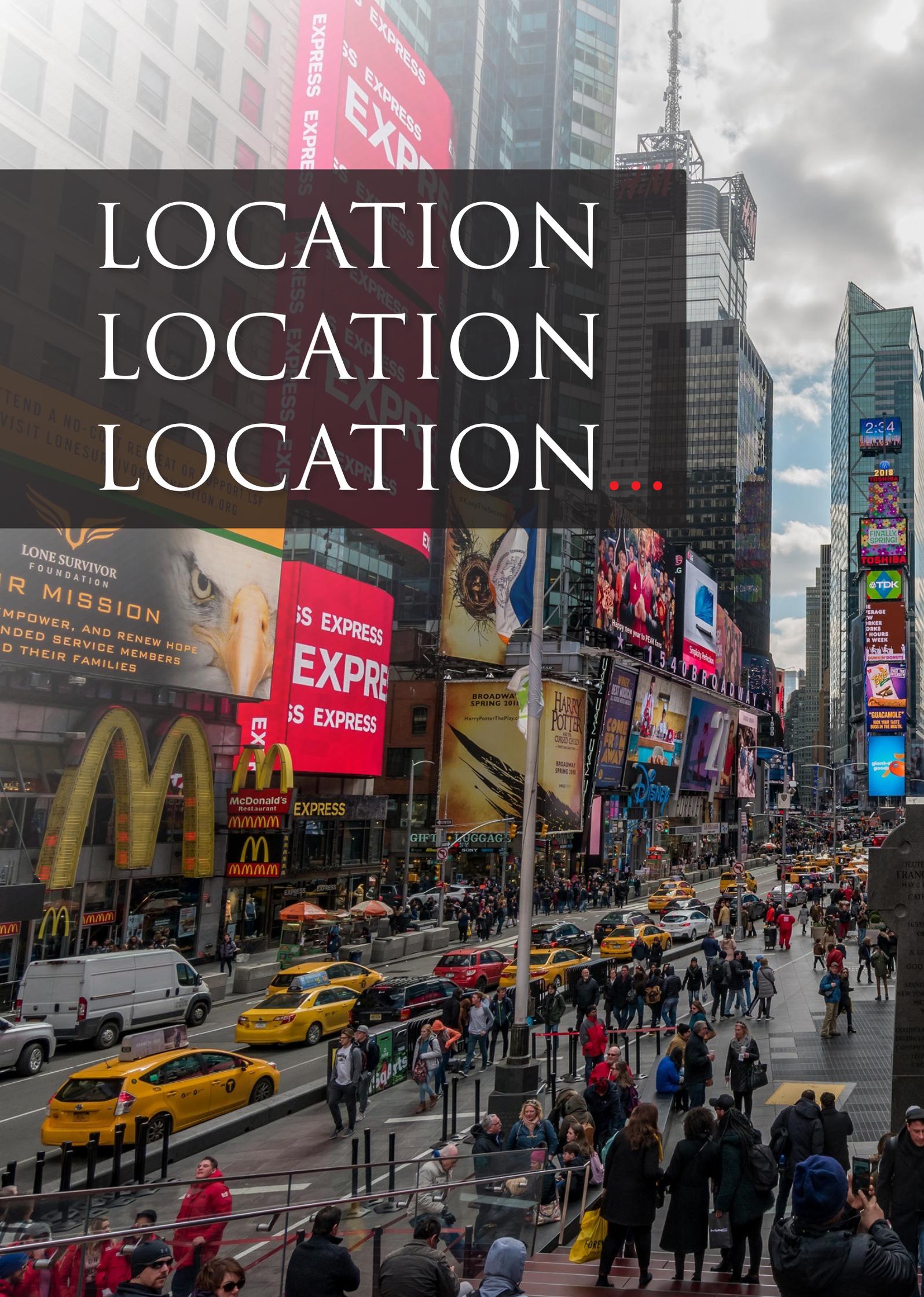
**25 YEARS  
EXPERIENCE**

# VISION

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- 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





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. Neighbors will no longer tolerate cooking odors close to their homes.

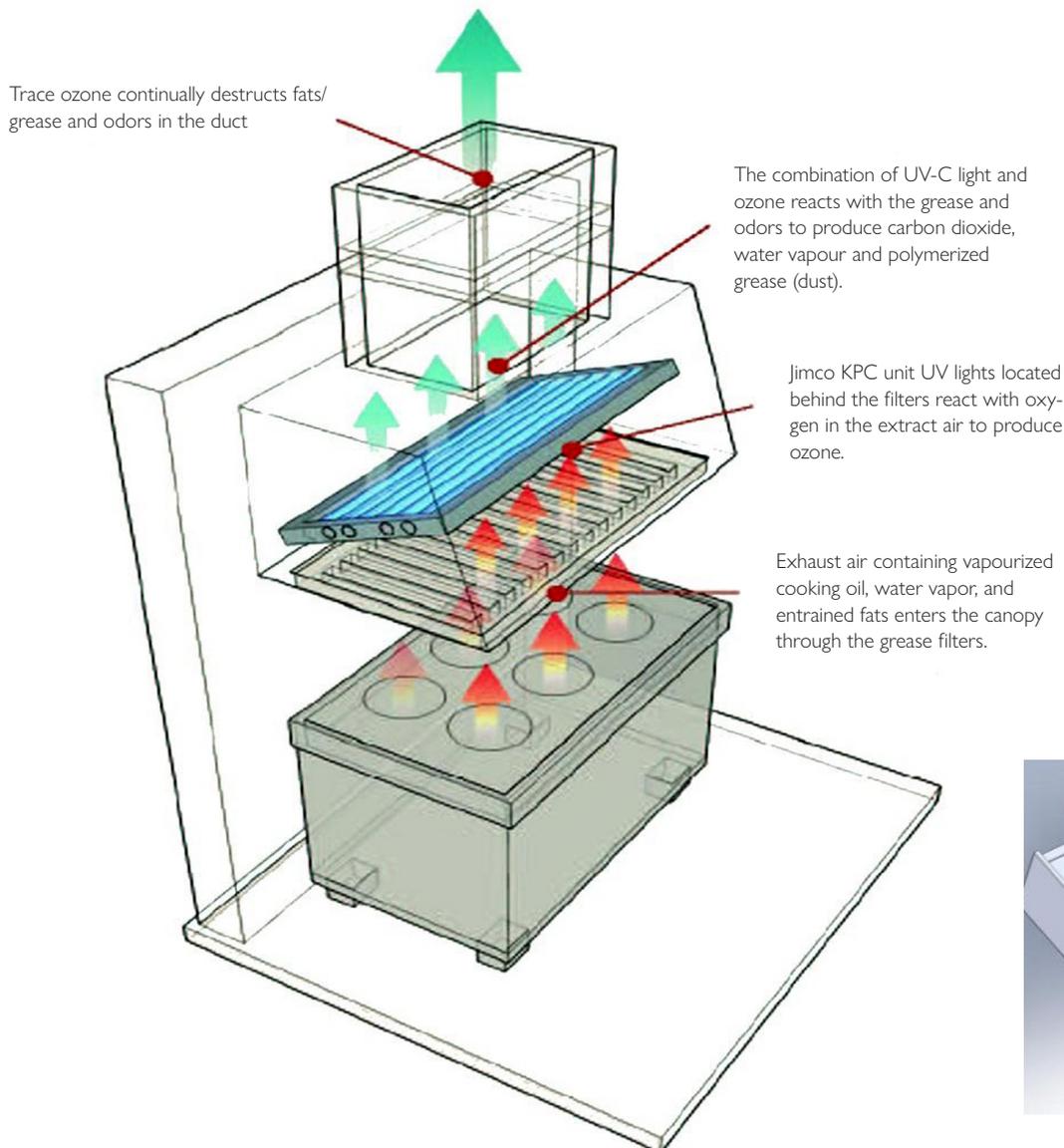
JIMCO's technology opens the opportunity to actively look for locations in sensitive areas. Because of JIMCO's certified documentation and proven odor reduction, authorities will give any restaurant building permission in any odor sensitive area. With JIMCO's technology you can exhaust at street level,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

The JIMCO KPC equipment uses a process called photolytic oxidation – combining photolysis and ozonolysis.

Photolysis is a process of photodecomposition 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 photodecomposed molecules which are incinerated by means of cold incineration when exposed to ozone (produced by the lamps). The end result is grease and odor reduction from kitchen exhaust.



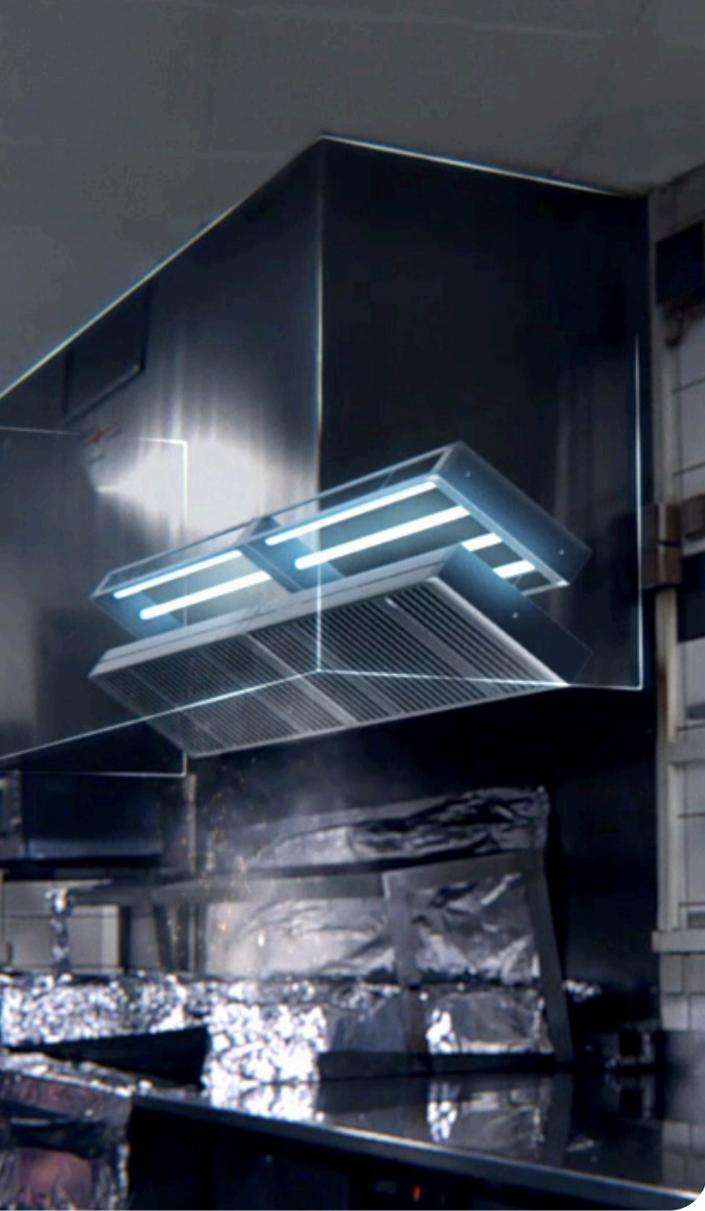
## TYPICAL JIMCO KPC CANOPY UNIT



The JIMCO lamps are placed in a steel frame, which is installed behind the grease filters in the hood or, in the case of insufficient 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 odor emissions to the surroundings and no grease deposits in the ductwork.

This process reduces the odor emitted to the surroundings. At the same time, a small quantity of ozone excess 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.



# THE PROCESS



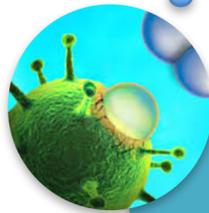
The contaminated air passes through the KPC unit



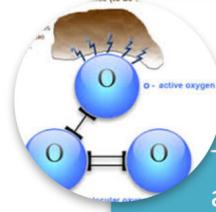
The UV-C rays break down the organic molecules



The Oxygen converts into Ozone



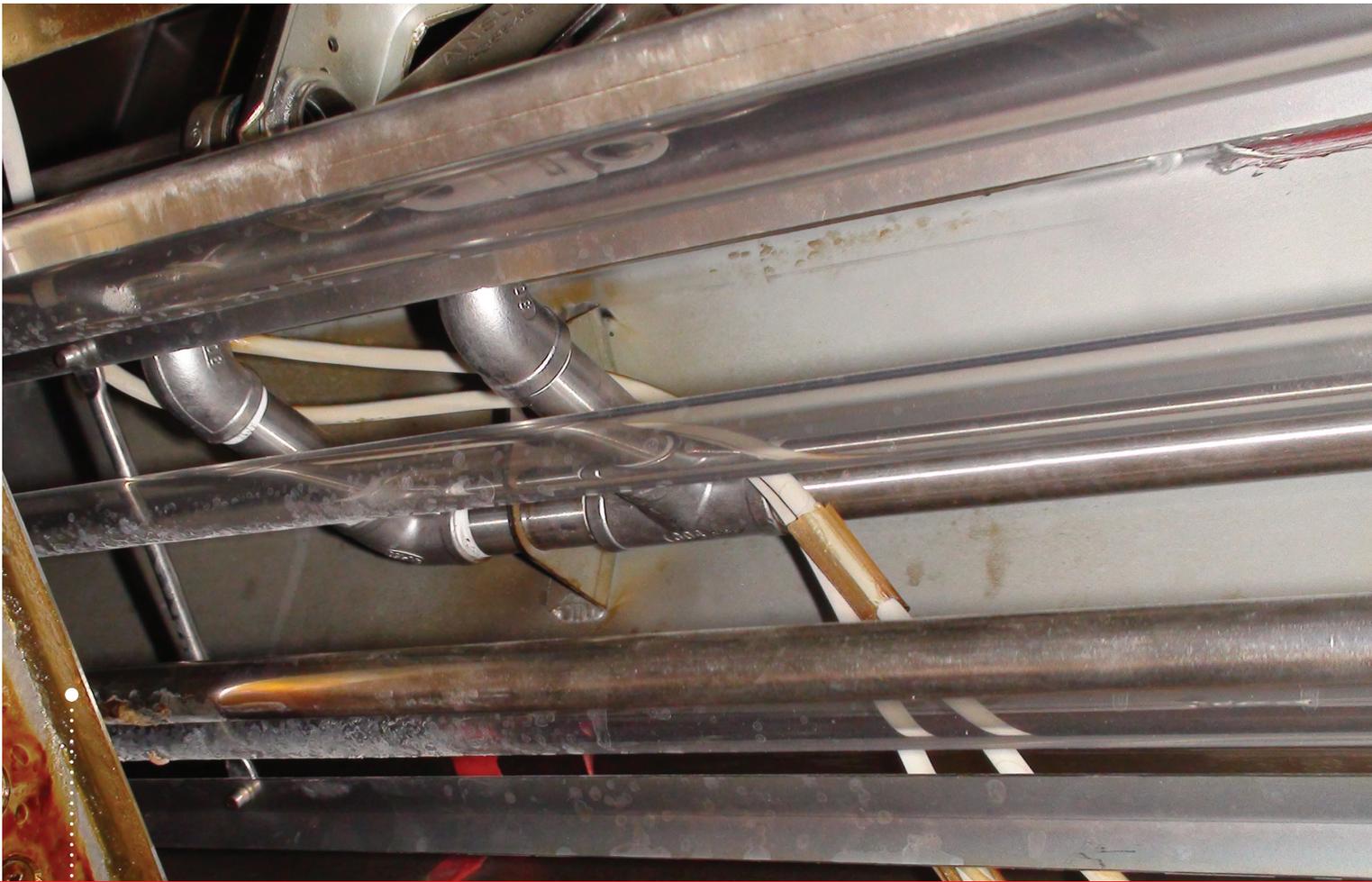
The Ozone combines with the organic substances in the air



The organic substances are oxidized



The oxidized substances are removed through the duct system



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
- ✓ Odor 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 odor (*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 odor 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 12 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 odor 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.*



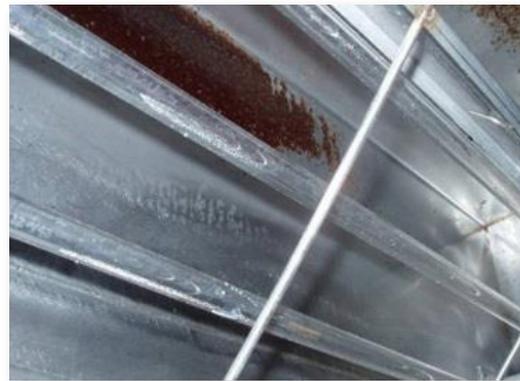
Grill duct **with** JIMCO Technology  
- Not cleaned for 60 months

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

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



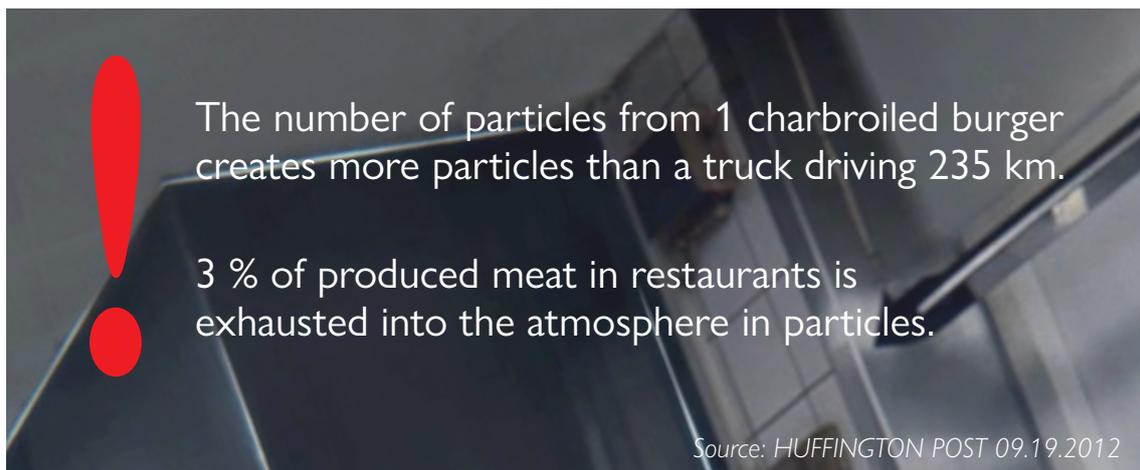
# KEEP YOUR HOOD CLEAN REDUCE FIRE RISK



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

The advantages of using a JIMCO KPC system means that 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 STORY



**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.

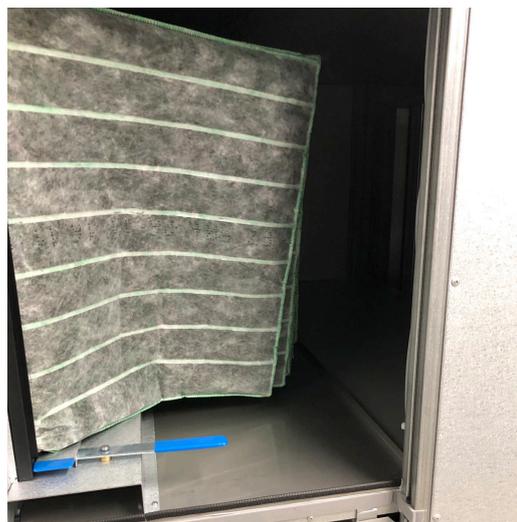


*Air Inlet channels*



*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 have not complained about odors, not even 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.*

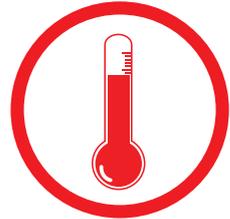




**SIGNIFICANTLY REDUCED  
FIRE RISK**



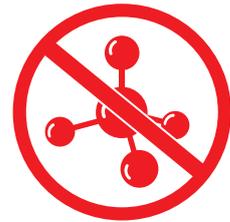
**NO USE OF CHEMICALS**



**OPTIMIZED HEAT  
RECOVERY**



**STREET LEVEL  
EXHAUST POSSIBLE**



**NO GREASE DEPOSITS**



**ENVIRONMENTALLY FRIENDLY  
AIR PURIFICATION**



**GET INSURANCE  
REDUCTION**

# KPC SYSTEM COMPONENTS



200.xxx

## **KPC UV-C FRAME - Ballast Inside**

Quantity lamps 2-6

Length: 446-1714 mm

Height: 178-304 mm

Depth: 72-105 mm



200.xxx

## **KPC UV-C FRAME**

Quantity lamps 2-8

Length: 446-1722 mm

Height: 129-337 mm

Depth: 70-154 mm



200.xxx

## **KPC UV-C FRAME - Triangular**

Quantity lamps 2-6

Length : 920-1765 mm

Height: 135 mm

Depth: 222 mm



200.xxx

## **KPC UV-C FRAME - HEX**

Quantity lamps: 4

Length: 780-1714 mm

Height: 201 mm

Depth: 73-143 mm

# KPC SYSTEM COMPONENTS



500.xxx  
**KPC BallastBox**  
428 x 190 x 150 mm - IP20



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



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 82 mm - IP67  
305 x 240 x 110 mm - IP66

# KPC SYSTEM COMPONENTS



300.526

### STO-Mini Remote Wall, EN

Wall mounted remote display (Plastic) + Control

Display: 147 x 96 x 38 mm - IP54

Box: 289 x 239 x 107 mm - IP65

1x230V+PE 50/60Hz · 2300 W



300.546

### STO-Mini Remote Hood, EN

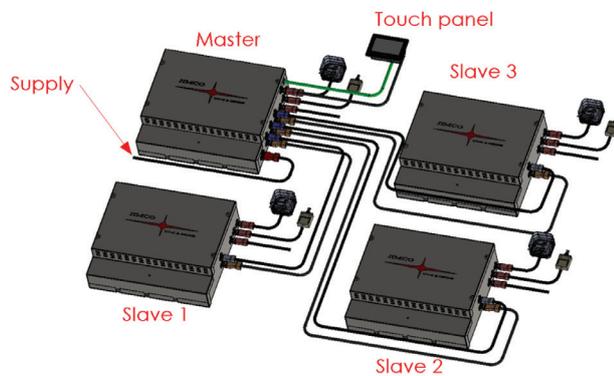
Flush remote display for hood (Steel front) + Control

Display: 15 x 124 x 40 mm - IP54

Box: 289 x 239 x 107 mm - IP65

1x230V+PE 50/60Hz · 2300 W

## STO-FLEX system



The STO-FLEX system is designed for easy installation and mounting from the factory. It is a plug-and-play system with a touch screen. The STO-FLEX control boxes come with ballasts. The STO-FLEX system has one master control. You can select a Master box for maximum 1 Slave box or a Master box for maximum 3 Slave boxes.

JIMCO recommends 1 box per hood section. You can choose between a system for mounting in the supply air chamber or a system with fans for mounting outside the supply air chamber.



### STO-FLEX Main control box

Remote touch display: 77,5 x 112,5 x 38,8 mm

Box: 121 x 418 x 357 mm

1x230V+PE 50/60Hz · 2300 W

### STO-FLEX Slave control box

Box: 121 x 418 x 357 mm

1x230V+PE 50/60Hz · 2300 W

# 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 resources, 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<sub>2</sub>, 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.



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 AIR PURIFICATION SYSTEM 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/>





UV-C AND OZONE SOLUTIONS FOR THE FUTURE  
EUROPE · SOUTH AMERICA · NORTH AMERICA · AFRICA · ASIA · MIDDLE EAST

For information  
please contact.

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