oxytec

Front cooking

Efficient odour removal with plasma

Cooking at the guest
without vapours, without odours

oxytec offers technologies that turn front cooking into a real experience without disturbing side effects.

Front cooking, i.e. cooking in front of the guest, is becoming increasingly popularity, no matter whether in restaurants, hotels, catering, in supermarkets and shopping malls. The concept has become a real trend and is finding more and more users in the industry.

However, this places special demands on the collection and cleaning of the cooking vapours, because, especially when cooking in supermarkets, there is often no appropriate ventilation. Here oxytec offers various solutions for almost every need and application. These offer the following advantages:

- independent of ventilation
- free choice of space
- mobility without limits

Hint:
The air after a plasma unit remains an exhaust air.
A recirculation system is not permitted by law for commercial kitchens. This also applies to small commercial kitchens with connected loads < 25 kW. The possibility of secondary air ducting (space internal) must be agreed with oxytec.

Secondary air operation is not permitted for gas-powered cooking appliances.

Trade fair
The Cleanair plasma systems are installed directly above the hood and eliminate unpleasant cooking odours.

Canteen
To remove cooking odours from the canteen within a multi-storey building and to be able to blow out the purified air on the outside facade, a Cleanair Plasma was integrated into the ventilation system.

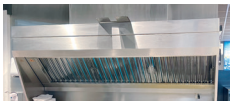
Mall
Conversion of shop units often means, that ventilation duct networks for grease exhaust air are missing. The compact exhaust air purification unit of the Cleanair Plasma offers a practical solution here.

Snack bar in the station
In a station building, small dishes are cooked and deep-fried. It is not possible to discharge the exhaust air of 3000 m³/h via the roof, as the the building is a listed building. The specification was to bring the exhaust air directly into the station hall at a height of 3 metres. The system makes it possible and at the same time uses the exhaust air for heat recovery.

Front cooking systems

oxytec products and their applications

Counter/grill hood with plasma **CAP hood T**

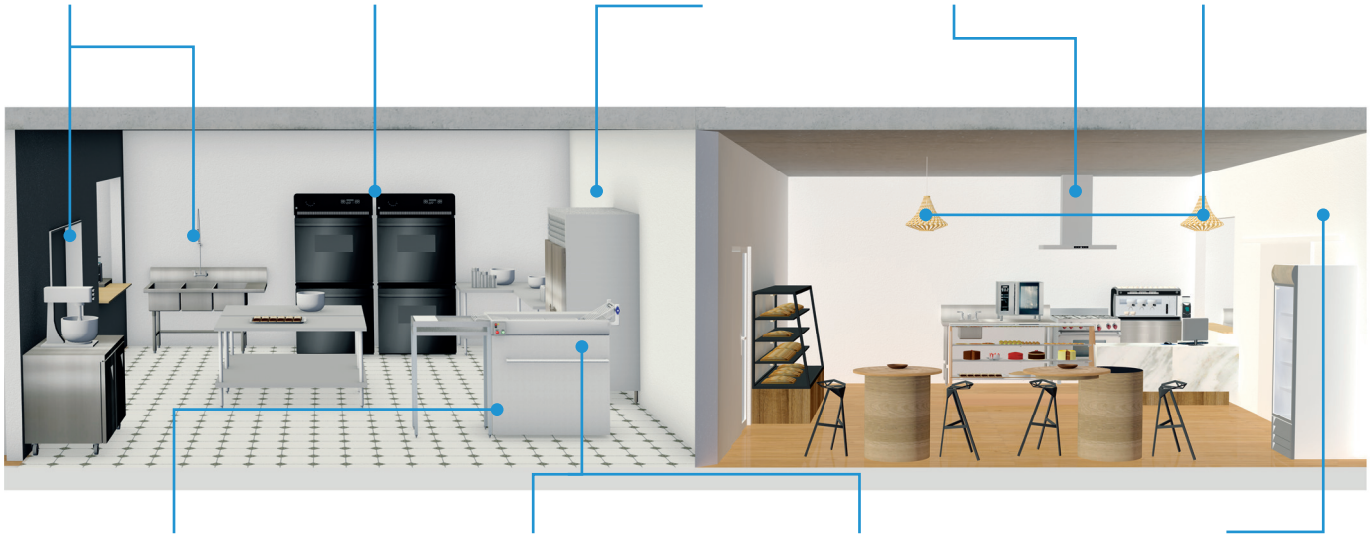


Plasma hood with electrostat **CAP hood E**

Condensation plasma hood **CAP hood C**

Island/wall hood with plasma **WHP and IHP**

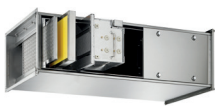
Plasma ceiling unit **Cleanair Cloud**



Front cooking **ODP**

Jet vapour extractor **GDP**

Plasma Front cooking station **PFC**



Cleanair Plasma **CAP mini H**

Efficient reduction in odours – without chemicals

The plasma technology was especially developed for removing odours and has truly stood the test in catering and industry. The plasma technology is based on a purely physical principle and functions like the UV-C/ozone technology without any chemicals. The plasma air purification is a technology for treating air and circulating air by means of which the smallest, gas-shaped, organic carbon compoands such as odour molecules are removed and **bacteria and viruses are destroyed.** Particulate matter and aerosols are separated in pre-filter stages.

This technology offers a **variety of possible applications.** These not only include kitchen exhaust air odours from large-scale catering establishments and gastronomy, but also ambient air contaminated with cigarette smoke, waste deposit room odours, bacteria, viruses and other harmful substances. Besides mobile catering installations and front cooking stations, living space ventilation can also be equipped with this technology.

The products of the Cleanair Plasma series match the respective requirements and are adapted in line with the individual conditions at the place of installation. They are **highly productive in the long term and energy-efficient**.

Cleanair Plasma – Circulating air as an alternative to exhaust air

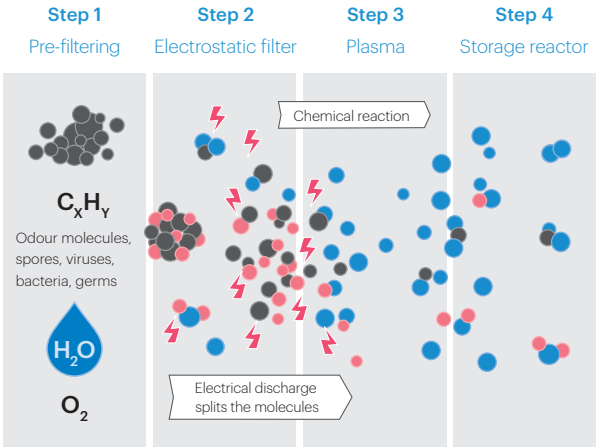
With the Cleanair Plasma circulating air filters, a technology is finally available that represents a low-cost alternative to effective exhaust air treatment. For now, an optimal air purification is also possible in cases where structural reasons have prevented an exhaust air solution.

Odourless and germfree air in four steps

The Cleanair Plasma technology (CAP) is based on four stages:

1 Pre-filtering for pre-separation
The pre-filter holds back the roughest air impurities. This protects the following stages of the plasma technology.

2 Electrostatic filter for pre-separation
Separation via cracking the molecule-structures by use of electrical potential.



3 Reaction processes and oxidation in the plasma stage

The reaction and oxidation process based on plasma is initiated by a through-flow of a high voltage discharge source: In this way, cooking fumes are oxygenated with singlet oxygen, carbon compoands are either stimulated to react or react directly with the oxygen.

4 Carbon filter as storage reactor
Compoands that have previously not been oxidised are held back in the carbon filter and oxidised. The activated carbon acts in this process as a storage reactor that returns ozone to oxygen among other things. One special feature of this technology is the extremely long service life of the activated carbon as it re-generates itself during the process.

Jet vapour extractor GDP

The Classical

The **Jet vapour extraction** (1-pipe, 2-pipe or 3-pipe) enables direct extraction at the point of origin and is thus, in contrast to hood solutions, not influenced by transverse flows.

Due to a unique collection channel in the extraction pipe aerosol is prevented from dripping back into the cooking area.

A combination with lighting, UV-C system or in the recirculating-air version with integrated plasma system, complete the system.

Advantages for GDP and ODP

- Capture of cooking vapours directly above the cooking area
- No rinsing possible
- Forms an effective hygiene spit shield at the same time
- Can be integrated into all commercially counter areas

Product name for RLT-operation	Size	Suitable for m³/h	Product name for secondary air operation	Suitable for m³/h
GDP 1	1 one tube	800	CAP hood GDP 1	600
GDP 2	2 one tube	1,600	CAP hood GDP 2	1,100
GDP 3	3 one tube	2,400	CAP hood GDP 3	Upon request

Frontcooking ODP

The Noble

The **ODP front cooking system** is the perfect solution for sophisticated front cooking. It impresses with functional technology, elegant design and individuality.

Optionally available for GDP and ODP

- Integrated air purification system CKA with UV/ozone technology keeps downstream systems practically grease- and odour-free.
- CAP with NT plasma technology enables odour-free front cooking in secondary air operation and prevents contamination of the environment through grease, vapours, blue smoke and odour.

Advantages

- Technology in a noble design
- A rotating flow field ensures uniform vapour collection
- Integrated fan for support ventilation

Product name for RLT-operation	Size	Suitable for m³/h	Product name for Secondary air operation	Suitable for m³/h
ODP 1	800	900	CAP hood ODP 1	600
ODP 2	1200/1400	1,800	CAP hood ODP 2	1,100
ODP 3	1200/1400	2,700	CAP hood ODP 3	Upon request

Plasma Front cooking station PFC

The Self-Supporting

Advantages

- Capture of vapours directly above the cooking appliances
- Neutralisation of grease, odour and blue smoke
- Hygiene spit shield made of ESG safety glass
- EC fans and socket installation
- Ready to plug in

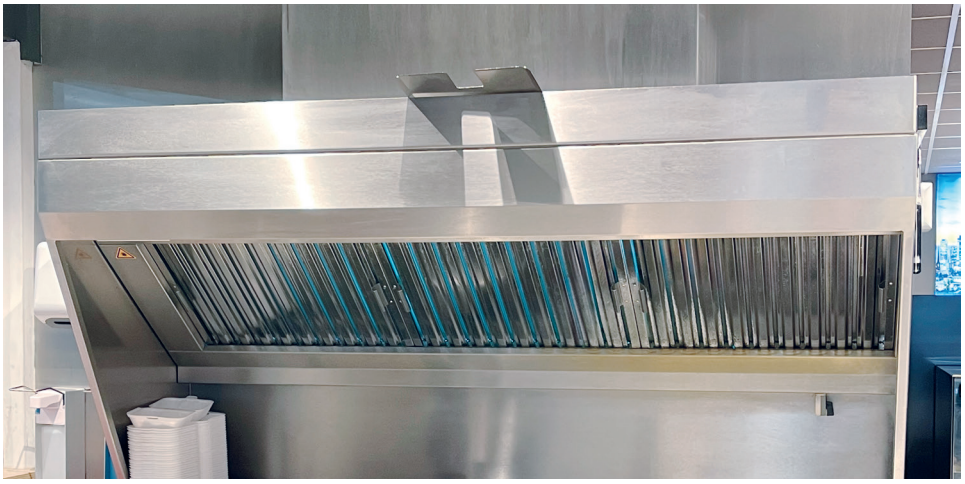
With the **front cooking station,** in real „secondary air mode" thermal grill, frying, deep-frying and other appliances (induction woks, pasta cookers, teppanyaki grills, etc.). can be operated. Equipped with the proven NT plasma technology and electrostatic filters, the cooking process can also take place in closed rooms without disturbing and annoying odours for the guests.

As a self-supporting unit, the station is independent of room heights and ceiling constructions.

Product name	Power consumption in W	Dimensions, mm (D x L x H)	Weight, kg	Retractable niche for thermal modules, mm
PFC 0,8	400	750 x 1410 x 1300	250	810 x 650
PFC 1,2	400	750 x 1810 x 1300	250	1210 x 650

Counter/grill hood with Plasma CAP hood T

The Compact One



Ultra-compact **counter/grill hood** to be placed directly or on top of the cooking appliances.

The counter hood has an extraction system with integrated NT-plasma technology and offers effective exhaust air purification in secondary air operation.

The cooking or deep-frying vapours are extracted as soon as they are produced and fed just as quickly and effectively to the NT-plasma system for cleaning. This prevents contamination from fat, protein, water vapour or odours.

Advantages of the counter/grill hood

- Capture of vapours directly above the cooking appliances
- Effective neutralisation of grease, odour and blue smoke
- Independent of the ventilation duct

Technology and Material

- Combi separator
- Electrostatic
- Plasma unit with activated carbon
- EC fan

Product name	Suitable for m³/h	Power consumption (total), kW	Active power, kW	Active power, kW (Fan)	Dimensions, mm (L x W x H)	Material
CAP hood T 600	600	0.40	0,14	0.3	Upon Request	Stainless steel
CAP hood T 1200	1,200	0.60	0.14	0.46	Upon Request	Stainless steel

Condensation hood CAP hood C

The Special

This **steamer hood** with integrated NT-plasma technology offers effective exhaust air purification in secondary air mode. Thus cooking vapours are cooled and released odourless to the environment.

Technology and material of counter/grill hood and CAP hood C

- Condensation unit
- Separator, mesh filter, sponge filter
- EC fan
- Plasma unit
- Activated carbon
- Hepa filter
- Stainless steel hood
- Control panel with 4-step switch

Advantages CAP hood C

- Capture of vapours directly above the cooking appliances
- Effective neutralisation of grease, odour and blue smoke
- Independent of the ventilation duct

Condensation

The condensation plasma hood condenses hot vapours, removes odours via plasma and reduces blue smoke via hepa filtration.

Product name	Suitable for m³/h	Active power, kW	Dimensions, mm (L x W x H)
CHP	1,000	0.6	Upon request

Plasma hood with electrostat CAP hood E

The Commercial

This **compact plasma hood with EC-fans and electrostat** is designed for commercial use, offers effective exhaust air purification in secondary air operation and thus ensures a high reduction of grease, blue smoke and odour reduction.

Cooking and frying fumes are captured by a standard-compliant kitchen hood and quickly and effectively fed into the system for cleaning by energy-saving EC fans.

For almost odour-free front cooking stations, food outlets, kiosk operations in malls of shopping centres, railway stations and trade fairs.

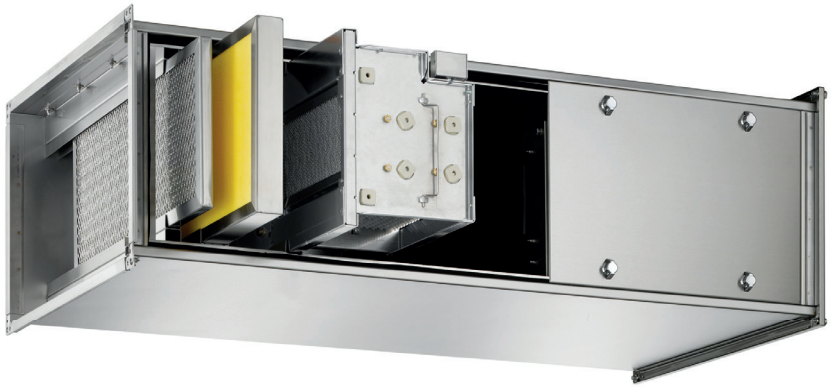
Advantages

- Commercial kitchen hoods according to DIN EN 16282 or VDI 2052
- Effective neutralisation of grease, odours and blue smoke
- Independent of the ventilation Duct

Product name	Suitable for m³/h	Power consumption (total), kW	Electrostat number and types	Active power, kW (Electrostat + Plasma)	Active power, kW (Fan)	Dimensions, mm (L x W x H)	Weight, kg	Material
CAP hood E 600	600	0.31	600	0.08	0.23	1000 – 1100 x 1200 x 650 – 800	150	Stainless steel
CAP hood E 1100	1,100	0.62	1500 Q	0.16	0.46	1200 – 1500 x 1200 x 650 – 800	185	Stainless steel
CAP hood E 1500	1,500	0.93	600 & 1500 Q	0.24	0.69	1600 – 2200 x 1200 x 650 – 800	330	Stainless steel
CAP hood E 2000	2,000	1.24	2 x 1500 Q	0.32	0.92	2300 – 2800 x 1200 x 650 – 800	410	Stainless steel

Plasma unit CAP mini H

The Universal



The compact **Cleanair Plasma CAP 600/1100 SS ES H** unit is suitable for installation in the ventilation duct or as a hood attachment equipped with the proven low-temperature plasma technology (NTP).

Thanks to the efficient pre-filtering and electrostatic filter the plasma effect is completely available for odour minimization, which leads to an increase in theefficiency and ensures the long service life of the activated carbon. The air flow is through the volume plasma and not just past it. The effectively purified exhaust air is therefore free of harmful environmental effects such as noticeable kitchen odour, and can be discharged alternatively, e.g. at ground level.

Advantages

- Subsequent integration into existing plants possible
- Ultra-compact cleaning unit
- Effective neutralisation of grease, odour and blue smoke
- 4-stage control
- Low overall height

Technology and Material

- Stainless steel housing
- Mesh and sponge filter
- Plasma electrode
- Fan
- Activated carbon

Product name **CAP mini H**	Suitable for m³/h	Power consumption (total) in kW	Active power, kW (Electrostat + Plasma)	Active power, kW (Fan)	Dimensions, mm (L x H x W)	Weight, kg	Material
CAP 600 SS ES H	600	0.68	0.08	0.6	1300 x 400 x 370	70	Stainless steel
CAP 1100 SS ES H	1,100	0.96	0.16	0.8	1300 x 400 x 700	120	Stainless steel

Wall and island hood with plasma unit WHP/IHP

The Semi-Professional

The wall-mounted and island hood for reheating kitchens works with volume plasma to remove odours, allergens and mould spores.

- Suitable for reheating kitchens e.g. in day-care centres and dining rooms
- Eliminates odours, allergens and mould spores
- Works with volume plasma to inactivate viruses

Technology and Material

- Stainless steel
- Stainless steel baffle filter
- Plasma unit with activated carbon
- EC fan

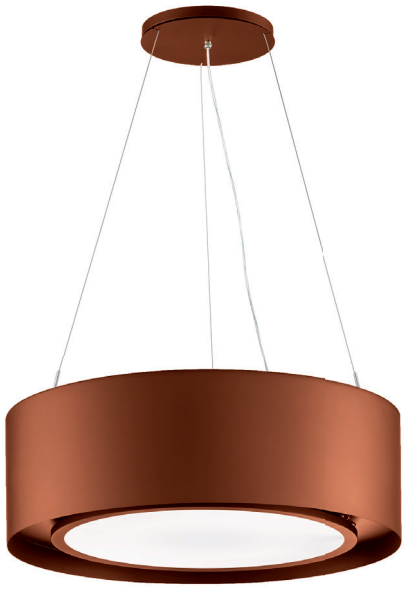
Advantages

- Energy class A+
- Integrated touch control system
- Functionally dimmable
- Duct and reduction flange included 150 – 120 mm

Product name	Volume in m³/h	Mains voltage	Dimensions, mm (L x W x H)	Weight, kg
WHP 90	750	230 V/50 Hz	900 x 500 x 80	27
WHP 120	750	230 V/50 Hz	1200 x 500 x 80	31
IHP 90	750	230 V/50 Hz	900 x 600 x 65	27
IHP 120	750	230 V/50 Hz	1200 x 600 x 65	31

Plasma ceiling unit Cleanair Cloud

The Beauty



This plasma hood is designed for germ-laden, smelly room air, whether in the kitchen, at home, in healthcare or in the hotel and catering sector. It combines professional technology with elegant design and is also economical in terms of energy consumption.

Equipped with NT plasma technology, this hood ensures highly effective cleaning of the room air by effectively not only filtering odours, viruses, bacteria, yeasts and mould spores in the air, but also inactivating them. The efficiency of this technology has been tested and confirmed under real conditions by the Fraunhofer Institute for Building Physics. The **Cleanair Cloud** can be operated in multiple stages and is at the same time a design and lighting object due to the integrated dimmable lighting.

Areas of application:

- Open kitchens in the private sector
- Buffet, banquet and counter areas
- Guest rooms, lobbies and lounges
- Waiting rooms and lounges

Product name	Suitable for m²	Volume in m³/h	Power supply, W	Mains voltage	Dimensions, mm (L x Ø)	Noise level, (dB)	Weight, kg
Cleanair Cloud	25 – 56	150 – 600	21 – 75	230 V/50 Hz	325 x 900	28 – 58	approx. 50

Let us advise you individually.
We are happy to be there for you!

air and water purification

www.oxytec.com

oxytec ag

Switzerland
Feldeggstraße 39 | 8034 Zurich
info@oxytec-ag.com
+41 43 511 33 93

Germany
Geibelstr. 64 | 22303 Hamburg
info@oxytec.com
+49 40 480 967 73

Czech Republic
Revoluční 1082/8 | 11000 Praha 1
info@oxytec.cz
+420 722 908 426