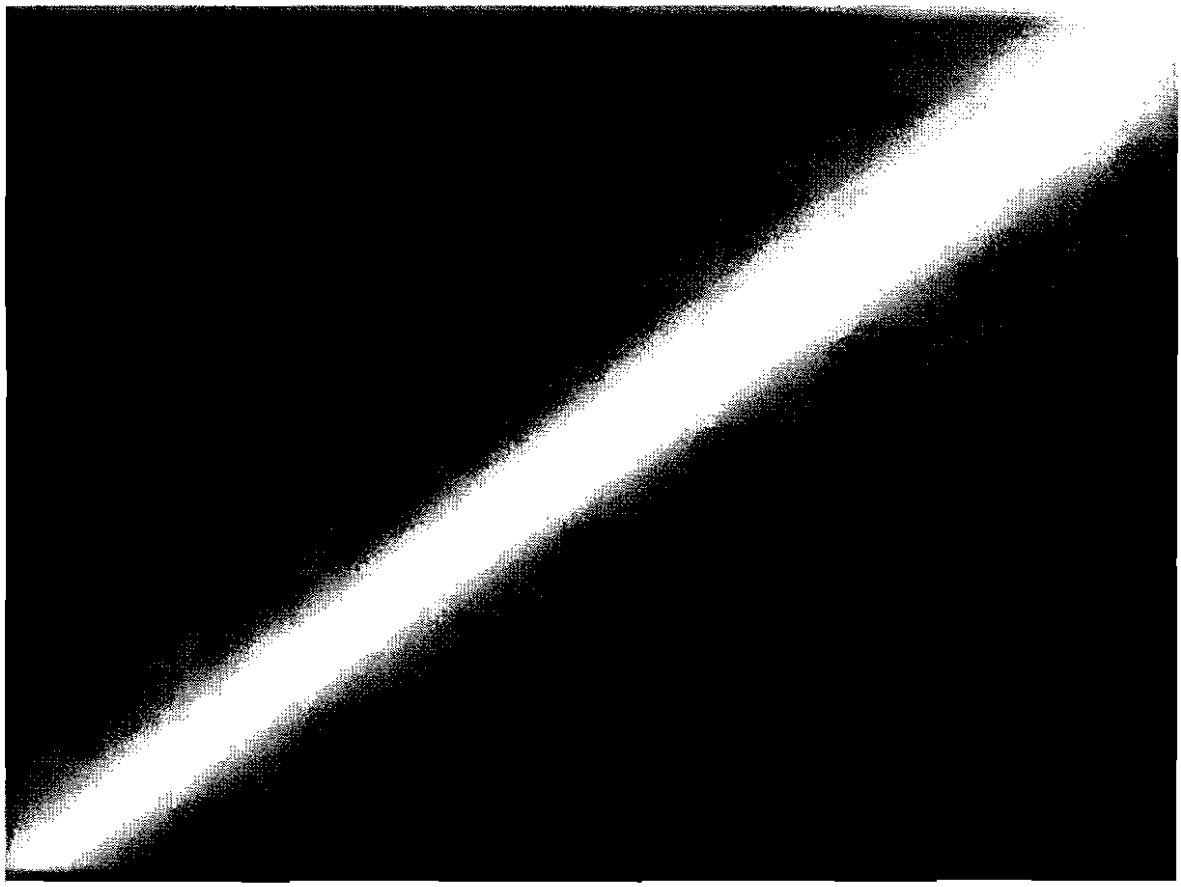
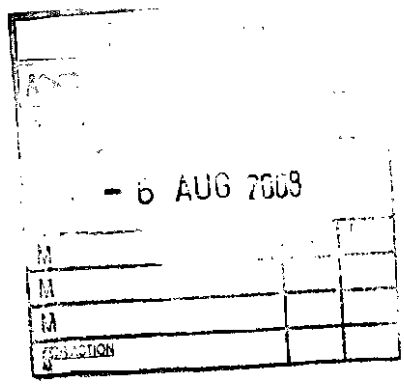
UV-C Odour Control Technology



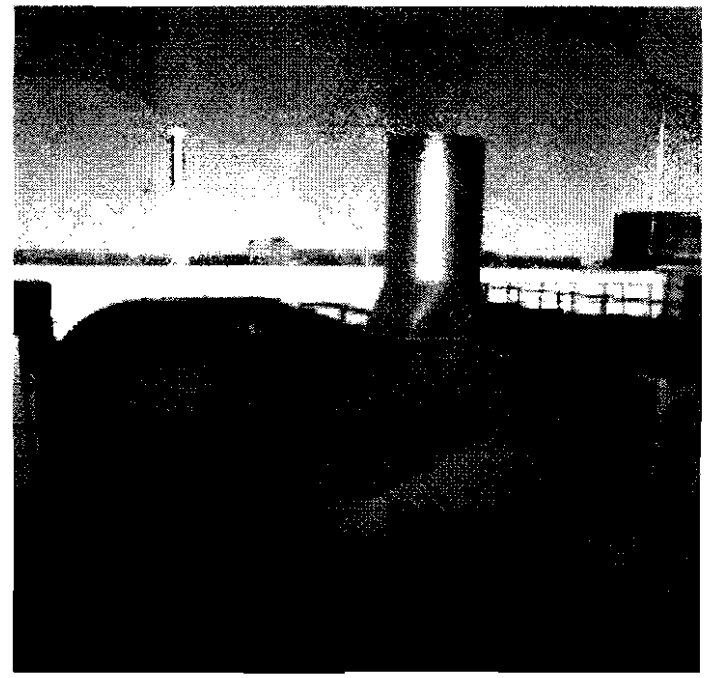


purifiedair®
providing a better environment

Purified Air Systems...

...market leaders in odour control for the food service industry

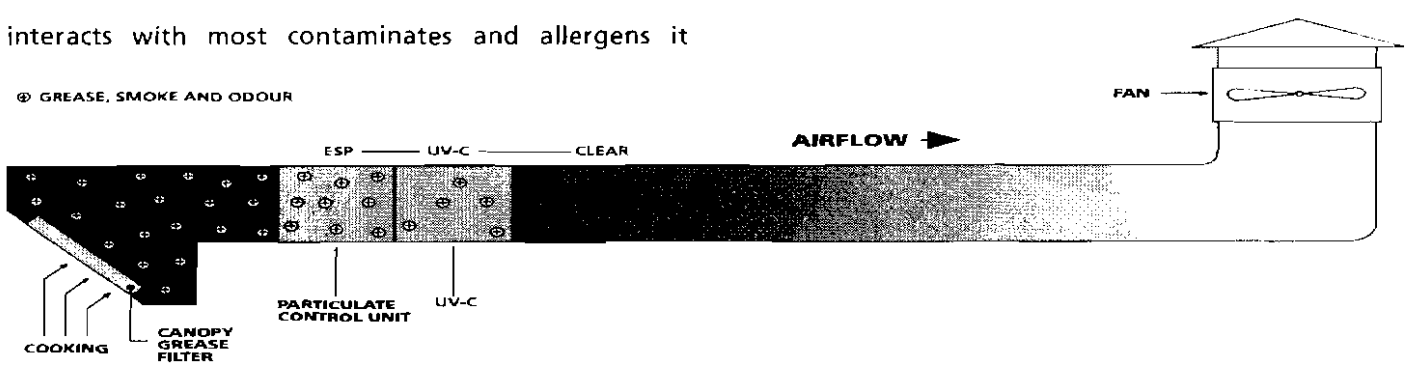




The emission of cooking odours from commercial kitchens is becoming an increasingly important environmental issue, as well as having a significant influence on the granting of planning permission for new restaurants. UVC Technology from Purified Air uses UV-C (ultra-violet light) to eliminate cooking odours and alter the make up of grease to a better-managed compound.

How UV-C Technology Works

UV-C technology is based on the synergy, which occurs when ozone and ultra-violet light are combined and the Purified Air modular system features six to eighteen high output UV-C lamps. These lamps act to oxidise odours and grease permanently destroying and altering the compounds. Some of the lamps are designed to produce UV light at 185nm, which converts ozone from the oxygen present in the air. Ozone is a highly reactive oxidant which interacts with most contaminates and allergens it encounters rendering them harmless, and at the same time removes odours. The remaining lamps in the system combine to produce UV light at 254nm, the most efficient UV-C wave length, which converts the ozone to hydroxyl free radicals. Purified Air's UV-C odour control system also features a photo catalytic liner, which enhances the production of hydroxyl free radicals. Free radicals are natural air cleansing agents and are strong oxidants. They are significantly more powerful than plain ozone.



Safety

Band C ultra-violet light is the most powerful of the three bands, so to ensure the safety of customer's employees the UV-C technology is secured behind locked panels. The system has also been engineered to shut down automatically when the panel is unlocked. However, since the lamps typically have a life of twelve months and with the system able to operate even if one lamp fails at optimum efficiency it is unlikely that, apart from routine servicing by experienced engineers, the system will ever need to be opened. As an option Purified Air's UV-C system can also be fitted with a self-diagnostic module, which constantly monitors the unit to ensure no installation or component failure



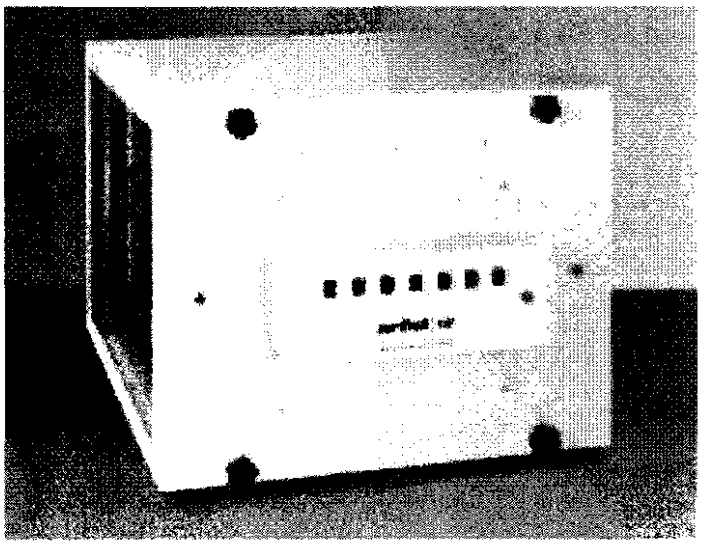
Electrostatic Precipitator (ESP)

UV-C technology cannot remove smoke, and for those instances where a lot of smoke is produced at the kitchen extract due to the cooking style, for example char-grilling. Then Purified Air recommends that the UV-C system be used in conjunction with a filtration system such as their Electrostatic Precipitator (ESP).

Purified Air's highly efficient ESP range cleans the kitchen extract emissions of both smoke and grease and can remove particulate down to sub-micron (0.01 micro) size. Filter efficiency of 98% is attained during a single pass through the ESP, based on the charging of particles. These particles are then trapped on the earthed plates in the collector cell with larger particulate in the air stream removed by the pre-filter. Lastly the air stream passes through an after-filter to prevent re-entrainment and provide good air distribution.

Main Features

- **High efficiency UV-C technology**
- **No cooking odours**
- **Grease altered to better managed compound**
- **Robust, compact construction**
- **Twelve month lamp life**
- **Minimum maintenance**
- **High security - UV-C lamps locked behind panels**
- **Optional self-diagnostic system**



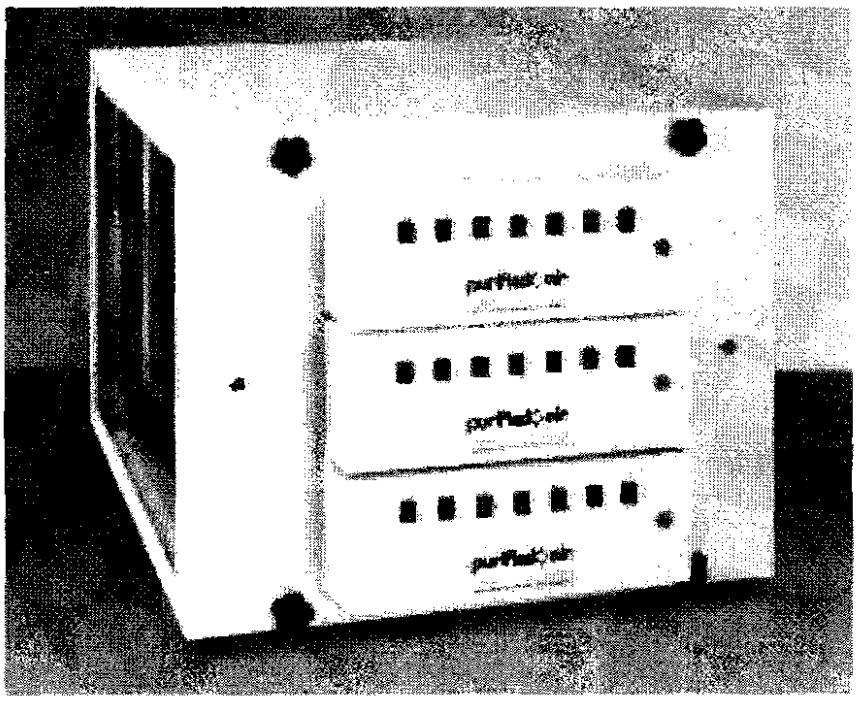
This unit's tried and tested UV-C technology allows for the siting of commercial kitchens in locations such as residential areas and shopping centres, where previously planning permission would not have been granted.

After extensive research and development Purified Air devised the best combination of lamps at different wave lengths, which when combined with the photo catalytic liner provides the most effective odour control.

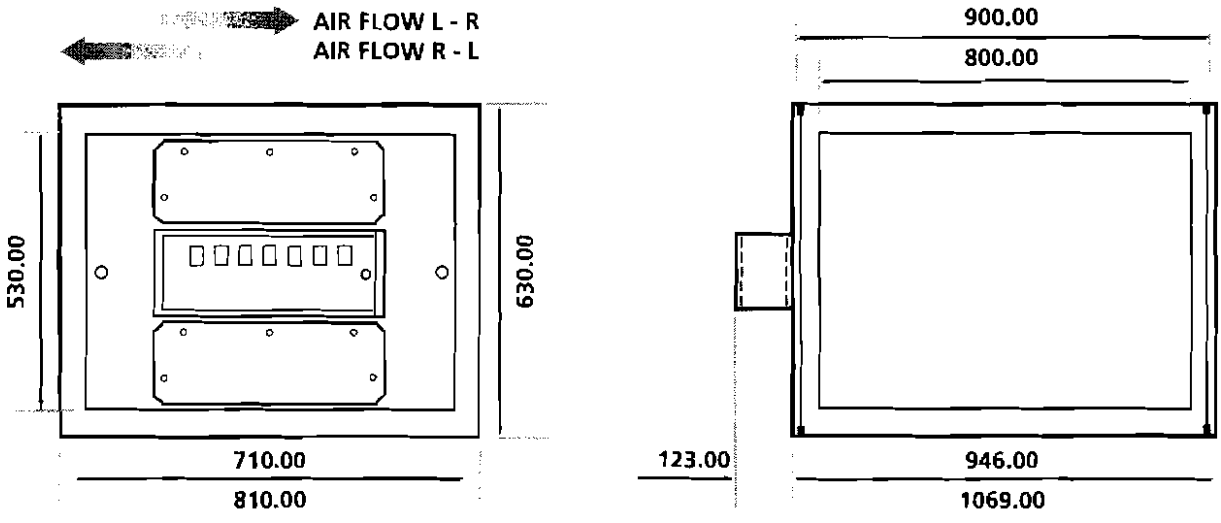
Technical Specifications



Six ESP and Three UV-C modules installed as an integrated system.



The Purified Air system modular is designed to be able to incorporate up to three racks of six lamps. The unit can be stacked as with our ESP range to accommodate higher airflows.



■ Electrical Supply	220/240v 50Hz 1ph	■ Weight Per Rack	16 Kg.
■ Power Consumption	500w (Per rack of Six lamps)	■ Min/Max Working Temperature	4/56°C
■ Weight Unit	105 Kg.	■ Maximum Relative Humidity	75%

TÜV

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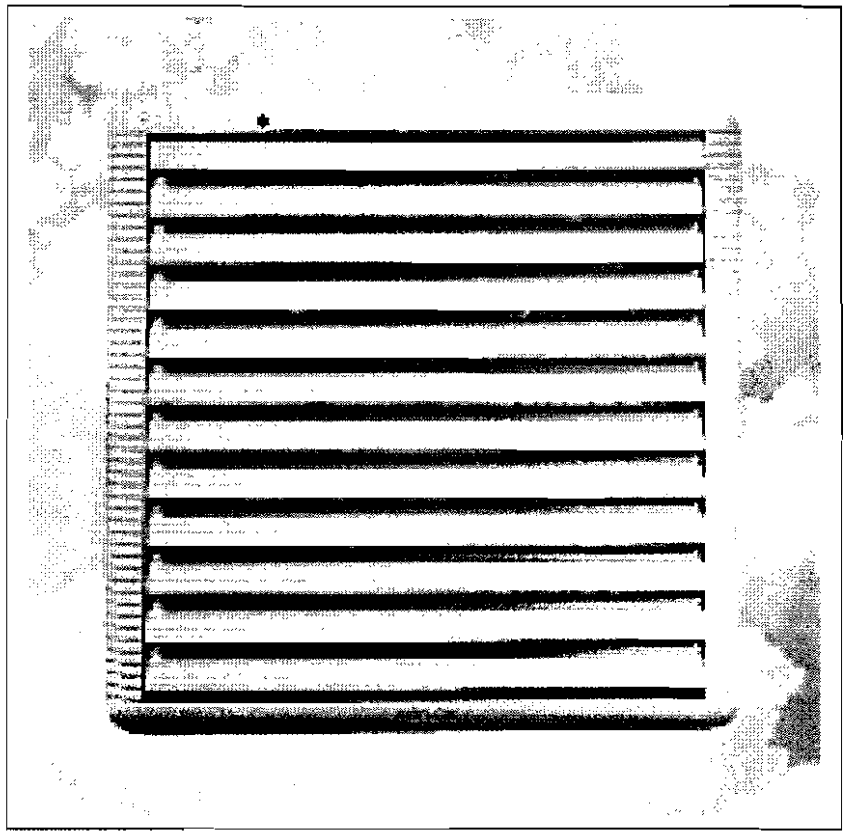
providing a better environment

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JAN 2004

EXTRACTION FAN EXTERIOR DESIGN



Manufacturer- AIRFLOW
Model number MV300
300mm Maxivent Fan

Exterior can be any colour in order to of set any differences in environment.