## FREMAP Hospital, Majadahonda, Spain - Operating Rooms



Fremap Hospital is a successful public health care facility belonging to the MAPRE private insurance group and has 124 beds covering 4,000m<sup>2</sup> / 43,000ft<sup>2</sup>. Their focus is on quality customer service and use of the latest technological innovations. The managers wished to improve air purity in critical treatment areas and to continuously limit micro organic concentrations on surfaces to below 50 CFUs, without disruptive chemical disinfection.

Activtek installed its <u>Induct technology</u> within advanced TROX system air-conditioning/heating ducts air discharge chambers: six <u>Induct 5000</u> modules in the operating room system and 1 Induct <u>10000</u> module in the rehabilitation room.

Results: The micro bacterial controls below 50 CFUs were achieved, increasing comfort and air safety for patients, visitors and staff. VOCs were maintained below regulatory thresholds. In addition, the RCI technology helped increase retention capacity on the traditional particle filters in the system by increasing particle agglomeration by 60%-90%. Overall an excellent example of Activtek at work, helping to achieve operating and energy cost savings.





One of the largest and most important public hospitals in Spain wished to improve particle and microorganism levels inside its buildings in reaction to the constant evolution of the superbug threat. In particular, it wanted to address potential issues on the new born baby unit. Activtek standalone units and Induct membrane cells were installed in different parts of the maternity operation.

Results: Once again Activtek's <u>RCI technology</u> not only successfully continuously disinfected the environment and surfaces in a proactive way, reducing biosecurity risks, but also contributed to improved efficiency on the traditional HEPA filters by increasing average particle size. A double-sided success bringing real, cost effective benefits to patients and staff in an ecological way.

## Global Restaurant Franchisee – top site, Sao Paolo, Brazil



One of the best performing franchise restaurants in South America, (operating under a global brand), needed an effective odor reduction strategy for the external ventilation stack, due to the enclosed urban area where it was located. No traditional ventilation solution was capable of addressing the client's need. An innovative, large-scale solution was required. <u>Activtek Induct</u> technology was employed in a custom-made ventilation solution specifically for the higher-grease-level environment with careful project planning & expertise from Activtek engineers.

Result: Odor elimination is virtually total and the business continues to prosper within a happy and supportive local community.



## Zena Group – Burger King & Fosters Hollywood brands, Spain

Many people enjoy a great grill or burger meal, although sometimes those mouth-watering aromas from the juicy meat dishes can find their way into our clothes or stay with us for the rest of the day. This large, national group always wants to offer the best customer experience & it trusted Activtek to provide cost-effective, portable solutions to freshen the air in 180 of its group restaurants. Two Eagle 5000 light-weight portable units, a product specially designed for this environment, were installed in each restaurant to limit indoor odor contamination.

Result: Odors from grill and grease have been reduced to a minimum. Customers have noticed a change in the ambiance.

#### **Retail Grocery Store – eastern Ohio, USA**



This well-known grocery store is a franchisee of a large regional chain and had all the potential freshness challenges common to similar businesses. Activtek continuous-working <u>Induct technology</u> was installed in produce display cases, meat & deli cases, walk-in storage in meat, dairy & bakery and also in the meat cutting room.

Result: Shrinkage of fresh produce, meat & deli goods was reduced by 60%. There was a noticeable improvement in odors, and cooling coil maintenance was reduced by 70%. Feedback from the store owner after 1 year was: "Knowing what I paid & the savings and benefits received, if you walked in here today quoting a price double what I spent, I would not hesitate to purchase the system"

#### Airbus, Production Facilities, Getafe, Spain



As one of the two leading global airplane manufacturers, Airbus needs no introduction. Airbus wanted the best possible air handling units (AHUs) for its new HVAC system at a key production facility near Madrid, and sought a bespoke solution: in particular it wanted to guarantee clean, healthy air (free of VOCs), particle reduction & energy efficiency. The industrial size AHUs combined indirect gas-fired heating with magnetic refrigeration. Activtek's photo catalytic Induct 10000 air purificaction units were installed before the filters on the output & return cycles. The main aim of the purifiers was to continuously disinfect the filters and humidifiers, preventing any biofilm build up impeding heating quality, and continually sanitizing filters and other components to increase performance and reduce maintenance.

Results: A successful partnership with their HVAC consultants has seen repeat orders for the same Activtek-led solution across more Airbus facilities. Significantly, particle count is also reduced as the <u>RCI technology</u> helps aggregate particle size and there is no need for old-style carbon filters, eliminating extra replacement filter cost and the associated performance loss with their use.

## ALK, European Pharmaceuticals



ALK is the world's largest maker of allergy immunotherapy products with headquarters in Denmark. At its Madrid ALK Abelló facility, AIK sought the best eco-friendly solution to maintain the high air quality and surface hygiene in laboratories & offices, without the need for expensive chemical cleansing solutions. 1 Induct 5000 & 2 Induct 10000 units with RCI technology were embedded seamlessly in existing HVAC system ducts.

Results: Ambient & surface microbial contamination was reduced even in an already very clean environment, as well as the reduction of chemicals odors. Micro organic CFUs remain below 50 and continuous disinfection takes place while reducing environmental impact and with lower operating and maintenance costs

# **Bocar Automotive Parts, Mexico**

Bocar Automotive wished to reduce pathogens and contaminants in its installations.

Results: Microbiological tests were performed in a predetermined area to see the reduction that could be achieved with Activek <u>AP3000</u> purification equipment. Within 48 hours, virus, bacteria, fungi, spore and coliform propensity in an area of constant use was reduced by 80%

## Chicago O'Hare Hilton 'Environ Rooms'



This is a brilliant example of Activtek in the US working with a multinational brand hotel to create a real, innovative solution to a fast-growing modern problem, and helping them to win more clients. The Chicago O'Hare used Activtek to create a new product: allergy-safe rooms (Environ Rooms). The renovated rooms were outfitted with hardwood floors, non-vinyl wallpaper, all-cotton bedding, wooden blinds & wooden furniture. Air purifiers containing the RCI <u>technology</u> were featured in both rooms.

**Result:** : An environment which is 99.999% free of harmful microorganisms, circulating as fresh air – friendly, continuous disinfection that guests love!



## Reebok Oasis Center - Canary Islands, Spain

The owners (and customers!) of this high profile and very busy sports center wanted "a gym that didn't smell like a gym". With 1,700m<sup>2</sup> / 43,000ft<sup>3</sup> (over 18000 ft<sup>2</sup>) to purify, this is typical of the type of operation helped by Activtek in Europe and elsewhere. We provided a cost-efficient, multi-product solution. Two <u>Activtek Inducts</u> were installed in the existing HVAC system to ensure actively circulating air in the main rooms was receiving our unique photocatalytic oxidation purification. This was supported by 3 <u>Eagle 5000</u>, self-contained, portable, multiple technology, air treatment systems for the spinning and exercise areas.

Result: Effective, continuous odor reduction within 24 hours and "a gym that doesn't smell like a gym"

# Banco Santander, New Corporate Office, Sao Paolo, Brazil



A leading global bank needs a world-beating working environment for its employees. Banco Santander turned to Activtek to deliver at its offices in Brazil – including five district offices and a large new data center for 3,000 workers. Recognizing that traditional filtering isn't everything, the bank's project managers sought out the latest technology to control odor levels, keep a low microorganism count, reduce employee absenteeism and increase productivity. Activtek engineers worked closely with them at every stage on this large project on the Indoor Air Quality Management System, installing <u>RCI technology</u> fit for purpose:

<u>400 Inducts</u> were placed in the new building ventilation systems to support filtering plus plug & play units for smaller spaces: 40 small format EcoBoxes for Bathrooms & 10 <u>AP3000</u> for restaurants.

Particularly important were the eco-friendly characteristics of the system. The units were also used to meet the requirements for LEED Credit 3.1 from the Green Building Council, which specifies improved air quality guidelines during construction.

Results: All project goals were met with odor control and very low CFU count in the different working environments. Activtek was part of the team to win the SMACNA\* Highlights of the Year Award in Brazil TWICE for the most advanced HVAC system.

\* Sheet Metal and Air Conditioning Contractors National Association



# Turk Telecom, Istanbul, Turkey

Turkey's leading communications and convergence technologies company, Türk Telekom Group, have 13 million fixed line, 7 million broadband (wholesale) and 16 million mobile subscribers. The company sought to reduce absenteeism to 5% and improve air quality at its main call center facility. ActivTek Turkey provided a retrofitted Induct solution to air-handling units that could be installed in a record time (less than a day) in order to avoid any down time at the center. They equipped 2 floors with 16 x Induct 10000,1 x Induct 2000 & 1 x Induct 750 units per floor. Each floor

measured 4,200 m<sup>2</sup> / 45,000ft<sup>3</sup> with a ceiling height of 2.9m. 700 employees worked on each floor.

Results: Successful. Ambient odor was kept to a negligible minimum and employee absenteeism was down by almost 30%. Other benefits include the reduction of particles, improving air and comfort for all employees. Sick building syndrome symptoms (headaches, sneezing, etc.) have been greatly reduced

# **BBVA Bank, National Branch Network, Spain**



BBVA, one of Spain's leading banks, needed to freshen air inside its branches for customer and employee benefit, and sought a natural continuous solution rather than reliance on chemicals or scented air products that stimulate allergic reactions and create more harmful VOCs. This is a good example of a smaller scale portable solution working in more compact office environments at street level and with access to the general public, where work environment contaminants are constant. This long term contract foresees the installation of 5,000 Activtek Fresh Air / <u>AP3000</u> units (portable standalone units) in a program running until 2016.

Results: This portable solution (rather than an in-built duct solution) was a popular, cost-effective option with managers. Less or no odors are noted, there is no mold & there is less employee absenteeism



## Intercity buses - Latin America

Bus transportation operators in Brazil & Mexico have installed prototypes of customized Activtek ductstation solutions, specially designed to eliminate restroom odors and food preparation smells from the small kitchens on board. Two units are installed per bus and are built to be tamper proof and cope with vehicle transit vibrations.

Results: Our partners in these tests are delighted with the results and improvement to the bus-riding experience for their customers. Activtek RCI plasma purifies the air during journeys.

# Aeropuerto Internacional de la Ciudad de Mexico



The busiest airport in Latin America (by aircraft movement) faced the typical odor and contaminant challenges of a large dynamic transport hub with 30 million passengers. The operators wished to counter odor issues in the old terminal, in particular in high contaminant restroom areas, and also foresee proactive purification measures in the public areas of the new terminal under construction. 185 x DuctStation Box units were installed in restrooms in the old terminal with a provision for over 500 x Induct 10000 or 5000 installations in air handling units (AHUs) in both new and old terminals.

Results: Odors have been eliminated in restrooms with the proactive <u>RCI technology</u>, giving the user a better service. There has been reduction of particle dissemination in the public areas, improving air quality and comfort for international passengers and reducing the risks of contamination.



## Spring Water Bottling: Leading multinational drinks maker

This major drinks supplier wanted to take extra precautions against mold, yeast and other bacterial contaminants in its ultra-hygienic premises. The company was concerned about keeping their key production area with the best possible air quality, especially the filling lines, to allow them to fully comply with the standards set by TCCC for this production area without all the inconveniences of having to spray hazardous chemicals on production environments.

Located at multiple sites across Spain, Activtek provides solutions not just for the final filling room but for the whole processing chain, including the laboratory sterile area, water tanks room, filling lines and air conveyor room.

Result: All prevention and disinfection goals have been achieved without having to stop production lines. Continuous disinfection takes place while reducing environmental impact and with lower operating and maintenance costs. The reputation of an international brand name is safeguarded in an eco-friendly way

## La Ñeca Fruit & Vegetable Grower – Almeria, Andalucia



Located in one of Europe's biggest regions for fresh vegetable cultivation, this family-run international exporter of products such as aubergine & zucchini needs to control the level of microbes and concentration of ethylene gas in its fresh produce storage rooms. With a volume of 170m<sup>3</sup> (6000ft<sup>3</sup>), their temperature (9°C), humidity control and hygiene standards are typical of the industry. An Activtek <u>Ductstation box</u> with RCI technology was installed in the room with excellent results compared to the previous solution used.

Result: With Activtek the volumes of etylene reduced to 0.2ppm (82% less than the levels using previous solutions) within just 6 days of installation, significantly improving product lifespan. The technology keeps the air purified with virtually undetectable levels of harmful microbes, reducing chances of cross contamination and offering a significant cost saving opportunity to the producer. A product that lasts longer- naturally!

## Pig Farm, Belgorod, Russia



To control ammonia build up in an enclosed space of 3000m<sup>3</sup> (106,000ft<sup>3</sup>), our client asked Activtek for the solution. In this sector, higher levels of ammonia affect animal weight gain, which may be reduced by up to 10% during prolonged periods of exposure. At very high levels, clearance of bacteria from the lungs is also impaired and therefore the animal is more prone to respiratory disease. We installed 4 Induct 5000 modules with RCI technology effortlessly into the existing ventilation and heating system.

Result: From a start point measurement of 20mg per cubic meter, within 48 hours this had lowered to 6mg/m<sup>3</sup> and after 100 hours to 4mg/m<sup>3</sup>: very low levels & not capable of affecting rearing quality. Happy and more profitable farmers!

#### Schools, Colleges and Nurseries



Children's lungs are still developing until they reach about 6-8 years of age. During this time, lungs can easily be damaged by pollution or infection. Children breathe 4 times as much air per pound of body weight as adults. This means that children take in more pollutants than adults.

Childcare facilities and schools often have problems with indoor air quality because of high concentrations of people in small areas, outdated buildings or low maintenance budgets. Poor air quality can increase the spread of communicable diseases and cause discomfort such as congestion and coughing for children and adults.

Activtek provides portable solutions, like the <u>AP3000</u>, that can easily be installed to begin proactive cleansing safely with <u>RCI technology</u>– designed to create indoor air, nature's way



## Washroom Odor Reduction & Disinfection

Where there are washrooms there are bacteria and odors. While other systems rely on contaminated air to be carried through filters to be treated, with Activtek, you don't have to wait for it to get into a filter: the air proactively reaches out to the contamination, even working on surfaces (both the visible ones and those out of reach of normal cleaning). There's no need to mask smells with allergy generating chemicals: Activtek <u>RCI technology</u> uses up to 5 natural processes to reduce microorganism concentrations 24/7 in an eco-friendly, filter-free way. From portable solutions to fixed duct-mounted products, installation is simple and quick and achieves results that no traditional filter system can.

## **Refrigerated Trucks or Containers**



When perishable goods are moved around in sealed environments, any contaminants inside can cause serious damage. Add to this the strong odors emitted by many products that linger & can contaminate future goods transported, and it is clear Activtek's eco-friendly, flexible products provide a modern solution that traditional ventilation systems cannot provide

#### **Working with Animals**



Pet clinics, stables, dog & cat shelters all give rise to odor issues and the spread of disease that can harm the animals. Activtek's purifying technology is easy to install and is scientifically proven to work effectively on 99.99% of pathogens. This eliminates odors and helps remove the tiny particles that normal filtering just cannot reach. In turn, this stops odors and, very significantly, can help eliminate allergy problems in humans, creating an acceptable working environment for people not normally able to work with or near animals