



ISCLEANAIR®
BREATHE YOUR LIFE



Core Partner



*To raise new questions and new possibilities, to regard old and tremendous problems from a new angle, and to solve them, **requires creative and high imagination**, and marks a real advance in science and progress for humanity.*

Albert Einstein (Physicist)

APA is a solution designed for the abatement of the ambient air pollutants everywhere, to disrupt the previous wrong approach based only on applications at the source of emissions rather than focusing also on receptors (people and communities). Thanks to simple water and integrated physical and mechanical processes, **APA abates effectively the widest range of pollutants and harmful micro-organisms present and/or released into the atmosphere**, such as particulate matter (PM), ozone, heavy metals, polycyclic aromatic hydrocarbons (PAH), light hydrocarbons (methane, benzene, LPG, etc.), nitrogen and sulphur oxides (NO_x , SO_x), Volatile Organic Compounds (VOC), CO, CO_2 alcohol and acetylene, in addition to different types of micro-organisms.

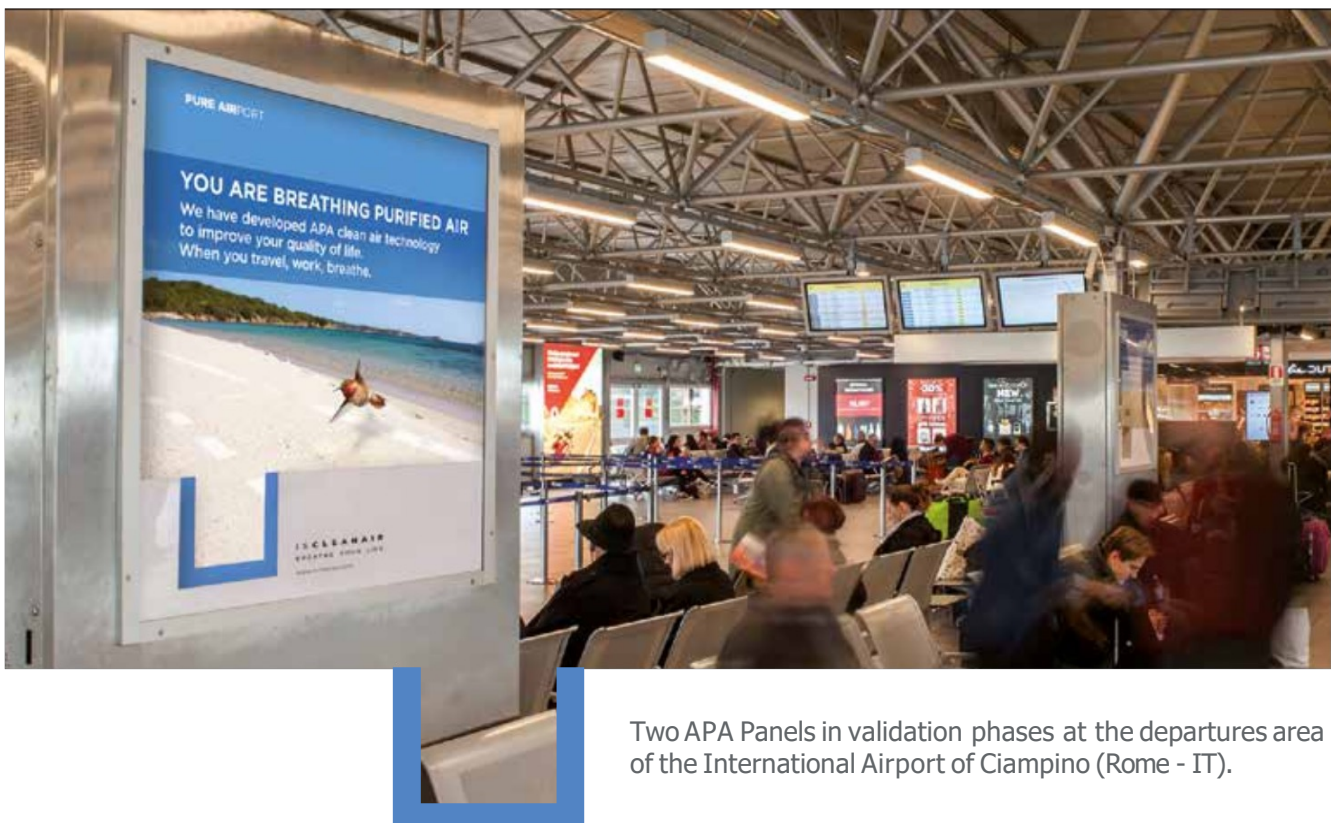
APA is a “filter-less” and nature-based (water) new solution, working distributed at ground level and standing out for its versatility, easy installation and maintenance, low running costs, and effective energy and economic savings. Another important feature of APA is the capability of being integrated in a simple and flexible way with other technologies to enable multidisciplinary, advanced and innovative services in the space of applications. Furthermore, APA does not generate any waste, not requiring special treatment and allows performing in real-time, in situ, or remotely, data monitoring and environmental parameters management.

▣ The performances and the demonstrated results achieved so far concerning the drastic improvement of the ambient air quality, moved APA to be recognized as a “Best Available Technology” (under EU IPPC Directive 2008/1/EC), which is an innovative solution that guarantees the highest level of environmental protection, enabling safer and healthier places for workers’ and citizens’ lives.

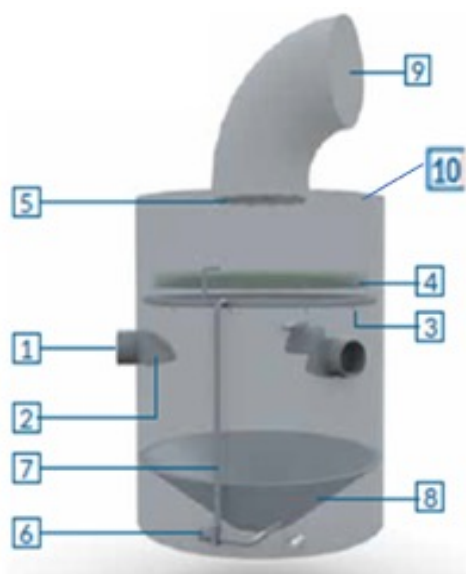
APA operations

The air enters from an intake system (ordinarily positioned at about 80 cm – 1 m from the surface) and is filtered inside the machine following a process that reproduces the rain’s natural cycle. Some drops of a water-based solution come into contact with the air, catching the pollutants and deposit them into the water tank. At the end of the washing process, the purified air is drawn and released into the surrounding environment.

ONE OF THE BEST AVAILABLE TECHNOLOGY, STRONGLY PATENTED AND CERTIFIED, SPECIFICALLY DESIGNED FOR THE ABATEMENT OF AIR POLLUTANTS AND HARMFUL MICRO-ORGANISMS IN PEOPLE’S LIVING AND WORKING SPHERES



Two APA Panels in validation phases at the departures area of the International Airport of Ciampino (Rome - IT).



Legend








- 1 Polluted air entrance
- 2 Venturi scrubber
- 3 Spray nozzles
- 4 Deposition stack
- 5 Fan
- 6 Water pump
- 7 Water recirculation
- 8 Washing water tank
- 9 Purified air exit
- 10 Electro-magnetic field UV-X

APA can be easily integrated both in indoor environments, confined or partially confined, and outdoors in the open spaces of our cities, as each system can have a different shape so as to be better integrated in all the areas of possible application. In every usage environment, both strongly localized and widespread, to generate the maximum effectiveness it is possible to set up a **cluster of APA** pollution absorbers, structured with many functionalities and sized according to the specific needs and the features of the area to be moved under remediation.

APA systems are connected to each other and can be remotely controlled. From the sensors to the monitoring of environmental parameters, from connectivity to video surveillance and the supply of information and/or advertising contents, the technologies that allow APA to be integrated and connected to other solutions in terms of the Internet of Things and Artificial Intelligence are several.



POINTS OF STRENGTH

-  FILTER-LESS AND NATURE-BASED TECHNOLOGY
-  LOW RUNNING COSTS AND REAL ECONOMIC SAVINGS
-  NO WASTE
-  MODULAR AND MULTI-SHAPES
-  WORKS INDOORS AND OUTDOORS
-  INTERNET OF THINGS AND MULTIDISCIPLINARY SERVICES
-  REMOTE MONITORING AND MANAGEMENT

We re-think and re-design the spaces where we live and work, operating as a responsible business for the people living in them and the spaces they interact with.

We do that starting with the ambient air, a vital necessity for people's health and life and work quality.

We consider environmental quality as a distinguishing feature of every enterprise's activities, paying attention to workers and raising awareness of the culture of "clean air".

The use of **APA** technology and its solutions in the **production and manufacturing areas** is a clear need, now necessary in order to reduce the emissions of fine particles and other harmful substances directly in the places where they arise and people breathe, thus decreasing the risk of exposure to the personnel and surrounding areas.

APA is a new technology and a versatile solution enabling collective prevention and protection of health, and also a valid aid to create safer and healthier spaces and a more sustainable management and business.

In fact, the technology enables, in closed environments, the reduction in air flows from outside, keeping the internal temperature constant, improving the energy efficiency of the building, and lowering running costs.

Furthermore, APA enables outdoors the decrease the diffusion of pollutants and smells near local and distributed sources of emission. While in applications to the chimney and at the beginning of HVAC/Air Handling Unit systems, it allows the respect of the limits prescribed by law and the fostering of people's health and well-being, with limited expenses and reduced running costs.


■ An enterprise that cultivates relations with its territory is an enterprise that, first of all, protects its natural and cultural wealth. With this purpose in mind, according to the conditions and the needs of the industrial areas, APA can act in the different steps of the production process, By working not only downstream, but also directly on the point or source of emissions, thus allowing the abatement of all pollutants created in the working places and/or delivered outside. Furthermore, thanks to its versatility, APA can be integrated with infrastructures and industrial/urban furniture already existing, and with pre-existing antipollution plants, contributing to increasing their efficacy.



POSSIBLE SPHERES OF APPLICATION

- Wastecycle management
- Centers for goods handling and transportation management
- Building and construction
- Chemical industry
- Cogeneration plants and similar sites
- Metal manufacturing and workshops and steel plants
- Manufacturing of plastic materials
- Marble working, manufacturing of ceramics and fiberglass
- Paint furnaces and Mechanical workshops
- Manufacturing of wood, paper and cellulose
- Production of dry food and pre-slaughter breeding farms

SOME FUNCTIONS

	Sensor systems and monitoring of environmental data and parameters
	WIFI Hotspot
	Remote management
	Video surveillance
	Information and advertising services and contents
	Other features

APA CAN BE USED BOTH IN WORKING SPACES AND INDUSTRIAL AREAS AND EVEN ON SOME POLLUTING SOURCES (POINTS OF EMISSION)



LIVING IN A CLEAN AIR ENVIRONMENT

In an urban context where every intervention must be aimed at improving everyday life, air quality becomes an overriding and noteworthy element.

Starting from the concept of Smart City, thanks to APA, we create a new sustainable urban development model named "Smart Clean Air City".

Starting from air purification through the use of **APA**, this model is aimed at involving people and communities towards a more engaged and collective environmental awareness. The public, private, commercial and urban spaces are going to be re-designed

and re-planned to become truly sustainable and liveable, under the activities of improving the quality of the Cities of Tomorrow and people's lives.

- In line with this vision, the integration of **APA** systems in the urban context occurs with full respect for the architectural and cultural characteristics of the areas. This happens thanks to the chance of including APA in the different buildings and street furniture also using the typical material of those areas. Bus shelters, Totems and Multimedia service points, Flowerpot and boxes, benches and lampposts are only a few of the possible designs and examples where **APA** can be integrated and work to improve the

air quality at the service of people and the environment.

- Furthermore, **APA** can be equipped with intelligent systems that allow the enabling of a set of innovative and bundle services for urban spaces, such as the remote monitoring and control of systems and areas, WIFI, video surveillance, digital payments, multimedia services, digital signage, pollution sensing, etc.







FROM THE STREETS TO THE PUBLIC AND PRIVATE BUILDINGS, **APA** PURIFIES THE AMBIENT AIR IN ALL THE URBAN SPACES



POSSIBLE PLACES FOR USAGE

- ▣ Hospitals and healthcare structures
- ▣ Universities, schools and nursery schools
- ▣ Museums, libraries, theatres and theme parks
- ▣ Shopping malls and galleries, restaurant chains
- ▣ Public and private offices and workplaces
- ▣ Apartment blocks and residential complexes
- ▣ Parks, streets and meeting points
- ▣ Airports and ports
- ▣ Railway and underground stations and docks
- ▣ Bus and coach stops and stations
- ▣ Underground and surface car parks
- ▣ Petrol stations and Tunnels
- ▣ Toll booths and refreshment areas

SOME FUNCTIONS

-  Sensor systems and monitoring of environmental data and parameters
-  WIFI Hotspot
-  Remote management
-  Video surveillance
-  Information and advertising services and contents
-  Other features



NOTES



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