Sanitation unit by VentOsan

What is meant by sanitation ?

According to ISS (Italian National Institute of Health) "report on sanitizing surfaces, environments and clothing" sanitation is:

a "set of procedures and operations" for cleaning and / or disinfecting which includes maintaining good air quality even with the exchange of air in all environments.

Sanitation unit by VentOsan

why VentOsan is a sanitation unit ?

about air quality control

- Provides mechanical ventilation directly in the environment with only supply of outdoor fresh air with filters for fine dust elimination.
- It recovers heat on the exhaust air through cross-flow heat exchange, ensuring the safety that the external air introduced, cannot be contaminated by the exhaust flow.
- Regulates supply fresh air by monitoring the CO2 in the environment, signals malfunctions and CO2 excesses with acoustic and visual alarms.
- Provides temperature control by reintegrating lost heat through an electric heater and or cooling by DX-System as an air conditioning terminal unit or through free cooling, when possible, through an automatic BY PASS

about disinfection of environments and HVAC systems

- Provides to sanitize the environments, with ozone natural biocide for saturation in periods of human absence, automatically and safely, with ozone control presence through PIR.
- Checks Ozone concentration continuously in the air flow treated, during ozonation treatment, checks and restores air quality limits in the treated volume before using environment.
- sanitizes active and passive HVAC components system , such as air conditioning terminal units.
- signals malfunctions and presence Ozone over limits with acoustic and visual alarms

Sanitation unit by VentOsan

Why VentOsan is suitable for all environments?

About EU directives as a bidirectional fan unit

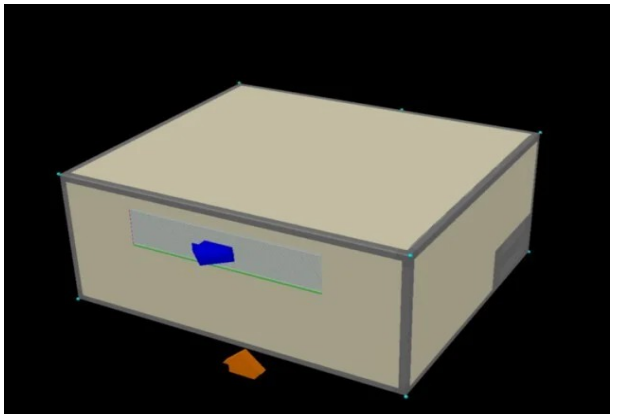
- Air exchanged flow is proportional to the size and destination of the place of installation in accordance with europe regulations , for a flow rate by standard sizes of the ventosan from 400 to 2000 mc / h.
- fan units are developed with EC technology (Electronically Commutated) and the turbulent plate recovery packs with efficiency > 73%, Ecodesign directive EU and Erp compliance .
- noise is compatible with indoor installation, Lp <45dB (A) @ 1 mt
- Air quality continuously and automatically regulated by CO2 probes with historical recording.
- control, regulation and supervision system is locally drive by PLC and remotating on web

about sanitizer requirements for biocidal products produced on site "in situ "

- Sanitation takes palce in environments volume through time exposure ozone saturation control, to remove or control microbiological life (insects, bacteria, spores, viruses, etc.) designed on the specific installation.
- Sanitation of furnishings and HVAC systems uses ozone which is a natural biocide, without polluting chemical by-products and without contraindications.
- Sanitation process have drived by a PLC, monitored continuously, with a datalog for the control and verification.
- Sanitation process is incompatible with humans, for this reason during the process the PLC monitors the environments by PIR (Passive InfraRed sensor), stop the process if necessary, activates alarms and starts action to restore air quality compatible with humans .

Sanitation unit by VentOsan

About VentOsan features?



ventosan up to 600 mc/h

- Overall dimensions 1000x900x420 h mm
- Supply 230 v 50 Hz monofase
- Power required < 1 kw
- Noise < 45 dB(A) @ 1mt
- Weight < 100 kg
- Structure by alluminium frame, galvanized steel walls by rock wool insulated

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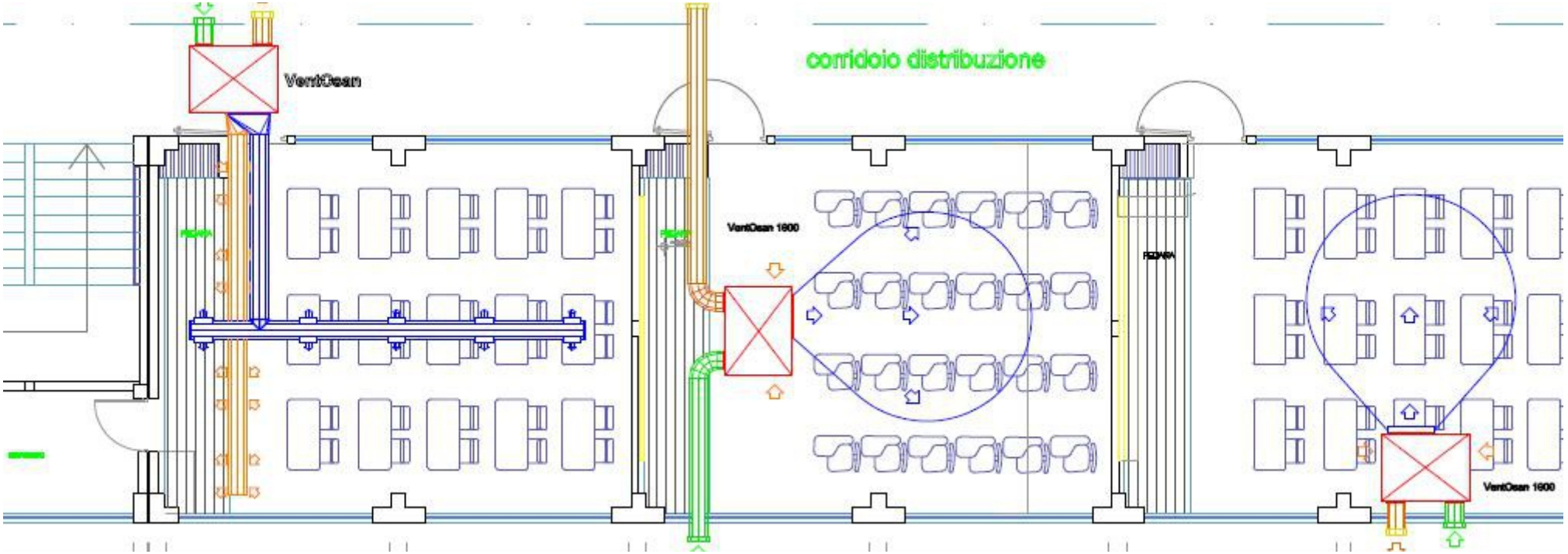
Situable installation ?

- Decentralization system in the room or volume to be treated as an air conditioning terminal unit and installed on the ceiling as a floor / ceiling evaporating unit, in the false ceiling as a cassette or ducted unit
- Centralization system with respect to the environment or volume to be treated by channeling the outlets (supply and return unit) as a ducted air conditioning terminal unit
- Inlet and outlet (outdoor and exhaust) will be ducted



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places of installation?

Ventosan is designed for all non-residential areas, for all work hospitality environments needs, to control air quality, biological and microbiological proliferation with the purposes of healthiness and deodorization of the environments.

- School
- Restaurant
- Kitchen and foods treatment
- Hotel and health residences
- Medical and veterinary clinics and laboratories
- Pharmacies
- Shops, fish and meat shops
- Human care
- Shop and pet care

Sanitation unit by VentOsan

Contagion COVID 19 contrast tool ?

- Ventosan was designed to increase security in all those places and environments without mechanical ventilation, where air quality is provided with natural ventilation through discontinuous opening surfaces such as doors and windows, whose rooms are intended to accommodate and aggregate people.

- In compliance with Italy's governative and healt department rules, like ISS which recommends a flow increase in mechanical ventilation and / or frequent ventilation of the premises, VentOsan reduces microbiological pollution concentration by virus as demonstrated by many scientific international study.

- In compliance with current regulations following the clarifications of Italy's governative and healt department working group (ISS-INAIL) on the professional use of ozone also with reference to COVID-19, currently in Italy ozone can be used only as a sanitizer, because is pending completion of the assessment on biocidal products at European Regulation (EU) 528/2012 (BPR). Regardless to ozone EU regulations, its effectiveness as accepted against many microorganisms including bacteria in HVAC systems, such as legionella and coronaviruses such as SARS.

- The effectiveness of Ozone against the Sars-Cov2 coronavirus is demonstrated by research and study by the Japanese university NARA MEDICAL UNIVERSITY that for 1 ppm exposure for 1 hour the Sars-Cov2 virus was inactivated by the Ozone. Although the study is public and issued by an accredited laboratory, the national health service in Italy do not yet accepts ozone to be a safe biocide for Sars-Cov2.

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What can we do with the VentOsan project?

- To use VentOsan idea to encrease air and conditioning quality for all work and hospitality environments, could lead to rethinking the air conditioning systems in enviroments risk , through only external air as a vector for air-conditioning so to increase, the healthiness of the air used for the air conditioning and through the sanitation process to remove all pathogens on the air conditioning system.
- The air conditioning system is intrinsically safe, there are no recirculations in terminal units, the absence of microbiological activity on the air conditioning systems , all in compliance with the energy saving directive is guaranteed.
- It's possible to use the decentralized heat exchange (like in primary air system) which remains on terminal unit, but using only fresh external air for air conditioning (like in all-air system), in this way removing on enviroments mixing and recirculation air is possible to decreas risk of contagion.

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VentOsan is the “sanitation unit” which

takes care of air quality in enviroments and HVAC systems.

Thanks

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