

Skrapan

A Mellifiq reference project

Vasakronan improves energy efficiency with ozone

**A quick payback in
just three months**

MELLIFIQ

Skrapan, Stockholm, Sweden

Vasakronan, Sweden's largest real estate owner, manages and develops centrally located office and retail properties in all major cities in Sweden. Vasakronan is owned by the four public AP pension funds.

The company's property portfolio comprises 183 properties with a total area of 2.5 million square meters. The majority of the stock is located in Stockholm, where Skrapan on Södermalm is one of the properties owned and managed by Vasakronan.

The "Tax Scraper" is a famous Stockholm building, designed by the renowned architect Paul Hedqvist. When the Swedish Tax Agency moved out, the Tax Scraper was rebuilt to make room for student housing. In September 2007, the new mall, which is on the ground floor, was inaugurated. The building was initially 24 storeys high, but two floors with a restaurant and sky bar have been added in connection with the refurbishment. Today, in addition to student housing and offices, there is a wide and appealing store mix and a large selection of cafes and restaurants.

Facts

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|-----------|---|
| Name: | Skrapan |
| Location: | Stockholm, Sweden |
| Industry: | Property for shopping and student housing |
| Purpose: | Air purification waste room |
| Area: | 70 m ³ |

Solution:

Ozonetech ACT-series

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|---------------------|-------------------|
| Dimensions (HxWxD): | 225 x 100 x 80 mm |
| Input power: | 0.018 kW |
| Noise level: | 28 dB |
| Weight: | 2 kg |



The "Skrapan" building in Södermalm, Stockholm.

The problem

Food waste from restaurants often creates inconveniences in the form of bad odors and bacteria. Properties with commercial restaurants are required to have a room for food waste. The room needs constant supervision to minimize disturbing odor emissions, bacterial growth, flies, insects and pests. The municipal waste regulations previously required that food waste

be stored refrigerated. The scraper achieved this using a 6.3 kW cooling unit which lowered the temperature to five degrees to reduce bacterial growth.

Since then, the waste regulations for the municipalities have changed and alternative solutions to the cooling units were allowed.

The solution

We contacted Vasakronan in conjunction with the rebuilding of the Tax Scraper, but the decision to purchase and install a conventional cooling unit for the 70 sqm waste space was already taken. At our initiative, a comparative study was conducted between a cooling unit and an ozone generator. The study showed that cooling can advantageously be replaced by ozone.

The benefits of replacing cooling with ozone were obvious immediately and were also permanent, which resulted in Vasakronan tearing down the cooling system and the entire odor purification is now handled by a Ozonetech ACT series ozone generator.

An ozone system purifies the air with the help of ozone (O₃) which quickly breaks down viruses, bacteria and odors. The ozone system produces ozone on site from the ambient air. Nothing needs to be bought, transported or refilled. The purification of the air in the waste room begins immediately when the ozone system starts.

“ The investment cost for the former cooling equipment amounted to approximately 20,000 USD, and the energy cost was more than 5,000 USD per year. The plant also required regular service and maintenance by technicians. Just by switching off the cooling unit and avoiding the electricity costs, the cost of the ozone generator was paid for in three months. Since then it has been pure profit for us.”

Project manager at Vasakronan

Evaluation

The system solution with both low investment costs and low service and maintenance costs, saves big money for Vasakronan. The energy consumption is only 18 watts, which means an energy cost of only 30-40 USD per year compared to the energy cost of the previous solution of several thousand USD per year.

In addition to the economic benefits of the new air purification in the waste room, Vasakronan sees additional benefits: the odors have been minimized and the quality of the air has increased.

Purification with ozone provides great advantages over other techniques such as ionization and the use of bacteria as ozone directly attacks the source of the odor. In addition, the ozone system uses ambient air to produce ozone. There is no need for purchasing, transport and handling as for other treatment solutions such as bacteria and chemicals, which means that the operating cost is very low.

About Mellifiq

Mellifiq is a multi-awarded environmental service company group, that has since the early nineties evolved into a world leading system and solution provider with multiple groundbreaking applications for industrial, municipal, and real estate clients. We supply cutting-edge technologies to manage the most sophisticated air, water, and energy challenges.

Mellifiq offers a complete range of air and water treatment technologies and solutions across multiple industries such as processing industry, energy sector, food and beverage, pharmaceutical, wastewater treatment and commercial real estate.

Mellifiq offers strong and renowned brands, such as Ozonotech, Nodora and Water Maid, and world-class engineering services combined an excellent track record of more than 40 years of innovation. We help our clients achieve the most efficient and sustainable solutions while creating the maximum value for their businesses.

With several business units across Europe, Mellifiq is headquartered in Stockholm where research and development, production, QA and certification all take place. Our unique technology and our extensive expertise have made us the Center of Excellence for the world's most complex projects, and a global player with installations on all six continents.

Everyday millions of people rely on our solutions for ventilation, disinfection, sanitation, and odor control. We are committed to raising the bar for the concept of clean and the industry standard for engineering, technical services and general contracting.

For additional information, visit our website at www.mellifiq.com

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