

Halton ProClean

The Modern Way of Cleaning in Hotels

Keycard
for better
indoor
air?





Foreword

Welcome to The Modern Way of Cleaning in Hotels! In this booklet, we present to you the benefits of Halton central vacuum cleaning system in hotel environments. See our example calculation of how you can save hundreds of thousands of euros or dollars by using the CVC system instead of traditional systems. Read also about our latest CVC project, Scandic Grand Central Helsinki.

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Benefits of using a Halton central vacuum cleaning system in hotels

People spend most of their time indoors. Halton's mission is to enable wellbeing by providing the best possible indoor environment, including the air that we breathe.

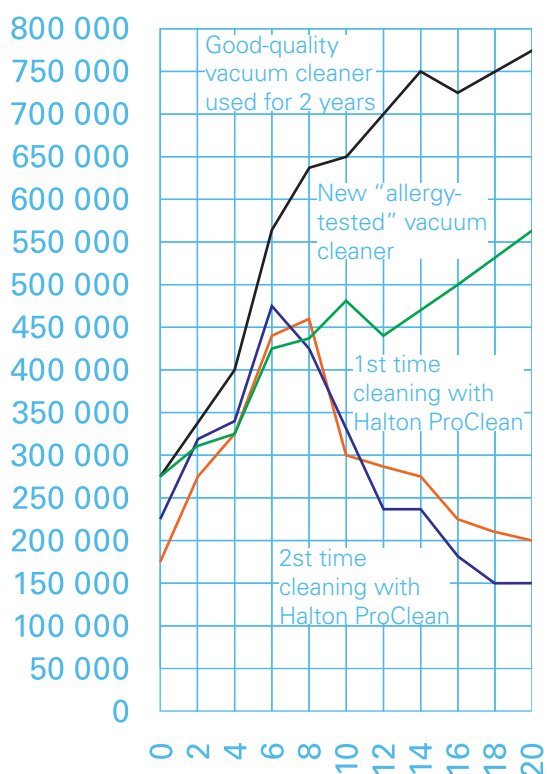
The way that indoor areas are vacuum-cleaned is one of the most important factors affecting indoor air quality. Achieving high indoor air quality requires the removal of odours, dust and airborne bacteria. Micro-dust can cause breathing difficulties for people with allergy and asthma. With traditional vacuum cleaners, fine dust and bacteria are released through filters back into the air, where they can spread infections and trigger allergies.

Study

An independent study by Dr Ilmari Lindgren from Helsinki University Hospital (Skin and Allergy Hospital) shows that traditional vacuum cleaners are not optimal for human health. According to the study, regular use of a central vacuum cleaning system achieves indoor air that is nearly as clean as outdoor air. Take a look at Chart 1 displaying the results.

Chart 1. Halton ProClean system effects in practice

Quantity of harmful dust particles (<0,5 microns) per sq.m. air



Vacuuming time in minutes

Solution

Halton central vacuum cleaning system, also known as the CVC system, significantly improves indoor air quality: harmful micro-dust travels through piping to a dust container where it is filtered out of the building, while heavier debris and dust remain in the dust container. As a result, the vacuum-cleaned particles no longer circulate indoors and people can breathe clean indoor air.

Clean indoor air is not only for the sake of better customer comfort but also for personnel comfort. Cleaning with a Halton central vacuum cleaning system is healthier for the hotel personnel as the system does not create dust-raising swirls filled with hazardous micro-dust. Halton central vacuum cleaning systems are also a better choice for people suffering from allergies and asthma.

"Cleaning with a Halton central vacuum cleaning system is healthier for the hotel personnel as the system does not create dust-raising swirls filled with hazardous micro-dust."

Performance tests

Halton central vacuum cleaning system is 30-55% faster to use compared to traditional vacuum cleaners. This claim is based purely on actual operational tests performed by two of our customers in Sweden and Finland. The duration of the vacuum-cleaning process was observed by hotel management.

The first round was performed using traditional vacuum cleaners. The average result was that they were able to vacuum-clean 2.2 rooms per hour. The second round was performed using the Halton central vacuum cleaning system. The Swedish customer got a result of 3.4 completed rooms per hour, while the Finnish customer got a result of 3.3 completed rooms per hour.

This study showed us that the average vacuum-cleaning efficiency had improved by almost 55%. The improvement in efficiency is due to the fact that, unlike a portable or traditional vacuum cleaner, the Halton central vacuum cleaning system only requires carrying a hose during cleaning, which makes cleaning easier and less demanding. Less time is also spent on caution. A traditional vacuum cleaner requires special care during cleaning to avoid damaging surfaces and furniture. In conclusion, the Halton central vacuum cleaning system saves several extra hours a day.

Sustainability

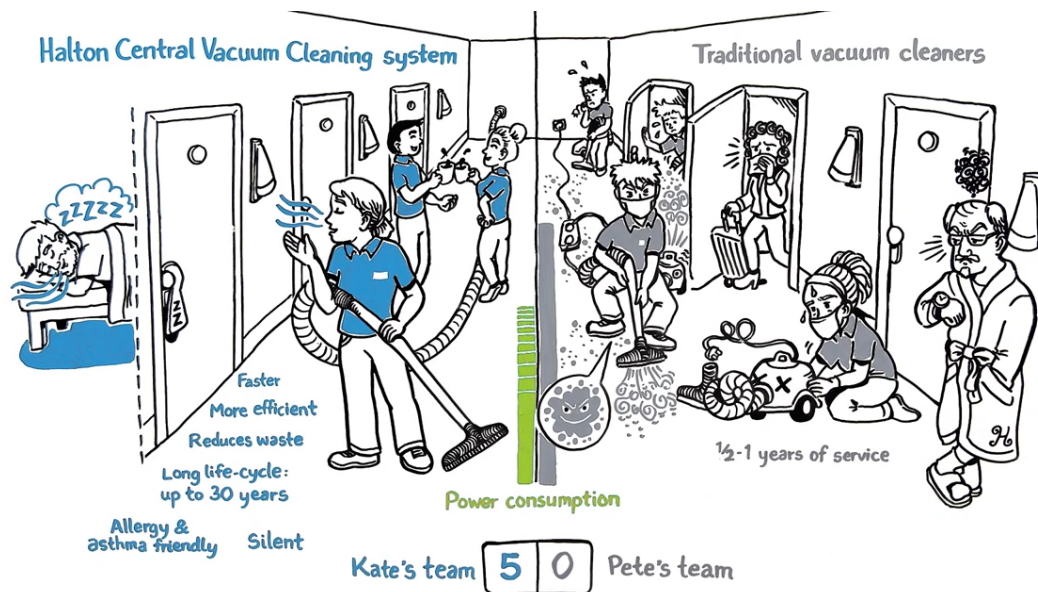
Halton central vacuum cleaning system is not only about saving time and improving efficiency, but also about protecting the environment. The product lifetime of traditional vacuum cleaners is short. Throughout the service life of a hotel building, many broken vacuum cleaners will be replaced with newer units, generating a huge amount of waste. The CVC system is designed to serve as long as the building itself, while also promoting the value of the building.

Energy consumption

According to our calculations, using a Halton central vacuum cleaning system instead of traditional vacuum cleaners results in considerable energy savings. The central unit that powers the entire system adjusts its power consumption based on actual demand, and it is still much more efficient with its suction power than traditional vacuum cleaners.

Why buy a Halton central vacuum cleaning system?

Halton central vacuum cleaning system is a rational choice and it only offers benefits. It's a greener, safer and more efficient choice – and it really contributes to better indoor air quality. It does not disturb customers with noise or odours as traditional vacuum cleaners tend to do. Nor does it hurt that it brings a return on investment. We have completed over 2,500 installations with great customer satisfaction.



Calculation example: CVC vs. traditional systems

How is it possible to save hundreds of thousands of dollars or euros by using a Halton central vacuum cleaning system? See how we calculated the savings and compare the figures to your own potential project.

The total price of a Halton central vacuum cleaning system (CVC) can vary quite a lot because each project has several factors that affect the price. A renovation project is usually more demanding to design and install than new buildings. Local regulations also have cost implications for CVC system prices. For example, local authorities may or may not allow the use of plastic pipes instead of metal pipes, fire regulations vary by country, and so on. Halton offers a variety of tested materials for the different requirements of hotel projects.

During the last 5 years, the turnkey hotel projects we have delivered in Finland have been made of a combination of plastic (PVC-U) and metal (Fe+zinc coat) pipes. All rooms, including public spaces such as corridors, restaurants, gyms, saunas, and staircases, have been equipped with inlet valves (vacuum hose connection points). In this type of CVC system, the maximum number of simultaneous users is 18 people. The average price of a CVC system, including system installation, is EUR 770 per room, bringing the average total price of a 300-room hotel to EUR 231,000. In projects where we have not carried out the installation ourselves, the average price of one room, which only covers material costs, has been only EUR 350 cheaper, bringing the average price of a room to EUR 420.

Background

As we learned in the first chapter, according to the performance tests carried out by two of our customers, using a Halton central vacuum cleaning system in a hotel environment can lead to up to 30-55% savings in vacuum-cleaning time. The reason for this great result is very simple: Halton central vacuum cleaning system is much faster to use compared to traditional vacuum cleaners.

Efficiency and productivity had increased because bulky and heavy portable vacuum cleaners did not have to be transported from one place to another during vacuum-cleaning. There was no need to roll the power cords time and time again, as well as kneel and bend each time to connect the power cord to the power outlet.

Halton central vacuum cleaning system only requires carrying a light flexible hose during vacuum-cleaning. The hose does not stick to furniture and does not damage the surfaces of walls or furniture. When the inlet valves are installed at a perfect height on the wall (our suggestion is always 70-100 cm above the surface of the floor or carpet), the hose is quick and ergonomically comfortable to connect. Just a few simple changes in the daily routine can lead up to big savings. Let's see what this means in euros (€).

Calculation

In our calculation, we will use a 300-room hotel as an example. Room occupancy is 80%, which means that 240 rooms have to be vacuum-cleaned daily. For example, in Finland, hotel cleaning work is often outsourced rather than using the hotel's employees. The cleaning cost of EUR 32 per hour had been estimated in our calculation based on the Finnish cost level.

We have estimated that 20% of all cleaning work, including public spaces and room corridors, is vacuum-cleaning time. We have also estimated that one person can clean 20 rooms per 7.5-long workday. This means that the hotel needs 12 cleaning people. In Finland, the CVC systems are becoming a common standard in buildings. According to Finnish Cleaning Standards, vacuum-cleaning can be done 15% faster by using a central vacuum cleaning system. That's why we calculate costs with both 15% and 55% time-savings.

Number of hotel rooms	300
Room occupancy	80%
Rooms vacuum-cleaned daily	240
Cleaning cost per hour	EUR 32.00




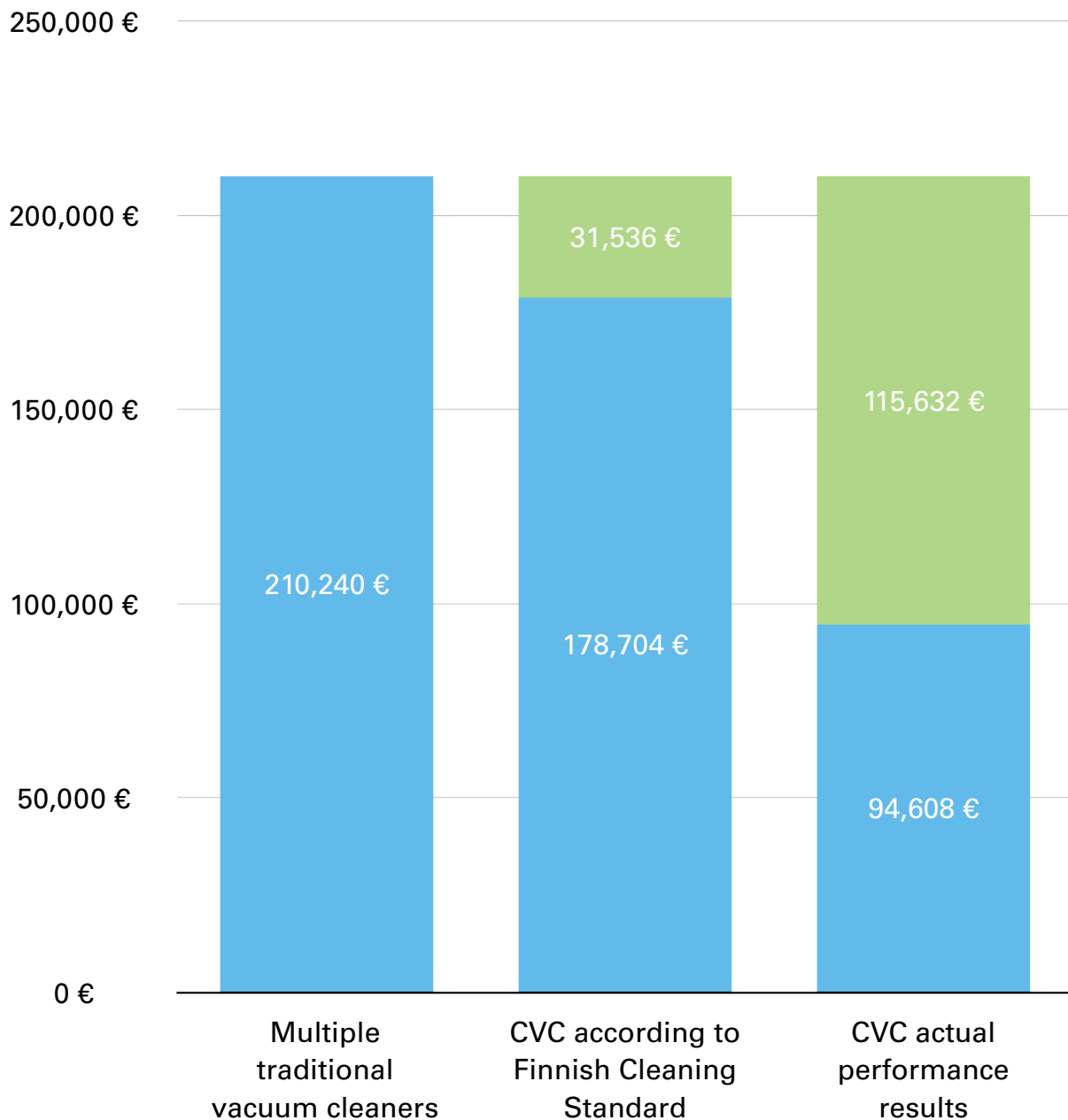
	 Multiple traditional vacuum cleaners	 CVC according to Finnish Cleaning Standard	 CVC actual performance results
Acceleration of cleaning time		15%	55%
Vacuum-cleaning from the total cleaning time	20%	17%	9%
Rooms per person per day	20.00	20.619	22.472
Vacuum-cleaning time per room (h)	0.075	0.064	0.034
Cost of vacuum-cleaning per room	EUR 2.40	EUR 2.04	EUR 1.08
The total cleaning time per room (h)	0.375	0.364	0.334
The total cost of cleaning per room	EUR 12.00	EUR 11.64	EUR 10.68
Required number of cleaning people	12.00	11.64	10.68
The total cost of vacuum-cleaning per day	EUR 576.00	EUR 490.00	EUR 259.00
The total cost of vacuum-cleaning per year	EUR 210,240	EUR 178,704	EUR 94,608
Savings per year		EUR 31,536	EUR 115,632
Savings in labour costs for vacuum-cleaning		15%	55%
Total savings in all cleaning		3%	11%

Chart 2. Costs and savings of vacuum-cleaning per year

300 rooms, 80% occupancy, cost 32 €/h, vacuum-cleaning time 20% of total hotel cleaning work.

- Total vacuum-cleaning costs per year
- Savings per year



As a result of this calculation, when vacuum-cleaning is 55% more efficient, we can see that the payback period of the installed CVC system in a 300-room hotel is only 2 years. It can be seen from the calculation that the total cleaning work can also save time by up to 11%.



Photo courtesy of Scandic Hotels Oy

Case story: Scandic Grand Central Helsinki

Halton Marine had the privilege to design and build a new Halton central vacuum cleaning system for Scandic Grand Central Helsinki. The new hotel is located in the historical Helsinki Central Railway Station, which was designed by architect Eliel Saarinen

and built between 1909 and 1919. The Helsinki Central Railway Station is constructed in a distinctively Finnish Art Nouveau style and is one of the city's most visited and well-known buildings. Upon the hotel's opening in spring 2021, Scandic Grand Central Helsinki will be one of Finland's biggest and most unique hotels with close to 500 air-conditioned rooms, stunning meeting and banquet facilities and a restaurant world.

The Modern Way of Cleaning in Hotels



Photo courtesy of Scandic Hotels Oy

The refurbishment

The hotel building was originally the administrative building of the National Board of Railways (Finnish: Rautatiehallitus). Before transforming into a magnificent hotel, the building had served as the headquarters of VR Group. The building was renovated under the protection of the Finnish Heritage Agency (Finnish: Museovirasto) and the City of Helsinki. The project involved extensive refurbishment work in a way that respected the historical and architectural value of the building. A completely new building was built to connect the northern ends of the original building, giving the northern façade a modern look.

A Halton central vacuum cleaning system was also built into the hotel during the refurbishment. The CVC system was designed in collaboration with the customer, taking into account their practices for cleaning. The construction of the CVC system was carefully planned and carried out in a way that respected the historical and architectural value of the building.

Halton central vacuum cleaning system

The hotel is divided into sections by the needed number of central vacuum units. The original building is divided into four sections with four SPLIT-type central vacuum units and the new building functions as a single section with an all-in-one-frame central vacuum unit. About 7 kilometres of suction piping have been installed throughout the hotel.

The hotel has 650 pieces of inlet valves (hose connection points), enabling 30 simultaneous users. The inlet valves are situated in strategic places throughout the hotel, covering every hotel room and corridor, reception and restaurant areas, a Finnish sauna area, conference and event facilities as well as the hotel's thrilling banquet hall. Even the winter garden in the hotel courtyard, which serves as a dining area, is equipped with inlet valves.

“By making an effort to purchase environmentally-friendly products, such as Halton central vacuum cleaning system, Scandic has reduced waste generation in its hotels.”

Sustainability

As the biggest hotel company in the Nordic countries with more than 280 hotels, Scandic is driving the development of sustainability in the hospitality industry and pushing for a more sustainable society. Like we do at Halton, Scandic believes that caring for people and the environment can both contribute to good business and a better society. By making an effort to purchase environmentally-friendly products, such as Halton central vacuum cleaning system, Scandic has reduced waste generation in its hotels. The system is a sustainable choice for its substantially longer life cycle (up to 30 years) compared to traditional vacuum cleaners. Scandic already has several CVC systems installed in its hotels.

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About us

Halton Marine

Halton Marine, one of the world's leading suppliers of marine HVAC, develops, manufactures and markets reliable, high-quality ventilation solutions specifically designed for different types of ships, offshore oil & gas, heavy industry and offshore wind. Our track record includes deliveries to over 150 major cruise ships, 200 oil & gas projects and 100 naval vessels.

Halton Group

Halton Group specializes in indoor environment solutions, ranging from public and commercial buildings to foodservice facilities. Founded in Finland in 1969, Halton operates today in over 35 countries around the world, with annual sales of €220 million and over 1600 employees. The company has production facilities in Brazil, Canada, China, France, Finland, Germany, Malaysia, the United Kingdom, and the USA.