



HEINEN & HOPMAN

SERVICES

> HVAC cleaning & inspection



OUTSIDE 35°C
HUMIDITY 90%

22°C Inside

PROVIDED BY
HEINEN & HOPMAN



Heating



Ventilation



Air Conditioning



Refrigeration

BEFORE

Introduction

On board many vessels and platforms ducted H.V.A.C.- and/or exhaust ventilation systems have been installed. International studies on indoor and outdoor pollution show that the air indoors is more polluted than the air outside. In fact, research proves explicitly that the air in some vessels is 10 to 100 times more polluted than the air outside! Research has also shown that no less than 30% of vessels and platforms have to cope with indoor air quality problems.

These problems manifest themselves for the users of these vessels in so-called "Building Related Illnesses" (BRI) with symptoms such as headaches, listlessness, excessive weariness, irritations of the mucous membranes and running eyes. These symptoms, and the as yet undetected causes, are often also linked to "Sick Building Syndrome" (SBS).

Again research has proved that the cause of 50% of BRI can be found in the heating, ventilation, and air-conditioning (HVAC) system. The pollution present in the HVAC system is one of the most important sources of BRI.

Tradition says that an HVAC system automatically and without maintenance provides a comfortable and safe indoor climate. The recent awareness of BRI and SBS proves that this is a myth.

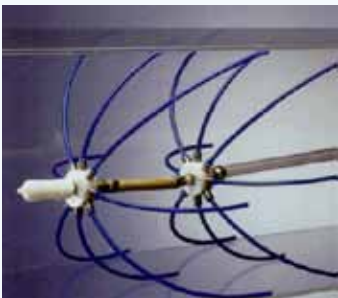
If the HVAC system is not periodically cleaned or maintained adequately, even the most advanced HVAC system causes Building Related Illnesses.

If air ducts in vessels and platforms are not maintained properly, they are a serious source of health risk. After all, the HVAC system is an ideal breeding ground for dust, micro-organisms and bacteria, mould and pollen. These pathogenic contaminants enter the indoor climate through the ventilation system and can have disastrous effects on people's health.

Application

The High Pressure Vacuum (HPV) System is the standard of excellence in air duct cleaning technology.

The HPV System ensures thorough cleaning of air ducts using compressed air. The pressure is regulated according to the size and type of duct, and naturally to the pollution in the duct. The HPV System reaches every part and location in heating, ventilation and air conditioning (HVAC) systems. In other words, the system guarantees integral, high quality cleaning everywhere in the air duct system. If required, the ducts can be disinfected after they have been cleaned. An additional, optional service provides the duct walls with a special coating. Even insulated ducts can be sealed in the same easy way with the HPV System.



Random endoscopic pictures are used to estimate the degree of pollution in the entire HVAC system. If the client wishes, air samples can be taken by a Heinen & Hopman expert to determine the Indoor Air Quality (IAQ) before the cleaning project starts. This approach gives clear insight into the extent of the task and the best way of tackling it.

When the contract has been awarded, the HVAC system which needs to be cleaned is divided into a number of duct sections. Each duct section in turn is sealed off from the rest of the system. A Hepa extraction unit creates a negative pressure in that section.

Through a small opening in the duct wall the HPV cleaning unit is introduced into the duct. Sections are then cleaned in one single action. With a firm, pulsating current of compressed air the HPV unit removes the dirt from the duct wall and the suction created by the equipment removes the suspended material from the system.





AFTER

During the cleaning process the HPV cleaning unit moves through the heart of the duct. The so-called Spider keeps the nozzle centred, guaranteeing that the HPV System always cleans more effectively than an uncentred cleaning system. Moreover, the HPV System Spider protects the ducts from damage on the inside caused by an uncentred nozzle. Furthermore, the Spider concept minimises noise during the cleaning process. The HPV System was uniquely designed so that the compressed air keeps the nozzle centred and transports the system as well as, of course, cleaning the ducts.



International legislation and guidelines

IAQ (Indoor Air Quality) is becoming a hot issue everywhere, as in Asia, the United States and Europe governments regulate in inspection and cleaning of air ducts by legislation and guidelines for vessels and platforms. Everyone who feels responsible for an optimum inner climate, continuity and productivity should pay structural attention to the right degree of maintenance of the HVAC system. With current knowledge of the impact of BRI and SBS, duct cleaning should be an integral part of all modern maintenance procedures. After all, people's health is at stake.

Key Features

- The HPV System guarantees perfectly cleaned air ducts and easily meets the highest quality standards (cleanliness) in the air duct cleaning branch;
- Two small openings in the main duct wall are sufficient (minimal damage to the ventilation system);
- The nozzle centring ensures excellent cleaning results, prevents damage and minimises noise pollution;
- The HPV System is multifunctional: air ducts can be cleaned, disinfected and coated using the system;
- The HPV System cleans both horizontal and vertical air ducts equally effectively;
- The HPV System treats round, square and oblong air ducts (from Ø 5 cm) with equal ease;
- The HPV System also treats construction ducts and ducts insulated on the inside;
- By taking simple precautions, air duct cleaning can even take place during operation hours (process continuity for the client).

Services

- Air duct cleaning
- Reconditioning of air handling units
- Kitchen/galley extract cleaning services
- Electronic disinfecting process
- Inspection (video robots)
- Explosion safe video inspections
- Air technical adjustments
- Endoscopic examination
- Microbiological examination

If requested, the check-up report can be accompanied by quotations for recommended work and materials.

Alternatives available on request.

Due to continued product development, Heinen & Hopman reserves the right to introduce alternations without prior notice.

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Heinen & Hopman encourages a more sustainable world. By providing eco-friendly solutions and services we offer our clients the option of reducing energy consumption and thus CO2 emissions. Visit greenmanifest.info for more information.



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