

# CASE STUDY

Warehouse & Distribution Centre



**Customer:**  
Compass Transport

**Location**  
Hardenberg, The Netherlands

**Sector:**  
Warehouse & Distribution Centre

## TACKLING DUST PROBLEMS AT THE NEW DISTRIBUTION CENTRE OF COMPASS TRANSPORT

BY INSTALLING AIR CLEANERS CC 6000, THE DUST LOAD IS REDUCED BY 80%. THIS PROVIDES A PLEASANT AND HEALTHY WORKING ENVIRONMENT FOR THE EMPLOYEES, BESIDES, PROTECTING THE GOODS IN THE WAREHOUSE.

Compass Transport is a logistics service provider based in Hardenberg, The Netherlands. Every day more than 40 trucks travel hundreds of kilometers to distribute goods. The main business focus is on the distribution of B2B transport; from 1 pallet to full freight as well as length goods.

Compass Transport has a storage capacity of 12,000 square meter, where both long-term pallet storage and order pickups take place. Since April 2019, the new storage centre in Hardenberg is in use. During the construction of this new centre, Compass Transport took the topic of dust and filtration into the engineering & implementation stage. In the past, Compass Transport has faced problems due to dust in high concentration in the previously used centre. Moving on, they were focussed to solve these challenges and use modern air filtration technology in their application.

The new centre is aimed to **be dust free**. The source of the high dust concentrations can be traced back to the forklifts that travel many meters every day during the loading and unloading process. The dust problem is twofold; it affects the health of the employees in the centre, and the goods offered for storage used to get covered in layers of dust in a short time. In the case of prolonged pallet storage, the dust problem was even a greater challenge.

Camfil normally starts projects by first conducting an air quality measurement analysis. However, as it was a new centre that was not yet in use, Camfil could only determine the challenges based on available knowledge, calculations, and experience. The crucial step is to calculate how many air cleaners would be needed to remove dust problems in the centre (with a capacity of 27,000 cubic meter). Another step was to determine what should be the ideal airflows to achieve a maximum quality result. Based on the analysis, five air cleaners type CC 6000 were put into action as this will completely resolve the challenges that occurred in the past due to heavy dust concentrations.



5 air cleaners CC6000 attached to the ceiling of the new centre.

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Preventing dust problems was one of the main challenges along with the limitation that solutions provided by Camfil should not obstruct the work in the centre. Therefore, it was preferred to attach the mobile air cleaners to the ceiling. The air cleaners are equipped with ePM1 55% pre-filters and H13 efficiency main filters. This is accompanied by an **Air Image Sensor** that hangs in the middle of the centre, where you can monitor online, real-time analytics regarding the dust concentration level in the centre and what is the status of the individual air cleaner.

The air cleaners can be controlled online from the monitor. For example, a dust concentration level can be set at which the units must start to rotate in a higher or rather lower position. As a result, it is possible to obtain maximum efficiency

from the air cleaner. When the filters need to be replaced, this will be notified as well through the Air Image Sensor. The result was more than satisfactory as the air cleaners successfully reduced the dust load by 80%. For activities in the centre, the substance concentration is on average 20 mg/m<sup>3</sup>. When there are no activities, this drops even further to 0.4 mg/m<sup>3</sup>.

*"One time we experienced a power outage, the air cleaners were shut and within hours, employees complained of sore eyes and a stuffy nose. When the power outage was repaired and the air cleaners started working, we could see the problems disappeared. This is the impact and effect of Camfil's air cleaners on our warehouse environment."*

- Managing Director, Compass Transport

## Product Information Air Cleaner CC 6000

- Healthier employees
- Less cleaning
- Reduced environmental impact
- Clean products, fewer operational disruptions
- Less mold and extended product shelf life
- Filters fine and ultra fine dust particles
- Lower energy costs
- Air volume up to 6000 m<sup>3</sup>/h
- ePM1 Pre-filter + H13 efficiency main filter
- Leasing options available



**Snapshot of the substance concentration on the day of the power failure. The decline is clearly visible when the power outage was remedied and the Air Cleaner started working again.**