

## CASE STUDY

# VAN TILBURG ENERGIE DESIGN - DE ZORGGROEP MAGNOLIAHOF

## OPTIMIZATION OF INDOOR AIR QUALITY AT THE CARE CENTER

Van Tilburg Energie Design provides environmentally conscious and energy-efficient solutions for various applications. This also includes their work at De Zorggroep Magnoliahof in Venlo. The care center consists of 80 care studios, where residents can enjoy light, space, a pleasant living climate, atmosphere, and experience. Given the emphasis on a comfortable living environment, proper ventilation and optimization of air quality are high on the agenda. How does De Zorggroep, together with Van Tilburg Energie Design, offer residents optimal protection against (ultra)fine dust?

### Air Quality Challenge

The answers to these questions are sought by William Wulms, advisor at Van Tilburg, in collaboration with their long-term partner, Interfilter. Together with Interfilter HVAC, they conducted research into the air quality within De Zorggroep Magnoliahof and the potential for improving it. The research revealed that outdoor air around the care center has an elevated concentration of fine dust particles (PM0.3, PM1.0, PM2.5). Therefore, it is extremely important to apply a filter that meets the WHO requirements for fine dust filtration in order to create a healthy environment for all residents.

### A Pleasant Living Climate

A clear difference was observed between the current filters (ePM2.5-70%) and the recommended filters (ePM1-70%) at Magnoliahof. This difference is visible in the fine dust concentrations measured behind the filters and in the rooms where staff and residents are present. The fine dust concentrations behind both filters meet the WHO and Eurovent 4/23 guidelines. However, the standard recommends using at least ePM1-70% filters for the Magnoliahof location in Venlo (ODA 2/SUP 2). Based on advice from Interfilter and in consultation with Van Tilburg, the G85 ePM1-70% filter was installed in the air handling units at De Zorggroep Magnoliahof. *"In this way, we ensure that all residents of the care center at Magnoliahof can enjoy a pleasant living climate,"* says the care center.

## FACTS AND FIGURES



G85 ePM1-70% filters meet the guidelines of Eurovent 4/23 and the WHO



Significant reduction in fine dust concentrations at each PM level



30% less energy consumption and a decrease in energy costs



CO<sub>2</sub> savings of approximately 1500 kg per year



50% more dust-holding capacity and longer filter lifespan