Performance of Ductless Personalized Ventilation in Open-Plan Office - Field Survey

A field survey was conducted in an architectural company located in Syracuse, USA. 54 employees who participated in the survey performed mostly design work. Large open-plan office and several single offices ventilated by displacement air distribution were included in the survey. Ductless personalized ventilation was installed on 38 of the workstations (53 %). The DPV equipped with small fan and filter, sucks the clean and cool air distributed over the floor by the displacement ventilation and supplies it to the breathing zone of the occupant. The DPV allows for individual control of flow rate (i.e. velocity) and direction of the supplied personalized air. During the survey, carried out in July – September 2011, both DPV users and non-users reported daily on their thermal comfort, air quality and SBS symptoms. Continuous measurements of air temperature, operative temperature and relative humidity were performed. The occupants at the desks with DPV reported increased satisfaction with the indoor environment.