



Surgical Site Infections Are A Significant Concern to Patients And Hospitals

CompView Medical's NuBOOM Is The First U.S. Integrated System to Meet Germany's Rigorous Air Quality Standard For Operating Room Laminar Airflow

Beaverton, OR. May 28, 2014 –[CompView Medical](#) (CVM), a leading provider of integrated audio-visual systems for healthcare environments and manufacturer of [NuBOOM](#)[®], the world's first all-in-one equipment manager, visualization, and ergonomic boom system, announces it has successfully passed Germany's Operating Room Air Hygiene Standard –DIN 1946-4. DIN 1946-4 specifies the acceptable cleanliness of hospital air quality. In addition to meeting this qualification, NuBOOM is the world's first boom system to pass the standard while supporting low heat signature LED surgical lights and LCD displays simultaneously.

Passing this standard is important because according to a recent study published in the New England Journal of Medicine, about 1 in every 25 patients seeking treatment at hospitals acquired an infection in 2011, with surgical site infections being the most common type. To combat the risk of airborne contaminants, hospitals have been placing more emphasis on air handling systems that create a purified zone over the patient. These systems are known as "laminar flow systems". In a laminar flow system, HEPA filtered air is fed to a vent over the patient. The air is chilled so that it is slightly cooler than the ambient air temperature of the room (~3°). Since cooler air is denser than a room's warmer ambient air temperature, the purified air settles slowly towards the floor, laminating the patient with a "clean", particulate-free air barrier.

"The German DIN-standard 1946-4 is a significant accomplishment for the NuBOOM system to have achieved, along with its new approach to operating room design," stated Frank Reichert, professor of Life Sciences Engineering at HTW-Berlin, Germany. "It was particularly impressive for the NuBOOM to meet this standard given the system includes four LCD displays, as well as two luminaires."

The theoretical design of airflow in operating rooms is, in many ways, tied to an earlier era, when open surgery, not minimally invasive surgery (MIS), was the procedural choice and surgery illumination was created by inefficient incandescent bulb technology. The heat of incandescent bulbs negatively impacts unidirectional laminar airflow by warming the chilled, purified air; and because warm air rises, the downward trajectory of purified air could be reversed, making it possible for particulates to spread from elsewhere in the OR to the patient, thereby increasing the risk of surgical site infections. Additionally, since no provision for the surgical displays required for MIS was considered when standards were implemented, questions existed as to whether suspension of LCD monitors within the laminar flow covered area could also impair proper function of the laminar air flow system. Today's operating rooms, especially in hybrid ORs, use a vast array of imaging technologies to enable MIS and require multiple LCD screens.

Intuitively, patients undergoing open surgery procedures have more risk to airborne bacteria than those undergoing minimally invasive surgery, where openings into the patient's body are small. However, the volume of MIS procedures now outweighs open procedures. Still, laminar flow is an important topic because hybrid operating rooms, where MIS and open surgeries are performed, are now a major area of investment for hospitals.

Hybrid operating rooms need both surgical luminaires and LCD displays. NuBOOM's modular design allows hospitals to rapidly install surgical luminaires and displays in just 2 days. NuBOOM enables suspension of LED surgical luminaries and displays via a floor mounted system that cantilevers them to the ideal spot over the surgical table. Expensive ceiling reinforcement is eliminated. Additionally, modern LED technology has created luminaires that operate at a lower temperature than older incandescent technology. Lessening the heat signature of the luminaires improves the performance of the laminar air system.

"NuBOOM has been widely adopted by hospitals and outpatient surgery clinics throughout the Americas, as a means of cost effectively upgrading out-of-date operating rooms with modern, minimally invasive surgery visualization equipment," said Paul White, President and CEO, CVM. "Many European hospitals considering a NuBOOM purchase have expressed interest in NuBOOM's ability to reduce the cost of retrofitting hybrid ORs with new surgical technology, but meeting existing regulatory guidelines for air purity was a prerequisite. We are thrilled to be the first U.S. manufacturer to meet this requirement."

About CompView Medical:

CVM is the manufacturer of the NuBOOM- the world's first all-in-one equipment management, visualization and ergonomic boom appliance. The NuBOOM assists hospitals desiring to retrofit out-of-date operating rooms with modern visualization technology for minimally invasive surgery. NuBOOM is installed in operating rooms in two days, minimizing disruption to OR schedules and staff. CompView Medical was founded in 2006. For more information, visit <http://www.nuboom.com>.

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