THE HYGIENIC DOOR FOR THE CARE SECTOR

M11 OPERATIONAL THEATRE DOOR

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KONE: Market leader in hermetically sealed doors for healthcare sector.

Inventor of and producer of the unique Hermetic door conept!

In the last two decades KONE has mainly specialised in door concepts for the care sector. Proof of which can be found in the number of differentiated door concepts that fully comply with all kind of European norms on the one hand, and satisfy the needs of modern hospitals on the other. Constant development to pace the increasing patients' demand and hospital needs.

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The KONE hermetic door concept efficiently and economically maintains over- and under pressure, one of the basic demands in the operational theatre area. However, the M11 is more than just an operation theater door. Because of its weight, accepted dimensions, its pricing, hermetic sealing and, above all, its fire retardant qualities, it supremely qualifies as an overall hospital door one can come across the staff rooms, the ward rooms.
Of course interlock is one of the M11 features. Doors can be linked and programmed to interact. Air tightness tests have shown the M11 to be 100% air tight. In under pressure (quarantine surroundings) the door has no leakage at all up to no less than 150 Pa. In over pressure (operation theatre surroundings) 20 Pa difference only results in an air loss of 0.5 m3. In respect to the present quarantine demands KONE is leading and the first to initiate new and relevant options. Hermetic sealing results in 27 dB sound reduction, a feature that cannot be overlooked in any operation theatre area.

Energy saving

While maintaining over- and under-pressure is a necessity and while a continuous flow of 'fresh air' will greatly contribute to a high level of hygiene, any hermetic sealing will drastically reduce energy cost. Being a slider the M11 initiates hardly any uncontrolled air movement and consequently the particles in the air influencing the level of cleanliness, are not disturbed. Every movement of the door, though, will inevitably influence air-hierarchy.

After each door movement air-hierarchy needs to be restored. Again the hermetic slider compartmentalises perfectly and reduces air-hierarchy recovery time dras-tically. Short opening and closing time further supports the energy economic character of the M11. Differentiation between nurse-, trolley- and bedopening will contribute to maintain energy economics, maximum hygiene and minimal disturbance of the desired air-hierarchy.

Hygiene

It stands to reason that hygiene is an important criterion when we have to decide on sensible and efficient applications in the hospital. The M11, being an hermetic solution, seems to come into play quickly when infections and viruses endanger a proper operational outcome. Hermetic closure will minimise the problem of micro-organisms and the spread of it. Confining and controlling the free air-flow seems to help greatly in reducing the risk of infection. Easy to clean, sliding on the outside of the theatre, moving a minimal amount of particles, non touch systems, and a differentiated opening programme, all add to a perfectly acceptable hygienic door solution.

Easy to install

No special constructional features are necessary to in-stall a standard KONE door. No special door casing, and no sill. Although hermetic sealing demands a high level of accuracy, the M11 construction can easily cope with normally accepted constructional tolerances without affecting proper sealing or sealing quality in any way. The wall frame and door are installed at the same time avoiding discrepancies in dimensions, communication problems and other failures. The sliding principle is flexible in respect to wall opening dimensions.

Opening and closing

The M11 is a sliding door and consequently airhierarchy, air pressure differences, will have no impact on the door movements. Opening andclosing time is extremely short in order to reduceair pressure losses to the bare minimum, anddrastically shorten the recovery period. No disproportionate air losses through differentiating between nurse-opening, trolley-opening and bed-opening, of the door. The automation is 'high tech' and software controlled. Minimal adjustments will allow her to be linked with building control systems. It has a 'history readout' option in order to quickly recover failures or improper use of the door.
A 'service code line' which allows the hospital technicians to perform a first scan to do an immediate check on basic door features. The automation is self regulating. It automatically match memory reading of obstacles. Should the door fail to close because of an obstacle in the way,the door will fully open again and restart its closing cycle but still remember that an obstacle is in the way, and automatically slow down to prevent bumping into it.

Automation and M11

The KONE door is easily automated, even when we decide to this later on the M11 is fully prepared and equipped to easily undergo the change. Whenever it appears important to change to 'non-touch' systems, in case the real virus transport is still munknown, the rail system technically embeds all features to accommodate the 'non-touch' upgrading. The actual door construction is always on the outside of the operational theatre and in addition easy to clean. Assuming that; the effective use of energy, strict following of hospital procedures, countermeasures for infections, the practical use of interlocking door positions, product reliability and a silent, inconspicuous way of door functioning, are important criteria to come to a well balanced decision in purchasing high quality hospital doors, the M11 might be an excellent choice.

Sliding doors generate extra space

Besides the fact that a slider is a lot more functional in use than a hinged door, think of dimensions, door blade weight, and sealing, the construction is extremely helpful in case of limited working areas, narrow corridors, necessary activities next to the door opening. A slider becomes even more important when we think of disabled people, patients using a wheelchair, crutches or those who are spastic and are unable to control their movements. The M11 has no sill and provides a smooth and easy passage for every patient no matter what his disability is. All situations in which a slider is far more user friendly than a hinged door.

M11 open to options

Because every Public Health Service is likely to be faced with new demands all the time, such as: new and unknown viruses, stricter hygienic demands, increased patient numbers, sudden peak demands to cope with calamities, and other challenges, the M11 has been designed to grow with these changes. A manual slider can be easily automated. Non touch system can be added to the door and a variety of security measures, when needed, can be incorporated to suit any future hospital demand.