

THERMA-KLEEN®

INDUSTRIAL DRY VAPOR CLEANERS

Advantages of Therma-Kleen Dry Steam Vapor for Medical Facilities

Reducing Medical Facility Infection Risk with Therma-Kleen Dry Vapor Cleaning Systems



A hospital and medical facilities are supposed to be place a healing and safety. But, what happens when the place you go to get better actually poses its own set of risks to your health? Unfortunately, this is the reality that the healthcare world is facing. Increasingly, hospitals and healthcare facilities are having to deal with patients that acquired an infection such as Staph or MRSA, not from the outside world but from right inside the healthcare facility. There is a reason that doctors, nurses and hospital staff take hand washing and disinfection of surfaces and instruments very seriously, they are dealing with very sick, sometimes contagious patients and infection can spread quickly without the following of proper protocols.

Therma-Kleen Dry Vapor systems use Super-heated steam (5% moisture) and pressure to penetrate deep into surfaces providing a safe, sanitary and clean surface. The low moisture content of the Dry vapor allows surfaces and fabrics to dry right before your eyes. The higher the steam temperature, the more



efficient the steam becomes as a disinfectant, making it easier to clean & sanitize. Therma-Kleen systems reach temperatures up to 380°F/193°C with pressures up to 160psi. These elevated temperatures are guaranteed to kill pathogens, molds, viruses, bacteria, or any other contaminants effortlessly, making Therma-Kleen Dry Vapor systems ideal for environments where these nasty organisms can easily spread. Additionally, this is all done without the use of Toxic Cleaning Agents, which come with their own set of safety/health hazards.

- Cleans and sterilize, wheelchairs, supply carts, ambulatory & surgical equipment
- Cleans & deodorizes upholstery, carpet, mattresses & bedding
- Cleans & Sanitizes Examination/Operating rooms
- Low moisture content allows for cleaning of and around electrical equipment
- Disinfects & deodorizes bathroom surfaces & fixtures
- Kills & removes bacteria, mold & mildew as well as chemical contaminants
- Cleans & disinfects kitchens, food service areas, appliances, supply carts, etc.



Who Needs Therma-Kleen Dry Vapor Systems:

- Medical Offices
- Dentists Offices
- Urgent Care Facilities
- Minor Medical Facilities
- Clinics
- Physicians' Offices
- Outpatient Facilities
- Surgical Facilities
- Dialysis Centers
- General Practitioners Offices
- Mental Health Facilities
- Nursing Care Facilities
- Long Term Care Facilities
- Physical & Speech Therapy Centers
- Ambulances

Consumer Reports: sheds light on just how concerning hospital infections are and why more and more hospitals need stringent and effective cleaning protocols in place to combat the issue, "Every year an estimated 648,000 people in the U.S. develop infections



during a hospital stay, and about 75,000 die, according to the Centers for Disease Control and Prevention (CDC). That's more than twice the number of people who die each year in car crashes. And many of those illnesses and deaths can be traced back to the use of antibiotics, the very drugs that are supposed to fight the infections."

While the first instinct may be to grab every chemical disinfectant and throw it at the problem, that is not necessarily the answer. First of all, chemical cleaners

leave behind a biofilm that acts as a protective barrier under which bacteria can find safe harbor and grow with reckless abandon. Further, chemical cleaners have been linked to many health concerns including asthma and some forms of cancer. Hospitals and healthcare facilities must find a safe and effective cleaning method that eradicates bacteria and allows patients to safely seek treatment. For this reason, many hospitals and healthcare facilities are turning to steam cleaning for its powerful cleaning and disinfecting capabilities. Many hospital and healthcare surfaces including tables, chairs, beds, floors, showers, grout, and more can harbor harmful bacteria that can spread infection. Further, chemical cleaners cannot clean all of these surfaces, let alone tiny pores or cracks and crevices, but steam can.

Infection Control Today: describes just how effective steam cleaning can be in healthcare settings and provides research to back it up, "Therefore, my colleagues, Jonathan D. Sexton, MS; Benjamin D. Tanner, PhD; and Sheri L. Maxwell, BS, and I recently undertook a research project involving a novel steam vapor sanitation device to determine surface disinfection efficacy with the tap-water-only method in a major Arizona hospital. The study was carried out in eight occupied rooms of a long-term care wing of a hospital. Six surfaces per room were swabbed before and after steam treatment and analyzed for heterotrophic plate count (HPC), total coliforms, methicillin-intermediate *S. aureus* and methicillin-resistant *Staphylococcus aureus* (MISA and MRSA), and *Clostridium difficile*. The resulting research report published online on June 8, 2011 in the American Journal of Infection Control (AJIC) stated, "The steam vapor device consistently reduced total microbial and pathogen loads on hospital surfaces, to below detection in most instances" and that the system "provides a means to reduce levels of microorganisms on hospital surfaces without the drawbacks associated with chemicals."



Steam cleaning is fast, eco-friendly and, most importantly, effective at the removal of harmful bacteria which can reduce the risk of hospital-acquired infection in patients.

Clinical Microbiology Review: notes just how effective steam is for disinfection of contagious infections, "Steam Vapor Machines are rapidly effective against a wide range of pathogens, notably VRE, MRSA, and Gram-negative bacilli, including *P. aeruginosa*. Initial inocula of 7 log₁₀ selected organisms are reduced to undetectable levels in less than 54 seconds following exposure to steam. The total surface bioburden from hospital surfaces is decreased by more than 90%, along with almost complete elimination of pathogens."



Hospital Equipment: states just how important it is to use Dry Steam Vapor Equipment which is suitable for health care environments. The machine must be designed for use in areas where infectious organisms may be present, so it must also be constructed in a manner which will allow it to be cleaned and disinfected as well. The Dry Steam Vapor Machine needs to have an easy to clean Stainless-Steel outer surface, be constructed using industrial grade Stainless-Steel or Brass components. The steam output must have a low enough moisture output that will allow it to be used around electrical apparatus. Hospital use requires the units be durable so they must be constructed in a manner which will allow it to stand heavy duty use.

Why Therma-Kleen Equipment:

- Manufactured in the United States to American Industrial Safety & Operational Standards
- Temperatures up to 380° F
- Pressures up to 160 psi
- All Stainless-steel body
- All fittings are Stainless-steel or Brass
- Ease of operation equates to higher efficiency and a better job

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