

# HEPA Room Air Cleaner

critical environment diffusers

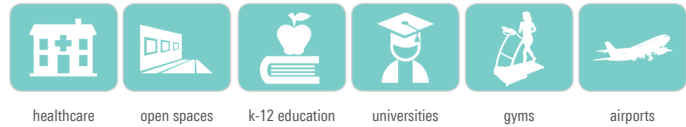
www.titus-hvac.com

## THRC

- Ideal airflow pattern delivers clean air to the breathing zone
- 560 CFM – 800 CFM High Flow Configuration
- 70 CFM – 400 CFM Low Flow Configuration
- 99.99% Medical Grade HEPA Filter
- 99.995% ULPA Filtration Option
- Antimicrobial MERV 8 Pre-filter
- Filter Replacement Indicator Light
- Quiet operation and simple maintenance
- Durable welded steel cabinet
- Optional High Intensity UV-C Germicidal Lighting
- Locking Caster Wheels



THRC



 See website for Specifications

### MODELS:

- THRC / High Flow
- THRC / Low Flow

### FINISHES:

Standard Finish - #26 White

### OVERVIEW

The Titus HEPA Room Air Cleaner (THRC) is the ideal solution to improve indoor air quality by providing continuous filtration within the space. When equipped with the optional Germicidal Ultraviolet light, the THRC provides superior defense against the spread of infectious airborne particles. The quiet operation and durable welded steel cabinet makes the THRC ideal for use in classrooms, open and individual offices, restaurants, retail spaces, and other high occupancy areas.

### HVAC SYSTEM ABATEMENT STRATEGIES

HVAC systems are not capable of addressing all aspects of infection control. However, they do impact the distribution and bioburden of infectious aerosols. Increased ventilation, as well as enhanced air filtration and cleaning (e.g. UVGI) technologies have been proven to reduce the risk of transmission of airborne aerosols.

### INCREASED VENTILATION AND ENHANCED FILTRATION

ASHRAE recommends that during times when there is an elevated risk of infectious aerosols “outside air for ventilation be increased to as much as the HVAC system can accommodate and still maintain acceptable indoor conditions during occupied hours”. This statement underscores the fact that existing HVAC systems are often limited in their cooling capacity and can properly condition only a limited amount of outdoor air during periods of near peak cooling or heating demand. The THRC solves this problem by increasing the number of clean air changes within a space without increasing load on existing heating and cooling equipment.

The THRC increases the volume of clean air changes by recirculating room air through high efficiency (HEPA or ULPA filters). This affects the spread of infectious aerosols through dilution which reduces the volume of potentially infectious particles within the space. The airflow pattern of the THRC delivers the clean air changes into the breathing zone where it is most important for occupants.

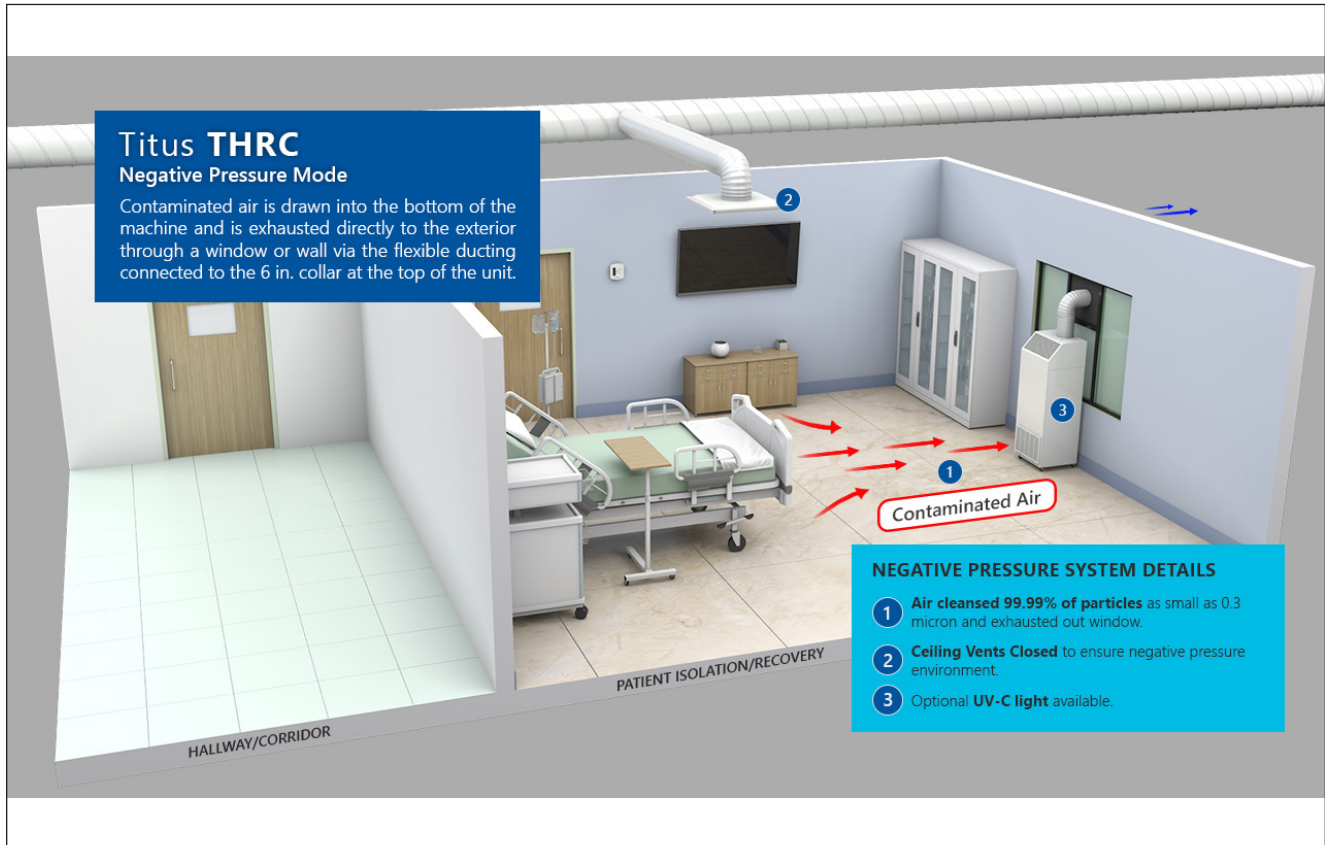
Another key aspect to reducing concentration of airborne contaminants by dilution is high efficiency filtration. Although MERV 13 filters are 90% effective at capturing aerosol droplets larger than 1µm, they are less than 75% effective capturing particles smaller than 1µm. The THRC

TABLE 1 – AIR CHANGES PER ROOM VOLUME

Model	High Flow Configuration				Low Flow Configuration				
	Room Dims.	10'x8'x10'	12'x12'x10'	12'x15'x10'	15'x15'x10'	10'x8'x10'	12'x12'x10'	12'x15'x10'	15'x15'x10'
Room Volume	800 ft <sup>3</sup>	1440 ft <sup>3</sup>	1800 ft <sup>3</sup>	2250 ft <sup>3</sup>	800 ft <sup>3</sup>	1440 ft <sup>3</sup>	1800 ft <sup>3</sup>	2250 ft <sup>3</sup>	
Air Change Rate	42- 60	23 - 33	18 - 26	14 - 21	5 - 30	2 - 16	2 - 13	1.5 - 10	

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THRC



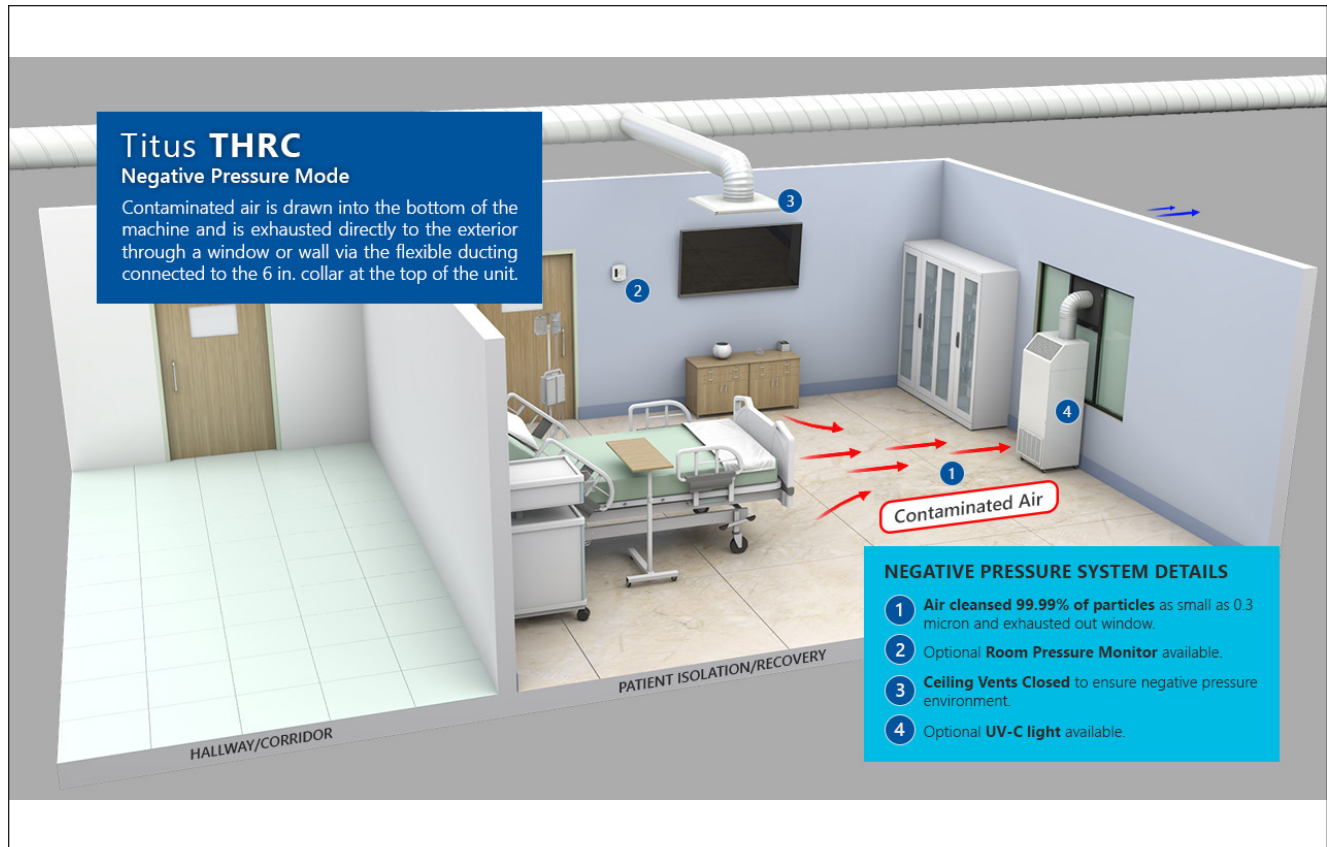
is equipped with an Antimicrobial MERV 8 pre-filter and HEPA filter that is 99.99% efficient for particles as small as 0.3µm. This level of filtration is important as the size of most infectious aerosols are 0.5-5µm, and the very smallest of those particles have been shown to remain airborne for as much as 40 hours, and can continue to remain airborne if not captured by a filter. The optional ULPA filters can increase filtration efficiency to 99.9995% at 0.15µm, further improving capture rate.

### ENHANCED AIR CLEANING

ASHRAE also endorses the use of ultraviolet germicidal irradiance (UVGI) as an effective technology for de-activating the airborne viruses, bacteria, and fungal spores both in HVAC systems and the occupied space. The THRC can come equipped with optional UV-C lighting (254 nm wavelength) and further enhances the cleanliness of the recirculated air. UV-C bulbs in the THRC are rated for 9,000 hours of continuous usage, and are placed upstream of the HEPA filter to ensure all captured particles are inactivated.

### EXHAUST AND PARTIAL EXHAUST APPLICATIONS

The THRC can be set up for two different exhaust setups. THRC is supplied with a 6-inch duct collar, underneath a blank-off plate on the top of the unit. By removing the blank-off and installing the 6-inch duct collar 50% of the air can be recirculated and the remaining 50% can be exhausted. A 100% exhaust configuration can be achieved by replacing the supply grill with the 8-inch ducted collar accessory. These configurations can help convert standard patient room to isolation rooms when outbreaks occur and a shortage of available Airborne Infection Isolation (AII) rooms occurs. In order to achieve this conversion, the requirements of FGI guidelines/ASHRAE Standard 170 must be achieved. These requirements include achieving total of 12 exhaust air changes and maintaining a negative pressure of at least 0.01 in wg. The addition of a THRC in either the 100% or 50%/50% exhaust configurations can help systems that were not initial designed for isolation room use to be converted on an as needed basis and stored for future outbreaks when not required. Portable construction and easy maintenance procedures make cleaning and disinfecting the THRC simple and efficient.



## STANDARD FEATURES

- 560 CFM – 800 CFM High Flow Configuration
- 70 CFM – 400 CFM Low Flow Configuration
- 99.99% Medical Grade HEPA Filter
- Filter Replacement Indicator Light
- Antimicrobial MERV 8 Pre-filter
- 6in Duct Collar and Blank-off for 50-50 Supply/Exhaust Configuration
- 120V or 220V Configurations with Power Cord
- Durable Welded, Powder Coated Steel Cabinet
- Eggcrate Supply Grille
- Quiet Operation
- Locking Caster Wheels

## OPTIONS & ACCESSORIES

- High Intensity UV-C Germicidal Lighting
- 99.995% ULPA Filter
- Carbon MERV 8 Pre-filter
- 8in Duct Collar for 100% Exhaust Configuration