



**TRANE**

*It's Hard To Stop A Trane.*

CleanEffects™



**IR** Ingersoll Rand

# Technologically advanced cleaning. Amazingly enhanced air.

Introducing Trane CleanEffects™, a patented whole-house air filtration system from the recognized industry leader. Designed from the ground up to clean the air like nothing before, CleanEffects makes the air in your home feel cleaner and fresher than you thought possible.



The Asthma and Allergy Foundation of America (AAFA) and Allergy Standards Limited (ASL) has announced that the CleanEffects™ whole home air cleaner from Trane, has earned the asthma & allergy friendly® Certification. The asthma & allergy friendly Certification Program, an independent program administered in the United States by AAFA with their partner ASL, helps consumers identify products more suitable for people with asthma and allergies. To receive the certification, the Trane CleanEffects was independently tested and required to meet benchmark standards as prescribed by ASL and AAFA based on industry leading medical and scientific research in health issues and indoor air pollution.

**AIR FILTRATION**

## CLEANEFFECTS™

- Removes up to an incredible 99.98% of allergens from filtered air.
- Traps particles as small as .1 micron in size.
- Up to 100 times more effective than a standard 1" filter.
- Can reduce your need to dust by up to 50%.
- Performance verified by leading experts at the Harvard School of Public Health.



## So effective, it essentially redefines clean air.

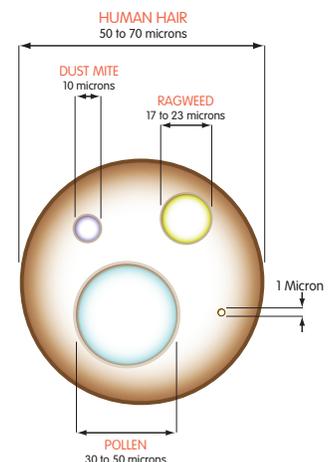
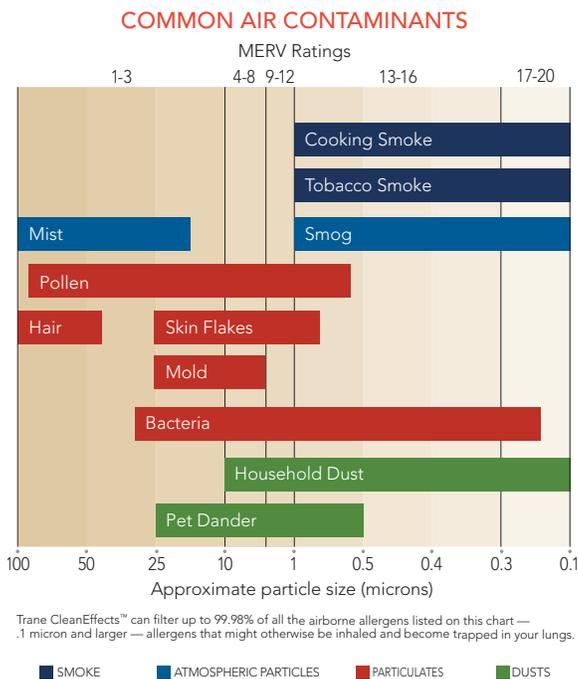
There are several ways to measure the effectiveness of an air filtration system. The two you'll most likely see are MERV, or Minimum Efficiency Reporting Value, and CADR, or Clean Air Delivery Rate. MERV is designed for systems with media-based filters, and involves loading the filter with varying size micron particles until the percent of efficiency fails to meet minimum air filtration standards. This method only measures one aspect of air filtration, particle capture efficiency. Since Trane CleanEffects™ operates with incredible airflow efficiency even under a heavy particle load, it simply cannot be evaluated with the MERV method.

Instead, Trane uses CADR, which measures not only the efficiency with which particles are removed from filtered air, but also the rate at which clean air is delivered to your living space. This is a more accurate representation of an air cleaner's performance because it measures the end benefit to you.

In 2016 AAFA test results showed that CleanEffects™ measured actual removal rates, of particulates, allergens, and viruses from the air in real world conditions similar to your home environment. This is the first whole home filtration system to meet the standards established by AAFA and ASL.

## Micron sizes and your allergies.

CleanEffects™ filtration can help those affected with respiratory distress by reducing "triggers" that cause these attacks. Many common allergens are small enough to bypass the body's natural defenses and embed deep in the lungs, aggravating breathing ailments. Since CleanEffects filters down to .1 micron, or 700 times smaller than a human hair, it is extremely effective at removing spores, mold, pollen, pet dander, dirt and dust, preventing them from entering your air, and your lungs.



## A CLOSER LOOK INSIDE A TRANE CLEANEFFECTS™.

**Pre-Filter** captures larger particles and extends the collection cell cleaning interval.

**Power Door** provides easy access for cleaning. The front panel displays power indicator and filter status lights. Safety interlocks power down the system if the door is opened while CleanEffects™ is on.



**Painted Sheet Metal Cabinet** with heavy 18-gauge steel provides attractive and durable protection for electronics and filter components.

**Reusable Collection Cells** are precisely engineered to capture particles down to .1 micron, while still remaining easy to clean. Simply vacuum once or twice a year to make them like new.

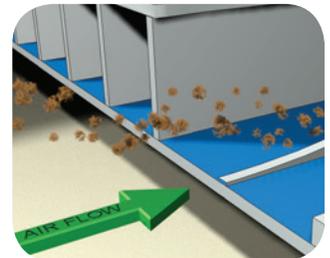
**Field Charger** charges incoming particles so they adhere to the collection cells. This patented process is what allows CleanEffects to remove up to 99.98% of particles down to .1 micron that pass through it.

## Trane's revolutionary, patented ifD charger delivers powerful cleaning with efficient airflow.

Most filtration systems work like a vacuum cleaner bag. Small holes let air pass through but not particles. Unfortunately, the more dirt these systems collect, the more clogged they become. This creates enough of a restriction that reduces clean air flow through the filter which affects comfort level and reduces system life.

Trane CleanEffects™ uses a powerful, patented ifD corona field to charge incoming air, causing particles to adhere to the CleanEffects collection cells as air passes through. Since your furnace or air handler isn't struggling to work against a clogged filter, clean air flows freely. No other filtration system can compare. The fact is that CleanEffects efficiency would actually fall to zero before it would clog the collection cells and damage your furnace or air handler. Periodic maintenance by vacuuming the collector cells and cleaning the charger restores the cleaning efficiency to within 2% of previous level.\*

The Trane CleanEffects collection element is ground-breaking. Each layer is only 0.08 inches apart, with alternating charges, which makes for a stronger, more effective collection field. What's more, the Trane CleanEffects element has eight times the collection surface (over 50 sq.ft.) of a standard electronic air cleaner, so it's vastly more efficient at providing clean air throughout your home.



**Clean Air Delivery Rate** measures the effectiveness of air cleaning appliances. The higher the clean air delivery rate collect on the media, the more effective the unit is at cleaning the room or home of airborne particles and allergens.

					
Typical In-room Appliance	Standard 1-inch Filter	Typical Room HEPA Appliance	Whole-House 5-inch Media Filter	Whole-House Electronic Air Cleaner	TRANE CleanEffects
Clean Air Delivery Rate: 10	Clean Air Delivery Rate: 12	Clean Air Delivery Rate: 150	Clean Air Delivery Rate: 240	Clean Air Delivery Rate: 660	Clean Air Delivery Rate: 1,200

\* Test data from ASL Standard-In-duct Electrostatic Air Cleaner ASP08-06/101

Clean air delivery rate (efficiency times airflow rate) is recognized by the Federal Trade Commission (FTC) and the Environmental Protection Agency (EPA) as a fair and objective measure of various air cleaner technologies. Ratings reflect cubic feet per minute of clean air delivered for a typical 3-ton heating and cooling system; the higher the value, the more effective the air cleaner.

# And it's quiet, too.

Many electronic air cleaners emit an unpleasant buzz, similar to a bug zapper, while operating. Not CleanEffects. Its patented technology makes it as quiet as it is effective.

# The facts about ozone.

Ozone is a naturally occurring element in our atmosphere. According to the EPA, background levels of ozone in the air average about 2 ppm (parts/ million). In 2016 testing at LMS labs, CleanEffects when operating at full capacity only added 3 ppm to the air. The FDA ozone emission standards for all appliance is 50 ppm. Our ozone output falls far below that standard, and is in fact much lower than appliances such as toasters, and heaters.

Trane is concerned about ozone sensitive individuals and has designed CleanEffects to fall well below appliance standards, as well as standards set by the FDA for medical devices.

We have even designed into our product the ability to adjust the power level of CleanEffects to further reduce the ozone output level if desired.



## They're as hard to stop as a Trane itself.

Independent Trane dealers are as personally invested in your comfort as you are, and take great pride in creating your perfect indoor environment. They are some of the most highly trained in the business and have an extensive understanding of the movement and conditioning of air and the expertise to advise, install and maintain the right system for your home.

We Encourage Professionalism



Through Technician Certification by NATE



Ingersoll Rand (NYSE:IR) advances the quality of life by creating comfortable, sustainable and efficient environments. Our people and our family of brands—including Club Car®, Ingersoll Rand®, Thermo King® and Trane®—work together to enhance the quality and comfort of air in homes and buildings; transport and protect food and perishables; and increase industrial productivity and efficiency. We are a \$13 billion global business committed to a world of sustainable progress and enduring results.

