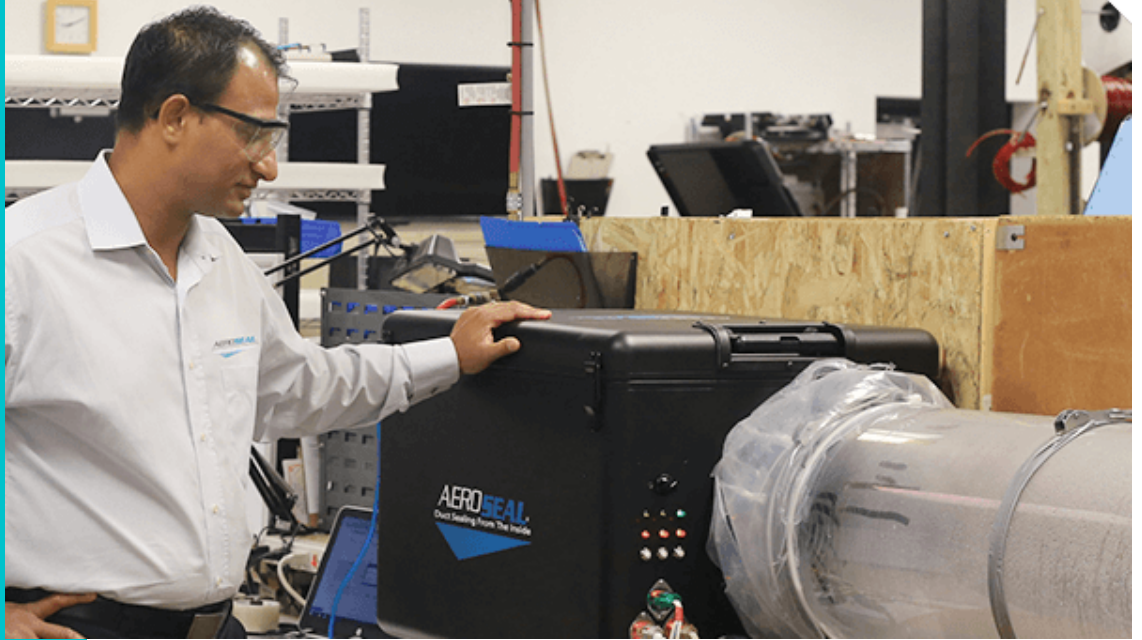


## NZTAP MANUFACTURER CASE STUDY



## MANUFACTURER BACKGROUND

**Background:** It all started in Dr. Mark Modera's California garage in 1993, where he invented a breakthrough aerosol-based sealing technology. For the first time ever, it was possible to seal leaks and holes in air ducts from the inside out. Modera's invention was very well received amongst the industry and was even awarded the prestigious Energy Top 100 award by the US Department of Energy. Since celebrating its 20th anniversary in 2017, AeroSeal continues to be recognized for its significant impact on a better environment, better IAQ, energy savings and the best solution to sealing ductwork in homes and buildings.

## WHAT IS IT?

AeroSeal is a patented breakthrough technology that tackles duct leaks from the inside out. The AeroSeal process puts escaping air under pressure and causes polymer particles to stick first to the edges of a leak, then to each other until the leak is completely sealed.

This unique inside-out approach makes it possible to quickly and easily seal the entire duct system — even sections that are hidden behind walls, under insulation, through tight spaces, or other inaccessible locations.

The AeroSeal sealant is made of a vinyl polymer acetate water-based glue. Its ingredients are commonly found in baby pacifiers and chewing gum. Non allergenic, it has been used in military bases, daycares, hospitals and schools for over 20 years.

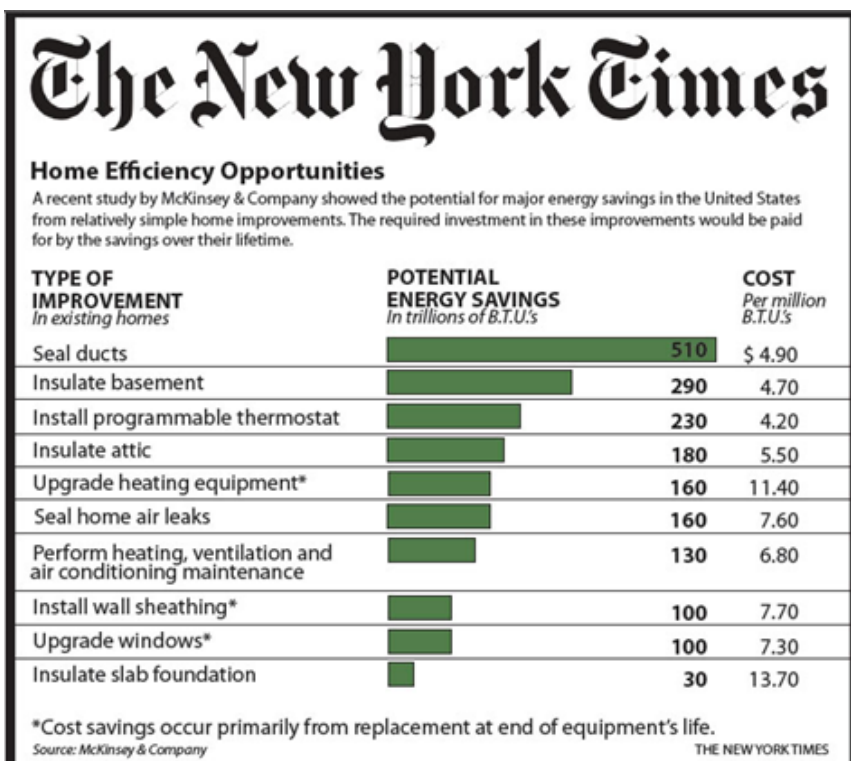
It has won over 16 technology awards and has been featured on many home renovation shows; based on heating and cooling habits in Ontario. AeroSeal has been used to seal ducts in over 150,000 buildings across the globe, including hospitals, military facilities, schools, hotels, and many more industrial, commercial, and residential settings.

# INSTALLATION & PROCESS

- 1. Prepare system:** registers are temporarily blocked with foam plugs to force air in the ductwork to escape through any leaks. Then the air conditioning indoor coil, fan, and furnace are also temporarily blocked with a foam plug to prevent sealant particles from entering this part of the HVAC system.
- 2. Connect system to ductwork:** The AeroSeal machine is connected to the duct work using lay flat tubing. A small access hole is cut into the supply or return, and a temporary collar is attached. One end of the tubing connects to the collar; the other end connects to the AeroSeal. The access hole is closed upon completion.
- 3. Pretest ductwork:** A pretest is run that pressurizes the duct system and provides a leakage reading on the computer. It will detect the exact amount of duct leakage in the duct system (the typical duct leakage detected in a home is between 30-40%).
- 4. Leaky ducts are found:** The patented aerosol sealant is injected as a mist into the ductwork. Holes and cracks in the duct system are found by the pressurization.
- 5. Sealant seals the ductwork:** The aerosol particles collect on the edges of holes and cracks in the ductwork to seal them from the inside.
- 6. Monitor process:** This entire process is computer controlled so technicians can monitor the progress in real-time.
- 7. Certificate of completion:** Upon completion, a computer generated certificate is produced with verifiable proof of the seal, which includes before and after results of the AeroSeal application.

# BENEFITS AND COSTS

Some homeowners have saved up to 40% on their energy bill. A study published in the New York Times showed the potential energy savings of US homes by sealing ducts:



# STANDARDS & CERTIFICATIONS

**Standards and certifications:** AeroSeal duct sealing meets USGBC LEED v4 standards for low VOC coatings and sealants, the WELL Building Standard, ANSI/GBI 01 Green Building Assessment Protocol for Commercial Buildings, certified non-toxic by Occupational Safety and Health Administration (OSHA) and UL approved.