



When Cool Zone Inc., an HVAC contractor, air duct cleaner and Carlisle HVAC Products factory-trained Authorized Applicator, was contacted to clean and seal the ductwork of a 27,000-square-foot facility in South Florida, they knew the task wouldn't be a simple one. The building's dual-wall spiral ductwork was painted purple and exposed to the interior of the building for aesthetic reasons. It was leaking and needed to be cleaned and sealed, but Cool Zone faced a problem: no sealant could be applied to the outside of the ductwork, and no access holes could be cut to clean or apply sealant to the interior, as either would take away from its visual appeal. These factors meant the ductwork had to be sealed from the inside, which presented a challenge.

However, Cool Zone had the perfect solution – Carlisle HVAC Products' ISAAC™ Robotic System. ISAAC, which stands for the Inspecting, Sealing, and Advanced Cleaning robot, was created specifically for the inspection and repair of ductwork and is capable of hard-to-reach remediation, which would otherwise require much more complicated and costly renovations. ISAAC effectively removes debris and is outfitted with a digital video recorder to provide footage of interior duct conditions. This precision device can inspect, coat, and seal all types of ductwork from the inside, with minimal disruption to building occupants. "If we didn't have ISAAC, we would have had to crawl inside the ducts to do the work," said Chris Wilson, Commercial Indoor Air Quality Manager for Cool Zone.



### South Florida Facility Ductwork Remediation

**Contractor:**

Cool Zone Inc.

**Job Location:**

South Florida

**Project Type:**

Remediation

**Carlisle HVAC  
Products Used:**

- Robotically Applied RS-100
- ISAAC HVAC Robotic System

Application of Carlisle HVAC's RS-100 sealant results in a smooth, tack-free surface that will not promote the collection of particulate that could be a food source for bacterial growth.



After Cool Zone used ISAAC to clean the ductwork, removing dirt and debris in a single pass, ISAAC was then utilized to apply Carlisle HVAC Products' RS-100™ water based duct sealant. RS-100 is a sprayable duct sealant that is specially engineered to seal joints and seams from inside the ductwork. RS-100 meets and exceeds all Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) pressure classes, while providing a true SMACNA Class A seal. Its flexibility allows for system vibration without cracking, supplying a permanent fix to leaking ductwork. Wilson added, "The way the RS-100 product adhered to the internal side of the spiral was very good, even though its surface was slightly lubricated."

The ductwork was leaking at the joints, fittings, couplings, 90's, and 45's. Even though there was a lot of work to be done, Cool Zone finished the project in two weeks. "The project was relatively easy, especially using ISAAC," said Wilson.

Cleaning and sealing this facility's duct system provided numerous benefits. Leaky ducts are inefficient and make a building's HVAC system work much harder, contributing to higher energy bills and an increased carbon footprint. In addition, improperly sealed ducts can circulate and deposit dirty, dusty air throughout a facility, causing problems for those who suffer from allergies and asthma. The strategic application of the RS-100 sealant results in a smooth, tack free surface that will not promote the collection of dust, debris or particulate that could be a food source for bacterial growth.

Thanks to an experienced contractor with the right products and equipment, this potentially difficult, lengthy, and costly job was performed quickly and efficiently. Cool Zone was able to provide an easier, more cost-effective method for sealing the ductwork and ensuring proper airflow, which resulted in a happy customer whose air distribution system will operate at peak efficiency for years to come.

**Carlisle HVAC has specialized in making ductwork airtight for the past 50 years. Their expertise in creating quality, long lasting Hardcast duct sealants is matched by their continued innovation in the application of these sealants in both new construction and in the remediation of existing ducts. The best contractors demand Carlisle HVAC Products due to the superior support provided in all phases of the process.**

