

m³cube[®]

ACMV MAINTENANCE SPECIALIST



AIR DUCT DECONTAMINATION
AND SANITIZING SOLUTIONS



Advance Duct Cleaning Methods

A variety of methods have been used over the years to clean ductwork. For large ductwork, humans can crawl through “Mission impossible style” and clean the ducts by hand with rags and brushes. For less accessible ducts, flue brushes, air whips and skipper balls have been used. More recently, industrial robots have been employed. Each of these methods has significant drawbacks. Access to the interior of the ductwork requires cutting large holes, compromising the structural integrity of the duct. Some systems cannot go around bends or up vertical risers and require additional points of access. Cleaning the corners of rectangular ducts can be a problem. COLLUM[®] System uses high pressure air directed through a flexible hose to a special nozzle that moves through the duct, accessing even difficult to reach locations. The nozzle is designed so that it’s head rotates near the duct walls. Emerging air jets not only propel the nozzle, but act like an air knife to remove dirt, debris and contaminants. Negative air pressure is maintained in the duct system during cleaning, and all the debris is blown into the main duct where it is removed by a large vacuum machine.

Applications	m'cube [®] ACMV MAINTENANCE SPECIALIST	Skipper Balls	Brushes	Air Whips/ Spider	Crawl Thru	Robots
Vertical Risers	✓	✓	✓	✓	✓	
Sanitizing	✓				✓	✓
100% Contact with Duct Surface	✓					
Works in any shape of duct	✓	✓		✓		
Effective Agitation	✓		✓		✓	
Ability to go around Bends	✓				✓	✓
Minimum access doors required	✓					
Total control over system	✓		✓		✓	✓
Effectiveness of 100ft	✓					
Ability to clean corners of the duct surface	✓				✓	



Introduction

You spend most of your working hours in the office, have you ever wondered how clean is the air you breathe in your building? Do you know extensive research shows that building owners and maintenance managers are largely unaware of how to combat the spread of internal airborne bacteria and viruses throughout a building or how to reduce fire risks easily from exhaust and industrial ventilation systems? Exposure to such causes a spectrum of illnesses ranging from mild to severe effects such as mild irritation/ lethargy, impaired respiratory development, asthma, cancer; that cost communities heavily in suffering and economic loss.

SOME INTERESTING FACTS

An Average Human Being:

- Inhales 20,000 Times Every Day
- Requires 20,000 Litres of Oxygen Each Day
- Spends 90% of the Time Indoors

And The Truth:

Indoor Air Can Be Up to 100 Times More Polluted Than The Air Outside! (Source from the Environmental Protection Agency) An average human being consumed 1 kilogram of food and 2 kilograms of fluid per day. In comparison we breathe 24 kilograms (20,000 liters) of air a day. Recent studies by the US Environmental Protection Agency (EPA) shows that indoor air in many cases is up to 70 times more polluted than outside air. The World Health Organization (WHO) estimates that 30% of the world's modern buildings are affected and classified as having the Sick Building Syndrome (SBS).



Worried about your employee's health?

Studies by the National Institute for Occupational Safety and Health (NIOSH) found that more than 50% of IAQ problems are related to poor ventilation and related maintenance. Most IAQ problems can be traced to two common causes: inadequate ventilation hygiene and a pollutant source.

Cleaning a building's heating, ventilation and air conditioning system (HVAC) will in most cases led to a major improvement in IAQ. Many buildings have not had their ductwork cleaned in decades; some have never been cleaned. Debris from the original construction as well as years of accumulated soot, fungi, spores, pollen, dust viruses, bacteria, asbestos, oil, mites, smoke, tar, textile fibers, moulds and other contaminants are hidden throughout the ventilation system.

DUCT CLEANING SERVICES VIA

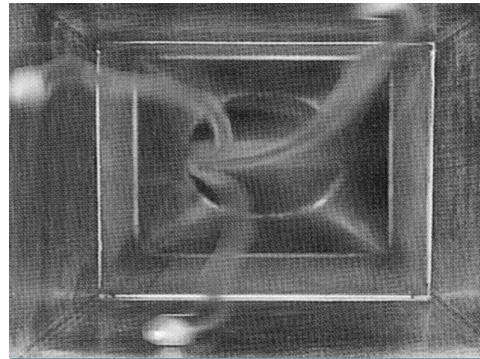


ANZ have adopted the most advanced duct cleaning system in the world called COLLUM® International. COLLUM® is developed based on blow and suction technology, where it uses high compressed air together with special nozzles acting as air knives inside the ventilation system. The entire system is set under negative pressure by using super efficient negative air machines that also collect the debris.

On top of it, we are also able to perform sanitizing on the inside surface of the ductwork after the cleaning process is completed by spraying anti-microbial solutions if required.



The COLLUM® System.



The nozzle is designed so that its head rotates near the duct walls.

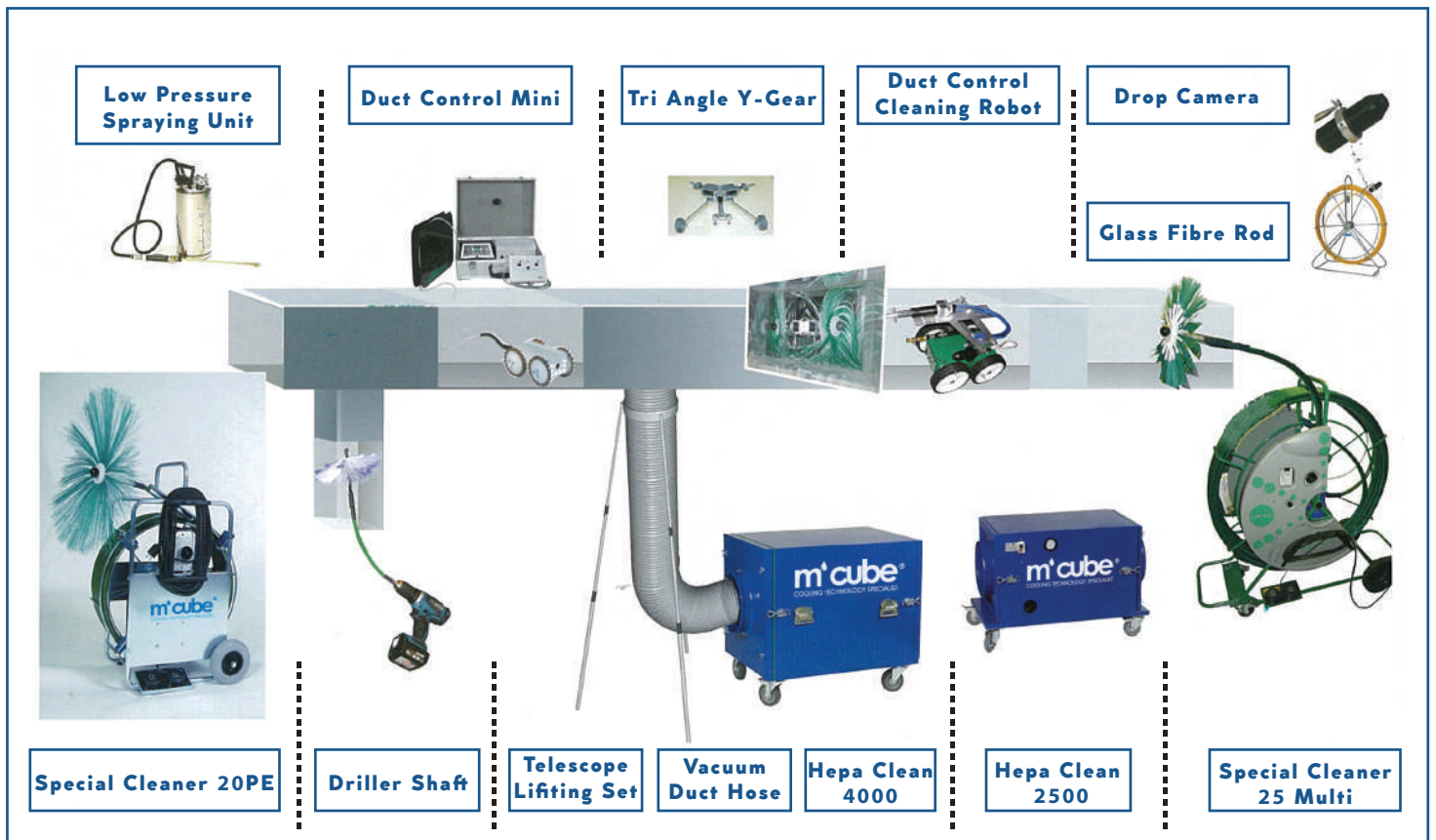


A very contaminated duct.



The duct after cleaning.

Patented HVAC cleaning systems use high-volume compressed air and aerodynamic nozzles to clean air duct systems more efficiently and effectively than conventional technology. A minimum of 180 Cubic Feet Per Minute (CFM) of air is supplied to the nozzle (usually via a tow behind compressor). Pounds Per square Inch (PSI) delivery is a minimum of 100 PSI..



Features:

Nozzles can traverse up to 80 feet with a single access opening. Nozzles create an "air knife" effect to cut away duct debris thus providing effective agitation without the need for brushes, in most cases. (When brushes are required, COLLOM® provides state-of-the-art brush systems). Air volume from nozzle transports debris downstream in the same direction that vacuum collector is "pulling". Thus a less powerful vacuum collector is required as the nozzle provides the transport velocity. Nozzles adhere to the sides of any shape ductwork (e.g. round, rectangular, oval), thus handling transitions in size without s topping. Nozzles can effectively operate in vertical risers.

For any enquiries or information, please contact us at:

M-cube Engineering Sdn Bhd (612336-U) No. 29, Gravitas, Jalan 22/5, Seksyen 22, 40300 Shah Alam, Malaysia.

T: +603- 5103- 3603 W: www.m-cube.com.my E: info@m-cube.com.my

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