

NADCA **DUCTALES**

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The Trouble with Regulation

GETTING GOVERNMENTS TO ACCEPT NADCA
STANDARDS DEPENDS ON EQUIPMENT STANDARDS

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The Trouble with Regulation

Getting Government Acceptance of NADCA Standards Relies on Equipment Standards

By Steven Scanlan

The absence of official enforcement of regulations for proper duct cleaning means there are no guarantees that a duct cleaner who follows NADCA proper duct cleaning standards will have any more recognition than one who cleans improperly. The bitter irony is that the costs of duct cleaning are leading factors that prevent governments from legislating to enforce NADCA ACR standards in commercial cleaning, despite the reduction in power-consumption and the lost productivity due to workplace sicknesses caused by contaminated indoor air. Government enforcement of the NADCA duct cleaning standards would ensure a permanent advantage to certified contractors who clean commercial and government buildings effectively while expanding the market and creating more business for the industry, which should therefore be a top priority for respectable duct cleaners

The Trouble with Regulations

A number of reasons exist why governments have been hesitant to accept regulations for the industry, and the cause of these reasons originates with the duct cleaners themselves. Dedication to the highest standards of quality combined with

efficient equipment is the key to proving the benefit of this service to political actors and normalizing the industry. With the costs of cleaning commercial ductwork reaching hundreds of thousands of dollars, why should governments force such an expense on building owners or incur it themselves? The health hazards, from asthma to exploding dust catastrophes, and increased energy consumption would be the rational response from those familiar with the market, but how can governments know that benefits are truly taking place?

Inspections—the first step in proving the necessity of the job—are difficult to enforce, and go unrecorded in many contracts. Low-quality imaging makes it difficult for veteran duct cleaners to determine the exact extent of the contamination, and makes proving the necessity of the contract to clients difficult in comparison to a recorded, higher quality inspection. Different equipment, methods and, ultimately, job quality in duct cleaning jobs ensures that governments see correct cleaning method enforcement as hurting duct cleaners as well as building owners. Finally, a poorly performed job inhibits clients' appreciation of the benefits of duct cleaning, as a single improperly cleaned area can re-contaminate the entire building's air supply.

This problem is due to poor-quality inspections and inaccessible duct sections for manual methods. Inadequate equipment makes for poor work, and contaminates the reputation of the duct cleaning industry. For an institution, such as the American government, to take duct cleaning standards seriously, duct cleaners must all take these standards seriously as well, or official standards will be seen as favoritism, and would invoke fears that normalizing the industry may cause political resistance to lawmakers.

Managing Risk

Duct cleaners who don't do their jobs according to NADCA regulations do not necessarily do so out of a desire to cheat clients. It could be considered cheating the cleaner to ask him or her to provide the same job quality using a semi-rigid cable and brush or extremely large or inspection-only robot for the same cost as is demanded from cleaners with advanced equipment. Manual cleaning with a brush attached to a cable is the most common method used in North America, likely because they are cheap to buy and replace and widely available. Compared to robotic methods, manual cleaning is far more time consuming when performed effectively, and difficult sections are left inaccessible with this

method. Cleaners tire after extended work periods, and that's without the burden of having to crawl into the duct, which represents safety risks due to the contaminated air, especially in places like hospitals, or the risk of the duct collapsing and folding in two. This risk is mitigated by hiring an engineer to determine the stability of the duct, a costly job that is still less expensive than the problems that would come from an accident occurring without it. There is a security risk involved with this too, as jails, embassies and other high-security buildings may not want people crawling around in their ducts. Not only does this method entail more time and, therefore, costs to clients, it also involves worker safety risks, and governments should not be expected to accept a method that includes manual cleaning, outside of flexduct cleaning, for an official proper cleaning regulation.

The Robot Option

North American duct cleaners have the option to buy duct cleaning robots from several different suppliers, a trend which has generally not caught on. Just as the duct cleaning market is unregulated, so are the duct cleaning robot manufacturers, and duct cleaners have brought complaints about robots that break down and get stuck in the duct, or do not work efficiently. Others break down quickly, forcing cleaners to return to their old methods, which many who have tried duct cleaning robots have opted for. Many robots do not have the capacity to use more than air whips, a less effective method that usually does not clean the duct deeply enough, leading many hospitals and other types of institutions where cleaning is extremely important to demand that only brushes be used. Duct cleaners are unlikely to invest



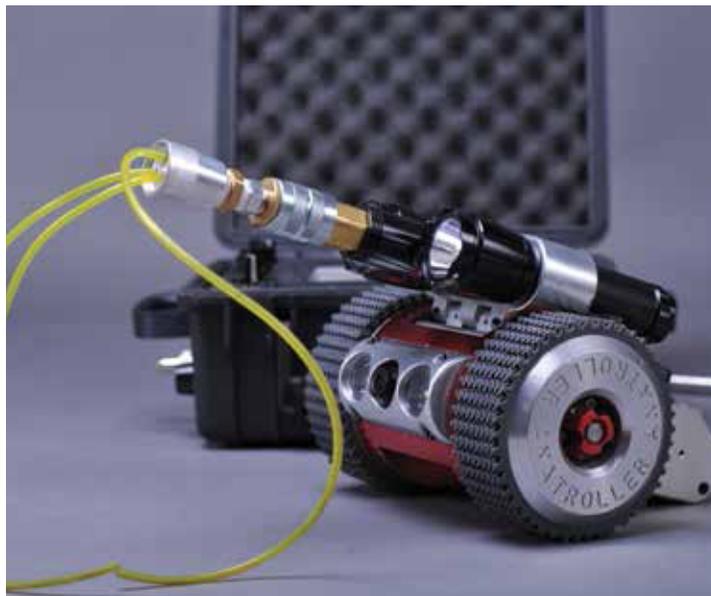
in something they cannot regularly use, is less efficient than their current methods, or won't do what they and their clients need. As a result, price is seen as the main factor in purchasing a duct cleaning robot, which perpetuates the problem of robot quality.

Many robots suffer from a lack of strength and manoeuvrability, and cannot drive with heavy accessories over long distances or over slopes, and in the case of obstacles, either they are unable to surmount them, or the most commonly reported problem with robots occurs: They flip over. This requires manual extraction, which involves tugging the robot out by its cable, risking damage, to set it upright. With very heavy and large robots, the flip-over can waste a good deal of work time and effort—if the robot is able to fit into the duct in the first place—and will not cause it to collapse. Large robots can also be difficult to deploy, especially when they must be inserted into a high overhead duct.

This process requires two workers to climb a ladder and fit the robot into a doorway, causing accidents that could harm the workers and the equipment. Other time-consuming problems range from having separate air and power cables that tangle and break to components falling in the duct or wear-and-tear damaging key components. If a piece of equipment cannot do what duct cleaners need, or does not work efficiently, it cannot make for a good standard in the industry. Governments would be equally unlikely to enforce cleaning standards with these as with manual brushes. The best move for governments when presented with these options is to eliminate or prevent industry regulation, and let the industry develop.

Getting the Government Onboard

The multi-billion dollar duct cleaning industry is no longer an emerging market, and despite naysayers, the benefits of duct cleaning in terms



of energy cost savings and health hazard reduction have been outright proven through NADCA studies. What then, is the right way to clean ducts to ensure the expected benefits are truly taking place? The No. 1 issue in every business must first be addressed: Cost. A duct cleaner's time is money, and therefore, robotic equipment that allows for the highest possible efficiency in every job is key in achieving this. A quality design for a robot is one that resolves all the challenges the robot will face. With lower duct cleaning costs and reduced length through high efficiency equipment, governments will be far more easily convinced to adopt more regular and widespread duct cleaning. This is also the primary issue to making regular cleaning the law.

Martin Garon, the president of NADCA member Air Innovation in Quebec, Canada, was very recently faced with a 4,000-foot contract of 3-foot x 4-foot ducts for a garage of the city's major bus terminal. The job demanded a robot, as ducts were contained in an exceptionally high ceiling. They found their best equipment solution

in the ANATROLLER™ ARI-100 advanced duct cleaning robot. "The ANATROLLER ARI-100 was used to clean all the ductwork in the huge garage last fall," says Garon, a professional duct cleaner with more than a decade of experience in servicing commercial and industrial ducts. "We saved around 25 percent on working hours with the robot, and were able to clean 300-400 feet each day using the ANATROLLER. It gave us the flexibility to clean very small and very large ducts, had a long operating distance and gave us extraordinary visibility in the duct with the cameras. Our goal for the next year is to have an ANATROLLER ARI-100 on each job we perform because we can do a better cleaning in less time than with any other equipment."

In Canada and Europe, where government regulation of proper cleaning is coming into force, other duct cleaners have found the ANATROLLER to be the only solution for their work. "I can confirm that ANATROLLER robots cannot be compared to any other product on the market," says Patrick Poulin, a duct cleaning technician for the past two decades. "I've used the

ARI-100 and the ARI-50 and I can say without a doubt that the ARI-100 is the most professional cleaning robot, and it has allowed me to save an enormous amount of time. After using ANATROLLER robots, I'll never go back to manual labor."

Robotics Design Inc. makes three robots to serve duct cleaners of all sizes, and every robot since the equipment line was launched in 2001 continues to be the critical equipment for every job its users perform. The robots brush, coat, seal, spray and paint, as their unique modular design allows them to hold almost any needed accessory.

The "Cadillac" of the family, known as the ARI-100, was made specifically to resolve every single challenge faced in the duct after long periods of discussion with the industry. The result is an 8-kg. robot that cleans ducts from 8.5-inches x 6.5-inches to 7-foot x 7-foot or more; can climb 5-foot obstacles and sharp slopes without flipping over; and flips itself over back and forth on command, thanks to its symmetrical design and articulated arm. The robot also

moves in all four directions, allowing cleaners to reach tough corners in square ducts and clean entire duct sections in a single trip, without having to adjust bristle length for changes in duct size. The 100-foot cable length reduces the number of access holes that need to be made, while its small size ensures that access holes are small. It can also seal access holes. The robot carries 45 kg., and can carry in a vacuum for isolated ducts or ducts where external vacuums would cause asbestos or other unacceptable contaminants to be blown into the air. It clamps onto heavy pieces of insulation and debris to carry them out. For the largest jobs, the robot is an invaluable time-saver that consistently ensures perfect work.

The best choice for commercial jobs and for duct cleaners is a modular robot that fits into 3.6-inch x 6-inch ducts called the ARI-50. It carries 20 kg. and weighs 5 kg., and despite a stationary arm, has all the advantages of the ARI-100. It's the only option for professional air-brushing in small ducts and ducts of all shapes.

The only effective solution acclaimed by residential cleaners is the ANATROLLER ARI-10, a magnetic robot that climbs walls with HD cameras and a 100-foot stainless steel cable, which helps the robot navigate thin ducts full of twists, turns and drops found in homes.

With all the advantages of efficiency, safety and versatility, ANATROLLER robots were born to be the solution to lead governments to trust in the advantages of duct cleaning to deliver the service the exact way that they want, and move from questioning the duct cleaner's honesty to simply comparing the job to the set standard. This would make the enforcement of that standard as law far easier than one that seeks to incorporate countless tools and methods. It is necessary to prove to the government that what duct cleaners do is in fact a professional trade, and that involves moving past decades-old equipment. Technology has changed, and HVAC professionals must change with it to help the industry move forward. ●

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