

HVAC System Mechanical Cleaning Methodology



DuctControl Maxi

DuctControl Maxi

A remote controlled video/digital camera system using a built-in mini tractor, which can be used for visually monitoring cleaning quality and microbial and other sampling methods and accessories.

- Temperature measurement
- Air flow measurement
- Relative Humidity
- Dust sampling
- Instant display gas meters



DuctControl Mini for vertical ducts

DuctControl Mini

A light hand controlled version for vertical ducts by which it is possible to survey cleaning needs, and check the quality of cleaning afterwards.



Special Cleaner 20

Hydmaster

Hydmaster

Powerful remote controlled hydraulically driven cleaning equipment with optional integration of video camera to the brush unit for real time control of cleaning quality. Hydmaster has a wide range of accessories

Special Cleaner 20

Electrically driven cleaning equipment with a wide range of accessories. Ideal for small ducts.

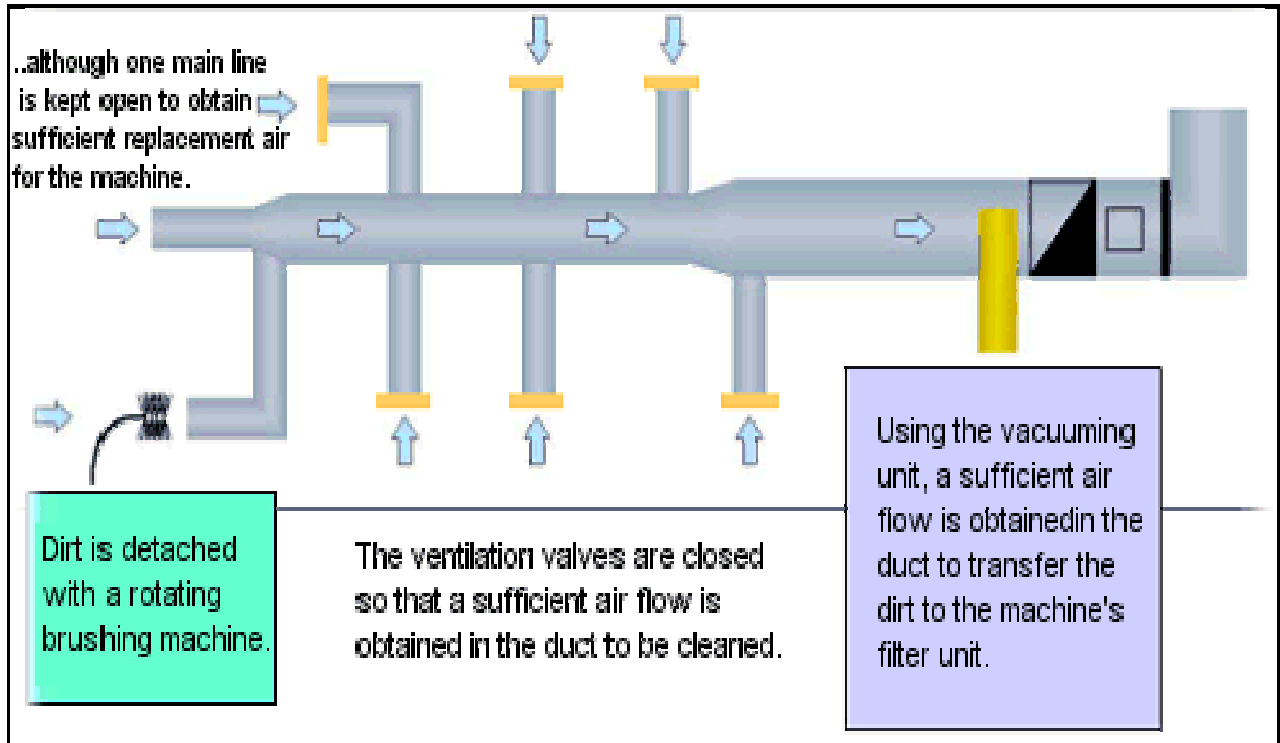


HepaClean 4000

HepaClean 4000

A low-pressure vacuuming unit that is adaptable to the maintenance opening or air valve site of the ventilation duct. The other valves are then covered. First the branches of the duct are cleaned using a rotary brush. Powerful air-flow (10–20 ms/s) is needed to carry the loosened dirt into the collecting filter bag of the low pressure vacuum unit. Then the filtered exhaust air is conducted outside the building. A High Efficiency Particulate Air (HEPA) filter is used when there is not a possibility to conduct the air out of the facility

Air duct cleaning concept diagram



Duct Cleaning Procedure:

1. Preparation for equipments and cleaning plan.
2. Site protection of office furniture and sensitive equipments by plastic covers
3. Removing and Cleaning Air Grilles
4. Opening access panels if necessary
5. Camera robot inspection and taking photos for ductworks
6. Connecting vacuum unit to air duct
7. Mechanical cleaning by brushing the air ducts
8. Verification of cleanliness by robot inspection and photos
9. Disinfecting ductworks using AD Coating Solution or FOSTER 40-80 HVAC wall disinfectant
10. Re-installing the air grilles
11. Removing plastic covers and general cleaning of site.

Cleaning report with inspection video & photos (before and after cleaning) will be submitted to the client.

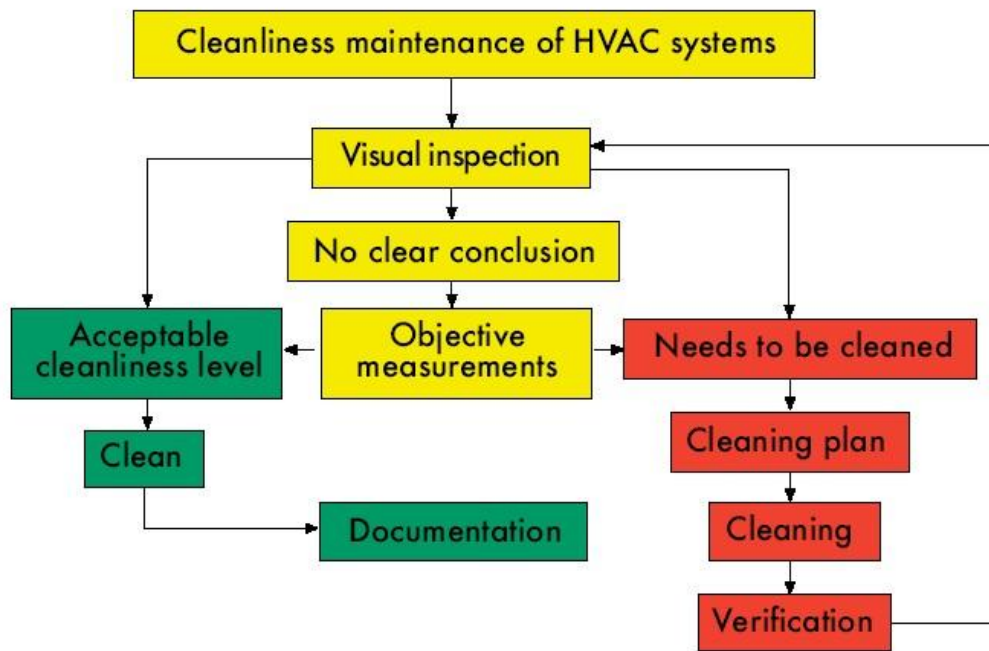
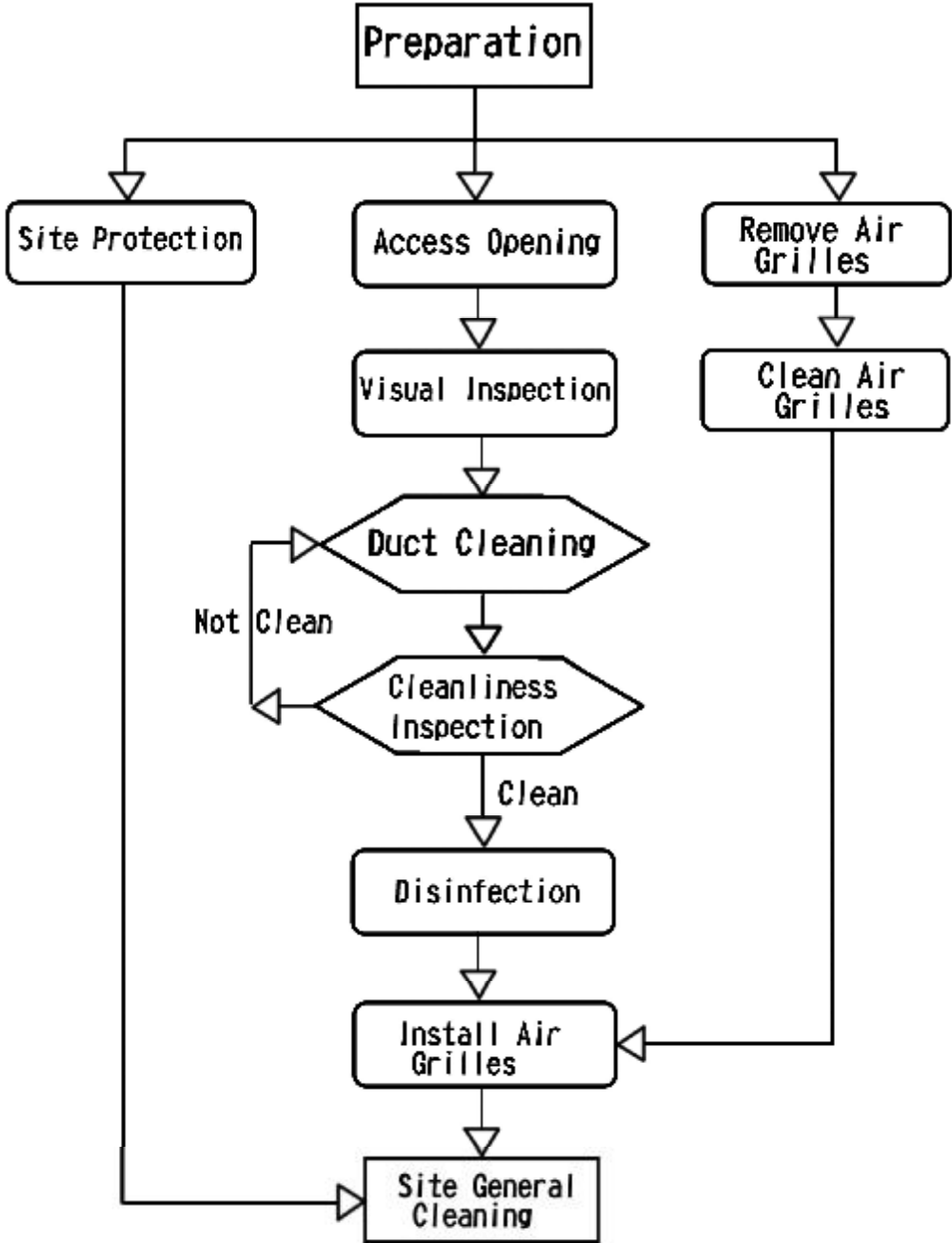


Figure 1. The elements of HVAC cleaning concept.

DUCT CLEANING FLOWCHART



National Air Duct Cleaners Association (NADCA), USA
NADCA Vacuum Test is now available!

The NADCA Vacuum Test can be used for evaluating the cleanliness of non-porous HVAC component surfaces. Using this procedure, a template is adhered to the surface being tested. The open face of a vacuum cassette is passed over slots cut into the template. Air is pulled through the vacuum cassette by an air pump attached to the cassette. Debris is drawn from the surface being tested and is collected on a filter within the cassette. The cassette is prepared and weighed to determine the amount of debris collected on the filter media.



To be considered clean by the NADCA Vacuum Test, the net weight of the debris collected on the filter media shall not exceed $0.75 \text{ mg}/100 \text{ cm}^2$.

Test report will be issued by HOKLAS Laboratory. Additional fee will be charged for this optional verification test.