

### Lifa Air Cleaning Machines

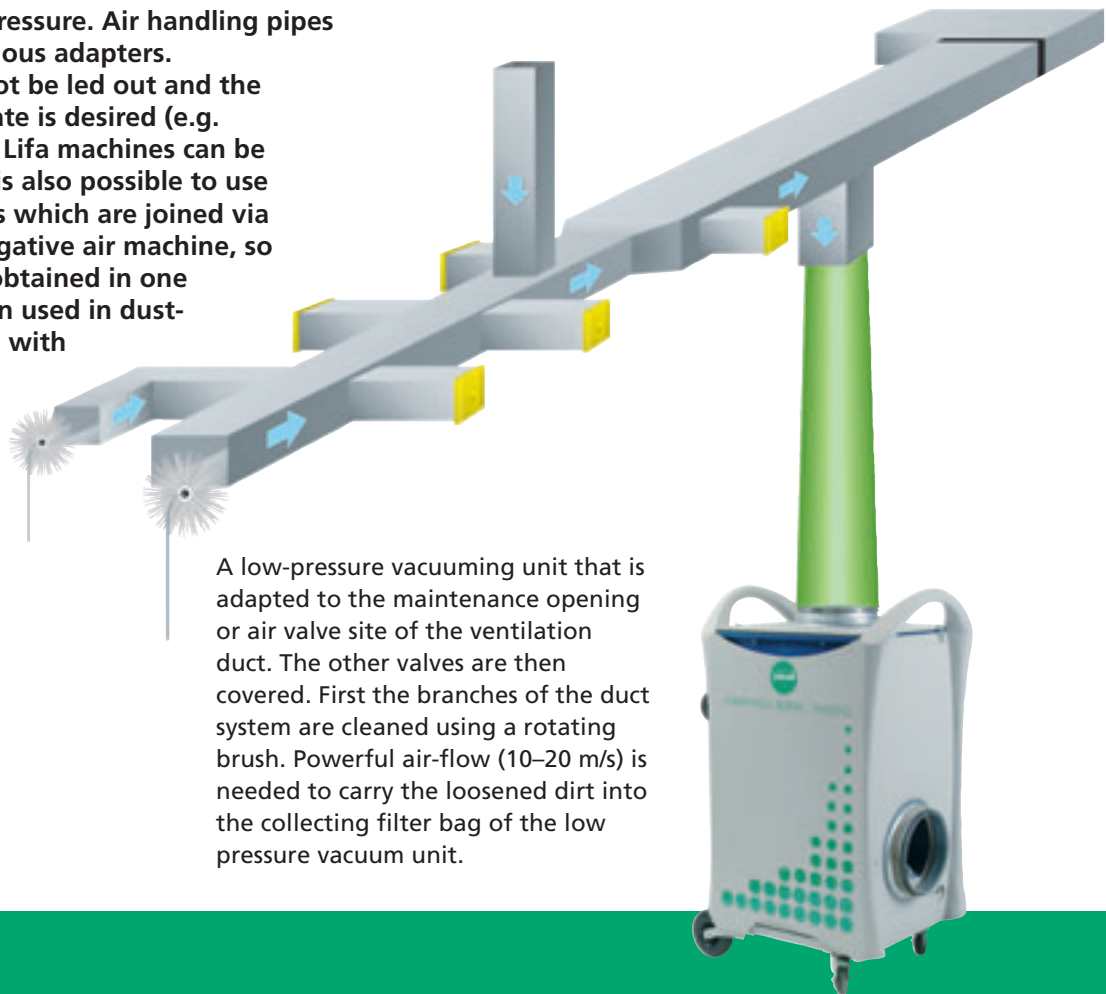
The Lifa HepaClean negative pressure vacuum/air cleaner units are designed for construction, renovation or restoration work and ventilation cleaning.

The machines are suitable for handling dry air containing dust such as asbestos, quartz, hardwood, mineral wool, or micro-organisms, mould and fungus spores etc. The Lifa HepaClean air cleaners are portable and quiet, allowing them to be used in small and cramped spaces, too. They are reliable and easy to maintain.

The machines, equipped with powerful fans and durable Hepa filters, achieve high efficiency ratios. The motors can withstand pressure drags, and thus the useful life of the filters increases without the machine losing the required negative pressure. Air handling pipes can be joined by means of various adapters.

When the exhaust air can not be led out and the greatest possible separation rate is desired (e.g. hospitals, fine electronics), all Lifa machines can be equipped with Hepa filters. It is also possible to use two separate Hepa filter boxes which are joined via a Y branch neck to another negative air machine, so that a larger amount of air is obtained in one machine. This method has been used in dust-free renovations in connection with asbestos demolitions, etc.

Lifa Air and Finnish Technical Research Centre VTT have developed in co-operation the method by which each unit is tested and guaranteed that there are no leakages (see figure in the last page).



A low-pressure vacuuming unit that is adapted to the maintenance opening or air valve site of the ventilation duct. The other valves are then covered. First the branches of the duct system are cleaned using a rotating brush. Powerful air-flow (10–20 m/s) is needed to carry the loosened dirt into the collecting filter bag of the low pressure vacuum unit.

# Lifa AirClean 8000

## Negative pressure vacuum / air cleaner machine

Lifa AirClean 8000 is the newest, largest and most effective unit in the Lifa family. It suits dust-free work requiring large amounts of negative air pressure, and when working on large and expansive ventilation ducts.

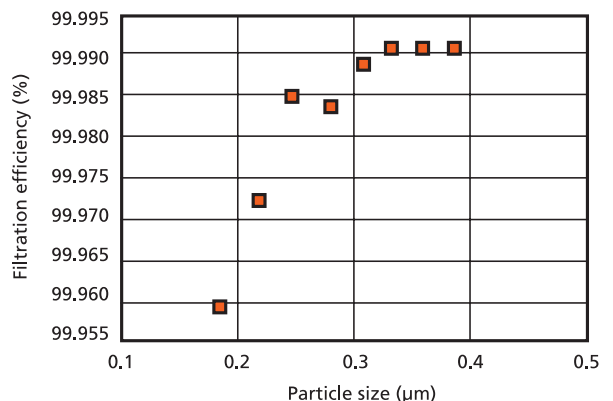
- Maximum airflow without filters 6200 m<sup>3</sup>/h
- For ventilation duct cleaning, dust collection
- For air cleaning by using EU 7-8 filter
- For air cleaning by using two Hepa filters
- For generating vacuum in the working compartment
- Three phase, 380-400V 16 amps motor 4 kW/5,3 HP
- Wide range of filters and accessories available
- Easy to handles



# Lifa HepaClean 4000

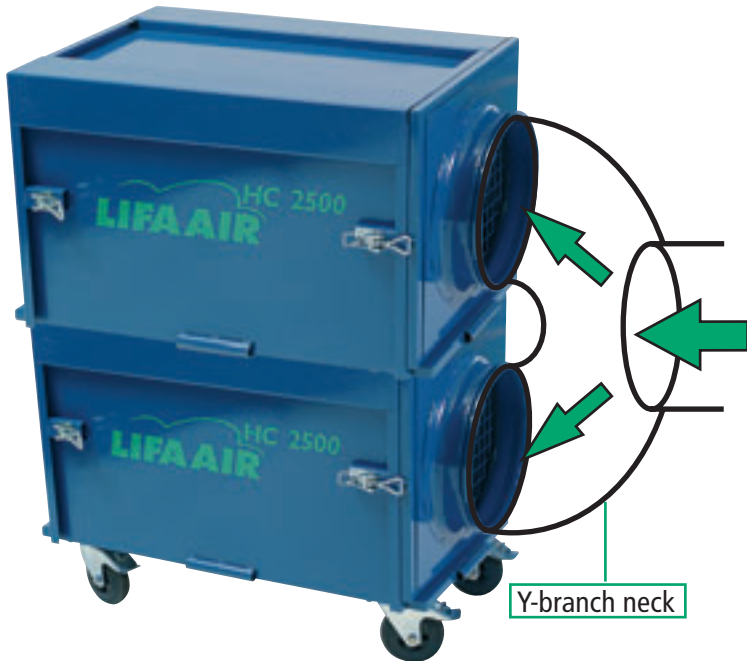
## Negative pressure vacuum / air cleaner machine

- Maximum airflow without filters 3850 m<sup>3</sup>/h
- For ventilation duct cleaning, dust collection
- For air cleaning by using EU 7-8 filter
- For air cleaning by using Hepa filter
- For generating vacuum in the working compartment
- Wide range of filters and accessories available
- Easy to handle



Filtration efficiency as a function of particle size

# Lifa HepaClean 2500



## Negative pressure vacuum / air cleaner machine for medium-sized jobs

It is designed so that two or more units can be placed on the top of each other and connected in order to create more efficient filtration with excessively dirty.

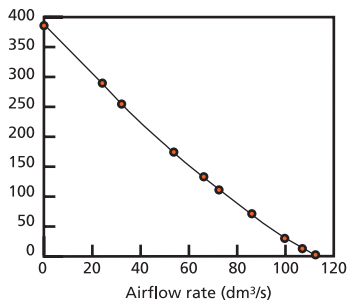
- Maximum airflow without filters 2800 m<sup>3</sup>/h
- For air cleaning by using EU 7-8 filter or Hepa filter
- For gas filtration by using active carbon filter and Hepa filter
- For generating vacuum in the working compartment
- Wide range of filters and accessories available
- Easy to handle

Filtration system	Airflow rate, m <sup>3</sup> /s (m <sup>3</sup> /h)	Filtration efficiency for particles (D <sub>p</sub> =0,3 μm)	Activated carbon filter efficiency for toluene
Prefilter + HEPA H13 450x450x292 mm	0,55 (2000)	>99,97	—
Prefilter + HEPA H13 450x450x85 mm + gas filter	0,26 (940)	>99,97	98,5
Prefilter + HEPA H14 450x450x85 mm + gas filter	0,14 (500)	>99,97	>99

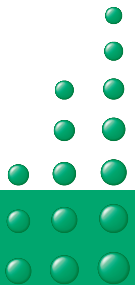
# Lifa HepaClean 800

## Negative pressure vacuum / air cleaner machine for small jobs

- Maximum airflow ranging from 300 to 800 m<sup>3</sup>/H
- For air cleaning by using F7-8 filter or Hepa filter
- For generating vacuum in the working compartment
- Single phase, 230 V 10A, motor 190 W
- Wide range of filters and accessories available
- Easy to handle, portable



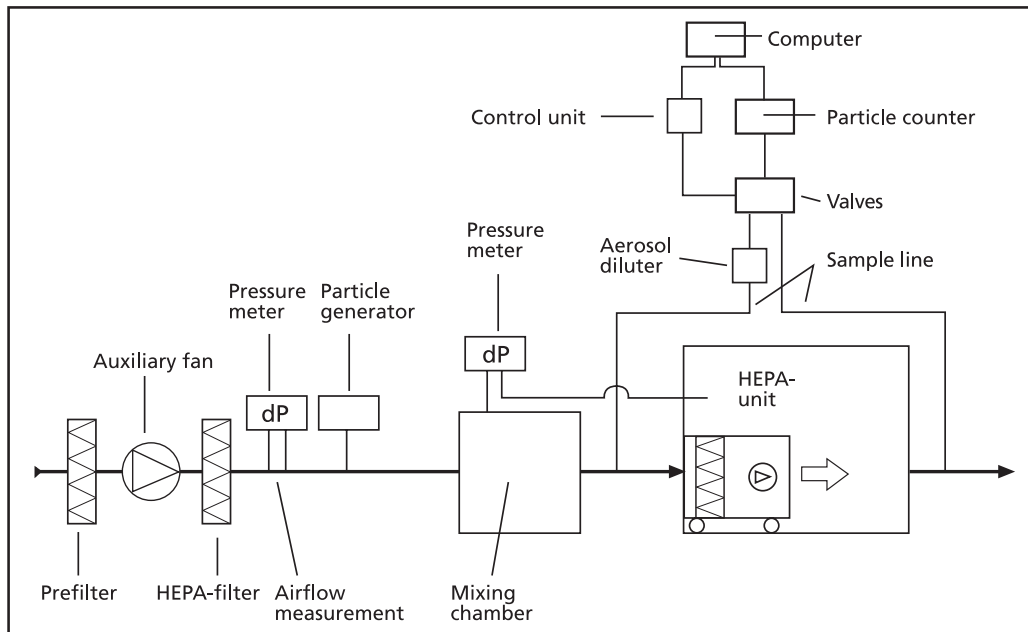
Fan curve of the HEPA filtration unit with the lowest adjustable power



# Technical Information

	HepaClean 800	HepaClean 2500	HepaClean 4000	AirClean 8000
Maximum airflow Adjustable	300–800 m <sup>3</sup> /h	2800 m <sup>3</sup> /h	3580 m <sup>3</sup> /h	6200 m <sup>3</sup> /h
Blower motor*	230 V or 115 V	230V or 115V	230 V or 115V	380V, three phase
Fuse size 230V/115V	10 A/15 A	10 A/15 A	10 A/15 A	16 A, 380 V
Frequency	50 or 60 Hz	50 or 60 Hz	50 or 60 Hz	50 Hz
Motor Power	0.5 HP (0,34 kW)	1.5 HP (1,1 kW)	1.5 HP (1,1 kW)	5.3 HP (4 kW)
Power Cable	2 m	2 m	2 m	Optional accessory
Dimensions	370x350x580 mm	860x570x 1030 mm	1100x720x960 mm	1100x720x960 mm
Weight	20 kg	60 kg	85 kg	105 kg
Construction	Painted Steel	Painted steel	Rotomolded plastic	Rotomolded plastic
Transportation	Portable	Wheels	Wheels	Wheels
Accessories			Manometer	Manometer

\*) The machines with 230V motors can be equipped with 115V motors or with variable speed AC motor drives to run with 60Hz/120V



## Principle of the measurement system

The developed test setting measures the whole HEPA unit system so that the exact measurement of the airflow rate, filtration efficiency and detection of possible leaks can be done within a few minutes.

The aerosol generator produces DESH particles at a constant rate. The aerosol concentrations upstream and downstream of the air handling unit are measured with an optical particle counter (Met One). The test system is capable of measuring air handling units which have air flow rates from 400 to 5000 m<sup>3</sup>/h. The new test method is routinely used in a company making asbestos removal work (Hesasbest).

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