LIFA AIR®

Solutions for Indoor Air Quality

Lifa Dry&Clean Cleaning Dehumidifier

Item number: 6420281010002

Lifa Dry&Clean dehumidifies and cleans air.

1+1+1>3 = A SUPERIOR SOLUTION

Functions of Lifa Dry&Clean:

- Removes water from the air
- Removes particulate contaminants from the air
- Removes gaseous contaminants from the air

Use of Lifa Dry&Clean:

- Repair of water and mould damage, property drying
- Control of moisture, dust and emissions in new construction sites
- Controlling the contaminants in work site air
- First-aid for moisture damage
- Cleaning and drying the air of the lower floor of a crawling space

Lifa Dry&Clean is a multi-function air cleaner especially developed for drying, filtering and maintaining negative pressure during renovation work on water and mould damaged buildings.

The Lifa Dry&Clean multi-function machine is suitable for the simultaneous drying and cleaning of the air of renovation worksites. With the help of the machine, the repair of water and mould damage and property drying is accomplished without exposing people to the air contaminants caused by the work. Cleaning the air with regular micro filters (HEPA) is not enough, because the moisture ruins the filters quickly. Lifa Dry&Clean solves this problem by drying the air before particulate filtering.

According to the General Building Procedures (Ratu-työohjekortti) published by the Confederation of Finnish Construction Industries and the Building Information Foundation RTS (82-0239 November 2000), the removal of moisture from worksite air and structural drying can be started during demolition, if equipment with a drying unit based on the condensation principle and an air cleaning unit equipped with a micro filter are used.

The increase of micro organisms during demolition work is a notable health hazard. By using Lifa Dry &Clean multi-function air cleaner the health hazards due to exposure to bioaerosols and metabolites produced by micro organisms can be eliminated.

The machine removes water from the structures and the air. Simultaneously it removes particulate contaminants from the air, i.e. mould spores and asbestos fibres, with the help of a HEPA-filter (= micro filter). In addition, it removes gaseous contaminants such as mould poisons, MVOCs and the gaseous

Europe, Headquarters
Lifa Air Ltd.
Hämeentie 103 D
00550 Helsinki, Finland

Phone +358-9-394 858
fax +358-9-3948 5781
e-mail europe@lifa.net
www.lifa.net

Asia
Lifa Air Asia Ltd., Hong Kong
e-mail asia@lifa.net

Middle East
Lifa Air Ltd., Dubai
e-mail middle-east@lifa.net

North America
Lifa Air Inc., New York
e-mail north-america@lifa.net

Russia
Lifa Air Ltd., Moscow
e-mail russia@lifa.net

exhausts of construction materials. The machine has been tested. The separation degree of the machine for particles larger than 0.3 µm is over 99.97 %. The machine thus meets the criteria set for machines used in asbestos work.

The machine is also well suited for controlling moisture, dust and emissions in new construction sites and work sites. It can be used for first aid in moisture damage, to dry and clean the air while waiting for renovation work.

The machine can also be used to clean and dry the air of the lower floor of the crawling space. Dry&Clean can be installed temporarily or permanently to control the moisture problems of the lower floor of the crawling space.

The machine is equipped with filter combinations suitable for the work or cleaning target.

Operating principle of the machine:
The machine both dehumidifies and cleans the air. The dehumidifier section of the machine works on the principle of condensation, for which the environmentally friendly refrigerant R404A is used.

The fan draws the air through the pre-filter and the evaporator and into the condenser. The air cools to below dew point temperature in the cold evaporator. The water vapour from the air condenses on the surface of the evaporator sheets and runs down into the bottom of the evaporator. The unit is equipped with a pump, which pumps the accumulated water through a hose and down the drain. If necessary, any frost accumulating in the evaporator can be defrosted automatically by the activation of a pressure switch, which halts the compressor. The air drawn in by the fan then causes the evaporator frost to melt.

The air is once again warmed in the condenser before being channelled out at a temperature 3-5° C above room temperature. The air then passes from the condenser through the HEPA filter (=micro filter) where any particulate contaminants are removed and through an activated carbon filter for removal of gaseous contaminants.

Following filtering and drying, the clean air is ejected from the unit by the fan. Continuing recycling makes it possible for the relative humidity in the air to be reduced to the required level while the unit is cleaning the air in a given area.

A handy adapter can be attached to the air in or air out section of the unit. A flexible accordion hose, that can be installed near the target of the demolition work, can be attached to the connection unit of the suction side. The contaminants formed in the demolition work are sucked directly into the machine, before they are spread into the air of the work site.

With the help of the connection unit of the exhaust side and the plastic film sock, the exhaustion air can be channelled outside the work site, and thus the work site can be kept at a lower pressure than its environment. Because of the lower pressure, contaminated air is unable to spread into the atmosphere outside the area where the work is being done.

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www.lifa.net

Asia
Lifa Air Asia Ltd., Hong Kong
e-mail asia@lifa.net

Middle East
Lifa Air Ltd., Dubai
e-mail middle-east@lifa.net

North America
Lifa Air Inc., New York
e-mail north-america@lifa.net

Russia
Lifa Air Ltd., Moscow
e-mail russia@lifa.net

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Maximum airflow: ° Micro filter H13, 450x450x85mm ° Activated carbon filter 450x450x200mm ° Pre-filter HC2500 EU4	400 m³/h (240 CFM) (depending on the filter)
Maximum airflow: ° Micro filter H13, 450x450x292mm ° Pre-filter HC2500 EU4	800 m³/h (470 CFM)(depending on the filter)

Technical specifications

Operating temperature range	+8 – +32 °C
Electrical connection	110/230 V 1~
Frequency	50 Hz or 60 Hz
Power rating	4.8 A
Breaker/Fuse	10 A
Electric cable	2 m3G1.5 mm²
Dimensions	L 1030 mm (40”), H 775 mm (30”), W 570 mm (22”)
Weight (without filters)	95 kg (210 lbs.)
Materials	Painted aluminium coat Injection moulded RIM plastic ends
Ready installed	Lockable wheels and carrying handles
Relative moisture	30 – 90 %
Moisture collection efficiency 30 °C rel moist 66%	43 l / 24 hours
Moisture collection efficiency 22 °C rel moist 55%	18 l / 24 hours
Cooling efficiency 5 / 45 °C	2.1 kW (2,8 HP)
Input power 22 °C, relative humidity 55 %	1.1 kW (1,5 HP)
Refrigerant	R 404A
Noise level at maximum utilization level	70 dB

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Asia
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Middle East
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North America
Lifa Air Inc., New York
e-mail north-america@lifa.net

Russia
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e-mail russia@lifa.net