The air purifiers

Part No. 973103015599

Extraction unit type LFE 401 for laser application (Generation – 11/2015) (230V; 50-60Hz)

The mobile mid vacuum cartridge filter unit is especially designed for applications in which the rate of particles is relatively high. (laser engravings, laser cleaning, laser cutting)

The casing of the unit is made of stable sheet steel and is finished with powder coating inside and outside. Due to the special design of the unit with a separated air duct of the turbines a very low noise level of the filter unit is reached. Thus even the application in very sensitive areas with low noise emissions can be recommended without any hesitation.

In order to pre separate the dust, the airflow is led onto a baffle plate. Then the raw airflow strikes the filter cartridges. The dust is cleaned with a jet of high-pressure air and collected in a generously sized dust collector with a capacity of about 9 litres.The unit is equipped with maintenance doors in order to increase the ease of operation of the system. The dust collector is pressed tightly against the filter casing by means of a clamping system.

The filter cartridges work according to the principle of surface filtration, i.e. the particles deposit on the filter cartridges and do not penetrate the filter medium. The new generation LFE is equipped with filter cartridges of the easy clean nano type. These cartridges do not require an initial precoating. Nevertheless a permanent precoating system can optionally be connected if required by the process.

Due to the three filter cartridges the unit works very steadily at the operating point because during the cleaning of one cartridge the process air is at the same time extracted by the two remaining cartridges. Thanks to the new mode of attachment of the filter cartridges which are now attached from the clean air side in the pneumatic area the unit is easier to maintain than conventional systems.

The unit is equipped with an additional activated carbon filter to separate most of the gases. The unit is also equipped with a HEPA final filter stage.The monitoring of the final filter stage is carried out by means of an additional control lamp and via the SUB D9 interface.

The extraction unit is equipped with a powerful high-pressure turbine. The suction capacity can be adjusted steplessly. The minimal rate of rotation of the turbine is 20%. All operating conditions of the unit can be set and shown on the display of the S7 control unit by Siemens which is located in the cover of the filter unit at operational height.

An automatic filter monitoring indicates when a replacement of the filter is necessary. The evaluation of the particle sensor is carried out via pin 3+4. If the operator wants to actuate the filter unit by means of the laser, it is possible with the help of the Harting interface. A 2.5 m mains cable with a plug is included in the scope of supplies.

TECHNICAL DATES:

Fan performance [m³/h]:	0-500
Compression [Pa]:	11,000 Pa
Pre-filter:	baffle plate
Main filter:	3x filter cartridge à 2.7 m², easy clean nano type
Activated carbon:	FK type (filling 6 kg)
Final filtering stage:	initial equipment HEPA filter H13 (possible change to ULPA filter U16)
Turbine:	continuous run, single-stage
Motor performance [kW]:	2x 1.2

Voltage/frequency [V; Hz]: 230;	60/50
Current consumption [A]:	14.0
Control voltage [V]:	24
Sound pressure level:	approx. 68 dB (A)
Dimensions (w x d x h) [mm]:	751 x 400 x 1590
Weight [kg]:	168
Air duct:	via discharge grilles at the back of the unit
Colour:	RAL 9010 pure white

Intake housing with connection point for alternatively:

version 1: 2 x DN 50 (item 9731001)

version 2: 1 x DN 71 (item 9731002)

version 3: 1 x DN 100 (item 9731003)

Each with optional connection point for a permanent precoating facility DN 80 mm

(indicate intake housing for the order)

Control unit: Siemens S7, integrated in the cover of the unit, including option to control a dosing system for filter aid and shut-off disc (connection via Harting connector)

Harting Interface

Configuration:

Pin 1&2 =	start-stop
Pin 3&4 =	centralized alarm (closing contact)
Pin 5&6 =	process control
Pin 7&8 =	not allocated
Pin 9 =	ground (GND)