

# DC 11 module



# Optimised local solution

The design of a source extraction system is always based on the specific need on each work place. It is then possible to build a central unit designed for several extraction points, or local solutions at each work place.

The advantage with local solutions is that you can build one unit at a time and optimise the equipment for the actual need. A larger installation requires a larger investment at one time and also requires more planning, calculation and preparation, but gives technical advantages as well as economies of scale.

Whatever is chosen, a system gives flexibility for the future, optimised function and value for money over time.

The DC 11-module is developed to fulfill the demands of a local solution. It can have 1-3 extraction points working at the same time. It has sound level of 65 dB(A) and can be equipped with a Hepa micro filter as an optional extra. The discharge system can be chosen in accordance with the material to be handled; something that can have a big effect on ease of use of the system.

The DC 11-Module is also suitable as a central unit for source extraction and general cleaning in smaller production units. Note that the unit can be connected to many extraction points, as long as the number of users does not exceed the maximum capacity.

## Effective and clean

Large savings can be made when an extraction system from is installed. Some example situations could be:

- Suction casings mounted on grinding machines in the glass fibre industry: By capturing the dust where it is created improves the working environment, resulting in less cleaning and better product quality.
- Cleaning of saws, turning equipment and other machinery with a centralised vacuum system. Large savings can be made by working faster, lubrication can be recycled, material chips can be handled more efficiently and machines have fewer problems when they are clean.
- Source extraction of chips and oil/lubrication directly at the point of their production: Cleaner parts throughout the operation of the process resulting in quality improvements. At the same time, parts and machinery need less cleaning.
- Smoke extraction, integrated on torch, when welding: Health risks are reduced by eliminating welding fumes. Integrated extraction guarantees that the extraction is close to where the smoke is generated, thereby preventing airborne pollution.
- Extraction systems and cleaning equipment in bakeries reduces the airborne flour dust that is dangerous to health and can cause asthma: The health and safety regulations are met and at the same time the workplace environment and overall efficiency is improved. Less health problems from employees will also save money in this industry.
- Extraction systems in the pharmaceutical industry for extraction directly onto production machines and for cleaning of equipment: To eliminate toxic substances being emitted from pharmaceutical production is a must from a health perspective as well as a product quality issue. The DC 11module can be equipped with a HEPA micro filter and safe change system so the toxic substances are not allowed to spread into the surrounding atmosphere.





## HEPA filter

The fine filter separates a large quantity of the fine dust, but has a limited separation of the finest particles. In order to separate almost all the fine particles the unit should be equipped with a HEPA filter. We recommend that the HEPA filter is always used when the air is returned into the working environment. With hazardous dust we recommend the use of a HEPA filter even if the air is vented outside.

## Safechange

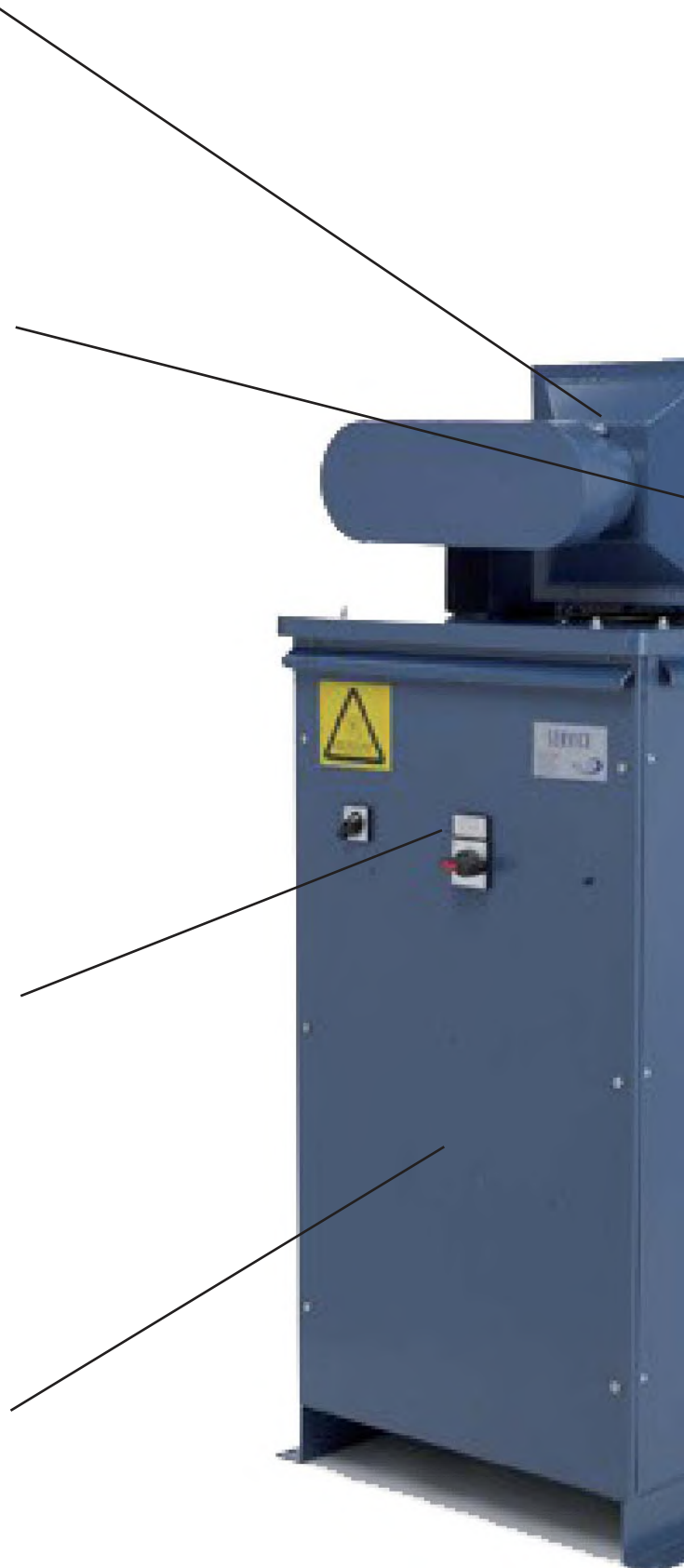
When dealing with unhealthy and hazardous dust, the filters (fine and Hepa micro filter), should be able to be changed without exposure to the personnel or surroundings. The same applies for changing the bags. By choosing the safechange solution, which includes the Hepa micro filter, a system is designed that keeps negative pressure in the cyclone during this operation. By putting plastic bags over the filters before they are changed, protection against dust can be maintained.

## Electrical cabinet

The The electrical function is built in to the machine. The unit is started manually with a start button or automatically when any of the extraction points are opened and micro-switches are used. Automatic is for 5 kW intermittent. Filter cleaning is automatic after shutdown of the vacuum. More complex controls can be delivered, such as frequency control or automatic functions e.g. for airlock discharge, but are not presented here. You can also choose if the unit should be a fixed installation or delivered with a mobile chassis.

## Vacuum producer

The vacuum producer is a direct driven turbo pump with high durability and low service requirements. The performance curve for the pump has excellent characteristics for the typical applications.





## Filter unit

The filter unit separates the larger particles in the cyclone and the finer dust in the pleated conical filter. The filter is cleaned very effectively with air pulse. Normally, compressed air is used for filter cleaning, but manual filter cleaning that does not require compressed air can be chosen as alternative. The filter unit separates everything from fine dust to chips and fluids.

## Outlet/Exhaust

For fixed installed extraction systems it is always recommended to exhaust the air out of the building. In doing that, all particles, even gas, are lead out of the building. With the help of a HEPA filter, almost all the particles can be eliminated. In a big industrial building, exhausting to atmosphere can be quite difficult sometimes. In these cases an alternative is to exhaust the air directly under the lid of the capsule. This solution is also used on mobile version of 11mobile. Note however there might be local restrictions.

## Discharge of material

Discharge of dust, fluids and heavy material is done under the cyclone. A number of different solutions can be chosen. The most common is plastic bag or container. There are containers in different sizes. They can also be equipped with wheels, internal plastic bag, level glass, drain tap for lubricants. It is also possible to discharge into an open container or on to a conveyer belt. In the list of accessories on the next page, some of these alternatives are presented. It is also possible to discharge continuously with a peristaltic airlock, but this requires extra electrical controls.

## Mobile unit

The DC 11module is designed so it will always be possible to move with a fork lift truck. By choosing to equip the unit with wheels and handles, a mobile unit is created that even with its large size and weight, is possible to move on an industrial floor. It can be used as a very powerful mobile unit. There is also the possibility to create a semi-mobile unit where it is docked to a pipe system, but can also be moved to other parts of the building when necessary.





**Filterstandard**

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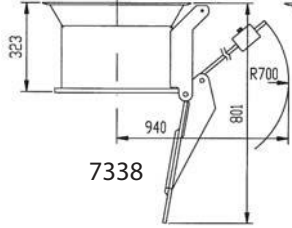
**Discharge**

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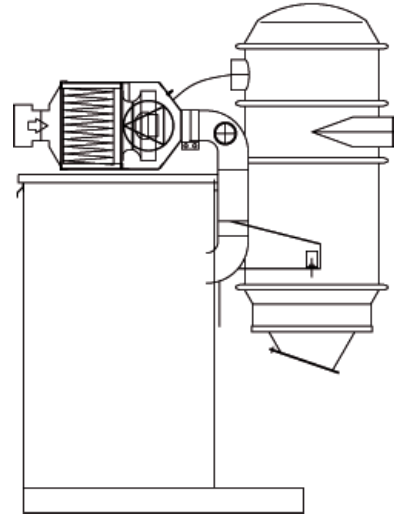


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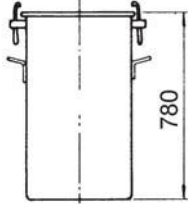
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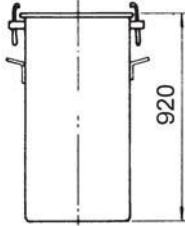
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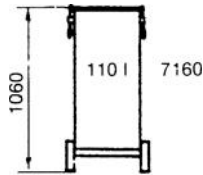
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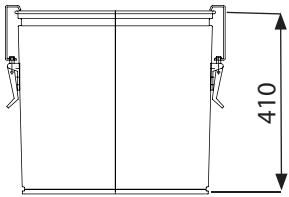


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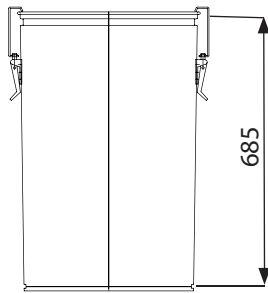
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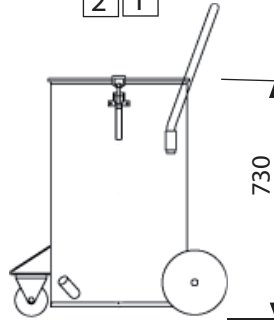
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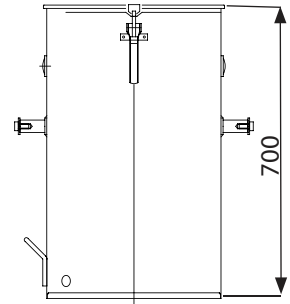
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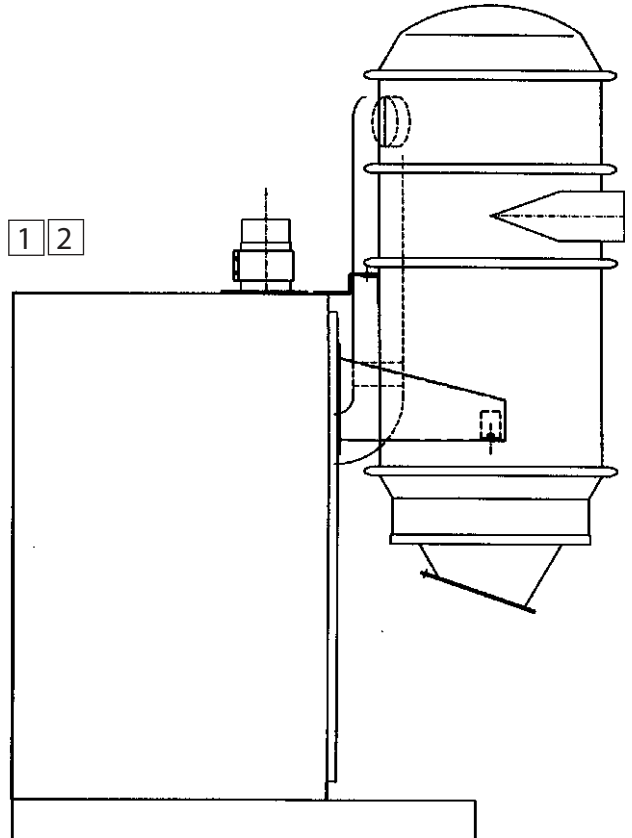
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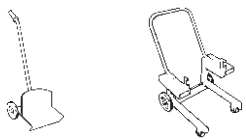
1 2



drain tap

bottom screen

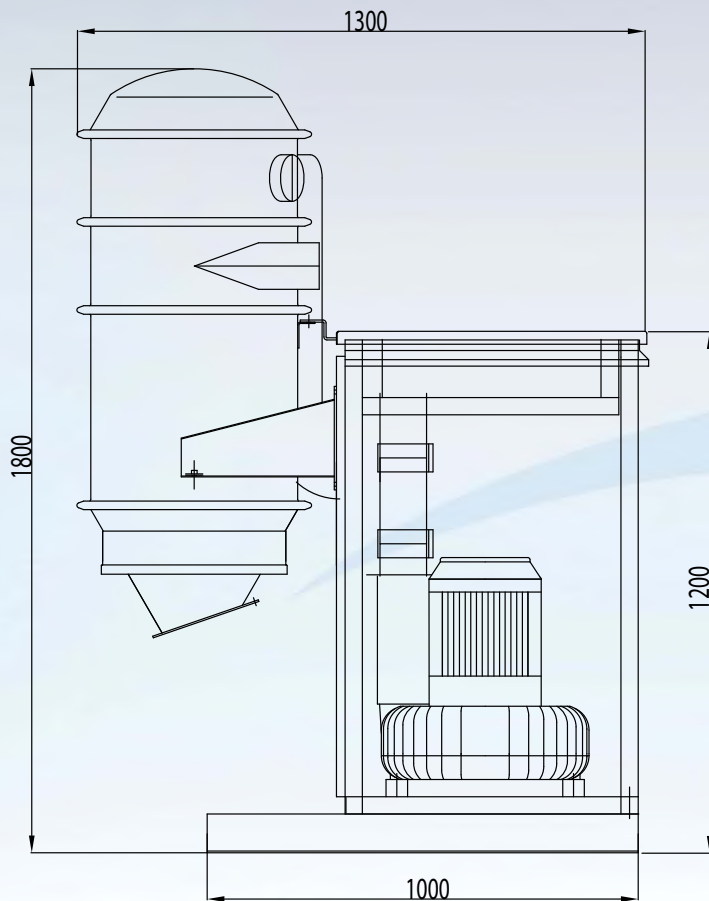
sight glass



emptying cart

**Design**





**The DC 11 module is built complete from the factory as standard with:**

- Direct driven three phase turbopump – long life.
- Sound absorbent around vacuum producer.
- Filter unit with separation of main material in cyclone and fine particles in conical pleated cartridge filters.
- Filter cleaning with air pulse.
- Automatic air pulse cleaning of the filter.
- Outlet equipment for the separated material i.e. steel container.
- Electrical start kit on the machine. \*/
- Pre-configured for remote start with micro switches. \*/

\*/ not for all models, see optional list

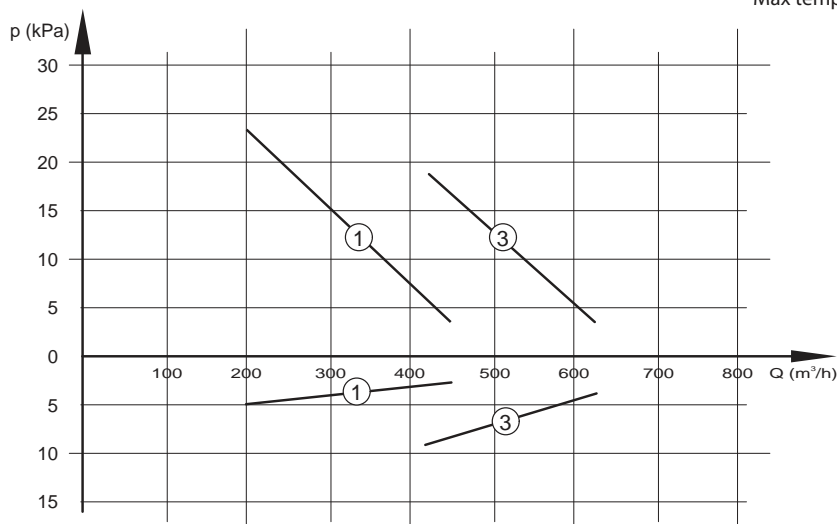
### TECHNICAL DATA

	5 kW
Motor	50 Hz
RPM	3000 rpm
Inlet	Ø 108
Max dp	23 kPa
Q at max dp	200 m <sup>3</sup> /h
Nominell pressure	18 kPa
Max Q	450 m <sup>3</sup> /h
Weight	200 kg
Sound level 1 m	62(1)/67(2)dB(A)
Electrical connection	20 A, 400 V
1/ with outlet canal with sound silencer	
2/ with diffuse outlet	
Air pulse filter cleaning	all models
Air consumption	4 l/s, 4 bar
Hose connection	6 mm

### 10 HP

Motor	3600 rpm
Inlet	Ø 108
Max dp	24 kPa
Q at max dp	250 m <sup>3</sup> /h
Nominell pressure	18 kPa
Max Q	550 m <sup>3</sup> /h
Weight	225 kg
Sound level 1 m	65(1)/70(2)dB(A)*/
Electrical connection	25 A, 400 V

Filter material in corrugated polyester	all models
Part No	4292
Total filter surface	8,4 m <sup>2</sup>
Degree of separation EN 60335-2-69 part 1	> 99,9 %
HEPA filter (choice)	
Part No	42136
Total filter surface	6,0 m <sup>2</sup>
Degree of separation EN 1822-1 HEPA H13	99,95%
Max temp filter	80 °C



1. 5.5/7.5 kW 50 Hz

3. 7.5 kW 70 Hz