CENTRAL VACUUMING UNITS

TASK

It is necessary to provide a clean manufacturing environment, e.g., clean machinery, workrooms and work areas to achieve optimal production results.

Although using brushes, mobile vacuum cleaners, and blowing with compressed air are the most commonly used cleaning methods, they are not the latest in cleaning technology.

Blowing with compressed air exposes employees to dispersed dust, resulting in legislation imposing a “blowing” ban for different segments of the manufacturing industry.

SOLUTION

Keller Lufttechnik offers numerous stationary vacuuming units that cost-effectively enhance productivity and efficiency, and require low maintenance for the operator. A wide range of accessories allows for customized design of standard stand-alone units.
DUCTWORK

Each system consists of branched ducting in relatively small diameters. Suction connections are supplied at pre-determined points to which a flex-hose can be attached by means of quick couplings. A variety of suction nozzles are available for different applications.

DUST COLLECTOR

Coarse dust particles are extracted by nozzles that are connected to the dust collector by means of a duct. The dust collector is equipped with a pre-separator for coarse particles so that only a dust/gas mixture of relatively fine particles impacts the filter media. The dust is efficiently filtered from the air flow and is stored in a dust collection container or is continuously discharged via special discharge means. Filter element cleaning is continuous by means of compressed air pulses.

FILTER ELEMENTS

Our high quality filter elements are available in a range of sizes and configurations. The selection of a suitable filter medium depends on each customer’s application. Our technical research department is available for consultation on individual applications.

ADVANTAGES

- high filtration efficiency
- sturdy and long-lasting
- easy to clean
- wide range of applications
SAFETY FILTER (IF NECESSARY)

The use of a safety filter depends on the type of dust, filter medium, and creation of a vacuum, as well. The safety filter functions as a storage filter whose main purpose is that of an extra safeguard filter. This design minimizes space requirements without loss of serviceability.

CREATING A VACUUM

Low pressure is created via single-stage or multi-stage fans as well as a side channel blower, or rotary piston fan. What combination will be used depends on required air pressure and vacuum, taking into consideration efficiency and economy. Low pressures up to approx. 6000 daPa can be achieved. Vacuum generally originates on the clean air side. In order to reduce exhaust noise and noise radiation to legal limits, inlet and exhaust silencers and sound insulated housings are provided.

EXPLOSION PROTECTION

Many dusts are combustible and explosive. Because filtration systems are often situated indoors, special attention should be paid to the prevention of structural explosion by means of reliable decoupling and the safe handling of excessive pressure.

WASTE DISPOSAL

The discharge of waste material is an essential filtration function. Keller Lufttechnik offers a wide range of choices in this regard.
REFERENCES

Armstrong DLW, Bietigheim-Bissingen
Bosch, Hildesheim
CAV, Chemnitz
Coperion, Stuttgart
Merkle, Blaubeuren
PolyOne, Gaggenau
Schwarzpharma, Zwickau
TPE Kraiburg

EXCERPTS OF APPLICABLE REGULATIONS:

TA-Luft
TRGS 900
ATEX