

MULTIDUST® COLLECTION

MultiDust® Bank Ram-Air™

The new generation cost efficient clean air system



Efficient filtration of dust and fumes up to 99.9%

Modular design for any size solution

Expandable when business grows

New 6 cartridge model

New optimal cartridge technology

RamAir™ really cleans the whole cartridge

**6-cartridge version
MultiDust® Bank**



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The new MultiDust® Bank brings you to the frontline of air cleaning and economy

With the new MultiDust® Bank PlymoVent introduces the 3rd generation flexible cartridge collector system. Based on vast experience from worldwide applications over 9 years, the MultiDust® Bank gives you the latest technology and still the best return on investment. Together with the MultiDust® Bank comes the experience, technical knowhow and support that has made PlymoVent the supplier of the widest production range available for controlling industrial pollution.

10 good reasons to put your dust problems in the Bank

The MultiDust® Bank talks a language you'll understand

With the MultiDust® Bank, PlymoVent has again set new standards in handling industrial pollution. The benefits are not only the numerous technical features of the MultiDust® System, but also the economy this frontline technology gives in daily operation and for years to come. Yes, the MultiDust® Bank has a clear message:

Cleans 99.9% of fumes and dust in the most economical way.

1. The MultiFlow multiposition inlet can be fitted in a variety of positions depending on size, concentration of particles and space requirements. The inlet can be supplied in various sizes to fit the relevant duct.

6. The unique MultiFlow airshield disperses incoming air evenly, resulting in equal air flow throughout multiple modules.

7. Latest pleat stabilizing filter technology
The spun bonded full polyester cartridges use a new technique in pleat stabilizing which ensures correct distances between cartridge pleats. This allows more effective filter area in each filter and the best cleaning ability. In the end, this means a lower cartridge replacement rate.

2. Pre-filter for safety

In applications where hot sparks might be a risk for damage or fire, an optional slide-in pre-filter can be positioned in the inlet. Here we talk economy in cartridge life as well as safety.

3. Control systems for best economy

PlymoVent provides a variety of control systems to fit any application in the most cost-effective way.

4. Eliminates 99.9% of fumes and dust

The high filtration efficiency allows re-circulation of cleansed air as well as energy savings through heat recovery.

5. Tailor made capacity design

The modular MultiDust® Bank allows designs to fit your exact needs and give optimum cost efficiency. Moreover it is flexible to expand as your business and your workload grow.

8. The Ram-Air™ cleaning system eliminates filter clogging

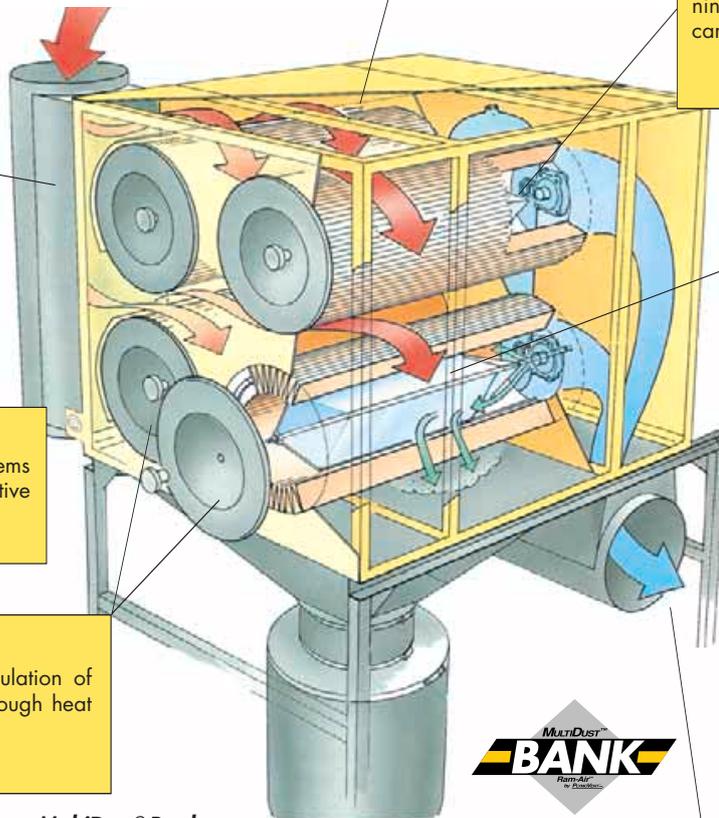
Inside every filter cartridge a Ram-Air™ pulse amplifier disperses the compressed air for cleaning, releasing any dust collected on the surface of the filter cartridge. Less expensive compressed air is used, resulting in longer cartridge life and lower operating costs.

9. Less is more

The new technology allows for higher air volume per cartridge. This means that a smaller MultiDust® Bank has the same performance as a larger conventional dust collector. This is economy of investment.

10. The MultiFlow multiposition outlet

The MultiFlow outlet can be positioned on any of the four sides of the MultiDust® Bank filter. Available in various sizes to fit the relevant connecting duct.



MultiDust® Bank
The total solution for dust collection

The modular design of the MultiDust® Bank provides for any capacity application. In addition, the impressive performance of each module allows for a more compact solution compared to other systems; facts that clearly mean economy of investment. The range of technical features and the latest filter technology add up to a system completely cost effective to operate and maintain.

Altogether, it brings The MultiDust® Bank to the forefront in total dust collection solutions.

And it all comes down to a low cost of ownership

99.9% Clean Fresh Air – 100% right choice

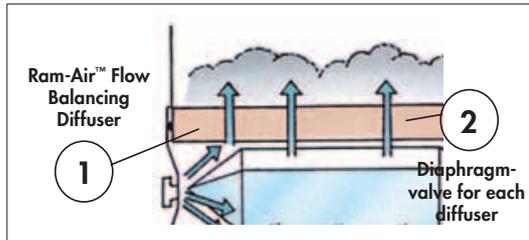
Ram-Air™ cleaning means filter cartridge economy

Ram-Air™ High Energy Cleaning System was designed by PlymoVent in 1994 to overcome the historical problem of cartridge filters clogging due to ineffective cleaning systems.

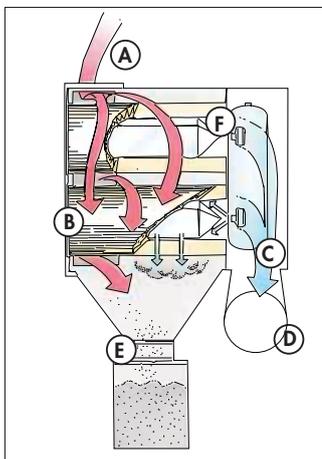
Ram-Air™ works like this:

Inside each cartridge filter is a Ram-Air™ Flow Balancing Diffuser (1), which reduces the open internal area of the filter. Its triangulated design and air-foil tips at the front and back direct the cleaning energy provided by compressed air. The air rapidly fills the inside of the filter and totally cleans the entire outside filter surface.

Other manufacturers try to clean two filters at the same time or pack twice the filter media in the cartridge but just cannot clean it.



The MultiDust® Bank introduces you to the future of dust collection standards. A well balanced system where all the numerous features together fulfil their mission for highest performance. The PlymoVent experience over the years has created a total dust collection solution, not only for 99.9% clean fresh air but also for low cost of ownership.



- A) Polluted air passes through the multi flow inlet to the filter.
- B) Pleated and highly efficient filter cartridges clean the air up to 99.9%.
- C) Filter cleaning is performed by efficient compressed air pulses.
- D) A Multi-Flow outlet is fitted to the clean air side.
- E) The outlet at the bottom of the hopper allows dust removal.
- F) Ram-Air™ cleans the entire cartridge.



The Ram-Air™ benefits:

- Reduced consumption of expensive compressed air by 50%.
- Reduced replacement filter cost.
- Reduced running pressure, which reduces electric consumption.
- Increased airflow provided to your process.
- Reduced need for off-line cleaning, which increases production time.

Control system for any application

The control system is available in several different models, from the standard timer unit with digital settings and off-line cleaning, up to advanced models that include pressure controlled cleaning, fan controls, etc.



Quality from top to bottom!



Inlets and outlets can be mounted in a variety of side and top positions for maximum flexibility of ductwork installation. Several sizes are available as well.



Ram-Air™ Balancing Diffuser forces and distributes the compressed air, for optimal cleaning and reduced compressed air consumption.



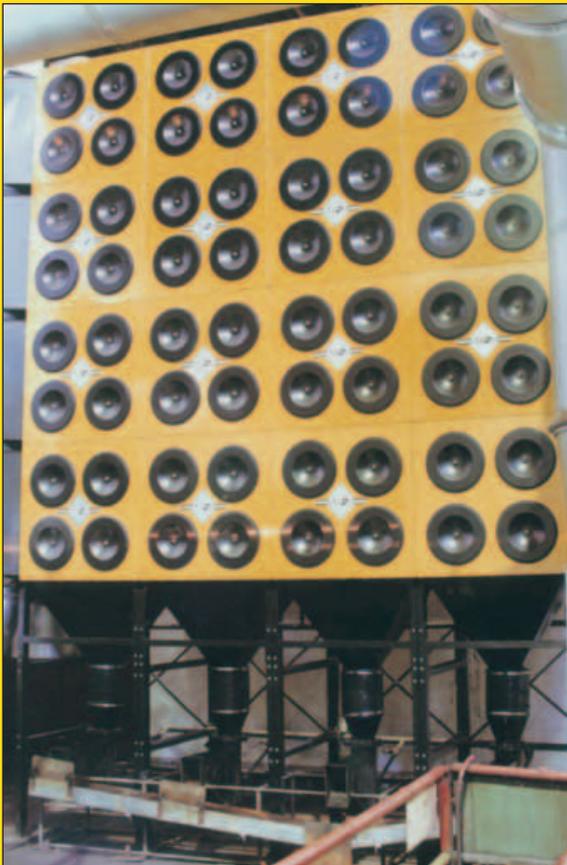
The latest filter technology, incorporating staggered integral pleat spacers, widely out-performs all standard spun bonded polyester media as well as conventional paper based media.



60° dust hopper and dustbin are standard. Several dustbin sizes and rack heights are available.

MultiDust® Bank for any size of air cleaning solution

The MultiDust® Bank is not only a highly efficient fume and dust filter, it also represents the heart of an extensive and flexible modular system for filtration of airborne pollutants in dry manufacturing processes.



Every day we advise industries world wide about the superiority of the MultiDust® Bank, working in close co-operation with customers from planning to installation. Find out about the technical know-how and experience behind the development of the MultiDust® Bank – and you will be convinced!



Cetetherm AB, Sweden, manufactures boilers and heat exchangers. PlymoVent was contracted to replace an existing extraction system which failed to filter fumes from the plasma cutting table. The problem was solved by installing a modern extraction system and 8-cartridge filter unit, meeting today's high environmental standards. Stainless as well as black steel of various thicknesses are cut on the table which is sectioned for more efficient fume extraction.



The HWK Welding school in Koblenz, Germany, was opened in 1984 with a simple extraction system consisting of arms and open hoods. As the system didn't work sufficiently, the school turned to PlymoVent for help. The school has 83 work places for welding, but sometimes only five or ten are in use.

PlymoVent installed 83 pcs 4"/100 mm Miniman Arms, Automatic Dampers ASE-12 and Frequency Inverters FO. In addition, we also installed two 32-cartridge MultiDust® Banks and 45 kW fans to take care of the vapors. The system works at the capacity needed at a specific moment, depending on how many welding workplaces are in use. This keeps the energy cost down to a minimum, at the same time as it ensures that the system always removes the pollution sufficiently.

The Fagro organization is a subcontractor to the car industry in Germany, manufacturing doors for the Ford Transit and oil sumps for Mercedes-Benz. PlymoVent was contracted to design a system to extract particles from grinding and polishing of car doors at two work stations as well as welding and soldering oil sumps. As rotating grinding tables are used, the unusual problem of constantly grinding in the same direction arises. Together with Fagro's operation and production manager, PlymoVent designed optimum extraction systems tailored to a 8-cartridge filter unit with fan. Thanks to a successful filter installation, Fagro ordered another filter system with an air capacity of 11 200 m³/h for welding and soldering fumes at the oil sump production.



The MultiDust® Bank

Unsurpassed in m³ clean air economy

One important main objective has guided the design of the MultiDust® Bank: Performance with maximum economy in every cubic meter of processed air. When other people talk about filter area we talk about the economy of filter cartridge efficiency and optimum filter cleaning performance for 99.9% Clean Fresh Air.



Filter cartridge performance for compact installations

The efficiency of each filter means that fewer MultiDust® Bank modules have the equivalent capacity of installations with a higher number of filter units. Here we talk less money to invest and less money per cubic meter of clean air.

Filter cartridge exchange is rare

Frequently MultiDust® Bank filter cartridges last for periods up to a year or more thanks to the Ram-Air™ cleaning system providing high filter cleaning energy. An air valve for each cartridge and a perfect balance between filter area and cleaning ability are features securing total filter cleaning and cartridge economy.

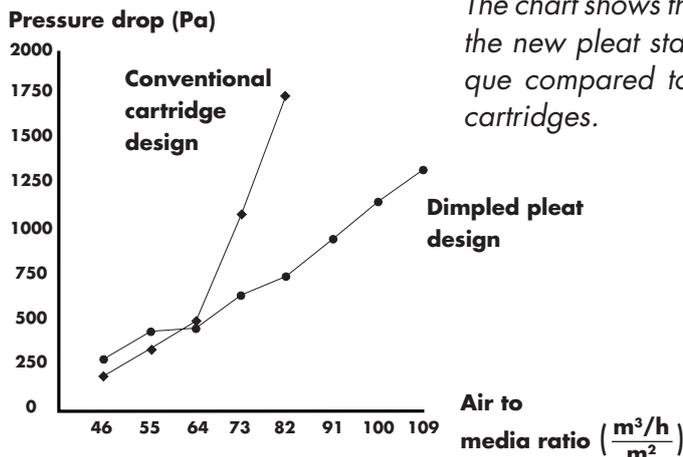


This is how it's done

By design, cartridge filters are manufactured with deep pleats and tight pleat spacing. As a result, there is a natural tendency for the media to collapse on itself under high operating pressure or during cleaning cycles. To solve this problem, PlymoVent introduces cartridges with a new pleat stabilizing technique.

- Alternating ridges created by the dimples keep the pleats open during all phases of operation.
- Pleated, dimpled construction of the media provides rigidity, extended filter life and improved performance.
- The unique design provides higher cartridge performance as a result of increased structural integrity and improved filter life.
- Airflow remains consistent and allows for optimum efficiency across a range of operating pressure conditions.

Dimple pleat spacers are stamped into the media



The chart shows the superiority of the new pleat stabilizing technique compared to conventional cartridges.

Options and accessories



Pneumatic supply unit with pressure gauge feeds compressed air to the MultiDust® Bank.



To avoid filter cartridge damage caused by hot particles, a slide-in pre-filter is available. Positioned in the inlet it is easily cleaned.



Pressure relief panel (EN ISO certified) available for safety in explosive dust/fume applications.

- Various control systems
- Special filter media
- Dustbins; 40, 125, 200 litres.
- Racks 120, 170 cm heights
- Explosion-proof solenoid valves
- Fire protection systems
- Custom colours
- Full range of fans
- Pre-separators and cyclones

