Over 40 years of industrial air filtration experience and extensive process systems knowledge

Schenck Process Industrial Air Filters –
the smart process solution
Schenck Process Group – Your Partner Worldwide

Acting locally to support your needs the Schenck Process Group is working where you are.

With a global network of sites and competent partners, the name Schenck Process is synonymous throughout the world with process expertise and well-engineered technology for industrial weighing, feeding, mechanical and pneumatic conveying, screening, automation and air filtration technology.

Our key skills include planning processes, air filtration, conveying, feeding bulk materials, controlling flows of material, recording flows of goods, weighing goods and automating transport processes.

Members and brands of the Schenck Process Group are:
Schenck Process offers a portfolio of industrial air filtration products that are accepted for a wide variety of dust collection applications throughout the world. Based on the technology developed by Mac Process, which set the industry standard in the USA for over 40 years, Schenck Process manufactures and supplies bag and cartridge filtration products suitable for a large range of air flows.

The range has been designed to offer the customer unrivalled flexibility. Access into the filter housings for media changing can be accomplished either through the top or side of the unit to suit the process or site requirements. Most of the products in the Schenck Process filtration range are available in the following four formats:

- Clean air plenum only
- Clean air plenum and filter body
- Clean air plenum, filter body and bottom hopper
- Clean air plenum, filter body and bottom product receiver hopper for conveying applications

Schenck Process has considerable experience controlling dust in process areas which reduces the potential risk of explosion. When handling explosive dusts the range of filters can be fitted with a variety of explosion protection technologies such as explosion venting, flameless venting or suppression, to suit specific site or material requirements.
The range of Schenck Process air filtration and dust collection products are designed and manufactured to be installed in a wide variety of industrial processes. Installations throughout the world can be found in the following industries and applications:

- Chemical Plants
- Pharmaceutical Factories
- Food Processing Factories
- Sugar Refineries
- Agricultural and Grain Processing
- Pet Food Manufacture
- Biofuels and Biomass Transport and Storage Systems
- Wood Processing and Board Manufacture
- Iron and Steel Manufacturing Industries
- Cement and Gypsum Factories
- Plasterboard Manufacturing Plants
- Pulverized and Solid Coal Handling
- Ash Handling
- Recycling Facilities
- Paper Manufacturing and Converting
Solutions for all air flows
The right filter for every application.

To accommodate process and application conditions; square, circular or rectangular filter housings can be offered in carbon or stainless steel. Most filters can be supplied with either side or top mounted access doors to facilitate removal of filter media for inspection or replacement. The majority of the filters use externally supplied high pressure compressed air to clean the filter media, with the exception of the MCF model, which uses an integral medium pressure blower giving the benefit of reduced energy consumption.

The products are available in a number of different Styles to suit both customer and installation requirements. The base format is Style 1 with a clean air plenum, reverse jet cleaning system and filter media connections. Style 2 includes the addition of the main filter body and Style 3 includes the addition of both the filter body and discharge hopper. If the unit is required to function as a product receiver in a conveying system, then that option is available as Style 3P.
As the cost of energy continues to increase, plant managers are continually looking for ways to reduce power consumption. Within the Schenck Process filter portfolio is the unique MCF PowerSaver®, a dust collector that can save up to 50% of operational costs by using medium pressure air at only 7 PSI for the cleaning cycle. The air is provided by its own blower, therefore no plant compressed air is used, potentially freeing up the expense to produce air for other applications.

**MCF PowerSaver® dust collectors: the economical solution**

*Designed green. Built strong.*

- Heavy duty carbon or stainless steel construction
- Walk-in clean air plenum with lifting lugs
- Hinged service door for easy access
- Direct-drive rotating surge tank, diaphragm valves, and distribution arm powered by an explosion proof motor
- Mechanically controlled medium pressure air cleaning mechanism consistently discharges air directly over filter bags, each and every time
- Topside cage and snap-band bag removal – no tools required
- Self-contained positive displacement pump supplies all the air that is required for filter cleaning
- Stainless steel explosion vents are available when required
1. **Main Drive**—this rugged explosion proof electric motor is the only electronic component used inside the filter housing. Except for the motor and external air blower package, the MCF is pneumatically operated for safety and reliability.

2. **Patented Never-Miss™ Controlled-Cleaning System** aligns cleaning arm and bag segments, so that air nozzles fire directly into the bag center. So there’s no wasted air. No bleed. None of the wasted energy you pay for on every cycle with conventional random-cleaning and reverse-air systems.

3. **Diaphragm Valve Assemblies** are located close to the air reservoir and cleaning arm to maintain cleaning pressure and minimize recovery time. These two valves do the work of ten to thirty diaphragm valves and solenoids on conventional pulse-jet filters.

4. **MCF Position-Sensing Index Assembly and Cleaning Control** keep nozzles properly positioned and air pulses correctly timed for optimum media cleaning. The timing sprocket is laser cut and self-aligning. The sensing assembly and control are direct-drive, mechanically linked components. They have no chains or belts to break, wear out, or go out of adjustment—no electronic circuits to fail. These operate reliably for years in abrasive and corrosive environments—with virtually no maintenance.

5. **Tangential Inlet** controls heavy dust loads utilizing vortex breakers built into the MCF housing, which even out the distribution of particulate-laden air coming from the tangential inlet for improved collection. Vortex breakers create an area at the center of the housing where the air has no upward velocity and where dust particles cleaned from the bags can flow downward. A spiral ridge plate traps centrifuged particles and drives them into the hopper.

6. **Medium-Pressure Blower Package** uses a liquid-filled pressure gauge and powers cleaning with 7-9 psig air for economical operation and longer bag life. Medium-pressure air virtually eliminates cold weather freeze-ups that cause other filters to fail.

**Cleaning Energy Costs**

Studies indicate that users can meet safety and regulatory requirements for approximately 50% of the cost of running high pressure pulse jet filters. The graph illustrates how much you could save on cleaning energy costs per year using the MCF.
Schenck Process Pulse Jet filters can be used in a wide variety of air filtration applications. There are nine different products in the Pulse Jet range that offer a multitude of air volumes, access positions and air inlet arrangements. All models incorporate the same compressed air cleaning technology, reliable components and high quality construction.

As part of the Aftermarket service and spare parts package, Schenck Process is able to supply new and replacement air filtration bags, cartridges and ancillary parts for the full range of filter products. Schenck Process filter media is designed to ensure the most efficient performance of the filter unit and it is recommended that Schenck Process branded filter media is continually used to maintain this high performance level.

Replacement bags and cartridges for other manufacturer’s filters are also available. Contact the Aftermarket sales team for further details.
SEntry (Side Entry)
The Side Entry horizontal cartridge filter is designed for low headroom applications.
- Easy maintenance and accessibility even in confined space
- The rectangular envelope style cartridge design minimizes product retention on the filter cartridge
- Wide pleat arrangement allows for high air-to-cloth ratios
- Can be explosion vented through the roof without increasing the cross sectional area of the filter unit

RT/RTC Filters (Round Top-Removal)
Filter media is installed and removed through the topside, or clean air plenum of the filter. The topside removal provides quick filter media replacement.
- Designed for low air volumes, the RT can handle higher pressure or vacuum than a square or rectangular unit
- RT Filters utilize bag media while the RTC contains cartridge media

ST/STC Filters (Square Top-Removal)
Ideal for removing dust in applications where floor space is limited. The filter media is installed and removed through the clean air plenum of the filter.
- Hinged top doors allow clean air access to the filter media
- ST Filters utilize bag media while the STC contains cartridge media

LST/LSTC Filters (Large Square Top-Removal)
Similar to the ST Filter, but larger sized. The filter media is installed and removed through the clean air plenum of the filter.
- The plenum can be designed as a walk-in plenum so the filter media replacement and maintenance can occur in an enclosure
- When the option of a walk-in plenum is not selected, hinged doors on top of the plenum provide access to the filter media
- LST Filters utilize bag media while the LSTC contains cartridge media

Pulse jet features & benefits.

Header provides high surge capacity for the compressed air cleaning system which extends the life of your filter.

Reliable timer board provides the sequencing for cleaning the dust laden filter media with compressed air. Adjustable settings give the ability to change the frequency or duration of the pulse to maximize use of compressed air.

Diaphragm valves designed for maximum shock wave cleaning. Furnished in 3/4” (19 mm), 1” (25 mm) and 1-1/2” (38 mm) sizes.

Lifting lugs are shop-installed to expedite handling.

Magnehelic gauge monitors differential pressure across filter media to ensure system is functioning properly.

Factory wiring of the timer and solenoid valves minimizes installation cost and ensures proper hook-up and operation.
Mac SpaceSaver®
The biggest improvement in dust collection is also the smallest.

The Mac SpaceSaver® is a low profile, compact filter which is ideal for installations where there is a need for high efficiency dust collection, but is limited in floor space or headroom. It is also suitable for areas that are not easily connected to central dust collection systems.

- The patented cleaning mechanism thoroughly pulses the cartridges using directed airflow
- Saves energy with more efficient use of compressed air
- Cartridge life is also extended to reduce consumable costs
- Tool-free maintenance for changing the filter cartridge
- Unique blowpipe configuration speeds maintenance
- Quick release handles allow fast, tool-less removal of entire blow pipe section

Integral frame assembly allows for sectional removal of blow pipes and guarantees that blow pipe holes will always be properly aligned when reinstalled

Quick release handles allow fast, tool-less removal of entire blow pipe section

Chamfered lip prevents mis-installation of pleated filter

Captured lock down nut prevents hold down from falling into hopper
Complete solutions for your requirements

Looking for after-sales solutions? Our extensive Process Advanced Service System (PASS) provides you with after-sales services – customized to your specific requirements.

The framework of our PASS program is designed with you in mind. With the guidance of our experienced after-sales team, you can create PASS packages comprised of original spare and wear parts, various services and high quality components to meet your needs.

PASS is based on a modular principle – you can pick and choose any individual PASS product or a combination thereof. Four PASS service categories consisting of repair, inspection, management and support are designed to meet your specific service requirements.

We welcome the opportunity to provide you with individual consultation, either as part of a PASS contract or on an individual basis. Whatever Full Service means to you – let’s create it together!
Schenck Process is the global market leader of solutions in measuring and process technologies for industrial weighing, feeding, conveying, screening, automation and air filtration technology.

Schenck Process develops, manufactures and markets a full range of solutions, products and turnkey systems on the basis of combining process engineering expertise, reliable components and field-proven technology.