



DUSTCHECK[®]

Engineering a better environment

Product Range



About Us

As part of Filtermist International Ltd, Dustcheck is one of the UK's leading manufacturers of industrial process filtration, dust control and extraction systems.

We offer a comprehensive range of cartridge and bag collectors, as well as wet dust collectors which use water and air pressure to 'scrub' dust from the air.

With an unrivalled reputation for quality, and a client list spread across a wide range of industrial, manufacturing and processing sectors, our technically innovative and cost effective solutions exceed today's stringent demands for low energy consumption and emissions; ensuring a cleaner, safer working environment.

Filtermist's Aftermarket Team offers spare parts and replacement filters for a wide range of air filtration equipment including Dustcheck units, whilst its Service Division delivers routine and reactive maintenance, product support, and CoSHH compliant LEV testing for all makes and models of industrial air filtration equipment.



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IPF 328 Series

Inlet Protection Filter Range

The **IPF 328 Series** is a range of non-self-cleaning inlet protection filters designed to protect and clean airflow into a production process. Typical uses are on vacuum conveying intake applications, exhauster vacuum break systems and vessel breather applications.

Features:

- Rugged carbon steel painted construction
- Filter area from 5 to 20m²
- Filter medias to suit all applications and products
- Filter efficiencies up to H14 HEPA class
- Optional stainless steel construction (all grades)
- Optional weatherproofing
- ATEX options available

Advantages:

- Guaranteed process air quality - reducing product contamination
- High efficiency and minimal maintenance - saves money



CFC 328 Series

Inline Protection Filter Range

The **CFC 328 Series** is a range of non-self-cleaning in-line protection filters designed to provide 'secondary' protection to process air systems. The rugged carbon steel painted construction is typically fitted downstream of a primary venting filter. The CFC can provide protection to exhauster units on vacuum conveying systems, or prevent emissions to atmosphere in the event of a primary filter fault.



Features:

- Filter area from 4 to 100m²
- Filter medias to suit all applications and products
- Filter efficiencies up to H14 HEPA class
- Optional stainless steel (all grades)
- Optional weatherproof solutions
- ATEX options available
- Optional safe change filter removal replacement

Advantages:

- Prevents emissions to atmosphere and guarantees air quality - to ensure compliance with COSHH and EPA regulations
- Minimal maintenance, reduces housekeeping, downtime and saves money
- High efficiency - protects environment and personnel



Vesvent 120 & 328 Series (VVF)

Vessel Venting Filter Range

The **Vesvent Series** is a range of single cartridge, reverse jet cleaning venting filters. The rugged carbon steel painted units can be used for a variety of applications including venting of vessels being filled mechanically or via gravity from an upstream process (replacing the typical 'floppy sock'). They can also be used effectively for venting of rotary valves on positive pressure pneumatic conveying systems.

Features:

- Filter area from 0.3 to 10m²
- -0.5 to +0.5 Bar(g) operating pressure rating (higher available on request)
- 1 Bar(g) pressure shock resistant (PSR) as standard
- Optional stainless steel construction (all grades)
- Weatherproofing options
- Differential pressure (clean on demand) controller options
- ATEX options available
- Range of cartridge formats to suit most dust requirements

Advantages:

- Minimal maintenance and easy element replacement - reduces downtime and saves money
- Reliable operation and long filter life
- High efficiency guarantees air quality, eliminates production contamination, protects environment and personnel
- Conical filter technology for enhanced cleaning - prolongs filter life



Ventmatic 120 Series (SFJ2)

Rotary Valve Venting Filter Range (Fan & Non Fan Assisted)

The **Ventmatic 120 Series** Rotary Valve Venting Filter Range is a compact carbon steel painted, twin cartridge reverse jet cleaning venting filter with optional integral fan. It is designed primarily for rotary valve venting applications, but is also equally well suited for other low duty venting applications. Its two valve cleaning system ensures 50% 'free' vent area during cleaning and can therefore be used in applications where 'on-line' cleaning (cleaning during operation) is required, or where pressurisation of the filter chamber and associated discharge equipment could cause other process problems. The optional fan gives 'forced aspiration' to the unit to negate positive pressure in the filter chamber.

Features:

- Filter area from 1.0 to 3.2m²
- Up to +/- 0.1 Bar(g) operating pressure rating
- 0.5 Bar(g) pressure shock resistant (PSR)
- Optional stainless steel construction (all grades) and weatherproofing
- Differential pressure (clean on demand) controller options
- ATEX options available
- Integral fan assembly available

Advantages:

- Minimal maintenance requirements, 'on-line' cleaning system and long filter life - reduces downtime and saves money
- High efficiency guarantees air quality, eliminates production contamination, protects environment and personnel
- Conical filter technology for enhanced cleaning - prolongs life of the filter and saves money



Ventmatic 120 & 160 Series

Rectangular (SFJ)

Rectangular Process Venting Filter Range

The **Rectangular Ventmatic Series (SFJ)** Process Venting Filter Range is our 'staple' multi-cartridge, multi-valve reverse jet cleaning venting filter range. Designed for use in a wide variety of process venting applications where compact design, high efficiency and trouble free operation are a pre-requisite. The multi-valve cleaning system allows 'on-line' cleaning and the 120 and 160mm conical cartridges give excellent performance, even in the most arduous of applications. Available with a wide range of options, they can be tailored to suit all applications. For applications where a cartridge filter solution is either not suitable or desirable, or where a bag type solution is specifically required, the units can be offered with tubular sock bag-type filter elements.

Features:

- Rugged carbon steel as standard - optional weatherproofing and stainless steel construction (all grades)
- Insertable design or complete with filter housing
- Suitable for horizontal (cartridge only) or vertical mounting
- Filter area from 1.0 to 96m²
- Different filter cartridge formats or medias for all application and products
- Up to +/- 0.2 Bar(g) operating pressure rating
- Up to 1 Bar(g) pressure shock resistant (PSR)
- Differential pressure (clean on demand) controller options
- ATEX options available
- Clean or dirty side element removal
- Fan assisted options (with optional volume damper)

Advantages:

- Minimal maintenance requirements, 'on-line' cleaning system and long filter life - reduces downtime, saves money
- High efficiency and low emissions to atmosphere and guarantees air quality - to ensure compliance with COSHH and EPA regulations
- Conical filter technology for enhanced cleaning - prolongs life of the filter



Ventmatic 120 & 160 Series Circular (SFJC) Circular Process Venting Filter Range

Having all the benefits and features of the Rectangular Ventmatic Range, the **Circular Ventmatic Series (SFJC)** also has the advantage of being suitable for high vacuum and pressure applications. Its circular construction is also well suited for hygienic applications making it an extremely popular solution for food and pharmaceutical type applications. The multivalve cleaning system allows 'on-line' cleaning and the 120 and 160mm conical cartridges give excellent performance, even in the most arduous of applications. Available with a wide range of options, they can be tailored to suit all applications. For applications where a cartridge filter solution is either not suitable or desirable, or where a bag type solution is specifically required, the units can be offered with tubular sock bag-type filter elements.

Features:

- Rugged carbon steel painted or optional stainless steel construction
- Insertable design or complete with filter housing
- Circular 'easy clean' construction
- Filter area from 2.0 to 48m² (larger available)
- Up to +/- 0.5 Bar(g) operating pressure rating (higher available on request)
- Up to 1 Bar(g) pressure shock resistant (PSR)
- Differential pressure (clean on demand) controller options
- ATEX options available
- Clean or dirty side element removal
- Fan assisted options (optional volume control damper)

Advantages:

- High operating vacuum and pressure suitability
- Hygienic, easy clean design
- Reliable operation and long filter life - reduces downtime and saves money
- Eliminates production area contamination, protects environment and personnel
- High efficiency and low emissions to atmosphere and guarantees air quality - to ensure compliance with COSHH and EPA regulations
- Conical filter technology for enhanced cleaning - prolongs life of the filter



Silovent Series (SFJC-VU)

Silo Venting Filter Range - Non Fan Assisted

The **Silovent Series (SFJC-VU)** is a high quality, cost effective reverse jet cleaning venting filter designed specifically for the venting of bulk storage silos being filled pneumatically via a road tanker or land based blower unit. The weatherproof, rugged carbon steel, galvanized and electro plated construction makes the unit virtually maintenance free. It includes a simple element retaining method with no removable parts for easy and safe filter removal via a hinged weather-cowl complete with retaining latch. The compact design can also use the 160mm two piece conical cartridge to reduce replacement costs. It is extremely competitively priced and where suitable, it can also be applied to other venting type applications.

Features:

- Integral filter body
- Filter area from 21.0 to 24.5m²
- Simple element retaining method with no removable parts
- ATEX rated as standard
- Up to +/- 0.5 Bar(g) operating pressure rating
- 1 Bar(g) pressure shock resistant (PSR) as standard (2 Bar(g) PSR available on request)
- Optional stainless steel construction (all grades)
- Differential pressure (clean on demand) controller options

Advantages:

- Minimal maintenance requirements - saves on man hours and money
- Reliable operation and long filter life with easy element replacement reduces downtime
- High efficiency and low emissions to atmosphere and guarantees air quality - to ensure compliance with COSHH and EPA regulations
- Conical filter technology for enhanced cleaning - prolongs life of the filter



Silovent Series (SFJC-VU)

Silo Venting Filter Range - Fan Assisted

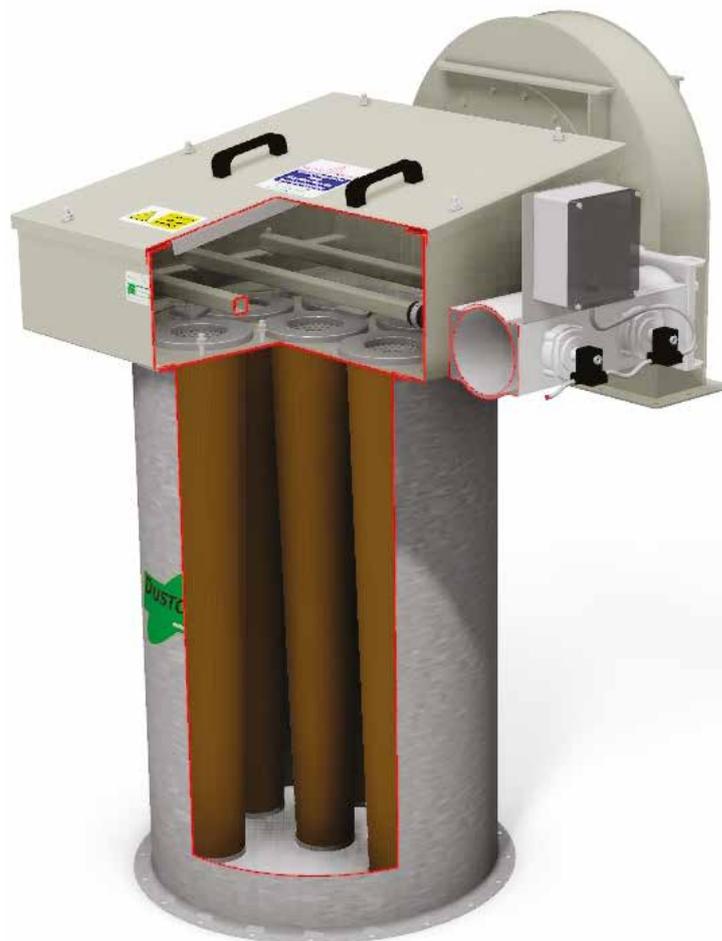
Having all the benefits of the standard **Silovent Series**, the fan assisted version gives 'forced aspiration' to negate positive pressure in the silo. This can sometimes be a requirement where it is necessary to prevent over-pressurisation of silo top ancillary equipment (explosion panels etc.). As on the normally aspirated SFJC-VU version, the compact unit can use the 160mm two piece conical cartridge and is extremely competitive in terms of price. It can also be applied to other venting type applications.

Features:

- Rugged carbon steel, galvanized and electro plated construction with options for stainless steel
- Integral filter body
- Filter area from 21.0 to 24.5m²
- ATEX rated as standard
- Up to +/- 0.5 Bar(g) operating pressure rating
- 1 Bar(g) pressure shock resistant (PSR) as standard (2 Bar(g) PSR available on request)
- Differential pressure (clean on demand) controller options
- Other ATEX options available

Advantages:

- Non pressurisation of silo internal space during filling protects equipment
- Reliable operation and long filter life - reduces downtime
- High efficiency and low emissions to atmosphere and guarantees air quality - to ensure compliance with COSHH and EPA regulations
- Conical filter technology for enhanced cleaning - prolongs life of the filter



Ventmatic Series (SFEB)

Envelope Bag Venting Filter Range

The **Ventmatic Series (SFEB)** is a range of reverse jet cleaning envelope bag venting filter units for applications where a cartridge type filter solution is either not suitable or desirable, or where a bag type solution is specifically required. Suitable for both horizontal and vertical mounting, and available with a wide range of options, they can be tailored to suit all applications.



Features:

- Insertable design or complete with filter housing
- Filter area from 2.8 to 36m² (larger available on request)
- Filter medias to suit all applications and products
- Up to 0.2 Bar(g) operating pressure rating
- Up to 1 Bar(g) pressure shock resistant (PSR)
- Optional stainless steel construction (all grades)

- Weatherproof solutions
- Differential pressure (clean on demand) controller options
- ATEX options available
- Fan assisted options (with or without volume control damper)

Advantages:

- High efficiency guarantees air quality, eliminates production contamination, protects environment and personnel and saves energy and money



Ventmatic 328 (SFJC 1 & 2)

Mixer Venting Filter Range

The **Ventmatic 328 Series** Mixer Venting Filter Range is a circular single cartridge reverse jet cleaning venting filter with integral fan. It is designed primarily for the venting of mixer units on concrete batching plants, but can also be effectively applied to other venting applications where the vessel or mixer is being filled under gravity from an upstream process.

The units feature an integral fan complete with balance damper for forced aspiration of the mixer unit during the filling sequence, thereby preventing dust egress to the wider production environment. A powerful reverse jet cleaning system is used for effective cleaning of the filter element(s) after the filling sequence and to allow collected dust to be re-entrained into the mixer vessel thereby maximising product yield. The filter is fitted with a conical discharge cone and flexible mixer connection hose.

Features:

- Three sizes from 7.5 to 25m²
- Conical filter cartridge(s) with fast action bayonet location system
- Integral fan set complete with volume control damper
- Powerful reverse jet cleaning system
- Rugged galvanised carbon steel body
- Integral support lugs positioned on fan housing
- Hinged access door with quick release catches
- Optional mixer connection spigot
- ATEX options available

Advantages:

- High efficiency guarantees air quality, eliminates production contamination, protects environment and personnel
- Minimal maintenance requirements
- Conical filter technology for enhanced cleaning – prolongs life of the filter and saves money



Bag Tip 120 Series (SFJ)

Sack Tipping Unit Range

The **Bag Tip 120 Series (SFJ)** is an extremely simple and compact 'self-contained' solution for the decanting of 25kg sacks/bags into downstream process. The unit incorporates a sack tipping chamber with integral gas strut assisted door and tipping grid, coupled to a rear mounted fan assisted 9m² filter unit employing our well established 120mm conical cartridge technology. The unit is designed to give effective dust control and protection to the operator and production environment during the tipping operation. A variety of discharge options are available to suit all process requirements.

Features:

- Rugged carbon steel painted construction with option for stainless steel (all grades)
- Filter medias to suit all applications and products
- Removable bag tipping grid/resting shelf
- Integrated and pre-wired control panel options
- ATEX options available
- Mounting feet or support legs available
- Empty bag disposal spigot and/or sack compactor units

Advantages:

- Minimal maintenance, reliable operation and long filter life - saves time and money
- Fast and easy element removal/replacement - saves man hours and money
- High efficiency guarantees air quality, eliminates production contamination, protects environment and personnel and saves energy and money - ensuring compliance with COSHH and EPA regulations
- Conical filter technology for enhanced cleaning - prolongs life of the filter



Bag Tip 328 Series (SFJ)

Sack Tipping Unit Range

The **Bag Tip 328 Series (SFJ)** is an extremely simple and compact 'self-contained' solution for the decanting of 25kg sacks/bags into downstream process. The unit incorporates a sack tipping chamber with resting shelf, internal or external hinged door and tipping grid, coupled to a top-mounted, fan-assisted 10m² filter unit employing our well established 328mm cartridge technology. The unit is designed to give effective dust control and protection to the operator and production environment during the tipping operation. A variety of discharge options are available to suit all process requirements.

Features:

- Rugged carbon steel painted construction with option for stainless steel
- Integral bag resting shelf and tipping grid
- Optional integrated and pre-wired control panel
- ATEX options available
- Mounting feet or support legs available
- Empty bag disposal spigot and/or sack compactor units available

Advantages:

- Minimal maintenance, reliable operation and long filter life - saves time and money
- High efficiency and low emissions to atmosphere guarantees air quality - protects personnel and ensures compliance with COSHH and EPA regulations



Compact 120 Series (SFKJ)

Compact Rectangular Dust Collector Range

The **Compact 120 Series (SFKJ)** is an extremely compact and versatile reverse jet cleaning dust collector, using our well proven 120mm conical cartridge technology. It is capable of handling high dust loads and can offer technical advantages and a cost effective solution to mechanical shake type solutions. Available with a wide range of options, it can be tailored to suit any requirements.

Features:

- Rugged carbon steel painted construction with options for stainless steel
- Filter area from 4.0 to 57.6m² (larger available on request)
- Filter medias to suit all applications and products
- Standard collection bin with 'Reverse cam' bin locating technology
- Up to +/- 0.4 Bar(g) operating pressure rating (higher available on request)
- Up to 0.7 Bar(g) pressure shock resistant (PSR) as standard
- Differential pressure (clean on demand) controller options
- ATEX options with integral explosion relief (horizontal and vertical)
- Bin liner facility and isolation valve or variety of discharge hopper arrangements available

Advantages:

- 'On-line' cleaning system, minimal maintenance requirements and long filter life - reduces downtime, saves money
- High efficiency and low emissions to atmosphere, guarantees air quality and protects environment and personnel and saves energy and money
- Complies with EPA and COSHH regulations
- Conical filter technology for enhanced cleaning - prolongs life of the filter



Compact 120 Series (SFKJC)

Compact Circular Dust Collector Range

Having all the benefits and features of the rectangular SFKJ range, the **Compact 120 Series (SFKJC)** circular construction also has the advantage of being suitable for high vacuum and pressure applications. It is also well suited for hygienic applications making it an extremely popular solution for food and pharmaceutical type applications. Using our well proven 120mm conical cartridge technology, the unit is extremely compact and is suitable for small to medium duty applications. Available with a wide range of options, it can be tailored to suit any requirements.

Features:

- Rugged carbon steel painted or optional stainless steel construction (all grades)
- Filter area from 4.0 to 32.0m² (larger available on request)
- Standard collection bin with 'Reverse cam' bin locating technology
- Fan assisted options
- -0.05 to +0.6 Bar(g) operating pressure rating (higher available on request)
- Up to 0.7 Bar(g) pressure shock resistant (PSR) as standard
- Differential pressure (clean on demand) controller option
- ATEX options with integral explosion relief (horizontal and vertical)
- Bin isolation valve and bin liner facility or variety of discharge hopper arrangements available

Advantages:

- High operating vacuum and pressure suitability
- Hygienic design
- High efficiency and low emissions to atmosphere and guarantees air quality, protects personnel and ensure compliance with COSHH and EPA regulations
- Conical filter technology for enhanced cleaning - prolongs life of the filter



Maxi 328 Series (SFKJ & SFKW)

Large Dust Collector Range

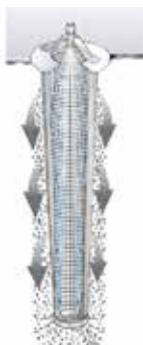
The **Maxi 328 Series (SFKJ & SFKW)** of reverse pulse cleaning dust collector units are a compact solution for medium to large type applications and use the 328mm diameter 'deep pleat' cartridge technology for maximum filter area effectiveness. The rugged carbon steel (optional stainless steel) construction comes with options of weatherproofing, single and double height, both conical and parallel filter elements and a range of input voltages. The units can also utilise either 'jet' or 'wing' online cleaning depending on the cleaning efficiency requirements (wing cleaning gives the benefit of 'off-line' cleaning in an 'on-line' system). Unit formats can be varied to best suit the available footprint and other hopper discharge options are also available to tailor for all requirements.

Features:

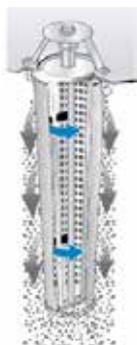
- Filter area from 20 to 480m²
- Filter medias to suit all applications and products with two or three deep formats
- Standard collection bin with 'Reverse cam' bin locating technology
- Top or floor mounted fansets
- -0.02 to +0.04 Bar(g) operating pressure rating (higher available on request)
- 0.2 Bar(g) pressure shock resistant (PSR) as standard
- Differential pressure (clean on demand) controller option
- ATEX options with integral explosion relief
- Bin liner facility and isolation valve

Advantages:

- Minimal maintenance requirements and long filter life - reduces downtime, saves money
- High efficiency and low emissions to atmosphere and guarantees air quality - protects personnel and ensures compliance with COSHH and EPA regulations
- Versatile planning in flexibility



Jet Cleaning



Wing Cleaning



Downflow 328 (SSD/SDD)

Down Flow Dust Collector Range

The **Downflow 328 Series (SSD/SDD)** of reverse jet cleaning dust collector units offer a compact solution for medium to large type applications and use the 328mm diameter 'deep pleat' cartridge technology. Utilising a high level inlet and the cartridges mounted in a horizontal format, the units offer enhanced cleaning capability due to the 'down-flow' air path and can be extremely effective on light and low bulk density dusts. The units can also be offered with safe change filter element removal and product collection and integral secondary HEPA filter sections. This makes the range well suited for use with toxic dusts or where exposure to the operator and environment is strictly controlled (pharmaceutical applications etc.).

Features:

- Rugged carbon steel painted or optional stainless steel construction
- Filter area from 15 to 672m²
- Filter medias to suit all applications and products
- Standard collection bin with 'Reverse cam' bin locating technology
- Top mounted or pedestal floor mounted fansets
- Up to +/- 0.05 Bar(g) operating pressure rating (higher available on request)
- 0.2 Bar(g) pressure shock resistant (PSR) as standard
- Differential pressure (clean on demand) controller option
- ATEX options with integral explosion relief (horizontal and vertical)
- Bin liner facility and isolation valve and/or variety of discharge hopper arrangements available

Advantages:

- Suitable for low bulk density dusts
- Safe change facility, no production area contamination - safe for the operator and complies with EPA and COSHH regulations



Maxi Bag Series (SFKB)

Tubular Sock Dust Collector Range

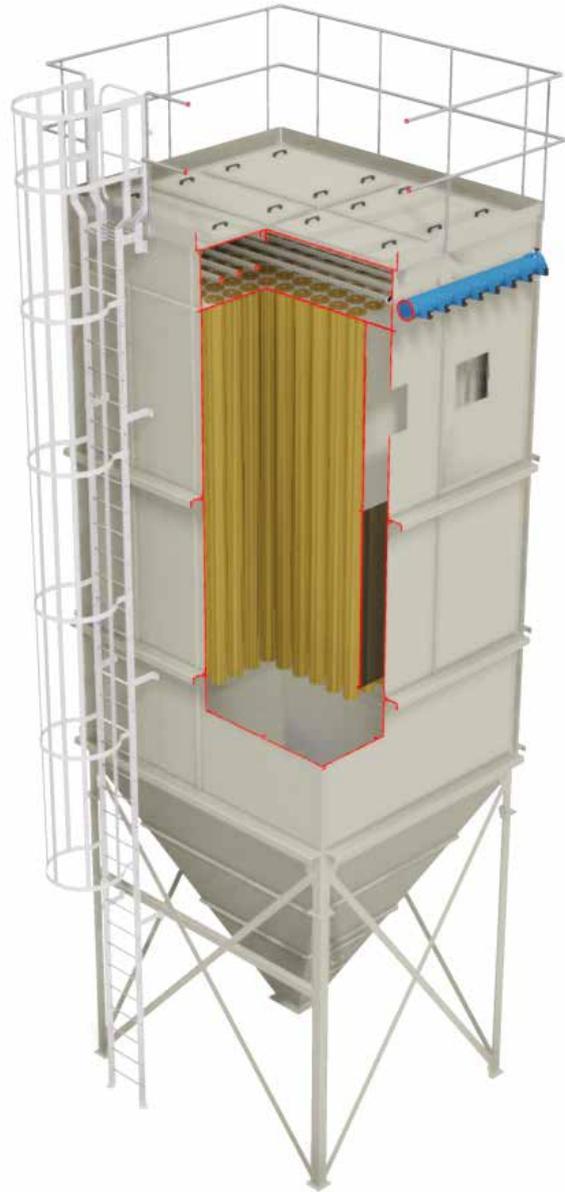
The **Maxibag Series (SFKB)** of reverse jet cleaning tubular bag dust collector units offers an alternative solution to cartridge type filters. The unit uses tubular sock filter elements with a very simple 'snap-lok' locating system. The range is massively diverse with choices of bag length and depth to suit all planning-in and process requirements. Standard bin and other hopper discharge options are available.

Features:

- Rugged carbon steel painted construction with option for stainless steel and weatherproofing
- Filter area from 7.2 to 972m²
- Standard collection bin with 'Reverse cam' bin locating technology
- Up to +/- 0.05 Bar(g) operating pressure rating
- 0.35 Bar(g) pressure shock resistant (PSR) as standard
- Bag length and depth to suit customer planning-in requirements
- Differential pressure (clean on demand) controller and fan starter/control panel options
- ATEX options with integral explosion relief (horizontal and vertical)
- Assisted discharge systems (vibratory and fluidisation) for poorly flowing materials

Advantages:

- Ease of installation even on restricted sites - makes planning easy and saves time
- High efficiency and low emissions to atmosphere and guarantees air quality - protects personnel and ensures compliance with COSHH and EPA regulations



Mekabag Series

Mechanical Shake Dust Collector Range

The **Mekabag Series** of mechanical shake dust collector units offer a cost effective solution for intermittent applications and where the dust is relatively free flowing. The unit uses a 'multi-pocket' bag filter element which is cleaned via a shaker bar coupled to a side mounted motor unit. This is interlocked into the main fan control, such that it only operates when the fan is switched off. This is termed 'off-line' cleaning and has to be done when the fan is not running. Although medias are available for all applications, the units should only be considered on intermittent applications and are not well suited to continuous production type processes. Designed for small to medium applications.

Features:

- Rugged carbon steel painted construction - stainless steel available
- Filter area from 7 to 77m²
- Dirty side element removal
- Fan and shaker motor cleaning control supplied loose or pre-wired to unit
- Standard collection bin - bin liner facility available
- Support legs for free standing applications
- Integral fansets mounted in acoustically lined enclosure
- Differential pressure gauge/switch available
- ATEX options
- Increased capacity bins for low bulk density products (wood shavings etc.)

Advantages:

- Low cost solution for intermittent applications and low whole of life cost
- Eliminates production area contamination saving on man hours and production downtime
- High efficiency and low emissions to atmosphere and guarantees air quality - protects personnel and ensures compliance with COSHH and EPA regulations



NonFlam Series

Self-Induced Wet Dust Collector Range

The NonFlam Series can be sited inside or outside (with weather protection) if space is at a premium. With built in silencer to comply with noise requirements the Noflam Series can also be supplied to meet ATEX zoning requirements.

Available in either painted mild steel or stainless steel construction, it is ideally suited to white metal dust extraction. These units can expertly handle the heavy loading of larger, mechanically generated volumes of dust particles.

Features:

- Volumes ranging from 720 – 16,200 m³/hr
- Mild steel painted, stainless steel and GRP options
- Self-induced wet scrubbing always providing full extraction
- Fan set built in with anti-spark option and silencer
- Weather protection option for outside location
- Complies with the health and safety guide HSG 258

Advantages:

- High efficiency filtration
- Simple eliminator removal for cleaning
- Easily removable front door for easy access to eliminators, inducer and sludge removal
- Can handle a wide range of difficult and sticky dusts
- Can also handle titanium, aluminium or magnesium with optional control



Midac Series

Heavy Duty Wet Dust Collector Range

The Midac Series offers enhanced design and construction for a cost effective, bespoke solution. Able to extract efficiently from machining systems of much higher complexity and pressures this range can be tailored to suit your exact requirements.

In addition to the standard range we offer add-on packages such as the Auto-Drag-Out Waste Management System or Hopper Bottom Waste Collection System.

Features:

- Able to handle air volumes of 1700 m³/hr up to 20,000 m³/hr
- Self-induced spray wet collector ranging from 0.95m³/s to 5.5m³/s
- Available with automatic sludge removal

Advantages:

- Efficiency levels up to 99%
- Suitable for hazardous application
- Manufactured from heavy gauge sheets for extended durability



Auto Sludge Series

Automatic Sludge Removing Wet Dust Collector Range

Auto Sludge Series of wet collectors is able to handle the highest of air volumes effectively. A self-induced spray system provides a scrubbing action that is up to 99% efficient. Can be accompanied by our purpose built Auto-Drag Out System.

Manufactured from heavy duty gauge sheet to provide extended lifetime and durability and able to handle air volumes of 17,000 m³/hr to 100,000 m³/hr.

Features:

- Self-induced spray wet collector ranging from 2.7m³/s to 28m³/s
- Includes automatic sludge removal

Advantages:

- Efficiency levels up to 99%
- Suitable for hazardous application
- Manufactured from heavy gauge sheets for extended durability



CycloVent Series

Venturi Scrubber

Wet Dust Collector Range

Taking a given particle size and required collection efficiency the CycloVents typically require 25% less pressure loss and hence less power than a single or conventional multi-stage venturi scrubber. The ability of the CycloVent to operate at a lower pressure loss has been consistently demonstrated in successful applications in UK and in pilot plant testing.

Alternatively a CycloVent will achieve a significantly greater collection efficiency than a conventional venturi scrubber operating at the same pressure loss.

Features:

- Able to handle air volumes of 1700 m³/hr up to 20,000 m³/hr
- Self-induced spray wet collector ranging from 0.95m³/s to 5.5m³/s
- Available with automatic sludge removal

Advantages:

- Efficiency levels up to 99%
- Suitable for hazardous application
- Manufactured from heavy gauge sheets for extended durability



Ductwork Design and Calculations

DUCT SIZING

UNITS USED

Air volumes are usually in - m³/hr.

For duct sizing it is better to be in - m³/sec (divide m³/hr by 3600 to obtain m³/sec).

DUCT VELOCITY

For conveying airborne dust, to ensure dust does not drop out of the airflow this should be 18 - 20m/sec for most dust types.

Consideration can be given to velocities higher or lower than this band bearing in mind the following:-

- Velocities can be lower if the dust load is very light or is a light bulk density
- Velocities can be higher if the dust load is heavy and/or the product is a heavy bulk density

When selecting duct sizes, be aware of the duct type and manufacturer - some have differences in their size range.

CALCULATIONS

The following formulae includes all the values used in duct sizing:-

DUCT AREA

$$\text{Area (m}^2\text{)} = \pi (3.142) \times \text{Duct Radius}^2 \text{ (m)}$$

DUCT VELOCITY AND AIR VOLUME

$$\text{Air Volume (m}^3\text{/sec)} = \text{Duct Area (m}^2\text{)} \times \text{Air Velocity (m/sec)}$$

These can be transposed to:

$$\text{Area (m}^2\text{)} = \frac{\text{Volume (m}^3\text{/sec)}}{\text{Velocity (m/sec)}} \quad \text{Velocity (m/sec)} = \frac{\text{Volume (m}^3\text{/sec)}}{\text{Area (m}^2\text{)}}$$

Air Volume Calculator

Duct Diameter		Open Area m ²	Circumference mm	Air Volume m ³ /hr							
inches	mm			15	16	17	18	19	20	21	22
1.6	40	0.0013	126	68	72	77	81	86	90	95	100
2.0	50	0.0020	157	106	113	120	127	134	141	148	156
2.4	60	0.0028	188	153	163	173	183	193	204	214	224
2.5	63	0.0031	198	168	180	191	202	213	224	236	247
2.8	70	0.0038	220	208	222	236	249	263	277	291	305
3.1	80	0.0050	251	271	290	308	326	344	362	380	398
3.9	100	0.0079	314	424	452	481	509	537	565	594	622
4.7	120	0.0113	377	611	651	692	733	774	814	855	896
4.9	125	0.0123	393	663	707	751	795	839	884	928	972
5.5	140	0.0154	440	831	887	942	998	1053	1108	1164	1219
5.9	150	0.0177	471	954	1018	1081	1145	1209	1272	1336	1400
6.3	160	0.0201	503	1086	1158	1230	1303	1375	1448	1520	1592
6.9	175	0.0241	550	1299	1385	1472	1559	1645	1732	1818	1905
7.1	180	0.0254	565	1374	1466	1557	1649	1741	1832	1924	2015
7.9	200	0.0314	628	1696	1810	1923	2036	2149	2262	2375	2488
8.9	225	0.0398	707	2147	2290	2433	2576	2720	2863	3006	3149
9.8	250	0.0491	785	2651	2827	3004	3181	3358	3534	3711	3888
10.8	275	0.0594	864	3207	3421	3635	3849	4063	4276	4490	4704
11.0	280	0.0616	880	3325	3547	3768	3990	4212	4433	4655	4877
11.8	300	0.0707	942	3817	4072	4326	4580	4835	5089	5344	5598
12.4	315	0.0779	990	4208	4489	4769	5050	5330	5611	5892	6172
13.8	350	0.0962	110	5195	5542	5888	6234	6581	6927	7274	7620
14.0	355	0.0990	1115	5345	5701	6058	6414	6770	7127	7483	7839
15.7	400	0.1257	1257	6786	7238	7691	8143	8595	9048	9500	9953
17.7	450	0.1590	1414	8588	9161	9733	10306	10879	11451	12024	12596
19.7	500	0.1963	1571	10603	11310	12017	12723	13430	14137	14844	15551
21.7	550	0.2376	1728	12829	13685	14540	15395	16251	17106	17961	18817
22.0	560	0.2463	1759	13300	14187	15074	15960	16847	17734	18620	19507
23.6	600	0.2827	1885	15268	16286	17304	18322	19340	20358	21375	22393
24.8	630	0.3117	1979	16833	17955	19078	20200	21322	22444	23566	24689
28.0	710	0.3959	2231	21380	22805	24230	25656	27081	28506	29931	31357
31.5	800	0.5027	2513	27143	28953	30762	32572	34382	36191	38001	39810
35.4	900	0.6362	2827	34353	36644	38934	41224	43514	45804	48095	50385
39.4	1000	0.7854	3142	42412	45239	48066	50894	53721	56549	59376	62204
44.1	1120	0.9852	3519	53201	56748	60294	63841	67388	70935	74481	78028
49.2	1250	1.2272	3927	66268	70686	75104	79522	83939	88357	92775	97193
56.0	1422	1.5881	4467	85760	91477	97194	102912	108629	114346	120063	125781
59.1	1500	1.7671	4712	95426	101788	108149	114511	120873	127235	133596	139958
63.0	1600	2.0106	5027	108573	115812	123050	130288	137526	144765	152003	159241
78.7	2000	3.1416	6283	169646	180956	192265	203575	214885	226195	237504	248814



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