

# Pulse Jet Dust Filters

Pulse Jet Dust Filters for  
Tough Industrial Applications



## MAC Pulse Jet Dust Filters can be configured to fit your applications

### *Engineered for...*

- ▶ Quality
- ▶ Versatility
- ▶ Durability
- ▶ Low Maintenance

### *Pulse Jets are widely used in...*

- ▶ Grain processing
- ▶ Food processing
- ▶ Furniture and cabinet manufacturing
- ▶ Composite board manufacturing
- ▶ Metalworking
- ▶ Rock and mineral processing
- ▶ Dry chemical

## Pulse Jet Features

- ▶ Header provides high surge capacity for the compressed-air cleaning system.
- ▶ Timer Board Reliable printed circuit board provides the sequencing for cleaning the dust-laden filter media with compressed air. Features adjustable settings for changing the frequency or duration of the pulse.
- ▶ Factory wiring of the timer and solenoid valves minimises installation cost and ensures proper hook-up and operation.
- ▶ Lifting Lugs Shop installed to expedite handling.
- ▶ Diaphragm Valves Furnished in 83mm, 102mm and 25mm, 32mm and 51mm sizes. Designed for maximum shock-wave cleaning.
- ▶ Magnehelic Gauge Monitors differential pressure across filter media.

## Let MAC solve your dust collection problems

Our engineers are experienced in the science of filtration and will help you make the right choices. Whether you need a single collector or a whole plant system, we'll help you meet your filtration goals.

MAC Pulse Jet Filters can use high efficiency cartridge filters as well as cage-supported standard polyester fabric bags. Some models are designed for internal bottom cage and bag replacement. Others feature topside removal. These models require more headroom for installation but offer quick access to the filter bags on the clean side of the filters.



## MAC Pulse Jet Filters meet a wide range of heavy-duty filtration requirements

They are available in rectangular and circular designs and can be configured with hoppers and/or pneumatic receivers. All use electrically-timed pulses of compressed air to dislodge particles from the filter media. To ensure long service life and minimal maintenance, MAC Pulse Jet Filters are built for heavy-duty applications and rugged use. They effectively filter such materials as grain and feed dust, coal, flour, cement, limestone, fly ash, sugar and a wide range of chemical solids.

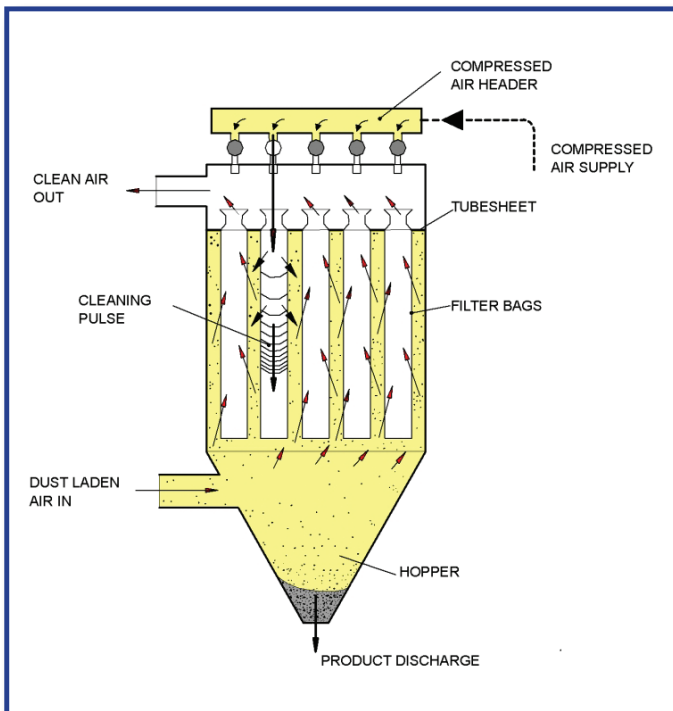
# How Pulse Jet Dust Filters Work

## Using pulses extend filter life

The header design concentrates the pulses of compressed air directly above the filters. Pulses are instantaneous and uniform to provide optimum pressure drop and to extend filter life. The use of round filter bags or cartridges also contributes to the exceptionally even and thorough cleaning.

## Pulse Jet are widely used in...

- ▶ Grain Processing
- ▶ Food Processing
- ▶ Furniture/Cabinet Manufacturing
- ▶ Composite Board Manufacturing
- ▶ Metal Working
- ▶ Rock & Mineral Processing
- ▶ Dry Chemical Processing



All MAC Pulse Jet models use compressed air to clean the internal filter media. Particle-laden air enters the housing and passes from the outside to the inside of the filter media. The dust collects on the exterior of the filters while the cleaned air flows upward and exits through the opening at the top of the filter into the clean-air plenum.

The cleaning cycle starts when the adjustable timer activates a high capacity diaphragm valve. This valve opens the header pipes above the filters for 20 to 60 milliseconds. Compressed air nozzles, located in the header pipe, direct the air pulse into the individual filters. As the compressed air bubble travels down the length of the filters, the collected dust is accelerated away from the filter surface.

When the filter media reaches its elastic limit, its movement is halted, but inertia causes the dust to continue to separate from the filter surface. The dust is discharged at the base of the filter. MAC Pulse Jet feature no-moving-part construction and operate with minimal maintenance. The timer is completely adjustable. Cycle and pulse duration can be set to minimise compressed air usage.

# MAC Pulse Jet Dust Filters



## MAC Pulse Jet Dust Filters

AVS Filters have square housings and are ideally designed for use with storage tanks, work bins, and similar applications. The square configuration is more economical than comparable round filters.

The standard AVS filter is suitable for systems where the operating static pressure ranges between -43mbar to +43mbar. But AVS Filters can also be customised for higher operating static pressures to meet specific application requirements.



## AVR Pulse Jet Filters

MAC AVR Pulse Jet Filters are designed for vacuum, pressure, and combination vacuum/pressure bulk material handling and dust collection systems. Configured with an optional receiver, the AVR is recommended for handling heavy dust loads and for applications in which the filter is used as a pneumatic receiver.

Their cylindrical shape enhances housing strength and allows them to operate at higher pressures than standard AVS models. Vacuum ratings range up to 570mbar. The tangential inlet and inner cone prevent direct impingement of product on the filter media.

## RPT and LST Pulse Jet Filters

ST and LST Filters are similar to the AVS line but are designed for topside bag replacement. They have square housings and clean air plenums with hinged top doors for easy access to the tube sheet and filters. A walk-in plenum is optional on some LST models.



## ST & RT Pulse Jet Filters

MAC ST & RT Filters are similar to the round AVR filters, but they are configured for topside filter media replacement. The clean air plenums have hinged doors to facilitate access to the tube sheet and filter media.





# Pulse Jet Filters Handle Specialised Needs



## AV-2 and AV-4 Filters

MAC AV-2 and AV-4 Filters feature compact square or rectangular designs. They are available fitted with either two or four filters. They are ideally suited for cleaning the air vented from rotary air locks and surge hoppers or for venting small volumes of displaced air.



## AV-3 Filters

MAC AV-3 Filters are compact units. Their round housings contain three cartridge-style filters. They are designed for low-capacity pneumatic conveying systems, such as vacuum loading extruders or refilling minor/micro hoppers.

## Get the Right Technology and Filter Media

- ▶ Let MAC help you select exactly what you need. We'll be glad to perform an on-site evaluation and assist in defining your objectives.
- ▶ We'll analyse the materials to be collected and determine the filters and filter media best suited to your application.



## Custom Process Baghouse Filters

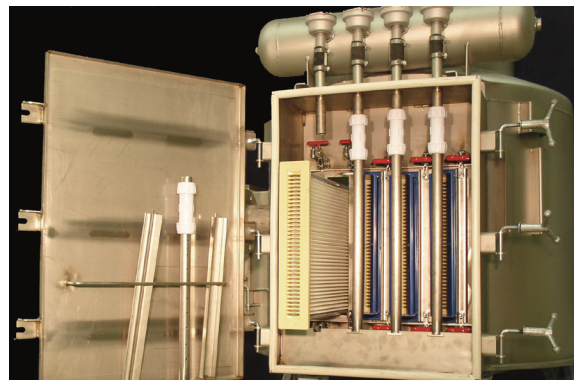
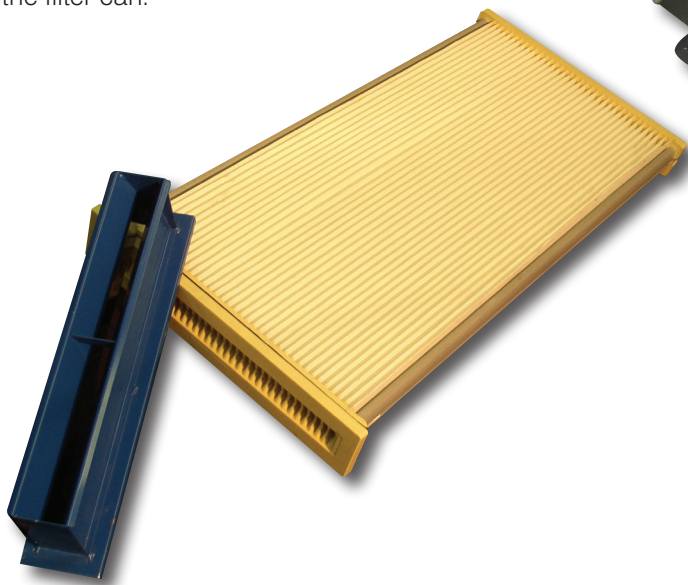
These specialised units are customised to fit purchaser applications. They are constructed with steam and water jacketing are designed for use with vacuum or pressurised material handling systems. All units undergo vacuum leak testing at our plant.

- **All filters are available with or without hoppers.**
- **All filters are sized and selected based on proper air-to-cloth ratio, approach, and interstitial velocity.**

# SEntry Side Entry Pulse Jet Filter

## Side Entry Horizontal Cartridge Filter

Designed for low headroom applications. Side entry provides easy maintenance and accessibility with no concerns about confined space entry and eliminating the need for a ladder and/or safety cage. The rectangular envelope style cartridge design minimises product retention on the filter cartridge. Wide pleat arrangement allows for high air-to-cloth ratios. The Sentry can be explosion vented through the roof without increasing the cross sectional area of the filter can.



## Contact Us

To learn more about our range of air filtration solutions, please contact us at:



**Clyde Materials Handling**  
INCORPORATING MAC EQUIPMENT

Carolina Court, Lakeside  
Doncaster, DN4 5RA

Tel: +44 (0) 1302 321 313

Fax: +44 (0) 1302 554 400

E-mail: [mac@clydematerials.co.uk](mailto:mac@clydematerials.co.uk)

[www.macequipment.co.uk](http://www.macequipment.co.uk)