REVERSE AIR FILTER II

ENGINEERED BY PNEUMAFIL

MIKROPUL

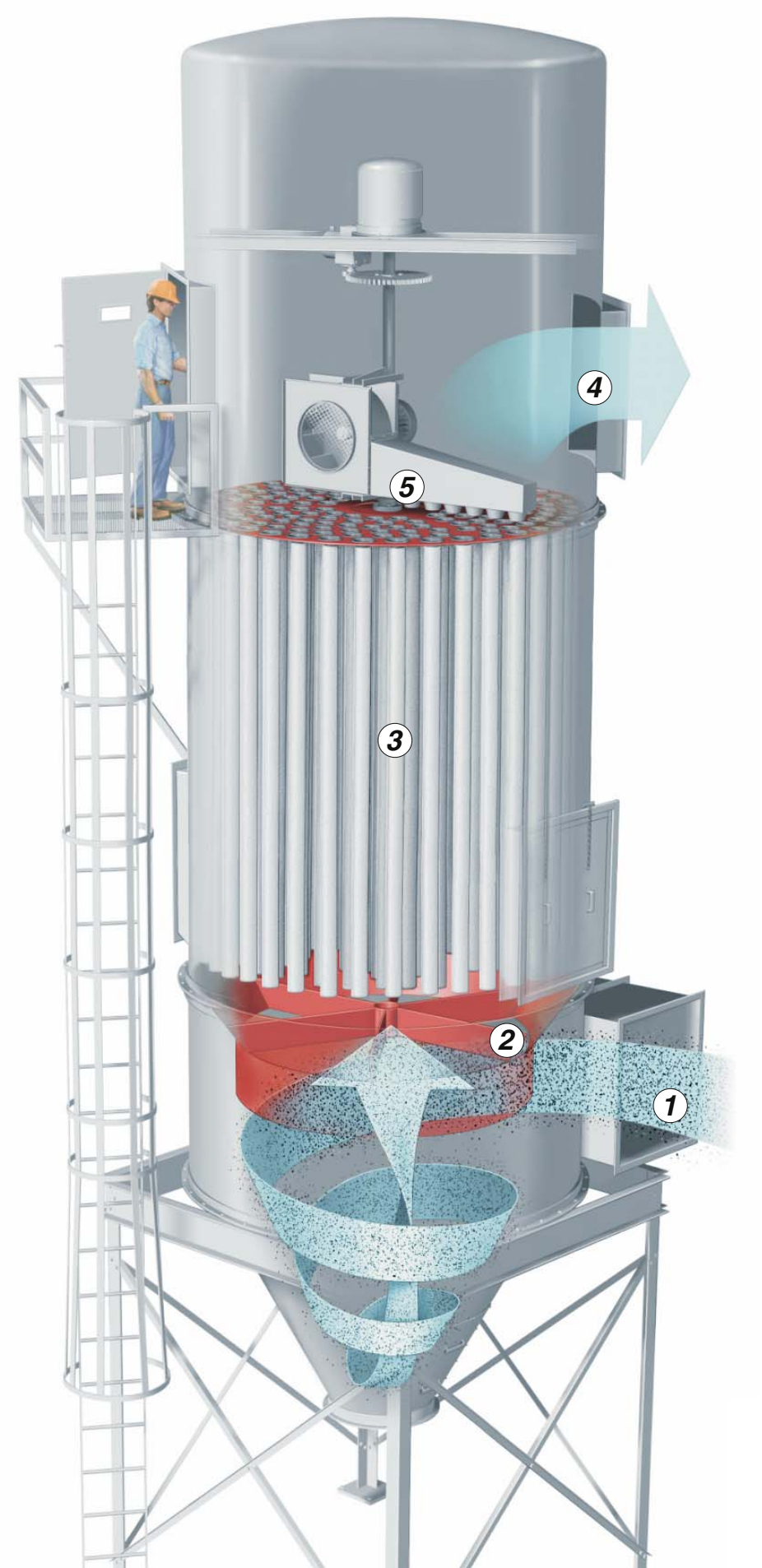
DRY FILTRATION
WET SCRUBBERS
CYCLONES
WET ELECTROSTATIC PRECIPITATORS

OPERATION

The RAF II utilizes two techniques to remove dust: cyclonic separation and media filtration. Dust laden air enters the filter through a low involute inlet ❶ where it meets a deep particle deflector ❷. This combination causes a cyclonic downward deflection of larger particles to the hopper.

This separation step allows for very heavy dust loadings, reduces abrasion and lowers the energy requirement for removing remaining particles.

The air then passes through the filter bags ❸ which filter out the remaining fine particles. The now clean air flows into a clean air plenum ❹ and exits through an outlet duct for recycling or venting to atmosphere. The dust captured on the filter media is discharged into the hopper by the reverse air cleaning mechanism ❺.



Features and Benefits

Energy Savings

- Low pressure drop
- Low fan horsepower
- Efficient involute entry
- Recycled clean air

Superior Operating Performance

- Integral cleaning fan and manifold
- Conical 60° hopper

Reduced Maintenance

- Lighted, walk-in plenum
- Top bag removal
- Reverse flow fan (no PD pump)
- No valves, dampers, compressors
- Sectionalized, bolt-in tube sheets

The reverse air cleaning mechanism is a patented feature of the RAFII, and provides unparalled performance.

HIGH PERFORMANCE / LOW ENERGY USE

Energy Savings

A true evaluation of a dust control system should consider energy consumption as it applies to the complete filter system—and not merely to any one component. This is why all MikroPul dust filters are designed to function as an integral part of the total system in combination with its exceptional capabilities for reducing overall operating costs.

For example, our Reverse Air Filter II is cleaned by either an economical 5, 10, 15, or 20 hp motor and costs very little to operate. But more importantly, each bag is cleaned once every 120 seconds by utilizing the efficient reversed flow of processed air.

This complete and systematic cleaning dramatically reduces the pressure drop across the media as well as the load demands on the complete fan system. Systems that employ random air pump cleaning may require the same horsepower, but do not clean each bag every 120 seconds. Because of this, some bags can go for an extended time without cleaning, causing higher pressure drops across the media, which increases demands on the total fan system and ultimately leads to higher energy costs.

The MikroPul involute air entry expends less overall energy than a conventional air inlet. It allows heavy dust particles to drop out into the filter hopper. This initial separating out of larger dust particles results in greater energy savings and less wear and tear on filter bags. Each contributes to lower operating costs.

Additional energy savings are achieved by recycling plant air previously heated or cooled. Due to the short contact time of air passing through the filter, the cleaned air is not affected by outside temperatures, so no additional energy is expended to heat or cool make-up air.

Reduced Maintenance

All bag inspection and removal operations were designed to simplify maintenance procedures and keep maintenance costs down.

A viewing port and lighted plenum allows the operator to visually inspect the bag cleaning system from outside the filter.

The walk-in plenum permits top bag removal from the clean air side. This operation simply requires extracting the drop-in cage from the snap-in bag.

Our washable, wear-resistant bags are designed and constructed to deliver maximum efficiency. They are made of 16 oz. singed polyester felt with a 2 inch wear strip at the bottom to protect against abrasion.

Special Features

Sectionalized, Bolted-In Tube Sheet—If the filter tube sheet is damaged, it can be easily unbolted and removed through the plenum door. Filters that employ welded-in tube sheets require cutting and welding to remove damaged plates, in addition to replacing the entire mechanical section. This can result in considerable downtime and expense.

Patented Reverse Air cleaning mechanism.

Integral Cleaning Fan and Manifold—The MikroPul Reverse Air bag cleaning operation is accomplished by effectively using a simple reverse flow fan. The fan and manifold rotate above the tube sheet and filter bags, eliminating friction and metal-to-metal contact. There are no valves, dampers or compressors to maintain. And with the absence of compressed air, there is less risk of explosion because no additional oxygen is being introduced.

Conical 60° Hopper—prevents bridging and the need for any additional, expensive auger discharge. Each hopper is equipped with a large, bolted access door and flanged outlets.

Rugged High Quality Construction and Finish

Constructed of carbon steel, the RAF II can withstand ±20" W.G. and is suitable for severe environments. Filters are equipped with relief panels secured with safety chains of uneven lengths to reduce the possibility of the door becoming a projectile.

Our standard paint surface preparation meets SSPC-SP6 specifications. Every unit is primed (2.0-2.5 mils) inside and outside and finished outside with polyester epoxy paint (2.0-2.5 mils). This painting method has passed a 500 hour salt spray test.

Metallurgies, surface preparation and finish can be customized to suit your site or process requirements as necessary.

Options

Many options are available, including:

- Additional bracing for higher pressure
- Explosion proof motors
- Special filter media
- Stainless steel construction
- Non-sparking or abrasion resistant air entry wear plates

PARTS AND SERVICE: TOTAL SUPPORT

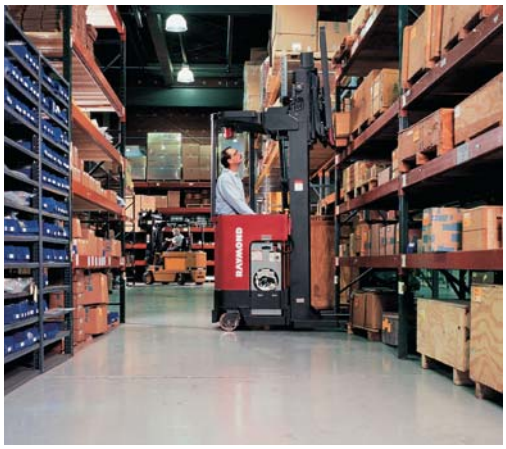
MikroPul backs up our products with reliable and responsive customer support. Call us any time you need help.

Parts

We carry a full line of replacement parts, and keep most-used items on the shelf for immediate shipment. MikroPul's investment in total support includes approximately 1,000 different part numbers.

Services

MikroPul provides an array of services to help you select, install, operate, optimize, and upgrade your equipment. Services include:



- Clean air preparation program
- Inspections
- Collector refurbishing
- Collector rebuilding
- Converting old collectors to new technology
- Upgrades to increase capacity
- Preventive maintenance programs
- Bag testing
- Maintenance seminars
- Erection services

OTHER DRY FILTRATION SOLUTIONS

RAF-IS Reverse Air Collector for Hazardous Dust. All electrical components are located outside the housing and no outside oxygen is introduced. These and many other features make the RAF-IS the world's safest dust collector. Ideal for PRB coal and other volatile particulate.

Mikro-Pulsaire® Pulse-Jet Collector. MikroPul invented the pulse-jet and continued innovations, such as our patented inlets, keep the Mikro-Pusaire at the forefront in operating performance and value.

High Efficiency Cyclones. These are the most cost-effective solution for filtering particulate 5 microns or heavier. More than four decades of experience produce designs with low pressure drop and low operating costs.

MIKROPUL
A Noticeable Difference

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