

# DUST, SMOKE & FUME SYSTEMS

**MICRO AIR**

**CLEAN AIR SYSTEMS**



**BREATHE EASY....SOLUTIONS FOR CLEAN, SAFE AIR**

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# Dust, Smoke & Fume Systems

## Micro Air®

Established in 1969, Micro Air® manufactures precision engineered dust collection equipment, industrial air cleaners, filters and accessories designed for industrial manufacturing applications. With more than 40 years of experience, we are focused on improving employee health and safety, providing unrivaled **CLEAN AIR SOLUTIONS**. Clean air is our passion and we are committed to keeping your workplace safe, productive and pollution free!



## The Clean Air Solution....

### Breathe Easy Applications



Manufacturing processes create toxic pollutants, mist, or fumes that are extremely harmful to workers. Micro Air® products are designed to capture and remove indoor pollutants found in a variety of industrial processes such as welding and cutting smoke, fumes, dust generated in blasting, grinding, sanding, polishing, mixing processes, odors and coolant mist. Micro Air® also offers a complete line of ancillary products and accessories including fans, rotary air valves, Intelli-Touch™ Energy Savings Controls, all components required for OSHA/NFPA compliance.

### Why Choose Micro Air Clean Air Systems?

Micro Air® is your ONE-STOP SHOP for air quality and dust collection needs. Micro Air® has the widest product variety in the industry with a solution to all of your industrial air quality and dust collection needs.



**BREATHE EASY....  
SOLUTIONS FOR CLEAN, SAFE AIR.**



## Regulatory Compliance



### Combustible Dust - OSHA/NFPA Compliance

Combustible dust explosions in the past decades in U.S. manufacturing plants are blamed for well over 100 fatalities and hundreds of non-fatal injuries, prompting OSHA to implement the “National Emphasis Program” (NEP) that enforces NFPA standards and guidelines. Employee and property safety, is always first and foremost in any employers mind. Trust the expertise of Micro Air® staff to follow the provisions of the NFPA Standards: 68, 69, 654, 61, 484 and 664; and how they apply to your process application. We specialize in the design of dust collection systems that can be equipped with all components for OSHA/NFPA compliance.

### Focus On Welding....

Overexposure to weld smoke and fumes causes a wide range of health problems, from minor irritations to potential life-threatening issues. Some of the harmful contaminants generated in weld smoke/fumes are:

- ▶ Iron
- ▶ Beryllium
- ▶ Hexavalent Chromium
- ▶ Copper
- ▶ Cadmium
- ▶ Zinc Oxide
- ▶ Lead
- ▶ Manganese
- ▶ Nickel

Micro Air® dust collectors, clean air booths, downdraft tables, portables and source capture arms provide solutions for clean, safe air in welding processes, capturing harmful contaminants and maintaining compliance to OSHA Permissible Exposure Limits (PEL's).



### Repairable Crystalline Silica



Crystalline silica is a common mineral found in sand, stone, concrete and mortar. This silica dust is created in the production of glass, pottery, ceramics, bricks, stone, etc. Workers who inhale respirable crystalline silica dust particles are at risk of developing potentially fatal silica-related diseases including silicosis, lung cancer, COPD and kidney disease.

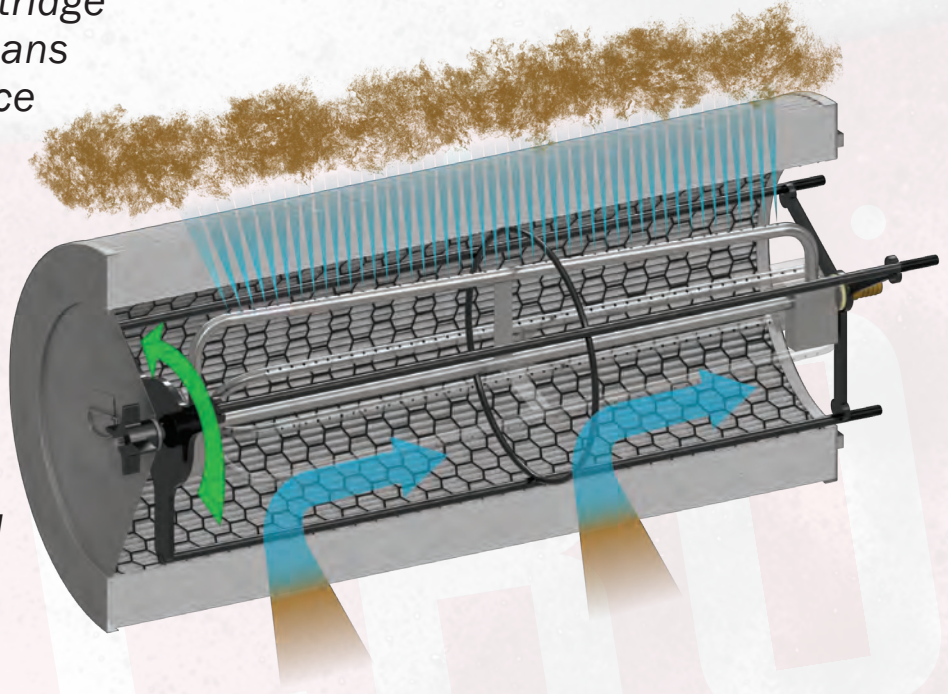


# Roto-Pulse® Cleaning Systems



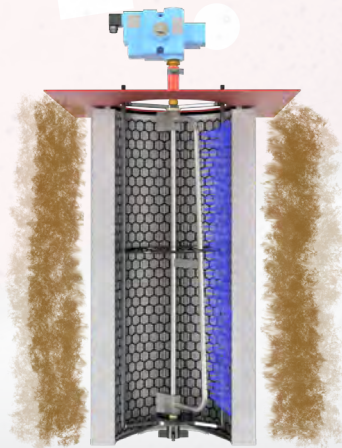
## Micro® Air Dust Collectors The Next Generation Of CLEAN Air Systems

*The Micro Air Roto-Pulse® cartridge cleaning system uniformly cleans 30% to 40% more filter surface than conventional reverse pulse (backflush) systems, all while running quieter and using less compressed air. It extends the life of your filters, your compressor and reduces your risk of violating OSHA sound level standards. Our 5 year limited warranty on Roto-Pulse® assures confidence in the system design.*



### Micro Air Roto-Pulse® Cartridge Cleaning System

Air is pulsed into a specially designed stainless steel rotating tube with pre-drilled holes. The tube incrementally rotates, distributing the pulse of air across the length of the inside surface of the cartridge, dislodging clogged dirt from the outside of the cartridge. The number of increments per revolution can be adjusted, as well as the time between pulses, for maximum flexibility.



### Typical Air Cleaner Backflush System

Air enters cleaning pipe and is pulsed into cartridge out of each filter. The air hits only the back corners of the cartridge resulting in inefficient cleaning.





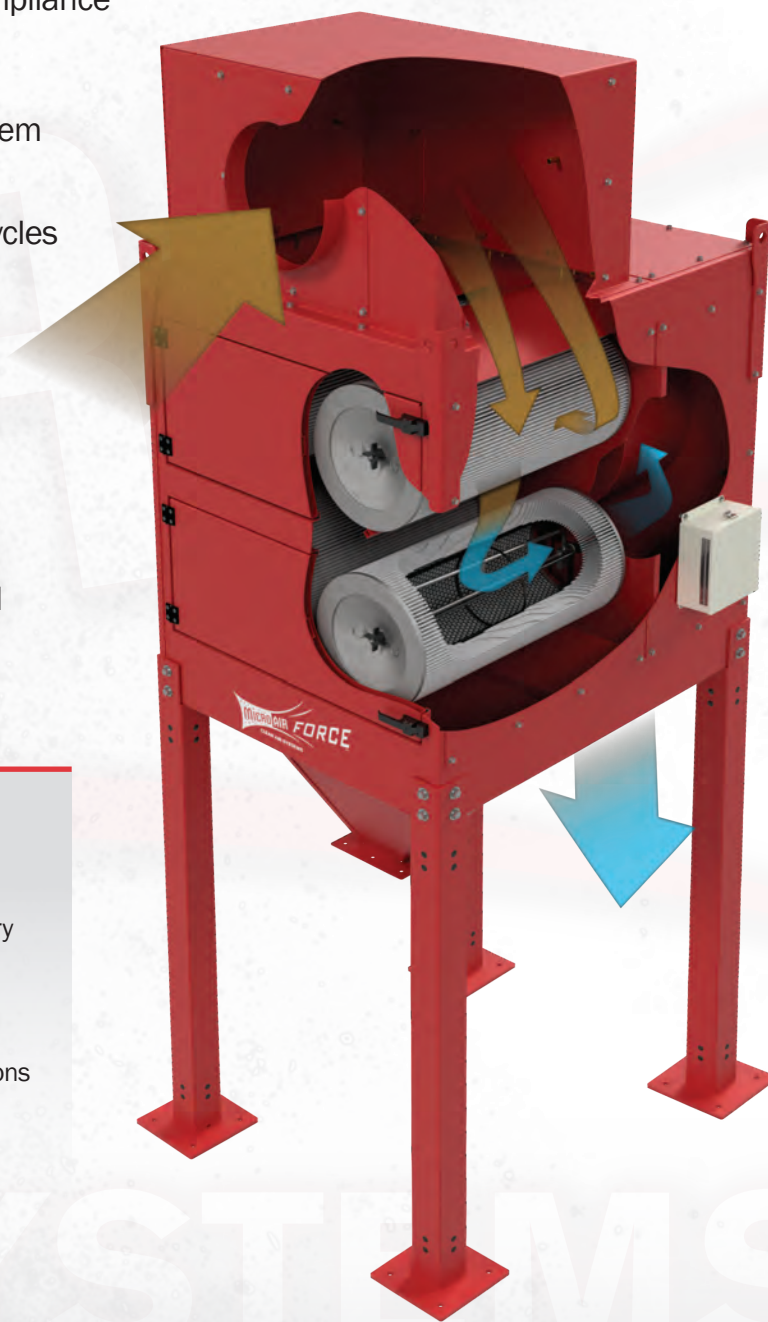
## High-Volume Dust Collection

### **FRP-DUST COLLECTORS**

- ▶ Revolutionary Roto-Pulse® Filter Cleaning System
- ▶ Ledge-Less Construction For OSHA/NFPA Compliance
- ▶ Quick Access Hinged Filter Doors
- ▶ State Of The Art Compressed Air Delivery System For Increased Cleaning Efficiency
- ▶ Long-Life Valve System, Rated For 5 Million Cycles
- ▶ Best Industry Warranty
- ▶ Rigid 12 Gauge Construction
- ▶ Standard Indoor/Outdoor Rated
- ▶ Rated To 30" W.C. Operating Pressure
- ▶ Sturdy Support System - No Cross Bracing Required For Seismic Zones 1, 2, & 3 Or Wind Load Rating  $\leq$  115MPH

### Options

- ▶ Rear, Top, Or Remote Motor Mounting Options
- ▶ Variety Of Motor HP Options Available For Specific Application Needs
- ▶ 208/230/460 Volt Three Phase Control Options, Factory Wired Pulsing Controls
- ▶ Variety Of Cartridge Filter Media Options, Application Specific
- ▶ Low-Profile With Dust Tray Or Long Leg With Barrel Options
- ▶ Hepa After-Filters
- ▶ Spark Arrestors And Silencer
- ▶ OSHA/NFPA Combustible Dust Compliance Options
- ▶ Intelli-Touch Energy Savings Control Panel
- ▶ Seismic/Wind Bracing Available - Seismic Zone 4, Wind Rating  $\leq$  160MPH
- ▶ Epoxy Powder Coated Finish
- ▶ DOC Drop-Out Modules For Heavy Particulate
- ▶ Rotary Air Locks





# Dust, Smoke & Fume Systems

## Standard Volume Dust Collection

### **RP-DUST COLLECTORS**

- ▶ Revolutionary Roto-Pulse® Filter Cleaning System
- ▶ Easy Removal Filter Cartridge For Maintenance And Replacement
- ▶ Energy Efficient EPACT Motor
- ▶ Standard And Custom Configurations
- ▶ Long-Life Valve System
- ▶ Rigid 14 Gauge Construction
- ▶ Best Industry Warranty

### Options

- ▶ Rear, Top, Or Remote Motor Mounting Options
- ▶ Variety Of Motor HP Options Available For Specific Application Needs
- ▶ 208/230/460 Volt Three Phase Control Options, Factory Wired Pulsing Controls
- ▶ Variety Of Cartridge Filter Media Options, Application Specific
- ▶ Low-Profile With Dust Tray Or Long Leg With Barrel Options
- ▶ Magnahelic or Photohelic Gauge Options
- ▶ Hepa After-Filters
- ▶ Explosion Relief Panels
- ▶ Fire Retardant Filter Media - All Micro Air Filters Are Treated FR
- ▶ Spark Arrestors
- ▶ Silencer
- ▶ OSHA/NFPA Combustible Dust Compliance Options
- ▶ Intelli-Touch Energy Savings Control Panel
- ▶ DOC Drop-Out Modules For Heavy Particulate
- ▶ Rotary Air Locks



CLEAN



## ***Intelli-Touch™ Energy Savings Control*** \_\_\_\_\_



The Intelli-Touch control panel for use with Micro Air® dust collection systems is truly a state-of-the-art system that enables the dust collector to continually operate at the designed CFM, RPM, or Static Pressure Mode. By operating at the exact specifications your application requires, there is no wasted horsepower, compressed air, or energy. The touch-screen controls feature online monitoring and tracking of all pertinent electrical and performance data related to the dust collection system. With a built-in variable frequency drive and PLC, the system airflow can be adjusted at the touch of the screen or can be set to run at a constant CFM, no matter what the system static pressure.

### ***Benefits***

- ▶ Reduces Peak Energy Consumption Costs Utilizing A Slow-Start, Eliminating Surges and Spikes In Power Usage
- ▶ Quieter Operation Utilizing Lower Fan Speeds When Possible
- ▶ Tracks Pertinent Data Such As CFM, RPM, Amp Draw, And Static Pressure
- ▶ Multiple Factory Set Pulse Settings For Roto-Pulse Cleaning Based On Volume Of The Application
- ▶ Reduces Compressed Air Usage
- ▶ Allows For System Balancing In Multiple Drop Applications And Utilizes The Minimum Amount Of Energy Needed To Power Drops That Are Being Used

***Intelli-Touch™ Energy Savings Control Panel Gives You Big Savings On Energy And Filter Replacement.***





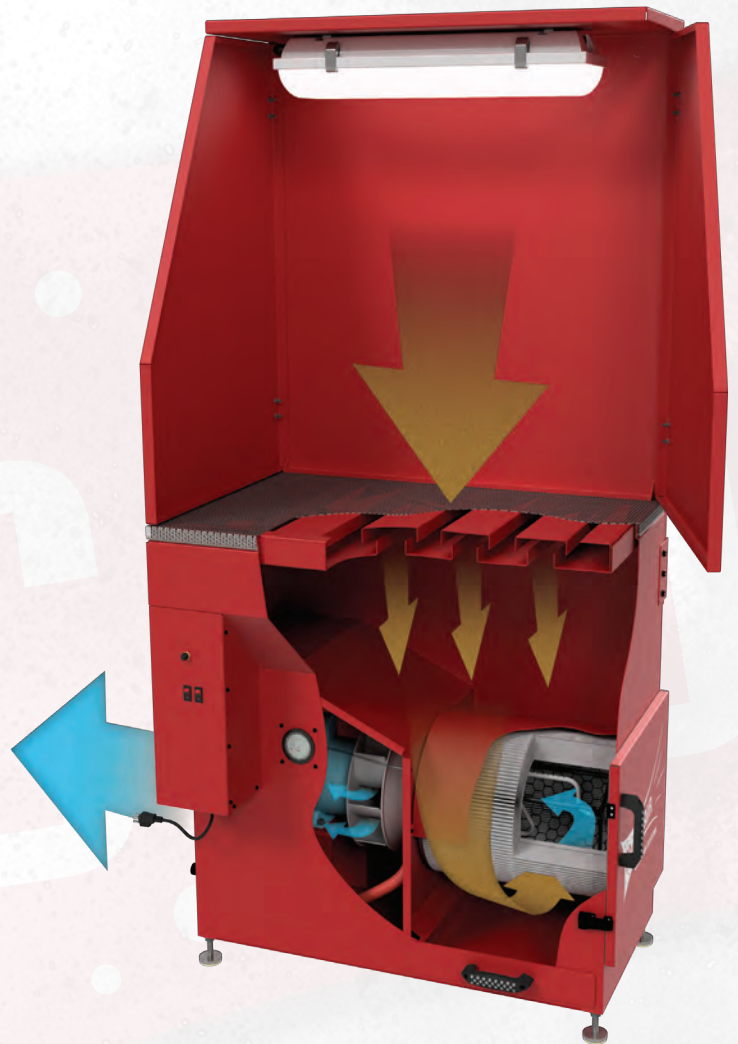
## Downdraft Table Collector

### **XAM-EXTREME DOWNDRAFT TABLE**

- ▶ Revolutionary Roto-Pulse® Filter Cleaning System
- ▶ Hinged Filter Door With Easy Access Latches For Quick Filter Change And Maintenance
- ▶ High Efficiency Motor With Built-In Starter And Overload Relay
- ▶ Baffle Type Spark Arrestance
- ▶ 250 FPM Engineered Down Draft Velocity
- ▶ Manual Pulse Roto-Pulse® Filter Cleaning
- ▶ Minihelic Gauge

#### Options

- ▶ Factory Prewired LED Light Fixture, Backshield Mounted
- ▶ Back/Side Shield With Hinged Wing Walls
- ▶ Auto-Pulse Filter Cleaning
- ▶ Industrial Grade Casters
- ▶ Variety Of Filter Media For Specific Application Needs
- ▶ Silencer
- ▶ 2' x 3', 3' x 4', 3' x 8', and 4' x 6' Size Options
- ▶ 4' x 5' Arm Mounted To Table With Tabletop Cover Plate



# CLEAN



## High Efficiency Wet Collection

### **WC-WET COLLECTORS**

- ▶ Multiple CFM Configurations
- ▶ Stainless Steel Construction
- ▶ Marine Grade Black Epoxy Finish
- ▶ Washdown TEFC Motors With Stainless Steel Blowers
- ▶ UL Listed NEMA 4 Control Panel With Start/Stop Controls
- ▶ Integrated Automatic Fill Valve Actuated By Digital Static Pressure Inputs
- ▶ Equipment Interlock: Low Level Shut-Off Relay And Motor Relay To Interlock Dust Producing Equipment
- ▶ Agitated Water Bath Filtering System
- ▶ Particulate Disposal Rake

### **Options**

- ▶ Powered Sump Vent Blower
- ▶ Hepa After-filter Module - 99.97% Efficient
- ▶ Single Or Dual A-Frame After-Filter - 95% Efficient, MERV 16
- ▶ Exhaust Silencer
- ▶ Downdraft Tables Pre-Sized With Interconnecting Ductwork
- ▶ Low Or Medium Static Pressure Blower Wheels
- ▶ RAW Stainless Steel Finish (Unpainted)
- ▶ High Temperature Alarm With Auto Shut-Off





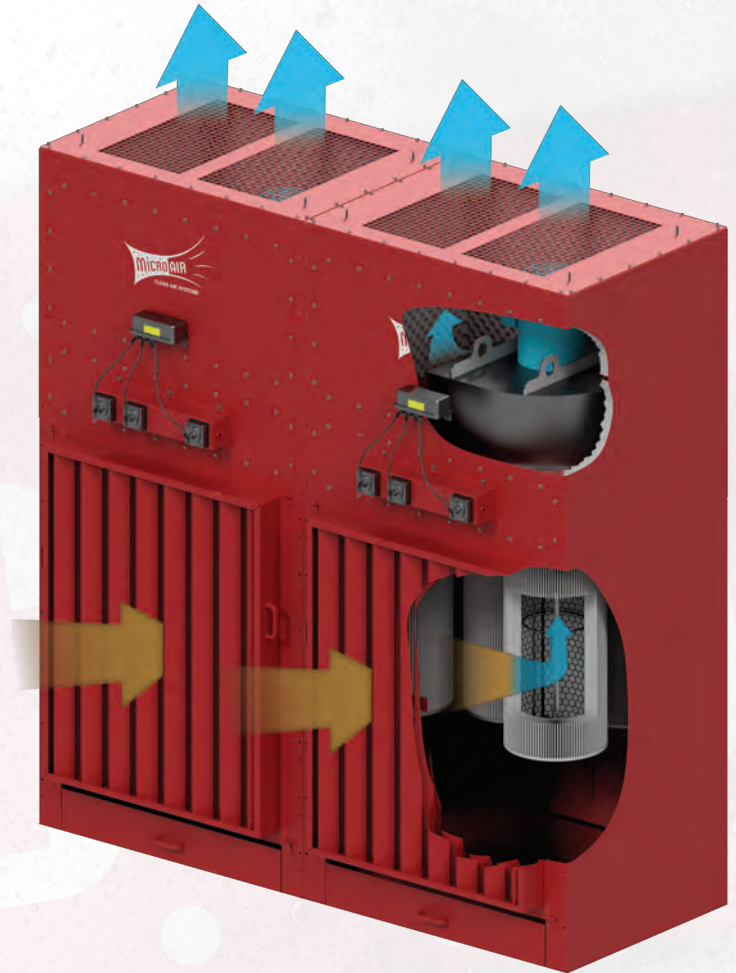
## Clean Air Booth Collection

### **CAB-CLEAN AIR BOOTH**

- ▶ Revolutionary Roto-Pulse® Filter Cleaning System
- ▶ Modular Design And Custom Capability
- ▶ Heavy Duty Construction
- ▶ Large Capacity Dust Drawers
- ▶ Quiet Power - Lowest Sound Levels In The Industry
- ▶ After-Pulse Cleaning Cycle
- ▶ Ductless System
- ▶ Direct Drive, TEFC Backward Inclined Blower

#### Options

- ▶ Variety Of Cartridge Filter Media Options Available
- ▶ HEPA After-filters And Silencer Options
- ▶ Magnahelic Gauge
- ▶ Variety Of Booth Enclosures - Application Specific
- ▶ Motor Starter Controls With Built In Disconnect
- ▶ Spark Arresting Inlet
- ▶ Regain Air For Push/Pull Design
- ▶ Insulated Acoustically Lined Booth Panels
- ▶ LED Lighting For Booth Enclosures



# CLEAN



## Portable Collection

### **TM1000/MC1500-SOURCE CAPTURE**

- ▶ Revolutionary Roto-Pulse® Filter Cleaning System
- ▶ High Cleaning Capacity
- ▶ Reduced Power Requirements
- ▶ Compact Design For Versatility
- ▶ Heavy-Duty 16 Gauge Steel Construction
- ▶ Dual Arm Capability
- ▶ Broad Assortment Of Attachments For A Variety Of Applications
- ▶ Easy Removal Dust Collection Tray
- ▶ Hood Mounted Controls

#### Options

- ▶ Variety Of Cartridge Filter Media Options
- ▶ HEPA After-Filter
- ▶ Big Wheel Kit
- ▶ Dual Arm Packages
- ▶ LED Light In Hood
- ▶ Carbon After-filter
- ▶ Auto Pulse Option
- ▶ Backdraft Hood
- ▶ Downdraft Table Attachment
- ▶ Flex Hose And Hood Attachment



# AIR SYSTEMS



# Dust, Smoke & Fume Systems

## Ambient Collection



### **MX- AMBIENT CAPTURE**

- ▶ Multiple CFM Configurations
- ▶ Side Load, Easy Filter Access
- ▶ Cam-Lock Positive Filter Sealing
- ▶ Dry Particulate, Smoke Or Oil Mist Filtration
- ▶ Low Cost Solution For Light To Moderate Applications
- ▶ 2 Stage Or 3 Stage Filter Options

### **Options**

- ▶ Single or Three Phase Motor
- ▶ Filter Change Light Or Magnahelic Gauge
- ▶ Low, Medium, Or High Static Pulley Configurations
- ▶ HEPA After-Filter And Silencer
- ▶ Variety Of Filter Media Options - Application Specific
- ▶ Source Capture Plenum For Ducted Applications
- ▶ Oil Mist Drain And Door Seal
- ▶ Side Exhaust Capability

## Ambient/Source Capture Collection



### **MC- AMBIENT CAPTURE**

- ▶ Revolutionary Roto-Pulse® Filter Cleaning System
- ▶ High Cleaning Capacity And Multiple Drop Capability
- ▶ Built In Silencer Plenum
- ▶ Motor Starter/Overload Relay Standard
- ▶ Modular Design
- ▶ Hinged Door For Easy Filter Access
- ▶ After Pulse Cleaning
- ▶ Hopper Or Dust Tray Collection

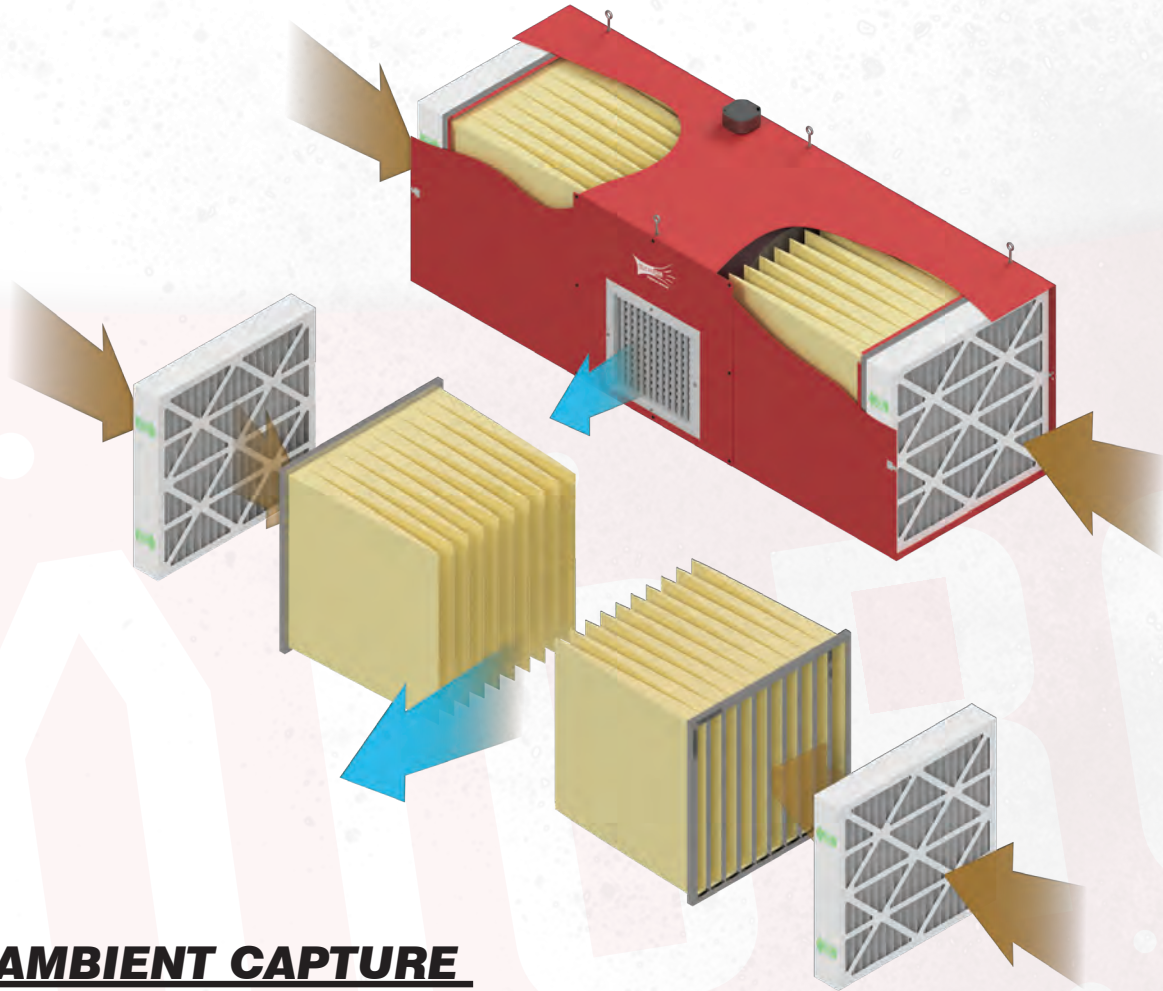
### **Options**

- ▶ 5HP Or 7.5HP Motor Options
- ▶ Magnahelic Gauge
- ▶ Variety Of Cartridge Filter Media Options
- ▶ HEPA After-Filter
- ▶ Spark Arresting Pre-Filter
- ▶ Silencer
- ▶ Variety Of Pulley Combinations, For Static Pressure Control
- ▶ Remote Start/Stop Switch
- ▶ Carbon After-Filter
- ▶ Inlet Plenum For Source Capture Applications



# Dust, Smoke & Fume Systems

## Ambient Collection



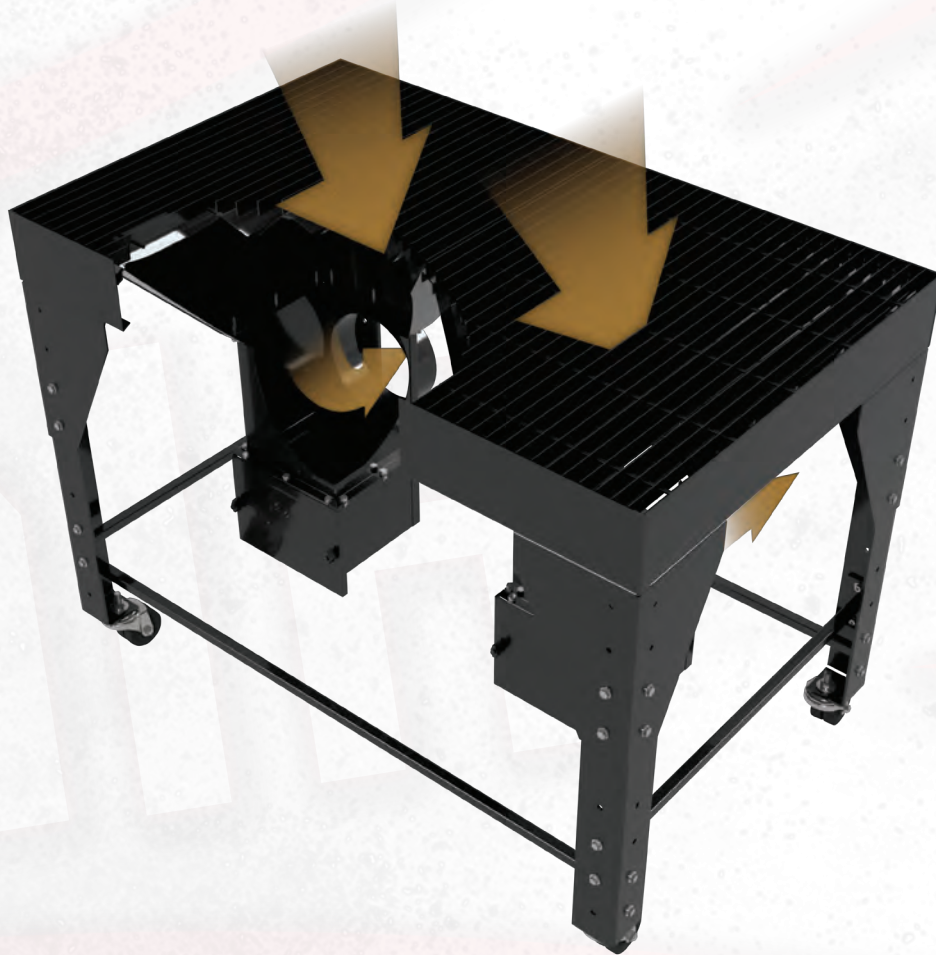
### **MXT-AMBIENT CAPTURE**

- ▶ Multiple CFM Configurations
- ▶ 16 Gauge Steel Construction
- ▶ Easy Change-Out Front Filter Access
- ▶ Double The Filter Media Of Conventional Ambient Units
- ▶ Dual Inlet/Single Exhaust

#### **Options**

- ▶ Wrap Around Prefilter
- ▶ Variety Of Filter Media Options - Application Specific
- ▶ Filter Change Light
- ▶ 3/4HP - 120V Motor

## Downdraft Table Collection



### **DDT-DOWNDRAFT TABLE**

- ▶ Standard Sizes 24" x 30", 48" x 30", And 72" x 30"
- ▶ Modular Design
- ▶ Rugged Construction
- ▶ Adjustable Height
- ▶ Dust Tray Dropout
- ▶ Easily Connects To Existing Dust Collection System

#### Options

- ▶ Wheel Kit For Portability
- ▶ Back/Side Shield With Hinged Wing Walls
- ▶ Dust Tray Dropouts
- ▶ Painted Steel Grille
- ▶ Fiberglass Scratch Resistant Grille
- ▶ Stainless Steel Design For Food Grade Applications
- ▶ Coated Grille Options For Soft Surfaces



## Source Capture Collection

### **SCA-SOURCE CAPTURE ARM**

- ▶ 4", 6", And 8" Diameter Options
- ▶ 5', 7', 9', And 12' Lengths
- ▶ Externally Self Supported
- ▶ Fire Retardant Flexible Elbow Joints
- ▶ Industrial Strength Construction
- ▶ Versatile Design
- ▶ Air Diverter In Hood
- ▶ Airflow Damper



#### Options

- ▶ 1HP And 3HP Exhauster Options
- ▶ LED Lamp In Hood
- ▶ Hood Mounted Controls
- ▶ 10' And 14' Boom Arm Extensions



# Dust, Smoke & Fume Systems



[WWW.MICROAIRONLINE.COM](http://WWW.MICROAIRONLINE.COM)



## 1. DUST COLLECTION SYSTEMS

Micro Air dust collectors are engineered from the ground up with innovative designs, featuring the "Roto-Pulse" cleaning technology that separates Micro Air from the competition. Whether it's fine dust or coarse particulate, we can help to make your facility cleaner, safer and operate more efficiently.



## 2. CLEAN AIR BOOTHS

The Micro Air Clean Air Booth (CAB) is a unique blend of simple modular construction and leading edge technology. It's self-containing ductless system that provides maximum manufacturing flexibility while protecting workers from airborne hazards associated with applications such as cutting, grinding, sanding, finishing, and multiple other industrial operations that produce airborne contaminants.



## 3. WET DUST COLLECTION

HYDROMAX Wet Collectors offer the most technologically innovative design available in the industry today. Competitors may offer all stainless steel construction, TEFC washdown motors and/or NFPA compliant packages as expensive add-on options, while Micro Air combines these optional add-ons into the standard product offering.



## 4. DOWN DRAFT TABLES

Micro Air's EXTREME AIR-MAX Downdraft Tables of ducted dry or wet tables, provide a modular, portable and adjustable downdraft work surface ideal for welding, grinding, soldering, sanding and others finishing processes. Our tables offer the flexibility to configure a worktable to meet the exact application needs, space requirement, and operator preference.



## 5. SOURCE CAPTURE ARMS

Micro Air model SCA exhauster arms can be used on a variety of fume and particulate exhaust applications. Designed to control airborne pollutants at the generation point, SCA arms can be equipped with a fan for venting externally or ducted to Micro Air cleaners or dust collectors to filter materials and return clean fresh air back into the facility.



## 6. AMBIENT CLEANING SYSTEMS

Ambient capture is a good way to capture pollutants and keep plant air below OSHA and NIOSH standards. In basic terms, we filter plant air in problem areas to achieve the desired air changes per hour based on application and pollutant levels. This can be cost effective way to provide clean, safe air to plant employees. Micro Air's network of Engineered Systems Distributors are trained experts in industrial ventilation and offer product expertise, sizing, layout, etc assistance.



## 7. PORTABLE AIR CLEANERS

Micro Air manufactures a complete line of portable collectors. From the TM1000 cartridge collector, for light duty or small applications to the MC1500 cartridge collector for heavy-duty production. The TM500, our newest addition to the line of portable collectors, equipped with a baffle prefilter and your choice of a 95% DOP HEPA or 99.97% DOP HEPA, fits the bill where space constraints are an issue or where a wall-hung unit can be used.

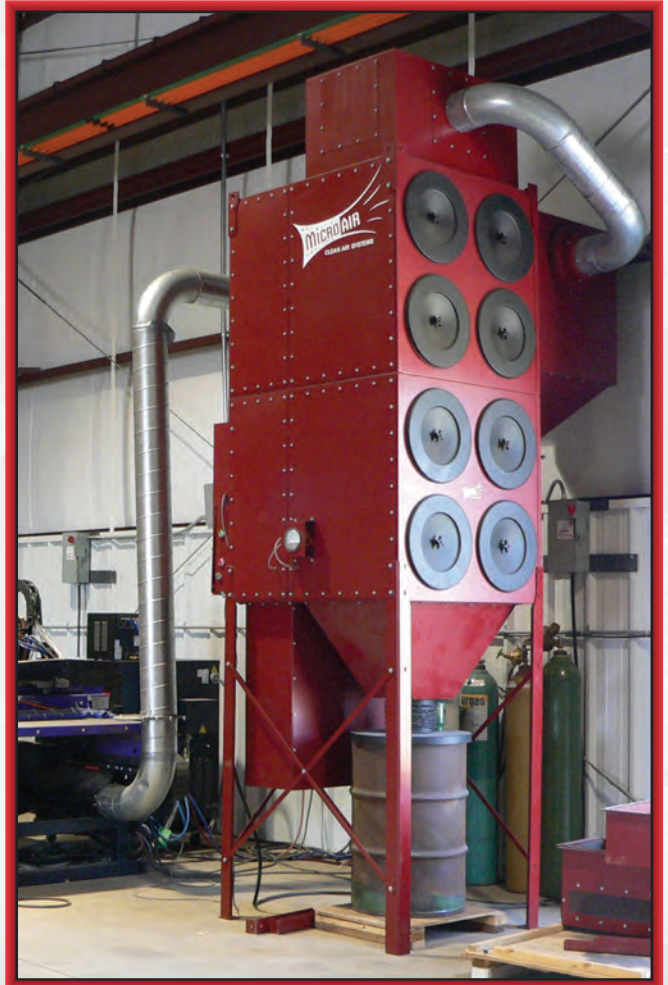


## 8. MIST COLLECTION SYSTEMS

Processes that produce coolant mist and smoke are extremely harmful and if not effectively captured and filtered is dangerous to workers. Oil residue is costly to clean up and may cause problems with equipment maintenance and repair. From individual machine mounted units like the OM550DD or MM800 to large central systems, Micro Air offers filtration options that will solve any mist problems found in the industry and will return costly cutting fluid to machinery.



## APPLICATIONS





# Dust, Smoke & Fume Systems

## APPLICATIONS



Disclaimer: While the information in this brochure (L3003) "Dust, Smoke & Fume Systems" is believed to be true and correct at the date of publication, changes after the time of publication may impact the accuracy of the information presented. Micro Air assumes no responsibility or liability and reserves the right to update, delete from or modify information for accuracy and completeness without prior notice.





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