

COMBUSTIBLE DUST Explosion Protection Solutions

MICROAIR

Clean. Easy. RED.

**Why Risk a Dust
Explosion?**



NFPA / OSHA COMPLIANCE COMPONENTS

- MECHANICAL BACKDRAFT DAMPER
- FLAMEQUENCH
- BARREL LID/HARD PIPE
- CHEMICAL ISOLATION
- LEDGELESS HOPPER
- EXPLOSION VENT
- FAST-ACTING EIV VALVE



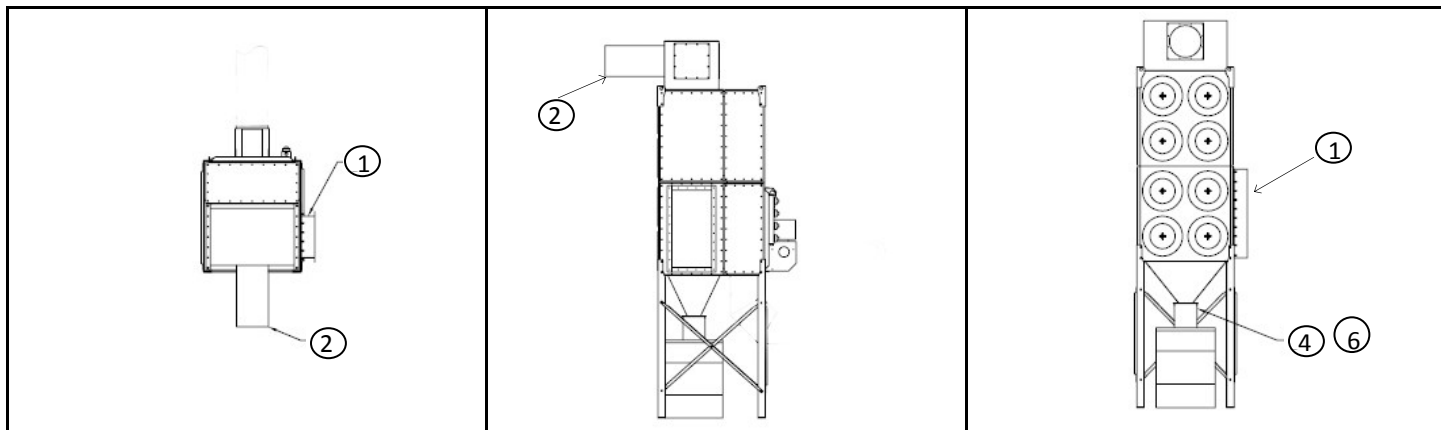
**COUNT ON MICRO AIR FOR YOUR OSHA/NFPA
COMBUSTIBLE DUST COMPLIANCE PACKAGE**

NFPA/OSHA COMBUSTIBLE DUST COMPLIANCE PACKAGE

OUTDOOR INSTALL—NO RETURN AIR

SINGLE MODULE COLLECTORS

A



COMPONENTS REQUIRED FOR NFPA / OSHA COMBUSTIBLE DUST COMPLIANCE

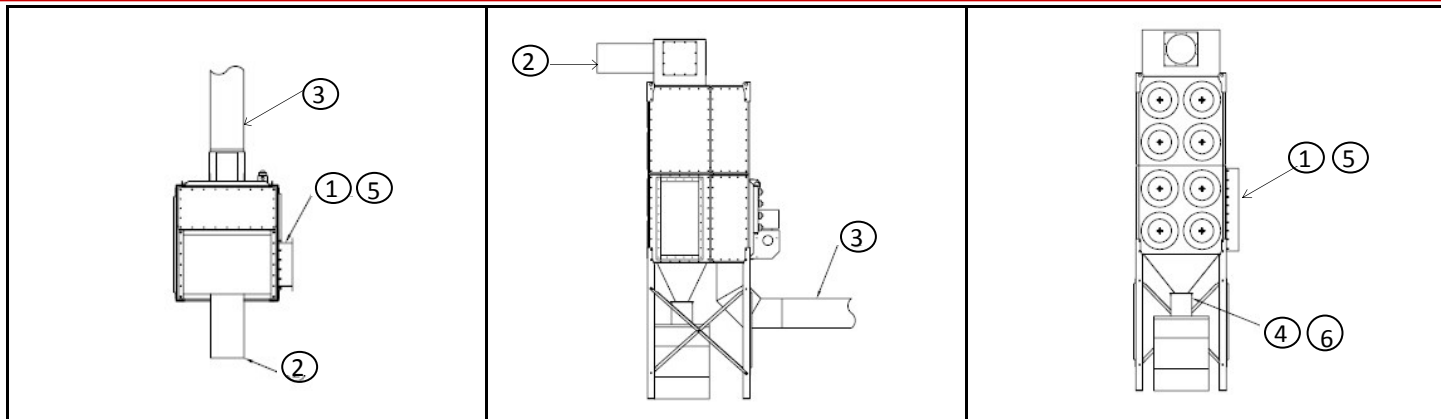
- 1 EXPLOSION VENT KIT
- 2 INLET ISOLATION: MECHANICAL BACKDRAFT DAMPER, or EIV FAST-ACTING VALVE, or CHEMICAL ISOLATION
- 4 BARREL LID / HARD PIPE and LEDGELESS HOPPER (STD. ON NEW MICRO AIR RP UNITS)

NFPA/OSHA COMBUSTIBLE DUST COMPLIANCE PACKAGE

OUTDOOR INSTALL—WITH RETURN AIR

SINGLE MODULE COLLECTORS

B



REQUIRED FOR NFPA / OSHA COMBUSTIBLE DUST COMPLIANCE

- 1 EXPLOSION VENT KIT*
- 2 INLET ISOLATION: MECHANICAL BACKDRAFT DAMPER, OR EIV FAST-ACTING VALVE, OR CHEMICAL ISOLATION
- 3 EXHAUST ISOLATION: EIV FAST-ACTING VALVE, or CHEMICAL ISOLATION
- 4 BARREL LID / HARD PIPE and LEDGELESS HOPPER (STD. ON NEW MICRO AIR RP UNITS)

ADDITIONAL OPTIONS

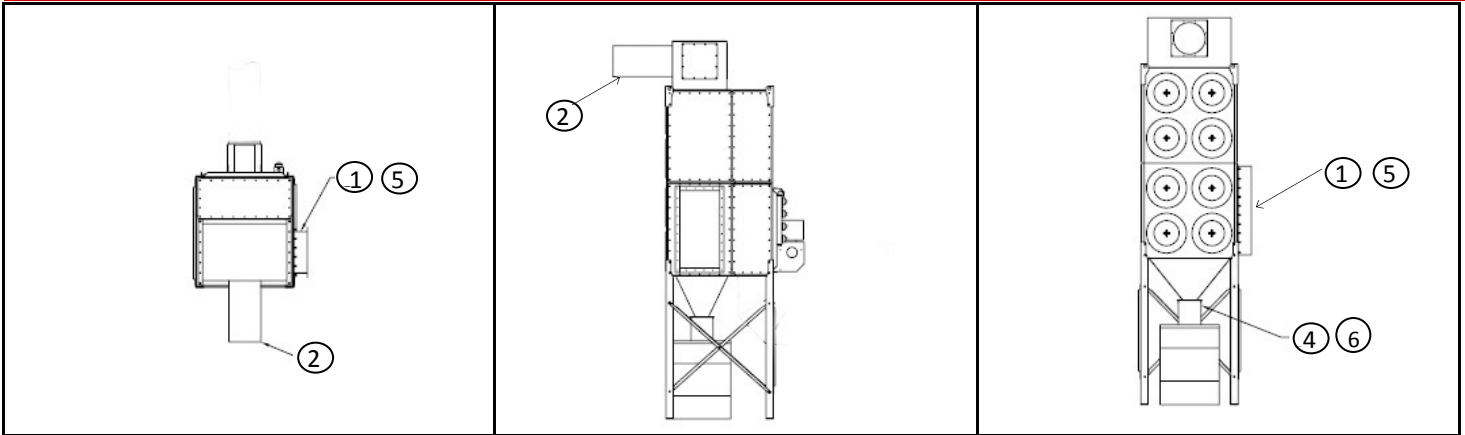
- 5 FLAME DIVERTER or FLAMELESS VENT (FLAMEQUENCH) **
- 6 ROTARY AIRLOCK

** FLAMEQUENCH Flameless Vent is for Non-Metal Applications

NFPA/OSHA COMBUSTIBLE DUST COMPLIANCE PACKAGE

C

INDOOR INSTALL SINGLE MODULE COLLECTORS



REQUIRED FOR NFPA / OSHA COMBUSTIBLE DUST COMPLIANCE

- ① EXPLOSION VENT KIT*
- ② INLET ISOLATION: MECHANICAL BACKDRAFT DAMPER, OR EIV FAST-ACTING VALVE, OR CHEMICAL ISOLATION
- ④ BARREL LID / HARD PIPE AND LEDGELESS HOPPER (STD. ON NEW MICRO AIR RP UNITS)

ADDITIONAL OPTIONS

- ⑤ FLAMELESS VENT (FLAMEQUENCH) **
- ⑥ ROTARY AIRLOCK

*Must be ducted to exterior wall (max. 3' duct) or used in conjunction with flameless vent

** Flameless Vent is for Non-Metal Applications

DESIGN CRITERIA FOR OSHA/NFPA COMBUSTIBLE DUST COMPLIANCE

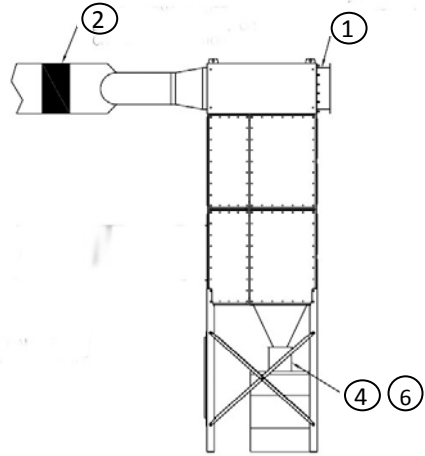
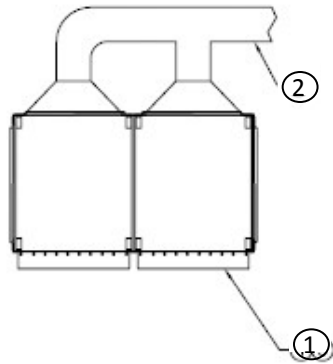
- (1) Determine Kst Values of particulate being collected.
- (2) If Kst values require Explosion Protection, design system per scenarios A, B, or C

	A OUTDOOR INSTALL NO RETURN AIR	B OUTDOOR INSTALL RETURN AIR	C INDOOR INSTALL
REQUIREMENTS	<ul style="list-style-type: none"> ① EXPLOSION VENT ② INLET ISOLATION ④ EXPLOSION BARREL LID / LEDGELESS HOPPER 	<ul style="list-style-type: none"> ① EXPLOSION VENT ② INLET ISOLATION ③ EXHAUST ISOLATION ④ EXPLOSION BARREL LID / LEDGELESS HOPPER 	<ul style="list-style-type: none"> ① EXPLOSION VENT ② INLET ISOLATION ④ EXPLOSION BARREL LID / LEDGELESS HOPPER <p>** MUST BE DUCTED TO EXTERIOR WALL (MAX. 3' DUCT) OR EQUIP WITH FLAMEQUENCH FLAMELESS VENT</p>
OPTIONS	<ul style="list-style-type: none"> ⑤ FLAMEQUENCH FLAMELESS VENT or FLAME DIVERTER ⑥ ROTARY AIRLOCK 	<ul style="list-style-type: none"> ⑤ FLAMEQUENCH FLAMELESS VENT or FLAME DIVERTER ⑥ ROTARY AIRLOCK 	<ul style="list-style-type: none"> ⑤ FLAMEQUENCH FLAMELESS VENT ⑥ ROTARY AIRLOCK

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NFPA/OSHA COMBUSTIBLE DUST COMPLIANCE PACKAGE
OUTDOOR INSTALL-NO RETURN AIR
BOLT-TOGETHER MODULE COLLECTORS—REMOTE MOUNT FAN

A

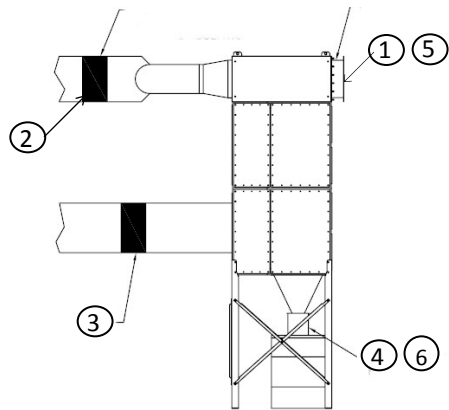
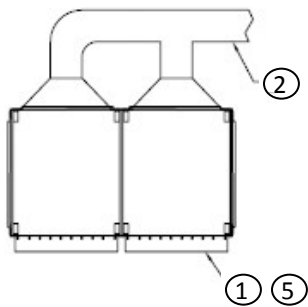


REQUIRED FOR NFPA / OSHA COMBUSTIBLE DUST COMPLIANCE

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- ② INLET ISOLATION: MECHANICAL BACKDRAFT DAMPER, or EIV FAST-ACTING VALVE, or CHEMICAL ISOLATION
- ④ BARREL LID / HARD PIPE and LEDGELESS HOPPER (STD. ON NEW MICRO AIR RP UNITS)

NFPA/OSHA COMBUSTIBLE DUST COMPLIANCE PACKAGE
OUTDOOR INSTALL-WITH RETURN AIR
BOLT-TOGETHER MODULE COLLECTORS—REMOTE MOUNT FAN

B



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ADDITIONAL OPTIONS

- ⑤ FLAME DIVERTER or FLAMELESS VENT (FLAMEQUENCH) **
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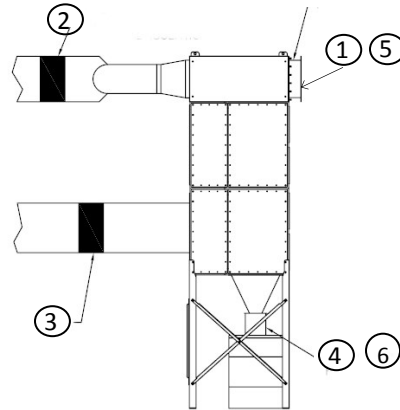
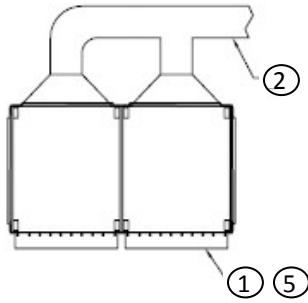
*** Flameless Vent is for Non-Metal Applications

NFPA/OSHA COMBUSTIBLE DUST COMPLIANCE PACKAGE



INDOOR INSTALL

BOLT-TOGETHER MODULE COLLECTORS—REMOTE MOUNT FAN



REQUIRED FOR NFPA / OSHA COMBUSTIBLE DUST COMPLIANCE

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ADDITIONAL OPTIONS

- ⑤ FLAMELESS VENT (FLAMEQUENCH) **
- ⑥ ROTARY AIRLOCK

*Must be ducted to exterior wall (max. 3' duct) or used in conjunction with flameless vent

** Flameless Vent is for Non-Metal Applications

DESIGN CRITERIA SAME AS SINGLE MODULE UNITS ...SEE PAGE 3 FOR DEFINITION

OSHA COMBUSTIBLE DUST EMPHASIS PROGRAM GUIDANCE

What are the components of a dust explosion?

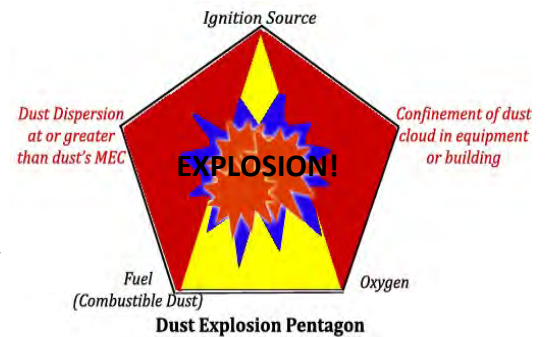
1. Ignition Source
2. Fuel (Combustible Dust)
3. Oxygen
4. Dust dispersion at or greater than dust's MEC
5. Confinement of dust cloud in equipment or building

Simply stated, a dust explosion occurs when an ignition source touches a dust cloud with a concentration at or greater than the dust's MEC (minimum explosible concentration). A dust cloud with this concentration can result when a layer of dust thicker than 1/32 inch on equipment, piping, overhead conduit or similar components is pushed into the air by some event, such as the pressure wave from a relief device's operation. When an ignition source (spark or flame) touches the cloud, the dust can explode with devastating impact.

NFPA 654 states that particulate processing systems shall prevent fire or explosion from propagating from one process to another.

How do you mitigate your dust collection system's explosion risk?

- (1) Collectors shall be equipped with **explosion vent**, sized appropriately. Micro Air has undergone extensive explosion testing to verify compliance. **Micro Air explosion vents are tested appropriate for Kst values up to 230 kst. For anything over 230 Kst, consult the factory.**
- (2) There must be **mechanical dampers** or an **isolation system** in any ductwork leading to a collector, thus eliminating the chance of a secondary explosion.
- (3) There must be an **isolation system** (chemical or fast-acting EIV valve) on any exhaust ductwork where clean air is being returned to the building.
- (4) Collectors shall be designed to prevent an accumulation of dust internally. All Micro Air collectors are now standard with the **ledgeless hopper** and **barrel lid kit equipped with hard pipe**.
- (5) NFPA 654 states that dust collectors *shall* be located outdoors. If that is not possible, collectors can be located indoors, but must be ducted to an exterior wall with a maximum of 3' of duct, or must utilize a **flameless vent (FlameQuench)** on the explosion vent panel.



MICRO AIR SCENARIOS / SOLUTIONS - COMBUSTIBLE DUST

	PART # DESCRIPTION			OUTDOOR INSTALL – NO RETURN AIR					
				SINGLE MODULE			BOLT TOGETHER— REMOTE MOUNT FAN		
		LIST PRICE EACH Consult Factory	LIST PRICE INLET & OUTLET Consult Factory	RP4 RPO4	RP6 RPO6	RP8 RPO8	RP6-2	RP6-3	RP8-2

OPTION **REQUIRED COMPONENTS FOR NFPA / O**






①	38425-01 – EXPLOSION VENT FRAME / WELDMENT (RP4/RP8)	-	-	1		1			
①	38425-03 – EXPLOSION VENT FRAME / WELDMENT (RP6)	-	-		1				
①	P3990—EXPLOSION BURST PANEL	-	-	1	1	1	2	3	2
④	38222-01—LEDGELESS HOPPER (STD. ALL COLLECTORS)	-	-	1	1	1	2	3	2
④	38284-01—BARREL LID / HARD PIPE (STD. ALL COLLECTORS)	-	-	1	1	1	2	3	2
①	38432-01—EXPLOSION INLET PLENUM (BOLT-TOGEHER)	-	-				2	3	2
①	38429-01 – EXPLOSION FRAME / WELDMENT (BOLT-TOGETHER)	-	-				2	3	2

OPTIONAL COMPONENTS FOR NFPA / O

②	P2410 - 6" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2411—8" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2412—10" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2413—12" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2414—14" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2415—16" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2416—18" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2417—20" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2418—22" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
②	P2419—24" DIA. MECHANICAL BACKBLAST DAMPER	-	-	1	1	1	1	1	1
② ③	P3991—CHEMICAL ISOLATION	-	-	1	1	1	1	1	1
② ③	P3992—12" DIA. FAST-ACTING EIV VALVE	-	-	1	1	1	1	1	1
② ③	P3993—14" DIA. FAST-ACTING EIV VALVE	-	-	1	1	1	1	1	1
② ③	P3994—16" DIA. FAST-ACTING EIV VALVE	-	-	1	1	1	1	1	1
② ③	P3995—18" DIA. FAST-ACTING EIV VALVE	-	-	1	1	1	1	1	1
⑥	P2425 - ROTARY AIRLOCK	-	-	1	1	1	2	3	2
⑥	38440-01 – FLOOR STAND FOR VALVE	-	-	1	1	1	2	3	2
⑤	XXXX—FLAMELESS VENT (FLAMEQUENCH)	-	-	1	1	1	2	3	2

NOTES:

- SINGLE MODULE COLLECTORS— EXPLOSION VENT CAN BE INSTALLED LEFT OR RIGHT SIDE
- BOLT- TOGETHER COLLECTORS MUST BE EQUIPPED WITH REMOTE MOUNT FANS

①	BURST PANEL WITH FRAME for SINGLE MODULE INLET	①	BURST PANEL WITH FRAME for BOLT-TOGETHER INLET	④	LEDGELESS HOPPER	④	BARREL LID / HARD PIPE CONNECTION	①	BOLT - TOGETHER EXPLOSION INLET PLENUM
									
LIST PRICE EACH		LIST PRICE EACH		LIST PRICE EACH		LIST PRICE EACH		LIST PRICE EACH	
Consult Factory		Consult Factory		Consult Factory		Consult Factory		Consult Factory	

- NFPA / OSHA COMPLIANCE REQUIREMENTS AND OPTIONS

OUTDOOR INSTALL WITH RETURN AIR								INDOOR INSTALL							
SINGLE MODULE				BOLT-TOGETHER— REMOTE MOUNT FAN				SINGLE MODULE				BOLT-TOGETHER— REMOTE MOUNT FAN			
RP8-3	RP4 RPO4	RP6 RPO6	RP8 RPO8	RP6-2	RP6-3	RP8-2	RP8-3	RP4 RPO4	RP6 RPO6	RP8 RPO8	RP6-2	RP6-3	RP8-2	RP8-3	






SHA COMBUSTIBLE DUST COMPLIANCE

	1		1					1		1				
		1							1					
3	1	1	1	2	3	2	3	1	1	1	2	3	2	3
3	1	1	1	2	3	2	3	1	1	1	2	3	2	3
3	1	1	1	2	3	2	3	1	1	1	2	3	2	3
3				2	3	2	3				2	3	2	3
3				2	3	2	3				2	3	2	3

SHA COMBUSTIBLE DUST COMPLIANCE

1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
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3	1	1	1	2	3	2	3	1	1	1	2	3	2	3
3	1	1	1	2	3	2	3	1	1	1	2	3	2	3

- NOTES:
- USE OF VENT DIVERTER (shown on page 9,) REDUCES EXPLOSION EXCLUSION AREA BY APROX. 40%—CONSULT FACTORY
 - MICRO AIR COMPLIANCE PACKAGES ARE TESTED APPROPRIATE FOR Kst VALUES UP TO 230 Kst. FOR ANYTHING OVER 230 Kst, CONSULT FACTORY.

2 MECHANICAL BACKBLAST DAMPER (INLET)	2 CHEMICAL ISOLATION (INLET &/or OUTLET) 3	2 FAST-ACTING EIV VALVE (INLET &/or OUTLET) 3	1 FLAMEQUENCH (Flameless Vent) or VENT DIVERTER (pg. 9)	6 ROTARY AIRLOCK AND FLOOR STAND
				
LIST PRICE EACH	LIST PRICE EACH	LIST PRICE EACH	LIST PRICE EACH	
Consult Factory	Consult Factory	Consult Factory	Consult Factory	Consult Factory

MICRO AIR FIELD RETROFIT KITS

FOR OSHA / NFPA COMBUSTIBLE DUST COMPLIANCE

SINGLE MODULE COLLECTORS – RP4, RP6, RP8

PART NUMBER	DESCRIPTION	QUANTITY REQUIRED	LIST PRICE EA.
RP4 / RP8 –FIELD RETROFIT KIT – OSHA/NFPA COMBUSTIBLE DUST COMPLIANCE PKG.			
①	38425-01	EXPLOSION VENT FRAME / WELDMENT	1 Consult Factory
①	P3990	EXPLOSION BURST PANEL	1 Consult Factory
④	38222-01	HOPPER - LEDGELESS	1 Consult Factory
④	38284-01	BARREL LID FOR LEDGLESS HOPPER WITH HARD PIPE CONNECTION	1 Consult Factory
RP6 - FIELD RETROFIT KIT - OSHA/NFPA COMBUSTIBLE DUST COMPLIANCE PKG.			
①	38425-03	EXPLOSION VENT FRAME / WELDMENT	1 Consult Factory
①	P3990	EXPLOSION BURST PANEL	1 Consult Factory
④	38222-01	HOPPER – LEDGELESS	1 Consult Factory
④	38284-01	BARREL LID FOR LEDGELESS HOPPER WITH HARD PIPE CONNECTION	1 Consult Factory

NOTES:

- * Explosion Vent panels can be installed on either left or right side of cabinet —Refer to drawings at right.
- * If other components such as Mechanical Backdraft Dampers, Chemical Isolation, or Fast-Acting EIV Valves are required for OSHA/NFPA compliance in a retrofit application, refer to table on pages 6-7 for part #'s and prices.
- * Compliance kits listed are tested appropriate for Kst values through 230 Kst. For any application capturing contaminants with Kst values higher than 230 Kst, consult Micro Air sales staff.

Kst Theoretical Values - Common Materials

When looking to protect your equipment against a dust explosion, it is critical that you know the Kst value of your material. Kst, is the dust deflagration index, and it measures the relative explosion severity compared to other dusts. This is a relative index, however, and **any material with a Kst value greater than zero is considered to be at risk of an explosion.**

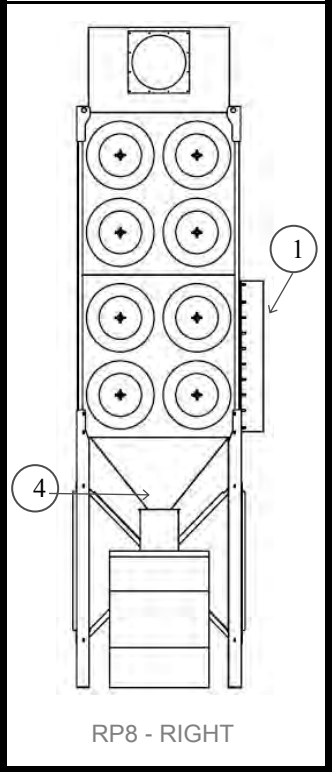
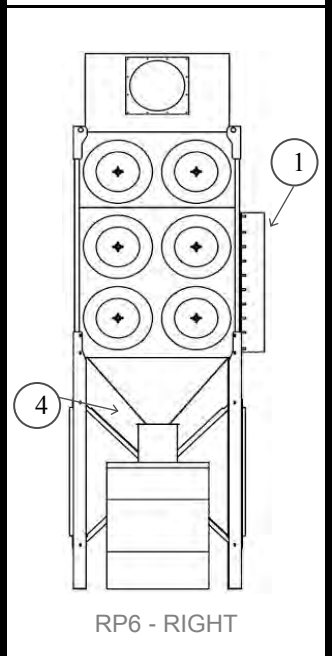
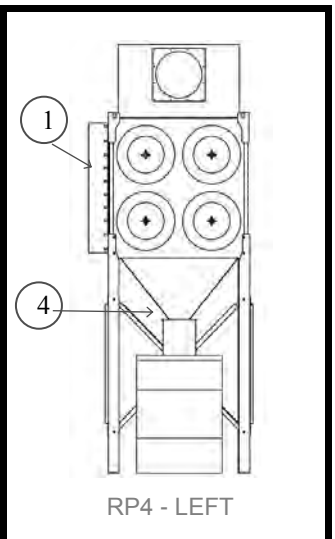
Examples of Kst Values for Different Types of Dusts ²

Dust explosion class*	Kst (bar.m/s)*	Characteristic*	Typical material**
St 0	0	No explosion	Silica
St 1	>0 and ≤ 200	Weak explosion	Powdered milk, charcoal, sulfur, sugar and zinc
St 2	>200 and ≤ 300	Strong explosion	Cellulose, wood flour, and poly methyl acrylate
St 3	>300	Very strong explosion	Anthraquinone, aluminum, and magnesium

The actual class is sample specific and will depend on varying characteristics of the material such as particle size or moisture.
 * OSHA CPL 03-00-008 - Combustible Dust National Emphasis Program.
 ** NFPA 68, Standard on Explosion Prevention by Deflagration Venting.

Additionally, you can search an [extensive database](#) of materials that provides Kst values. The values listed in these sources should be treated as theoretical values, as the explosiveness of dust is based on several other factors including particle size, moisture content, available oxygen, and dust concentration. Testing, with a lab such as [Fauske](#) or [FIKE](#) is the only way to know the Kst value of a specific grade of a material.

²<http://www.osha.gov/Publications/3371combustible-dust.pdf>





MICRO AIR FIELD RETROFIT KITS FOR

OSHA / NFPA

COMBUSTIBLE DUST COMPLIANCE

BOLT-TOGETHER COLLECTORS WITH EXISTING REMOTE MOUNT FANS

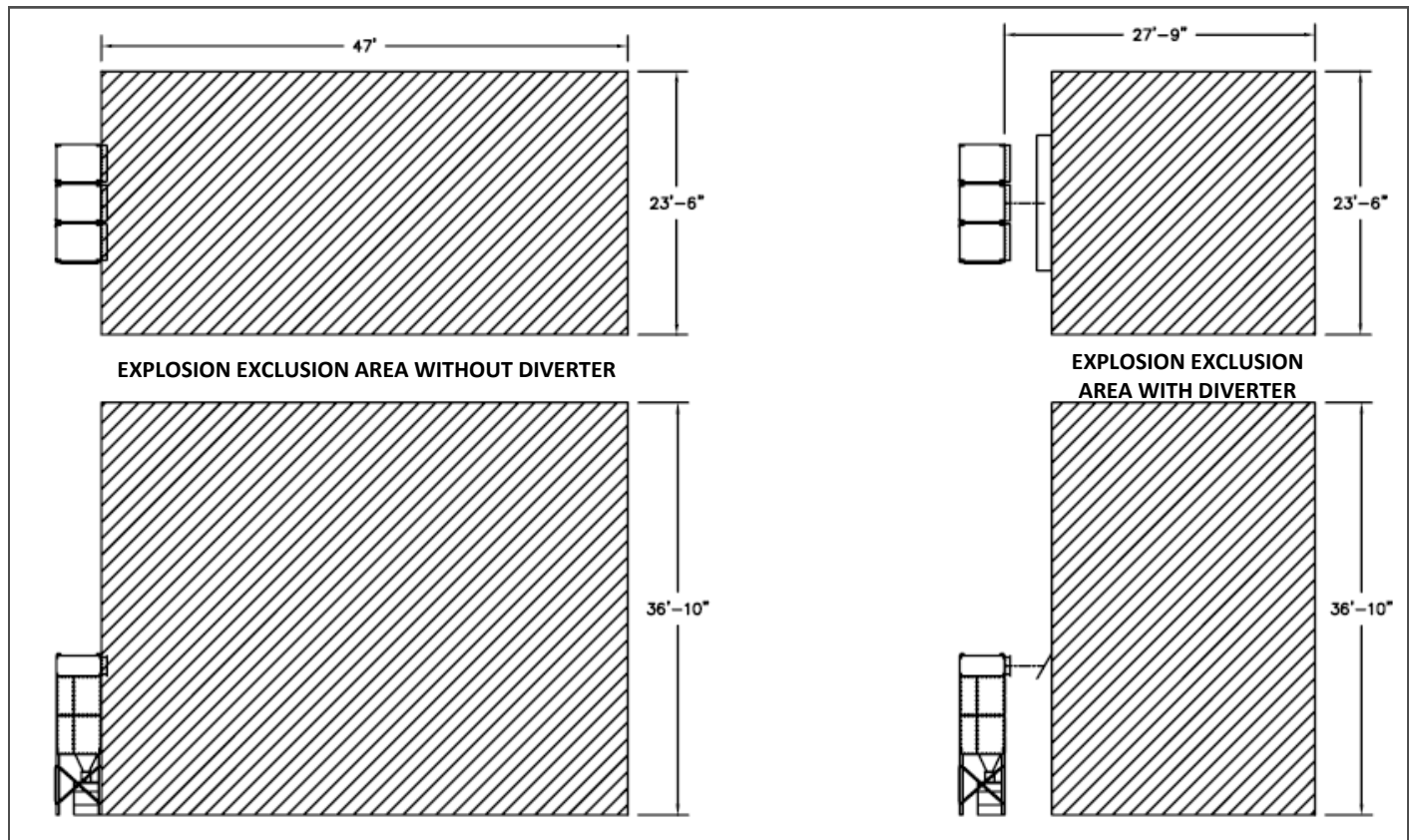
RP6-2, RP6-3, RP6-4, RP8-2, RP8-3, RP8-4

PART NUMBER	DESCRIPTION	QTY REQ. RP6-2 or RP8-2	QTY REQ. RP6-3 or RP8-3	QTY REQ. RP6 -4 or RP8 -4	LIST PRICE EACH
BOLT-TOGETHER COLLECTORS EQUIPPED WITH REMOTE MOUNT FAN - FIELD RETROFIT KIT					
① 38429-01	EXPLOSION VENT FRAME / WELDMENT	2	3	4	Consult Factory
① P3990	EXPLOSION BURST PANEL	2	3	4	Consult Factory
① 38432-01	BOLT-TOGETHER EXPLOSION INLET PLENUM	2	3	4	Consult Factory
④ 38222-01	HOPPER – LEDGELESS	2	3	4	Consult Factory
④ 38284-01	BARREL LID FOR LEDGLESS HOPPER - HARD PIPE CONNECTION	2	3	4	Consult Factory

Notes:

- * Bolt Together cabinets with EXISTING remote mount fans—use multiples shown on table - page 9.
- * Bolt Together cabinets with EXISTING Top Mount Fans—(up to 2 cabinets) use 2 ea. of the single cabinet kits shown on table - page 8.
- * Bolt Together cabinets with EXISTING Top Mount Fans (3 cabinets or more) Consult Factory...Top Mount Fan will have to be changed out with remote mount fans...then use multiples shown in chart - page 9.

USE OF VENT DIVERTER (shown below,) REDUCES EXPLOSION EXCLUSION AREA BY APROX. 40%—CONSULT FACTORY



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OTHER OSHA/NFPA COMPLIANT SOLUTIONS

HYDROMAX WET COLLECTORS

Micro Air's HYDROMAX line of wet collectors offers the most technologically innovative design available. Competitors may offer all stainless construction, TEFC wash-down motors and /or NFPA compliant packages as expensive add-on options, while MICRO AIR has built all of it into the standard product offering, making MICRO AIR

HOW IT WORKS...



Combustible dust enters the HYDROMAX wet collector through ducting in the rear of the filter cabinet and is run through an aqueous bed of water and a series of internal baffles, utilizing engineered water streams to drop out and filter the combustible dust. Dust is contained in the bottom of the collector for safe removal at necessary intervals. Water levels are automatically controlled through the MICRO AIR engineered flow valve system that can be interlocked with the dust producing equipment to meet OSHA and NFPA Codes.



HYDROMAX WC2500

HYDROMAX Models/Specs

WC2500 Wet Collector

WC2500 STANDARD FEATURES

- 2500 CFM
- NFPA compliant automatic low-level shut-off and motor-run interlock capability std.
- Auto-fill valve controlled by static pressure
- NEMA 4-wire, pre-wired control panel with push-button start/stop
- Digital flow control and heads-up display
- All 304SS construction with black marine grade powder epoxy finish
- Standard aluminum mesh after-filter built -in
- 4" powered sump vent damper meets NFPA requirements
- 10" rear intake collar
- 95% Efficiencies

WC2500 OPTIONS

- 250 CFM sump fan for magnesium applications where venting of off-gassing by products is required
- 99.97% DOP HEPA After-filter

COMING SOON...1200 CFM, 5000 CFM MODELS



MICRO AIR

OSHA / NFPA COMPLIANT SOLUTIONS

COMBUSTIBLE DUST APPLICATIONS



RP8-3 Equipped With Side Mounted Explosion Vents



RPO6 - Left Explosion Vent



RP8-5 with Top Mounted Explosion Vent



Statements made in this document reflect Micro Air's interpretations of the applicable standards as they are written today, 9/23/09 and should be noted that we do not represent an official OSHA or NFPA interpretation in any way. These interpretations are subject to change at any time and we highly recommend that you contact Micro Air or the appropriate Authority Having Jurisdiction in your area for further updates.

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APPLICATIONS:

- **WELDING** smoke and fumes
- **MACHINING** mist and smoke
- **METALWORKING** dust
- **PROCESS** dust and powder
- **LASER / PLASMA CUTTING** smoke and fumes

SOURCE CAPTURE

Hoods, arms, booths, enclosures, portable units and direct mounted units.

AMBIENT COLLECTION

Floor, ceiling and wall-mounted units

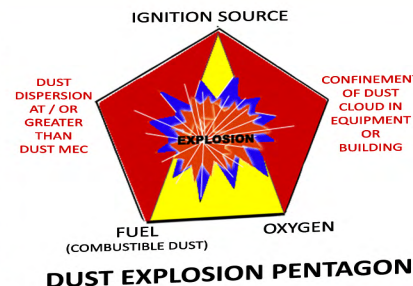
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Kst Values for Common Dusts

Dust	K _{St} Value	Characteristic
Activated carbon	44	Weak Explosion
Aluminum grit	100	Weak Explosion
Aluminum powder	400	Very Strong Explosion
Asphalt	117	Weak Explosion
Barley grain dust	240	Strong Explosion
Bronze	31	Weak Explosion
Brown coal	123	Weak Explosion
Calcium stearate	132	Weak Explosion
Cellulose pulp	62	Weak Explosion
Cellulose	229	Strong Explosion
Corn	75	Weak Explosion
Charcoal	117	Weak Explosion
Cotton	24	Weak Explosion
Dextrin	106	Weak Explosion
Egg White	38	Weak Explosion
Epoxy powder	125	Weak Explosion
Epoxy resin	129	Weak Explosion
Flour, Bakers 4.3% Moist	112	Weak Explosion
Lead stearate	152	Weak Explosion
Magnesium	508	Very Strong Explosion
Malt Dust	122	Weak Explosion
Melamine resin	110	Weak Explosion
Methyl cellulose	209	Strong Explosion
Milk powder	90	Weak Explosion
Paper tissue dust	52	Weak Explosion
Para formaldehyde	178	Weak Explosion
Peat	178	Weak Explosion
Pectin	162	Weak Explosion
Phenolic resin	129	Weak Explosion
Polyester	85	Weak Explosion
Polyethylene	134	Weak Explosion
Polyurethane	156	Weak Explosion
Rice starch	190	Weak Explosion
Silicon	126	Weak Explosion
Soap	111	Weak Explosion
Sodium ascorbate	119	Weak Explosion
Sodium stearate	123	Weak Explosion
Soot	26	Weak Explosion
Soybean flour	110	Weak Explosion
Starch, corn	202	Strong Explosion
Sugar	138	Weak Explosion
Sulfur	151	Weak Explosion
Tobacco	12	Weak Explosion
Toner	145	Weak Explosion
Wood dust	102	Weak Explosion
Wood Flour	205	Strong Explosion
Zinc	176	Weak Explosion

NFPA / OSHA COMPLIANCE COMPONENTS

- MECHANICAL BACKDRAFT DAMPER
- FLAMEQUENCH
- BARREL LID/HARD PIPE
- CHEMICAL ISOLATION
- LEDGELESS HOPPER
- EXPLOSION VENT
- FAST-ACTING EIV VALVE



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