

SMAC

Self-Maintaining Air Cleaner

CLEAN AIR

TO ALL YOUR CRITICAL SPACES

Bin Vents | Air Compressor Intakes | DRI & EAF Dust
Transformer Vaults | MCCs | Operator Pulpits | Fab Shops
Truck/Rail Dumps | Electrical Rooms | Bricking Stands

SYSTEMS CLEAN AIR

LEARN MORE AT SMAC.TSG.BZ

WWW.TSG.BZ



THE SYSTEMS GROUP

The Systems Group is a diverse group of privately held companies that are built on over 50 years of customer service. We firmly believe that if we do not take care of our customers - someone else will. That is why when you choose to do business with one of our divisions, you get our best every time with our companies being focused 100% on servicing the steel industry. We do not want to do just one project for you, we want to do all your projects.

WHAT IS A SELF-MAINTAINING AIR CLEANER (SMAC)?

The SMAC industrial dust collection unit was designed for the harsh environment of steel mills. This means that for any dust-generating process you can think of, it can handle. Explosive dust? No problem, NFPA compliant gear is available. Also, traditional room filtration involves a bank of HVAC filters that needs to be changed weekly or even daily; SMAC filters last 6 months to 4 years depending on application. Room pressurization is the most efficient, cost-effective, and lowest maintenance solution for keeping critical spaces clean.



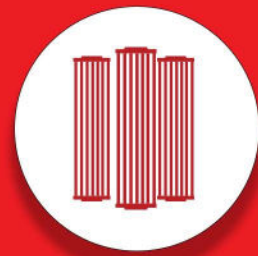
SELF-MAINTAINING TECHNOLOGY



HEAVY DUTY



ENERGY EFFICIENT



VERTICAL FILTERS

SELF-MAINTAINING

- Pulse action cleaning
- Customizable pulse schedule

ENERGY EFFICIENT

- High performance manifold mounted pulse valves
- Less service time

HEAVY DUTY

- 7 & 8 gauge construction
- Military grade door latches

VERTICAL FILTERS

- Longer filter life
- Easy filter exchange
- Even gasket pressure





LET'S TALK SMAC!

“ Systems SMAC units have changed the game in dust control. As a maintenance guy in the steel industry, I can appreciate equipment that's easy to maintain and easy to use. After installing SMAC units in various alloy handling locations throughout our mill, the benefits were obvious. Surfaces and floors in the mill were staying cleaner, and air quality had improved. The Systems SMAC units are superior to any other type of filtered bin vent or baghouse because of how little maintenance they require and ease of changing out filters. One man can swap out 6 filters in about 5 minutes with no tools required. These units have checked all the boxes from a mechanic's perspective. ”

- Graham Wilson | Nucor Steel Decatur Melt Shop Mechanical



“ Here in the BRS Meltshop we have found multiple uses for the great line of custom SMAC solutions from The Systems Group. Whether it is pressurizing our 225,000 cubic foot EAF Vaults with filtered air or it's one of our many secondary sub rooms that are placed local to the Meltshop equipment. We have seen massive improvement to the air quality in these rooms and have greatly reduced the required switchgear and equipment cleaning. In our EAF vaults we have coated the floors with white epoxy to further display the level of cleanliness and improve the ability to see any equipment leaks or potential failures. These units need little to no maintenance as the filters last much longer than any HVAC panel filters we have used in the past. I highly recommend SMAC products for anyone who is serious about improving the cleanliness of their equipment and reduce the chance of costly failures. ”

- Jarad Havis | Big River Steel Meltshop Electrical Supervisor

SMAC ROOM PRESSURIZATION



HOW IT WORKS

POSITIVE PRESSURE KEEPS CONDUCTIVE DUST OUT

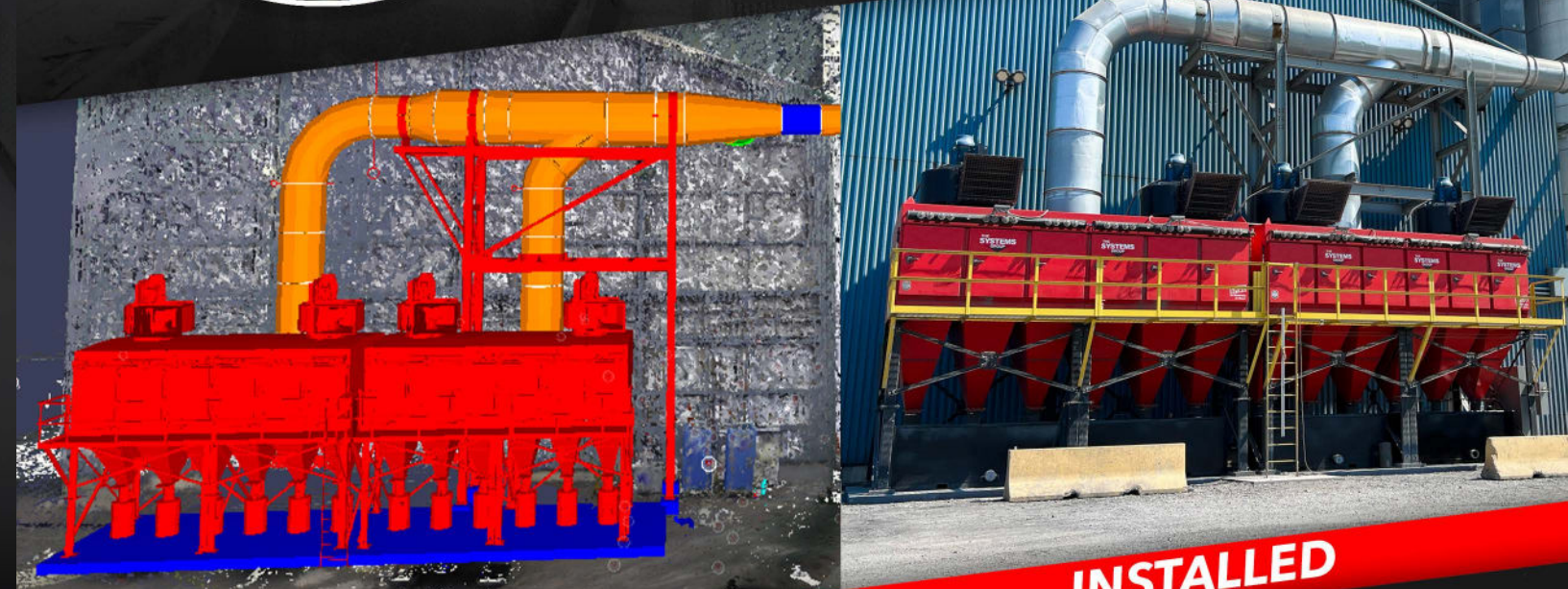
The SMAC unit was designed specifically for the harsh environment found in and around steel mills. Traditional room filtration involves a bank of HVAC filters that need to be changed on a weekly or even daily basis to ensure the mill's equipment remains protected from conductive dust. The SMAC unit will not only provide a cleaner area for your critical spaces, but it also takes out the weekly/daily changing of filters and the labor costs that goes along with that. SMAC Units are self-maintaining with a filter life of 2-4 years!

SMAC
LIFETIME WARRANTY
SYSTEMS

The Systems Group (TSG) warrants to the original purchaser that the major structural components of the SMAC unit will be free from defects in materials and workmanship for the lifetime of the equipment, if properly installed, maintained and operated under normal conditions. The Systems Group warrants filter cartridges to be free from defects in materials and workmanship for twelve (12) months from date of shipment. The Systems Group does not warrant damages which are due to corrosion, abrasion, normal wear and tear, product modification or product misapplication. The Systems Group also makes no warranty whatsoever as to any goods manufactured or supplied by others, including, but not limited to, electric motors and control components. After The Systems Group has been given adequate opportunity to remedy any defects in material or workmanship, The Systems Group, retains the sole option to accept return of the goods, with freight paid by the purchaser, and to refund the purchase price for the goods on a prorated basis after confirming the goods are returned undamaged and in usable condition. Such a refund will be the full extent of The Systems Group liability. The Systems Group shall not be liable for any other costs, expenses or damages, whether direct, indirect, special, incidental, consequential or otherwise. The terms of this warranty may be modified only by a special warranty document signed by the President of The Systems Group. There exist no other representations, warranties or guarantees except as stated in this paragraph. All other warranties, including merchant-ability and fitness for a particular purpose, whether express or implied, are hereby expressly excluded and disclaimed. Failure to use genuine TSG replacement parts & filters will void this warranty.



SCAN MODEL BUILD



MODELED

INSTALLED

LASER SCANNING & POINT CLOUDS

We use state of the art Leica laser scanners to accurately capture a 'snapshot' of your facility. This generates a 3D point cloud that allows us to accurately pull measurements and generate a new project that will fit like a glove. No super computer needed to see your project, Systems Cintoo takes care of all the heavy lifting with accurate modeling/measurements down to 2mm!

LEARN MORE AT 3D.TSG.BZ

BEFORE AFTER

MCC ROOMS

The SMAC unit can be sized for any single MCC room or even multiple MCC rooms. The SMAC comes in many different variations and is modular in design so making a standard model custom is an easy task for any size room.

TRANSFORMER VAULTS

Systems has a long line of successful transformer vault SMAC unit installations. Our SMAC systems are in place protecting EAF and LMF transformer vaults across the country, eliminating conductive dust and arc flash.

OPERATOR PULPITS

At Systems, we believe Safety is JOB ONE, that includes the air we all breathe. SMAC units can provide HEPA grade filtration to operator pulpits anywhere in your mill, protecting your employees.

DUST GENERATING PROCESS

The SMAC unit was designed for the harsh environment of steel mills. This means that any dust generating process you can think of, it can handle. Explosive dust? No problem, NFPA compliant gear is available.

AIR COMPRESSOR INTAKES

Managing air compressor intakes can be a full-time job with the constant filter change outs. If too much dust gets in the system, it can turn into a compounding, very expensive problem. SMAC units relieve your headache with self-maintaining technology.

BIN VENTS

Feeding your furnace with carbon, lime, and other alloy injections is just part of the job, having to deal with the dust shouldn't be. SMAC units are sized for your storage silos and are easily integrated into your current process.

CRANE CABS

Crane Cabs operate where noxious gases and particulates are most prevalent in a mill. Our SMAC units can be sized small enough and light enough to fit on a crane deck, providing HEPA grade filtration to your crane operators.

SMAC VARIATIONS



SHORTY



LARGE PYRAMID



STANDARD

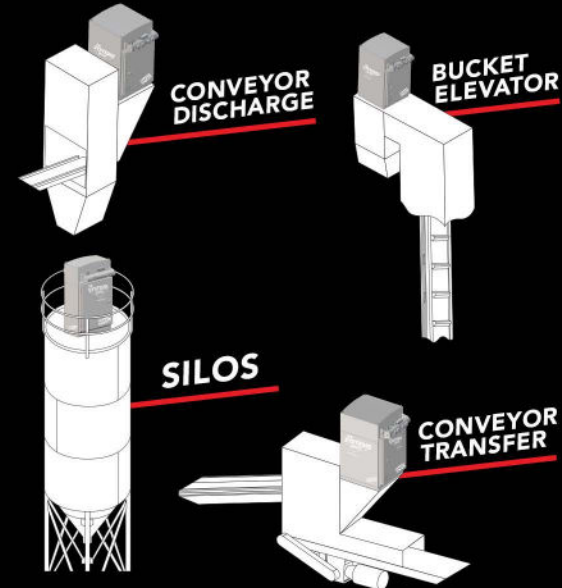


Scan here to take back your usable workspace!



TRUCK DUMP HOODS

SMAC BIN VENTS INDUSTRY APPLICATION



OLD STYLE BAG HOUSE

NEW STYLE SMAC UNIT

**50%
SMALLER**

**THAN A TRADITIONAL
BAGHOUSE**

DUST COLLECTOR

SMAC BIN VENT SYSTEM VARIATIONS

	Width	Depth	Height	Height with Fan (ft)	Weight (lbs.)	Weight With Fan (lbs.)	Filter Quantity	Filter Area (sq. ft.)	Nominal CFM Range
SMACBV002	45	22.5	77.25	101	1670	1920	2	700	350-3150
SMACBV004	45	45	77.25	110.5	2080	2520	4	1400	700-6300
SMACBV006	45	67.5	77.25	112	2590	3080	6	2100	1050-9450
SMACBV008	45	90	77.25	116	2995	3575	8	2800	1400-12600
SMACBV010	45	112.5	77.25	120.5	3395	4185	10	3500	1750-15750

FILTER BAGS & CARTRIDGE FILTERS

SMAC cartridge filters are manufactured for all makes and models of cartridge dust collectors. Regardless of the nature of your room pressurization, dust collection and air pollution control application, Systems has the answer for all of your cartridge filtration needs.

Systems offers our welded seam replacement filter bags and cages for our medium pressure and reverse air Big Round Filter baghouses. Our filter bags are available in all standard BRF lengths. Our filter bags give you the best function and efficiency from your BRF baghouse.

OEM REPLACEMENT
DUST COLLECTOR
CARTRIDGE FILTERS

SMAC
*Self-Maintaining
Air Cleaner*

“ Since NYS has swapped over to SMAC units for our carbon transport systems, we have gone from weekly filter changes to lasting over 6 months. This not only extended the life of the filters, but the feasibility of the guys changing them is better. ”

- Heath Hooker | Nucor-Yamato Steel Maintenance Mechanical Supervisor

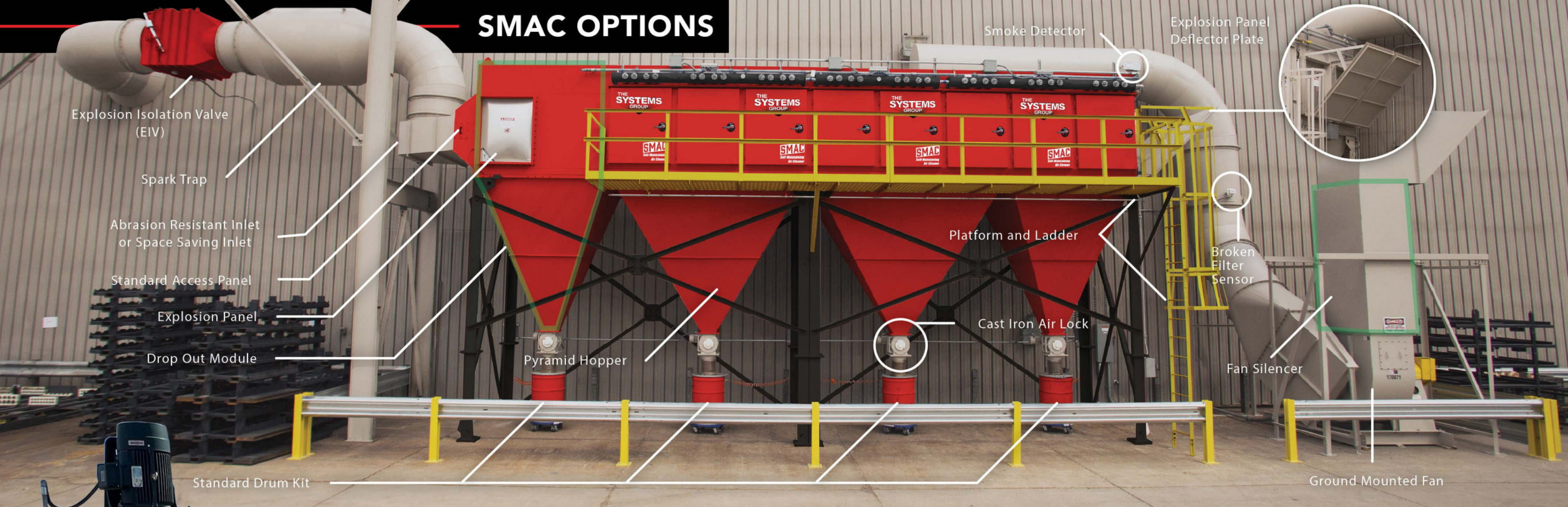
SMAC EASY FILTER CHANGE OUT



NO CONFINED SPACE
PERMIT REQUIRED



SMAC OPTIONS



120 VOLTS

SMAC
Self-Maintaining
Air Cleaner
smac.tsg.bz

Clean Air **Dirty Air**
Low Pressure High Pressure

⚠ DANGER
Hazardous Voltage
Will cause severe injury or death.
LOCK OUT POWER before servicing

⚡ DANGER
ARC FLASH and SHOCK HAZARD
Follow ALL requirements in NFPA 70E for safe work practices and for Personal Protective Equipment

AUTOMATION OUTFITTERS

PART #: A11713
 DRG #: 421554
 SERIAL #: 210294-02
 MFR. DATE: 04/2021

LINE VOLTS: 120 VAC
 PHASE: 1 Phase
 FREQUENCY: 50/60 Hz
 F.L.A.: 2.54 Amps
 HORSE POWER: N/A
 CONTROL: 24 VDC

Short Circuit Current: 150A rms Symmetrical @ 120 VAC Maximum

Mfr. By: Automation Outfitters
 3208 Neil Circle, Jonesboro AR 72401
 (870) 910-5200

INTEGRATED CONTROLLER

With this addition to your SMAC unit you can control every switch and electrical addition on your unit.

The Integrated Controller comes standard with cleaning controls and system starter. It is also pre-set for auto downtime cleaning and pre-programmed for automatic fan regulation.

It is housed in a NEMA 12 enclosure with NEMA 4x weather proof case available for outdoors.

SMAC NANO400 FILTER

HUMAN HAIR
80-100 MICRONS

POLLEN
30 MICRONS

HOUSEHOLD DUST
10 MICRONS

PET DANDER
5 MICRONS

WELD FUME PARTICLE
1 MICRON



80/20 CELLULOSE/
POLYESTER
MERV 10 3-1 MICRONS
70-80% Efficiency

8oz SPUN BOND
POLYESTER
MERV 11 3-1 MICRONS
70-80% Efficiency

NANOFIBER
MERV 15 1-0.3 MICRONS
85-99% Efficiency

SMAC SB245 FILTER



SMAC NANO FILTER .3 MICRON

400sq. ft. OF MEDIA

More media than leading filter competitors

OVAL DESIGN

Oval design maximizes surface area

UNIQUE PAN SHAPE

Prevents filter ramping for safety

COMPLETELY GROUNDED

Filters are grounded to the dust collector

DOUBLE GASKET

Double layer of protection to ensure a good seal

SURE STOP SYSTEM

Ensure filters are installed properly

SMAC SB FILTER 1 MICRON

245sq. ft. OF MEDIA

More media than leading filter competitors

OVAL DESIGN

Oval design maximizes surface area

UNIQUE PAN SHAPE

Prevents filter ramping for safety

COMPLETELY GROUNDED

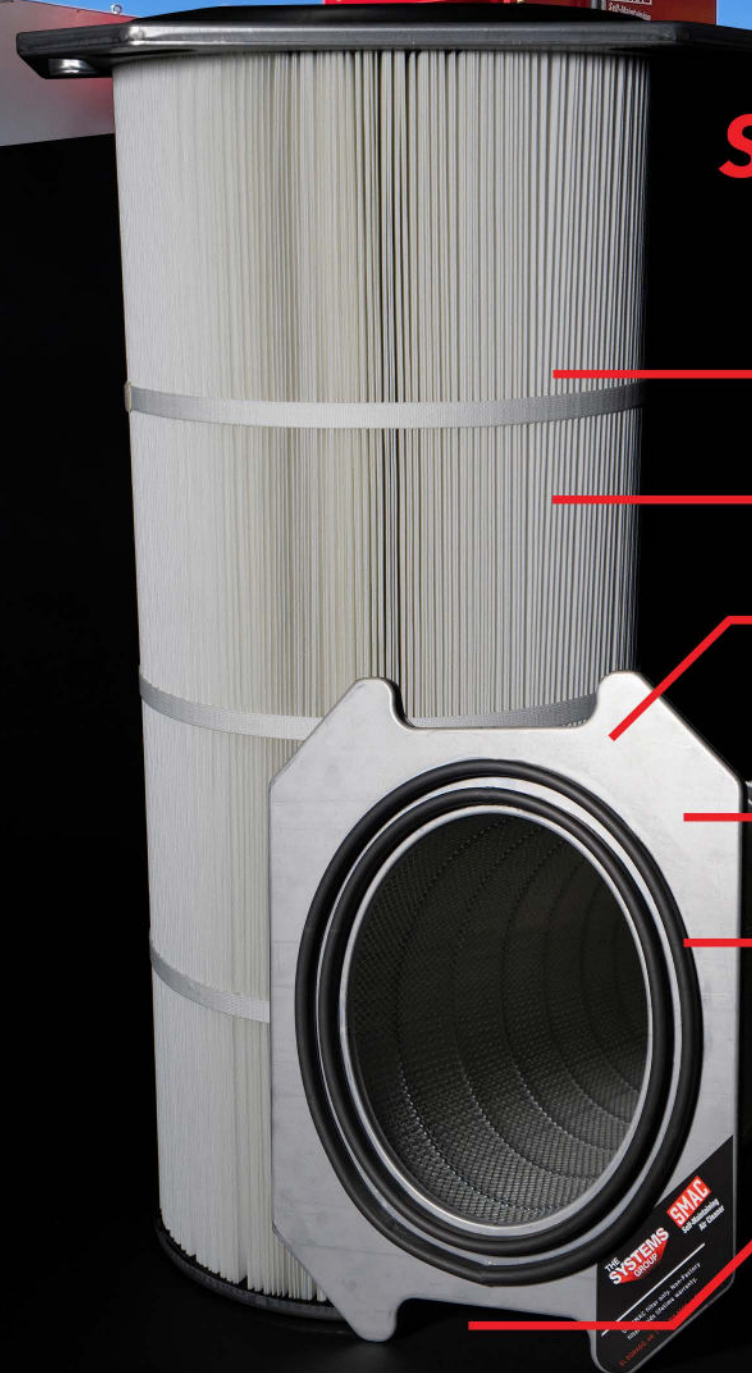
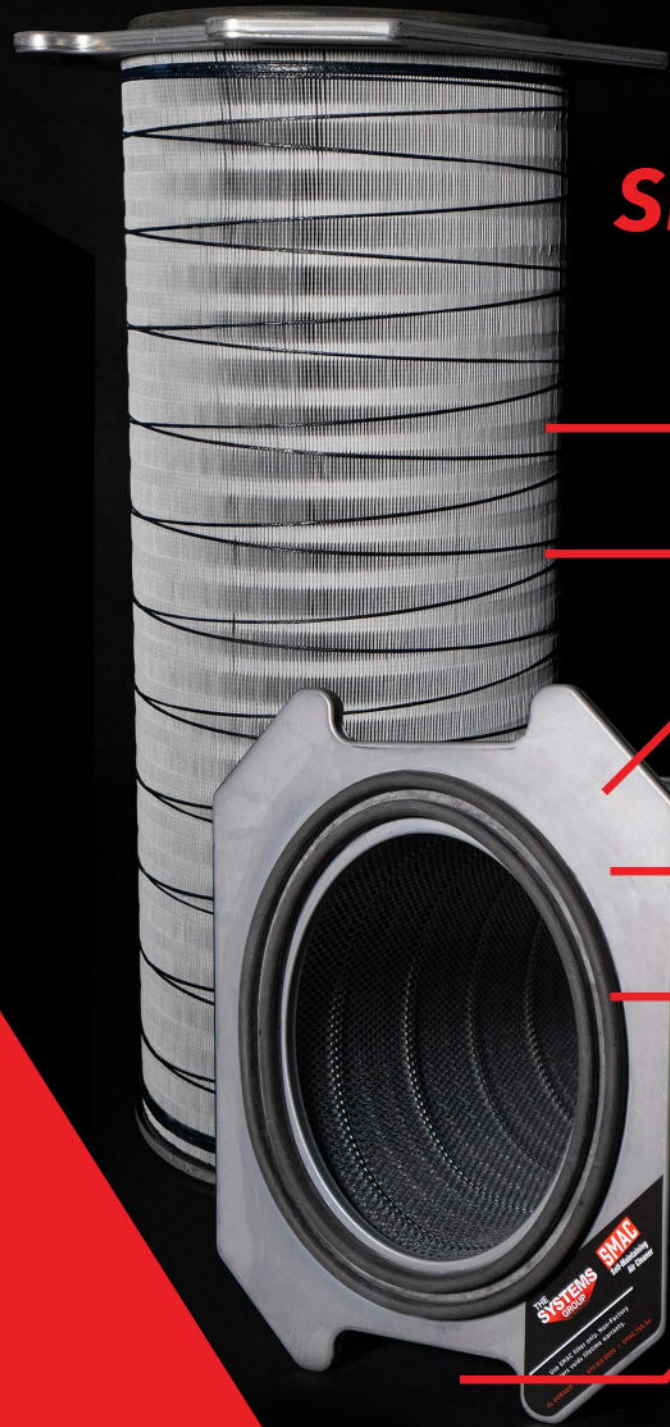
Filters are grounded to the dust collector

DOUBLE GASKET

Double layer of protection to ensure a good seal

SURE STOP SYSTEM

Ensure filters are installed properly





SMACx2
 Filter Area (sq. ft.) - 700
 Nominal CFM Range - 350-3150
 Weight (lbs.) - 1600



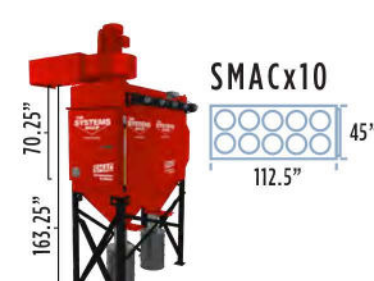
SMACx4
 Filter Area (sq. ft.) - 1400
 Nominal CFM Range - 700-6300
 Weight (lbs.) - 2000



SMACx6
 Filter Area (sq. ft.) - 2100
 Nominal CFM Range - 1050-9450
 Weight (lbs.) - 2700



SMACx8
 Filter Area (sq. ft.) - 2800
 Nominal CFM Range - 1400-12600
 Weight (lbs.) - 3150



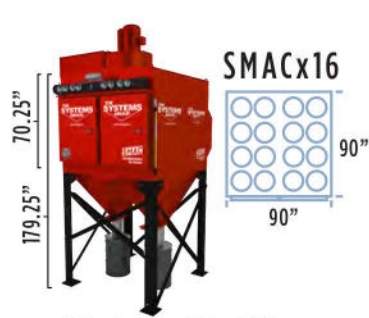
SMACx10
 Filter Area (sq. ft.) - 3500
 Nominal CFM Range - 1750-15750
 Weight (lbs.) - 3600



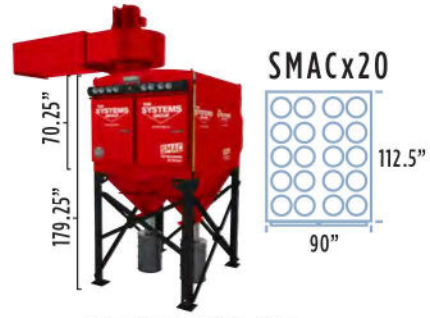
SMACx12L
 Filter Area (sq. ft.) - 4200
 Nominal CFM Range - 2100-18900
 Weight (lbs.) - 4500



SMACx12S
 Filter Area (sq. ft.) - 4200
 Nominal CFM Range - 2100-18900
 Weight (lbs.) - 4260



SMACx16
 Filter Area (sq. ft.) - 5600
 Nominal CFM Range - 2800-25200
 Weight (lbs.) - 5250



SMACx20
 Filter Area (sq. ft.) - 7000
 Nominal CFM Range - 3500-31500
 Weight (lbs.) - 6050



SMACx24
 Filter Area (sq. ft.) - 8400
 Nominal CFM Range - 4200-37800
 Weight (lbs.) - 7200



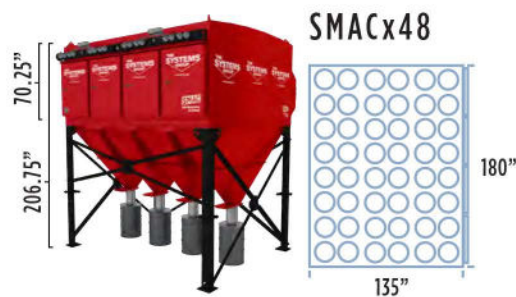
SMACx32
 Filter Area (sq. ft.) - 11200
 Nominal CFM Range - 5600-50400
 Weight (lbs.) - 10000



SMACx36
 Filter Area (sq. ft.) - 12600
 Nominal CFM Range - 6300-56700
 Weight (lbs.) - 10900



SMACx40
 Filter Area (sq. ft.) - 14000
 Nominal CFM Range - 7000-63000
 Weight (lbs.) - 12000



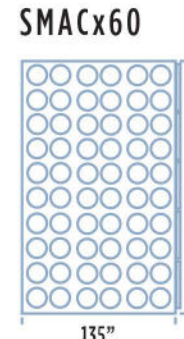
SMACx48
 Filter Area (sq. ft.) - 16800
 Nominal CFM Range - 8400-75600
 Weight (lbs.) - 13000



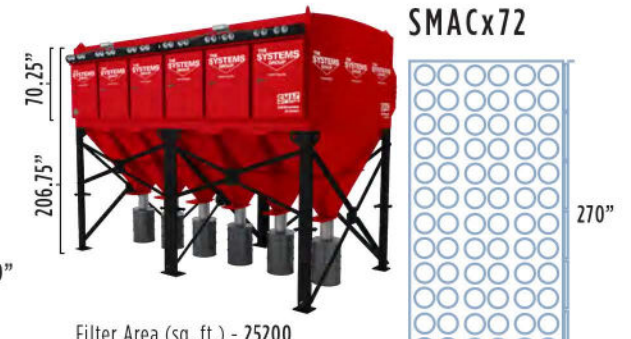
SMACx56
 Filter Area (sq. ft.) - 19600
 Nominal CFM Range - 9800-88200
 Weight (lbs.) - 16900



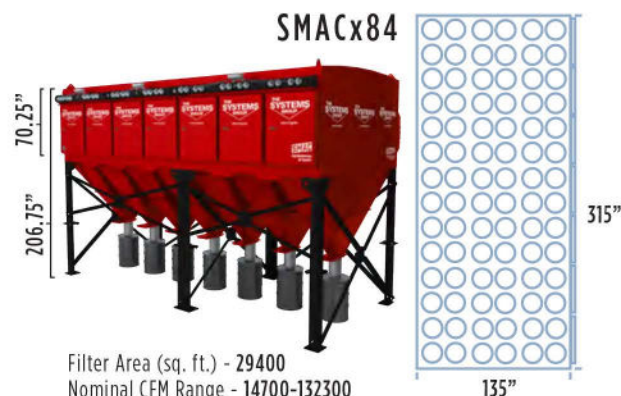
SMACx60
 Filter Area (sq. ft.) - 21000
 Nominal CFM Range - 10500-94500
 Weight (lbs.) - 18100



SMACx64
 Filter Area (sq. ft.) - 22400
 Nominal CFM Range - 11200-100800
 Weight (lbs.) - 19200



SMACx72
 Filter Area (sq. ft.) - 25200
 Nominal CFM Range - 12600-113400
 Weight (lbs.) - 21600



SMACx84
 Filter Area (sq. ft.) - 29400
 Nominal CFM Range - 14700-132300
 Weight (lbs.) - 25200



SMACx96
 Filter Area (sq. ft.) - 33600
 Nominal CFM Range - 16800-151200
 Weight (lbs.) - 28800



SMACx108
 Filter Area (sq. ft.) - 37800
 Nominal CFM Range - 18900-170100
 Weight (lbs.) - 32400



SMACx120
 Filter Area (sq. ft.) - 42000
 Nominal CFM Range - 21000-189000
 Weight (lbs.) - 36000



SYSTEMS

CLEAN AIR

SMAC units are designed to remove the cost and labor associated with traditional HVAC filters. They are engineered specifically for the harsh environments found in steel mills and can be applied to a variety of applications in the mill for both room pressurization and dust collection:

- EAF/LMF Transformer Vaults
- Motor Drive/Control Rooms
- Server Rooms
- Operator Pulpits
- Laboratories
- Air Compressor Intakes
- Crane Cabs
- Bin Vents
- DRI
- Conveying Systems
- Coil Cutting Lines
- Carbon/Lime/Alloy Injection Systems
- Rail Loading Buildings