

# Dust Control for SAND OPERATIONS

**C&W specializes in dust control for a variety of sand-related applications.**

We have expertise in various sand applications ranging from sand blasting, drying, classifying, distribution terminals and bagging operations.

We are experienced in high temperature projects, explosion suppression and venting, and fire suppression systems. Whether your project needs 5,000 up to 100,000 CFM, we have an experienced Engineering staff to customize a collector for your specific project.

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## Sand Drying and Classifying

RA-500 for Quikrete's Sand Drying Rotary Kiln and a RA-120 for cement/sand mix and bagging operation.



The RA-500 offers 26,500 CFM at 13" W.C. This collector and all its components are designed to operate at 300°F; interior of collector is painted with high temp paint and exterior of unit is painted with Ceramic Insulating Paint.

The RA-500 has 36" inlet duct and 41" outlet duct; expansion joints were installed in the ducting to prevent wear and tear and prolong its life. The 100HP blower is auto-adjustable from 12,000 - 26,500 CFM depending on production volume.

Also on site at Quikrete is a cement/sand bagging plant. C&W's RA-120 controls dust for this operation.

# Sand Drying and Classifying, Cont



Rawhide Sand (formerly CCS Silica) uses an MCP-7500 to collect dust from the bucket elevator and conveyor under the classifier.

MCP-7500

Hood Suction Duct

Hopper discharge duct which empties dust onto return conveyor belt



All dust from the Classifier drops onto the conveyor are controlled.

BEFORE



Before C&W installed dust collection on the bucket elevator

AFTER



After C&W installed the Canopy Hood



C&W 30" Long Air Knife for cleaning dust from the return belt. Uses 3500 CFM



## Ceramic-coated Fracturing Sand Facility

C&W supplied four (4) BP-3390 Collectors, each 20,000 CFM:

- Two units fitted with explosion vents and strengthened to withstand a pressure of 3 PSI.
- Two other units filter dust from the sand dryer and handle temperatures up to 300 degrees.
- All four units include walk-in plenums.



# Sand Drying and Classifying, Cont

Two CP-34,000 Cartridge Pulse Collectors for Industrial Sand in Highland, TX



C&W was contracted by Industrial Sand to fabricate both dust collectors, design a custom duct layout which included 98 various dusting pick up points, and helped with the plant start up to balance the system. Each pick up point requires 4,000 ft/min velocity, and adjustable slide gates were used to achieve this velocity throughout the plant.

Each of C&W's CP-34,000 collectors feature 10,133 Sq. Ft of Filtration Area and 34,000 CFM with 125 HP Fan w/ Silencer



Bucket Elevators w/ 6" ducting

Two CP-34,000 Dust Collectors

Building A  
Building B

Rotary Kiln - controlled dust discharging from the kiln

C&W supplied two (2) CP-34,000 Central Dust Collectors for both sand classification buildings. Building A (on the left) has 54 pick up points for the dust collector. Building B (on the right) has 38 pick up points plus the rotary kiln fugitive discharge dust.

Silencer on the 125HP Fan. Brings noise level to 85 dBA at 10 feet in an open field.



# Sand Classifying, Cont

CP-2340 trailer-mounted Mobile Dust Collector for a 75 TPH Sand Classifier.



C&W custom-engineered this Mobile Dust Collector and trailer for a Metso Classifier. Shown in travel position; equipment folds down and travels without a permit. The CP-2340 Dust Collector offers 16,000 CFM, 22" W.C. and 100HP fan.

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The Unimin Corporation in Cleburne, TX screens Silica Sand for industrial use. C&W supplied a CP-5250 and CP-7500 central dust collectors.

Both collectors have Actuated Double Dump Valves, UHMW wear-resistant liners in the hopper expansion boxes, and 'On Demand Cleaning Systems'. The optional 'On Demand Cleaning System' features a Pressure Controller that cleans cartridges based on the Delta P reading, not on a pre-set timer. So cartridges only get cleaned when they need it.



The collected material is discharged by a Double Dump Valve with Actuator, that runs off an adjustable timer. The Double Dump Valve is used in lieu of a rotary vane feeder due to the abrasive nature of silica sand.

# Sand Blasting



Worthington Monuments operation has a MCP-5000 filtering dust for two (2) Sand Blasting Booths. Includes two side draft hoods, Easy-UP ducting and a perforated wall air inlet.



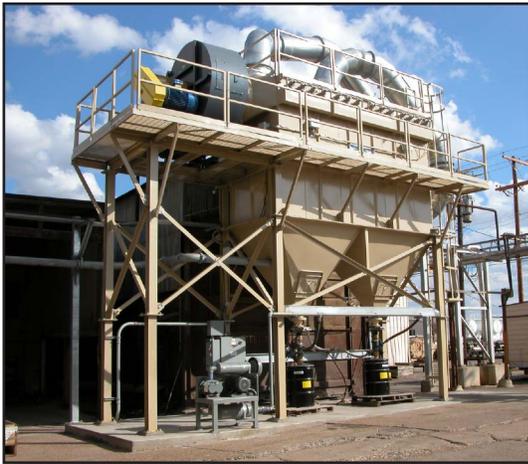
Two Sand blast booths located inside the facility with ducting to each for dust control



Side draft hood on second blast booth

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C&W Supplied two (2) 40,000 CFM units and two (2) 20,000 CFM units to a Sand Blasting operation.



Each 40,000 CFM cartridge unit has 9457 sq ft. of cloth area, contains 98 cartridges, 99.99% filtration efficiency, 75HP fans, and eductor blowers for dust removal to 40 foot roll-off bins. Dual hoppers are used to control the height of the unit with 28" duct size.



Each 20,000 CFM cartridge unit has 4728 sq ft. of cloth area, contains 49 cartridges, 99.99% filtration efficiency, 40HP fans, with 28" duct size.



C&W supplied an Eductor Blower and one (1) Roll-off Bin for each collector to store the particulate matter from the sand blasting.

# Sand Blasting, Cont.

C&W supplied two (2) 70,000 CFM units to High Concrete in Denver, PA for their Sand Blasting operation.



Each 70,000 CFM cartridge unit has 14,475 sq ft. of cloth area, contains 140 cartridges, 99.99% filtration efficiency, 150 HP fans w/ silencers, dual pyramidal hoppers, 55 gallon barrel drops, and 60" custom ducting layouts.

C&W supplied two (2) slotted side draft hoods inside the 50' wide 150' long 36' high building. Both feature top pyramidal inlets and draw air from one end of the building, to the collector, to purify the air inside the building.



# Sand Bagging

C&W supplied a RA-500 to Alamo Concrete for a Cement/Sand bagging operation.



C&W supplies flex-loc line pickup points for bagging machines which connect to the Dust Collector.

The RA-500 offers 25,000 CFM, a 60 HP fan and 4,776 sq ft of filtration area.

# Sand Bagging, Cont.

C&W supplied a CP-305C to Choice Bagging in Taylor, TX for their sand bagging operation.



CP-305C with 55 gallon barrel drop and 6" Easy-UP ducting.



flex-loc line pickup points for bagging machines which connect to the CP-305.

## Sand Distribution Terminal



C&W supplied two (2) CP-900 Dust Collectors for Badger Mining's sand terminals in George West, TX. One CP-900 includes a fire suppression system in the ducting and a 36" x 36" stainless steel explosion vent.

Both Collectors feature 1,069 sq. ft of filtration area, 55 gallon barrel drops to collect dust, and 6300 CFM with 25 HP Fans @ 13" W.C. In addition, 'Smart Clean' systems clean the filter media based on production and Delta P reading, rather than preset time intervals. This increases the cleaning efficiency of the collector and life of the filter media.

Shown to the left is the CP-900 without Fire Suppression System.

The Collector handling resin-coated sand has a Fire Suppression System in the ducting and an explosion vent. These systems are shown below, along with the control panel for the Fire Suppression System.



# Frac Sand Transfer Facility

C&W supplied LPR Silo top Collectors to Schlumberger in Midland, TX for their storage silos. Silos are fed by bucket elevator with turn-head.



C&W Dust Collectors can be used in various applications, including the following types of dust:

Abrasive Blasting  
Arc Spray  
Blast Dust  
Brick Tumblers/Coloring  
Cast Iron Grinding  
Ceramic  
Cement  
Clay  
Coal

Coke  
Crushed Stone  
Cutting Galvanized Steel  
Food Grade Components  
Fly Ash  
Glass  
Gold Ore  
Grain  
Granite

Gypsum  
Metal  
Paint Pigments  
Plasma Cutting  
Plastics  
Sands  
Salt  
Slate  
Soap  
Talc

