



## CO-GEN PLANT DIAGRAM

The following is diagram of where our Airsweep® material activation system, Dazic® zero speed switches, and Acousticlean® sonic horns can be used in a co-gen plant. If you're not running a co-gen plant, send us your process layout and we can customize a diagram for you.

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### 1. COAL SILOS

Bituminous Coal is crushed prior to being fed into the combustors. It is mixed with limestone in the combustion zone of the boiler.

### 2. COMBUSTION ZONE

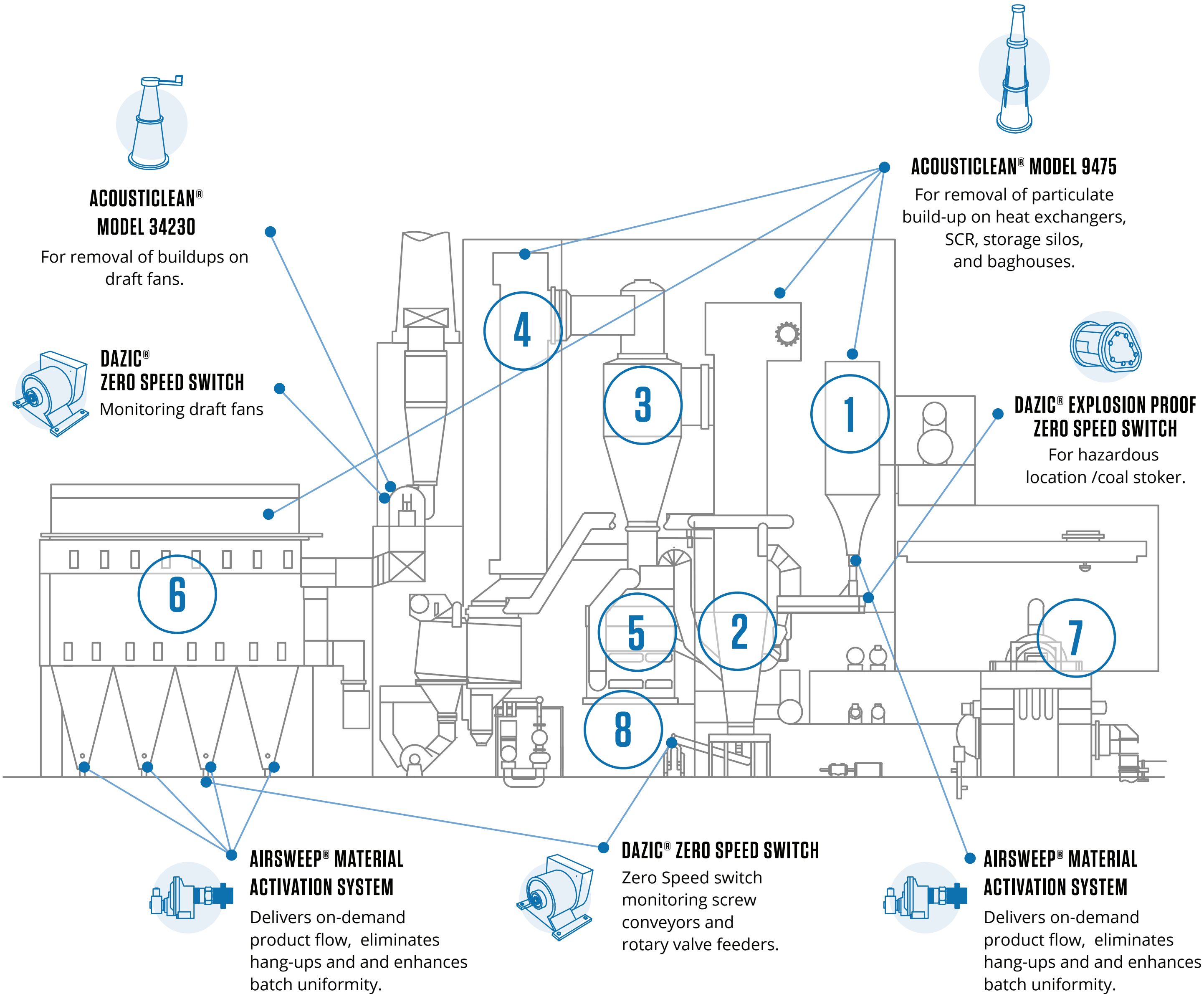
A strong upward flow of air holds the fuel and limestone particles in suspension in the combustion zone. As the coal burns, sulfur dioxide is absorbed by the limestone and the lighter particles move upward in the Combustion Chamber.

### 3. HOT CYCLONE

Ash and hot gases at 1560°F flow out the top of the combustor to the hot cyclone. The gas exits the cyclone to the convective pass. Partially burned fuel and ash pass from the cyclone back to the combustor for recombustion. Thus the combustor achieves a high degree of fuel efficiency.

### 4. CONVECTIVE PASS

Hot exhaust gas from the combustor pass over banks of water and steam piping helping to produce the steam for the turbine.



### 5. FLUID BED HEAT EXCHANGER

Ash taken from the cyclones heat the final reheat and superheat steam then returns to the combustor. This is the steam that powers the turbine which spins the generator to produce electricity.

### 6. FABRIC - FILTERS

After giving up most of its heat, the exhaust gas from the convective pass is routed through ducts to fabric - filter baghouses. These act as huge vacuum cleaners and collect almost all the fine particulate for ash disposal.

### 7. TURBINE GENERATOR

A single shaft, 3600 rpm, condensing turbine. Main steam to turbine is 1,345,000 lb/HR at 1,890 psig, 1005°F, and reheat to 1005°F.

### 8. ASH DISPOSAL

Ash is currently sent to a mine site via fully contained rail cars or trucks, where it is beneficially used to reclaim these sites.

OUR PRODUCTS ARE USED BY MORE THAN HALF OF S&P 500 COMPANIES

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# WARRANTIES

Control Concepts, Inc. provides a warranty on the following product units.


# TESTIMONIALS

AirSweep installation was easy, and the units have saved the company a lot of man hours. My experience totally exceeded my expectations – a 10 out of 10!

**STANLEY RHEA**  
HEAD OF MAINTENANCE DEPARTMENT, FLAX4LIFE

The AirSweep installation was pretty straightforward and I would absolutely recommend it. In fact, we are looking into expanding to use the system in other parts of our plant.

**JOHN PAPPENHEIM**  
MAINTENANCE MANAGER, BUNGE MILLING

# WE WORK WITH THESE MATERIALS & INDUSTRIES

			
FOOD/AGRICULTURE	MINING	CHEMICALS	OTHER
Animal feeds	Aluminum	Activated carbon	Acetate
Brewers grain	Bentonite	Adipic acid	Cement
Cocoa	Coal	Aluminum chloride	Chalk
Coffee	Copper	Boric acid	Cork
Corn	Diatomaceous Earth	Chlorine	Detergent
Flour	Gypsum	Herbicide	Fertilizer
Grains	Iron ore	Hydrated lime	Fly ash
Hops	Limestone	Iron Oxide	Pharmaceuticals
Salt	Magnetite	Polyacrylamide	Plastics
Soybeans	Phosphate	Titanium dioxide	Polymers
Spices	Shale	Zinc	Resins sludge
Starches	Soda Ash	and more...	Wax flakes
Sugar	and more...		Wood chips
and more...			and more...

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