MOFFITT Pressure Gravity System®

Eliminates Heat and Smoke Build-up

A Continuous Ridge Gravity Ventilator, mounted at the peak or high side of a building, provides a continuous evacuation point for heat and fumes. The hot air and fumes must rise, due to the Natural Gravity Effect and the pressurization of the wall fans. The roof and sidewalls guide the hot air to the highest point of the building. The continuous opening does not allow the hot air and fumes an opportunity to build up. This build-up is what creates poor ventilation conditions and haze in a building.

A continuous Gravity opening is much more effective than roof exhaust fans. Roof exhaust fans have a capture velocity of only one fan diameter. Thus, the heat and fumes cannot be exhausted until it comes within one fan diameter of the exhaust fan. Exhaust fans are placed intermittently across the roof, creating build up of heat and fumes between these fan locations, and **Roof Exhaust Fan System**

poor ventilation and haze in the building. **No Roof Maintenance**

A Continuous Ridge Gravity Ventilator does not require maintenance; therefore, there is no reason to go on the roof again! Roof Exhaust Fans require frequent maintenance, typically several times a year. It is difficult, dangerous and expensive to gain access

to a roof exhaust fan, so mainte-

nance is often ignored. Roof exhaust fans continuously handle hot, dirty air and become inoperable within 1 to 3 years of start up if not maintained. Building ventilation is reduced as these fans go off line.

No Roof Penetrations

Most industrial buildings today are of the pre-engineered type, and normally have standing seam roofs. An exhaust fan cannot be mounted at the roof ridge. Due to the expansion and contraction of the roof, the fans must be mounted on the slope. First, this reduces the fan's effectiveness because the heat misses the fan and collects at the highest point of the building. Second, a sloped mounting condition creates the opportunity for roof leaks. A Continuous Ridge Gravity Ventilator can be mounted at the peak of any pre-engineered building.

The Gravity Ventilator flashing works in the same manner as the building peak flashing, allowing for full expansion and contraction. Since it is at the highest point of the building, there are no roof leak concerns, and since it provides the same function as peak flashing, it is as if there are no roof penetrations.



Fresh supply air is brought in under high velocity from Wall Supply Fans typically located at approximately the 8' elevation. The high velocity throws the air into the center of the building. This process creates better air movement, and places the fresh air where it is needed, increasing the ventilation at the operating floor.

Roof exhaust fan systems use wall louvers or openings for intake. The intake air enters at a very low velocity, and only penetrates the building by a few feet before it begins to rise. Only a few feet from the louver, the

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movement of the air cannot be felt, reducing its cooling effectiveness.

Reduced Maintenance

The Wall Supply Fans handle only clean, cool outside air, reducing the amount of maintenance they require. Roof exhaust fans handle only hot, dirty plant air increasing the amount of maintenance they require. Also, the Wall Supply fans are easily accessible by stepladder to provide any maintenance required.

equipment. This causes the process equipment to work very inefficiently, and in the case of dust collectors and scrubbers, contributes to reducing indoor air quality.

Flexibility

A Continuous Ridge Gravity Ventilator is self-adjusting to the airflow in the building. If the airflow increases, the velocity of the air through the Gravity Ventilator simply increases to handle the additional capacity. Thus, the capacity of the ventilation system could be

> doubled with out ever going on the roof again. If a hot spot is created in the plant, a Wall Supply Fan can be added in that location. With a roof exhaust fan system, every time more air is required, an expensive and difficult roof modification must be made. Additionally, with a roof exhaust fan, the results are negligible because the supply air will not be introduced into the

Positive Pressure

MOFFITT

Pressure Gravity System®

A Continuous Ridge Gravity Ventilator accompanied with Wall Supply Fans always generates a positive pressure. It is impossible for a negative pressure to be created by the ventilation system. On the other hand, Roof Exhaust fans with wall louvers always generate a negative pressure. This negative pressure robs air from the plant process equipment such as dust collectors, scrubbers and combustion

50% Less Operating Cost

hot spot.

Replacing Wall Louvers with Wall Supply Fans in a roof exhaust fan system, in order to gain some of the advantages of Wall Supply Fans, will double the horsepower requirement as compared to a Pressure Gravity System®. The difference is that the Continuous Ridge Gravity Ventilator does not require any electrical cost to operate.

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Moffitt Corporation Partial Industrial Customer List

Glass Plant Projects

AFG - Richmond, KY

- Victorville, CA

Anchor Glass - Connellsville, PA

- Jacksonville, FL

- Winchester, IN

Cardinal FG - Menomonie, WI

- Portage, WI

- Richmond, KY

Certainteed Products - Chowchilla, CA

Gallo Glass - Modesto, CA

Guardian Glass - Chowchilla, CA

- Corsicana, TX

- Geneva, NY

- DeWitt, IA

- Brazil

Johns Manville - Cleburne, TX

Owens • Illinois - Guayaquil, Equador

- Toano, VA

- Volney, NY

PPG Industries - Shelbyville, IN

Phoenecia America - Israel

Siam Guardian - Thailand

Vertrotex Certainteed - Wichita Falls, TX

West Indies Glass - Jamaica

Steel Mill Projects

AK Steel - Evansville, IN

Austeel - Lemont, IL

Bethlehem Steel Cold Mill - Sparrows Pt., MD

Chaparral Steel - Dunwiddie, VA

Heartland Steel - Indianapolis, IN

Insteel Wire - Fredericksburg, VA

- Andrews, SC

Northstar Steel - Kingman, AZ

- Toledo, OH

Nucor Steel Cold Mill - Hickman. AR

Nucor Beam Mill - Berkely, SC

Nucor Steel - Berkely, SC

- Plymouth, UT

- Norfolk, NE

SMI Steel - Birmingham, AL

- Cayce, SC

Worthington Steel - Decatur, AL

- Monroe, MI

Aluminum Projects

Alcan Aluminum - Sebree, KY

- Oswego, NY

Alumax - Goose Creek, SC

Anaconda Company - Suharta, AZ

- Russellville, KY

ALCOA - Alcoa, TN

- Badin, NC

- Warwick, IN

- Rockdale, TX

- Oswego, NY

NSA div. of Southwire - Hawesville, KY

JW Aluminum - Goose Creek, SC

Power Station Projects

American Electric Power - Amos #3

Duke Power Co. - Oconee

Tucson Electric Power Co. - Springerville Generating

Station, Units #1 and #2

Kansas City Power and Light - latan Steam Electric Generating Station, Unit #1

> Florida Power Corp. - Crystal River Station, Units 4 & 5

Houston Lighting and Power - South Texas Project Nuclear Power Plants Units #1 and 2

Minnesota Power & Light Co. - Clay Boswell Steam Electric Station

Louisville Gas & Electric - Mill Creek, Units #3 and 4 San Diego Gas & Electric - Encina Power Plant #3

Pulp and Paper Projects

Fort Howard - Green Bay, WI

- Ricon, GA

Champion International - Deferiet, NY

- Sheldon, TX

International Paper- Ticonderoga, NY

- Natchez, MS

- Pineville, LA

- Moss Point, MS

- Georgetown, SC

Boise Cascade - Rumford, ME

- St. Helens, OR



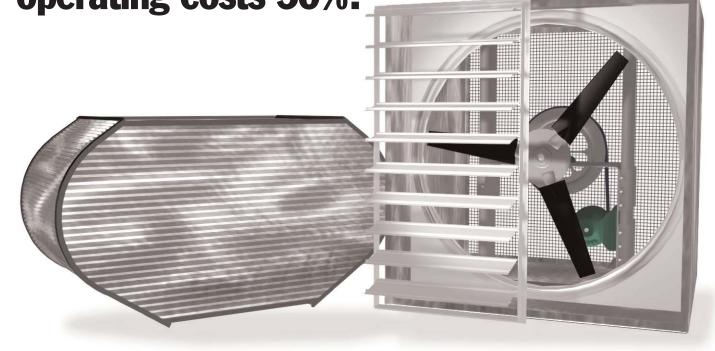
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MOFFITT Pressure Gravity System®

Eliminates rooftop maintenance and negative pressure while reducing operating costs 50%!





Iron Foundry Building



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