

Dust Extraction Technology®



Beckley, WV
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The Safe
Handling of
Fugitive
Combustible
Dust is the
HEART of
our Business

Dust Management Techniques

It is an Accepted Fact that there are Three main methods to control fugitive dust

- Collection
- Suppression
- Containment

New Technology

Engart Provides a Fourth Method

- Collection
- Suppression
- Containment
- **Extraction**

Typical Reasons for Engart Upgrade

- Concerned with Challenges of Combustible Dust and the Current Status of Bag House Collectors
- Lower Cost and Easier Maintenance
- Desire New Technology
- Fast Track Conversion

Experience and Concerns with Bag-House “DRY” Collectors

- Fire and Explosion Risk
- Labor Intensive and Difficult to Maintain.
- Re-Handling of Bag-House Collected Dust Caused Additional Fugitive Dust Problems
- Costly Bags
- Confined Entry Permit
- Costly Means to Discharge Collected Dust

UPGRADE TO EXTRACTION TECHNOLOGY

- SAFER Way to Handle Combustible Dust
- Eliminates Need for Bag Replacement
- Simpler Maintenance Procedures
- Eliminates Re-Handling of Fugitive Dust
- Compact Design Permits Installation in Close Quarters or Inside Building
- High Dust Collection Efficiency
- Fast Track Installation

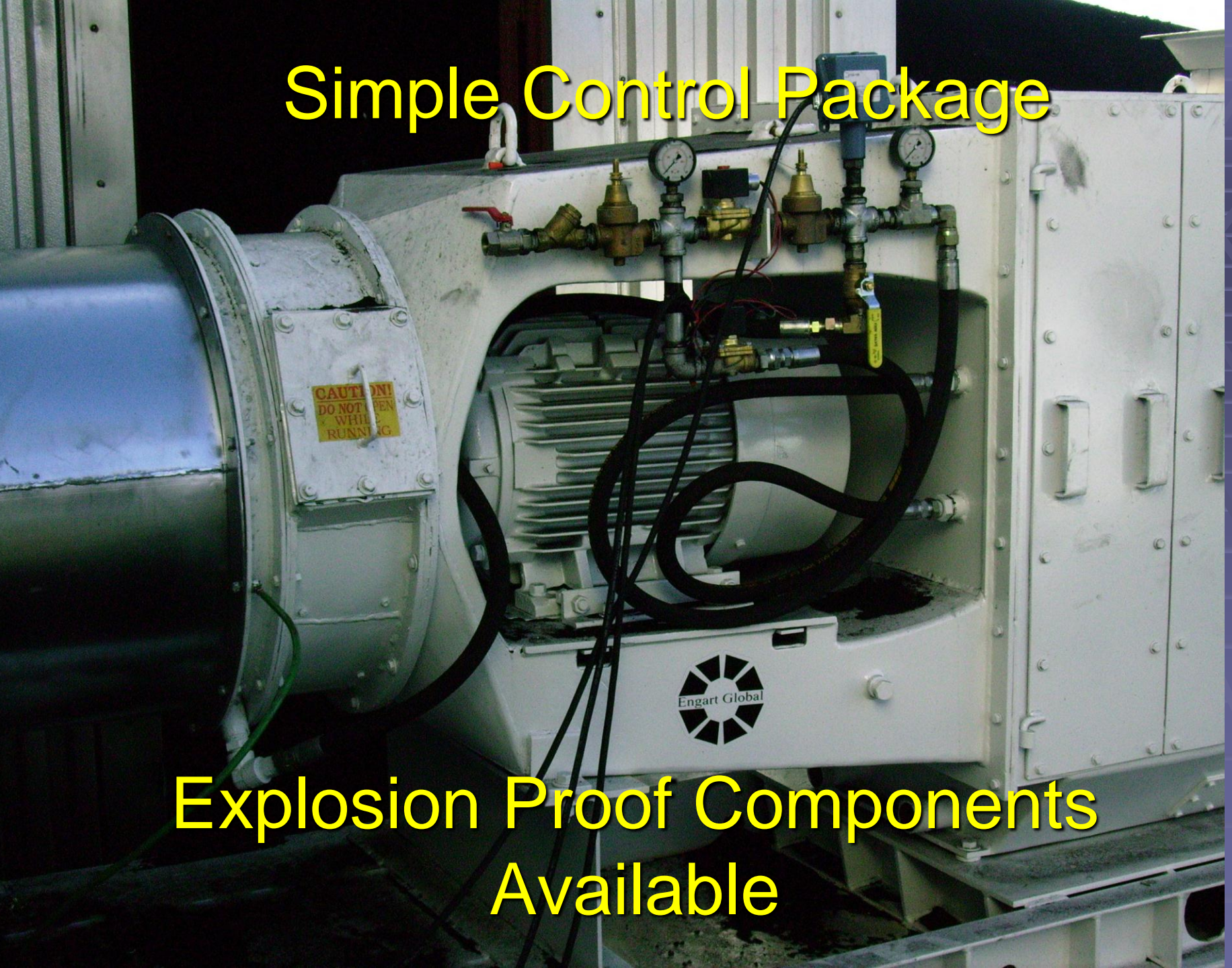
Compact Design Minimizes Ductwork and Reduces Horsepower Consumption





Allows Installation in Close
Quarters---Exhaust Inside to Save
Heat Loss

Simple Control Package



Explosion Proof Components
Available



Simple Control Package

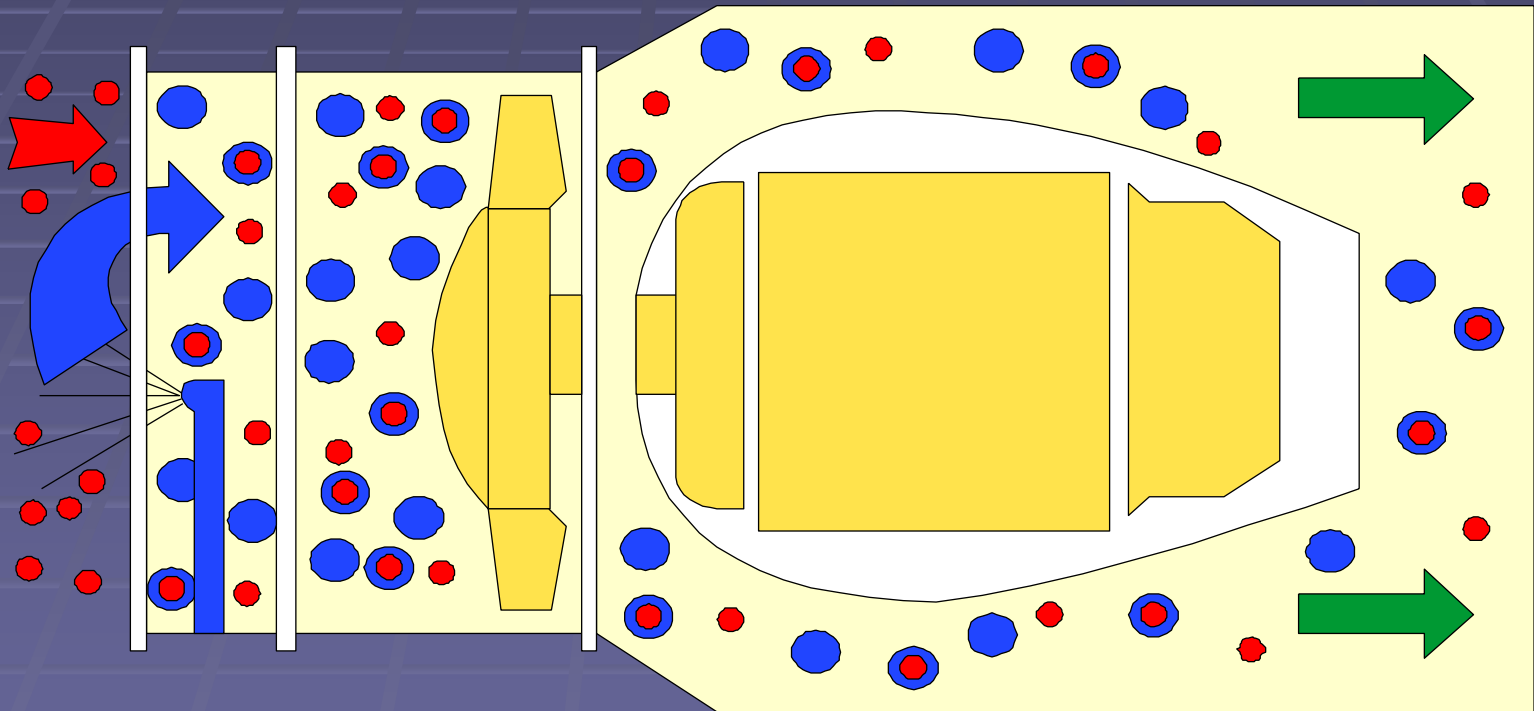
Insulated Water Controls Cabinet



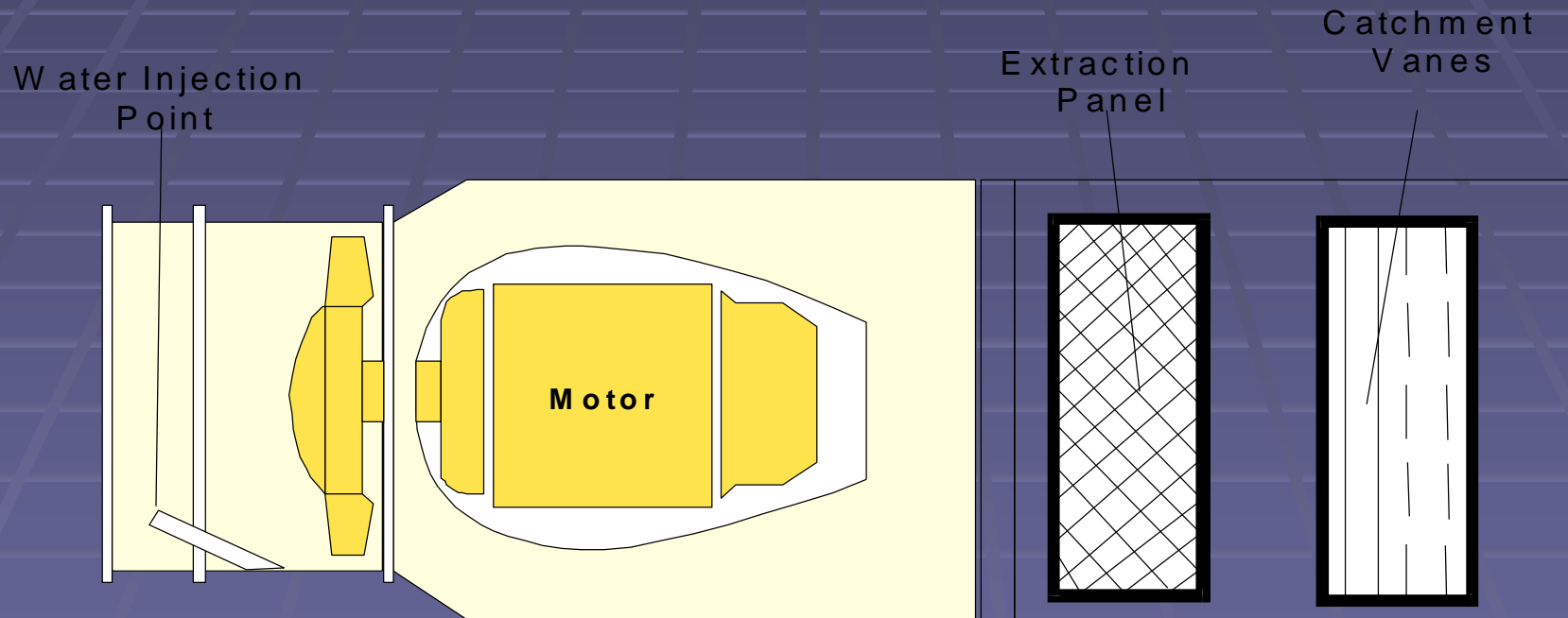
Dust Capture Principals

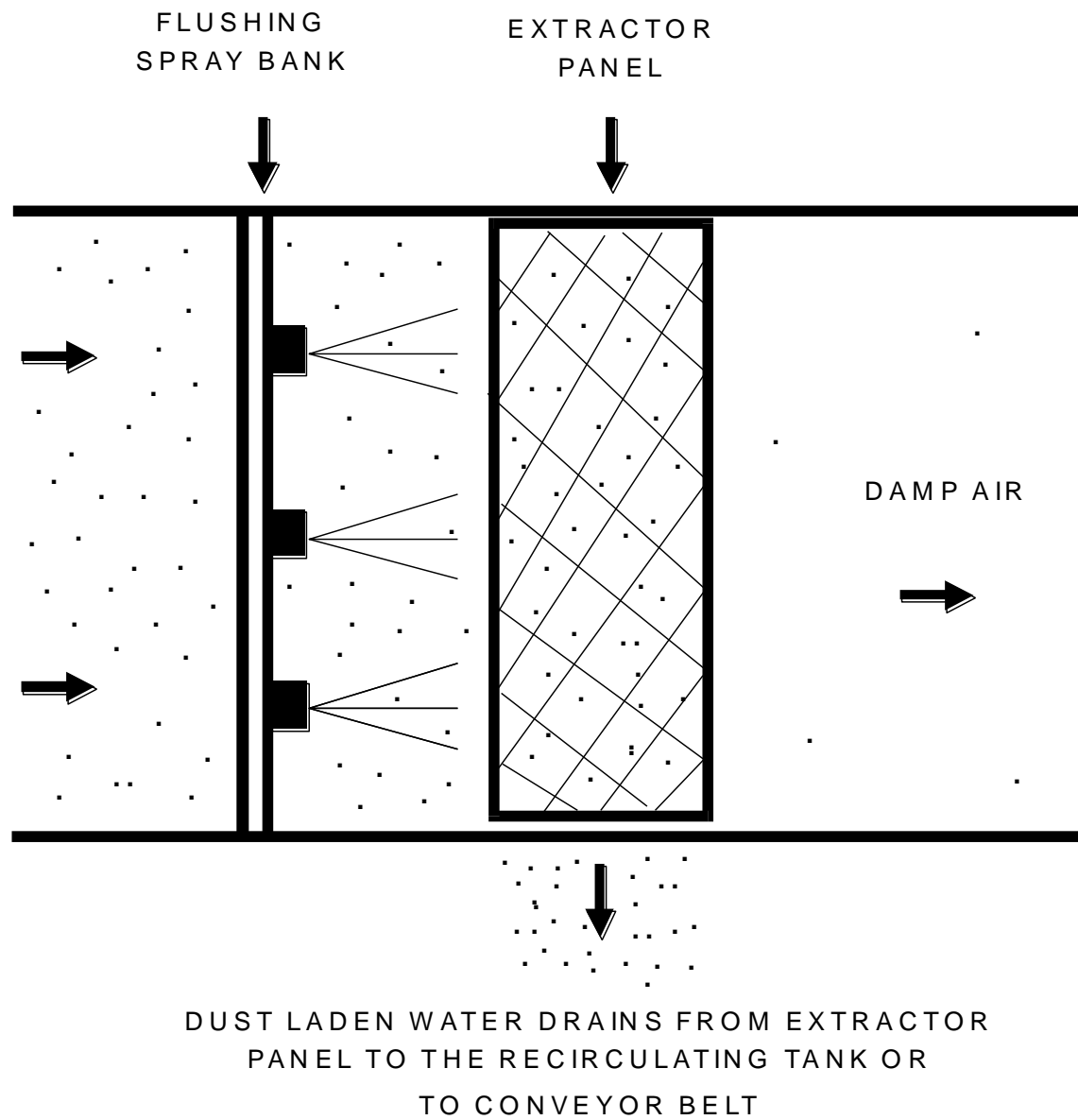
- Dust Particles and Displaced Air are Moved into the Engart by its Integrated Impeller.
- The Particles are Mixed with Finely Atomized Water Droplets During the Pressure Ramp Through the Fan Inlet
- Dirty Air, Dust Particles and Potentially Flammable Gases Move Past the Motor Compartment.
- Water Entrained Dust Particles are Removed From the Air Stream and Out the Sump to Local Drain.

Dust Captured in Water Droplets



Engart Components





Internal Spray Bank

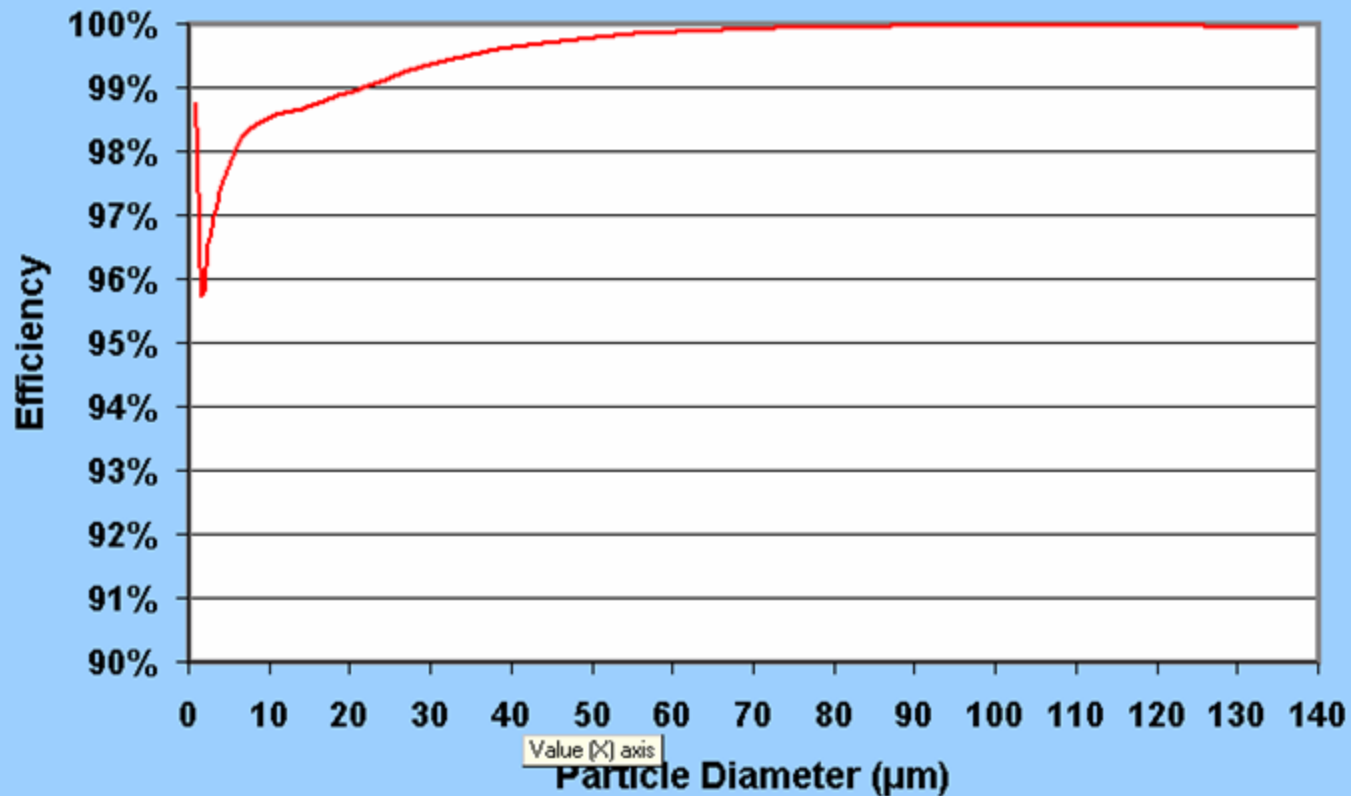


Dust Extraction Efficiency



Engart Dust Extractor Efficiency (Coal Dust)

June, 1997



Airflow Balance



Modular System Upgrades



Portable or Temporary Installations



Type 46 To Handle Larger Volume Needs



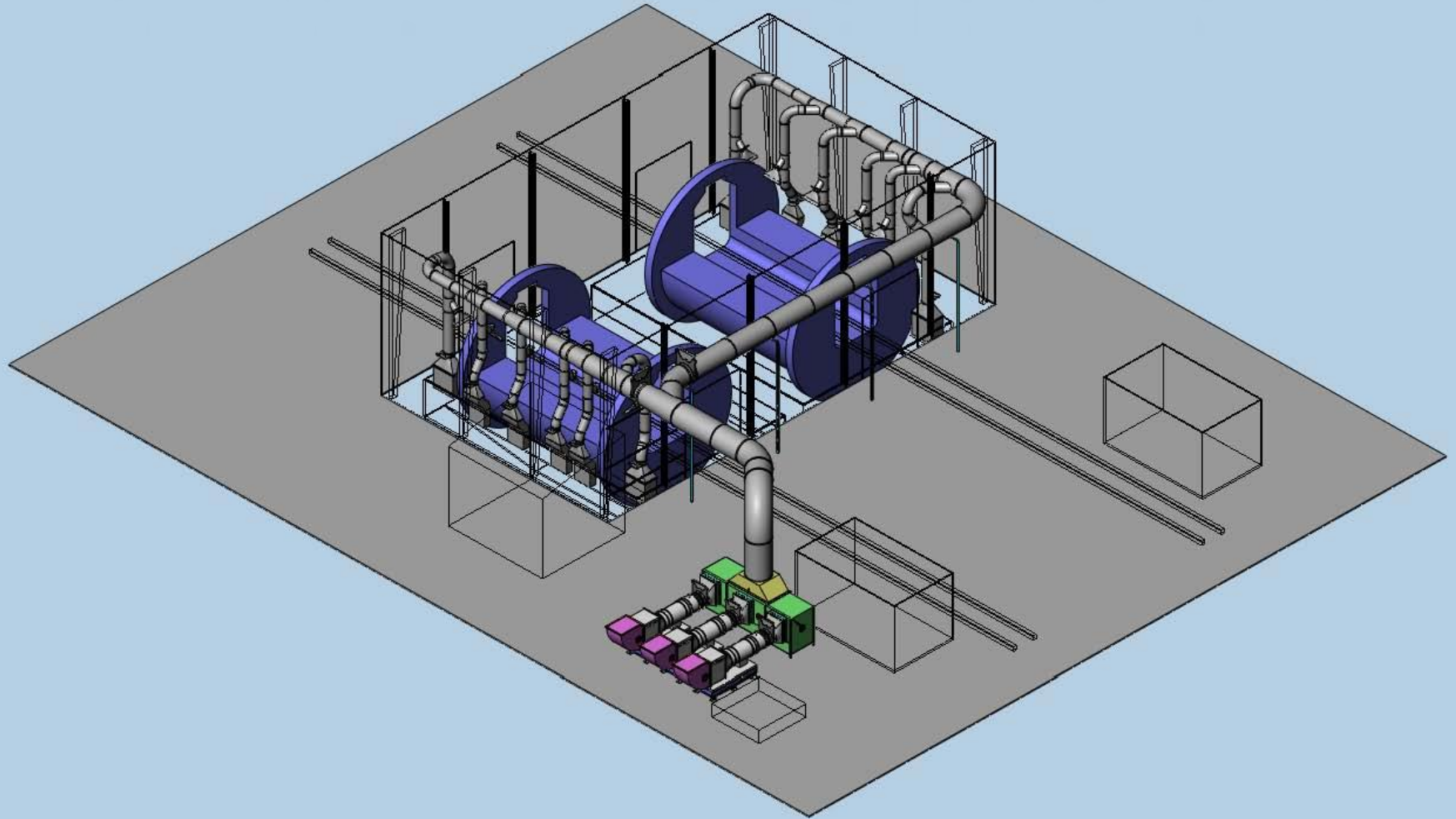
Plant Wide Engart Upgrade Projects



Rail-Car Dump Extraction System

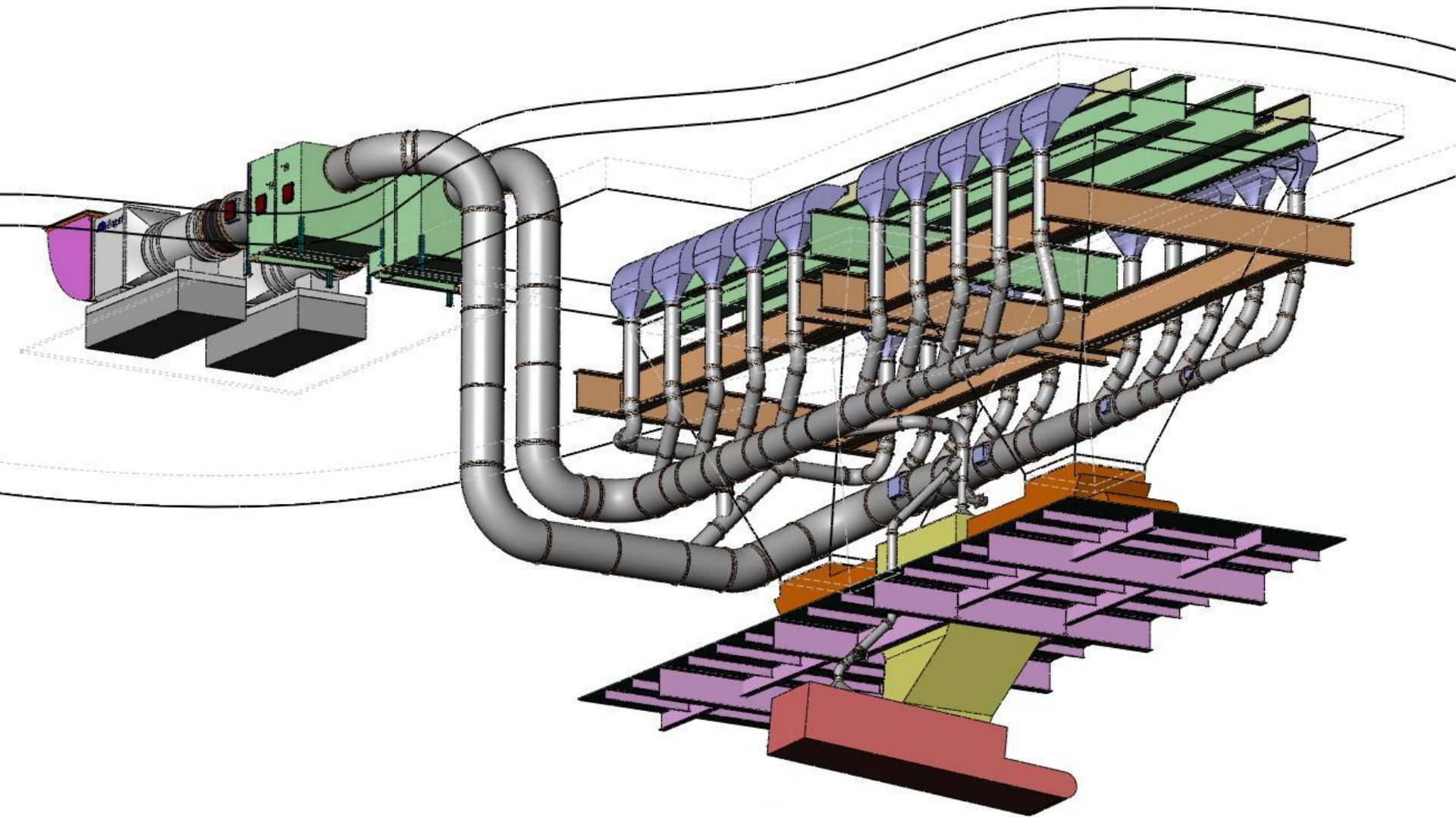


Complex Engineering Design





Bottom Car Dumper




3-D Design Capabilities

Engart Bag-House Replacement Projects



OSB MILL



A photograph of an industrial facility, likely a wood processing plant. The image shows a complex network of metal beams, pipes, and machinery. A prominent feature is a large, vertical, corrugated metal duct that rises from a large, boxy metal structure at the bottom. To the left, there are various pieces of equipment, including what appears to be a large cylindrical tank or drum. The background shows more structural elements and possibly other parts of the plant. The overall scene is dimly lit, with some light sources visible in the distance.

A Safer Device for Handling Fugitive Wood Dust

Water Separator Allows Separation of Wood “Cake” and Re-Use of Water



Forest Products Industry



Forest Products Industry



Water Recycling System



Cold Weather Protection Package



Combination Approach

Cold Weather Protection Package

- Heat Trace Supply Water
 - Air Purge Solenoid
 - In-Line Water Heater
- Heat Sheets and Insulated Blankets

MCC Room Pressurization



2006/07/15 01:43

Engart Extraction Technology Advantages

- High gas cleaning efficiency.
- Relatively low water usage
- Clean Air Discharge Permits Inside Exhausting To Save Heat Loss from Plant.
- Simple maintenance.
- Eliminates explosion risk.
- Compact integrated dust management units.
- Various purchase options.
- Bifurcated design – enhanced safety.
- Consistent air volume.
- Flexible engineering approach.
- Engineering service and support team.

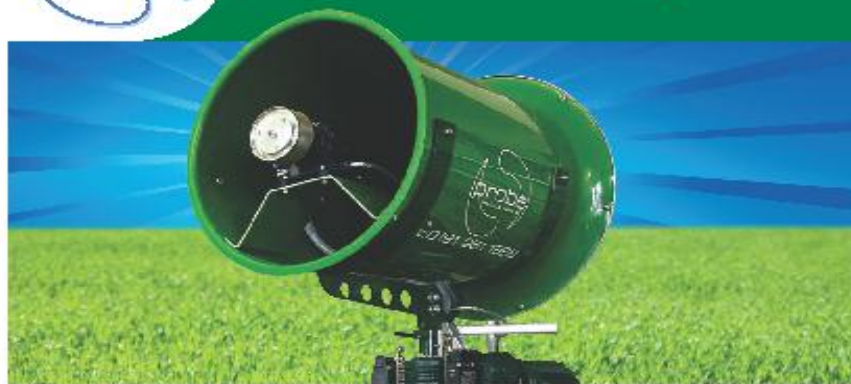
ODOR AREAS

- LANDFILL SITES
- COMPOSTING PLANTS
- SEWAGE WORKS
- QUARRIES
- FOUNDRIES
- WASTE TRANSFER STATIONS
- MATERIAL RECYCLING FACILITIES
- FOOD INDUSTRY
- RENDERING PLANTS



Atomizers

Odor Control Technology



A Revolutionary Solution to Odor Control and Dust Suppression



Rotary

The Probe Atomizer device uses a rotating metal gauze cylinder to create droplets of uniform size (monodispersed). The Atomizer works by injecting water into the cylinder head spinning at 12,000 rpm, dividing the liquid into an incredible 900 billion droplets per gallon. It gives a linear spray of between 60 and 90 feet and is available as a non-oscillating (static mount) or with the oscillating feature (180-degree sweep)

Mobile

If you have an odor or dust issue on site (e.g. Landfill) where power or water are not readily available, the Mobile unit can solve your problem. The Mobile unit can be quickly towed to the required location, is fully self-sufficient with its own water and power supply and can handle any terrain.

Floor Mounted

The Floor Mounted unit is an 8 feet high, floor mounted, stand-alone unit. It is secured to either a concrete base or similar fixed-level surface using bolts or clamps. The unit can be located internally or externally for odor & dust control.

Wall Mounted

The Wall Mounted unit is secured to walls using either bolts or clamps.

*No Blockages
and Droplets
at an Optimum
uniform size to
suppress Odor and
Dust even in the
most challenging
environments.*



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