



# mideco

*Your Partner in Environment Technology*





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## Over 60 Years Of Successful Dust Collection Solutions

Airborne contaminants are generated during mining, extraction, drilling, crushing, hauling and stockpiling of industrial materials. Workers in these mines, quarries, and other raw material processes may be exposed to both dust and crystalline silica.

These dust particles can penetrate into the lower regions of the lung where gas exchange takes place and can cause serious health issues for all workers, such as pneumoconiosis or silicosis. Both conditions are disabling and often fatal lung diseases.

To help keep all workers and their environment safe, **Mideco** provide dust control and management solutions tailored to their customers' specific needs and operational issues.

Australian owned and managed, Mideco have been operating for more than sixty years with a proven record in diverse industries, from mines and quarries to cement and fertiliser production plants in both Australia and international markets.

Mideco's solutions process involves a robust approach to better understand the needs, issues and key problem areas of their customers' operations. This is underpinned by utilising the know-how of key people combined with tailored products and services to control and manage occupational exposure to dust. Post implementation support and ongoing servicing of equipment is also provided by Mideco to ensure ongoing success for all our customers.





# BAT BOOTH® 2.0

The **BAT BOOTH® 2.0** uses nothing but pure air to capture dust from worker's contaminated clothing – providing safety for both the worker and the environment. It's the hardest working 10 seconds you'll ever see.

The **BAT BOOTH® 2.0** is supplied completely assembled on a skid base. Once on site, compressed air and power connections are all that is needed to be fully operational. Perfect for quarries, mines or any commercial environment where dust contamination poses a health hazard.

The following safety features are included in the **BAT BOOTH® 2.0**

- Dual start buttons to prevent accidental start.
- Emergency Stop button to shut off low-pressure air flow.
- Low vacuum in the device to ensure the door can be opened when the fan is running.
- Adjustable height of low pressures air jets to block air from being directed above shoulder height.
- Light inside the device and low voltage electrics for control, lighting and instrumentation.



**Before**



**After**



Mideco has gained **UL approval** for its Enclosed Industrial Control Panel that is the heart of the **BAT BOOTH® 2.0**. This means the product is fully compliant with the local regulations for which it is tagged. As a company we are purposefully working to open up new markets with equipment that is "plug and play" for our customers.

# Reverse Air Filters / Dust Collectors

Mideco **Reverse Air Filters / Dust Collectors** return remarkable results where the dust load is very high and the emission is required to be very low. It's also well suited to dusts that are ultra fine, hygroscopic or sticky. The key to this filter's success and abilities is its cleaning system. Reverse air cleaning is extremely efficient and very gentle on the filter fabric. The benefits being lower emissions (10 mg/Nm<sup>3</sup>) and lower power consumption.

The most unique benefit of the reverse air filter is its ability to preserve the filter bags. Our experience has shown 10 to 20 years on lead barton pots and carbon black banburies has been easily achieved.



## Tubular Pulse Duct Collectors

Mideco's **Tubular Pulse Duct Collectors** have been designed for a "no tools rebag" that provides minimal down time for refurbishment.

Mideco can accommodate for a wide range of inlet/outlet sizes and positions, bag fabrics, mounting structures and casing materials.

Our bag houses can be arranged as stand alone units or configured into a cellular configuration that allows for individual cells to be taken of line for cleaning or maintenance.



## Scrubbing Systems

Mideco has three technologies to meet any scrubbing requirement:

1. **Venturi Scrubbers** - are highly efficient scrubbers with minimum moving parts and wear points.
2. **Peabody Plate Scrubbers** – provide efficient dust collection with minimum pressure drop to minimise energy requirements.
3. **Packed Tower Scrubbers** – are for odour control.

To meet the requirements of any scrubbing application, Mideco provides:

- customised instrumentation and control systems
- alternative materials such as stainless steel
- specialised paint/coating systems



# Burnley<sup>®</sup> Baffles

**Burnley<sup>®</sup> Baffles** are our internationally patented dust suppression device designed to reduce the escape of dust from dump hoppers and chutes handling dry granular bulk raw materials such as grains and ores. A **Burnley<sup>®</sup> Baffle** installation consists of a set of modules that fill the open inlet face of a hopper.

Each module contains a set of blades that pivot to allow the material to flow into the hopper. The dust generated from the material falling into the hopper cannot escape because the hopper is only open where the material is entering. An 80% to 85% reduction in the size of dust collector and fan is achievable with the use of **Burnley<sup>®</sup> Baffles**.

**Burnley<sup>®</sup> Baffles** can be manufactured in a variety of dimensions to handle a large range of product sizes. Operators can actually work in the area of the unloading of bulk material.



## Bag House Filters and Dust Collectors

Mideco manufactures the following **Bag House Filters and Dust Collectors**:

- **Reverse Air Filters / Dust Collectors** – have the ability to preserve the filter bags for years to come.
- **Tubular Pulse Dust Collectors** – designed for a “no tools rebag” that provides minimal down time for refurbishment.
- **Economy Dust Collectors** – designed to maximise the filter cloth area while minimising the space requirements. They are available with pulse or shaker cleaning systems.
- **Ultra High Efficiency After Filters** – developed in response to a customer need for high volume ultra high efficiency filtration to manage air contaminated with lead dust.



# Mideco Customer Case Studies

## BORAL'S PEPPERTREE QUARRY, NEW SOUTH WALES

Boral's Peppertree Quarry is their newest hard rock aggregate site, it provides a major supply of aggregate material for the Sydney and wider NSW building and construction markets.

The nature of quarry operations brings the potential of dust emissions. Working with hard rock leads to dust related diseases like pneumoconiosis and silicosis.

A **BAT BOOTH® 20** has been installed in Boral's Peppertree Quarry in June 2017 – it helps to prevent workers lungs from dangerous silica dust impact. Huge reductions in dust cross contamination have been detected from that time. Being serviced in November within service schedule, done by Mideco, huge volume of silica dust were found in the **BAT BOOTH® 20** filter cartridges, which could have settled in workers' lungs.

Boral Peppertree quarry managers were wanting to provide workers with a highly efficient, modern and safe way of cleaning. The **BAT BOOTH® 20** combined all these features in one device.



## QUBE PORTS KWINANA, WESTERN AUSTRALIA

The Qube Ports facility in Kwinana, Western Australia uses two existing wharf hoppers when unloading Kilnker from supply ships and vessels using a 20 tonne grab. This process produced vast amounts of dust that contaminated the wharf and surrounding properties.

The Mideco solution involved the **Burnley® Baffles** installation with galvanised support frames and the Mideco Model ECP 48 Dust Collectors. The trough hopper with an integral screw conveyor, high level probe and 4Kw rotary screw compressor provided an overall filter efficiency of 99.9%+ for particles  $\geq 0.5\mu\text{m}$ . This meant the dust was contained and managed to meet the expectations of Qube Ports.

For more information on this customer case study contact the Mideco sales team.



# Mideco Customer Case Studies

## BHPB OLYMPIC DAM, URANIUM MINE, SOUTH AUSTRALIA

BHP Olympic Dam is a multi-mineral ore body containing uranium oxide, copper, gold and silver. The problem of dust is crucial on the site, since among other types of dust, workers deal with radioactive particles which are extremely dangerous for human's health.

Mideco accepted the challenge and developed two custom designed personnel dedusting booths, the **BAT BOOTH 2.0**, especially for the application with the demand of radioactive dust management.

The design of the units for BHP Olympic Dam included:

- Stainless steel case;
- Earthing and untypical power supply;
- Crating on the floor is made from FRP - it can be cleaned by caustic.

All these features are especially produced for the demands of uranium mining. Mideco strong engineering team can adjust the **BAT BOOTH 2.0** for any application type.



## GRAINCORP, PORTLAND, VICTORIA

Located in South Western Victoria, Portland is GrainCorp's most southern export terminal. The annual average grain exported through that facility reaches over 300 thousand tonnes.

Dealing with grain has always been dusty. That is why this kind of terminal requires strong dust control system.

The initial task from GrainCorp was to manage the dust escaping from 9 hoppers of total length of 42,500 mm and width of 5,000mm.

The **Burnley® Baffles** solution developed by Mideco reduced the dust from 9 hoppers, alone achieving the efficiency of 95% dust reduction. Mideco also supplied dust collectors achieving total dust elimination thus making the environment safer for everyone.

**Burnley® Baffles** combined with Dust Collector can solve any dust management issue for applications of this type.






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