Overview

To overcome the maintenance problems and operating costs of centralized dust control systems, Martin Engineering recommends the use of the Martin® Air Cleaner with PowerCore® Filter on conveyor transfer points.

Rather than carry dust-laden air to a central collector, air cleaning systems filter the air inside the transfer point. There is no large fan, no ductwork, and no central bag house. Air cleaning filters are integrated into the transfer point enclosure, where they can easily return the filter dust as agglomerated material to the conveying system.

Air Cleaners can effectively handle the heavy concentrations of dust and volumes of air arising at belt conveyor transfer points.

High efficiency filters remove 99.99 percent of all particles larger than 0.5 micron.

Benefits

Effective Dust Capture
The Martin® Air Cleaner with PowerCore® Filter is designed to remove 99.99 percent by weight of all dry particulate particles 0.5 micron and larger in size. (This efficiency is based on a time-weighted average and assures the air cleaner will be installed, operated, and maintained in accordance with instructions.)

Continuous Operation
Automatic “reverse jet” cleaning sequence keeps filters working effectively with minimum compressed air.

Returns Product To The Process
Dust stays within the transfer point. Valuable material returns to the material handling system.

Low Energy Costs
Small, efficient integral fan operates only when conveyor runs.

Economical Installation
No ductwork to install, balance, or clean.

No Dust Disposal
No haulage costs for waste disposal. Valuable material returns to the process. No equipment needed to handle, package, or dispose of dust.

Compact Design
Small “footprint” reduces space requirements and installation cost.

Minimum Maintenance
“Clean side” access for inspection and filter changeout. No tools required to change filter.

Flexible Design
Stand-alone system or use to supplement existing central dust collector systems.

Easy Access
Large side or top door allows for easy access for inspection and filter changeout.

The Martin® Air Cleaner is not designed for use with the following materials:

- Gypsum
- Alumina
- Salts
- Potash
- Soda Ash
- Hydrated Lime
- Urea
- Powder River Basin Coal

Systems To Fit Your Application

Martin Engineering offers a full range of system sizes and filter materials to match application requirements.

Explosion-proof models are also available for use in explosive environments.

System Requirements

Compressed Air: 10.2 cfm @ 90-100 psi
Electrical: 230/460V 3-Phase 60Hz (also available in 380V/50Hz)
Max. Operating Temperature: 150°F (66°C)

Replacement Filters

Standard: P/N 38432-FP
Explosion-Proof: P/N 38432-FPE

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### Dimensions & Specifications

<table>
<thead>
<tr>
<th>High End Air Flow* (cfm)</th>
<th>Air Cleaner P/N</th>
<th>Qty of Filters</th>
<th>Motor HP</th>
<th>Sound Level dbA @ 5 ft</th>
<th>Opening Size Required (A) in. (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Blower</td>
<td>Purge</td>
</tr>
<tr>
<td>1000</td>
<td>DFAC-10XXXXXX</td>
<td>2</td>
<td>3</td>
<td>87</td>
<td>99</td>
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<tr>
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<td>DFAC-15XXXXXX</td>
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<tr>
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<td>DFAC-30XXXXX</td>
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<td>5</td>
<td>88</td>
<td>99</td>
</tr>
</tbody>
</table>

*If using with cement or PRB coal, contact Martin Engineering.

### Dimensions

<table>
<thead>
<tr>
<th>Air Cleaner P/N</th>
<th>Length* in. (mm)</th>
<th>Width* in. (mm)</th>
<th>Height* in. (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DFAC-10XXXXXX</td>
<td>57 (145)</td>
<td>27 (69)</td>
<td>32 (81)</td>
</tr>
<tr>
<td>DFAC-15XXXXXX</td>
<td>57 (145)</td>
<td>37 (94)</td>
<td>32 (81)</td>
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<tr>
<td>DFAC-20XXXXX</td>
<td>112 (285)</td>
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</tr>
</tbody>
</table>

*Without blower
Operation

An integral fan pulls dust-laden air through the filter elements. The air passes through the filter, leaving the particles on the filter element.

Self-Cleaning Operation

Each filter element is individually cleaned by a “reverse jet” of compressed air, which is injected into the filter element. This causes a momentary reversal of the air flow in the filter dislodging the dust cake back into the main material body. Filter cleaning happens without interrupting the process.
NOMENCLATURE — DFAC-XX X X X X X X

1. Part Number Prefix
2. The first XX indicates high end airflow:
   10 = 1000 CFM
   15 = 1500 CFM
3. The next X indicates solenoid valve type:
   S = Non-explosion proof service duty
   E = Explosion proof service and NEMA 9 solenoid enclosure
   H = Same as “E” with heaters in solenoid enclosure
4. The next X indicates right side item*:
   F = Blower
   D = Door
   Ø = Cover Plate
5. The next X indicates top item:
   F = Blower
   Ø = Cover Plate
6. The next X indicates left side item**:
   F = Blower
   D = Door
   Ø = Cover Plate
7. The next X indicates end item:
   F = Blower
   D = Door
   Ø = Cover Plate
8. The next X indicates blower voltage/fan spool flange:
   A = 380V 50 Hz 3 Phase
   C = 220/480V 60 Hz 3 Phase
   F = 575V 60 Hz 3 Phase
   N07 = No Blower with 7.00 ID Fan Spool Flange
   N08 = No Blower with 8.00 ID Fan Spool Flange
   N13 = No Blower with 13.00 ID Fan Spool Flange
   N14 = No Blower with 14.00 ID Fan Spool Flange
   N16 = No Blower with 16.00 ID Fan Spool Flange
   N18 = No Blower with 18.00 ID Fan Spool Flange

*Right Side of Assembly
**Left Side of Assembly