Overview

• **Company background**
• **Manufacturing**
• **Pneumatic conveying**
• **New advancements**
  • Acoustic enclosures
  • Automatic adjusting motor bases
  • Sight glass tools
  • In-Line filter
  • New filter silencer design
• **Maintenance**
  • Oil
  • Filter changes
  • Maintenance checks
Company Background
Raw Materials
Rotor Machining
Endplate/Cylinder Machining
Blower Assembly and Testing
## Pneumatic Conveying Data Sheet

**Company Name:** Mill A  
**Contact:**  
**Phone:** (____) _____ - ______  
**Fax:** (____) _____ - ______  
**Cty:** Liberty  
**State:** NC  
**Elevation:** 0 ft. ASL  
**Average Ambient Temperature:** 70°F  
**Type of System:** Pressure № X  
**Product to be Conveyed:** Fluid  
**Weight, lb./cu. ft.:** 32 lb./cu. ft.  
**Particle size:**  
**Flow Rate cwts/hr.:** 300 cwts/hr. or Bscfm  
**Conveying line size O/D:** 4"  
**Total Conveying line in feet:**  
- **Horizontal:** 30 feet  
- **Vertical:** 110 feet  
**Total number of long sweep elbows 90°:** 3  
**Specify others i.e. Hammertek, short radius:** Long Radius  
**Total number of diveters:** 1  
**Number of air locks:** 1  
**Size and manufacture of air locks:** Bohle 36:38  
**Terminal of conveying line:**  
- □ Bin  
- □ Cyclone  
- □ Tanker  
- □ Other  
**Please specify any other info i.e. flex hose, switching station, multi product line:**  
**Size of air line from blower to air lock:**  
**Total Length in feet:**  
- **Horizontal:** ______  
- **Vertical:** ______  
**Number of elbows:** 90°  
**Outside installation:** □ Inside installation  
**Blower room:** □ Mill floor  
**Other:**  
**Return air intake (outside air):** □ Blower room / mill intake (inside air)  
**Motor frame:** TEFK  
**Explosion proof:**  

Please Attach Drawing of System Layout

- **Thru put (cwts/hr.)**
- **Conveying length**
- **Line size**
- **# conveying 90's / 45's**
Calculation and Blower Selection

<table>
<thead>
<tr>
<th>THRU PUT:</th>
<th>13608</th>
<th>KG/HR</th>
<th>30000</th>
<th>LB/HR</th>
<th>500</th>
<th>LB/MIN</th>
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</thead>
<tbody>
<tr>
<td>BULK DENSITY:</td>
<td>32.0</td>
<td>LB/CU.FT</td>
<td>512.6</td>
<td>KG/CU.M</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FEED RATE:</td>
<td>937.5</td>
<td>CU.FT./HR</td>
<td>26.5</td>
<td>CU.M./HR</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IN</td>
<td>15.6</td>
<td>CU.FT./IN</td>
<td>442.5</td>
<td>L/MIN</td>
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<table>
<thead>
<tr>
<th>AIRLOCK SELECTION:</th>
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<tbody>
<tr>
<td>MODEL DISPLACEMENT</td>
</tr>
<tr>
<td>Cu.Ft</td>
</tr>
<tr>
<td>L</td>
</tr>
<tr>
<td>Fill</td>
</tr>
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<td>36/38</td>
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<table>
<thead>
<tr>
<th>BLOWLINE LENGTHS</th>
</tr>
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<tbody>
<tr>
<td>QUANTITY</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>HORIZONTAL:</td>
</tr>
<tr>
<td>VERTICAL:</td>
</tr>
<tr>
<td>ELLS 90°:</td>
</tr>
<tr>
<td>ELLS 45°:</td>
</tr>
<tr>
<td>DIVERSES:</td>
</tr>
<tr>
<td>TOTAL FEET (EQUIVALENT / EMPTY):</td>
</tr>
<tr>
<td>LINE SIZE</td>
</tr>
</tbody>
</table>

| PREP'D PICK-UP VEL. | 3400 | RPM |
| PREP'D TERMINAL VEL. | 4346 | RPM |
| PREP'D EMPTY PRESS. | 0.49 | PSIG |
| PREP'D TOTAL PRESS. | 0.68 | PSIG |
| PREP'D BLOWER VOLUME | 404 | SCFM |
| MIN. CONVEYING VOLUME | 456 | SCFM |

SATURATION: 0.808

<table>
<thead>
<tr>
<th>SCFM</th>
<th>Lock loss</th>
<th>PSIG</th>
<th>Elevation</th>
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<tbody>
<tr>
<td>404</td>
<td>65</td>
<td>8210</td>
<td>0</td>
</tr>
<tr>
<td>469</td>
<td>65</td>
<td>8210</td>
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<table>
<thead>
<tr>
<th>MODEL</th>
<th>Temp rise</th>
<th>% Max. Temp.</th>
<th>BHP</th>
<th>RPM</th>
<th>% Max. RPM</th>
<th>% Max. Press</th>
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<tr>
<td>70</td>
<td>75.59</td>
<td>40</td>
<td>25.36</td>
<td>2200.3</td>
<td>58</td>
<td>58</td>
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</table>
Weather Proof Acoustic Enclosure
• Removable panels for oil changes, replacing parts.
• Double doors for easy access tightening belts or replacing a filter
Exhaust Fan

- Thermostat set @ 70° F
Gauges

- Blower pressure (PSIG)
- Discharge temperature (ºF)
- Filter minder ("WC")
Vibration Pads

- Reduce vibration
- Improve quieter operation
Key Benefits

- < 75 dba. @ 15 psig (3ft. field conditions)
- Weather proof
- Residential areas
- Outdoor applications
Knock Down Acoustic Enclosure

- Alternative to acoustic enclosure
Automatic Adjusting Motor Bases

Key Benefits

• Less maintenance
• Automatic belt tensioning
• Increased bearing life
• Energy efficiency ($)
Automatic Adjusting Motor Bases
Sight Glass Tools
In-line Filter
New Filter Silencer Design

Old Design

New Design
Sound Deadening Foam

- Urethane coated
- Does not peel or crack
- Non hazardous (OSHA)

Discontinued

New Material
Oil Tips

• Use synthetic or food grade synthetic oil in all blowers

• New blowers – change oil after first 100 working hours

• Regular oil changes every 2000 working hours

• Check oil level/quality every 500 hours.
Mobil SHC 630 - Synthetic

- High temperature resistance
- High Viscosity Index
- Reduce friction
- Rust and corrosion prevention
Mobil Cibus 220- Food Grade Synthetic

- FDA / NSF registered lubricants
- Low Potential of leakage
- Rust and corrosion prevention
Maintenance Tips

- Daily operating checks:
  - Outlet temperature
  - Discharge pressure
  - Power absorbed

- Every 500 hours check:
  - Oil condition
  - Belt wear
  - Coupling inserts

- Filter minder on all blowers
THANK YOU!

1-800-388-1339
sam@blowerengineering.com