Proper drying and aeration is essential to maintaining optimal moisture levels after harvest when your grain is in storage. AGI Grain Guard specializes in aeration and conditioning equipment and is committed to providing industry leading products for farm and commercial operations.

If you’re looking for tips and tricks on how to get the most out of your crop, visit aggrowth.com/grain-guard and click on the Support & Resources link located to the right. We have seasonal articles and answers to commonly asked questions.
Centrifugal fans

LOW SPEED | HIGH SPEED | IN-LINE

Low speed centrifugal fans

AGI Grain Guard low speed centrifugal fans are designed to maximize airflow at lower to medium static pressure.

- Available in 5-40 HP galvanized housing with an airfoil blade
- Totally enclosed, fan-cooled, electric motors (TEFC)
- Precision-balanced wheel ensures maximum airflow and efficiency
- Adjustable feet allow fans to be leveled on a concrete pad or support stand
- Aerodynamically designed inlet cone
- Weatherproof electrical controls

<table>
<thead>
<tr>
<th>LOW SPEED (1750 RPM) AIR DELIVERIES (CFM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MODEL</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>GGL-805**</td>
</tr>
<tr>
<td>GGL-807**</td>
</tr>
<tr>
<td>GGL-810**</td>
</tr>
<tr>
<td>GGL-815**</td>
</tr>
<tr>
<td>GGL-8203*</td>
</tr>
<tr>
<td>GGL-8253*</td>
</tr>
<tr>
<td>GGL-8303*</td>
</tr>
<tr>
<td>GGL-8403*</td>
</tr>
</tbody>
</table>

Fan Performance: Airflow (CFM) at Static Pressure (In. Water Gauge)

** Phase and Voltage of fan
**Centrifugal fans**

LOW SPEED | HIGH SPEED | IN-LINE

**High speed centrifugal fans**

AGI Grain Guard high speed centrifugal fans are designed to maximize airflow at medium to high static pressure.

- Available in 3-15 HP powder coated housing with airfoil blade
- Available in 20-40 HP galvanized housing with an airfoil blade
- Totally enclosed, fan-cooled, electric motors (TEFC)
- Precision-balanced wheel ensures maximum airflow and efficiency
- Adjustable feet on larger horsepower units allow the fan to be leveled on a concrete pad or support stand
- Aerodynamically designed inlet cone
- Weatherproof electrical controls

### HIGH SPEED (3550 RPM) AIR DELIVERIES (CFM)

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HP</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
<th>16</th>
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<tbody>
<tr>
<td>GGF-803**</td>
<td>3</td>
<td>3,430</td>
<td>3,120</td>
<td>2,740</td>
<td>2,260</td>
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<tr>
<td>GGF-805**</td>
<td>5</td>
<td>4,800</td>
<td>4,100</td>
<td>3,530</td>
<td>3,140</td>
<td>1,980</td>
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<td>7.5</td>
<td>5,500</td>
<td>5,140</td>
<td>4,560</td>
<td>4,140</td>
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<td>10</td>
<td>6,947</td>
<td>6,258</td>
<td>5,843</td>
<td>5,500</td>
<td>5,150</td>
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<tr>
<td>GGF-8153*</td>
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<td>8,925</td>
<td>8,450</td>
<td>7,955</td>
<td>7,380</td>
<td>6,630</td>
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<tr>
<td>GGF-8203*</td>
<td>20</td>
<td>8,930</td>
<td>8,560</td>
<td>8,190</td>
<td>7,830</td>
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<td>GGF-8253*</td>
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<tr>
<td>GGF-8302*</td>
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<td>10,980</td>
<td>10,050</td>
<td>9,065</td>
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<tr>
<td>GGF-8403*</td>
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<td>16,990</td>
<td>16,290</td>
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<td>14,890</td>
<td>14,190</td>
<td>13,490</td>
<td>12,790</td>
<td>11,740</td>
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</table>

Fan Performance: Airflow (CFM) at Static Pressure (In. Water Gauge)

** Phase and Voltage of fan
In-Line centrifugal fans

AGI Grain Guard in-line centrifugal fans are designed to maximize airflow at low to medium static pressure in cereal grains.

- Available in 3-15 HP sizes
- 18", 24", and 28" powder coated housing
- Precision-balanced steel fan wheel ensures maximum airflow and efficiency
- Aerodynamically designed inlet cone
- Weatherproof electrical controls
- Air-over cooled motor (ODP)

**IN-LINE CENTRIFUGAL FAN AIR DELIVERIES (CFM)**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HP</th>
<th>2</th>
<th>4</th>
<th>6</th>
<th>8</th>
<th>10</th>
<th>12</th>
<th>14</th>
</tr>
</thead>
<tbody>
<tr>
<td>GGI-803**</td>
<td>3</td>
<td>3,690</td>
<td>3,020</td>
<td>2,130</td>
<td>—</td>
<td>—</td>
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<td>—</td>
</tr>
<tr>
<td>GGI-805**</td>
<td>5</td>
<td>5,430</td>
<td>4,790</td>
<td>4,050</td>
<td>1,600</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>GGI-807**</td>
<td>7</td>
<td>6,550</td>
<td>5,950</td>
<td>5,220</td>
<td>4,340</td>
<td>1,560</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>GGI-810**</td>
<td>10</td>
<td>7,750</td>
<td>7,220</td>
<td>6,550</td>
<td>5,850</td>
<td>4,960</td>
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<tr>
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<td>7,715</td>
<td>6,940</td>
<td>6,300</td>
<td>5,337</td>
<td>1,390</td>
</tr>
</tbody>
</table>

Fan Performance: Airflow (CFM) at Static Pressure (In. Water Gauge)

** Phase and Voltage of fan
Supplemental Heaters

Low temperature downstream heaters

AGI Grain Guard low temperature downstream heaters allow for 24 hour grain drying when high humidity conditions prevail. The heater is easily installed between the fan and bin.

- Lowers humidity up to 50%
- 60,000 and 100,000 BTU models raise air temperature approximately 10-12 °C
- 200,000 BTU models raise air temperature approximately 25-30 °C
- Propane or natural gas (operate on lbs. pressure only)
- Available for in-line and high speed centrifugal fans
- Electronic ignition
- High heat limit safety switches
- Airflow and pressure sensing safety devices included
- 60,000 BTU available in 9"x14" or 18" round (3 HP fan)
- 100,000 BTU available in 9"x14" or 24" round (5 HP & 7 HP fans)
- 200,000 BTU available in 12"x17" or 28" round (10 HP fans)

High temperature downstream heaters

AGI high temperature downstream heaters are designed to increase temperature while decreasing humidity. Recommended to be used with a stirrator system, allows for crops to be efficiently and effectively dried inside of your grain bin.

- Two sizes available in both natural gas and liquid propane
  - To fit 5 HP to 15 HP low speed fans
    - LP 200,000 to 2.45 million BTU
    - Natural gas 240,000 to 2.35 million BTU
  - To fit 20 HP to 40 HP low speed fans
    - LP 603,000 to 4.48 million BTU
    - Natural gas 704,000 to 4.23 million BTU
- Adjustable vaporizer on liquid propane models
- Built-in adjustable brackets fit a variety of centrifugal fans
- Electronic ignition
- High heat limit safety switches
- Airflow and pressure sensing safety devices included
- Adjustable airflow baffles allow for successful ignition at low burner pressures
- Remotely mounted control box
- Industrial-grade ignitor and flame probe provide consistent lighting and long service life

Low temperature upstream heaters

AGI’s low temperature upstream heaters are your solution when a slight rise in temperature is required to aid in drying your crop. Low temp heaters are designed to provide a consistent amount of heat which results in less cycling and increases the life of components.

- Available in vapor propane or natural gas models to fit 10 HP to 40 HP Low speed fans
  - Propane 37,500-346,000 BTU
  - Natural gas 59,000 to 335,000 BTU
- Perfect solution for low temperature grain drying when less than 20 °F (11 °C) temperature rise is required
- Built-in adjustable brackets fit a variety of centrifugal fans
- Adjustable airflow baffles allow for successful ignition at low burner pressures
- Remotely mounted control box
- Industrial-grade ignitor and flame probe provide consistent lighting and long service life

Low temperature downstream heaters

AGI Grain Guard low temperature downstream heaters allow for 24 hour grain drying when high humidity conditions prevail. The heater is easily installed between the fan and bin.
Equilibrium Moisture Content (EMC)

EMC reflects moisture levels in grain when exposed to certain humidity levels and temperatures for a period of time.

<table>
<thead>
<tr>
<th>RELATIVE AIR HUMIDITY</th>
<th>10 °C (50 °F)</th>
<th>25 °C (77 °F)</th>
<th>RELATIVE AIR HUMIDITY</th>
<th>10 °C (50 °F)</th>
<th>25 °C (77 °F)</th>
<th>RELATIVE AIR HUMIDITY</th>
<th>10 °C (50 °F)</th>
<th>25 °C (77 °F)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50%</td>
<td>12.60%</td>
<td>11.00%</td>
<td>58%</td>
<td>13%</td>
<td>58%</td>
<td>8.60%</td>
<td>750%</td>
<td></td>
</tr>
<tr>
<td>60%</td>
<td>13.80%</td>
<td>12.40%</td>
<td>64%</td>
<td>14%</td>
<td>64%</td>
<td>9.40%</td>
<td>8.20%</td>
<td></td>
</tr>
<tr>
<td>70%</td>
<td>15.40%</td>
<td>14.00%</td>
<td>70%</td>
<td>15%</td>
<td>70%</td>
<td>10.30%</td>
<td>9.00%</td>
<td></td>
</tr>
<tr>
<td>80%</td>
<td>17.30%</td>
<td>16.00%</td>
<td>75%</td>
<td>16%</td>
<td>75%</td>
<td>11.10%</td>
<td>9.80%</td>
<td></td>
</tr>
<tr>
<td>90%</td>
<td>—</td>
<td>—</td>
<td>83%</td>
<td>18%</td>
<td>83%</td>
<td>13.20%</td>
<td>12.00%</td>
<td></td>
</tr>
<tr>
<td>—</td>
<td>—</td>
<td>—</td>
<td>86%</td>
<td>19%</td>
<td>86%</td>
<td>14.50%</td>
<td>13.40%</td>
<td></td>
</tr>
</tbody>
</table>

**SAFE STORAGE CHARTS**

**INITIAL SEED MOISTURE (%)**

**INITIAL SEED TEMPERATURE (°C)**

**Barley**: spoilage occurs when initial temperature ranges from 5°C to 20 °C with respective moisture from 18% to 10% moisture content.

**Canola**: spoilage occurs when initial temperature ranges from 10 °C to 50 °C with respective moisture from 12% to 7% moisture content.

**Beans**: spoilage occurs when initial temperature ranges from 5 °C to 42 °C with respective moisture from 20% to 10% moisture content.

**Flax**: spoilage occurs when initial temperature ranges from 5 °C to 32 °C with respective moisture from 13% to 6% moisture content.

**Wheat**: spoilage occurs when initial temperature ranges from 0 °C to 28 °C with respective moisture from 18% to 10% moisture content.
GRAIN GUARD is an AGI Brand.

AGI is a leading provider of equipment solutions for agriculture bulk commodities including seed, fertilizer, grain, and feed systems with a growing platform in providing equipment and solutions for food processing facilities. AGI has manufacturing facilities in Canada, the United States, the United Kingdom, Brazil, India and Italy and distributes its products globally.