



Table of Contents

| | | |
|--------|-------------------------------------------------------------|----|
| 1 | Sign-Off Form | 1 |
| 2 | Introduction | 2 |
| 3 | General Information | 2 |
| 4 | Safety | 3 |
| 4.1 | Safety Alert Symbols | 3 |
| 4.2 | General Safety | 3 |
| 4.3 | Electrical Safety | 4 |
| 4.4 | Operational Safety | 5 |
| 4.5 | Emergency Shutdown Procedure:..... | 5 |
| 4.6 | Storage | 5 |
| 4.7 | Preventing Bin Damage | 5 |
| 4.8 | Maintenance Safety | 5 |
| 4.9 | Safety Decals | 6 |
| 4.10 | Decal Installation..... | 6 |
| 4.11 | Decal Maintenance | 6 |
| 4.12 | Decal Replacement | 6 |
| 4.13 | Decal Locations | 6 |
| 5 | General Information | 9 |
| 5.1 | Electrical..... | 9 |
| 5.2 | Fan Blade..... | 9 |
| 6 | List of Features..... | 9 |
| 6.1 | General Features..... | 9 |
| 6.1.1 | Inline Centrifugal Aeration Fan | 9 |
| 6.1.2 | Full Speed Centrifugal Aeration Fan | 9 |
| 6.1.3 | Low Speed Centrifugal Aeration Fan . | 10 |
| 6.1.4 | Motor Features..... | 10 |
| 6.1.5 | BIN-SENSE Ready | 10 |
| 6.1.6 | Fan Weights & Motor Data | 11 |
| 7 | Packing List..... | 16 |
| 7.1 | Inline Centrifugal Fans..... | 16 |
| 7.2 | Centrifugal Aeration Fans..... | 16 |
| 7.3 | Low/High Speed Centrifugal Fans | 16 |
| 7.4 | Turbo Aeration Fans..... | 16 |
| 8 | Fan Model Specifications | 17 |
| 8.1 | Centrifugal Aeration Fans..... | 17 |
| 8.2 | Full Speed Centrifugal Fan Specifications and Data | 20 |
| 8.3 | Inline Centrifugal Fan Specifications and Data | 21 |
| 8.4 | Turbo Fan Specifications and Data | 22 |
| 8.5 | Low Speed Centrifugal Fan Specifications and Data | 23 |
| 8.6 | High Speed Fan Specifications and Data | 24 |
| 9 | Performance | 25 |
| 10 | Installation Instructions | 26 |
| 10.1 | Mechanical Check | 26 |
| 10.2 | Foundation as Required For Fan | 26 |
| 10.3 | Installation of the Fan..... | 27 |
| 10.3.1 | Fastening the Aeration Fan to a Flanged Adapter..... | 27 |
| 10.3.2 | Inline Centrifugal & Turbo Fan Installation | 27 |
| 10.3.3 | Low Speed Fan Installation..... | 27 |
| 10.3.4 | Full Speed Centrifugal Fan Installation | 28 |
| 10.4 | Electrical Installation | 29 |
| 10.4.1 | General Instructions | 29 |
| 10.4.2 | Electrical Service Installation..... | 29 |
| 10.4.3 | Motor Safety..... | 29 |
| 10.4.4 | Motor Enclosure | 29 |
| 10.4.5 | Electrical Connection at the Fan.... | 29 |
| 10.4.6 | Wiring | 30 |
| 10.4.7 | Installation of Accessories | 30 |
| 11 | Operating Instructions | 31 |
| 11.1 | Before Starting the Fan | 31 |
| 11.2 | Starting the Fan | 31 |
| 12 | Maintenance..... | 32 |
| 12.1 | Inspection..... | 32 |
| 12.2 | Fan Operation in Off-Season | 32 |
| 12.3 | Fan Motor Maintenance | 32 |
| 12.4 | Drain Plugs | 32 |
| 12.5 | Motor Lubrication | 32 |
| 12.6 | Lubrication Information | 33 |
| 12.7 | Lubrication Instructions | 33 |
| 12.8 | Lubrication Procedure..... | 33 |
| 12.9 | Lubrication Intervals..... | 33 |
| 12.10 | Fan Rotor Cleanliness | 34 |
| 13 | Troubleshooting..... | 35 |
| 13.1 | Troubleshooting Scenarios..... | 35 |
| 14 | Parts List..... | 35 |
| 14.1 | Ordering Parts | 35 |
| 14.2 | Turbo Fans..... | 36 |
| 14.3 | Inline Centrifugal Fans..... | 37 |
| 14.4 | Full Centrifugal | 38 |
| 14.5 | Low Speed Centrifugal Fans | 39 |
| 14.6 | High Speed Fans | 40 |
| 15 | Wiring Diagrams | 41 |
| 16 | Accessories..... | 51 |
| 16.1 | Bin Transitions..... | 51 |
| 16.1.1 | Low Speed Bin Transitions..... | 53 |
| 16.2 | Fan Socks..... | 54 |
| 16.2.1 | Fan Sock Clamps | 55 |
| 16.3 | Rover Aeration Fan Cart..... | 55 |
| | Warranty Registration | |
| | Warranty & Limitations | |

1 Sign-Off Form

S3 AIR SYSTEMS follows the general Safety Standards specified by the American Society of Agricultural and Biological Engineers (ASABE) American National Standards Institute, Canadian Standards Association, International Organization for Standardization, Occupational Safety and Health Administration (OSHA) and/or others. Anyone operating and/or maintaining the Aeration Fan must read and clearly confirm that they understand ALL Safety, Operating and Maintenance Information presented in this manual.

S3 AIR SYSTEMS recommends all personnel that intend to use the Aeration Fan, read the operators manual and will follow the safety precautions and instructions and will operate and maintain this equipment safely. S3 AIR SYSTEMS recommends that all users “sign off” below which confirms their agreement concerning safety.

Periodic reviews of this manual with all employees should be standard practice. For your convenience, we include this sign-off sheet so you can record your operation safety training and periodic reviews.

| DATE | EMPLOYEE NAME | SIGNATURE |
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|-----------------------|
| Model Number |
| Serial Number |
| Line Voltage |
| Dealer Purchased from |
| Bin Diameter |
| Date of Purchase |



2 Introduction

Congratulations on your purchase of a S3 AIR SYSTEMS Aeration Fan. Our fans represent the top of the line in Aeration Equipment. This fan has been engineered to provide optimum performance for your aeration needs.

This manual should be read in its entirety as your first source of information about the machine. If all the instructions are followed in this manual, you will mitigate the potential of any premature and unexpected failures.

Keep this manual handy for frequent reference. Contact your local supplier dealer if you need assistance. The following information is necessary for prompt and accurate assistance:

Please read all instructions and warnings thoroughly.

If, after studying this manual, you are unable to install or service your aeration fan, please contact the supplier from which you purchased the unit. Be prepared to provide the information listed on the Serial Plate as well as the details of application, i.e. bin diameter and type, grain depth and type, etc.

If further assistance is required, your dealer will refer you to the S3 AIR SYSTEMS Customer Service Department at 1-844-441-2020 for immediate attention.

3 General Information

S3 AIR SYSTEMS Centrifugal Aeration Fans sold by S3 AIR SYSTEMS are 100% CSA certified fans and components designed primarily for use in grain aeration or grain drying systems. All units are driven by electrical motors which are rated for continuous duty. Both fan housing and frame are fabricated of steel while the rotor is aluminum. The rotor has a unique blade design and is mounted directly to the motor shaft. A concentric circle screen guard covers the air inlet to comply with safety requirements and minimize exposure to any related safety risks.

S3 AIR SYSTEMS reserves the right to modify design of the S3 AIR SYSTEMS Aeration Fan in whole or in part without notice.

4 Safety

In order to operate this equipment safely, a complete understanding of the potential hazards present and the meaning of the warning decals is needed. Safety should be your first priority.

4.1 Safety Alert Symbols



This Safety Alert Symbol identifies important safety messages as posted on the product and referred to in this manual. When you see this symbol, be alert to the possibility of personal injury or death. Follow the instructions in the safety message.

Why is SAFETY important to you?

- Accidents Disable and Kill
- Accidents Cost Time and Money
- Accidents Can be Avoided

The Key Safety Signal Words below are used in the manual and on the safety decals, along with the Safety Alert Symbol. The appropriate signal word for each message has been selected using the identified definition as a guideline.



DANGER indicates an imminent hazard that, if not avoided, will result in death or serious injury.



WARNING indicates a potentially hazard that, if not avoided, could result in death or serious injury.



CAUTION indicates a potential hazard that, if not avoided, may result in minor or moderate injury.



NOTICE is used to address practices not related to personal injury.

4.2 General Safety

YOU are responsible for the SAFE operation and maintenance of your S3 AIR SYSTEMS Aeration Fan. YOU must ensure that you and anyone else who is going to operate, maintain, adjust, disconnect, or work around the Aeration Fan understands all procedures and related SAFETY information contained in this manual.

Remember, YOU are the key to safety. Good safety practices not only protect you, but also the people around you. Make these practices a working part of your safety program.

- It is the equipment owner and the operator's responsibility to read and understand ALL safety instructions, safety decals, and manuals and follow them before operating, or maintaining the Aeration Fan.
- Equipment owners must give instruction and review the information initially and annually with all personnel before allowing them to operate this product. Untrained users/operators expose themselves and bystanders to possible serious injury or death.

- Do not modify your S3 AIR SYSTEMS Aeration Fan in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the equipment. Any unauthorized modification to the equipment voids the warranty.
- Disconnect power before servicing.
- Keep hands and other objects away from inlet while the machine is operating. The rotating impeller will cause serious injury if contacted while it is rotating.
- Prior to operating this equipment, be sure to read and understand the operator's manual. If there is any portion you do not understand, or any phase of the machine's operation you do not understand, be sure to contact your dealer or S3 AIR SYSTEMS.
- Have a first-aid kit available for use should the need arise and know how to use it.
- Provide a fire extinguisher for use in case of a fire.
- Store the fan in a highly visible place.
- Wear protective gear. This list includes but is not limited to:
 - Protective shoes with slip resistant soles
 - Protective goggles
 - Work gloves
 - Hearing protection
 - Respirator or filter mask
- Make sure all persons are clear of the equipment when in operation. Failure to follow any of the above warnings may cause serious bodily injury or death.
- Use the Aeration Fan for its intended purposes only.
- Do not allow children, animals, or bystanders within the work area.
- Never operate the Aeration Fan with safety shields/guards removed.
- Never conduct maintenance on the equipment when parts are moving. Be aware of the moving parts.



4.3 Electrical Safety

- The electrical installation must be performed by a certified electrician, in accordance with the appropriate federal and local electrical codes.
- The motor must be connected to protective ground/earth at the terminal provided.
- The control system must include short circuit protection and overload current protection.
- It is recommended to provide ground / earth leakage protection, such as residual current device (RCD) or residual current circuit breaker (RCCB) to provide automatic disconnection from the power in the event of a fault.

NOTICE

Any violation of electrical wiring codes could jeopardize the manufacturer's warranty.

4.4 Operational Safety

WARNING

Before operating, maintaining, adjusting or disconnecting the Aeration Fan, turn the machine to off, wait for all the moving parts to stop, and unplug the electrical cord. If your aeration fan does not connect via a plug, turn off primary power supply and Lockout- tag out the equipment.

4.5 Emergency Shutdown Procedure:

In case of emergency, immediately shut off the Aeration Fan power source. To minimize the potential of injury, it is recommended that you:

- Read and understand the Operator's Manual and all Safety Signs before operating.
- Do not operate if any of the guards or shields are removed or damaged.
- Do not wear loose fitting clothing that may catch in moving parts.
- Be sure there are no tools or other foreign objects laying on or in the machine or blocking the inlet.
- Do not allow children, spectators, or bystanders within the work area.
- Do not start the machine until you are sure everyone is clear.
- Be sure the machine is mounted properly to the bin.
- Be sure the electrical cords are not damaged in any way.
- Accumulation of dirt or foreign material in the blower rotor may cause imbalance or excessive vibration. Inspect daily, thoroughly clean when necessary.
- Keep hands, feet and clothing away from moving parts, especially the air intake area of the fan.
- Do not clean, adjust or lubricate your equipment while it is running.

- Never sit or stand on this machine while it is in operation.
- Stay clear of fan discharge area.

4.6 Storage

- Store the fan on a firm, level surface.
- Store away from areas of human activity.
- Do not permit children to play on or around the fan.

4.7 Preventing Bin Damage

- Ensure there is enough venting on the bin roof to minimize condensation.
- Only use the fan in a positive aeration system. Do not use the fan on a bin in a suction / negative pressure aeration system.
- Be sure all roof vents are open and unobstructed before fan is started.
- Do not operate fan when conditions may cause roof vent or intake ports to freeze.

4.8 Maintenance Safety

WARNING

Before operating, maintaining, or disconnecting the fan, turn fan off, disconnect power, and wait for all moving parts to stop, then Lockout- tag out equipment.

WARNING

Failure to follow all the safety instructions below in Maintenance Safety Section can result in serious injury, death and/or property damage.

Prior to initiating any maintenance, it is critical that the following pre-maintenance protocol is followed:

- Fan can "free wheel" under any air movement even with power off and

disconnected. Ensure the rotor is locked from freewheeling prior to servicing the fan.

- Use only tools, jacks and hoists of sufficient capacity for the job.
- Make sure all the guards and shields are in place and properly secured when the maintenance work is completed.
- Keep body, hair and clothing away from all moving and/or rotating parts.
- Do not allow children, spectators, or bystanders within the work area.
- Use only genuine S3 AIR SYSTEMS replacement parts or equivalent. Replacement parts must meet ASABE standards. Use of unauthorized parts will void warranty. If in doubt, contact your S3 AIR SYSTEMS dealer.
- Remove rotor locking device and replace all guards before re-starting the fan.

4.9 Safety Decals

S3 AIR SYSTEMS reserves the right to update safety decals on new fans without notice to owners of older fans. Safety decals may not be exactly as shown.

4.10 Decal Installation

- Be sure that the installation area is clean and dry.
- Determine the exact position before you remove the backing paper.
- Place the decal over the specified area and carefully press a small portion with the exposed sticky backing in place.
- Slowly peel back the remaining paper and carefully smooth the remaining portion of the decal in place.
- Small air pockets can be pierced with a pin and smoothed out using the decal backing paper.

4.11 Decal Maintenance

- Keep the safety decals clean and legible at all times.
- Replace any safety decals and signs that are missing or have become illegible.

4.12 Decal Replacement

- Ensure the new equipment components installed during any repair include the current safety decals specified by the component manufacturer to be affixed to the replaced components.
- Replacements for damaged or missing safety decals are available from your authorized dealer or S3 AIR SYSTEMS.
- The complete decal sheet can be found on the following page. The numbers beside each decal coincide with the descriptions in the Decal Locations section.

4.13 Decal Locations

The types of decals and location on the equipment are shown on the following page. A good safety practice requires that you familiarize yourself with the various safety decals, the type of warning and the area, or particular function related to that area, that requires your SAFETY AWARENESS.

Note: If Safety Decals have been damaged, removed, become illegible or parts are replaced without decals, new decals must be applied.

Note: Decal No. 1 will either read 230 VOLTS, 460 VOLTS or 600 VOLTS, depending on the voltage rating of your fan.

Continued on next page

Decal Locations, *Continued*

1

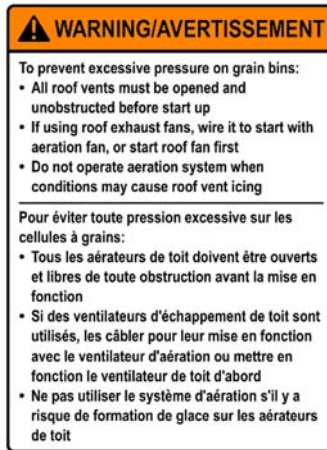


Note:

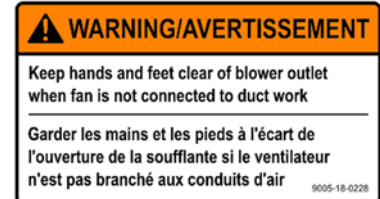
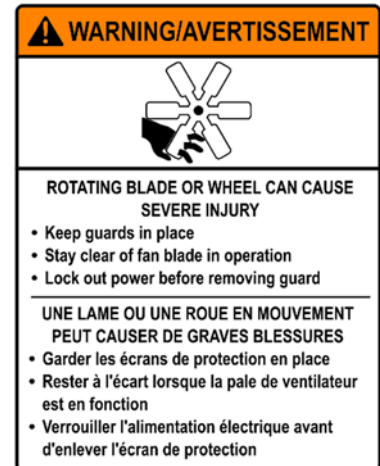
Decal 9005-18-0026 for fan voltage rating of 480V

Decal 9005-18-0227 for fan voltage rating of 600V

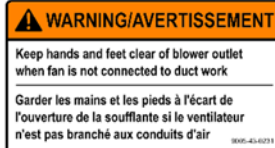
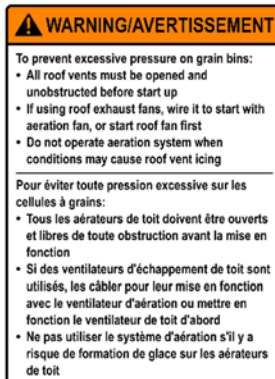
2



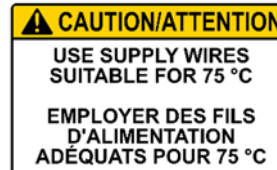
3



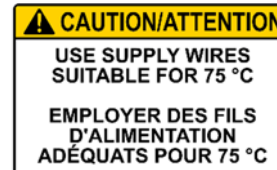
4



5



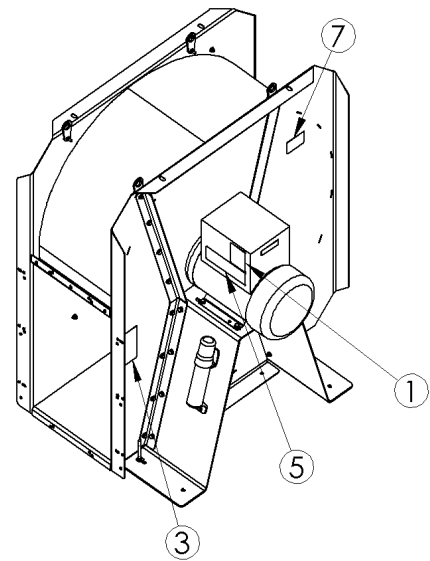
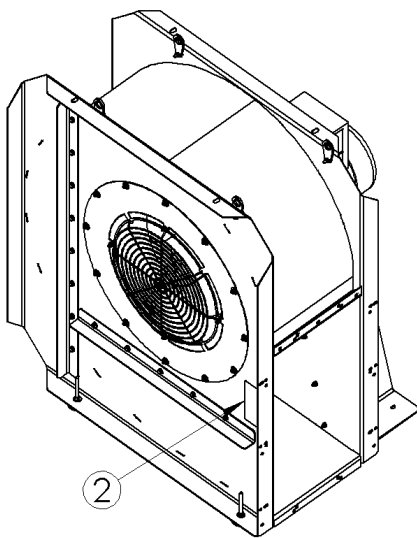
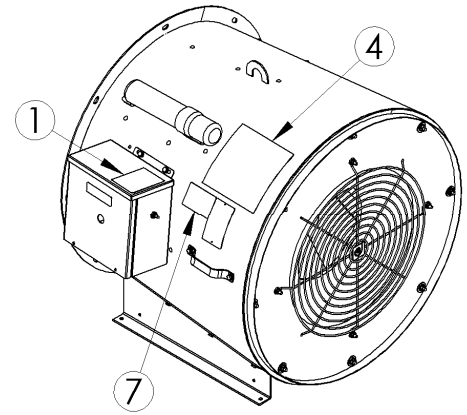
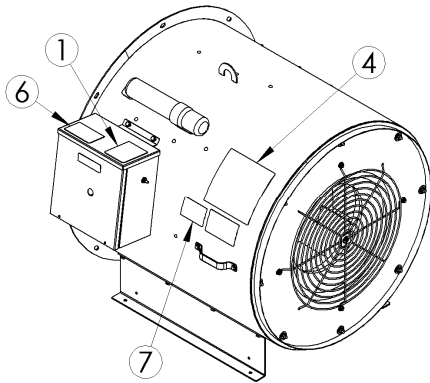
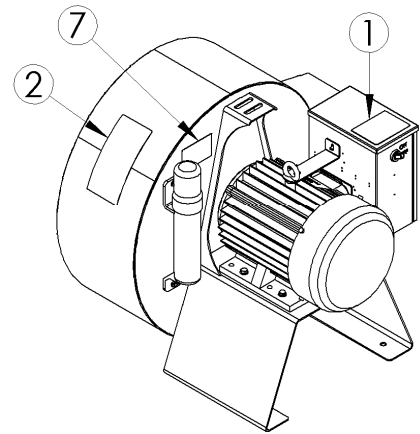
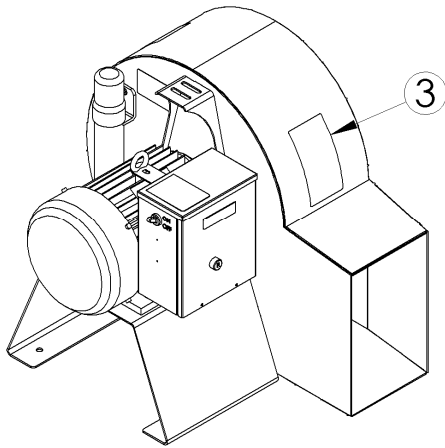
6



7



Decal Locations, *Continued*



5 General Information

5.1 Electrical

The unit utilizes electricity as the source of energy. When the power is connected properly, and protective covers are in place, the unit poses no direct hazard.



WHEN INSTALLING OR SERVICING THE ELECTRICAL COMPONENTS, ALWAYS SHUT THE POWER OFF AT THE FAN DISCONNECT AND LOCKOUT- TAG OUT THE FAN DISCONNECT IN THE OFF POSITION SO NO POWER CAN BE DELIVERED TO THE FAN WHILE YOU ARE SERVICING THE UNIT.



IF PERFORMING ELECTRICAL CHECKS WITH THE POWER ON, USE A VOLTMETER AND BE CAREFUL NOT TO CONTACT LIVE PARTS.

5.2 Fan Blade

The unit has a fan blade rotating turning at high speed while it is in operation. When guarded with the screen guard it poses no direct hazard.



MAKE SURE THE SCREEN GUARD IS SECURELY ATTACHED AND FASTENED IN PLACE.



WHEN SERVICING THE FAN BLADE, MAKE SURE THE ELECTRICAL POWER IS SHUT OFF AT THE FAN DISCONNECT, AND LOCK THE FAN DISCONNECT IN THE OFF POSITION.

6 List of Features

6.1 General Features

6.1.1 Inline Centrifugal Aeration Fan

The Inline Centrifugal Fan has been designed for applications that require airflow at high static pressures. The Inline Centrifugal Fan utilizes a centrifugal rotor and inlet specifically designed for smooth, quiet, efficient operation. The fan incorporates the following features:

- 100% CSA Certified fan and components.
- Heavy gauge steel housing with platform feet
- Inlet Bell for high efficiency
- Air straighteners to efficiently align the air stream
- Baffles to increase efficiency
- Aluminum fan rotor for a lightweight efficient design and corrosion resistance
- Powder coated body and zinc-plated screen for long life
- Internal motor that is 100% CSA Certified and thermally protected
- Rain-tight control enclosure

6.1.2 Full Speed Centrifugal Aeration Fan

The Full speed Centrifugal Aeration Fan has been designed for applications that require high static pressures. The Full speed Centrifugal Aeration Fan utilizes a centrifugal rotor which spins at a nominal 3450 rpm. The fan incorporates the following features:

- 100% CSA Certified fan and components.
- Heavy gauge steel housing with platform feet
- Heavy duty support over center of gravity for easy and strong suspended install style.
- Inlet Bell for high efficiency
- Tapered exhaust to fit tight into bin aeration inlets.

- Aluminum fan rotor for a lightweight efficient design and corrosion resistance
- Powder coated body and zinc-plated screen for long life
- Internal motor that is 100% CSA Certified and thermally protected
- Rain-tight control enclosure

- 230 VAC / 460 VAC / 600VAC
- 60 Hz
- Integral connection leads or a standard plug in version in available as an option
- Base mounted to frame using 4 bolts

All S3 AIR SYSTEMS fans are certified by the Canadian Standards Association.

6.1.3 Low Speed Centrifugal Aeration Fan

The Low speed Centrifugal Aeration Fan has been designed for applications that require very high flow and pressure. The Low speed Centrifugal Aeration Fan utilizes a centrifugal rotor spinning at a nominal 1750 rpm. The fan incorporates the following features:

- 100% CSA Certified fan and components
- Heavy gauge steel housing and mounting platform
- Heavy duty lifting lugs for easy and strong suspended install style
- Cone inlet for high efficiency
- Aluminum fan rotor for a lightweight efficient design and corrosion resistance
- Powder coated body and zinc-plated screen for long life
- Internal motor thermal protection
- Rain tight control enclosure

6.1.5 BIN-SENSE Ready

BIN-SENSE® is an electronic sensor device by IntraGrain Technologies Inc. in Regina, Saskatchewan. It monitors the conditions inside the grain bin and live updates can be monitored & controlled wirelessly as well as managed through predefined optimal settings, which starts/stops the fan accordingly.

Bin-Sense ready fans are equipped with easy to install switch/circuitry for Bin-Sense. This results in a huge advantage while installing the Bin-Sense unit on fans in terms of ease of installation and time saved.

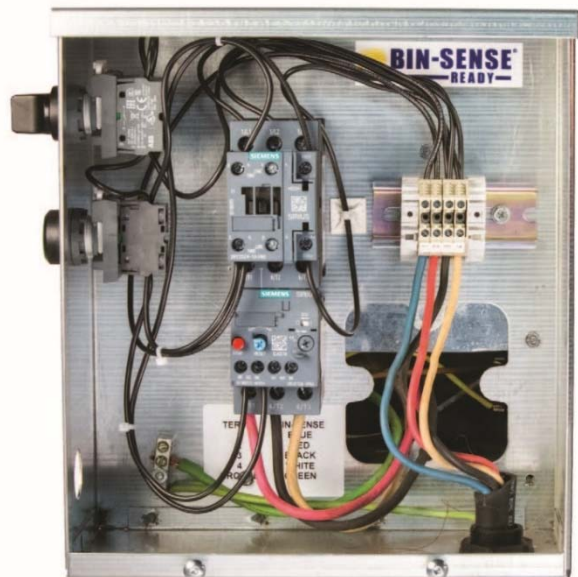
All fans are Bin-Sense ready except 3 & 5 HP FC-single phase fans. Upon request, S3 AIR SYSTEMS can provide a quote to have these fans Bin-Sense ready.

6.1.4 Motor Features

The electric motors used in S3 AIR SYSTEMS Aeration Fans comply with applicable CSA standards and incorporate the following features:

- Internal thermal protection
- Sealed capacitor motor starter built for trouble free operation
- Energy efficient operation
- Cool operation
- Unequaled dependability
- Quick start-up
- Sealed bearings for long life

All S3 AIR SYSTEMS Aeration Fans electric motors are available in both single-phase and three-phase configurations and offer the following specifications:



6.1.6 Fan Weights & Motor Data

| Full Centrifugal Fan Weights & Motor Data | | | | | | | | |
|------------------------------------------------------|------------|-------|----------------|------|----------------|---------------------|-------------------------------|------------------|
| Fan | Motor Data | | | | | | | Fan Weight (lbs) |
| | Enclosure | Frame | Full Load Amps | RPM | Service Factor | Class of Insulation | Protection | |
| 3HP 1PH 230V | TEFC | 145TZ | 14.5 | 3450 | 1.35 | F | Thermal Protection in Motor | 175 |
| 3HP 3PH 230V | TEFC | 182T | 8 | 3450 | 1.4 | F | Thermal Protection in Starter | 185 |
| 3HP 3PH 480V | TEFC | 182T | 4 | 3450 | 1.4 | F | Thermal Protection in Starter | 185 |
| 3HP 3PH 600V | TEFC | 182T | 3.2 | 3450 | 1.4 | F | Thermal Protection in Starter | 185 |
| 5HP 1PH 230V | TEFC | 184TZ | 20 | 3450 | 1.5 | F | Thermal Protection in Motor | 215 |
| 5HP 3PH 230V | TEFC | 184T | 12.4 | 3450 | 1.4 | F | Thermal Protection in Starter | 230 |
| 5HP 3PH 480V | TEFC | 184T | 6.2 | 3450 | 1.4 | F | Thermal Protection in Starter | 230 |
| 5HP 3PH 600V | TEFC | 184T | 5 | 3450 | 1.3 | F | Thermal Protection in Starter | 230 |
| 7.5HP 1PH 230V | TEFC | 215Z | 30.5 | 3450 | 1.33 | F | Thermal Protection in Motor | 290 |
| 7.5HP 3PH 230V | TEFC | 213T | 17 | 3450 | 1.3 | F | Thermal Protection in Starter | 320 |
| 7.5HP 3PH 480V | TEFC | 213T | 8.5 | 3450 | 1.3 | F | Thermal Protection in Starter | 320 |
| 7.5HP 3PH 600V | TEFC | 213T | 6.8 | 3450 | 1.3 | F | Thermal Protection in Starter | 320 |
| 10HP 1PH 230V | TEFC | 215Z | 40 | 3450 | 1.15 | H | Thermal Protection in Motor | 325 |
| 10HP 3PH 230V | TEFC | 215T | 22.8 23.5 | 3450 | 1.3 1.15 | F | Thermal Protection in Starter | 355 |
| 10HP 3PH 480V | TEFC | 215T | 11.4 11.8 | 3450 | 1.3 1.15 | F | Thermal Protection in Starter | 355 |
| 10HP 3PH 600V | TEFC | 215T | 9.1 9.4 | 3450 | 1.3 1.15 | F | Thermal Protection in Starter | 355 |

Continued on next page

Fan Weights & Motor Data, *Continued*

| Inline Aeration Fan Weights & Motor Data | | | | | | | |
|-----------------------------------------------------|--------------------|----------------|------|---------------------------|---------------------|--------------------------------------------------------------|------------------|
| Fan | Motor Data | | | | | | Fan Weight (lbs) |
| | Enclosure | Full Load Amps | RPM | Service Factor | Class of Insulation | Protection | |
| 3HP 1PH 230V | DPAO TEAO | 19 18.5 | 3450 | 1.5/1.0 1 | F | Thermal Protection in Motor Thermal Protection In Starter | 135 |
| 3HP 3PH 230V | TEAO | 12 | 3450 | 1 | H | Thermal Protection in Starter | 160 |
| 3HP 3PH 480V | TEAO | 6 | 3450 | 1 | H | Thermal Protection in Starter | 160 |
| 5HP 1PH 230V | DPAO TEAO | 28 | 3450 | 1.4/1.0 1 | F H | Thermal Protection in Starter | 210 |
| 5HP 3PH 230V | DPAO TEAO | 19.5 18 | 3450 | 1 | F | Thermal Protection in Starter | 220 |
| 5HP 3PH 480V | DPAO TEAO | 9.75 9 | 3450 | 1 | F | Thermal Protection in Starter | 220 |
| 5HP 3PH 600V | DP TEAO | 7.45 | 3450 | 1 | F | Thermal Protection in Starter | 220 |
| 7.5HP 1PH 230V | DPAO TEAO | 42 38 | 3450 | 1.3/1.0 1 | F | Thermal Protection in Starter | 230 |
| 7.5HP 3PH 230V | DPAO TEAO | 23.5 23 | 3450 | 1 | F | Thermal Protection in Starter | 220 |
| 7.5HP 3PH 480V | DPAO TEAO | 11.7 11.5 | 3450 | 1 | F | Thermal Protection in Starter | 220 |
| 7.5HP 3PH 600V | DPAO TEAO | 9.4 | 3450 | 1 | F | Thermal Protection in Starter | 220 |
| 10HP 1PH 230V | DP TEAO | 61.5 61 | 3450 | 1.15/1.0 1 | F | Thermal Protection in Starter | 315 |
| 10HP 3PH 230V | DP DPAO OPEN | 40 40 36 | 3450 | 1.15/1.0 1.15/1.0 1 | B F F | Thermal Protection in Starter | 260 |
| 10HP 3PH 480V | DP DPAO OPEN | 20 20 18 | 3450 | 1.15/1.0 1.15/1.0 1 | B F F | Thermal Protection in Starter | 260 |
| 10HP 3PH 600V | DPAO OPEN | 15.3 | 3450 | 1.5/1.0 1 | F | Thermal Protection in Starter | 260 |
| 15HP 1PH 230V | DP TEAO | 61.5 61 | 3450 | 1.15/1.0 1 | F | Thermal Protection in Starter | 325 |
| 15HP 3PH 230V | DP DPAO OPEN | 40 40 36 | 3450 | 1.15/1.0 1.15/1.0 1 | B F F | Thermal Protection in Starter | 270 |
| 15HP 3PH 480V | DP DPAO OPEN | 20 20 18 | 3450 | 1.15/1.0 1.15/1.0 1 | B F F | Thermal Protection in Starter | 270 |
| 15HP 3PH 600V | DPAO OPEN | 15.3 | 3450 | 1.5/1.0 1 | F | Thermal Protection in Starter | 270 |

*Note: For motors without inherent overheating protection, these motors are coupled with a motor starter box that has thermal protection circuitry – with separate motor overload and overheating protection which complies with the Canadian Electrical Code, Part 1.

Continued on next page

Fan Weights & Motor Data, Continued

| Turbo Fan Weights & Motor Data | | | | | | | |
|-------------------------------------------|------------|----------------|------|----------------|---------------------|-------------------------------|------------------|
| Fan | Motor Data | | | | | | Fan Weight (lbs) |
| | Enclosure | Full Load Amps | RPM | Service Factor | Class of Insulation | Protection | |
| 3HP 1PH 230V | DPAO | 19 | 3450 | 1.5/1.0 | F | Thermal Protection in Motor | 140 |
| | TEAO | 18.5 | | 1 | | Thermal Protection in Starter | |
| 5HP 1PH 230V | DPAO | 28 | 3450 | 1.4/1.0 | F | Thermal Protection in Starter | 210 |
| | TEAO | | | 1 | H | | |
| 5HP 3PH 230V | DPAO | 19.5 | 3450 | 1 | F | Thermal Protection in Starter | 210 |
| | TEAO | 18 | | | | | |
| 5HP 3PH 480V | DPAO | 9.75 | 3450 | 1 | F | Thermal Protection in Starter | 210 |
| | TEAO | 9 | | | | | |
| 5HP 3PH 600V | DP | 7.45 | 3450 | 1 | F | Thermal Protection in Starter | 210 |
| | TEAO | | | | | | |
| 7.5HP 1PH 230V | DPAO | 42 | 3450 | 1.3/1.0 | F | Thermal Protection in Starter | 235 |
| | TEAO | 38 | | 1 | | | |
| 7.5HP 3PH 230V | DPAO | 23.5 | 3450 | 1 | F | Thermal Protection in Starter | 235 |
| | TEAO | 23 | | | | | |
| 7.5HP 3PH 480V | DPAO | 11.7 | 3450 | 1 | F | Thermal Protection in Starter | 235 |
| | TEAO | 11.5 | | | | | |
| 7.5HP 3PH 600V | DPAO | 9.4 | 3450 | 1 | F | Thermal Protection in Starter | 235 |
| | TEAO | | | | | | |

*Note: For motors without inherent overheating protection, these motors are coupled with a motor starter box that has thermal protection circuitry – with separate motor overload and overheating protection which complies with the Canadian Electrical Code, Part 1.

Continued on next page

Fan Weights & Motor Data, Continued

| High Speed Fan Weights & Motor Data | | | | | | | | |
|------------------------------------------------|------------|-------|----------------|------|----------------|---------------------|-------------------------------|------------------|
| Fan | Motor Data | | | | | | | Fan Weight (lbs) |
| | Enclosure | Frame | Full Load Amps | RPM | Service Factor | Class of Insulation | Protection | |
| 20HP 3PH 230V | TEFC | 256T | 46 45.8 | 3600 | 1.15 1.3 | F | Thermal Protection in Starter | 600 |
| 20HP 3PH 480V | TEFC | 256T | 23 22.9 | 3600 | 1.15 1.3 | F | Thermal Protection in Starter | 600 |
| 20HP 3PH 600V | TEFC | 256T | 18.4 18.3 | 3600 | 1.15 1.2 | F | Thermal Protection in Starter | 600 |
| 25HP 3PH 230V | TEFC | 284TS | 57.6 59 | 3600 | 1.15 1.2 | F | Thermal Protection in Starter | 640 |
| 25HP 3PH 480V | TEFC | 284TS | 28.8 29.5 | 3600 | 1.15 1.2 | F | Thermal Protection in Starter | 640 |
| 25HP 3PH 600V | TEFC | 284TS | 23 23.6 | 3600 | 1.15 1.2 | F | Thermal Protection in Starter | 640 |
| 30HP 3PH 230V | TEFC | 284TS | 70 70.4 | 3600 | 1.15 1.2 | F | Thermal Protection in Starter | 680 |
| 30HP 3PH 480V | TEFC | 286TS | 35 35.2 | 3600 | 1.15 1.2 | F | Thermal Protection in Starter | 680 |
| 30HP 3PH 600V | TEFC | 286TS | 27.7 28.2 | 3600 | 1.15 1.2 | F | Thermal Protection in Starter | 680 |
| 40HP 3PH 480V | TEFC | 324TS | 46 45 | 3600 | 1.15 | F | Thermal Protection in Starter | 775 |
| 40HP 3PH 600V | TEFC | 324TS | 37 36 | 3600 | 1.15 | F | Thermal Protection in Starter | 775 |

Continued on next page

Weights & Motor Data, *Continued*

| Low Speed Fan Weights & Motor Data | | | | | | | | |
|-----------------------------------------------|------------|-------|----------------|------|----------------|---------------------|-------------------------------|------------------|
| Fan | Motor Data | | | | | | | Fan Weight (lbs) |
| | Enclosure | Frame | Full Load Amps | RPM | Service Factor | Class of Insulation | Protection | |
| 10HP 1PH 230V | TEFC | 215T | 40 | 1750 | 1 | F | Thermal Protection in Motor | 530 |
| 10HP 3PH 230V | TEFC | 215T | 25.7 25 | 1750 | 1.15 1.3 | F | Thermal Protection in Starter | 570 |
| 10HP 3PH 480V | TEFC | 215T | 12.3 12.5 | 1750 | 1.15 1.3 | F | Thermal Protection in Starter | 570 |
| 10HP 3PH 600V | TEFC | 215T | 10.3 10 | 1750 | 1.3 | F | Thermal Protection in Starter | 570 |
| 15HP 3PH 230V | TEFC | 254T | 36 34.6 | 1750 | 1.15 1.3 | F | Thermal Protection in Starter | 750 |
| 15HP 3PH 480V | TEFC | 254T | 18 17.3 | 1750 | 1.15 1.3 | F | Thermal Protection in Starter | 750 |
| 15HP 3PH 600V | TEFC | 254T | 14.5 13.8 | 1750 | 1.15 1.3 | F | Thermal Protection in Starter | 750 |
| 20HP 3PH 230V | TEFC | 256T | 47 45.8 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 800 |
| 20HP 3PH 480V | TEFC | 256T | 23.7 22.9 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 800 |
| 20HP 3PH 600V | TEFC | 256T | 18.9 18.3 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 800 |
| 25HP 3PH 230V | TEFC | 284T | 58.4 61 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 890 |
| 25HP 3PH 480V | TEFC | 284T | 29.2 30.5 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 890 |
| 25HP 3PH 600V | TEFC | 284T | 23.3 24.4 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 890 |
| 30HP 3PH 230V | TEFC | 286T | 70 75 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 960 |
| 30HP 3PH 480V | TEFC | 286T | 35 37.5 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 960 |
| 30HP 3PH 600V | TEFC | 286T | 28.1 30 | 1750 | 1.15 1.2 | F | Thermal Protection in Starter | 960 |

7 Packing List

This shipment should contain the following items:
 Check carefully when unpacking and before installing. In case of any shortage or damage while in shipment, file a claim with the carrier.

7.1 Inline Centrifugal Fans

| Component | Description | Quantity |
|------------------------|---------------------------------------|----------|
| Inline Aeration Fan | Inline Fan Assembly | 1 |
| Manual | Installation, Operation & Maintenance | 1 |
| Motor Service Bulletin | Motor Service Centres | 1 |
| Warranty | Motor Warranty | 1 |

7.2 Centrifugal Aeration Fans

| Component | Description | Quantity |
|-------------------------------|---------------------------------------|----------|
| Full Centrifugal Aeration Fan | Full Centrifugal Fan Assembly | 1 |
| Manual | Installation, Operation & Maintenance | 1 |
| Motor Service Bulletin | Motor Service Centres | 1 |
| Warranty | Motor Warranty | 1 |

7.3 Low/High Speed Centrifugal Fans

| Component | Description | Quantity |
|-----------------------------|---------------------------------------|----------|
| Low/High Speed Aeration Fan | Low/High Speed Fan Assembly | 1 |
| Manual | Installation, Operation & Maintenance | 1 |
| Motor Service Bulletin | Motor Service Centres | 1 |
| Warranty | Motor Warranty | 1 |

7.4 Turbo Aeration Fans

| Component | Description | Quantity |
|------------------------|---------------------------------------|----------|
| Turbo Aeration Fan | Turbo Fan Assembly | 1 |
| Manual | Installation, Operation & Maintenance | 1 |
| Motor Service Bulletin | Motor Service Centres | 1 |
| Warranty | Motor Warranty | 1 |

8 Fan Model Specifications

8.1 Centrifugal Aeration Fans

| Fan ID | Wt. (lbs) | Description |
|--------------------------------------|-----------|-----------------------------------------------|
| Full Centrifugal Fans (Single Phase) | | |
| 0312FC | 175 | 3HP Full Centrifugal Fan (230, 1 Phase) |
| 0512FC | 215 | 5HP Full Centrifugal Fan (230, 1 Phase) |
| 0712FC | 290 | 7.5HP Full Centrifugal Fan (230, 1 Phase) |
| 1012FC | 345 | 10HP Full Centrifugal Fan (230, 1 Phase) |
| Inline Fans (Single Phase) | | |
| 0312IL | 135 | 3HP Inline Centrifugal Fan (230, 1 Phase) |
| 0512IL | 230 | 5HP Inline Centrifugal Fan (230, 1 Phase) |
| 0712IL | 260 | 7.5HP Inline Centrifugal Fan (230, 1 Phase) |
| 1012IL | 350 | 10HP Inline Centrifugal Fan (230, 1 Phase) |
| 1512IL | 324 | 15HP Inline Centrifugal Fan 230, 1 Phase) |
| Turbo Fans (Single Phase) | | |
| 0312T | 135 | 3HP Turbo Fan (230, 1 Phase) |
| 0512T | 230 | 5HP Turbo Fan (230, 1 Phase) |
| 0712T | 260 | 7.5HP Turbo Fan (230, 1 Phase) |
| Low Speed Fans (Single Phase) | | |
| 1012LS | 515 | 10HP Low Speed Centrifugal Fan (230, 1 Phase) |

Continued on next page

Centrifugal Aeration Fans, *Continued*

| Fan ID | Wt. (lbs) | Description |
|-------------------------------------|-----------|-----------------------------------------------|
| Full Centrifugal Fans (Three Phase) | | |
| 0332FC | 185 | 3HP Full Centrifugal Fan (230, 3 Phase) |
| 0334FC | 185 | 3HP Full Centrifugal Fan (460/480, 3 Phase) |
| 0336FC | 185 | 3HP Full Centrifugal Fan (575/600, 3 Phase) |
| 0532FC | 230 | 5HP Full Centrifugal Fan (230, 3 Phase) |
| 0534FC | 230 | 5HP Full Centrifugal Fan (460/480, 3 Phase) |
| 0536FC | 230 | 5HP Full Centrifugal Fan (575/480, 3 Phase) |
| 0732FC | 340 | 7.5HP Full Centrifugal Fan (230, 3 Phase) |
| 0734FC | 340 | 7.5HP Full Centrifugal Fan (460/480, 3 Phase) |
| 0736FC | 340 | 7.5HP Full Centrifugal Fan (575/600, 3 Phase) |
| 1032FC | 385 | 10HP Full Centrifugal Fan (230, 3 Phase) |
| 1034FC | 385 | 10HP Full Centrifugal Fan (460/480, 3 Phase) |
| 1036FC | 385 | 10HP Full Centrifugal Fan (575/600, 3 Phase) |
| High Speed Fans (Three Phase) | | |
| 2532FC | 615 | 25HP Full Centrifugal Fan (230, 3 Phase) |
| 2534FC | 615 | 25HP Full Centrifugal Fan (460/480, 3 Phase) |
| 2536FC | 615 | 25HP Full Centrifugal Fan (575/600, 3 Phase) |
| 4032FC | 735 | 40HP Full Centrifugal Fan (230, 3 Phase) |
| 4034FC | 735 | 40HP Full Centrifugal Fan (460/480, 3 Phase) |
| 4036FC | 735 | 40HP Full Centrifugal Fan (575/600, 3 Phase) |

Continued on next page

Centrifugal Aeration Fans, *Continued*

| Fan ID | Wt. (lbs) | Description |
|---------------------------|-----------|-------------------------------------------------|
| Inline Fans (Three Phase) | | |
| 0332IL | 160 | 3HP Inline Centrifugal Fan (230, 3 Phase) |
| 0334IL | 160 | 3HP Inline Centrifugal Fan (460/480, 3 Phase) |
| 0532IL | 220 | 5HP Inline Centrifugal Fan (230, 3 Phase) |
| 0534IL | 220 | 5HP Inline Centrifugal Fan (460/480, 3 Phase) |
| 0536IL | 220 | 5HP Inline Centrifugal Fan (575/600, 3 Phase) |
| 0732IL | 195 | 7.5HP Inline Centrifugal Fan (230, 3 Phase) |
| 0734IL | 195 | 7.5HP Inline Centrifugal Fan (460/480, 3 Phase) |
| 0736IL | 195 | 7.5HP Inline Centrifugal Fan (575/600, 3 Phase) |
| 1032IL | 260 | 10HP Inline Centrifugal Fan (230, 3 Phase) |
| 1034IL | 260 | 10HP Inline Centrifugal Fan (460/480, 3 Phase) |
| 1036IL | 260 | 10HP Inline Centrifugal Fan (575/600, 3 Phase) |
| 1532IL | 260 | 15HP Inline Centrifugal Fan (230, 3 Phase) |
| 1534IL | 260 | 15HP Inline Centrifugal Fan (460/480, 3 Phase) |
| 1536IL | 260 | 10HP Inline Centrifugal Fan (575/600, 3 Phase) |

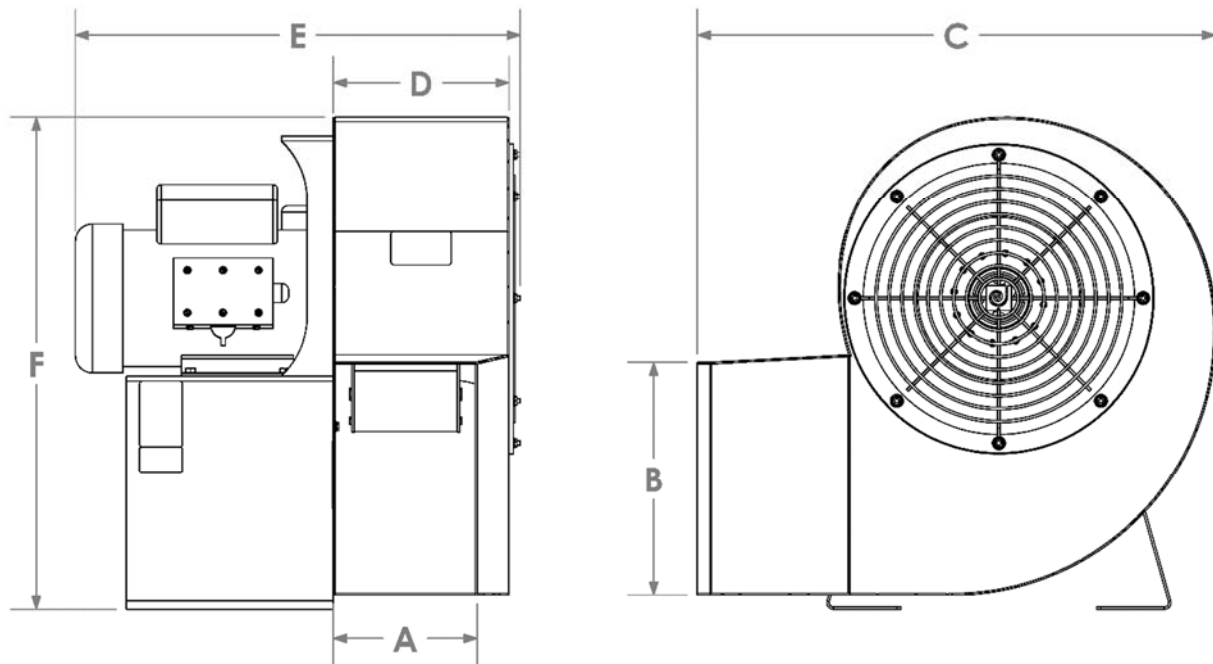
| Fan ID | Wt. (lbs) | Description |
|------------------------------|-----------|---------------------------------------------------|
| Low Speed Fans (Three Phase) | | |
| 1032LS | 515 | 10HP Low Speed Centrifugal Fan (230, 3 Phase) |
| 1034LS | 545 | 10HP Low Speed Centrifugal Fan (460/480, 3 Phase) |
| 1036LS | 545 | 10HP Low Speed Centrifugal Fan (575/600, 3 Phase) |
| 1532LS | 770 | 15HP Low Speed Centrifugal Fan (230, 3 Phase) |
| 1534LS | 770 | 15HP Low Speed Centrifugal Fan (460/480, 3 Phase) |
| 1534LS | 770 | 15HP Low Speed Centrifugal Fan (575/600, 3 Phase) |
| 2032LS | 840 | 20HP Low Speed Centrifugal Fan (230, 3 Phase) |
| 2034LS | 840 | 20HP Low Speed Centrifugal Fan (460/480, 3 Phase) |
| 2034LS | 840 | 20HP Low Speed Centrifugal Fan (575/600, 3 Phase) |
| 2532LS | 950 | 25HP Low Speed Centrifugal Fan (230, 3 Phase) |
| 2534LS | 950 | 25HP Low Speed Centrifugal Fan (460/480, 3 Phase) |
| 2534LS | 950 | 25HP Low Speed Centrifugal Fan (575/600, 3 Phase) |
| 3032LS | 1055 | 30HP Low Speed Centrifugal Fan (230, 3 Phase) |
| 3034LS | 1055 | 30HP Low Speed Centrifugal Fan (460/480, 3 Phase) |
| 3036LS | 1055 | 30HP Low Speed Centrifugal Fan (575/600, 3 Phase) |

8.2 Full Speed Centrifugal Fan Specifications and Data

All S3 AIR SYSTEMS Full Speed Centrifugal Aeration Fans are designed with a tapered exhaust which fits into the corresponding bin inlet duct.

Models 3 HP, 5 HP, and 7.5 HP are designed to fit in a bin duct which is 9" wide and 14" tall. The 10 HP Full Centrifugal fan is designed to fit a bin duct which is 12" wide and 17" tall.

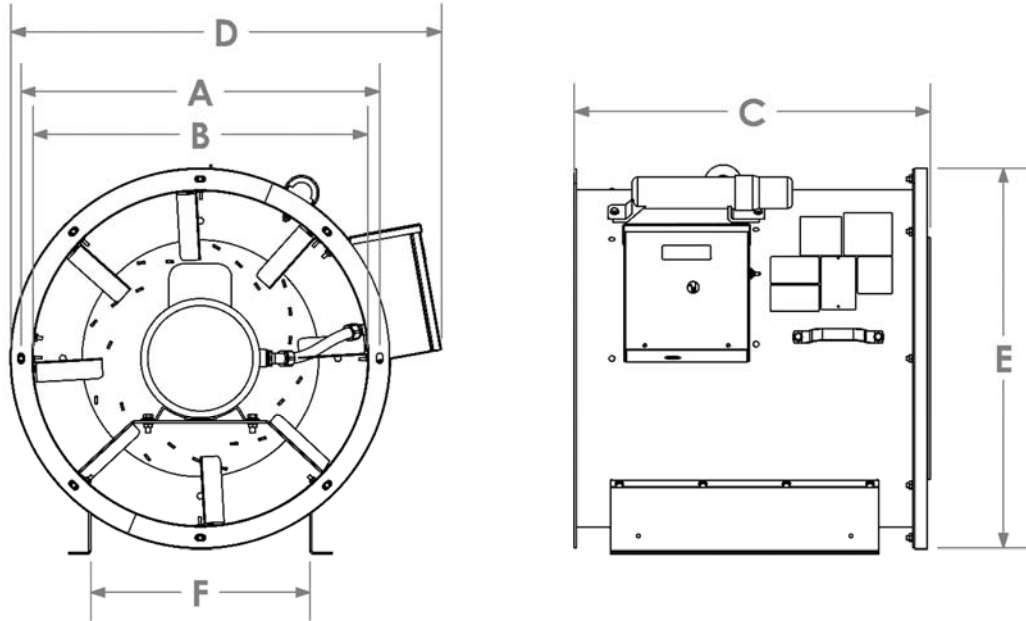
Overall dimensions of the FC line of fans are shown in the following images:



| Fan Dimension | 3HP | 5HP | 7.5HP | 10HP |
|-------------------|----------|----------|----------|----------|
| A (Outlet Width) | 8 5/16 | 8 11/32 | 8 11/32 | 11 13/16 |
| B (Outlet Height) | 13 13/32 | 13 9/16 | 13 5/8 | 17 3/32 |
| C (Length) | 28 21/32 | 30 3/32 | 33 13/32 | 36 5/8 |
| D (Body Width) | 9 7/32 | 10 7/32 | 10 7/32 | 13 23/32 |
| E (Width) | 23 5/32 | 25 13/16 | 28 7/32 | 32 3/16 |
| F (Height) | 24 19/32 | 28 19/32 | 32 21/32 | 38 3/32 |

8.3 Inline Centrifugal Fan Specifications and Data

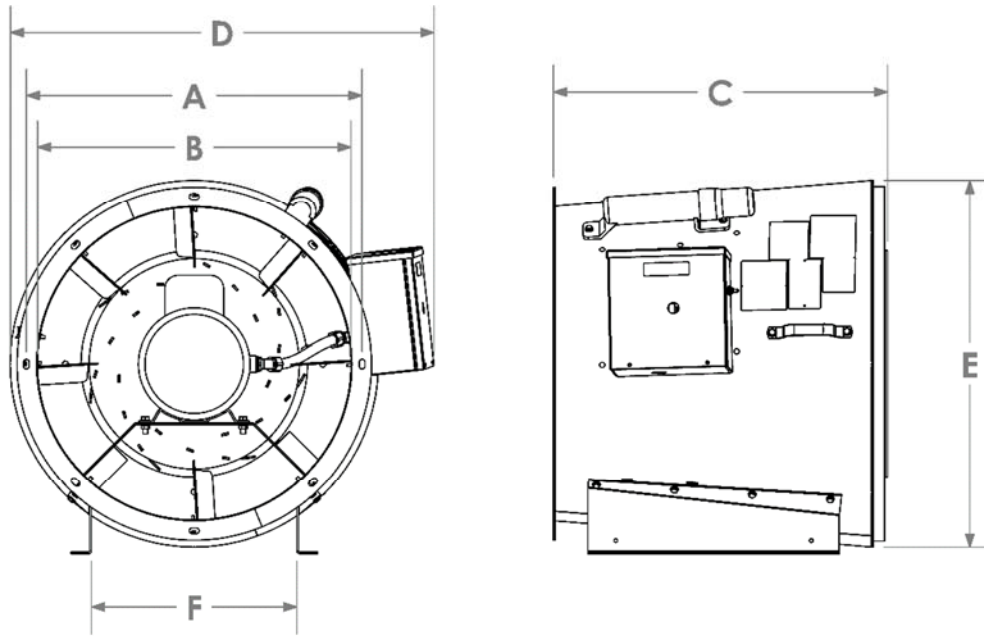
The mounting outlet on S3 AIR SYSTEMS Inline Centrifugal Aeration Fans has a circular 8-hole flange with the dimensions shown in the following images:



| Fan Dimension | 3HP | 5HP | 7.5HP | 10HP | 15HP |
|---------------------|---------|----------|----------|----------|----------|
| A (Outlet B.C.D.) | 19 3/4 | 25 3/4 | 25 3/4 | 29 3/4 | 29 3/4 |
| B (Outlet I.D.) | 18 1/2 | 24 1/16 | 24 1/16 | 28 1/8 | 28 1/8 |
| C (Length) | 25 5/8 | 25 9/16 | 25 9/16 | 29 3/8 | 29 3/8 |
| D (Width) | 25 5/16 | 31 | 31 | 35 3/4 | 35 3/4 |
| E (Height) | 23 3/8 | 27 11/16 | 27 11/16 | 31 11/16 | 31 11/16 |
| F (Foot Separation) | 12 1/16 | 15 3/4 | 15 3/4 | 18 1/4 | 18 1/4 |

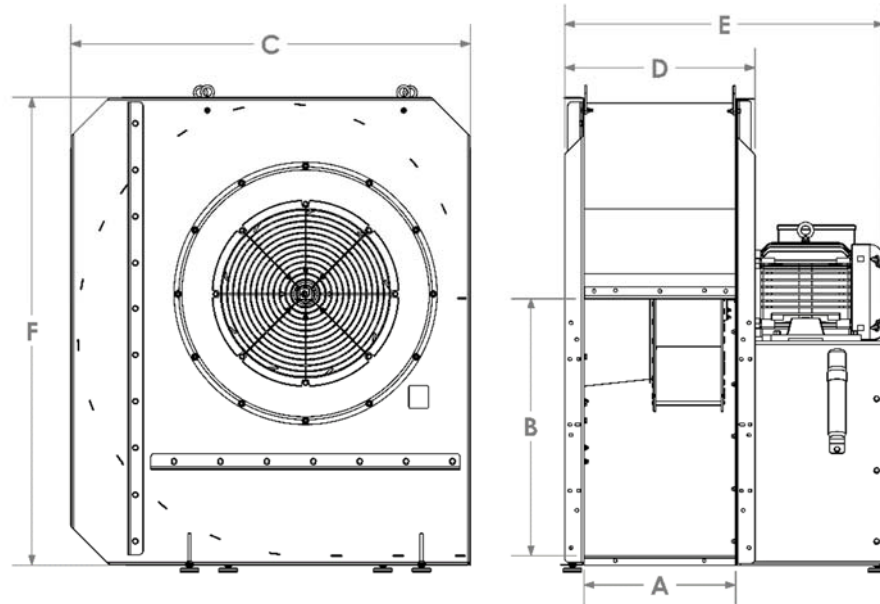
8.4 Turbo Fan Specifications and Data

The mounting outlet on S3 AIR SYSTEMS Turbo Aeration Fans has a circular 8-hole flange with the dimensions shown in the following images:



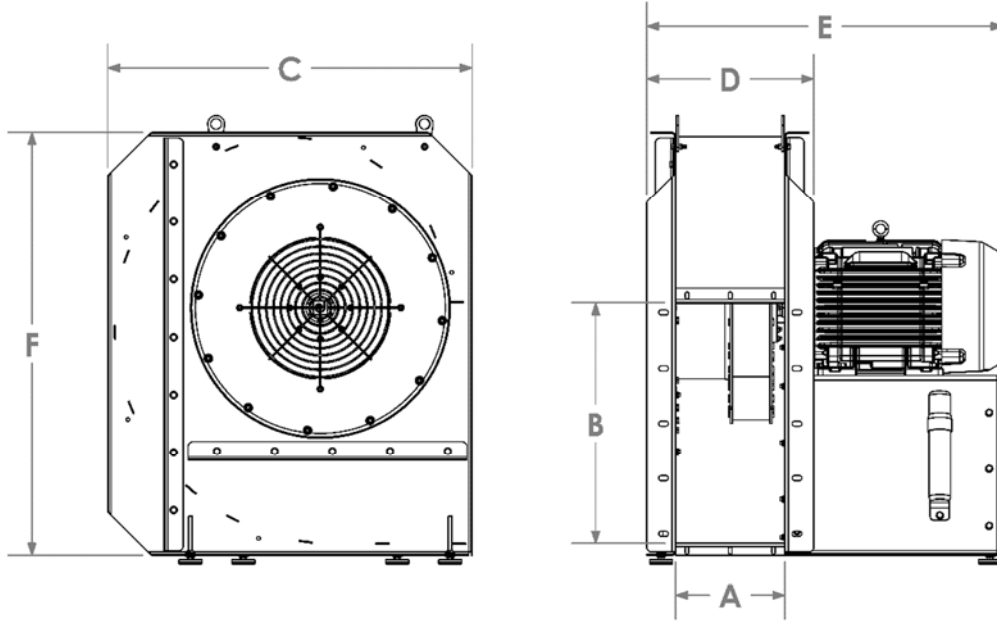
| Fan Dimension | 3HP | 5HP | 7.5HP | 10HP | 15HP |
|---------------------|---------|----------|----------|----------|----------|
| A (Outlet B.C.D.) | 19 3/4 | 25 3/4 | 25 3/4 | 29 3/4 | 29 3/4 |
| B (Outlet I.D.) | 18 1/2 | 24 1/16 | 24 1/16 | 28 1/8 | 28 1/8 |
| C (Length) | 25 5/8 | 25 9/16 | 25 9/16 | 29 3/8 | 29 3/8 |
| D (Width) | 25 5/16 | 31 | 31 | 35 3/4 | 35 3/4 |
| E (Height) | 23 3/8 | 27 11/16 | 27 11/16 | 31 11/16 | 31 11/16 |
| F (Foot Separation) | 12 1/16 | 15 3/4 | 15 3/4 | 18 1/4 | 18 1/4 |

8.5 Low Speed Centrifugal Fan Specifications and Data



| LS | | | | | |
|-------------------|--------|---------|----------|---------|--------|
| Fan Dimension | 10HP | 15HP | 20HP | 25HP | 30HP |
| A (Outlet Width) | 16 | 18 | 19 5/8 | 22 | 22 |
| B (Outlet Height) | 29 5/8 | 29 3/4 | 33 1/4 | 33 1/4 | 33 1/4 |
| C (Length) | 46 | 46 | 51 11/16 | 51 7/8 | 54 3/4 |
| D (Body Width) | 22 | 24 | 24 5/8 | 27 | 27 |
| E (Width) | 36 1/2 | 40 1/16 | 41 1/4 | 48 9/16 | 48 |

8.6 High Speed Fan Specifications and Data



| FC (High Speed) | | | | |
|-------------------|----------|----------|----------|----------|
| Fan Dimension | 20HP | 25HP | 30HP | 40HP |
| A (Outlet Width) | 11 3/8 | 11 3/8 | 14 | 14 |
| B (Outlet Height) | 25 | 25 | 25 | 25 |
| C (Length) | 37 15/16 | 37 15/16 | 37 15/16 | 37 15/16 |
| D (Body Width) | 17 3/8 | 17 3/8 | 20 | 20 |
| E (Width) | 36 5/8 | 37 1/8 | 40 7/16 | 41 3/4 |

9 Performance

Development and testing of S3 AIR SYSTEMS fans is done on a lab test stand, and all results are reported at standard air ⁽¹⁾ conditions.

Performance under actual operating conditions may differ from these results depending on such variables as temperature, barometric pressure, humidity, and elevation above sea level. The data below shows static pressure ⁽²⁾ over a full range of air flow rates ⁽⁴⁾ (CFM).

1. Standard Air is the condition of air with a density of 0.0750 lb/ft³ at 68 degrees F (20 degrees C), 50% humidity, and barometric pressure of 29.92 inches Hg.
2. Static Pressure is the increase in pressure created inside an aerated enclosure over outside air pressure.
3. Static Efficiency is the ratio of output power to input power expended in creating static pressure.
4. Air Flow Rates is the rate of air movement measured in cubic feet per minute (CFM)

| Inline Centrifugal Aeration Fan | | | | | |
|---------------------------------|--------------------------|------|----------|-------|-------|
| Static Pressure (inches) | Airflow (CFM) @ 3450 RPM | | | | |
| | 3 HP | 5 HP | 7 1/2 HP | 10 HP | 15 HP |
| 4 | 3030 | 4790 | 6345 | 7410 | 7900 |
| 6 | 2260 | 4150 | 5550 | 6930 | 7350 |
| 8 | | 3180 | 4425 | 6210 | 6700 |
| 10 | | | 2280 | 5120 | 5800 |
| 12 | | | | 3700 | 4200 |

| Full Centrifugal Aeration Fan | | | | |
|-------------------------------|--------------------------|------|----------|-------|
| Static Pressure (inches) | Airflow (CFM) @ 3450 RPM | | | |
| | 3 HP | 5 HP | 7 1/2 HP | 10 HP |
| 4 | 3060 | 4100 | 5325 | 6300 |
| 6 | 2690 | 3520 | 4820 | 5700 |
| 8 | 2170 | 3060 | 4280 | 4900 |
| 10 | 1300 | 2470 | 3510 | 4200 |
| 12 | | 1760 | 2300 | 3300 |

| Turbo Aeration Fan | | | |
|--------------------------|--------------------------|------|-------|
| Static Pressure (inches) | Airflow (CFM) @ 3450 RPM | | |
| | 3HP | 5HP | 7.5HP |
| 3 | 3850 | 5100 | |
| 4 | 3600 | 4800 | 6400 |
| 5 | 3250 | 4450 | 6100 |
| 6 | 2800 | 4100 | 5700 |
| 7 | 2350 | 3700 | 5200 |
| 8 | 1200 | 3200 | 4700 |
| 9 | | 2100 | 4200 |
| 10 | | | 3300 |

Continued on next page

Performance, *Continued*

| Low Speed Centrifugal Aeration Fan | | | | | |
|------------------------------------|--------------------------|-------|-------|-------|-------|
| Static Pressure (inches) | Airflow (CFM) @ 1750 RPM | | | | |
| | 10HP | 15HP | 20HP | 25HP | 30HP |
| 1 | 13500 | 17000 | 20750 | 23500 | 25100 |
| 2 | 12800 | 16200 | 20000 | 22500 | 24300 |
| 3 | 11850 | 15250 | 19000 | 21350 | 23300 |
| 4 | 10700 | 14400 | 18100 | 20250 | 22250 |
| 5 | 9400 | 13400 | 17000 | 19100 | 21000 |
| 6 | 8200 | 12100 | 15500 | 18000 | 19750 |
| 7 | 7200 | 10500 | 14000 | 17000 | 18600 |

10 Installation Instructions

10.1 Mechanical Check



MAKE SURE FAN IS NOT PLUGGED IN and or that its power supply is Lockout tag out at its power source.

Before the fan is attached to the bin it should be checked to ensure that there is no interference between its rotating and static components. To check this, manually rotate the fan rotor by reaching into the fan outlet. Ensure that the fan rotor turns freely and does not rub on the bell inlet. Contact between these two parts will result in severe damage to the fan. If there is interference, the bell inlet will need to be loosened from its mounting bolts and repositioned until the rotor turns freely without interference from the bell inlet. If this is not possible, contact the dealership or S3 AIR SYSTEMS. Check all the fasteners on the fan to make sure they are tight. If any are loose, check for proper clearance and retighten.

NOTICE

Clearance of high efficiency fans are very small. If the fan is dropped or impacted, misalignment of the rotor could occur; this check should be repeated periodically. Always check the power source is disconnected.

10.2 Foundation as Required For Fan

For proper operation of the fan, the unit may be mounted on a level pad. The fan should not be anchored to the pad but allowed to float on the pad. The fan pad should be at the same elevation as the floor of the bin or building. The minimum recommended thickness for the fan pad is 3-½" of stable foundation materials.

The fan should be securely fastened to the bin's duct flange or inlet, but not anchored to the foundation. If the fan is placed on the ground, it should be set on a firm wooden foundation or a cement pad.

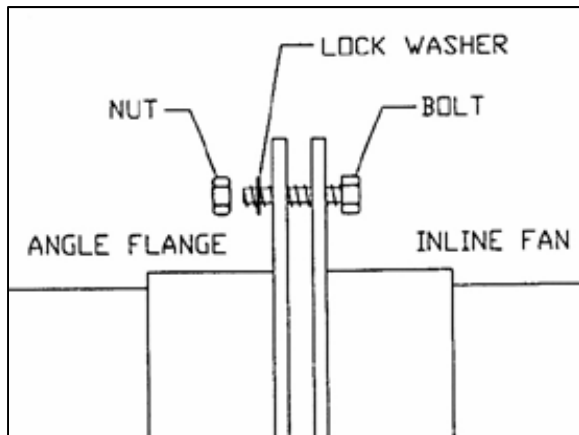
NOTICE

Foot mounted machines should be mounted to a rigid foundation to prevent excessive vibration. The fan base should sit evenly on the concrete pad for smooth trouble free operation. If not, use shims under the fan leg, so that the fan cannot generate a natural frequency to vibrate.

10.3 Installation of the Fan

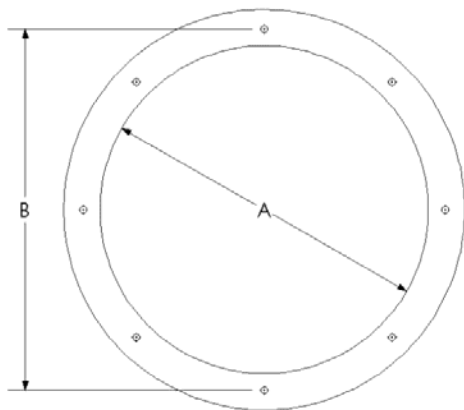
10.3.1 Fastening the Aeration Fan to a Flanged Adapter

When attaching the fan to a flanged adapter, the fan is secured to the transition or aeration wall adapter with the following fasteners: 8 each of $\frac{5}{16}$ " x $\frac{3}{4}$ " cap screws, $\frac{5}{16}$ " nuts and $\frac{5}{16}$ " washers. The Inline Centrifugal Fan is attached to the angle flange of the transition or wall adapter as illustrated by the following image:



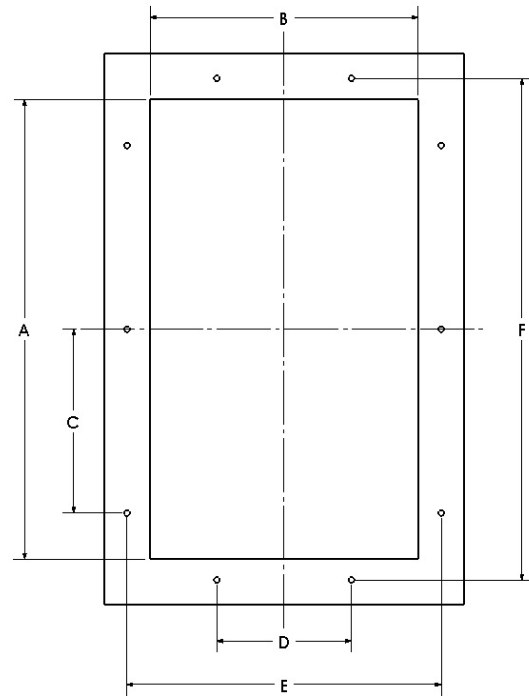
10.3.2 Inline Centrifugal & Turbo Fan Installation

The mounting outlet on S3 AIR SYSTEMS Inline Centrifugal Aeration Fan has a circular 8-hole flange with the dimensions are illustrated by the following tables and images on section 8.3.



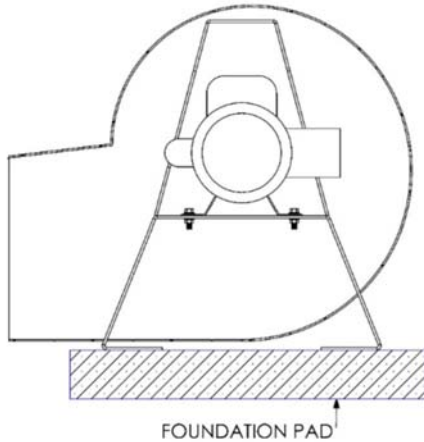
10.3.3 Low Speed Fan Installation

| Low Speed Centrifugal Fans | | | | | |
|----------------------------|--------|--------|--------|--------|--------|
| Dims | 10HP | 15HP | 25HP | 25HP | 30HP |
| A | 29 5/8 | 29 3/4 | 33 1/4 | 33 1/4 | 33 1/4 |
| B | 16 | 18 | 19 5/8 | 22 | 22 |
| C | 11 | 11 | 11 | 11 | 11 |
| D | 8 1/2 | 8 1/2 | 11 1/2 | 11 1/2 | 11 1/2 |
| E | 19 | 20 1/2 | 21 1/2 | 23 1/2 | 23 1/2 |
| F | 31 1/2 | 31 1/2 | 35 | 35 | 35 |



10.3.4 Full Speed Centrifugal Fan Installation

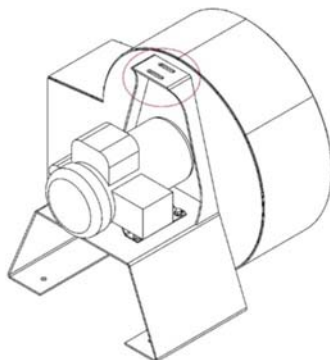
The full speed centrifugal aeration fan has a tapered exhaust designed to fit tightly into the bin duct. The fan has been designed in such a way that it can be installed by resting with its feet on a level pad. It also may be installed on some hopper bins using a chain, cable, or strap to suspend the unit and pull it snug into the bin's duct.



⚠ WARNING

Aeration fans are heavy. A fan that is not securely suspended can cause serious injury or death if it falls on someone. Whether chain, cable, straps, or any other system is used for suspension of the fan, ensure that it is designed to carry the load of the fan during operation. Keep in mind that the fan will have some vibration, as this can weaken supports or loosen fasteners over time. Be sure that the hopper bin has a suitable, strong lug that can support the weight of the suspended fan.

The lifting point on the fan is shown here.



10.4 Electrical Installation

10.4.1 General Instructions

CAUTION

This is only a guide. Electrical rotating equipment can result in property damage, serious injury or death when improperly installed. The electrical installation must be performed by a certified electrician, in accordance with the appropriate national and local electrical codes.

NOTICE

Any violation of electrical wiring codes could jeopardize the manufacturer's warranty.

10.4.2 Electrical Service Installation

NOTICE

Check the type of electrical service and make sure the fan to be wired is manufactured to operate on the electrical service to match the fan motor's phase and voltage.

10.4.3 Motor Safety

1. The machine must be grounded in accordance with the National Electrical Code and local code.
2. Permanently guard machine against accidental contact of body parts, clothing and moving parts.
3. Do not apply power to the motor until the motor is securely mounted by its mounting holes. This motor must only be connected to the proper line voltage, line frequency and load size.
4. Disconnect all power services and stop the motor before servicing.
5. For single phase motors, discharge the start and/or run capacitors before servicing.

6. Do not by-pass or render inoperative any safety device.
7. Mounting bolts should be high tensile steel. Be sure to use a suitable locking device on each bolt (spring washer or thread lock compound).

10.4.4 Motor Enclosure

ODP, open drip proof motors are intended for use in clean, dry locations with adequate supply of cooling air. These motors should not be used in the presence of flammable or combustible materials. Open motors can emit flame and/or molten metal in the event of insulation failure.

TEFC, totally enclosed motors are intended for use where moisture, dirt and/or corrosive materials are present in indoor and outdoor locations. Explosion proof motors are intended for use in hazardous areas as specified by the NEC.

10.4.5 Electrical Connection at the Fan

NOTICE

If connected to a circuit protected by fuses use time delay fuses marked D. Connect the machine in accordance with furnished connection diagram. The wiring, fusing and grounding must be in accordance to the National Electrical Code and any local codes.

NOTICE

Ensure that the motor is connected properly and that the motor spins the correct direction. The rotor should turn in the clockwise direction for full centrifugal fan and counter clockwise for Inline, Turbo & Low speed fans when looking at the inlet of the fan.

NOTICE

It is recommended that the motor current be checked after it has been operating for a short time and compared against the motor nameplate current.

10.4.6 Wiring

Connect the motor as shown in the motor's schematic in the motor manufacturer's specific Motor Installation / Maintenance Manual diagram. The wiring, fusing and grounding must comply with the National Electrical Code and local codes. When the motor is connected to the load for proper direction of rotation and started, it should start quickly and run smoothly. If not, stop the motor immediately and determine the cause. Possible causes are: low voltage at the motor, motor connections are not correct or the load is too heavy. Check the motor current after a few minutes of operation and compare the measured current with the nameplate rating.

10.4.7 Installation of Accessories

For proper installation of accessories, refer to the installation instructions provided with each accessory.

11 Operating Instructions

11.1 Before Starting the Fan

When the fan is to be started for the first time, or after the fan has been idle for months, the following checks should be made prior to starting the fan:

1. Review the fan's operation manual.
2. With the power OFF, and Lockout / tag out, rotate the fan blade to make sure it revolves easily and does not rub on the orifice.
3. Check all fasteners to make sure they are tight. If any are loose, check for proper clearance and retighten fasteners. Make sure the screen guard is fastened securely.
4. Be sure that the fan is properly mounted to the bin.
5. With the power OFF, and Lockout / tag out, check all electrical connections to make sure they are tight. Inspect the current carrying wires to make sure they are not grounded or damaged. Make sure the control enclosure cover is secured in place.
6. Inspect the motor according to the motor manufacturer's Installation Maintenance Instructions. Instructions for maintenance can be found in the lubrication section.

11.2 Starting the Fan

3 HP and 5 HP full centrifugal single phase fans are equipped with switches to turn them ON and OFF. To turn these fans on, simply flip the switch to the 'ON' position. To turn the fan off, flip the switch to the 'OFF' position.

All the other fans are equipped with magnetic starters. To turn these fans on, flip and hold the switch in the 'ON' position for a short period of time. Release the switch. The fan should start and run. To turn these fans off, flip the switch to the 'OFF' position.

All Bin Sense Ready fans have magnetic starters, which can be operated as follows:

1. Manually as described earlier.
2. Remotely (If Bin Sense device is installed).

3. With Bin Sense, predefine the settings which will starts/stops the fan automatically. Live updates can be monitored and settings can be modified wirelessly as well.

NOTICE

The unit will need to be checked for proper rotation. Provide power to the fan controls and start the fan momentarily. Make sure that the blade rotation is clockwise direction for full centrifugal fan and counter clockwise for Inline, Turbo & Low Speed fans when looking through the inlet into the rotor. If the rotor is rotating the wrong direction, have your electrician correct the problem.

NOTICE

The fan should get to operating speed within 10 – 15 seconds after the switch is turned on. However, if the fan begins to slow or does not reach the operating speed within 10 - 15 seconds after turning on the switch, shut off the switch there is likely a problem which needs to be fixed. Review the Troubleshooting Section or talk to a qualified electrician to inspect the fan.

NOTICE

Do not continue short multiple starts as overheating of the motor could result in its damage.

CAUTION

After turning the fan off, let the fan spin freely until it stops. If you are going to service the fan, ensure that the fan rotor has stopped moving. When shutting the fan off for the season, shut off the power at the fan disconnect rather than at the controls to provide additional protection from unauthorized personnel operating the fan. Refer to the Maintenance Section for Off-Season operation recommendations.

12 Maintenance

12.1 Inspection

The frame, housing and intake screen should be checked for structural damage and integrity. Ensure the motor is unplugged / disconnected and remove the intake screen to ensure there is no foreign material or obstruction inside the fan. Be sure the rotor turns freely by hand and that there is approximately $\frac{1}{8}$ " clearance between the intake and the rotor.

12.2 Fan Operation in Off-Season

During the off-season, the fan blades should be allowed to turn freely. Also, during the off-season, operate the fan for approximately 30 minutes every three weeks. The operation of the fan keeps the lubricant more evenly distributed within the bearing cavity and dries out any condensation that could be in the motor.

During the off-season, make sure the control enclosure cover is secured to the control enclosure. Before operating, the switch should be inspected. If the switch appears pitted or the wires have been degraded, replace faulty parts. Complete a full component check.

12.3 Fan Motor Maintenance



Motor eye bolts, lifting lugs or lifting openings, if provided, are intended only for lifting the motor and motor mounted standard accessories not exceeding, in total 30% of the motor weight. These lifting provisions should never be used when lifting or handling the motor and drive equipment. Eye bolt lifting capacity rating is based on a lifting alignment coincident with eye bolt center line. Eye bolt capacity reduces as deviation from this alignment is increased. Be sure eye bolts are tight and prevented from turning before lifting.



Do not touch electrical connections before you ensure that power has been disconnected. Electrical shock can cause serious or fatal injury.



Be sure the system is properly grounded before applying power. Electrical shock can cause serious or fatal injury.



Surface temperatures of motor enclosures may reach temperatures which can cause discomfort or injury to personnel accidentally coming into contact with hot surfaces. Protection should be provided by the user to protect against accidental contact with hot surfaces. Failure to observe this precaution could result in bodily injury.

12.4 Drain Plugs

One or more condensation drain plugs are provided on each endplate for various motor mounting configurations. For wash-down and totally enclosed, fan cooled or non-ventilated motors, the plugs in the lowest portion of the ends shields should be removed for operation (unless the motor has special stainless steel drains). All drains are located in the lowest portion of the ends shields.

12.5 Motor Lubrication

The life of a motor is very dependent on the life of the bearings. Before lubricating the bearings, inspect the bearings to make sure they are in good condition. If not the bearings will need to be replaced. Consult S3 AIR SYSTEMS for service.

12.6 Lubrication Information

Refer to motor nameplate for recommended lubricant. If none is shown, the recommended lubricant for anti-friction bearings (-15°F to 120°F) is POLYREX EM. For Minimum Start Temperature - 100°F use AEROSHELL #7. For roller bearings use ExxonMobil SHC-220.

Motor shafts are mounted on ball bearings. The bearings have been lubricated at the factory. Motors that do not have re-grease capability are factory lubricated for the normal life of the bearings.

(For motors with re-grease capability)

New motors that have been stored for a year or more should be re-lubricated. Lubrication is also recommended at Table 1 intervals.

1. Locate the grease inlet, clean the area, and replace the pipe plug with a grease fitting.
2. Locate and remove the grease drain plug, if provided.
3. Add the recommended volume of the recommended grease.
4. Replace the grease inlet plug and run the motor for 15 minutes.
5. Replace the grease drain plug.

12.9 Lubrication Intervals

Recommended re-lubrication intervals are shown below. It is important to realize that the recommended intervals are based on average use.

12.7 Lubrication Instructions

Cleanliness is important in lubrication. Any grease used to lubricate anti-friction bearings should be fresh and free from contamination. Properly clean the grease inlet area of the motor to prevent grease contamination.

12.8 Lubrication Procedure

Bearings should be lubricated while stationary and the motor is warm.

Full Speed Centrifugal Aeration Fan

| Motor | 3 HP | 5 HP | 7.5 HP | 10 HP | 25 HP | 40 HP |
|------------------------------------|---------|---------|---------|---------|-----------|-----------|
| Frame Size | 215TZ | 215TZ | 215TZ | 215TZ | 284TS | 324TS |
| Bearing | DE6205 | DE6206 | DE6206 | DE6206 | 6310-J/C3 | 6311-J/C3 |
| | ODE6203 | ODE6205 | ODE6306 | ODE6306 | 6310-J/C3 | 6311-J/C3 |
| Normal Grease Interval (Hours) | 5500 | 5500 | 3600 | 3600 | 2880 | 2880 |
| Severe Use Grease Interval (Hours) | 2750 | 2750 | 1800 | 1800 | 1440 | 1440 |
| Amount of Grease (cubic inches) | 0.3 | 0.3 | 0.6 | 0.6 | 0.6 | 0.6 |

Continued on next page

Lubrication Intervals, *Continued*

Inline, Turbo & Low Speed Centrifugal Aeration Fan

| Motor | 3 HP | 5 HP | 7.5 HP | 10 HP | 15 HP |
|------------------------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
| Frame Size | 145TZ | 184TZ | 184TZ | 215TZ | 215TZ |
| Bearing | DE6205 ODE6203 | DE6206 ODE6205 | DE6206 ODE6205 | DE6206 ODE6205 | DE6307 ODE6206 |
| Normal Grease Interval (Hours) | 5500 | 5500 | 3600 | 3600 | 3600 |
| Severe Use Grease Interval (Hours) | 2750 | 2750 | 1800 | 1800 | 1800 |
| Amount of Grease (cubic inches) | 0.3 | 0.3 | 0.6 | 0.6 | 0.6 |

NOTICE

Different grease types are generally incompatible and should not be mixed. Mixing different types can cause lubricant and bearing failure. Thoroughly clean bearing and cavity before changing grease type.

Some motor designs use different bearings on each motor end. This is normally indicated on the motor nameplate. In this case, the larger bearing is installed on the motor’s drive endplate. For best re-lubrication results, only use the appropriate amount of grease for each bearing size (not the same for both).

NOTICE

Do not strike the rotor to dislodge debris, as this may cause it to go out of balance, making vibration worse.

NOTICE

Do not over lubricate the bearings as the lubricant will work its way into the motor and can cause premature motor failure.

12.10 Fan Rotor Cleanliness

Once a year, or if vibration develops, clean the fan rotor surfaces so the unit runs smoothly. To do this, Lockout- tag out all power sources, remove the screen. With the fan rotor accessible, clean it with a suitable cleaner and wipe it with a cloth. If necessary, scrape it gently with a suitable tool.

13 Troubleshooting

When servicing the fan, switch the power OFF at the fan disconnect switch and Lock Out and Tagged Out this switch. Activate power only when a check is being made. The following items will help you pinpoint a possible malfunction of the fan unit and explain the corrective action to take.



BE CAREFUL WHEN WORKING WITH ELECTRICITY. USE A VOLTMETER TO MAKE THE NECESSARY CHECK.

13.1 Troubleshooting Scenarios

13.1.1 Turn on toggle switch & nothing happens.

1. Make sure the power is available to the fan unit.
2. Check the motor thermostat to determine if the thermostat is open or closed. (If the thermostat is open, take the motor to your local Authorized Service Centre. Make sure the motor has time to cool, if hot.)
3. Check the toggle switch. (If switch is defective, replace it.)
 - The toggle switch circuit should be checked in the OFF, and ON positions.

13.1.2 The fan hums when turned on.

1. Check to make sure that all leads of your power source have voltage present. If fan unit is not receiving power on all leads, check for a blown fuse, broken wire, or loose connections.
2. If power is available at all the motor leads and the motor still hums, then the motor should be taken to an Authorized Service Centre for repair or replacement.
3. The power can be hooked directly to the motor leads, if the motor hums, replace or repair the motor.

13.1.3 The fan starts and operates for a while and then shuts off.

1. Check the supply voltage. Voltage should be within 10% of rated voltage. For example, a motor rated at 230 Volts should operate in a voltage range of 207 to 253 Volts.
2. Check the supply wires required for the fan unit.
3. Check the load on the main circuit to make sure other items on the main circuit are not overloading the fan circuit.
4. Check the amperage of the fan, if the unit is pulling above nameplate amperage, take the motor to an Authorized Service Centre.

13.1.4 The fan only comes up to ½ speed.

Take the motor to an Authorized Service Centre for repair or replacement.

14 Parts List

This manual contains a part list for your machine. Since it covers many different fans, please be sure to locate your model number, so that the proper information is used.

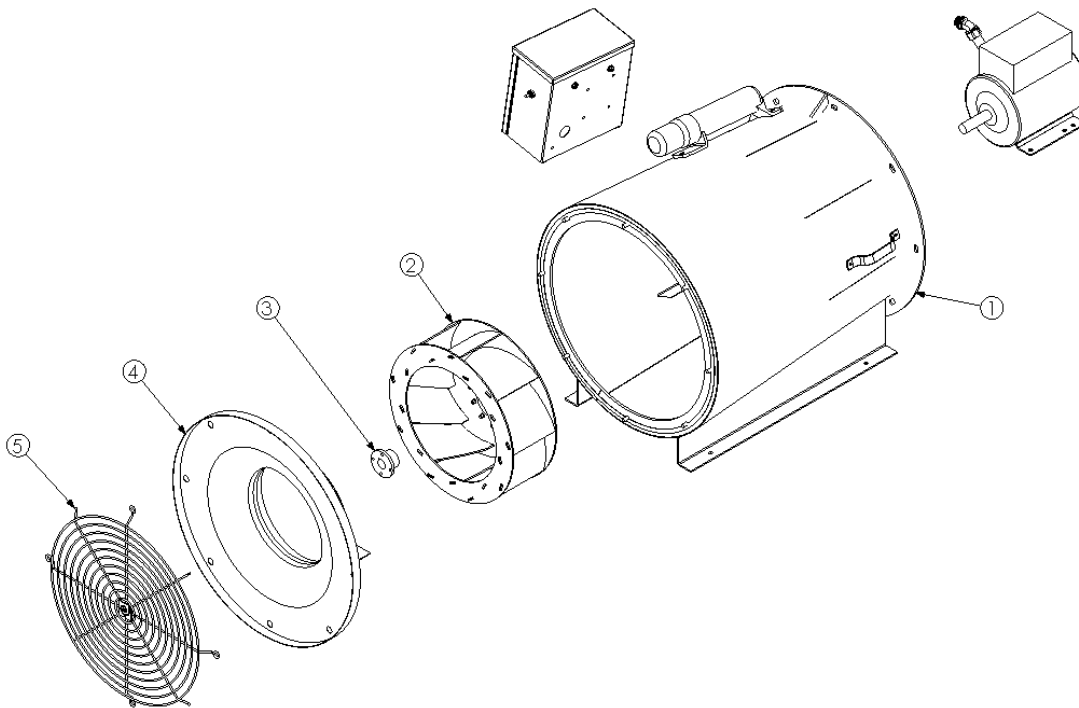
14.1 Ordering Parts

Always give your dealer the Model and Serial Number of your machine to assist in ordering and obtaining the correct parts. Use the exploded view and tubular listing to exactly identify the required part.

All S3 AIR SYSTEMS Aeration Fans are supplied completely assembled with all components as listed below.

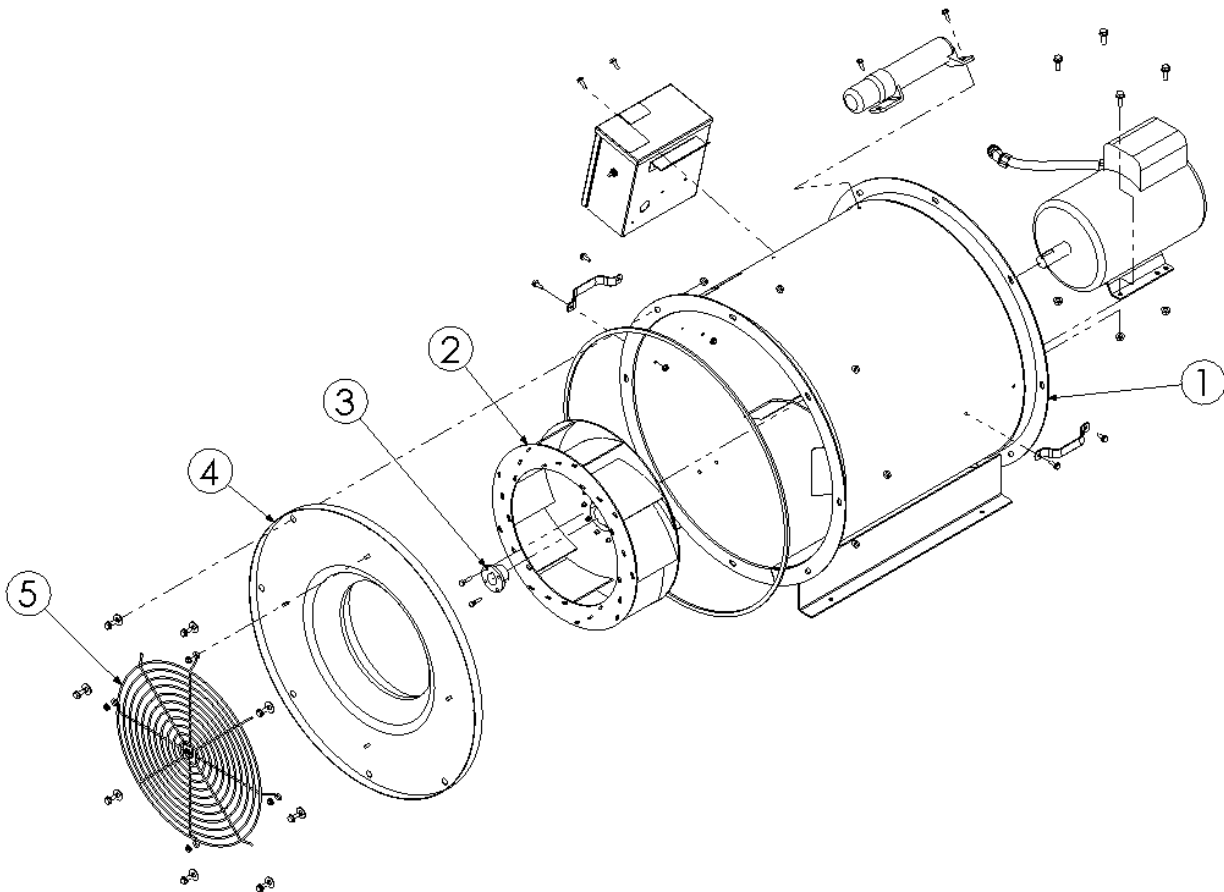
14.2 Turbo Fans

| Ref. # | Part # | | | Description |
|--------|--------------|--------------|--------------|---------------------|
| | 3 HP | 5 HP | 7.5 HP | |
| 1 | 43-117336-XX | 43-117337-XX | 43-117337-XX | Fan Housing |
| 2 | 43-109961 | 43-117309 | 43-113806 | Fan Rotor |
| 3 | 7000-02-0875 | 7000-02-1125 | 7000-02-1125 | Split Taper Bushing |
| 4 | 43-114069-1 | 43-114070-1 | 43-114071-1 | Bell/Cone Inlet |
| 5 | 0080-01-0025 | 0080-01-0025 | 0080-01-0025 | Inlet Screen |



14.3 Inline Centrifugal Fans

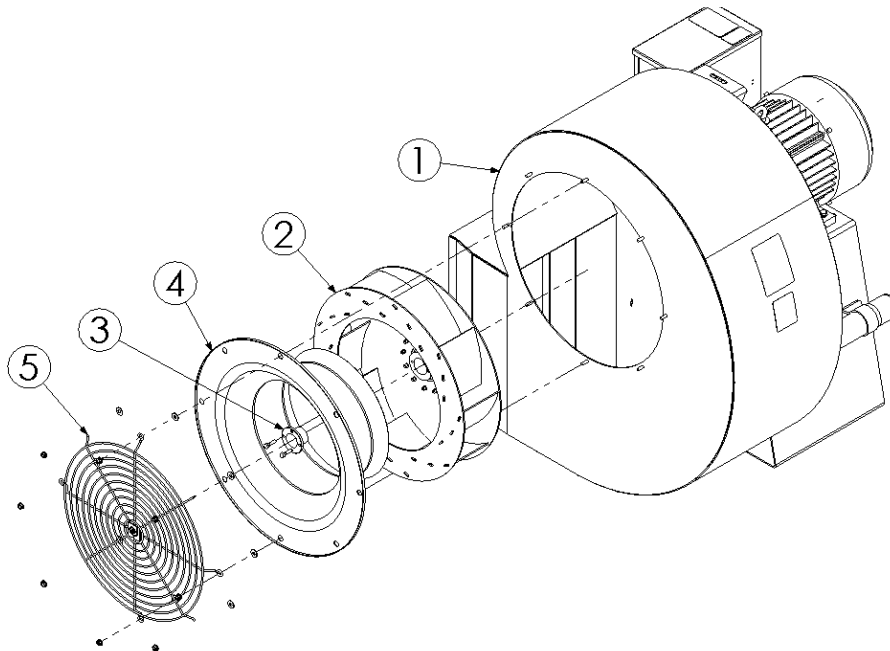
| Ref. # | Part # | | | | | Description |
|--------|--------------|--------------|--------------|--------------|--------------|---------------------|
| | 3 HP | 5 HP | 7.5 HP | 10HP | 15HP | |
| 1 | 43-115450-XX | 43-115451-XX | 43-115451-XX | 43-115452-XX | 43-115452-XX | Fan Housing |
| 2 | 43-109961 | 43-114162 | 43-113539 | 43-113550 | 43-113950 | Fan Rotor |
| 3 | 7000-02-0875 | 7000-02-1125 | 7000-02-1125 | 7000-02-1125 | 7000-02-1125 | Split Taper Bushing |
| 4 | 43-114069-1 | 43-114070-1 | 43-114071-1 | 43-114071-1 | 43-114071-1 | Bell/Cone Inlet |
| 5 | 0080-01-0025 | 0080-01-0025 | 0080-01-0025 | 0080-01-0025 | 0080-01-0025 | Inlet Screen |



14.4 Full Centrifugal

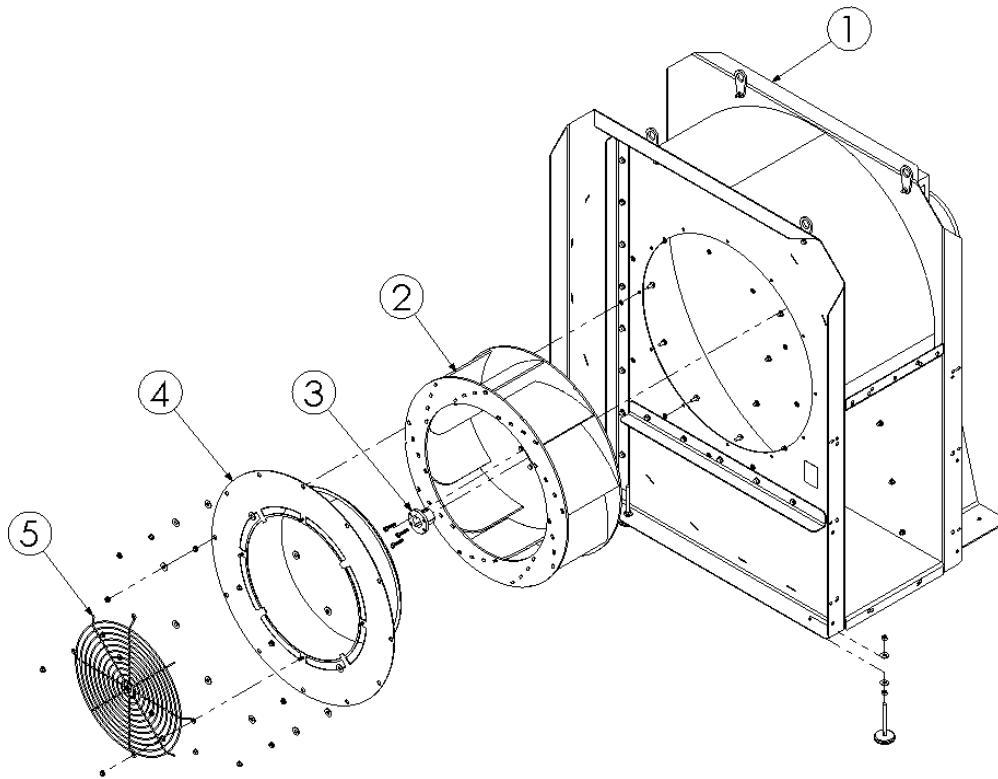
| Ref. # | Part # | | | | Description |
|--------|--------------|--------------|--------------|--------------|---------------------|
| | 3 HP 1PH | 3HP 3 PH | 5 HP 1 PH | 5 HP 3 PH | |
| 1 | 18-114055-XX | 18-114056-XX | 18-114057-XX | 18-114057-XX | Fan Housing |
| 2 | 18-113486 | 18-113723 | 18-114160 | 18-114160 | Fan Rotor |
| 3 | 7000-02-0875 | 7000-02-1125 | 7000-02-0875 | 7000-02-1125 | Split Taper Bushing |
| 4 | 18-114065-1 | 18-114065-1 | 18-114066-1 | 18-114066-1 | Bell/Cone Inlet |
| 5 | 0080-01-0026 | 0080-01-0026 | 0080-01-0026 | 0080-01-0026 | Inlet Screen |

| Ref. # | Part # | | | | Description |
|--------|--------------|--------------|--------------|--------------|---------------------|
| | 7.5 HP 1 PH | 7.5 HP 3 PH | 10 HP 1PH | 10 HP 3 PH | |
| 1 | 18-114058-XX | 18-114058-XX | 18-114157-XX | 18-114157-XX | Fan Housing |
| 2 | 18-114161 | 18-114161 | 18-113506 | 18-113506 | Fan Rotor |
| 3 | 7000-02-1125 | 7000-02-1375 | 7000-02-1125 | 7000-02-1375 | Split Taper Bushing |
| 4 | 18-114067-1 | 18-114067-1 | 18-114158-1 | 18-114158-1 | Bell/Cone Inlet |
| 5 | 0080-01-0025 | 0080-01-0025 | 0080-01-0025 | 0080-01-0025 | Inlet Screen |



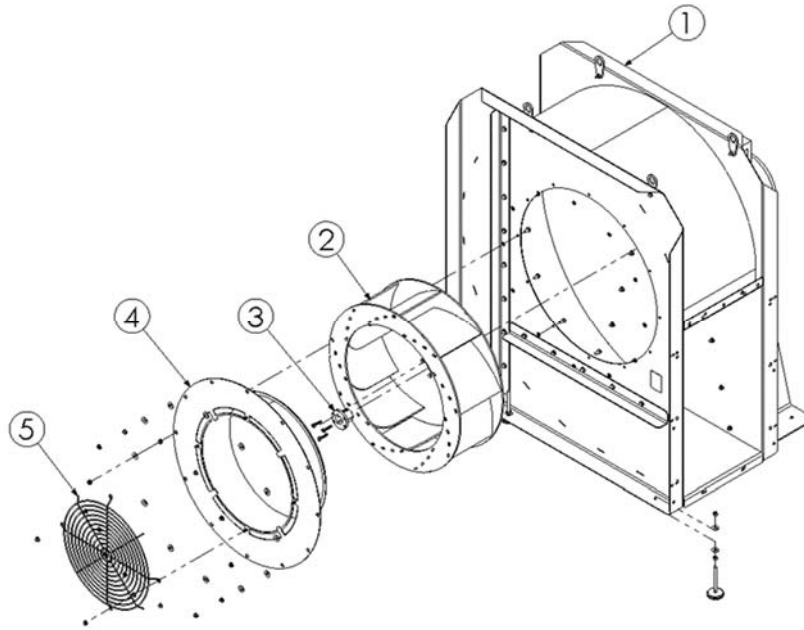
14.5 Low Speed Centrifugal Fans

| Ref. # | Part # | | | | | Description |
|--------|--------------|--------------|--------------|--------------|--------------|---------------------|
| | 10 HP | 15 HP | 20 HP | 25HP | 30HP | |
| 1 | 18-115081-XX | 18-113680-XX | 18-113688-XX | 18-113695-XX | 18-113702-XX | Fan Housing |
| 2 | 18-113425 | 18-113684 | 18-113691 | 18-113698 | 18-113705 | Fan Rotor |
| 3 | 7000-03-1375 | 7000-03-1625 | 7000-03-1625 | 7001-05-1875 | 7001-05-1875 | Split Taper Bushing |
| 4 | 18-113912-1 | 18-113686-1 | 18-113693-1 | 18-113700-1 | 18-113707-1 | Bell/Cone Inlet |
| 5 | 0080-01-0025 | 18-114116-1 | 18-114116-1 | 18-114116-1 | 18-114116-1 | Inlet Screen |



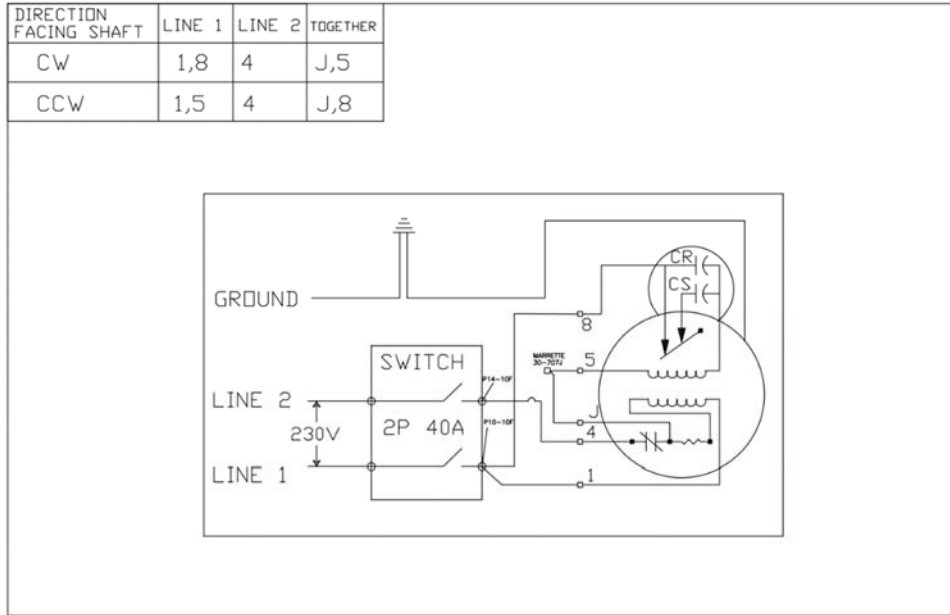
14.6 High Speed Fans

| Ref. # | Part # | | Description |
|--------|--------------|--------------|---------------------|
| | 25HP | 40HP | |
| 1 | 18-115415-XX | 18-115428-XX | Fan Housing |
| 2 | 18-115422 | 18-115436 | Fan Rotor |
| 3 | 7000-03-1625 | 7001-05-1875 | Split Taper Bushing |
| 4 | 18-115418-1 | 18-115432-1 | Bell/Cone Inlet |
| 5 | 0080-01-0026 | 0080-01-0026 | Inlet Screen |

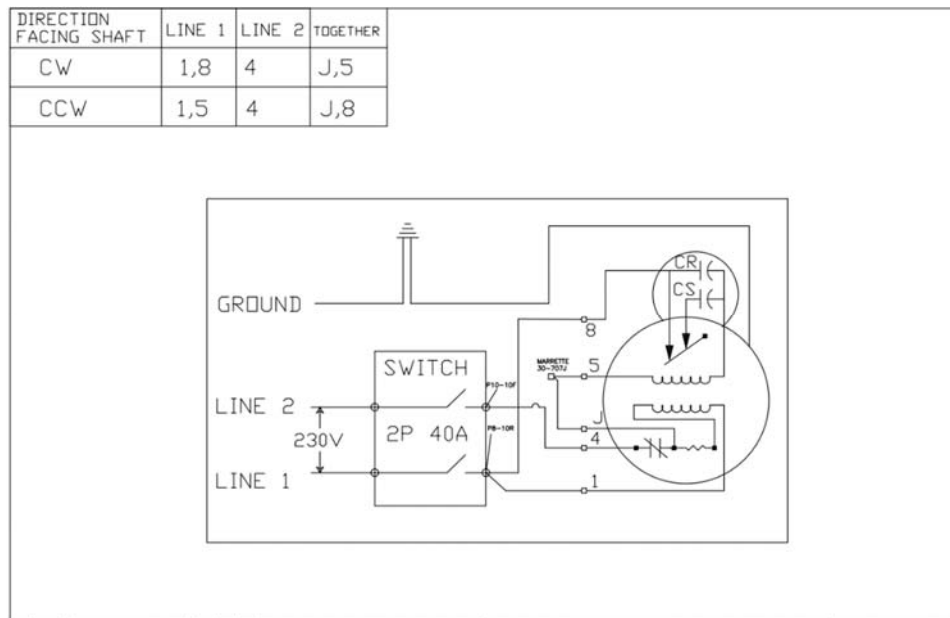


15 Wiring Diagrams

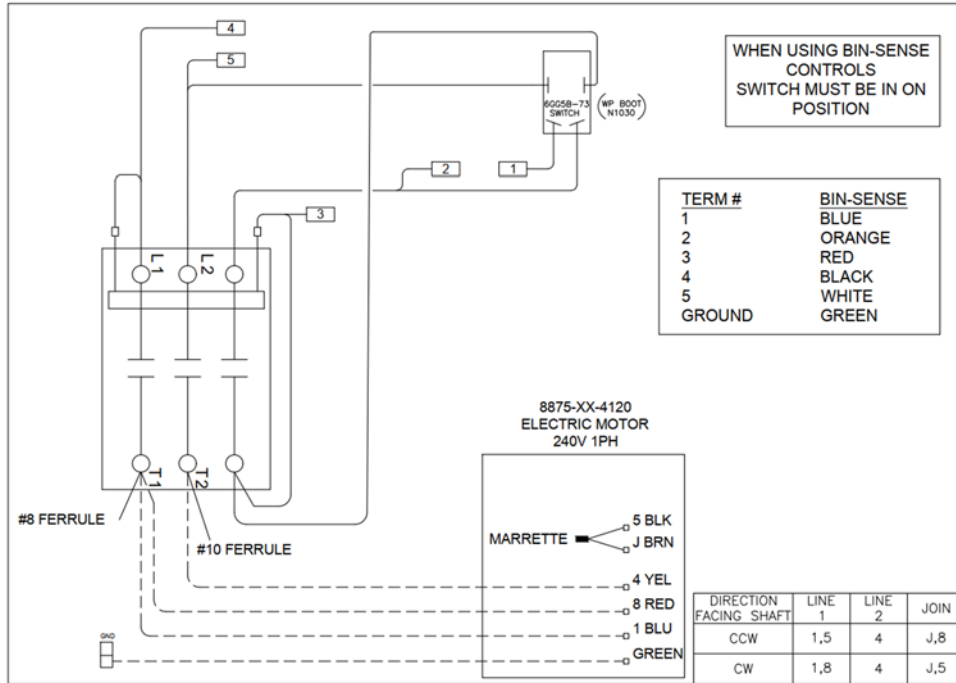
15.1 3HP Full Centrifugal Fan (230V, 1PH)



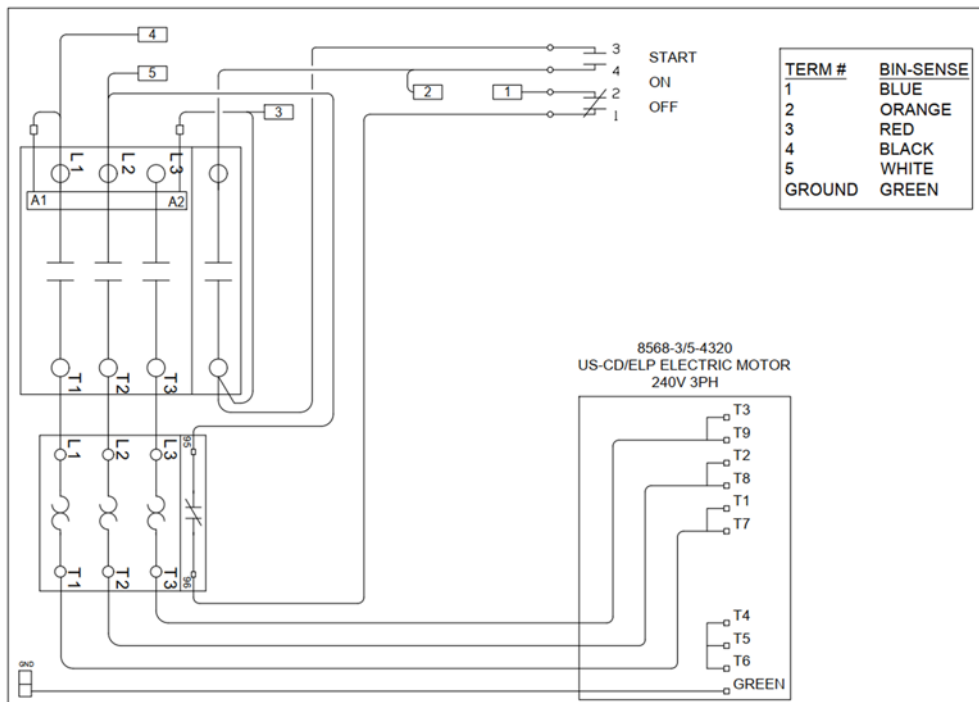
15.2 5HP Full Centrifugal Fan (230V, 1PH)



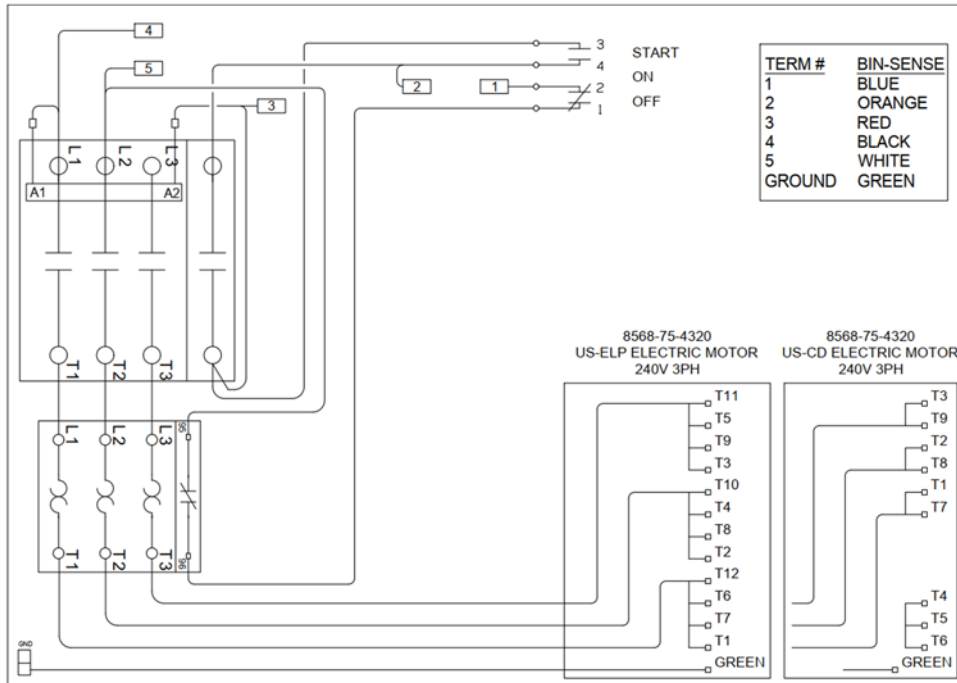
15.3 7.5 & 10HP Full Centrifugal Fan (230V, 1PH)



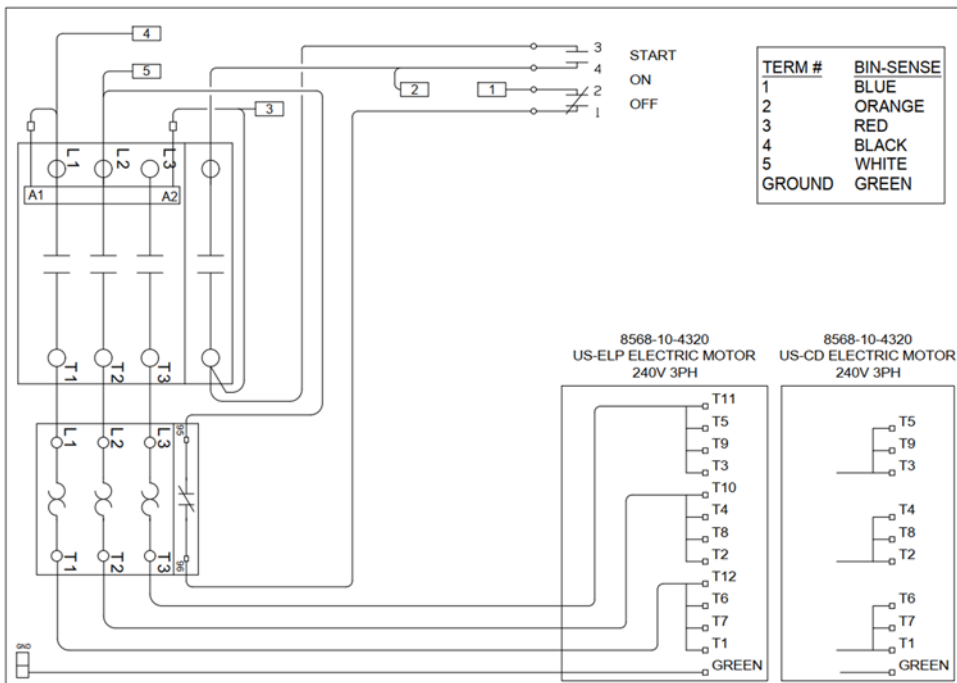
15.4 3HP & 5HP Full Centrifugal Fan (230V, 3PH)



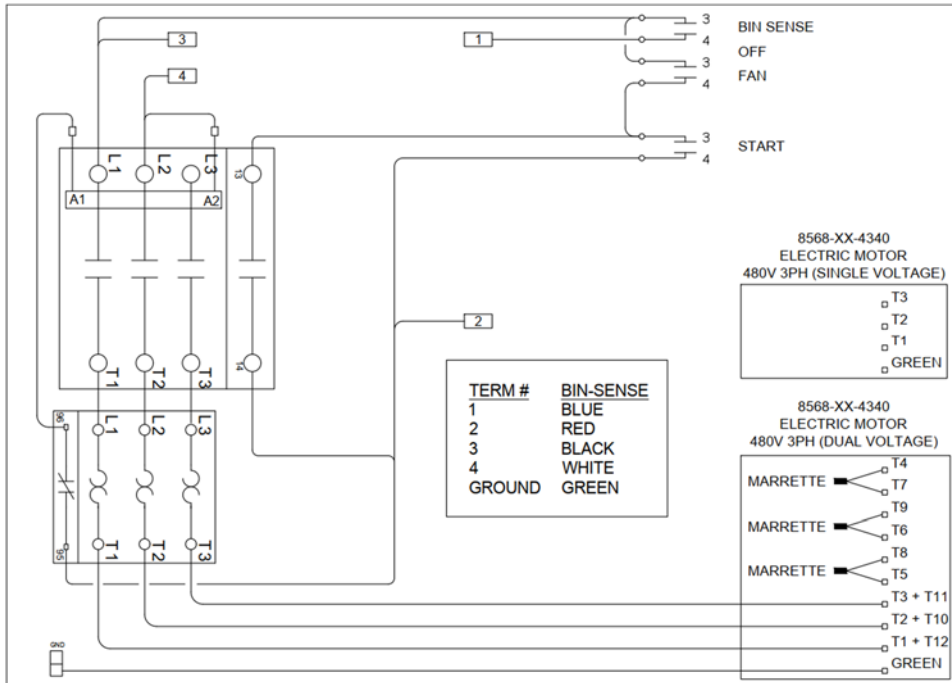
15.5 7.5HP Full Centrifugal Fan (230V, 3PH)



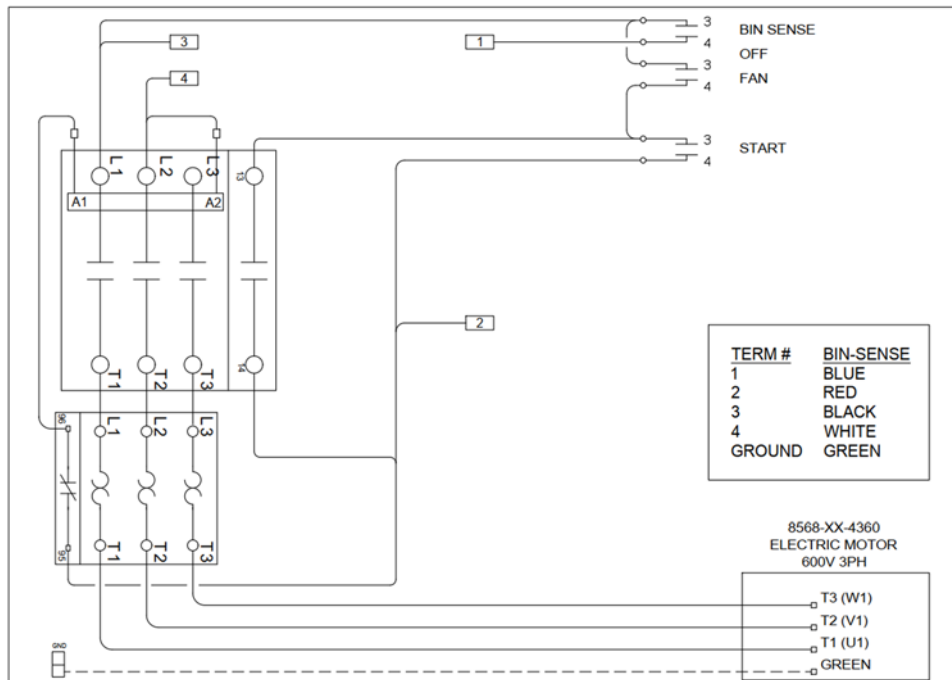
15.6 10HP, 15HP, 20HP, 25HP, 30HP & 40HP Full Centrifugal Fan (230V, 3PH)



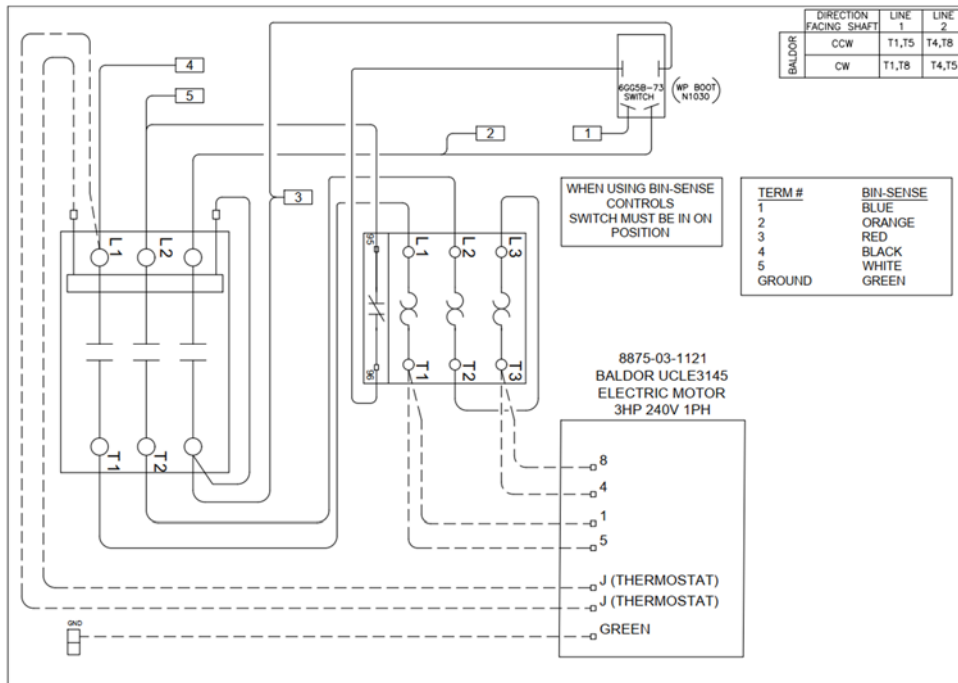
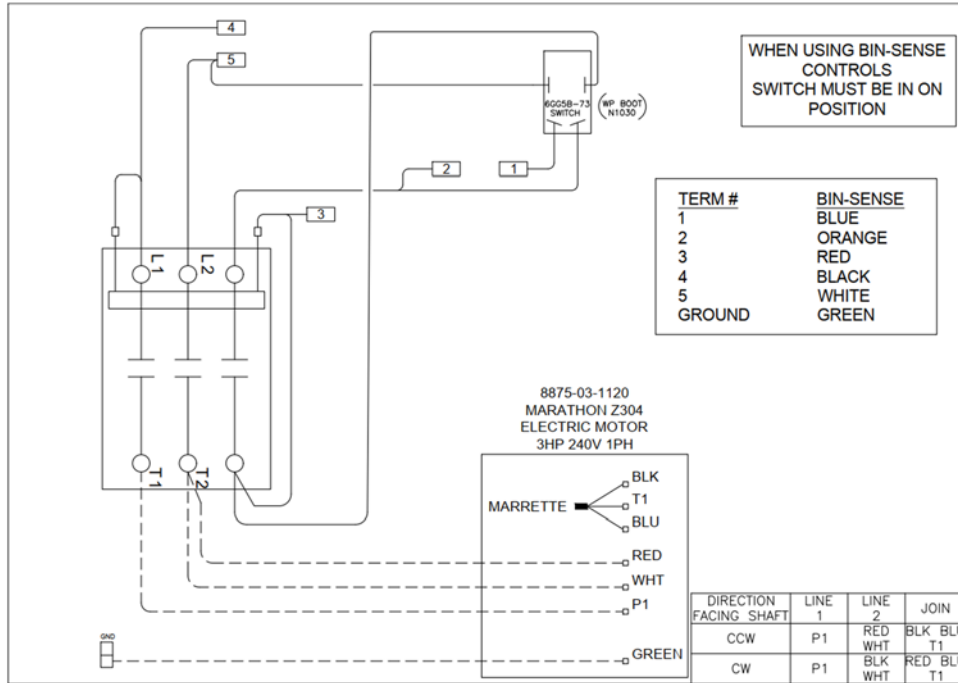
**15.7 3HP, 5HP, 7.5HP, 10HP, 15HP,
20HP, 25HP, 30HP & 40HP Full
Centrifugal Fan (480V, 3PH)**



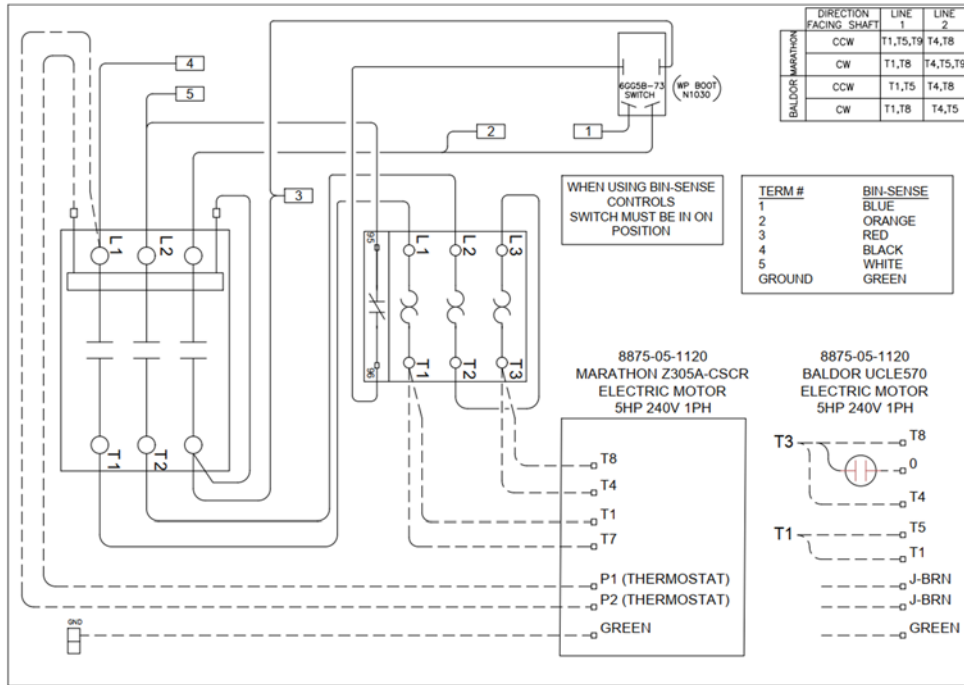
**15.8 3HP, 5HP, 7.5HP, 10HP, 15HP,
20HP, 25HP, 30HP & 40HP Full
Centrifugal Fan (600V, 3PH)**



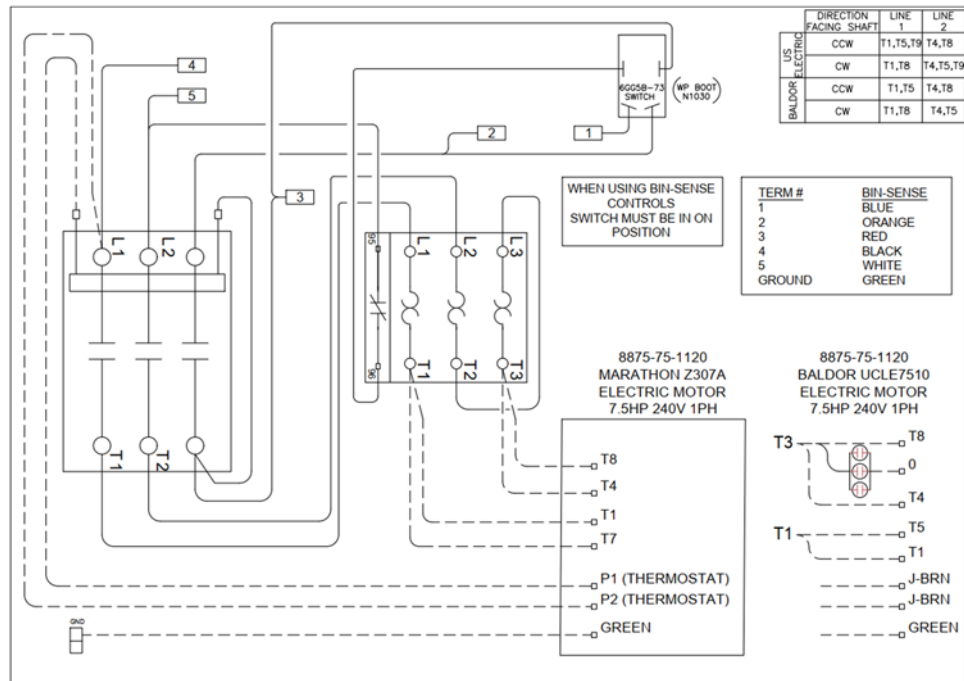
15.9 3HP Inline & Turbo Centrifugal Fan (230V, 1PH) (2 Options: Marathon or Baldor)



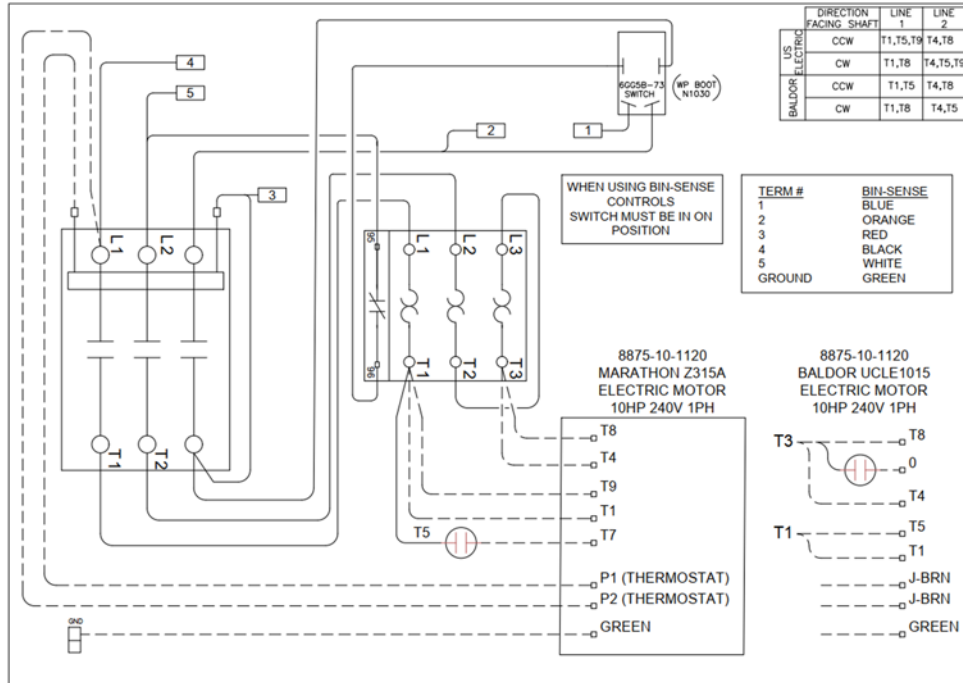
15.10 5HP Inline & Turbo Centrifugal Fan (230V, 1PH) (2 Options: Marathon or Baldor)



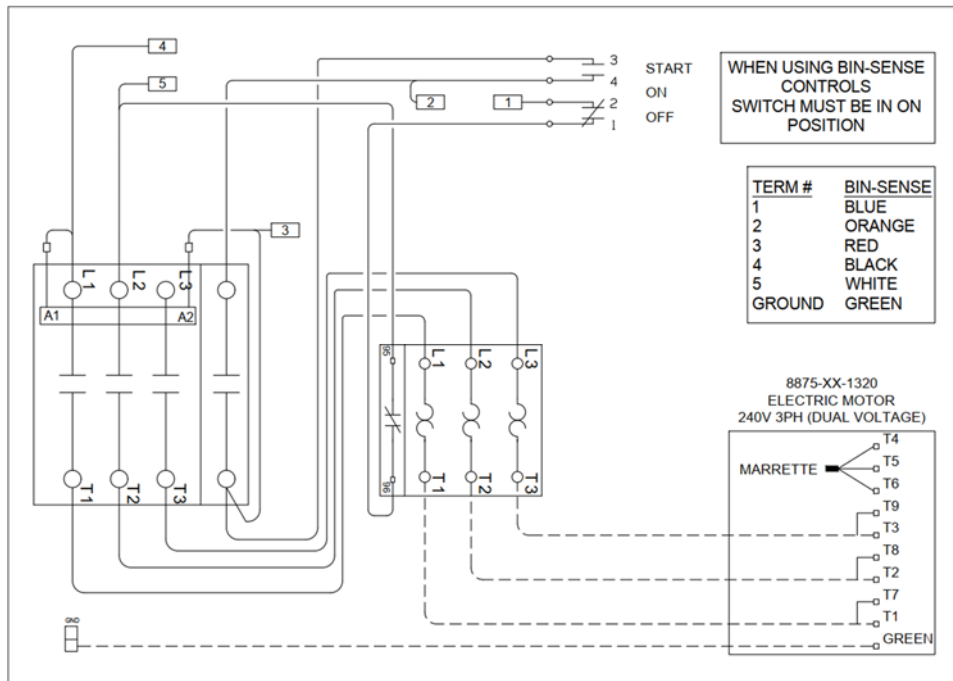
15.11 7.5HP Inline & Turbo Centrifugal Fan (230V, 1PH) (2 Options: Marathon or Baldor)



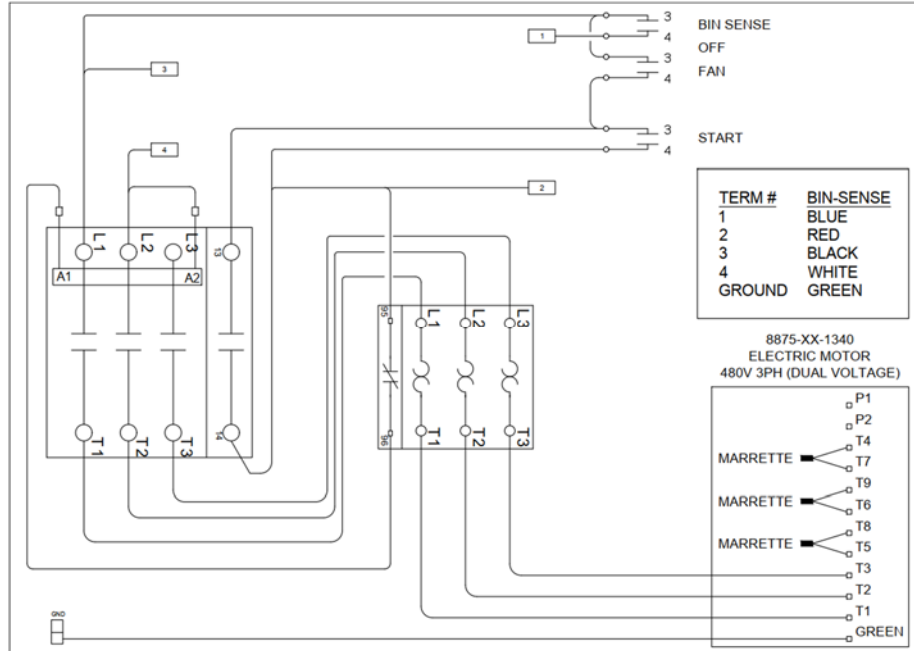
**15.12 10HP & 15HP Inline Centrifugal Fan (230V, 1PH)
(2 Options: Marathon or Baldor)**



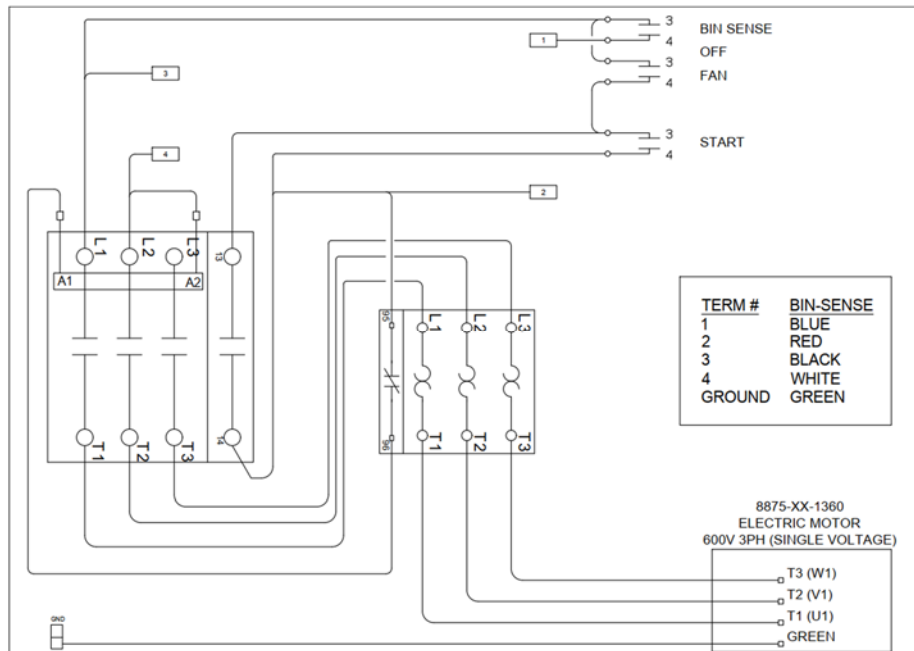
**15.13 3HP, 5HP, 7.5HP Inline & Turbo Centrifugal Fan
10HP & 15HP Inline Centrifugal Fan (230V, 3PH)**



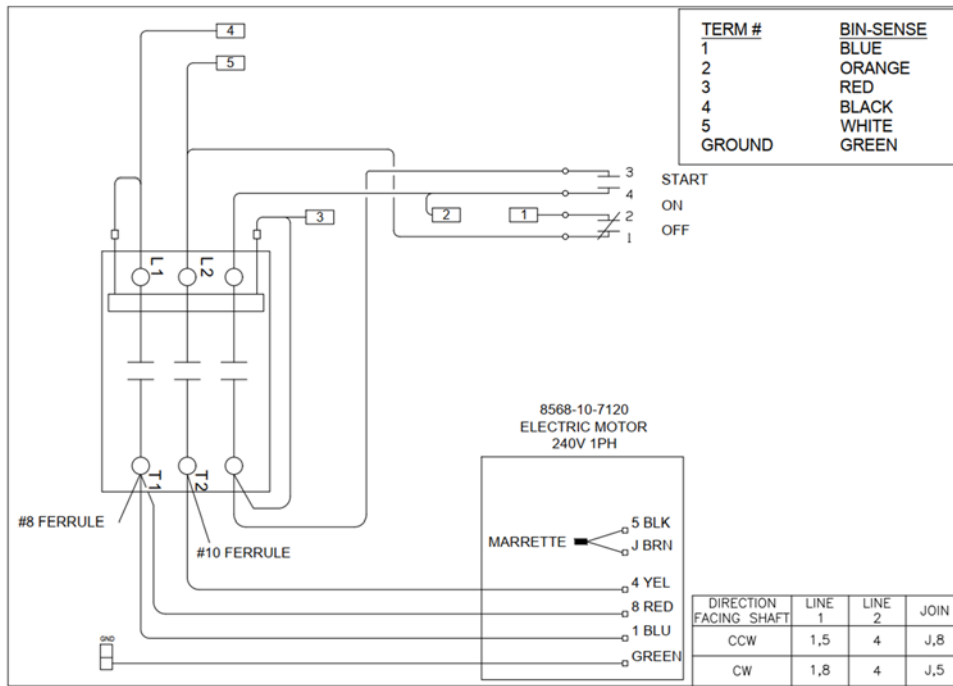
**15.14 3HP, 5HP, 7.5HP Inline & Turbo Centrifugal Fan
10HP & 15HP Inline Centrifugal Fan (480V, 3PH)**



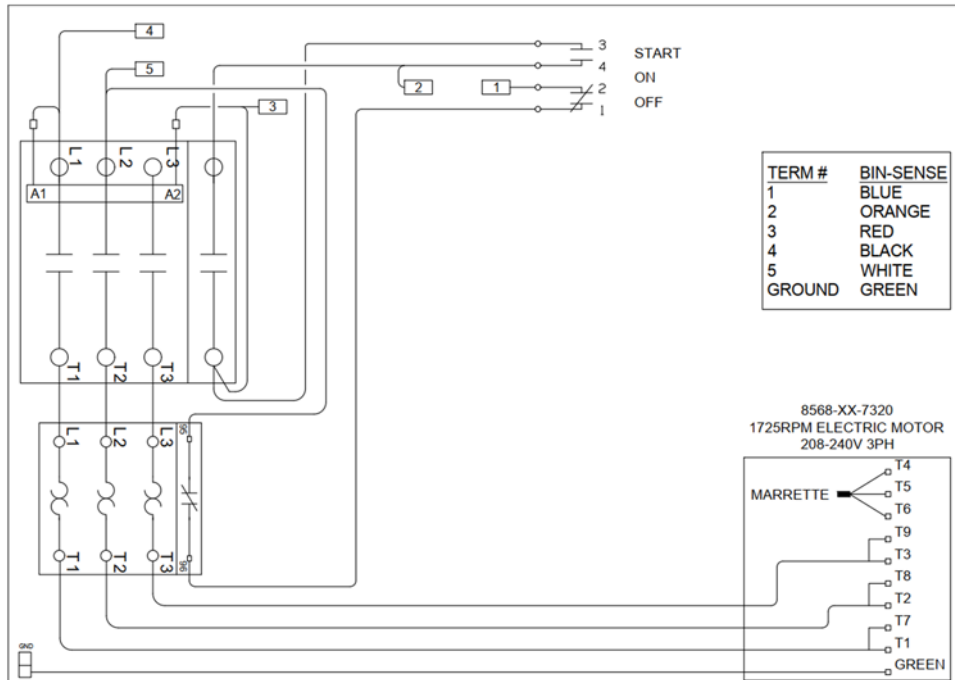
**15.15 3HP, 5HP, 7.5HP Inline & Turbo Centrifugal Fan
10HP & 15HP Inline Centrifugal Fan (600V, 3PH)**



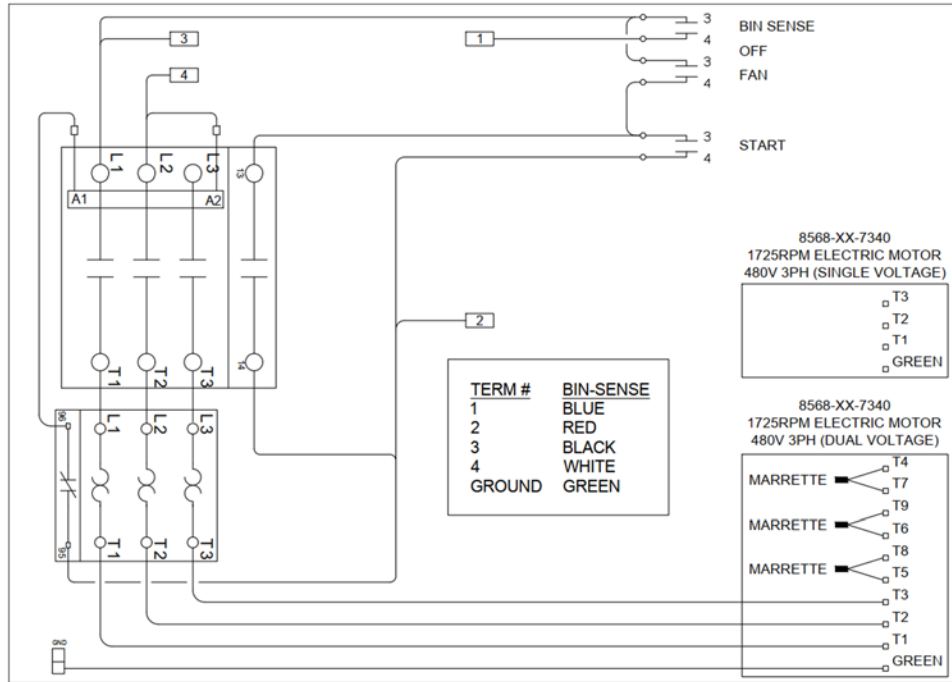
15.16 10HP Low Speed Centrifugal Fan (230V, 1PH)



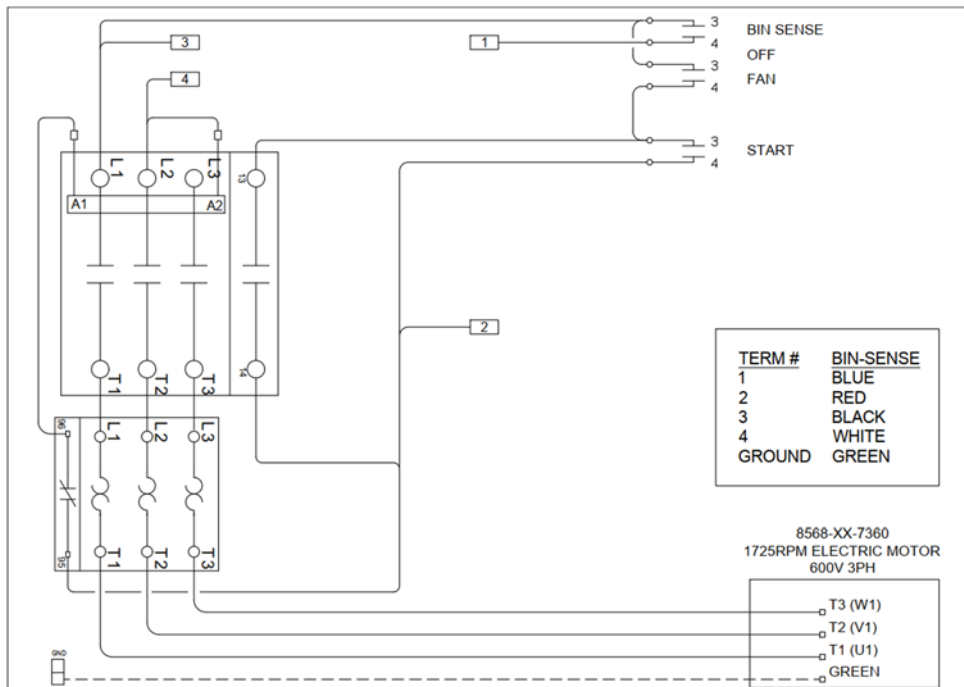
15.17 10HP, 15HP, 20HP, 25HP, 30HP Low Speed Centrifugal Fan (230V, 3PH)



**15.18 10HP, 15HP, 20HP, 25HP, 30HP
Low Speed Centrifugal Fan (480V,
3PH)**



**15.19 10HP, 15HP, 20HP, 25HP, 30HP
Low Speed Centrifugal Fan (600V,
3PH)**







16 Accessories

16.1 Bin Transitions

| Transition | Fan Discharge | Bin Inlet | S3 Part Number |
|-------------------------------------------------------------------------------------|---------------|-----------|----------------|
|  | 18" O.D. | 9" X 14" | 18-115500-1 |
|  | 18" O.D. | 24" O.D. | 18-115501-1 |
|  | 24" O.D. | 9" X 14" | 18-115502-1 |
|  | 24" O.D. | 12" X 17" | 18-115510-1 |
|  | 24" O.D. | 18" O.D. | 18-115503-1 |
|  | 24" O.D. | 28" O.D. | 18-115508-1 |
|  | 28" O.D. | 12" X 17" | 18-115511-1 |
|  | 28" O.D. | 18" O.D. | 18-115557-1 |





Continued on next page

Bin Transitions, *Continued*

| Transition | Fan Discharge | Bin Inlet | S3 Part Number |
|-------------------------------------------------------------------------------------|---------------|-----------|----------------|
|  | 28" O.D. | 24" O.D. | 18-115509-1 |
|  | 9" x 14" | 18" O.D. | 18-115504-1 |
|  | 9" x 14" | 24" O.D. | 18-115505-1 |
|  | 9" x 14" | 28" O.D. | 18-115506-1 |
|  | 12" x 17" | 18" O.D. | 18-117284-1 |
|  | 12" x 17" | 24" O.D. | 18-115513-1 |
|  | 9" x 14" | 12" X 17" | 18-115512 |
|  | 12" x 17" | 9" x 14" | 18-115507 |

Other sizes available upon request.

16.1.1 Low Speed Bin Transitions



| Transition | Description | Transition Outlet | S3 Part Number |
|-------------------------------------------------------------------------------------|-------------|-------------------|----------------|
|  | 10HP | 11" X 40" | 18-115549 |
|  | 20HP | 9" X 36" | 18-117408 |
|  | 25HP | 10" X 36" | 18-117407 |
|  | 30HP | 10" X 82" | 18-117483 |

16.2 Fan Socks

| Fan Side | Bin Side | S3 Part Number |
|-----------|-----------|----------------|
| 18" O.D. | 9" X 14" | 3005-00-0003 |
| 18" O.D. | 18" O.D. | 3005-00-0004 |
| 18" O.D. | 24" O.D. | 3005-00-0005 |
| 24" O.D. | 9" X 14" | 3005-00-0006 |
| 24" O.D. | 18" O.D. | 3005-00-0007 |
| 24" O.D. | 24" O.D. | 3005-00-0008 |
| 28" O.D. | 9" X 14" | 3005-00-0009 |
| 28" O.D. | 24" O.D. | 3005-00-0010 |
| 9" X 14" | 9" X 14" | 3005-00-0011 |
| 9" X 14" | 18" O.D. | 3005-00-0012 |
| 9" X 14" | 24" O.D. | 3005-00-0013 |
| 28" O.D. | 28" O.D. | 3005-00-0014 |
| 12" X 17" | 12" X 17" | 3005-00-0015 |

- Standard sock length is 12 feet.
- Socks with round ends come complete with a quick strap buckle for In-Line Fans.
- Socks with rectangular ends require a clamp for Full Centrifugal Fans.
- More sizes and lengths are available upon request.

16.2.1 Fan Sock Clamps

| Sock Clamp | Fan Outlet | S3 Part Number | Hardware |
|-----------------------------------------------------------------------------------|------------|----------------|------------------------------------------------------|
|  | 9" x 14" | 6190-00-0022 | Qty 16-3/16" X 3/4" Self-tapping screws |
|  | 9" x 14" | 6190-00-0023 | Qty 16-3/16" X 2" bolts Qty 16-3/16" Ny-lock nuts |

Socks with rectangular ends, require a clamp for Full Centrifugal Fans.

16.3 Rover Aeration Fan Cart

- The Rover gives you flexibility to move your aeration fan to where you need it the most. Hook up to an ATV, a garden tractor or simply move by hand.
- Load Capacity of 350 lbs.
- Powder-coated steel construction.
- Simply assembly.

S3 Part Number - 18-117302



Box 1780, 2180 Oman Drive, Swift Current, SK S9H 4J8 Canada
P: (306) 773-0645 | F: (306) 773-9318

| | |
|-------------------|---------------|
| S3 Serial Number: | Date of sale: |
|-------------------|---------------|

Dealer Information

| | | |
|-------------------|---------------|--------------------|
| Dealer name: | Phone number: | Email address: |
| Address: | | City: |
| Province / State: | Country: | Postal / Zip Code: |

End-user Information

| | | |
|-------------------|---------------|--------------------|
| End-use name: | Phone number: | Email address: |
| Address: | | City: |
| Province / State: | Country: | Postal / Zip Code: |

Dealer Inspection

- Shields Installed and Secured
- Operator's Manual Supplied
- Safety Decals in Good Condition

I have reviewed the safety decals with the End User and have confirmed that they and any operators will review the Operator's Manual. I have also reviewed the applicable Warranty Policy with the End User.

| | | |
|----------------------------|-----------|------|
| Dealer Representative name | Signature | Date |
|----------------------------|-----------|------|

Warranty & Limitations

Warranty

- 1.1 S3 Warranty Policy for all Aeration Products purchased from S3 is, all product shall be free from defects in workmanship and materials for a period of two (2) years from date of sale from S3' dealer to the end user. To initiate the two (2) Year Warranty, the dealer must complete the Warranty Registration & Inspection Form on date of sale, and submit to S3.
- 1.2 The Warranty described herein is provided by S3 to the original purchaser of the Product. The Warranty is non-transferable.
- 1.3 S3, at its option, will repair or replace any part covered by the Warranty in Section 1.1 during the Warranty Period on the following conditions:
 - (a) Customer shall notify S3 of the defect within thirty (30) days of failure;
 - (b) Customer shall provide the respective Product's Serial Number.
 - (c) S3, in its sole discretion, may contract out any repairs to the Customer or repair agent of its choice.
- 1.4 Eligible warranty repairs or replacement shall be free of charge to the original purchaser for materials, labor and shipping in the Warranty Period.
- 1.5 S3 shall be responsible for the repair or replacement of:
 - (a) Defective parts or subassemblies incorporated in the Product that are warranted under original manufacturing warranties from OEM or third party suppliers;

Not covered by warranty

- 2.1 S3 shall not be responsible for the repair or replacement of:
 - (a) Products that have been altered or modified in any manner not approved or authorized by S3; or
 - (b) Damage caused by normal wear and tear, lack of reasonable proper maintenance, misuse, excessive use, or damage caused by accident, vandalism or Act of God.

Purchaser responsibilities

- 3.1 In order to establish eligibility for the Warranty set out herein, the Customer shall:
 - (a) Notify S3 of the defect within thirty (30) days of date of failure and
 - (b) Provide S3 with the Product's Serial Number.
 - (c) Submit Warranty Registration & Inspection Form to S3 at date of sale from dealer to end user.
- 3.2 Where Customer is authorized by S3 to make the repairs, the Customer's account shall be credited for the cost of the repairs, provided:
 - (a) Customer provides S3 a detailed scope of work, labor hours required to complete the work, hourly rate and material costs ("Work");
 - (b) S3 approves the Work based on the details provided in para. (a);
 - (c) The warranty repairs and services are completed in a good and workmanlike manner
 - (d) The repairs are made in accordance with labor rates and price lists approved by S3, or as prescribed by local provincial or State laws;

- (e) Customer obtains the prior approval of S3 if field diagnostic inspection is required. Travel and expenses must be pre-approved.

S3 Responsibilities

- 4.1 S3 shall reply to the Customer's warranty notice in paragraph 3.1(a) within two (2) days of notification.
- 4.2 Upon receipt of the Products Serial Number set out in para. 3.1(b), S3 will evaluate the warranty claim and will provide a replacement under the Warranty upon completion of its evaluation.
- 4.3 S3 will require the return of the Product to S3, the Customer or as S3 may choose by issuing an RMA, or may elect to credit Customer's account for the Customer's cost of the Product.
- 4.4 S3 will credit all shipping costs on all approved warranty repairs provided Customer complies with the shipping and related instructions in the RMA.

Warranty & Liability Limitations

- 5.1 The Warranty provisions herein constitute the full extent of the warranties supplied by S3 for the Product.
- 5.2 S3 reserves the absolute and unconditional right to deny or reverse its approval of any Warranty claim in the case of fraud, abuse or error.
- 5.3 Without limiting the generality of the foregoing and to the extent permitted by law, S3 HEREBY expressly disclaims AND excludes all warranties and conditions of merchantability AND fitness for A PARTICULAR purpose, whether express or implied, statutory or otherwise
- 5.4 Where the exclusion of implied or statutory warranties or conditions is prohibited by law, any such warranties or conditions shall be limited in duration to the warranty period set out herein.
- 5.5 SUBJECT TO ANY STATUTORY EXCEPTIONS OR LIABILITY IMPOSED BY LAW, S3's LIABILITY FOR ANY CAUSE WHATSOEVER (INCLUDING NEGLIGENCE) IS HERBY LIMITED TO ACTUAL DAMAGES IN SUCH AN AMOUNT AS NOT TO EXCEED THE PURCHASE PRICE OF THE PRODUCT GIVING RISE TO THE WARRANTY CLAIM.
- 5.6 5.6 IN NO EVENT SHALL S3 BE LIABLE FOR ANY INCIDENTAL, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES, EVEN IF ADVISED OF THE POSSIBILITY THEREOF, INCLUDING DAMAGES FOR LOSS OF USE OF THE PRODUCT, OR LOSS OF BUSINESS OR PROFITS AS A RESULT.

General

- 6.1 This Warranty shall be governed by and subject to the Terms & Conditions of Sale of the Product, including without limitation "Limited Warranty" and "Governing Law" provisions thereof.
- 6.2 For greater clarity, and subject to any local laws or statutes to the contrary, the provisions of this Warranty shall be governed by the laws of the Province of Alberta, and shall be subject to the exclusive jurisdiction of the courts therein.

Aeration Fan Operator's Manual

Revised: Feb 2024

More Air, Less Maintenance



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Swift Current, SK S9H 4J8
Toll Free: 844-441-2020
S3airsystems.com

18-114193