



# OPERATOR'S MANUAL

Wood Working



## INTELLIGENT SHOP AIR FILTRATION SYSTEM MODEL: ISF-1000

Baileigh Industrial  
P.O. Box 531  
Manitowoc, WI 54221-0531  
Phone: 920.684.4990  
Fax: 920.684.3944  
[Baileigh-Sales@jpwindustries.com](mailto:Baileigh-Sales@jpwindustries.com)

REPRODUCTION OF THIS MANUAL IN ANY FORM WITHOUT WRITTEN APPROVAL OF BAILEIGH INDUSTRIAL IS PROHIBITED. Baileigh Industrial does not assume and hereby disclaims any liability for any damage or loss caused by an omission or error in this Operator's Manual, resulting from accident, negligence, or other occurrence.

Edition 3 04/2022

© 2022 Baileigh Industrial



## 1.0 Important Safety Instructions

When using an electrical appliance, basic precautions should always be followed, including the following:

READ ALL INSTRUCTIONS BEFORE USING THIS AIR FILTRATION UNIT.

**⚠ WARNING** To reduce the risk of fire, electric shock, or injury:

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. Do not use this air filtration system for other than its intended use. If used for other purposes, Baileigh Industrial disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
5. Never duct a machine directly into the air filtration unit.
6. To avoid a potentially dangerous situation, do not use this equipment to filter volatile fumes or smoke.
7. Do not use this equipment to filter flammable vapors. This air filtration unit is designed and intended for the filtration of air borne dust only. It is neither designed nor intended for any other purpose whatsoever.
8. Keep visitors a safe distance from the work area. Keep children away.
9. Make your workshop child proof with padlocks, master switches or by removing starter keys.
10. **DRUGS, ALCOHOL, MEDICATION.** Do not operate tool while under the influence of drugs, alcohol or any medication.
11. Make certain the switch is in the OFF position before connecting the machine to the power supply.
12. Make certain the machine is properly grounded.
13. Use recommended accessories; improper accessories may be hazardous.
14. **GROUND ALL TOOLS.** If tool is equipped with a three-prong plug, it should be plugged into a three-hole electrical receptacle. If an adapter is used to accommodate a two-prong receptacle, the adapter lug must be attached to a known ground. Never remove the third prong.
15. **WARNING:** Drilling, sawing, sanding or machining wood products generates wood dust and other substances known to the State of California to cause cancer. Avoid inhaling dust generated from wood products or use a dust mask or other safeguards to avoid inhaling dust generated from wood products. Wood products emit chemicals known to the State of California to cause birth defects or other reproductive harm. (California Health and Safety Code Section 25249.6)
16. Keep safety guards, panels, and doors in place, secured, and always closed when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards, install the panels and close the doors immediately after completion of maintenance.
17. Maintain tools with care. Keep filters clean for the best and safest performance.
18. Turn off the machine before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
19. Do not use this air filtration unit with a damaged cord or plug. If the unit is not working as it should, has been dropped, damaged, left outdoors, or dropped into water, return it to a service center.
20. When ceiling mounted, bottom of filtration unit must be at least 7 feet from the floor. The mounts must be anchored to building structure which will support the weight of the air filtration unit. Never mount to surfaces such as dry wall or false ceiling grids.
21. When bench top mounted, do not place this unit on an unstable surface, or where there is a risk of tipping over. Serious injury could occur if the unit tips over.



22. To reduce risk of electric shock, do not expose filtration unit to water or rain.
23. Do not use in high humidity environments. Doing so may cause electric shock and/or decreased performance of the unit.
24. **WARNING:** Not suitable for use with solid-state speed controls.
25. Suitable for commercial or industrial use only.

**⚠ WARNING:** Some dust, fumes and gases created by power sanding, sawing, grinding, drilling, welding and other construction activities contain chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. Some examples of these chemicals are:

- lead from lead-based paint
- crystalline silica from bricks, cement and other masonry products
- arsenic and chromium from chemically treated lumber

Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as dust masks that are specifically designed to filter out microscopic particles. For more information go to <http://www.p65warnings.ca.gov/> and <http://www.p65warnings.ca.gov/wood>.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Caution: The user is cautioned that changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device contains license-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's license-exempt RSS(s). Operation is subject to the following two conditions:

1. This device may not cause interference.
2. This device must accept any interference, including interference that may cause undesired operation of the device.

This equipment complies with IC RSS-102 radiation exposure limits set forth for an uncontrolled environment.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

L'appareil ne doit pas produire de brouillage;

L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet équipement est conforme aux limites d'exposition aux radiations IC CNR-102 établies pour un environnement non contrôlé.

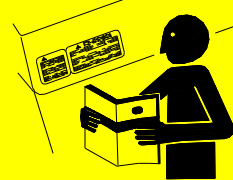
**SAVE THESE INSTRUCTIONS**



## IMPORTANT

### PLEASE READ THIS OPERATORS MANUAL CAREFULLY

It contains important safety information, instructions, and necessary operating procedures. The continual observance of these procedures will help increase your production and extend the life of the equipment.



## Safety Instructions

### LEARN TO RECOGNIZE SAFETY INFORMATION

This is the safety alert symbol. When you see this symbol on your machine or in this manual, **BE ALERT TO THE POTENTIAL FOR PERSONAL INJURY!**



Follow recommended precautions and safe operating practices.

### UNDERSTAND SIGNAL WORDS

A signal word – **DANGER**, **WARNING**, or **CAUTION** – is used with the safety alert symbol. **NOTICE**, which is not related to personal injury, is used without a symbol.

**DANGER:** Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

**WARNING:** Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

**CAUTION:** Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

**NOTICE:** Indicates a situation which, if not avoided, could result in property damage.

**DANGER**

**WARNING**

**CAUTION**

**NOTICE**

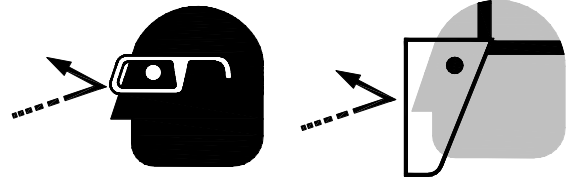


**SAVE THESE INSTRUCTIONS.**  
**Refer to them often and use them to instruct others.**



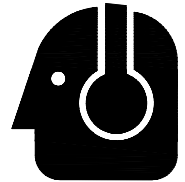
**PROTECT EYES**

Wear safety glasses or suitable eye protection when working on or around machinery.



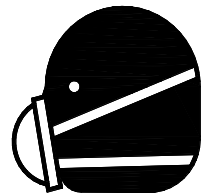
**PROTECT AGAINST NOISE**

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protective devices such as earmuffs or earplugs to protect against objectionable or uncomfortable loud noises.



**DUST HAZARD**

Wear appropriate dust mask. Dust created while using machinery can cause cancer, birth defects, and long-term respiratory damage. Be aware of the dust hazards associated with all types of materials.





## 2.0 Table of Contents

1.0 Important Safety Instructions .....	1
Safety Instructions.....	3
2.0 Table of Contents.....	5
3.0 About This Manual .....	6
4.0 Features .....	7
5.0 Specifications .....	8
6.0 Setup.....	10
6.1 Unpacking and Clean Up .....	10
6.2 Shipping Contents .....	10
6.3 Battery Installation.....	10
6.4 Installation .....	11
6.4.1 Overhead (ceiling).....	11
6.4.2 Benchtop .....	11
7.0 Electrical Connections .....	12
7.1 Grounding Instructions .....	12
7.2 Extension Cords.....	13
8.0 Controls Functions .....	14
8.1 Control Panel Buttons .....	14
8.2 RF Remote Control .....	14
POWER ON/OFF SWITCH – A .....	14
ON/OFF BUTTON (control panel or remote) – B .....	14
TIMER (control panel or remote).....	15
FAN SPEED ADJUSTMENT (control panel or remote) .....	15
AUTOMATIC MODE .....	16
FILTER STATUS INDICATOR (control panel) .....	17
9.0 Operation .....	17
10.0 User-Maintenance.....	18
10.1 Changing the Filters .....	18
10.2 Cleaning the Filters .....	19
10.2.1 Washable Filters .....	19
10.2.2 Dry Filters.....	20
10.3 RF Remote Control Replacement .....	20
10.4 Cleaning Sensors.....	20
10.5 Sensor Replacement.....	21
10.6 Control Board Replacement.....	21
11.0 Troubleshooting .....	22
12.0 Replacement Parts .....	24
12.1.1 ISF Unit – Exploded View .....	24
12.1.2 ISF Unit – Parts List .....	25
12.2.1 Display Module Assembly – Exploded View .....	26
12.2.2 Display Module Assembly – Parts List .....	26
12.3.1 Remote Control Assembly – Exploded View.....	27
12.3.2 Remote Control Assembly – Parts List .....	27
13.0 Electrical Connections 115V .....	28
14.0 Warranty and Service .....	29



### 3.0 About This Manual

This manual is provided by Baileigh Industrial, covering the safe operation and maintenance procedures for a Baileigh Industrial Model ISF-1000 Air Filtration System. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide consistent, long-term operation if used in accordance with the instructions as set forth in this document.

This manual is not intended to be an exhaustive guide to air filtration systems. Additional knowledge can be obtained from experienced users or trade articles. Whatever accepted methods are used, always make personal safety a priority.

If there are questions or comments, please contact your local supplier or Baileigh Industrial. Baileigh Industrial can also be reached at our web site: [www.baileigh.com](http://www.baileigh.com).

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.



**Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury!**

Register your product online -

[https://www.baileigh.com/support-us/product\\_registration](https://www.baileigh.com/support-us/product_registration)



## 4.0 Features

- Two-filter system with air diffuser disperses outgoing air into a broader pattern
- Disposable electrostatic outer filter attracts more dust particles than standard filters
- Inner pocket filter is removable for easy cleaning
- Can be either bench-top or ceiling mounted
  - Four eye bolts provided for ceiling mount
- Large easy to read display panel clearly shows:
  - Filter Status
    - Patent Pending system monitors the condition of the filters
    - Bright LED indicators notify the user of the filter status
      - GOOD
      - REPLACE SOON
      - REPLACE
  - Fan Speed – 6 levels
  - Timer setting
    - 1 to 16 hours in 1-hour increments
    - automatically shuts off when timer runs out
- High-efficiency Brushless DC motor
  - Improved durability
  - Quieter operation
  - More energy efficient
- Auto Mode:
  - In Auto Mode the unit monitors ambient air quality using an integrated PM2.5 sensor and adjusts fan speed to compensate
  - More air flow when it's needed to quickly improve air quality
  - Save energy and filter life when dust levels are low
- Patent Pending air flow design not only increases air volume but also decreases noise
- High strength plastic construction:
  - Reduced weight for ease of installation compared to sheet metal construction
  - Absorbs vibration for quieter operation
  - Impact resistant





## 5.0 Specifications

Table 1

Model No.	ISF-1000	
Stock No.	1231260	
<b>SPECIFICATION</b>		
<b>Motor:</b>		
Motor type	BLDC (Brushless Direct Current Motor)	
Horsepower	1/3HP	
Phase	3PH	
<b>Electrical:</b>		
Voltage	120V input, single phase only	
Frequency	60Hz	
Listed FLA (full load amps)	3.8 A	
Motor speed range	600~1,100 RPM	
Power cord	SJT 18 AWG x 3C, 6 ft.	
Power plug	American Type NEMA (10A/125V)	
Overload protector	5A	
<b>Performance:</b>		
Fan Speed	Air flow without filter (CFM) <sup>1</sup>	Sound rating @ 1m <sup>1</sup>
1	450 ±10%	51dB
2	560 ±10%	56dB
3	670 ±10%	60dB
4	780 ±10%	63dB
5	890 ±10%	66dB
6	1000 ±10%	67dB
<b>Control Panel:</b>		
On/off switch	Rocker switch	
Speed control	Six selectable speeds	
Timer Setting (Hour)	1 ~ 16 (LED display)	
Display	LED module	
<b>Digital Remote Control:</b>		
Transmitter	Radio Frequency	
Battery	CR2032.3 Volt Button Cell	
Inner Filter (stock # 708733)	1 Micron Replacement Inner Filter	



Table 1 (cont.)

Filters:	
Outer Filter (stock # 708731)	5 Micron Replacement Electrostatic Out Filter (carton frame)
Inner Filter (stock # 708733)	1 Micron Replacement Inner Filter
Dimensions and Weight:	
Overall Dimensions (L x W x H/mm)	30-1/8" x 24-1/4" x 15-3/8" (765 x 615 x 390 /mm)
Packing Dimensions (L x W x H/mm)	31-11/16" x 26-11/16" x 19-8/16" (805 x 678 x 495 /mm)
Packing Material	Corrugated Box and Styrofoam
Net Weight	33 lb (15 kg)
Gross Weight	41.8 lb (19 kg)

<sup>1</sup> Variable of  $\pm 10\%$ , for general information only, not to be viewed as fixed parameters for inspection purposes.

*L = length, W = width, H = height*

*n/a = not applicable*

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, Baileigh Industrial reserves the right to change specifications at any time and without prior notice, without incurring obligations.



**⚠WARNING** Read and understand the entire contents of this manual before attempting assembly or operation. Failure to comply may cause serious injury.

## 6.0 Setup

### 6.1 Unpacking and Clean Up

Inspect the Air Filtration Unit and check for shipping damage. Report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the Air Filtration Unit is installed and running properly.

Compare the contents of your container with the following parts list to make sure all parts are intact. Missing parts, if any, should be reported to your distributor.

### 6.2 Shipping Contents

#### Carton contents

- 1 Air Filtration Unit
- 1 Remote Control
- 1 CR2032 Battery
- 1 Manual and Warranty Card
- 4 Eye Bolts

### 6.3 Battery Installation

1. Remove the battery cover on the rear of the remote control as shown in Fig. 6-1.
2. Install the supplied battery (CR2032) with the “+” side facing upward (Fig. 6-1).
3. Replace the battery cover.



Figure 6-1



## **6.4 Installation**

### **6.4.1 Overhead (ceiling)**

**CAUTION** Overhead structure (often ceilings) must be capable of supporting the weight of the air filtration unit and absorbing any vibrations arising from the unit. Appropriate fasteners must be used to secure to the ceiling. Failure to comply may cause serious injury. Never mount to surfaces such as dry wall, false ceiling grids, etc.

When overhead mounting such as a ceiling, make sure chain and ceiling hooks are properly rated for hanging this unit.

Refer to figure 6-2. After noting the direction of air flow, use the hole location dimension to place the anchors in the ceiling so that the chains hang as straight as possible.

Clearance should be at least 7 feet from bottom of unit to the floor.

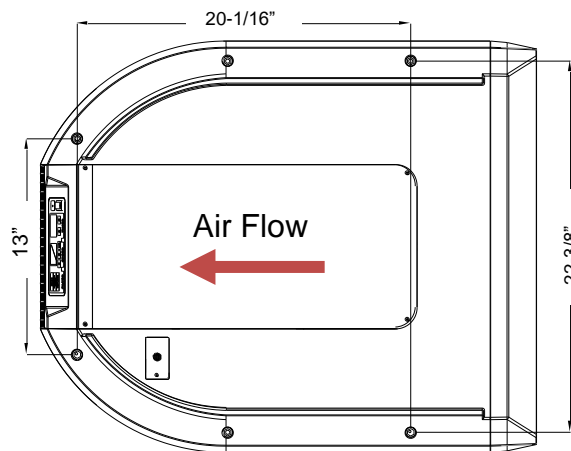


Figure 6-2

This unit will work best if located away from corners and heating/cooling vents.

### **6.4.2 Benchtop**

When bench top mounting is used, make sure that the surface is flat and level and does not allow the ISF to move over the surface which could allow it to fall.

Verify that the bench is stable and secure and will not tip causing the ISF to fall.

In either installation:

- Route the power cord so that it will NOT become entangled in the machine in any way.
- Route the cord to the power supply in a way that does NOT create a trip hazard.



## 7.0 Electrical Connections

**⚠WARNING** Electrical connections should be made by a qualified electrician in compliance with all relevant codes. Failure to comply may cause serious injury.

The ISF-1000 Air Filtration System is prewired for single phase, 120V power. It is provided with a plug designed for use on a circuit with a grounded outlet that looks like the one pictured in Figure 7-1.

It is recommended that the ISF-1000 be connected to a 15 amp circuit with a circuit breaker or fuse. If fuses are used, they should be time-delay fuse marked "D". **Local codes take precedence over recommendations.**

### 7.1 Grounding Instructions

#### 1. All Grounded, Cord-connected Tools:

This machine must be grounded. In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

**⚠WARNING** Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Failure to comply may cause serious or fatal injury.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

#### 2. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating **less than 150 volts**:

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Figure 7-1.

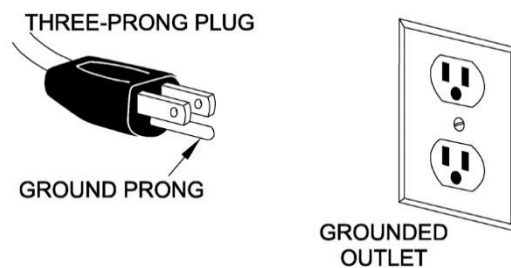


Figure 7-1



## 7.2 Extension Cords

The use of extension cords is discouraged. Try to position machines within reach of the power source. If an extension cord must be used, make sure it is heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 2 shows correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Ampere Rating		Volts	Total length of cord in feet			
More Than	Not More Than	120	25	50	100	150
			AWG			
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

*Extension Cord Recommendations  
Table 2*



## 8.0 Controls Functions

### 8.1 Control Panel Buttons



Figure 8-1

### 8.2 RF Remote Control



Figure 8-2

#### **POWER ON/OFF SWITCH – A**

The Power ON/OFF switch (Fig. 8-1, A) is a rocker switch on the control panel used to supply power to the ISF electronic controls and thus the full ISF.

In the OFF position, AC power is disconnected from the electronics. The ISF unit will Not turn On.

In the ON position, AC power is connected to the electronics. The electronics are powered On in a STANDBY state awaiting user input via the ON/OFF button on either the control panel or the remote.

#### **ON/OFF BUTTON (control panel or remote) – B**

The On/Off Button (Fig. 8-1 and 8-2, B) on the controls and the remote perform the exact same function under the exact same conditions.

When the Power switch (Fig. 8-1, A) is first turned ON, power is supplied to the electronics and the ISF unit is in the STANDBY state. All DISPLAYs are off.



Each press of the ON/OFF button (Fig. 8-1 and 8-2, B) cycles the ISF unit between STANDBY and ON.

Pressing the ON/OFF button once:

- ISF Unit goes to ON state.
- The TIMER DISPLAY is blank.
- The fan starts to run at speed 1.
- The SPEED DISPLAY shows 1 bar for speed 1.
- The FILTER DISPLAY will illuminate the filter status.

Pressing the ON/OFF button again does the following:

- ISF unit goes to STANDBY state.
- All DISPLAYS are off, and the fan stops.

### **TIMER (control panel or remote)**

The TIMER buttons (Fig. 8-1 and 8-2) on the controls and the remote perform the exact same function under the exact same conditions.

The TIMER may be set in 1-hour increments from 1 to 16 hours. When the timer expires, the fan will stop and the ISF will enter STANDBY state.

When the timer is not being used, the TIMER display will be blank and the ISF will run continuously until the user changes the settings or stops the ISF.

To activate the TIMER, pressing the TIMER + button.

- The TIMER DISPLAY changes from blank to display flashing "1". This is 1 hour.
- Pressing the TIMER + button again will increase the number by 1 each time the TIMER + button is pressed. Up to a maximum of 16 hours.
- Pressing the TIMER – button will decrease the number by 1 each time the TIMER - button is pressed. Down to a blank display turning the TIMER Off and running the ISF continuously.
- If the display is already set and showing an hour time value, then pressing the TIMER + or – button will add or subtract time from the already set value.
- When the TIMER + or – button have been pressed, the number on the TIMER display will flash for 1 second and then show steady ON. Steady ON indicates the TIMER is set and the countdown has begun.
- Pressing and holding either the TIMER + or – button (2 seconds) will advance the count quickly (changing every 0.2 seconds) until the button is released.

### **FAN SPEED ADJUSTMENT (control panel or remote)**

The SPEED Buttons (Fig. 8-1 and 8-2) on the controls and the remote perform the exact same function under the exact same conditions.

The SPEED display uses illuminated bars to indicate which speed level is active. The upper most illuminated bar is the current speed setting. The bars not lit are still available to increase fan speed if desired.





Air flow at each fan SPEED setting is as follows:

Fan Speed Setting	CFM
1	450 ±10%
2	560 ±10%
3	670 ±10%
4	780 ±10%
5	890 ±10%
6	1000 ±10%

Table 3

When the ISF is turned ON, the fan will start and run at SPEED 1 until changed by the user. The SPEED display will show 1 bar.

- Pressing the SPEED + button will increase the fan speed.
- Pressing the SPEED – button will decrease the fan speed.

### **AUTOMATIC MODE**

**NOTE:** For best performance in AUTO mode, allow adequate air flow to the sensor on the bottom of the unit (see Fig. 8-3).



Figure 8-3

The AUTO buttons (Fig. 8-1 and 8-2) on the controls and the remote perform the exact same function under the exact same conditions.

When the AUTO button is pressed, the AUTO button is illuminated, and the ISF is operating in AUTO mode.

In AUTO mode, the integrated sensor detects the air quality and adjusts the fan speed accordingly. Thereby reducing energy consumption when air quality is good and increasing the fan speed when dust is present.

- Pressing either the SPEED + or – button will deactivate AUTO mode and return to manual mode.

**NOTE:** In AUTO mode the unit may require several minutes to return to fan speed 1 once dust is detected. The unit intentionally ramps down slowly to ensure good shop air quality.



## **FILTER STATUS INDICATOR (control panel)**

The FILTER status indicators are located on the control panel and are there to indicate the condition of the filters.

"GOOD" indicates that the filters are clean enough to provide effective filtration.

"REPLACE SOON" indicates that the filters are becoming clogged, reducing the unit's ability to effectively filter the shop air, and therefore will need to be cleaned/replaced soon.

"REPLACE" indicates that the filter is clogged to the point that it needs to be cleaned or replaced.

## **9.0 Operation**

**NOTE:** *The Air Filtration Unit is designed to remove airborne non-metallic dust particles; it is not designed to take the place of a dust collection system.*

Larger particles are trapped by the outer filter. Smaller particles are stopped by the fine mesh pockets of the inner filter. The air is then exhausted through the diffusion filter, which has a fibrous composition to help diffuse the air.

Normal operation:

- At the Control panel, place Power On/Off switch to ON.
- From either the Control panel or Remote, press the On/Off button.
- Set the SPEED as desired or select AUTO.
- If desired, set the TIMER to automatically turn off at a later time.
- At the end of the day/shift/leaving for an extended period of time, press the On/Off button to stop the fan.
- If leaving for a longer period of time such as weekend or vacation, turn the Power switch to Off as well.



## 10.0 User-Maintenance

**⚠WARNING** Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

### 10.1 Changing the Filters

**⚠WARNING** To reduce the risk of injury, disconnect the air filtration system from the power source (unplug) before servicing or changing filters. Failure to comply may cause serious injury!

There are two filters that need to be changed.

Filter life will vary depending on the amount of usage and the environment of your shop. Clogged filters will reduce the amount of air circulation.

1. Lift the filter up and pull outward on the bottom edge to remove the filter.

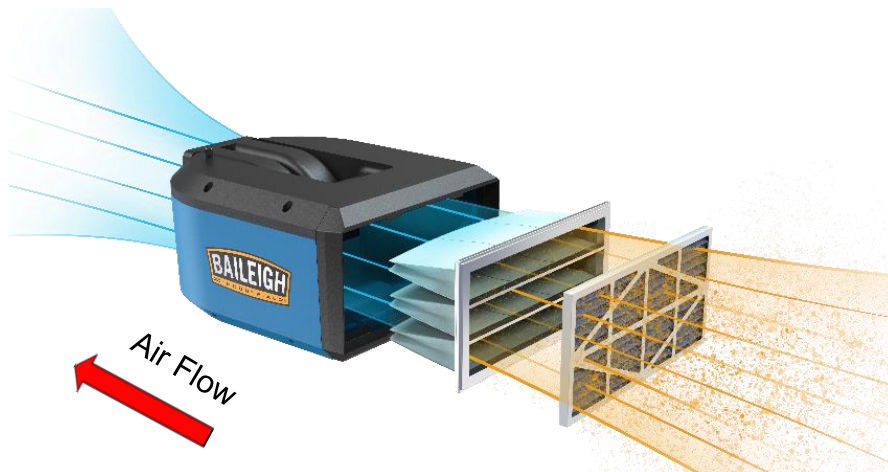


Figure 10-1

2. Remove the *inner filter* by pulling straight out of the cabinet.
3. Remove any protective wrapping from the new filters.
4. Install the filters in reverse of the removal. The outer filter has directional air flow arrows printed on the frame which depicts the direction of air flow. Make sure it is facing the proper direction when installed. If no directional arrows are present, the inboard side of the filter will typically have metal support not used on the outboard side.

#### Replacement Filters:

**NOTE:** Baileigh Industrial brand filters are recommended for best performance.

- 708731 .....Electrostatic Outer Filter
- 708732 .....Washable Electrostatic Outer Filter
- 708733 .....Inner Three-Pocket Filter
- 708734 .....Charcoal Filter



## **10.2 Cleaning the Filters**

**⚠WARNING** To reduce the risk of injury, disconnect the air filtration system from the power source (unplug) before servicing or changing filters. Failure to comply may cause serious injury!

This ISF is designed to remove airborne non-metallic dust particles from the air. Cleaning is about removing those particles from the filter in the opposite direction from which it came.

It is recommended to clean both filters at the same time. Whether using the Filter Status Indicator or a visual inspection, both filters should be cleaned to restore as much filtration ability as possible.

Remove the filters from the ISF unit as described in 10.1 Changing the Filters.

### **10.2.1 Washable Filters**

Washable filters are those filters which may get wet and allowed to dry before returning to service. The replacement Washable Electrostatic Outer Filter (P/N 708732) is a washable filter.



*Figure 10-2 Inside of filter shown*

- Using a hose and spray nozzle with normal tap water pressure, spray the filter from the inside out. Opposite the operating air flow. This will rinse the larger loose particles out of the filter.
- Mix a mild detergent and water mixture (soap) such as dish soap. Mix a drop or two of dish soap and water into a spray bottle. If using a commercial electrostatic detergent, follow the label instructions.
- Spray the soap onto the entire filter until fully covered.
- Allow the soap to soak 1 to 2 minutes on the filter but do not allow the soap to dry. This will create a sticky film that is difficult to remove.
- Thoroughly rinse the soap out of the filter and the filter frame.
- Allow all excess water to drain off the filter. While the filter does not need to be absolutely dry, do not return to service if water is dripping or droplets are still visible.
- Low pressure compressed air may be used to remove any remaining water from the filter.
- Install the filters in reverse of the removal. The outer filter has directional air flow arrows printed on the frame which depicts the direction of air flow. Make sure it is facing the proper direction when installed. If no directional arrows are present, the inboard side of the filter will typically have metal support not used on the outboard side.



### **10.2.2 Dry Filters**

Dry filters are those filters which should not get wet. The standard Electrostatic Outer Filter (P/N 708731) is a dry filter.

Cleaning may be completed by vacuuming using a brush attachment on the vacuum hose.

- Lightly brush the vacuum brush nozzle over the input side of the filter. The brush will help dislodge the particles which will then be removed by the vacuum.
- Make several passes moving inline with the pleats of the filter.
- Visually inspect the filter while cleaning. If the filter material is worn, torn, or coming apart from the frame, it must be replaced.

### **10.3 RF Remote Control Replacement**



Figure 10-3

The remote control provided with the AFS unit is programmed and ready to operate once the unit is installed. Verify that the batteries are installed in the remote.

Follow these instructions if the remote is being replaced.

1. Place the Power switch in the ON position.
2. DO NOT press the ON/OFF button.
3. Press and hold the SPEED – (minus) and SPEED + (plus) buttons on the control panel at the same time and hold for two seconds. The screen flashes (0.5 seconds) and displays "---" to enter the programming mode.
4. Press and hold the ON/OFF button of the REMOTE control until the panel is turned ON ("ON" is displayed), and the programming is complete.
5. In the programming mode, press any other button on the control panel to exit the programming mode.
6. In the programming mode, if the programming is not completed within seven seconds, you will leave the programming mode.

### **10.4 Cleaning Sensors**

Dust may accumulate on the sensor (see Fig. 8-3) and affect the performance in AUTO mode. Sensor may be cleaned with a dry cloth or compressed air.



## **10.5 Sensor Replacement**

The AFS unit ships from the factory with the sensor and control board calibrated and ready to use. In the event the sensor should need replacing, follow these instructions to calibrate the new sensor:

1. With the Power ON/OFF switch (Fig. 10-4, A) in the OFF position, press and hold the Timer-DN(-) and Timer-UP(+) buttons simultaneously, then switch the Power ON/OFF switch to the ON position to enter the environment value setting mode.
2. The screen flashes and displays "- -", the calibration is completed when the detected value is stable (- - disappears), and then returns to the standby state.



Figure 10-4

## **10.6 Control Board Replacement**

In the event the control board needs replacing, follow the steps in Section 10.5 to calibrate the sensor with the new control board. Then follow these instructions to program the remote to operate with the new control board:

1. Recalibrate the sensor to the new control board.
2. Pair the new control board with the remote control, reference Section 10.3.



## 11.0 Troubleshooting

Table 4

Symptom	Probable Cause	Remedy
ISF will not start	Power ON/OFF switch in the OFF position	Move Power ON/OFF switch to the ON position.
	No incoming power	Check plug connection Verify there is power at the outlet, check breaker or fuse panel.
	Low voltage	Request voltage check from power company and correct low voltage condition.
	Power cord damaged	Replace power cord.
	Control button or PCBA malfunction	Contact Baileigh Industrial customer service.
Excessive vibration	Loose frame, parts, or fasteners	Inspect and tighten as needed.
	Impeller imbalance	Clean impeller (do not use solvents). If imbalance still occurs, replace impeller.
	Motor imbalance	Have motor tested by qualified personnel; replace if needed.
Unit not responding to remote control	Weak batteries in remote	Replace batteries.
	Radio frequency interference	Identify sources of interference and eliminate them or relocate unit.
	Remote control or machine control panel malfunction	Contact Baileigh Industrial customer service.
Unit not working efficiently; not cleaning air.	Filter not installed properly	Reinstall filter.
	Blocked air flow	Inspect filter; replace if clogged remove blockage.
Controls on unit not working	Control button or PCBA malfunction	Contact Baileigh Industrial customer service.
Timer screen displays numbers / letters other than a countdown timer	If screen displays A8 filter is not installed	Install filter.
	Control may be in factory set-up mode	Move power ON/OFF switch to the OFF position. Wait 30 seconds, then switch back to ON. Then press the On/Off button.
	Loose connection on the control board	Move power ON/OFF switch to the OFF position and unplug the unit. Check the electrical connections to the control



Symptom	Probable Cause	Remedy
		board to ensure they are all seated properly.

Table 4 (cont.)

Symptom	Probable Cause	Remedy
Timer screen displays numbers / letters other than a countdown timer	Control button or PCBA malfunction	Replace control board. Contact Baileigh Industrial customer service.

**\*Warning:** Some corrections may require a qualified electrician.







## 12.1.2 ISF Unit – Parts List

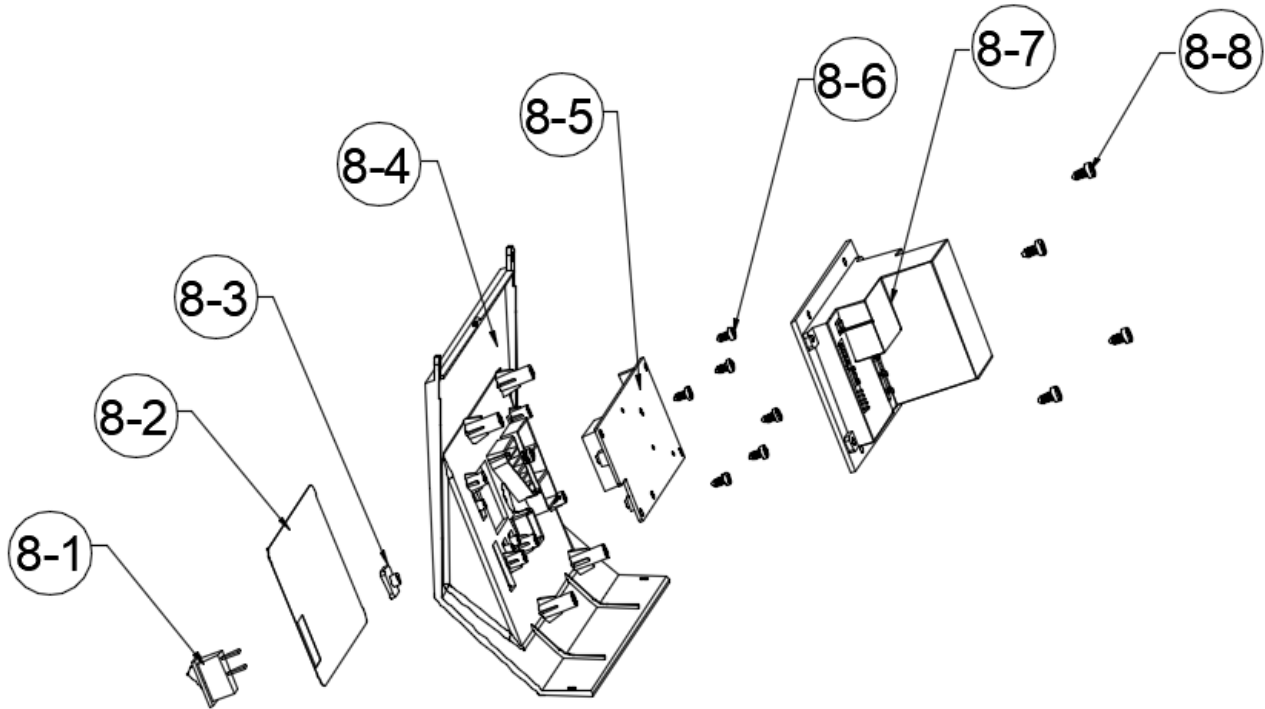
Index No	Part No	Description	Size	Qty
1	AFS1000C-001	Motor		1
2	AFS1000C-002	Fan blade (Right)		1
3	AFS1000C-003	Fan blade (Left)		1
4	AFS1000C-004	Deflector		2
5	ISF1000-AFLC	Air filter lower case		1
6	AFS1000C-006	Air filter upper case		1
7	AFS1000C-007	Air filter back case		1
8	AFS1000C-DMA	Display Module Assembly (SEE 12.2.1 for detail)		1
9	AFS1000C-009	Nets		1
10	708733	Inner three-pocket filter		1
11	708731	Electrostatic outer filter		1
12	ISF1000-12	Dust sensor cover		1
13	ISF1000-13	Bottom cover		1
14	AFS1000C-014	Dust sensor		1
15	AFS1000C-015	Power cord		1
16	ISF1000-BS	Baileigh Stripe (13"X5")		2
17	AFS1000C-018	Warning label		1
18	AFS1000C-019	Cable glands		1
19	ISF1000-RCA	Remote Control Assembly		1
20	AFS1000C-021	Eye bolt	M6X20	4
21	AFS1000C-022	Standoff	M6X25	4
22	TS-1550041	Flat washer	M6	6
23	AFS-1000C-032	Screw, Flanged Hex Head, Phillips	M6X10	5
24	AFS-1000C-033	Screw, Flanged Hex Head, Phillips	M6X20	2
25	AFS1000C-023	Hex head bolt	M6X300	6
26	TS-1551041	Spring washer	M6	7
27	AFS1000C-024	Cylindrical screw (Tapping screw)	M5X12	8
28	AFS1000C-025	Flat head screw (Tapping screw)	M4X10	8
29	AFS1000C-026	Flat head screw (Tapping screw)	M3X10	1
30	ISF1000-027	Motor Label (not shown)		1
31	ISF1000-028	ID Label (not shown)		1
32	AFS1000C-029	Energy star Label (not shown)		1
33	AFS1000C-030	Display cable (not shown)		1
34	AFS1000C-031	Dust sensor cable (not shown)		1
35	ISF1000-HK	Hardware Kit (Include 4 eye bolts and Remote Control Assembly - not shown)		1

### Replacement Filters:

.....708731	.....	Electrostatic Outer Filter
.....708732	.....	Washable Electrostatic Outer Filter
.....708733	.....	Inner Three-Pocket Filter
.....708734	.....	Charcoal Filter



### 12.2.1 Display Module Assembly – Exploded View

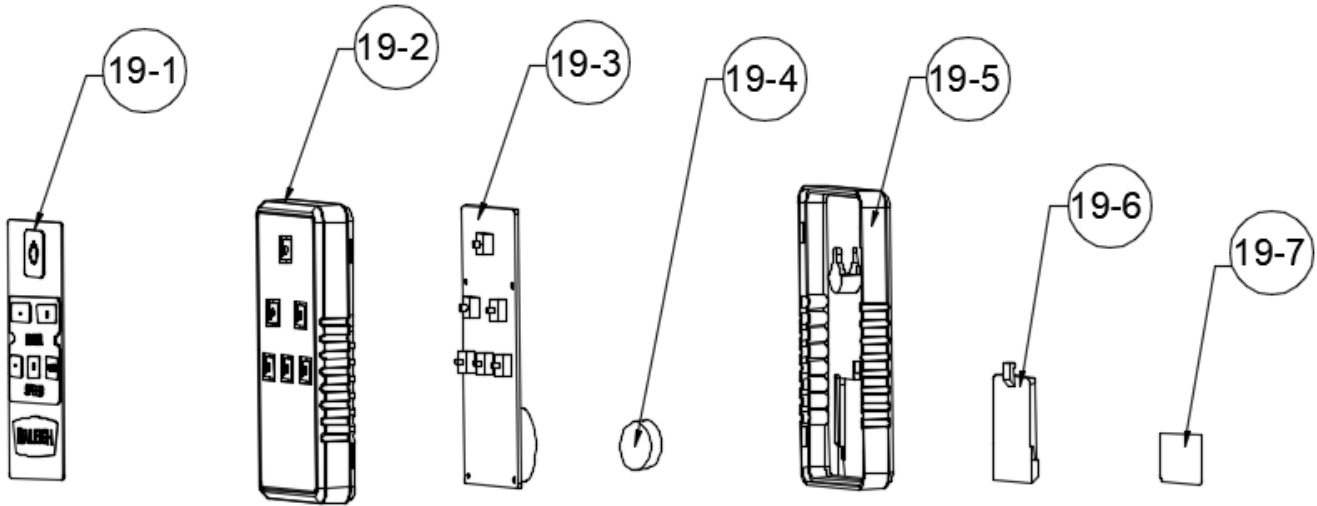


### 12.2.2 Display Module Assembly – Parts List

Index No	Part No	Description	Size	Qty
8	AFS1000C-DMA	Display Module Assembly		1
8-1	AFS1000C-DM1	AC power switch		1
8-2	AFS1000C-DM2	Display label		1
8-3	AFS1000C-DM3	Auto button		1
8-4	AFS1000C-DM4	Display cover		1
8-5	AFS1000C-DM5	Display PCB		1
8-6	AFS1000C-DM6	Cylindrical screw (Tapping screw)	M3X6	6
8-7	AFS1000C-DM7	Control module		1
8-8	AFS1000C-DM8	Cylindrical screw (Tapping screw)	M3X10	4



### 12.3.1 Remote Control Assembly – Exploded View

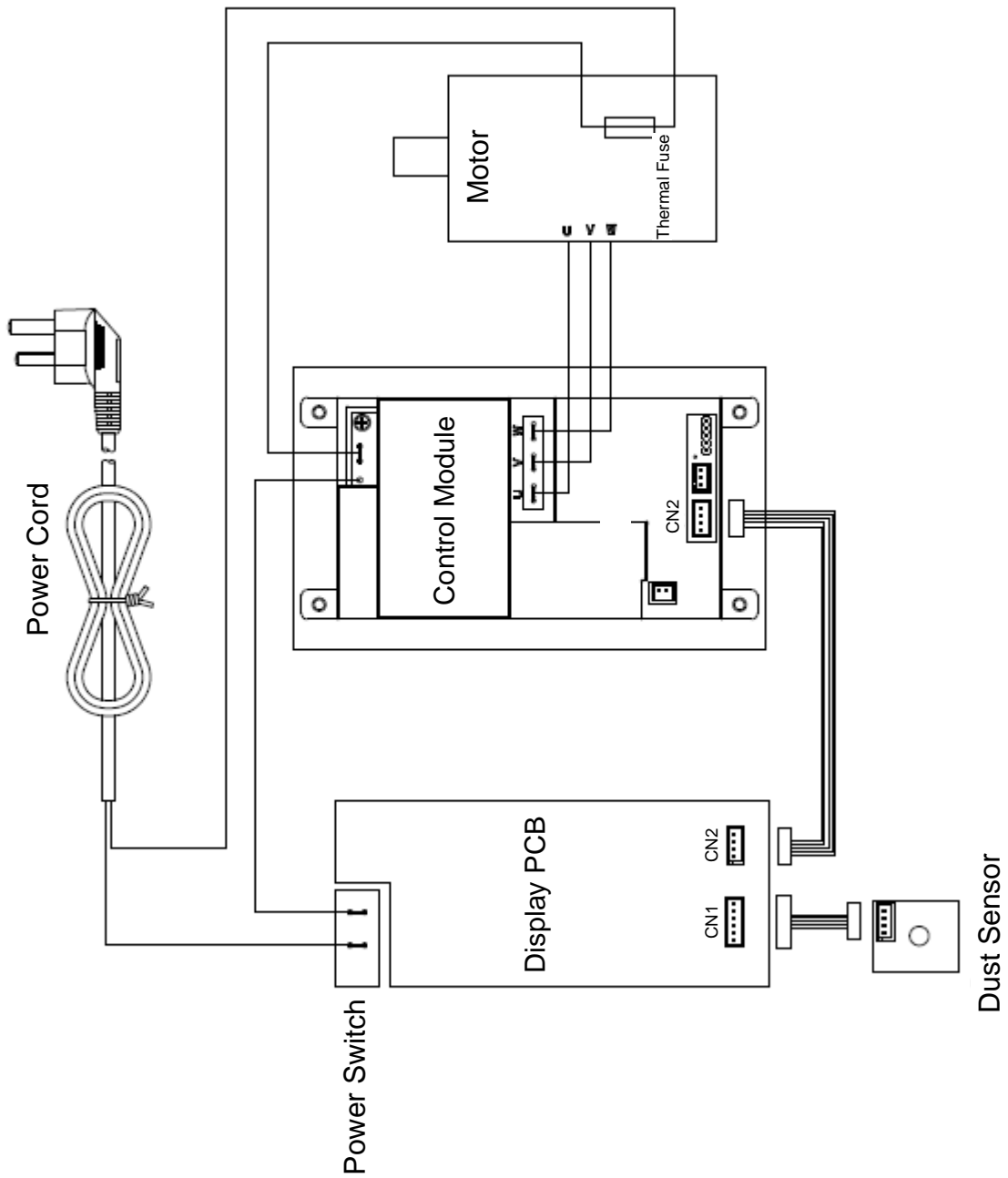


### 12.3.2 Remote Control Assembly – Parts List

Index No	Part No	Description	Size	Qty
19	ISF1000-RCA	Remote Control Assembly		1
19-1	ISF1000-RC1	Remote label		1
19-2	AFS1000C-RC2	Remote up case		1
19-3	AFS1000C-RC3	Remote PCB		1
19-4	AFS1000C-RC4	Button cell	CR2032	1
19-5	AFS1000C-RC5	Remote down case		1
19-6	AFS1000C-RC6	Battery cover		1
19-7	AFS1000C-RC7	Remote FCC label		1



### 13.0 Electrical Connections 115V





## 14.0 Warranty and Service

**Inspection & Acceptance.** Buyer shall inspect all Goods within ten (10) days after receipt thereof. Buyer's payment shall constitute final acceptance of the Goods and shall act as a waiver of the Buyer's rights to inspect or reject the goods unless otherwise agreed. If Buyer rejects any merchandise, Buyer must first obtain a Returned Goods Authorization ("RGA") number before returning any goods to Seller. Goods returned without an RGA will be refused. Seller will not be responsible for any freight costs, damages to goods, or any other costs or liabilities pertaining to goods returned without a RGA. Seller shall have the right to substitute a conforming tender. Buyer will be responsible for all freight costs to and from Buyer and repackaging costs, if any, if Buyer refuses to accept shipment. If Goods are returned in unsalable condition, Buyer shall be responsible for full value of the Goods. Buyer may not return any special-order Goods. Any Goods returned hereunder shall be subject to a restocking fee equal to 30% of the invoice price.

**Specifications.** Seller may, at its option, make changes in the designs, specifications or components of the Goods to improve the safety of such Goods, or if in Seller's judgment, such changes will be beneficial to their operation or use. Buyer may not make any changes in the specifications for the Goods unless Seller approves of such changes in writing, in which event Seller may impose additional charges to implement such changes.

**Limited Warranty.** Seller warrants to the original end-user that the Goods manufactured or provided by Seller under this Agreement shall be free of defects in material or workmanship for a period of twelve (12) months from the date of purchase, provided that the Goods are installed, used, and maintained in accordance with any instruction manual or technical guidelines provided by the Seller or supplied with the Goods, if applicable. The original end-user must give written notice to Seller of any suspected defect in the Goods prior to the expiration of the warranty period. The original end-user must also obtain a RGA from Seller prior to returning any Goods to Seller for warranty service under this paragraph. Seller will not accept any responsibility for Goods returned without a RGA. The original end-user shall be responsible for all costs and expenses associated with returning the Goods to Seller for warranty service. In the event of a defect, Seller, at its sole option, shall repair or replace the defective Goods or refund to the original end-user the purchase price for such defective Goods. Goods are not eligible for replacement or return after a period of 10 days from date of receipt. The foregoing warranty is Seller's sole obligation, and the original end-user's exclusive remedy, with regard to any defective Goods. This limited warranty does not apply to: (a) die sets, tooling, and saw blades; (b) periodic or routine maintenance and setup, (c) repair or replacement of the Goods due to normal wear and tear, (d) defects or damage to the Goods resulting from misuse, abuse, neglect, or accidents, (f) defects or damage to the Goods resulting from improper or unauthorized alterations, modifications, or changes; and (f) any Goods that has not been installed and/or maintained in accordance with the instruction manual or technical guidelines provided by Seller.

**EXCLUSION OF OTHER WARRANTIES.** THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ANY AND ALL OTHER EXPRESS, STATUTORY OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. NO WARRANTY IS MADE WHICH EXTENDS BEYOND THAT WHICH IS EXPRESSLY CONTAINED HEREIN.

**Limitation of Liability.** IN NO EVENT SHALL SELLER BE LIABLE TO BUYER OR ANY OTHER PARTY FOR ANY INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR DOWN TIME) ARISING FROM OR IN MANNER CONNECTED WITH THE GOODS, ANY BREACH BY SELLER OR ITS AGENTS OF THIS AGREEMENT, OR ANY OTHER CAUSE WHATSOEVER, WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY OF LIABILITY. BUYER'S REMEDY WITH RESPECT TO ANY CLAIM ARISING UNDER THIS AGREEMENT IS STRICTLY LIMITED TO NO MORE THAN THE AMOUNT PAID BY THE BUYER FOR THE GOODS.

**Force Majeure.** Seller shall not be responsible for any delay in the delivery of, or failure to deliver, Goods due to causes beyond Seller's reasonable control including, without limitation, acts of God, acts of war or terrorism, enemy actions, hostilities, strikes, labor difficulties, embargoes, non-delivery or late delivery of materials, parts and equipment or transportation delays not caused by the fault of Seller, delays caused by civil authorities, governmental regulations or orders, fire, lightning, natural disasters or any other cause beyond Seller's reasonable control. In the



event of any such delay, performance will be postponed by such length of time as may be reasonably necessary to compensate for the delay.

**Installation.** If Buyer purchases any Goods that require installation, Buyer shall, at its expense, make all arrangements and connections necessary to install and operate the Goods. Buyer shall install the Goods in accordance with any Seller instructions and shall indemnify Seller against any and all damages, demands, suits, causes of action, claims and expenses (including actual attorneys' fees and costs) arising directly or indirectly out of Buyer's failure to properly install the Goods.

**Work By Others; Safety Devices.** Unless agreed to in writing by Seller, Seller has no responsibility for labor or work performed by Buyer or others, of any nature, relating to design, manufacture, fabrication, use, installation or provision of Goods. Buyer is solely responsible for furnishing and requiring its employees and customers to use all safety devices, guards and safe operating procedures required by law and/or as set forth in manuals and instruction sheets furnished by Seller. Buyer is responsible for consulting all operator manuals, ANSI or comparable safety standards, OSHA regulations and other sources of safety standards and regulations applicable to the use and operation of the Goods.

**Remedies.** Each of the rights and remedies of Seller under this Agreement is cumulative and in addition to any other or further remedies provided under this Agreement or at law or equity.

**Attorney's Fees.** In the event legal action is necessary to recover monies due from Buyer or to enforce any provision of this Agreement, Buyer shall be liable to Seller for all costs and expenses associated therewith, including Seller's actual attorney fees and costs.

**Governing Law/Venue.** This Agreement shall be construed and governed under the laws of the State of Wisconsin, without application of conflict of law principles. Each party agrees that all actions or proceedings arising out of or in connection with this Agreement shall be commenced, tried, and litigated only in the state courts sitting in Manitowoc County, Wisconsin or the U.S. Federal Court for the Eastern District of Wisconsin. Each party waives any right it may have to assert the doctrine of "forum non conveniens" or to object to venue to the extent that any proceeding is brought in accordance with this section. Each party consents to and waives any objection to the exercise of personal jurisdiction over it by courts described in this section. Each party waives to the fullest extent permitted by applicable law the right to a trial by jury.

**Summary of Return Policy.**

- 10 Day acceptance period from date of delivery. Damage claims and order discrepancies will not be accepted after this time.
- You must obtain a Baileigh Industrial issued RGA number PRIOR to returning any materials.
- Returned materials must be received at Baileigh Industrial in new condition and in original packaging.
- Altered items are not eligible for return.
- Buyer is responsible for all shipping charges.
- A 30% re-stocking fee applies to all returns.

Baileigh Industrial makes every effort to ensure that our posted specifications, images, pricing and product availability are as correct and timely as possible. We apologize for any discrepancies that may occur. Baileigh Industrial reserves the right to make any and all changes deemed necessary in the course of business including but not limited to pricing, product specifications, quantities, and product availability.

**For Customer Service & Technical Support:**

Please contact one of our knowledgeable Sales and Service team members at:  
(920) 684-4990 or e-mail us at [Baileigh-Service@jpwindustries.com](mailto:Baileigh-Service@jpwindustries.com)



**BAILEIGH INDUSTRIAL**  
**1625 DUFEK DRIVE MANITOWOC, WI 54220**  
**PHONE: 920. 684. 4990 FAX: 920. 684. 3944**  
**[www.baileigh.com](http://www.baileigh.com)**