



# Coffee Crafters



## *Artisan 6<sup>m</sup>*

### 6 lb Fluid Bed Coffee Roaster Manual

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## Table of Contents

<i>Introduction</i> .....	5
About Us .....	5
Our Mission.....	5
Our Vision.....	5
<i>Warranty and Guarantee</i> .....	6
Artisan 6m Warranty.....	6
What is Not Covered by the Warranty .....	6
If You Need Service .....	7
30-Day Complete Satisfaction & Money-Back Guarantee.....	7
Return Instructions .....	7
Receipt of Damaged or Defective Items .....	8
<i>Assembly and Installation</i> .....	9
Assembly Introduction.....	9
Hood Attachment .....	11
Position and Secure Hopper .....	11
Electrical Cable.....	12
Exhaust Tube Attachment.....	13
Cooling and Chaff System .....	15
Flex Tubing .....	16
Blower Exhaust System.....	17
Chaff Bags.....	17
Ventilation Installation.....	18
Exhaust Penetrations .....	18
Cleanout.....	18
Maximum Run Length for 4" Exhaust Duct.....	18
Maximum Run Length for 5" Exhaust Duct.....	18
Blower Intake to Roaster Ducting.....	19
Blower Discharge Ducting.....	19
Exhaust Gas Temperature.....	19

Thermometer .....	20
Thermocouple Switch .....	21
Helpful Tips .....	22
<i>Roasting</i> .....	23
Roast Coffee in 6 easy steps: .....	23
Check Chaff Bag .....	23
Turn on Exhaust Blower .....	23
Load Beans in Hopper .....	24
Turn on System Power .....	24
Load Beans in Hopper .....	25
Turn on Heating Element .....	26
Roasting Complete: Cool the Beans .....	27
<i>Coffee Bean Education</i> .....	30
Proper Storage of Green Coffee Beans .....	30
Green Coffee Bean Abbreviations and Meanings .....	31
<i>Maintenance and Troubleshooting</i> .....	32
Maintenance .....	32
Chaff Bags .....	32
Roast Hopper Cleaning .....	32
Wire Chimney .....	32
Bean Cooling Tray .....	32
Exhaust Hood and Exhaust J Tube .....	33
Exhaust Tubing .....	33
Exterior Surfaces .....	33
Troubleshooting .....	34
Exhaust Blower Losing Suction .....	34
Bean Loft Motor Won't Run .....	35
Roast Air Temperature Stalls .....	36
Both Heat Elements Won't Turn On .....	37
Bean Loft Motor Runs at Full Speed Only .....	37

Both Element Running but Roasts Take too Long.....	38
Troubleshooting Figure 1.1 .....	39
Troubleshooting Figure 1.2 .....	39
Troubleshooting Figure 1.3 .....	40
Troubleshooting Figure 1.4 – SSR Connections .....	41
Troubleshooting Figure 1.5 – Contactors.....	42
Wiring Diagram .....	42
<i>Part List</i> .....	43

# Introduction

In this manual you will find everything needed to start roasting. Included in this copy is a description of your warranty/guarantee, detailed information on installation and assembly, how to roast guideline, additional information on green beans and a troubleshooting guide.

## About Us

While living in Thailand and unable to find fresh roasted coffee, Ken Lathrop, developer of Coffee Crafter's Artisan 6<sup>M</sup> coffee roaster, conceived of a concept to design and build a reliable, affordable machine capable of roasting five pounds or more of coffee beans in less than ten minutes.

"My goal was to enable new roasters – to help them roast their own beans and have fun doing it", says Lathrop. "My focus was to design and build a roaster that could be easy for anyone to learn and use – a roaster that could roast five pounds or more per roast batch, was easily installed and affordable for anyone. From the response we have received from customers and at coffee shows I think we succeeded."

Coffee Crafters designed and began selling its Artisan V fluid bed coffee roaster in August 2013. "We built the Artisan 6M specifically to serve small roasters or those new to the industry", says Lathrop. "The installation is similar to your home clothes dryer – very simple and straightforward. After installation we find that our customers are up to speed and roasting typically within 30 minutes."

## Our Mission

To become the best and largest supplier of high quality affordable coffee "micro-roasting" equipment in the world.

### **"Micro-Roasting" defined:**

1. *Hands on craft roasted coffee*
3. *Roasting 100 lbs or less per day*
4. *Supply "fresh" coffee to Customers immediately after roasting at its peak of freshness*

## Our Vision

We will maintain an "uncompromising" commitment to our "micro-roasting" Customers by:

- Serving our Customers like we would like to be taken care of.
- Providing our Customers with equipment, supplies and information to satisfy all of their micro-roasting needs.
- Supplying high quality products engineered and manufactured in the USA.
- Delivering affordable equipment factory direct.

# Warranty and Guarantee

## Artisan 6m Warranty

Your Artisan 6m Roster has been manufactured and tested to the highest quality standards by Coffee Crafters. This Limited Warranty covers defects in material or workmanship on new Artisan 6m Roasters. The Warranty extends to the original purchaser only and is non-transferable. Only consumers purchasing roasters from Coffee Crafters may obtain coverage under our limited warranty.

Coffee Crafters warrants this product against defects in material or workmanship as follows:

- Under normal installation per Coffee Crafters instructions, use, service, and maintenance for a period of one year from the original purchase date, Coffee Crafters will replace at no charge, any product or part of the product that proves defective because of improper workmanship and/or material.

The specific warranties expressed are the ONLY warranties provided by the manufacturer. These warranties give you specific legal rights, and you may also have other rights which vary from state to state.

## What is Not Covered by the Warranty

1. Conditions and damages resulting from any of the following:
  - a. Improper installation, delivery, or maintenance.
  - b. Any repair, modification, alteration, or adjustment not authorized by the manufacturer.
  - c. Misuse, abuse, accidents, unreasonable use, or acts of God.
  - d. Incorrect electric current, voltage.
  - e. Improper setting of any control.
  - f. Use of risers (pedestals) that are not authorized by the manufacturer.
  - g. The Warranty is void if a product is returned with removed, damaged, or tampered labels or equipment, or any alterations.
2. The Warranty is void if the original serial numbers have been removed, altered, or cannot be readily determined.
3. Chaff Filters.
4. Products purchased for use other than roasting coffee.
5. Any food loss due to product failures.
6. Expenses for travel and transportation for product service.
7. Consequential or incidental damages sustained by any person as a result of any breach of these warranties. Some states do not allow the exclusion or limitation of consequential or incidental damages, so the above exclusion may not apply.

## If You Need Service

1. See the Maintenance/Troubleshooting section of this manual.
2. Visit us at [www.CoffeeCrafters.com](http://www.CoffeeCrafters.com)
3. Write to Coffee Crafters Customer Service:

PO Box 641  
Liberty Lake, WA 99019

4. Call Coffee Crafters, Customer Assistance at 1-509-228-6916

## 30-Day Complete Satisfaction & Money-Back Guarantee

We want you to be fully satisfied with every item that you purchase from Coffee Crafters. If you are not satisfied with an item that you have purchased, you may return the item within 30 days of delivery for a full refund of the purchase price, minus the shipping, handling or other additional charges. The item must be returned in new condition, in original boxes, and with all paperwork, parts and accessories to ensure full credit.

## Return Instructions

**Please note:** For purposes of tracking and Insurance all returns must be shipped to Coffee Crafters.

1. Pack the item securely in the original package, if possible. Enclose the return portion of the original packing slip with the item.
2. All products must be returned in excellent condition, in original boxes, and with all paperwork, parts and accessories to ensure full credit.
3. All return shipping charges must be prepaid. We cannot accept C.O.D. deliveries.
4. Contact Coffee Crafters Customer Service Department at 1-509-228-6916 to obtain your Return Authorization Number. Once you have obtained your Return Authorization Number, ship the return package to the address provided by Customer Service. For your protection, we recommend that you use UPS or Insured Parcel Post for your return.
5. Keep the Return Tracking Number from the package you are returning to ensure that the package is returned to the warehouse.
6. You can expect a refund in the same form of payment originally used for purchase usually within 10-15 business days of our receiving your returned product. Returned funds may reflect charges for incomplete components or damage materials. Delays may be experienced in the case of incomplete returns. Please note that your shipping costs will not be refunded.

## **Receipt of Damaged or Defective Items**

If you receive a damaged or defective item, contact Coffee Crafters Customer Service Department at 1-509-228-6916. Please supply the Representative with your order number, item number and tracking number from your original confirmation e-mail. The Representative will also need your e-mail address and phone number. We will make every reasonable effort to assist you with your return. If you do not contact Customer Care, you are responsible for all return shipping charges.

A defective item may be repaired or replaced within 90 days of purchase under Coffee Crafters Warranty.



# Assembly and Installation

## Assembly Introduction

Your Artisan 6<sup>M</sup> roaster comes mostly assembled. The following instructions will help you complete the assembly process correctly. Your roaster comes in one (1) box. Your box should contain the following:

<b>Roaster, Chaff Collector</b> 	<b>Hopper/ Handle Mount</b> 	<b>Thermocouple, Thermometer</b> 	<b>Exhaust Blower</b> 
<b>Exhaust tube w/hood, Wire Chimney</b>  	<b>Exhaust tube bracket with 3" hose clamp &amp; four (4) 8/32 screws</b> 	<b>Big Blower Fittings, 4"x5" reducer, 5" 90° elbow duct</b> 	<b>4" duct with 4x3 rubber coupler</b> 
<b>2-4" 90° elbow ducts</b> 	<b>6x4x4 metal wye adapter and two (2) self tapping screw (in baggie)</b> 	<b>External Cooling Tray</b> 	<b>4 Chaff bags, 2 @ 200 micron and 2 @ 400 micron</b> 

Before you start the assembly process you must select a suitable location for the Roaster and Blower System. The Blower System can be installed in any location within 10 feet of the Roaster including on the other side of a wall. You may prefer this installation method if the noise is an issue. The Customer must supply the 4" metal flex or rigid ducting. If you decide to put the Blower System in a different location additional vent pipe and fittings will be required. Make sure to check with local codes for venting requirements as noted in the ventilation installation section of this manual (Maintenance and Troubleshooting). When installed correctly the exhaust gas temperature will not exceed 170° Fahrenheit.

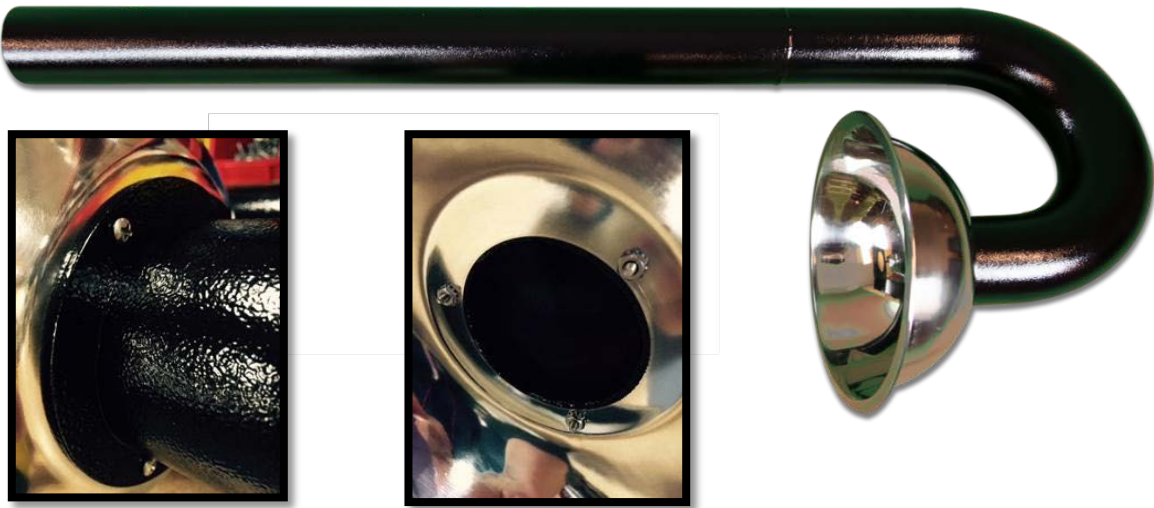
The Roaster must be positioned on a flat smooth surface, do not install on carpeting. Make sure the Roaster has at least a 6" (inch) gap between the back vent pipes and the wall.

## Hood Attachment

To attach the hood onto the exhaust tube, take the #6-32 x 3/8" screw and insert through the tube and into the hood, as shown in the picture on the far left.

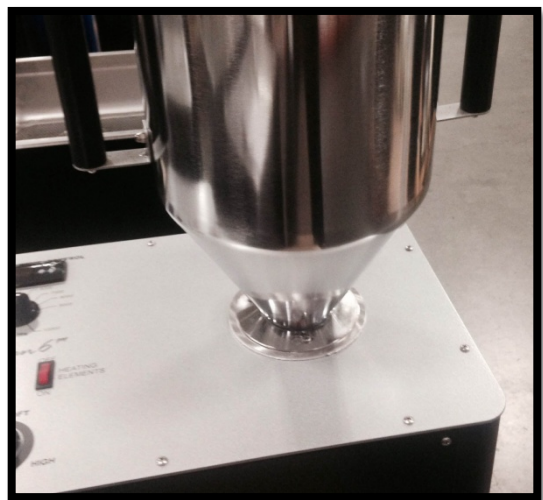
**Caution, when handling the hood, the inner hole edge can be sharp.**

The middle picture shows how the keps nut attach to the screw from the inside of the hood. Do this with all three screws. Hand tighten the keps nut.



## Position and Secure Hopper

For this part of the installation you need to secure the roast hopper in its roast position. There are 3 pins on the hopper lock ring that the hopper secures to, 2 are seen in the picture.



**NOTE:** It is not necessary to use excessive pressure to secure the hopper. The pins only keep the hopper from falling over. Using excessive pressure to secure the hopper can damage the lock pins.

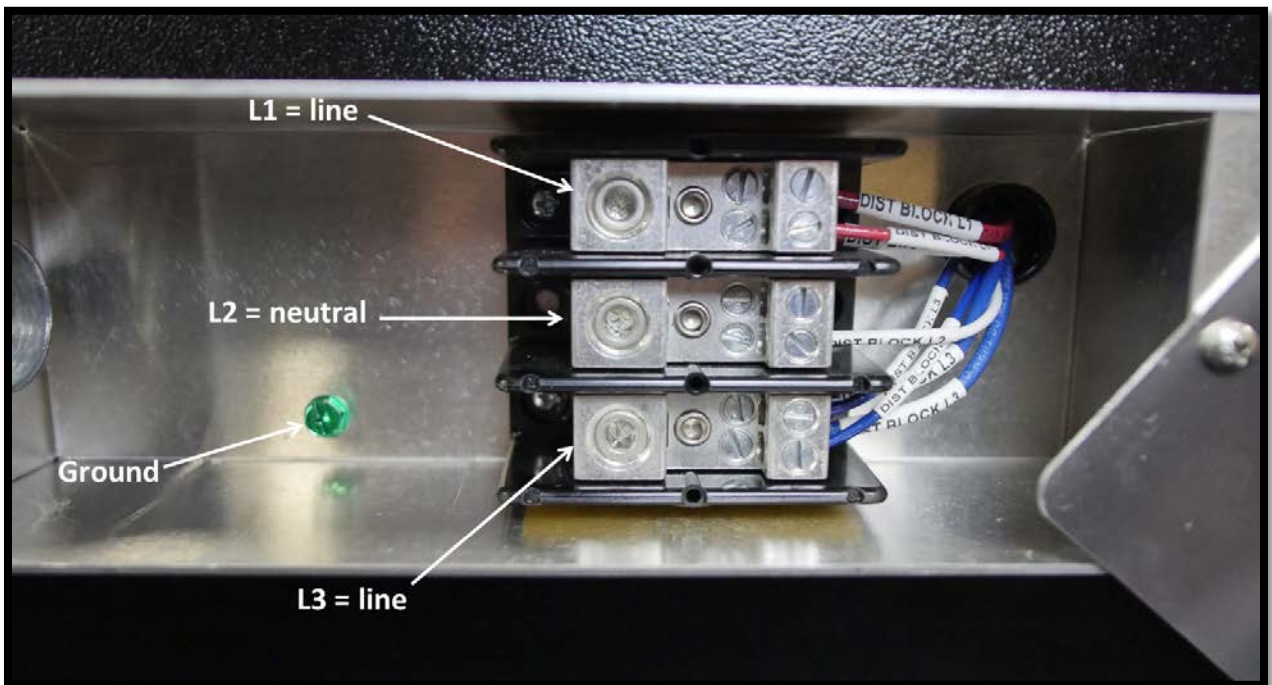
## Electrical Cable

The Roaster must be connected to a 60 amp, 240 volt, dedicated breaker. The roaster and control devices are 240 volt. Consult your local electrical codes for proper wire installation. The power distribution block and cover are located on the back of the roaster as shown.

**Note:** A complete Wiring Diagram is available under Maintenance and Troubleshooting section of this manual.



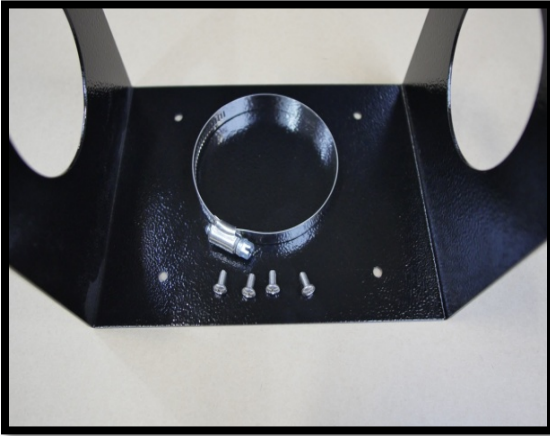
## Power Distribution Diagram





## Exhaust Tube Attachment

1. Install exhaust tube bracket on back of the Roaster using the four (4) #8-32 x 3/8" provided.



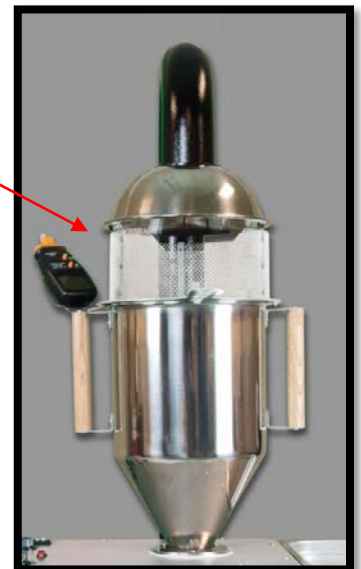
2. Insert 3" clamp over end of Exhaust tube. You may need extra help at this time to hold the tube in position with a 1/2" gap between the Hood and the Wire Chimney (gap shown in image). Tighten the clamp down once positioned.



1/2" gap



This photo shows a proper set up of the Hood height in relation to the Hopper with Wire Chimney in place. The Hood should be no less than 4 1/2" and no higher than 5" above the Hopper. This will give you the best performance and ensure the exhaust temperature stays below 170° Fahrenheit.



3. Insert the rubber boot onto the bottom of the exhaust tube, tighten down the clamp. Make sure you have hooked up the Electrical Cable Box at this time.



4. Install the 4" 90° elbow. Insert it into the bottom of the rubber boot. Face the tub in the direction you want your flex tube to point. Tighten down the clamp.

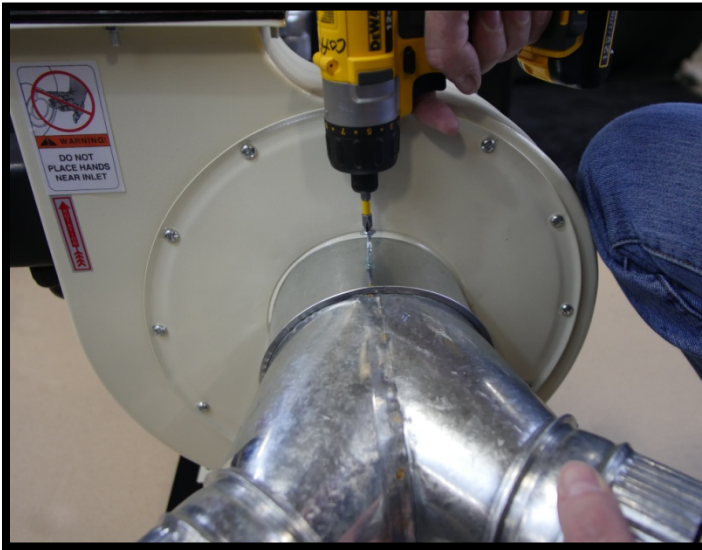


## Cooling and Chaff System

For this portion of installation, the Roaster is to be placed in its proper operating position.

1. Determine the direction your wye will be facing, we are showing it split, right and left for our set-up purposes. It can also face top to bottom.
2. Install the 6x4x4 metal duct to the blower motor. Slide the wye onto the motor. Use the self tapping metal screw, provided, to secure the wye to the motor.

**NOTE:** The 6x4x4 wye is a very tight fit to the motor and will require some manipulation and pressure to install.

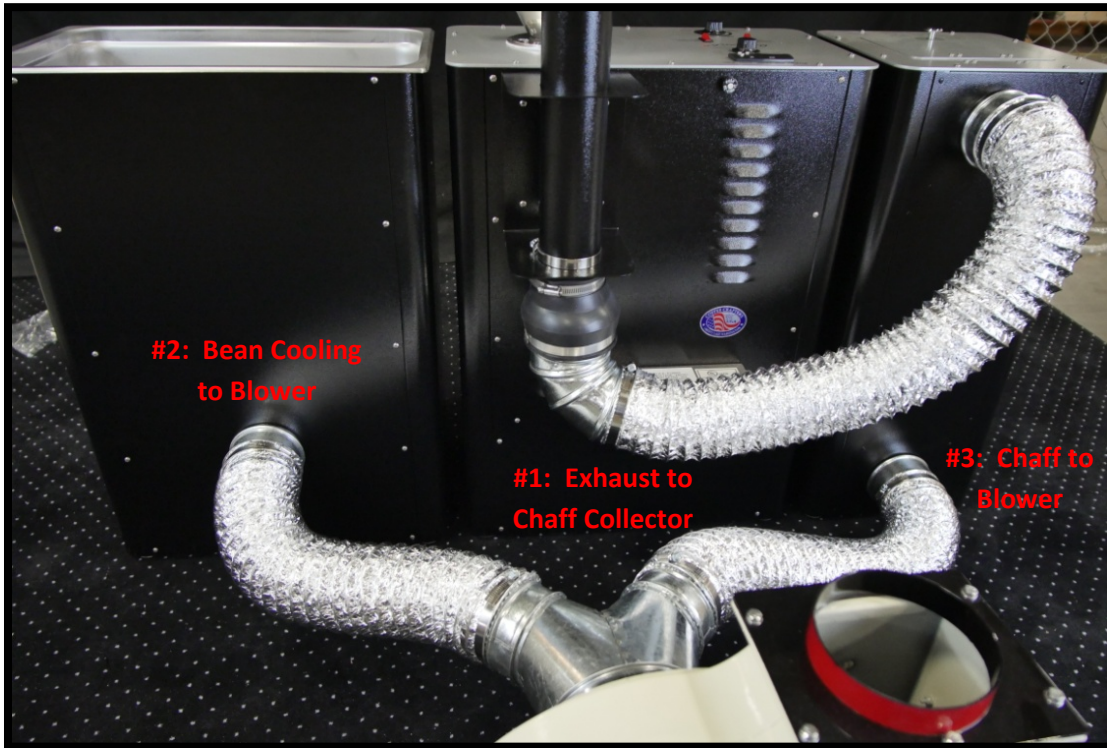


## Flex Tubing

To connect the Flex Tubing you will need six (6) 4" hose clamps to complete the hook up.

1. Connect the Exhaust Tube flex hose to the top of the Chaff Collector unit.
2. Connect the Bean Cooling unit to one of the 6x4x3 wyes on the Blower Motor.
3. Connect the Chaff Collector to the other section on the 6x4x4 wye.

## Flex Tubing Diagram



Depending on the floor plan you use, the tubing and wye configuration may look different. Regardless of where you install the Blower, the origin and termination of each exhaust duct hook up will remain the same as shown in the Flex Tubing Diagram.



### Blower Exhaust System

Coffee Crafters recommends you use rigid ducting when connecting the Blower Exhaust to the outlet terminal. Use 5" rigid tubing and the 5" 90° elbow (provided). Make sure and tape all duct joint seams from the exhaust side of the blower to avoid smoke escaping into your roasting area. This part of the system is pressurized and will leak smoke through open seams. For maximum run lengths, consult the next section of this manual for specific ventilation instructions.

**NOTE:** If you plan to exhaust using a 4" metal dryer ducting, use the 5" to 4" Reducer (provided) and install it on the blower exhaust flange as shown here:

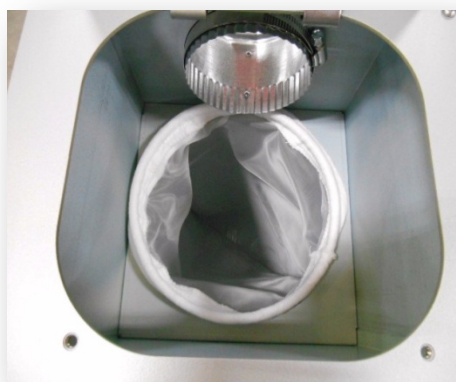
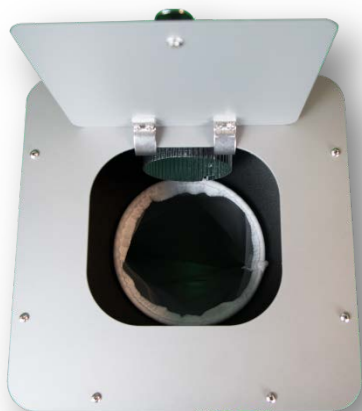


To minimize noise, your blower system may be placed in another room or under a cabinet. For maximum efficiency, the blower should be placed no more than 10 feet from the roaster.

### Chaff Bags

You will be provided 200 micron and 400 micron chaff bags. The 400 micron bags work well for dark roasting, allowing more air flow and less chaff powder build up due to the extra oil produced during roasting.

Open the Chaff chamber lid and insert one of your filter bags. It must sit evenly in the opening to work properly. When installing a new bag reach into the bottom of the bag and push it in place with one hand while positioning the top ring with your other hand. Close the lid before roasting.



## Ventilation Installation

The Artisan 6m roaster must be exhausted in accordance with the manufacturer's instructions as documented in the prior section of this manual. The roaster exhaust system must be independent of all other systems.

### Exhaust Penetrations

Any wall or ceiling penetration of ducts that transfer roaster exhaust must meet the International Building Code fire-resistance rating and cannot be located within any fireblocking\* and/or draftstopping\* areas. Unless, such duct work is constructed of galvanized steel or aluminum of a thickness specified in Section 603.3 of the International Building Code and the fire-resistance is rating is maintained.

\*Fireblocking: Prevents movement of flame, smoke, gases through concealed spaces. Primarily addresses vertical movement.

\*Draftstopping: Prevents movement of smoke and gasses through concealed spaces. Primarily addresses horizontal movement.

### Cleanout

All ducting from the blower discharge to the outlet terminal must have a means for cleanout. Exhaust duct cleaning is required for all coffee roasting installations. Inspect exhaust tubing frequently. Clean or replace if excessive build up is present.

### Maximum Run Length for 4" Exhaust Duct

Maximum 4" diameter exhaust run must not exceed 40' (feet) from the exhaust blower to the outlet terminal. For every 45° bend included in the exhaust duct path, 2 ½' (feet) must be deducted from the maximum of 40' duct work. For 90° bend included in the exhaust duct path, 5' must be deducted from the maximum of 40' duct work.

Example: There are two (2) 45° bends included in the exhaust duct path. The total maximum run length for a 4" exhaust dust is now 35' (feet).

### Maximum Run Length for 5" Exhaust Duct

Maximum 5" diameter exhaust run shall not exceed 50' (feet) from the exhaust blower to the outlet terminal. For every 45° bend included in the exhaust duct path, 2 ½' (feet) must be deducted from the maximum of 50' duct work. For 90° bend included in the exhaust duct path, 5' must be deducted from the maximum of 50' duct work.

Example: There are two (2) 45° bends included in the exhaust duct path. The total maximum run length for a 4" exhaust dust is now 45' (feet).

### **Blower Intake to Roaster Ducting**

Flexible ducting is acceptable from the roaster/chaff canister to the exhaust blower intake. Flex ducting must be all metal. **DO NOT USE** plastic dryer ducting or aluminum flex duct with plastic liner.

### **Blower Discharge Ducting**

**USE ONLY RIGID** ducting from the blower discharge to the outlet terminal.

### **Exhaust Gas Temperature**

The exhaust gas temperature must not exceed 200° Fahrenheit (93° Celsius).

## Thermometer

Your thermometer will be placed on the Thermometer bracket above the left handle.

The Apuhua 1300 Thermometer is very easy to operate (pictured). The large display makes the bean temperature reading easy to see. There are only a few basic operating functions.

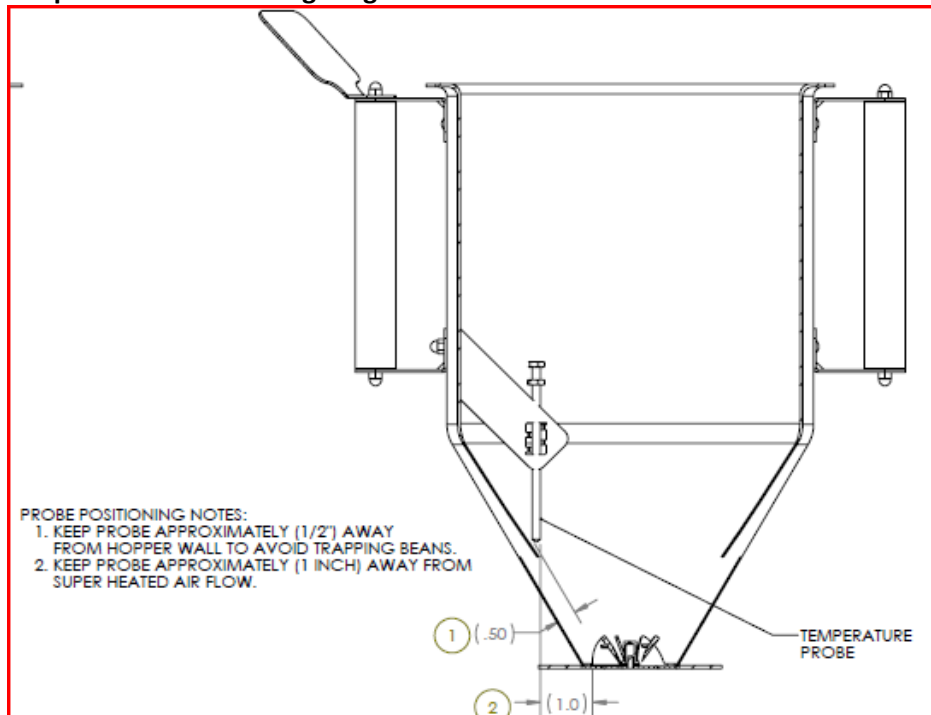


1. Select °C/°F – the unit's default is °C. To switch to °F hold down the °C/°F selector button for 3 seconds. Repeat the process to switch back to °C.
2. The meter has an auto off function and will power down after 30 minutes with no key operation. To disable the auto power off mode, press and hold the “H” and “Power” keys at the same time. The clock dial in the upper left corner of the screen will disappear and the auto off will be disabled.
3. When the battery voltage is under the proper operation requirements the low battery symbol will show on the LCD screen and the battery will need to be replaced.

The thermometer comes to you with the battery and thermocouple probe installed and tested. Velcro has been applied to the back of the thermometer. To install it on the thermometer bracket, remove the plastic from the Velcro and install on the bracket as shown in the picture above. The bottom of the thermometer should be even with the bottom of the thermometer bracket.

The Thermocouple wire will extend down into the Hopper. Take the probe and insert it into the probe bracket. You may need to adjust the fingers on the probe bracket to hold the probe securely. It is critical that the probe tip is ½” away from the hot air flow coming up from the bottom of the Hopper.

### Proper Probe Positioning Diagram



## Thermocouple Switch

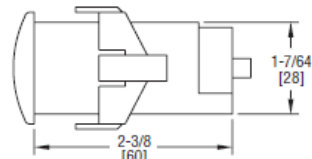
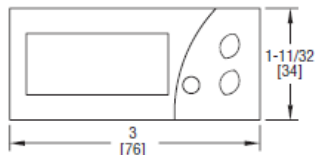
The information contained here originated from the manufacturer, LOVE.

Bulletin E-90-TCS



### Series TCS Thermocouple Switch

#### Specifications - Installation and Operating Instructions



**Monitor and control temperature** in heating and cooling applications with the Series TCS Thermocouple Switch. The Series TCS offers a wide temperature range, two selectable alarm sets, and an internal buzzer indicating alarm condition or error. The user can define set point, heating/cooling regulation, cycle time, alarm configuration, load status, and ambient probe adjustment. The thermocouple switch features password protection and error/alarm messaging. Temperature and output status is indicated on the bright red LED display. Use the configuration key (sold separately) to quickly program multiple units. The Series TCS includes a fitting clip for panel mounting, gasket, rear terminal cover and instruction manual.

#### INSTALLATION

**Note:** Unit must be mounted away from vibration, impacts, water and corrosive gases.

- Cut hole in panel 2.80 x 1.14 inches (71 x 29 mm).
- Apply silicone (or rubber gasket) around the perimeter of the hole to prevent leakage.
- Insert unit into hole of panel.
- Slide removable fitting clips onto unit from the back until secure to panel.
- Remove back cover to wire unit.
- Wiring diagram is displayed on the top of the unit.
- (Note: PROBE CABLE LENGTH MUST NOT EXCEED 238 ft (100 m). DO NOT INSTALL PROBE CABLE NEAR POWER CABLES).
- Replace cover once wiring is complete.

#### SPECIFICATIONS

**Probe Range:** 32 to 999°F (0 to 700°C) for Type J thermocouple; 32 to 999°F (0 to 999°C) for Type K or S thermocouples.

**Input:** Type J, K or S thermocouple.

**Output:** SPDT relay rated 16A @ 240 VAC resistive.

**Horsepower Rating (HP):** 1 HP.

**Control Type:** ON/OFF.

**Power Requirements:** 115 VAC, 230 VAC, 12 VAC/VDC or 24 VAC/VDC (depending on model).

**Accuracy:** ±1% FS.

**Display:** 3-digit, red, 1/2" (12.7 mm) digits, plus sign.

**Resolution:** 1°.

**Memory Backup:** Nonvolatile memory.

**Temperature Limits:**

Ambient: 32 to 158°F (0 to 70°C);

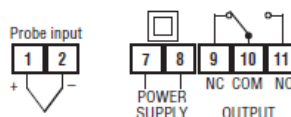
Storage Temperature: -4 to 176°F (-20 to 80°C).

**Weight:** 2.3 oz (65 g).

**Front Panel Rating:** IP64.

**Agency Approvals:** CE, cUR, UR.

#### WIRING DIAGRAM



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Fax: 219/872-9057 e-mail: [love@love-controls.com](mailto:love@love-controls.com)

### Helpful Tips

1. Wash and completely dry your Hopper and Bean Cooler Tray prior to use. Go to the Maintenance and Troubleshooting section for instructions on probably cleaning of the Artisan 6m Roster
2. A small lamp attached to your Hopper Exhaust Tube and shining into your Hopper will assist in visualizing the roast.

*You are now ready to roast coffee. Proceed to the next section of this manual for initial testing and roasting instructions.*

# Roasting

Before roasting your first batch of coffee it's important to orient yourself with proper safety procedures. Treat your roaster the same as you would a cook top range. During the roast your roast hopper gets as hot as any pot on your stove. The air that roasts your coffee reaches temperatures over 500° degrees F.

## Roast Coffee in 6 easy steps:

1. Check the Chaff bag
2. Turn on Exhaust Blower
3. Load Beans in Hopper
4. Turn on System Power
5. Set Bean Loft
6. Turn on heating element

### Check Chaff Bag

Ensure bag is secured in place and less than 50% full before roasting.

### Turn on Exhaust Blower

Never run your roaster without the chaff /exhaust blower running. The blower keeps the machine cool and prevents chaff, smoke and heat from venting into your roast area.

The on/off switch is located on the front of the blower motor. This directs all the suction through the hood so chaff does not escape.

Flip up switch to turn on Exhaust Blower





### Load Beans in Hopper

Make sure your air loft adjustment is off prior to pouring in the beans. Pour the beans in the hopper with a container with a spout that clears the hopper rim. You can also rotate the exhaust hood out of the way to pour in the beans. This is the easiest method.



### Turn on System Power

The system power switch is the single red switch to the left. As a safety feature the heat elements cannot be turned on with the system power switch in the off position.





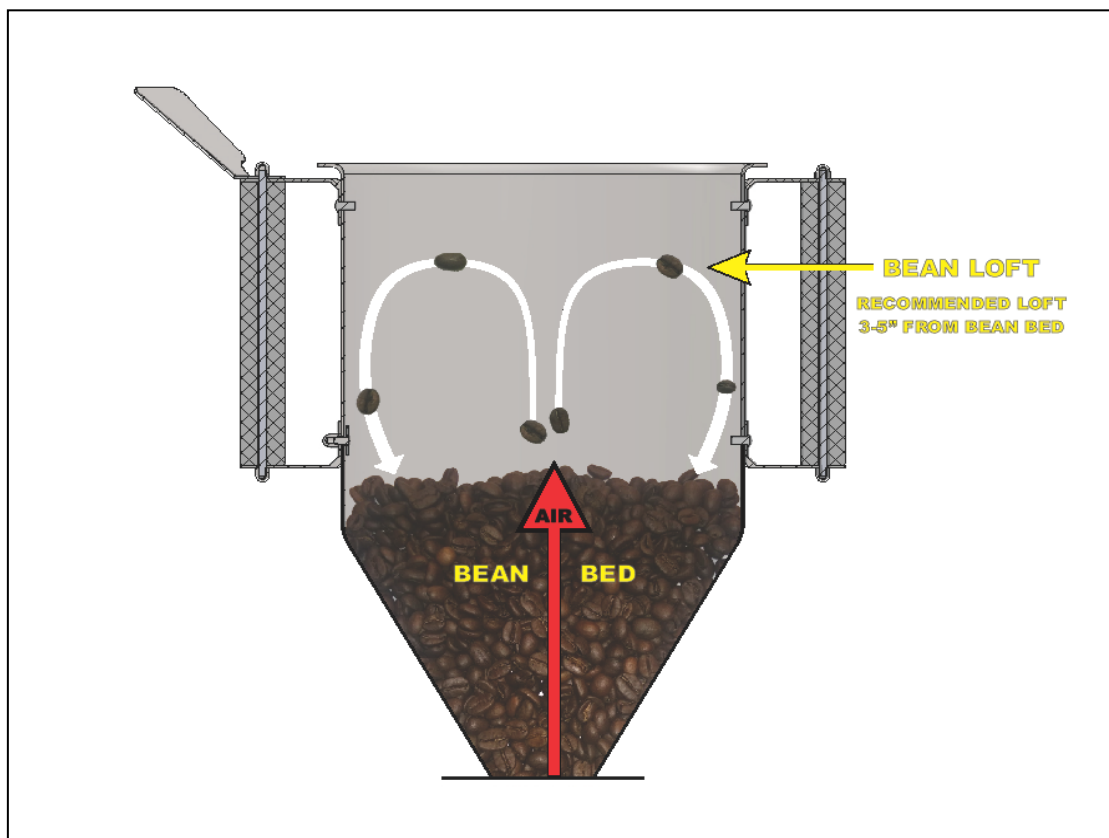
### Load Beans in Hopper

The bean loft blower knob is marked low to high. Remember; never turn the system power on until the bean loft knob is turned all the way to the low position. This prevents beans from being blown out of the hopper. Slowly turn up the air by turning the knob clockwise. Practice this several times before turning on the heat to familiarize yourself with the feel of lofting beans.

Set the bean loft 3-5" above the bean bed.

### CAUTION:

**Never** let the beans stop lofting with the heat elements on. You **will** burn your beans and possibly damage your Roaster.



### Turn on Heating Element

1. Turn on the heating elements switch.
2. Then use the heat adjustment knob below the Temperature Controller to set the heat/wattage for your batch size.
3. Readjust your bean loft if needed-sometimes the loft decreases after the heat switch is turned on.

### Roasting Recommendations:

BATCH SIZE IN POUNDS	WATTAGE SETTING
1-2	5000-6000
3-4	6500-8000
5-6	9000-10000

**NOTE:** These are only recommendations and may vary based on altitude, humidity, line voltage and ambient air temperature.

As your roast progresses your bean loft will rise because the beans double in size and get lighter. You can progressively turn down the bean loft to maintain 3-5 inches above the bean bed.

You can increase or decrease the wattage setting to achieve the temperature you need.

Roasting times may vary due to room temperature, if machine is warm or cold. Always monitor the batch while roasting, NEVER leave unattended and watch the bean temperature to achieve the desired roast. You will quickly learn which settings work best for your roasting style.

When roasting, this machine will roast down to 1/3 lb (6 oz.) of beans, but be aware it take 2-3lbs. or more for the bean thermometer to read accurately.

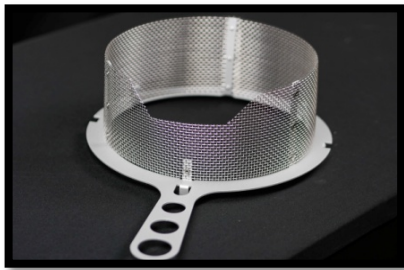
Roasting on the artisan 6M is very easy. Never leave your roaster unattended. If you lose your bean loft you will ruin your batch and possibly damage your Roaster. Coffee beans will catch on fire if they stop circulating.



## Roasting Complete: Cool the Beans

Coffee beans must be cooled quickly after you reach your desired bean temperature. You can see in the hopper as the roast progresses but a good rule of thumb is to stop your roast a few degrees **before** you reach your desired temperature. With a light shining in the hopper the beans look lighter than they do when removed from the hopper.

1. Turn off the Heat element switch.
2. Turn down the loft if needed
3. Remove the Hopper Chaff screen from the top of the Hopper



4. Pull out the knob on the side of the Bean Cooling unit



Pull knob out to open airway



## 5. Removing the Hopper from the Roaster

Grasp the handles firmly and turn the Hopper clockwise, lift straight up to clear the lock pins. Remember to practice this before roasting coffee to get the feel of the hopper locking and unlocking. Treat the hopper like any hot pan on your stove.

**If you touch the hopper with your bare skin you will get burnt.**

Allow your Roaster to cool down for a few minutes before turning off your systems switch. Turn off the blower motor and turn down the bean loft. Check all power supply switches to make sure they are off before leaving your Roaster.

## 6. Pouring and Cooling the Beans

As you are still grasping the handles of the Hopper, begin pouring the beans into the cooling tray. Notice the position of the arms in the image below; away from the sides of the Hopper when pouring.



**If you touch the hopper with your bare skin you will get burnt.**

**Notice the position of the arms, away from the sides of the Hopper when pouring into the bean cooler.**

Turn the hopper completely upside down into the cooler tray and shake to make sure no beans are lodged in the air diffuser fins.

Return the hopper to its locking seat. The hopper should always be secured to its lock ring before and after a roast cycle.

**Never place the hot Hopper anywhere but on its position on the Roaster**

With the beans in the cooling tray, stir the beans occasionally with a wooden spoon to make sure no hot spots remain in the corners. As you stir your beans, this is a good time to check for any rocks or foreign objects. Cooling takes about 1 minute for smaller loads and about 2 minutes for larger loads.

After your beans are sufficiently cooled down, return the cooling knob to its original position closing the air tube under the perforated tray. Our tray is designed to be removed for easy pouring of roasted beans.



**Do not start to roast another batch of beans while beans are cooling in the tray and knob is in open position. It is not good for the system.**

# Coffee Bean Education

## Proper Storage of Green Coffee Beans

The two most important variables for storing your beans are; humidity and temperature.

Your beans will keep for approximately 3 years when stored properly.

Some good tips to keep in mind;

- Store beans between 50-85 F' (If the temperature is comfortable for you, it's comfortable for your beans)
- If you purchased full bags, keep beans in jute bag they came in for good breathability
- Keep your beans off the ground (on a pallet if they were shipped on a pallet). This helps promote all around air circulation and prevents condensation
- Keep away from pets
- Place beans away from sink and water sources

Things to avoid;

- High humidity
- Changes in temperature
- Direct sunlight

If you are purchasing smaller quantities and don't plan on storing your beans for long periods of time; storing your beans in food grade buckets will work well. These Gamma screw lids give an airtight seal and are easy to open/close (available on Amazon).



Another great, yet expensive storage option is to keep beans in vacuum sealed bags. Vacuum packed beans do not need to be monitored as much since they are not exposed to oxygen and atmospheric moisture.

## Green Coffee Bean Abbreviations and Meanings

**SSFC** – Strictly Soft Fine Cup – Grown at relatively low altitudes (under 1200 meters). These beans mature quickly and produce a lighter, less dense bean. This term also means the beans are free of hard riony taints. Fine cup means it is a specialty grade coffee.

**RFA** – Rain Forest Alliance – Meets the standards that are intended to protect the environment and the rights of workers.

**FTO** – Fair Trade Organic – Certified as a fair trade bean with Organic classification.

**FT** – Fair Trade – Certified as a fair trade bean.

**EP** – European Preparation – These beans are hand sorted to remove any defective beans and foreign material.

**SHB** – Strictly Hard Beans – Grown at an altitude above 1350 meters.

**SWP** – Swiss Water Process – Decaffeinating process that includes a “flavor charged” water. 100% chemical free.

**MWP** – Mountain Water Process – Decaffeinating process that results in flavorful beans that are 99.9% caffeine free.

**MC** – Methylene Chloride – Used to decaffeinate coffee and some believe it to maintain coffee flavor better than other processes.

**EA** – Ethyl Acetate – An ester found naturally in fruits and vegetables that is used to decaffeinate coffee.

**SHG** – Strictly High Grown – This classification is higher than **HB** (Hard bean).

**AA** – Reference to a 17/18 screen size.

**AB** – Refers to size. AB consists of both A and B coffee beans; screen sizes 15 and 16. AB are small than AA and not as valued.

**Fancy** – Refers to better quality than average specialty quality for Arabica beans.

**17/18** – Refers to screen size. The larger bean size generally correlates to a higher quality bean.

**Rioy Taints** – Defect in the bean resulted from an over ripened cherry.

**Quaker** – Defect in bean. Unripe cherry.



# Maintenance and Troubleshooting

## Maintenance

Your Roaster requires periodic maintenance and cleaning. Maintenance and cleaning will be dependent on the amount of coffee you roast.

### Chaff Bags

Every time you roast, inspect the condition of the chaff bag. The suction works best when the bag is less than half full and clean. Empty your bag often. When the bag becomes covered in excess chaff dust, replace with a clean bag. Dirty Chaff bags can be washed with a mild detergent and air dried completely to use again.

Inside the Chaff Collector unit can be vacuumed after the chaff bag is removed for cleaning.



### Roast Hopper Cleaning

Remove the Thermometer from the Thermometer bracket. Take your hopper to the sink and wash with hot water and dish soap. **Be careful of the edges on the probe bracket they could cut you during washing.** Rinse and dry. You do not want any water to drip down into the heat chamber after you wash the hopper. Replace the Thermometer and probe, being careful to adjust the probe to the proper distance from the hopper wall, ½" is enough for roasted beans to pass under it. See probe placement diagram for actual dimensions.

### Wire Chimney

The wire chimney can be taken to a sink and washed with a dish cloth or gentle brush in hot soapy water. Let air dry until completely free of water before using it to roast.

### Bean Cooling Tray

With use, especially with darker roasts you will notice a buildup of oils inside your cooling tray. Remove the tray and wash with warm soapy water, rinsing and drying well. When the tray is removed from the cooling unit, take this time to clean out any beans that have fallen into the cooling void under the tray. A vacuum will remove the dust and beans then you can wipe out this area with a damp cloth.



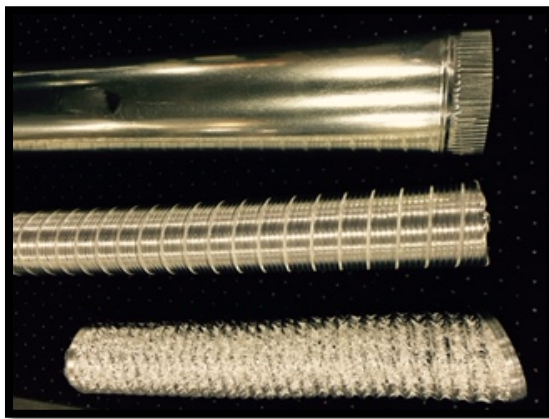
## Exhaust Hood and Exhaust J Tube

On the underside of the Hood, chaff can collect on the hardware that is used to attach the hood to the exhaust tube. Wiping the inside of the hood with a damp towel will remove any chaff build up.



At this time you can also remove your **A6M Hopper Exhaust tube** for cleaning as well. This cleaning can be done several ways. The easiest being taken outside and the inside of the tube sprayed with a hose. If you cannot do it outside, a bath tub works well. Make sure your exhaust tube is completely dry before your reinstall it.

## Exhaust Tubing



← Rigid Tubing

← Semi-Rigid Flex Tubing

← Flexible Tubing

You will need to access the inside of the solid exhaust tubing to be able to run a brush down the inside of the tubing. If you have elbows in your exhaust tube line, you may have to take apart your line to fully clean the exhaust tubes.

After the solid tubing is cleaned, inspect the inside of your blower prior to reinstalling the tubing. Take a brush and go over each fin on the inside of the blower. Once everything is reattached, turning on the blower will remove the debris.

Make sure to unplug the Blower before performing any cleaning and/or maintenance on the exhaust tubing. Depending on how many pounds (lbs.) of beans you roast daily will determine how often you change the flexible tubing. The buildup of chaff dust can present a fire hazard. When the inside of the tubing is completely covered with the dust is a good time to replace it.

## Exterior Surfaces

It is sufficient to clean the lid by wiping down its surface with a damp cloth. **Never** use an overly wet towel to clean the lid. Any excess liquid could damage electrical components.

The body of the Roaster can be washed down with a damp cloth or mild detergent. **Do not** use industrial spray cleaners/degreasers on your roaster.

## Troubleshooting

This portion of the manual is intended to provide guidance for roaster owners and qualified repair person working on the Artisan 6m.

Mechanical and operational issues most commonly experienced by customers are addressed. The Artisan 6 has proven to be a very reliable machine but like all mechanical devices, things will go wrong.

Coffee Crafters roasters were designed from the ground up to be very easy to operate and maintain. All wiring is color coded and labeled. Additionally, videos are available on changing most of the machine components.

Coffee Crafters maintains a full inventory of replacement parts. Please refer to the Parts List section of this manual when ordering. Your machine serial number can be found on the top of the power distribution block on the back of your machine. Please include your machine serial number when making inquiries about your machine. Coffee Crafters maintains a history of your machine accessible with your machine serial number.

### Exhaust Blower Losing Suction

Problem	Cause(s)	Solution
Exhaust blower starts to lose suction	<ol style="list-style-type: none"><li>1. The chaff bag is dirty.</li><li>2. An obstruction in the vent pipe.</li><li>3. The bean cooler blast gate is open.</li></ol>	<ol style="list-style-type: none"><li>1. Replace the dirty chaff bag and replace with a clean one.</li><li>2. Check the vent pipe from the blower discharge through the through wall fitting. Remove obstruction or replace damaged duct pipe.</li><li>3. Close the bean cooler blast gate while roasting.</li></ol> <p>Note: The most common cause for a loss in exhaust suction is a dirty chaff filter bag. The bag will plug much faster with darker roasts which produces oily residue captured by the bag.</p> <p>The filter bags are machine washable. Check filter bags often and replace when dirty.</p> <p>Clean filter bags reduce exhaust temperature and keep your machine running smoothly.</p>

### Bean Loft Motor Won't Run

Problem	Cause(s)	Solution
Bean Loft motor won't start.	<ol style="list-style-type: none"> <li>1. System power switch is in the "off" position.</li> <li>2. Faulty system power switch.</li> <li>3. SSR-3 has failed.</li> <li>4. Faulty potentiometer.</li> <li>5. Tripped system power fuse.</li> </ol>	<ol style="list-style-type: none"> <li>1. Insure system power switch is in the "on" position.</li> <li>2. Check system power switch voltage when in the 'on' position. If no voltage, replace switch.</li> <li>3. Check SSR-3 voltage output. If no voltage output, replace SSR-3.</li> <li>4. Check motor speed control potentiometer for linear resistance. If ohms of resistance do not reduce to "0" when potentiometer is turned all the way up, replace potentiometer.</li> <li>5. Check for tripped system power fuse located on the back of the machine.</li> </ol> <p>Note: A tripped system power fuse is an indication that a fault has occurred in the system. Visually check all wire connections and devices before resetting fuse. To do this remove face of roaster and raise lid as seen in illustration 1.1.</p>


## Roast Air Temperature Stalls

Problem	Cause(s)	Solution
Roast air temperature increases but stalls before reaching desired temperature.	<ol style="list-style-type: none"> <li>1. One heat element has failed.</li> <li>2. SSR-1 or 2 has failed.</li> <li>3. Contactor-1 or 2 has failed.</li> <li>4. Potentiometer 1 or 2 has failed.</li> <li>5. Heat element 1 or 2 has failed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace heat cartridge.</li> <li>2. Replace failed SSR.</li> <li>3. Replaced failed contactor.</li> <li>4. Replace double potentiometer.</li> <li>5. Replace heat cartridge.</li> </ol> <p>Note: To confirm that one heat element is not coming on:</p> <ol style="list-style-type: none"> <li>1. Remove hopper</li> <li>2. Turn bean loft motor on low so air is moving through the heat chamber.</li> <li>3. Turn heat setting to 10,000 watts.</li> <li>4. Look inside the heat chamber and visually check to see which element is not running.</li> </ol> <p>There are 2 heat elements. The #1 element is on the left and the #2 element is on the right.</p> <p>The left and right heat element correspond with the left and right SSR's and contactors as pictured in illustration 1.1. Element -1 components are on the left, element – 2 components are on the right.</p> <p>If one of the 2 heat elements replace with a complete heat cartridge.</p>

### Both Heat Elements Won't Turn On

Problem	Cause(s)	Solution
Bean loft motor powers up but elements won't turn on.	<ol style="list-style-type: none"> <li>1. Heat element switch failed.</li> <li>2. Faulty connector on input side of heat switch.</li> <li>3. Temperature controller setting.</li> <li>4. Faulty temperature controller.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace heat element switch.</li> <li>2. Replace connector and heat switch.</li> <li>3. Check the roast air temperature control setting. Roast air temperature must be set higher than your desired ending bean temperature.</li> <li>4. Replace temperature controller.</li> </ol> <p>Note: The system power switch supplies power to the input of the heat switches when in the "on" position. If the heat elements do not come on when the heat switch is turned "on", check the voltage on the output of the heat switch (center terminal). If no voltage, replace switch.</p>

### Bean Loft Motor Runs at Full Speed Only

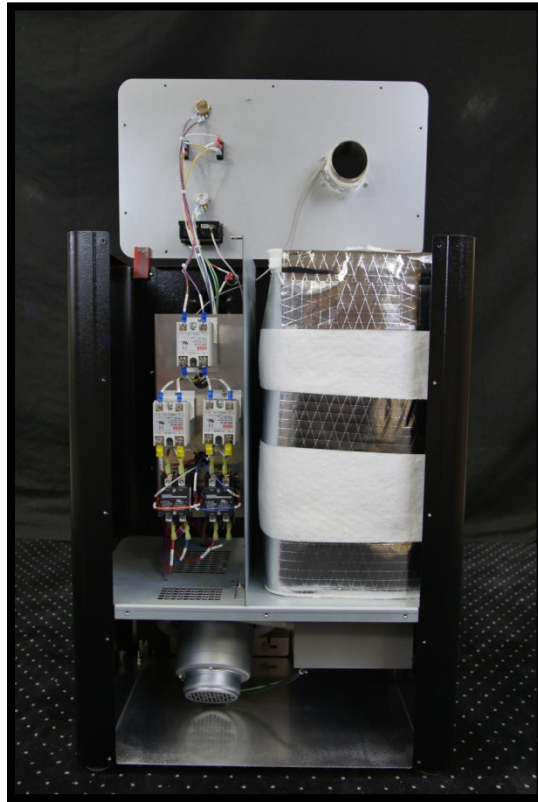
Problem	Cause(s)	Solution
Speed control knob will not reduce bean loft motor RPM.	<ol style="list-style-type: none"> <li>1. SSR-3 has failed.</li> <li>2. Motor speed control potentiometer has failed.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace SSR-3.</li> <li>2. Replace motor speed control potentiometer.</li> </ol> <p>Note: Use only OEM Fotek SSR as shown below. There are many counterfeit Fotek SSR's being sold. The only Fotek 25-VA SSR's used by Coffee Crafters is shown below.</p> 

### Both Element Running but Roasts Take too Long

Problem	Cause(s)	Solution
Both elements running but roasts taking too long.	<ol style="list-style-type: none"><li>1. Ambient air temperature too low.</li><li>2. Low line voltage.</li></ol>	<ol style="list-style-type: none"><li>1. Roast smaller loads until you identify maximum load size where machine can reach optimum roast air temperature.</li><li>2. Install a buck boost transformer.</li></ol> <p>Note: Roasting in cold environments below 50° Fahrenheit will increase roast times. We suggest roasting in an enclosed, heated environment in cold weather.</p> <p>The roaster does perform well below 215 line voltage. If you confirm that both heat elements are running but have trouble achieving your desired roast air temperature with full loads, have a qualified electrician check your line voltage under load.</p>

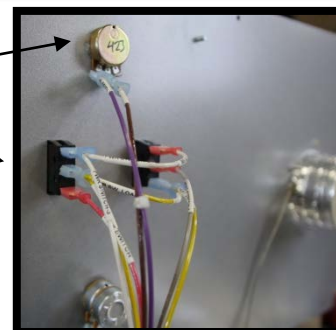
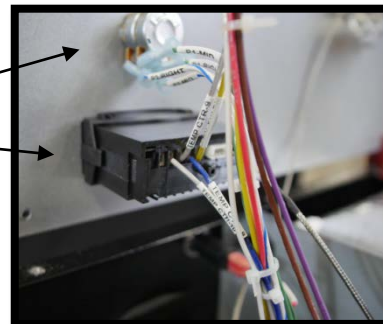
### Troubleshooting Figure 1.1

Image of Roaster with the lid up and the front panel removed.

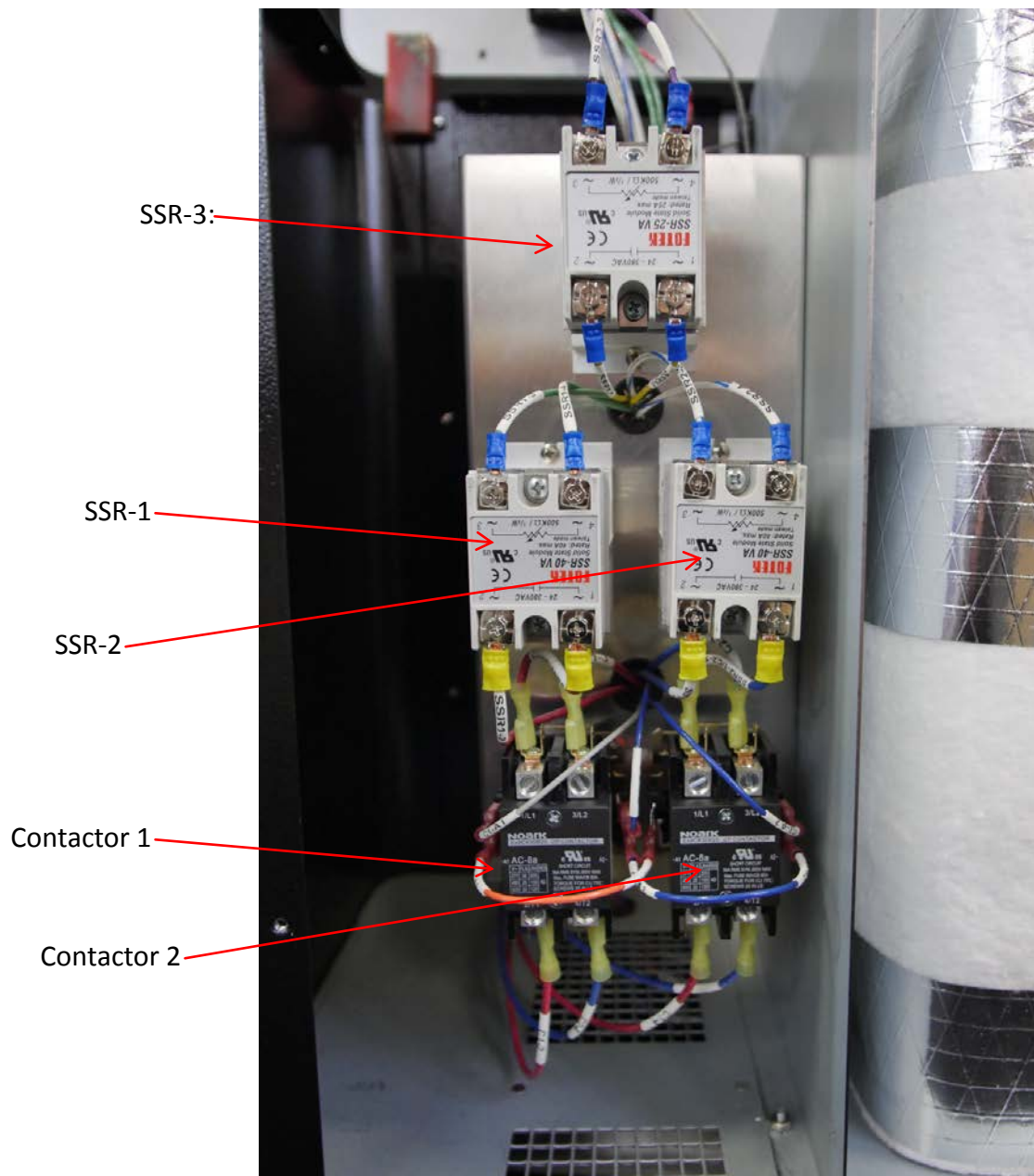


### Troubleshooting Figure 1.2

Wiring connection of controllers underneath the lid.



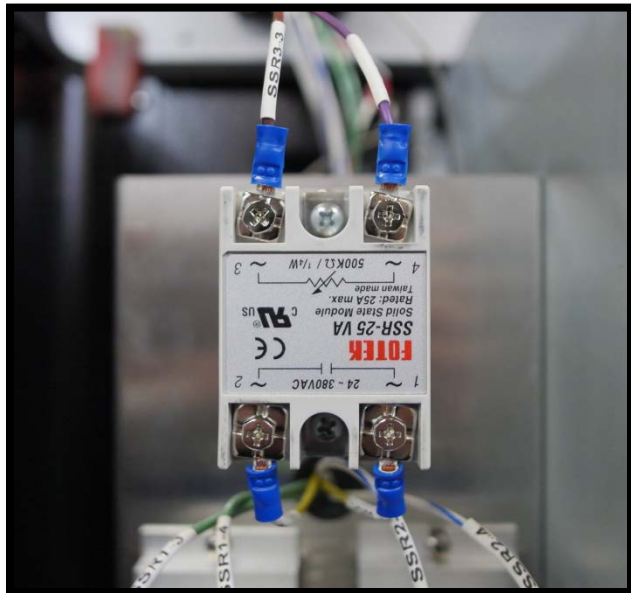
### Troubleshooting Figure 1.3





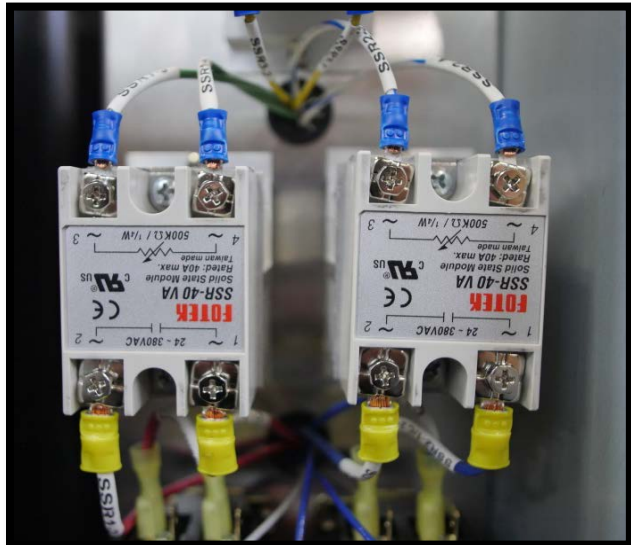
### Troubleshooting Figure 1.4 – SSR Connections

Note that the SSR's are installed with the writing upside down. Potentiometer connections are on the top, power connections are on the bottom.



SSR 3

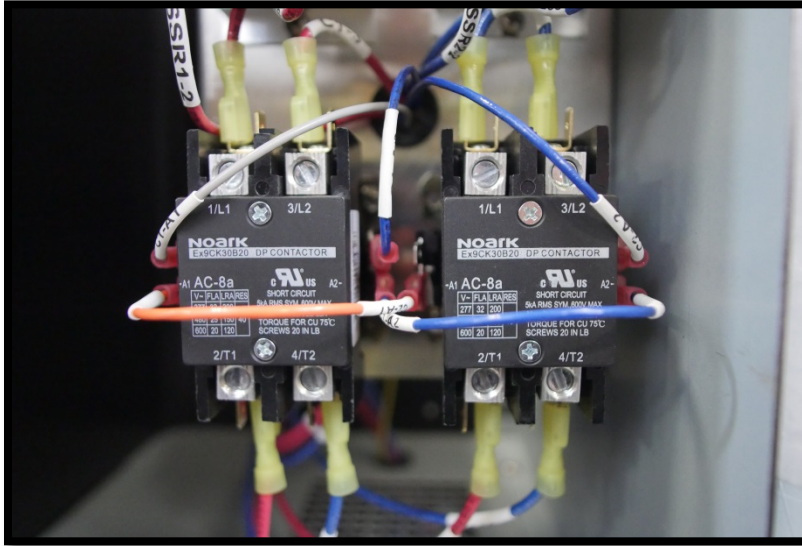
Motor Speed Control Module



SSR 1 and 2

Heat Control Modules

## Troubleshooting Figure 1.5 – Contactors



### Wiring Diagram

Reference the following fold out page.

# Part List

This list provides the customer with a brief description of the various parts used for specific sections of the Artisan 6m Roaster. If a part needs to be ordered, please reference the corresponding part number and revision when contacting Coffee Crafters Customer Service.

Part Description	Part Number
<b>Artisan 6M Roaster</b>	A6M-0000-Blk
Roaster Floor	A6M-1001
Roaster Side Panel	A6M-1002-Blk
Roaster Front Panel	A6M-1003-Blk
Roaster Rear Panel	A6M-1004-Blk
Roaster Lid	A6M-1005
Heat Dam	A6M-1006
Electronic Bracket	A6m-1007
Heat Chamber	A6M-1008
Heat Shroud Assembly	A6M-1011
Heat Element Mount Plate	A6M-1014
Air Box	A6M-1015
Blower Mount Bracket	A6m-1016
Chimney	A6M-1017
Distribution Block	A6M-1020
Distribution Block Cover	A6M-1021
Exhaust Tube Bracket	A6M-1022-Blk
Bottom Panel	A6M-1024
Foot Bracket	A6M-1023
Bean loft Blower	CC-122165-00 BLB
Thermocouple wire chimney	CC-TWTK 1/4x20
<b>Bean Cooler Assembly</b>	A6M-2000-Blk
Subfloor	A6M-2001
Bean Cooler Side Panel	A6M-2002-Blk
Front Panel	A6M-2003-Blk
Rear Panel	A6M-2004-Blk
Cooling Tray Assembly	A6M-2005
Foot Bracket	A6M-2008
<b>Chaff Collector Asm w/Lid</b>	A6M-3000-Blk
<b>Exhaust Tube</b>	A6M-5000-Blk

Part Description	Part Number
<b>Bowl-Hood</b>	A6M-5004
<b>Hopper</b>	A6M-6000
Handle Mount	A6M-6005
Diffuser	A6M-6004
Handle Delrin	A6M-6006
Temperature Probe Bracket	A6M-6007
Thermometer Bracket	A6M-6009
<b>Wire Chimney</b>	CC-WireChimney10"
<b>Shop Fox Blower Assembly</b>	A6M-4000-Blk
Blower base	A6M-4001-Blk
Transition Manifold	A6M-4002
<b>Chaff Bags</b>	
200 Micron Chaff Bags	CCM-size 1-7x16 200
400 Micron	CC-#1-7x16 400
3" hose clamp	CC-3-HC
4" hose clamp	CC-4-HC
Large WYE 6x4x4	CC-LW6x4x4
Duct reducer 4x5	CC-DR-4x5
Duct 4" 90 degree	CC-Duct4x90
Duct 5" 90 degree	CC-Duct5x90
Flexible Coupling	CC-FlexC4x3
Duct 4x6" long	CC-Duct4x6
Electrical Assembly	CC-UL-Ele-Asm
Mini Breaker 15 amp	CCE-KD1-15
Apuhua Thermometer Complete	CC-Apuhua Th-Comp
Thermometer Probe	CC-Thermprobe
Fotek SSR25-VA 1/4 watt	CC-Fotek SSR 25-VA 1/4 watt
Fotek SSR40-VA 1/4 watt	CC-Fotek SSR 40-VA (1/4 watt)
Potentiometer 500k Double	CC-R-VA2X500KL
Potentiometer 500k Single	CCE-alfa500k

Part Description	Part Number
Noark contactor 40 amp 240 vlt	CC-Ex9CK30B20
Power Distribution Block	CCE-63133
Single red switch Cherry	CC-TRG22F2BBRLN
Speed Control Knob	CC-SPKnob
Temperature Controller F	CCE-4020
Temperature Controller C	CCE-4021
Heat Element Cartridge	CC-HCART