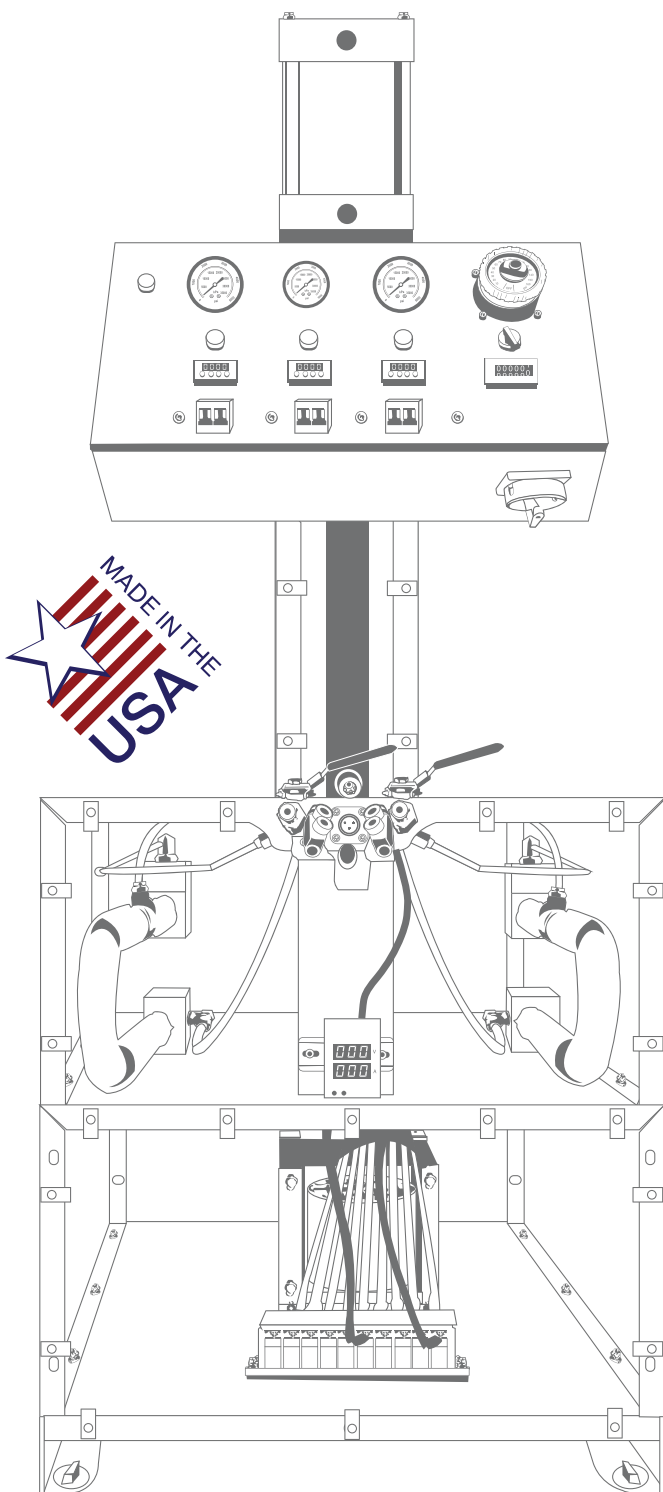


# **REVOLUTION SERIES**

BY AUSTIN FOAM SYSTEMS, CORP

## **OWNER'S MANUAL**

### **PNEUMATIC PREHEATED PLURAL COMPONENT PROPORTIONING MACHINE**



*for models:*  
**REV5/7000**  
**REV5/14000**  
**REV6/7000**  
**REV6/14000**



**REVOLUTION**  
MACHINERY

**FOR SALES PLEASE CALL**  
**(800)724-8403**

**FOR SERVICE PLEASE CALL**  
**(844)251-8324**

**austin**  
FOAM SYSTEMS CORP



# THANK YOU

## PLURAL COMPONENT PROPORTIONER



### IT'S A NEW REVOLUTION!

Thank you for your purchase of a Revolution Series Spray Foam Proportioner Machine proudly designed, manufactured and built in the United States by Austin Foam Systems, Corporation.

Regardless of which plural component 1:1 ratio application you will be spraying (eg. polyurethane, polyurea, light or heavy epoxies, open or closed cell foam, spray-in bedliners etc.) we are confident that you will be 100% satisfied with your purchase.

To ensure that you receive optimal performance when operating your new Spray Foam Proportioner, please read through this operational guide in it's entirety and familiarize yourself with all aspects of the machine before using. Please fill out and return the last page of this manual to register it with the Austin Foam Systems, Corporation to activate your warranty.

Included within this manual are the correct procedures for installation, starting and cleaning your machine, general maintenance and safety guidelines.

This manual contains important information that will help you set up and safely operate your new machine properly. Please take the time to read and understand it in full before the initial setup and operation of your new machine.

**DO NOT** operate or permit anyone to operate or service this machine before reading this manual. Only use operators that have demonstrated the ability to operate and service this machine correctly and safely.

**DO NOT** use this machine for any application or purpose other than described in this manual.

Consult your authorized dealer for any changes, additions, or modifications that may be required for this machine to comply with any regional safety requirements. Unauthorized modifications could cause serious injury or death. Any alterations of this machine from its original state will void your warranty. Anyone that performs any unauthorized modifications is responsible for any consequences that may occur.

**NOTE: ALL REVOLUTION SERIES MACHINERY AND EQUIPMENT IS DESIGNED FOR PROFESSIONAL USE ONLY.**

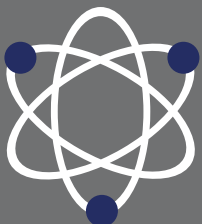




<b>2</b>	<b>Thank You</b>	<b>33</b>	<b>Troubleshooting (TSU Wire)</b>
<b>3</b>	<b>Table of Contents</b>	<b>34</b>	<b>Warranty (Part I)</b>
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<b>5</b>	<b>Tools Needed for Setup and Maintenance</b>	<b>36</b>	<b>Notes</b>
<b>6</b>	<b>Warnings (Part I)</b>	<b>37</b>	<b>Equipment Questionnaire (Part I)</b>
<b>7</b>	<b>Warnings (Part II)</b>	<b>38</b>	<b>Equipment Questionnaire (Part II)</b>
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<b>32</b>	<b>Troubleshooting (Hose Heat)</b>		

### **WARNING**

Unsafe use of this equipment could result in serious injury or death. This manual contains important instructions for the safe installation, operation and recommended maintenance of your spray foam proportioner machine from Austin Foam Systems, Corporation. All who operate this spray foam machine must carefully read and understand this manual before installation or initial use. Keep this manual available both as a reminder for your experienced operator and as a training guideline for new employees. Digital replacement manuals are available by calling Austin Foam Systems, Corporation at (800) 724-8403.





# REVOLUTION SERIES MODELS

## PLURAL COMPONENT PROPORTIONER



(chart 1)

### MODEL SPECIFICATIONS

MODEL#	FULL LOAD PEAK AMPS*	VOLTAGE (phase)	SYSTEM WATTS**	PRIMARY HEATER WATTS	MAX FLOW RATE (lbs/min) (kg/min)	MAXIMUM HOSE LENGTH	MAX FLUID WORKING PRESSURE psi (MPa, bar)	MAXIMUM FLUID TEMP	DIMENSIONS	WEIGHT
REV5/7000	42	230 / 1	9,660	7,000	28 / 12.7	400	2,000	190°F	24" x 24" x 63"	296 lbs.
REV5/14000	53	230 / 1	16,660	14,000	35 / 15.9	400	2,000	190°F	24" x 24" x 63"	311 lbs.
REV6/7000	42	230 / 1	9,660	7,000	28 / 12.7	400	3,000	190°F	24" x 24" x 63"	301 lbs.
REV6/14000	53	230 / 1	16,660	14,000	35 / 15.9	400	3,000	190°F	24" x 24" x 63"	318 lbs.

\*Full load amps with all devices operating at maximum capabilities.  
 \*\*Total system watts, based on maximum hose length for each unit.





# TOOLS NEEDED FOR SETUP AND MAINTENANCE

## PLURAL COMPONENT PROPORTIONER

**NOTE:** In case of shock or serious injury, a qualified electrician or technician should setup all electrical connections. Please ensure that you comply with all applicable local codes and ordinances.

### **RECOMMENDED TOOLS (but not limited to) FOR SETUP AND MAINTENANCE**

Amp/Volt Meter (image 2A) Torque Wrench (image 2B) 3/16" Allen Wrench (image 2C)  
Multi-tipped Screwdriver (image 2D) Wrenches: 7/8", 11/16", 5/8" and 1/2" (image 2E)



(image 2A)



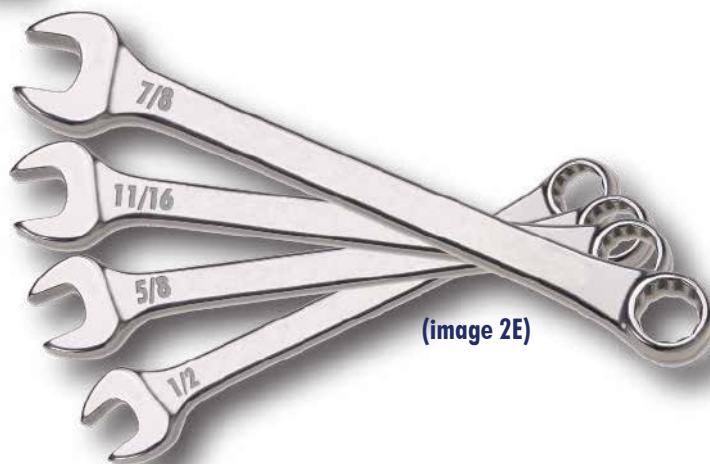
(image 2B)



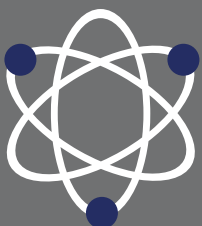
(image 2D)



(image 2C)



(image 2E)





# WARNINGS (PART I)

## PLURAL COMPONENT PROPORTIONER

R

### FOR MODELS: *REV5/7000, REV5/14000, REV6/7000, REV6/14000*

While using any high pressure dispensing equipment like your Revolution Series Spray Foam Proportioner for Polyurethane or Polyurea foam spraying, the operator and any other person(s) assisting in the use of this machine is required by OSHA (Occupational Safety and Health Administration) to use the following Personal Protection Equipment (PPE):

**EYE PROTECTION, BREATHING RESPIRATOR, PROTECTIVE CLOTHING, GLOVES**

**NOTE: WEAR HARD HATS AND BOOTS WHEN APPLICABLE**

The following warnings are for your safety and should be recognized and followed while setting up, using, grounding, repairing or performing maintenance on this machine.

### READ, FOLLOW AND UNDERSTAND ALL INSTRUCTIONS IN THIS MANUAL BEFORE USE.

#### **WARNING**



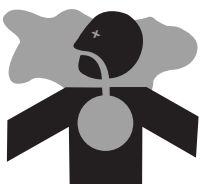
##### **ELECTRIC SHOCK HAZARD**

This product must be installed by a licensed or certified electrician and comply with all applicable local codes and ordinances. Improper installation will create an electrical hazard which could result in death --- or serious injury due to electrical shock, and may also cause damage to property. Always turn off and disconnect the power before servicing this machine. Connect to a grounded power source only. Improper grounding, setup or use of this machine can cause an electric shock.



##### **FIRE AND EXPLOSION HAZARD**

Flammable fumes in the work area can ignite or explode. To help prevent fire or explosion, adhere to the following safety guidelines. Use this machine and any other equipment in a well ventilated area. Remove all sources of potential ignition. (eg. pilot lights, cigarettes, portable electric lighting or heating equipment. Do not use plastic drop cloths in the event of a static arc. Keep the work area clear of all debris and flammable liquids. (eg. rags, garbage, solvents, fuel, etc.) Do not plug, unplug, turn on or turn off the machine when flammable fumes are present. If there is an instance of a static spark or you experience a shock, STOP OPERATION IMMEDIATELY! Do not continue use until you can identify and fix the problem. Always keep a current and fully charged fire extinguisher in your work space.



##### **TOXIC FLUID OR FUMES HAZARD**

Toxic fluids or fumes can cause serious injury or death. Emergency First Aid Procedures: In the event that toxic fluids or fumes come in contact with eyes and or on skin, flush out and/or wash immediately. Remove any contaminated clothing and call a physician immediately. In the event that toxic fluids or fumes have been inhaled or swallowed, drink copious amounts of water and call a physician immediately. Read Manufacturer Material Safety Data Sheets (MSDS) to familiarize yourself to the specific hazards of the fluids or materials you are using/spraying. Always store hazardous fluids and chemicals in approved containers and dispose of them according to all applicable guidelines. Always wear personal protective equipment (PPE) when operating or cleaning equipment.





**FOR MODELS: REV5/7000, REV5/14000, REV6/7000, REV6/14000**

#### **WARNING**

##### PERSONAL PROTECTIVE EQUIPMENT (PPE)

To prevent and protect against death or serious injury including eye injury or blindness, inhalation or digestion of hazardous toxic chemicals and fumes, burns, hearing loss etc., appropriate Personal Protective Equipment(PPE) must be worn at all times when operating, servicing or when in the general operation area of the equipment being used. The PPE includes but is not limited to:



##### SKIN INJECTION HAZARD



This machine and equipment produce a high pressure stream of fluid that is emitted from a spray gun. High pressure fluid, ruptured components and hose leaks can potentially pierce skin. In the event skin has been pierced or broken, it could appear as a simple cut or abrasion. This is a potentially **SERIOUS INJURY** that can result in amputation. **GET IMMEDIATE SURGICAL TREATMENT.** Never point the spray gun at anyone or at any part of the body. **DO NOT** put your hand over the spray tip. **DO NOT** try to stop or deflect leaks with your hand, body, glove or rag. **DO NOT** spray without an installed tip guard or trigger guard. Always engage the trigger lock on the gun when not in use. Refer to the Pressure Relief Procedure on page 27 in this manual when you discontinue use or before cleaning, checking or servicing of the machine and/or equipment.

##### BURN HAZARD



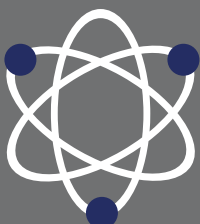
Machine and/or equipment surfaces and fluid/material that is heated can become hot while in operation. To avoid severe burns, dress appropriately and do not touch hot fluid/material or machine and/or equipment. Wait until the machine/equipment, fluid/material has cooled down before attempting to touch.



##### MOVING PARTS HAZARD



Keep all body parts, hair and loose clothing away from moving parts while machine or equipment is in operation. Moving parts can severely pinch or even amputate fingers and other body parts if they get caught while machine or equipment is in operation. If applicable, do not operate machine or equipment with protective guards or covers removed. This machine uses air pressure and pressurized equipment can start without any warning. Refer to the Pressure Relief Procedure on page 27 in this manual before attempting to check, move or service this machine and/or equipment.





# WARNINGS (PART III)

## PLURAL COMPONENT PROPORTIONER

R

FOR MODELS: **REV5/7000, REV5/14000, REV6/7000, REV6/14000**

### ! WARNING



#### EQUIPMENT MISUSE HAZARD

Misuse of this machine and/or equipment can cause serious injury or death. If you are tired, fatigued or under the influence of drugs or alcohol, DO NOT operate this equipment. Refer to technical data in all equipment manuals so that you don't exceed the maximum working pressure or temperature rating of the lowest system component. Only use fluids and solvents that are approved to use with this machine and/or equipment. Request Material Safety Data Sheets (MSDS) from your material manufacturer, distributor or retailer. Read and understand the fluid and solvent manufacturer warnings before starting any spray foam application. Check equipment daily and repair or replace any damaged or worn parts immediately with genuine manufacturer replacement parts only. DO NOT modify or alter the machine or equipment in any way. Only use the machine or equipment for its intended purpose and call your distributor for additional information. Route all hoses and cords away from traffic areas, sharp edges, moving parts and hot surfaces. To preserve the life of the hose, do not kink, over bend or use them to pull equipment. Importantly, keep children and animals away from your work area. Comply with all applicable safety regulations.

\*\*\*Misuse of the equipment or disregarding information set forth within this manual will void the Austin Foam Systems, Corporation Manufacturer Limited Warranty\*\*\*



#### PRESSURIZED ALUMINUM PARTS HAZARD

The use of incompatible fluids with aluminum in pressurized equipment can implement serious chemical reactions and force equipment and/or parts to rupture under pressure. Failure to follow this important warning can result in serious injury, death or property damage.

**DO NOT USE 1,1,1-trichloroethane, methylene chloride or other halogenated solvents or fluids that contain such solvents.**

Many other fluids or solvents may contain chemicals that can react with aluminum. Contact your material supplier for compatibility before use.



#### THERMAL EXPANSION HAZARD

Fluids that are subjected to heat in confined spaces such as hoses can create a rapid rise in pressure due to thermal expansion. Over-pressurization can result in equipment rupture and cause serious injury or death. While heating, open a valve to relieve the fluid expansion. Replace hoses proactively at regular intervals based on the frequency your machine is used and the operating conditions.



**READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL.**





## WARNINGS (TWO-PART MATERIALS) PLURAL COMPONENT PROPORTIONER

### ! WARNING



#### ISOCYANATE CONDITIONS

Spraying or dispensing materials that contain isocyanates can create potentially harmful vapors, mists or atomized particulates. It is important that you read all manufacturer Material Safety Data Sheets (MSDS) on the materials you are using to recognize and fully understand all specific hazards and precautions to follow when using isocyanates. Prevent inhalation of isocyanate vapors, mists and atomized particulates by providing a well ventilated work space. If your workspace is not ventilated properly, it is required for everyone in the work space to wear a respirator. To prevent any external contact with isocyanates, it is also required for everyone in the work space to also wear suitable Personal Protective Equipment (PPE) at all times. The items required but not limited to are: goggles, protective clothing, chemically impermeable gloves and boots.



### ! WARNING



#### MATERIAL SELF-IGNITION

Some materials when sprayed too heavily could potentially become self-igniting. Before use of any material, read all manufacturers Material Safety Data Sheets (MSDS) to recognize and fully understand all specific hazards and precautions to follow when using each material.

### ! WARNING



#### KEEP A AND B COMPONENTS SEPARATED

Cured material in fluid lines can result in cross contamination. This could cause serious injury or damage to your equipment. For prevention of cross contamination, NEVER interchange component A (ISOCYANATE) and component B (RESIN) parts.

#### Foam Resins with 245 Blowing Agents

When temperatures reach above 90°F (33°C) some foam blowing agents will froth when not under pressure, especially if agitated. To reduce the risk of frothing, minimize the preheating in a circulation system.

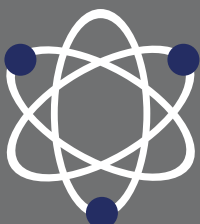
#### MOISTURE SENSITIVITY OF ISOCYANATES

Isocyanates (ISO) are catalysts used in two-part foam and polyurea coatings. Isocyanate will react with moisture (eg. humidity) to form small, dense crystals that are abrasive. These crystals will become suspended in the fluid and eventually form a film on the surface. When this occurs, the ISO will begin to gel and increase its viscosity. If used in the equipment, the partially cured isocyanate will reduce the performance of the material and shorten the lifespan of all parts where isocyanate is used.

**NOTE:** The blend of isocyanate, humidity and temperature will determine the amount of crystallization and film formation.

For prevention of moisture exposure to isocyanate, always use a sealed container with a desiccant dryer in the vent or a nitrogen atmosphere. NEVER store isocyanate in an open container. Always use Austin Foam Systems, Corp or other moisture-proof hoses with your equipment. Never use reclaimed solvents that could contain moisture and always keep containers closed when not in use. Never use a solvent on one side if it has been contaminated from the other side. Always use isocyanate pump oil or grease when you are lubricating ALL threaded parts.

**READ AND UNDERSTAND ALL WARNINGS IN THIS MANUAL.**

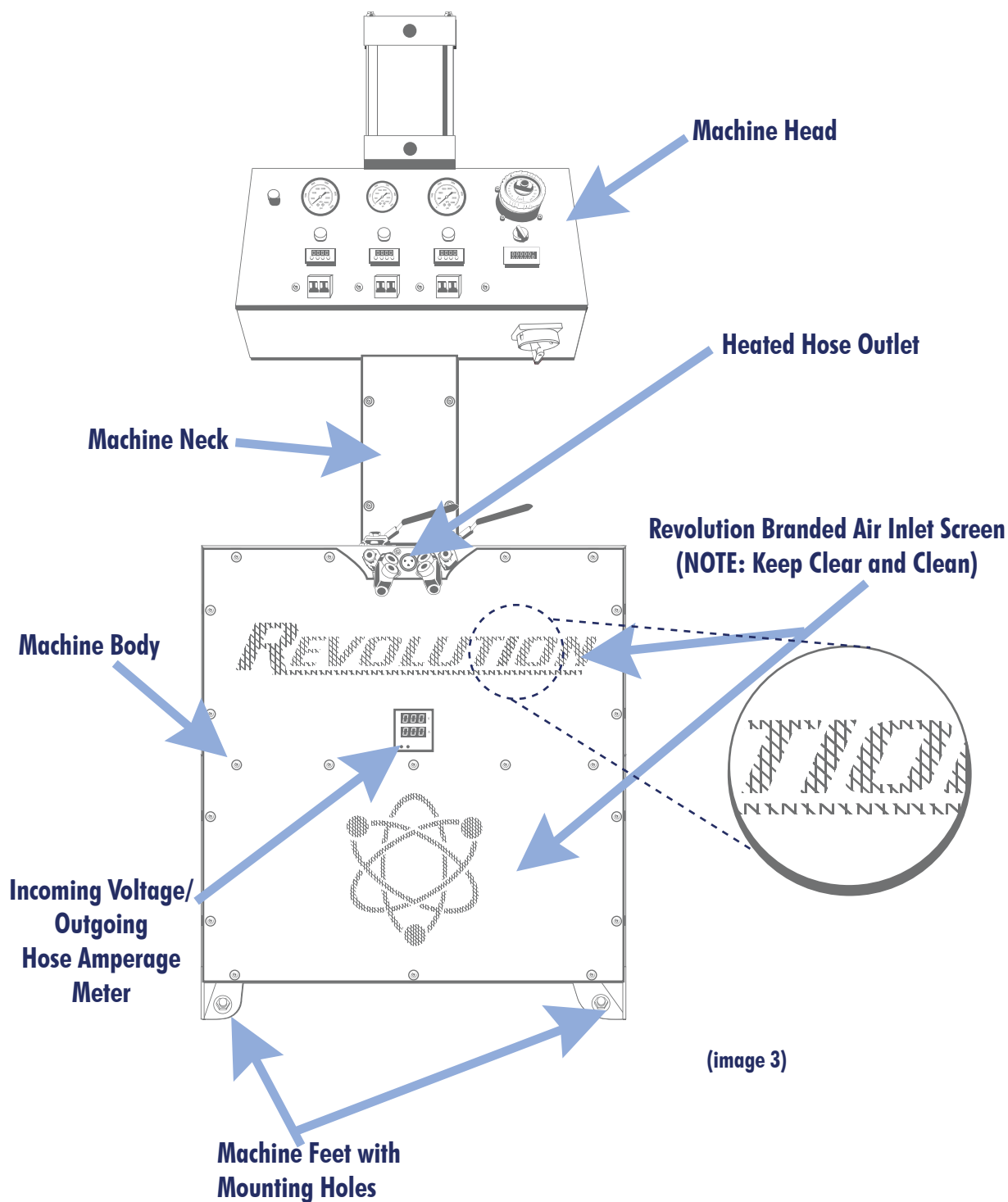




# MACHINE VIEW (FRONT)

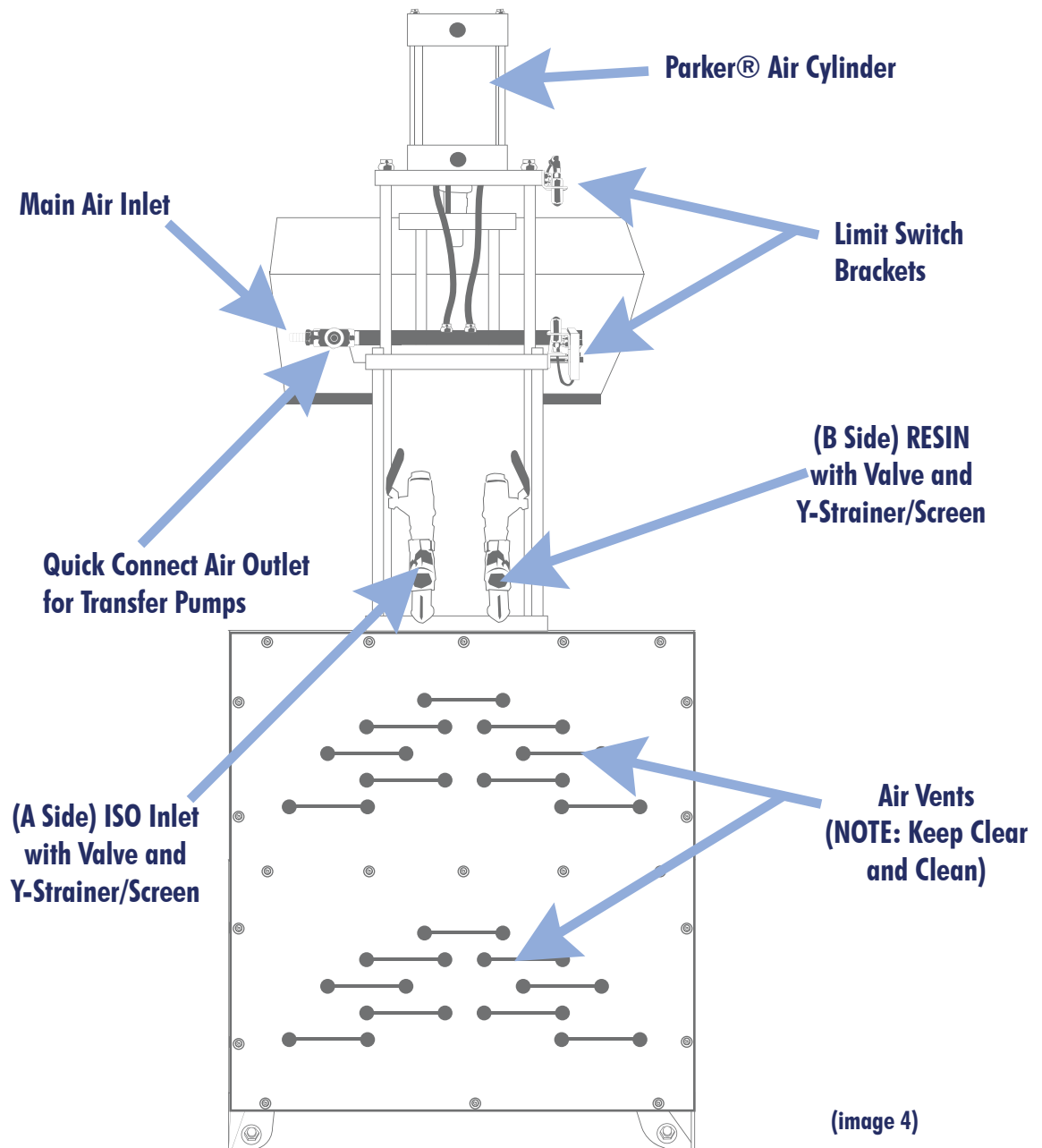
## PLURAL COMPONENT PROPORTIONER

R





## MACHINE VIEW (BACK) PLURAL COMPONENT PROPORTIONER

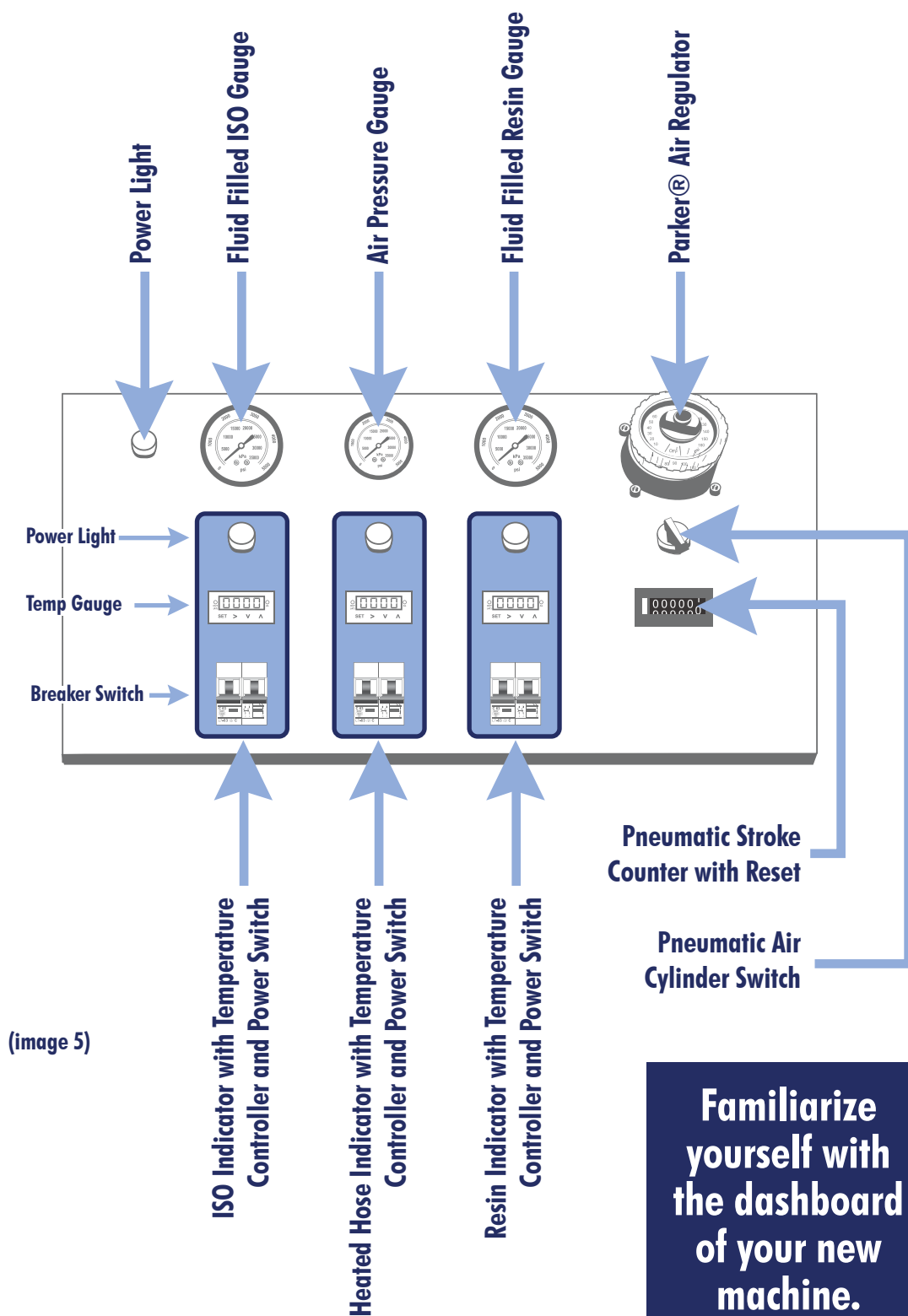




# MACHINE VIEW (DASH BOARD)

## PLURAL COMPONENT PROPORTIONER

R



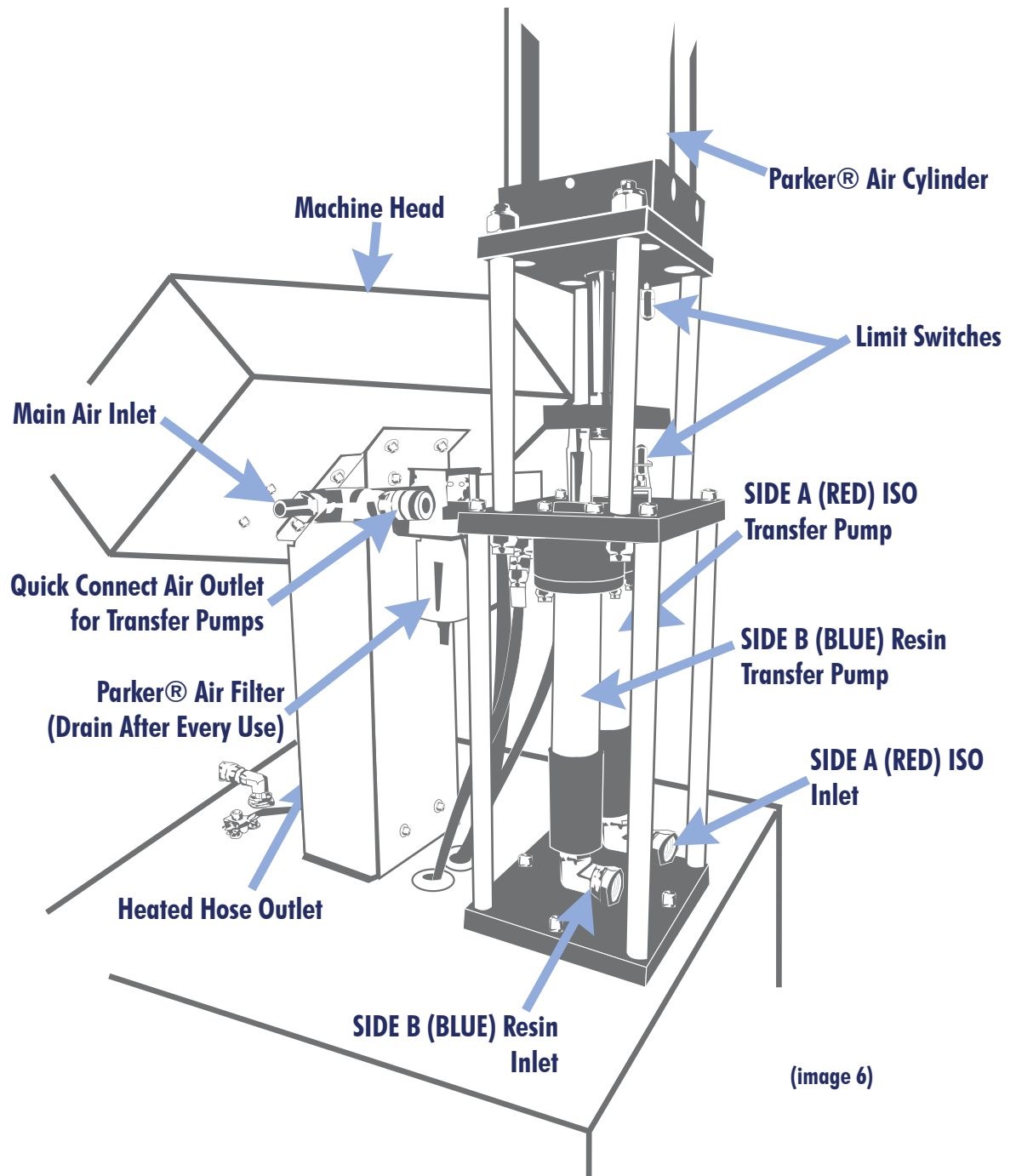
Familiarize  
yourself with  
the dashboard  
of your new  
machine.





## MACHINE VIEW (PUMP ASSEMBLY)

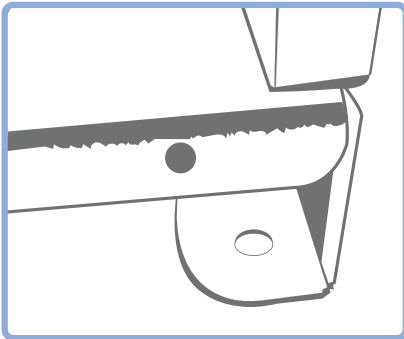
### PLURAL COMPONENT PROPORTIONER





### CHOOSING A LOCATION

**NOTE:** Choose a location to setup your machine. Ensure there is adequate space around all four sides of the machine for easy access.



(image 7A)

If the location you have chosen is a flat, concrete surface where the machine will not be moved, there is no need to secure it to the surface.

(image 7A)

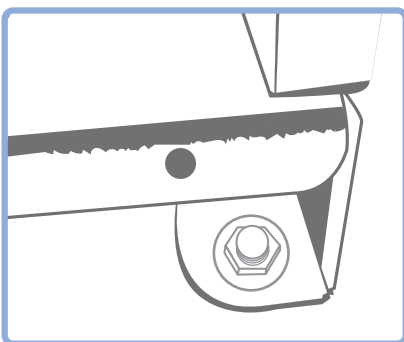
**Setup machine in an enclosed location.**



DO NOT EXPOSE TO RAIN  
OR OTHER PRECIPITATION.

### NOTICE

To prevent the possibility of incurring damage to your machine due to toppling over, execute proper care while handling, lifting or moving it to its fixed or new location. Whether only moving the machine once, or if it will be moved frequently for various applications, stabilize it by bolting it down to the original shipping pallet so it can be relocated easily.



(image 7B)

If the location you have chosen is not permanent (eg. trailer, truck, pallet etc.) secure all four(4) of the machine feet mounting holes with the supplied hex bolts, nuts and washers

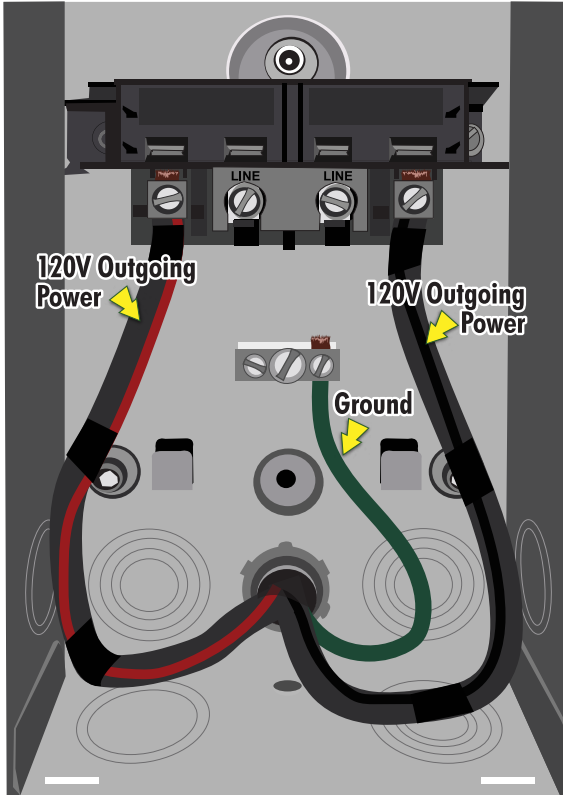
(image 7B)



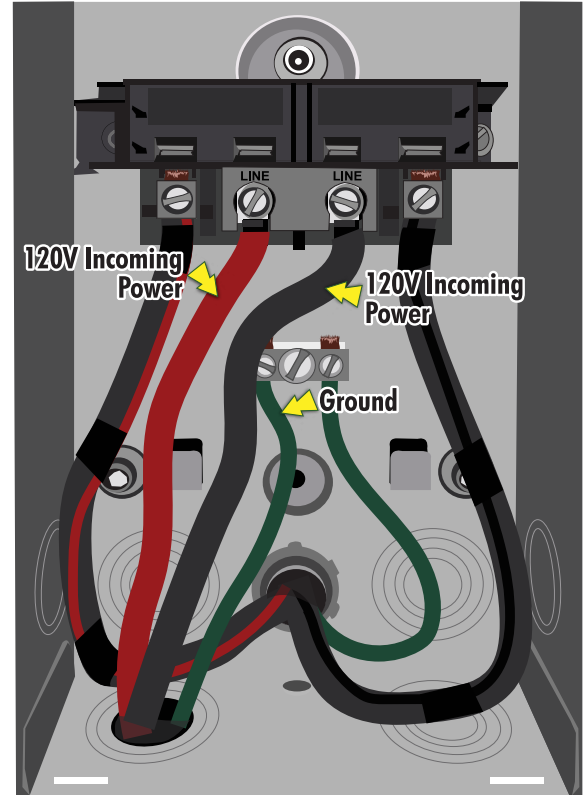


### CONNECTING YOUR MACHINE FOR USE

After a location has been chosen, it's time to connect your machine for use.



(image 8A)



(image 8B)

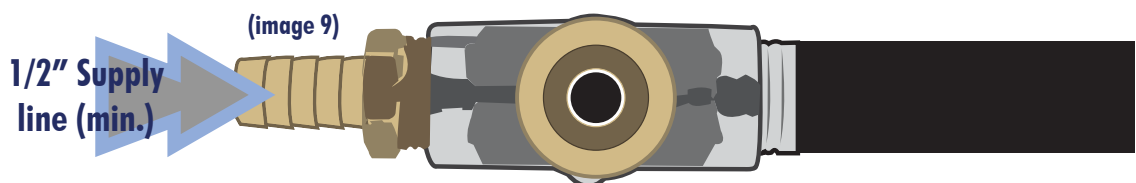
**POWER CORD IS NOT SUPPLIED - Power Cord Requirements / AWG (mm<sup>2</sup>) 6 (13.3) / 2 wire + ground**

#### HARD WIRING YOUR MACHINE

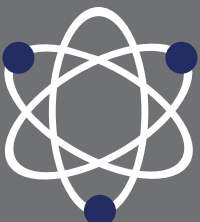
Locate the disconnect box on the side of your machine and open it. (See image 8A). Your new machine requires 220-240 single phase electric. **(A licensed electrician is highly recommended for this procedure).** Connect a ground line to the ground bar located inside the disconnect box. Connect incoming power lines to the LINE IN terminal inside the disconnect box. (See image 8B) **Make sure that your installation complies with all applicable local codes and ordinances.**

**NOTE:** Always remember if you are running a generator to power your equipment, the neutral wire **MUST** be connected to the breaker box. (Refer to the machine setup on page 18 for information on using your machine with a generator).

#### AIR CONNECTION TO YOUR MACHINE



Connect an air line (1/2" minimum) to the quick connect on your machine. (See image 9) This machine requires 30 cfm at 100 psi. The transfer pumps also requires 100 psi.





# HOSE SETUP

## PLURAL COMPONENT PROPORTIONER

R

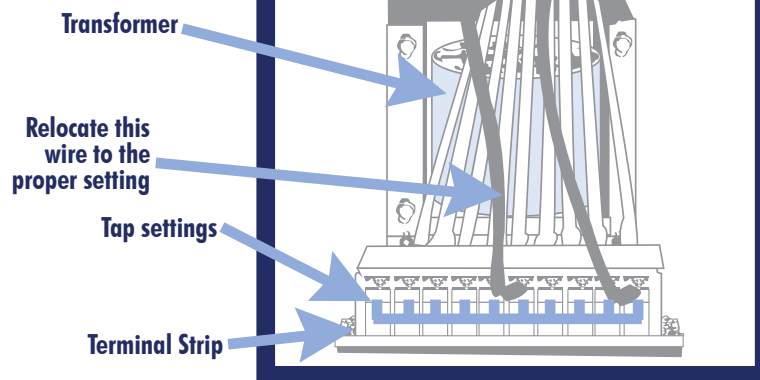
**NOTE:** The Thermal Coupler on all Revolution Series Spray Machines is preset to EX on the controls. The hose voltage is also preset for hoses that are 150 feet in length. Please refer to the Hose Chart on the next page (pg. 17) for the correct voltage for the length of the hose you are using with your machine.

### HOSE SETUP PROCEDURE

1. If you are using a hose that is shorter or longer than the default 150 feet, the first thing you will need to do is raise or lower the transformer tap settings. (see hose chart for correct settings)
2. To change the transformer settings, remove the front panel of the machine. The transformer is located in the bottom section of the machine. Unscrew the left wire out of the terminal strip and relocate to the appropriate tap settings. (See image 10)

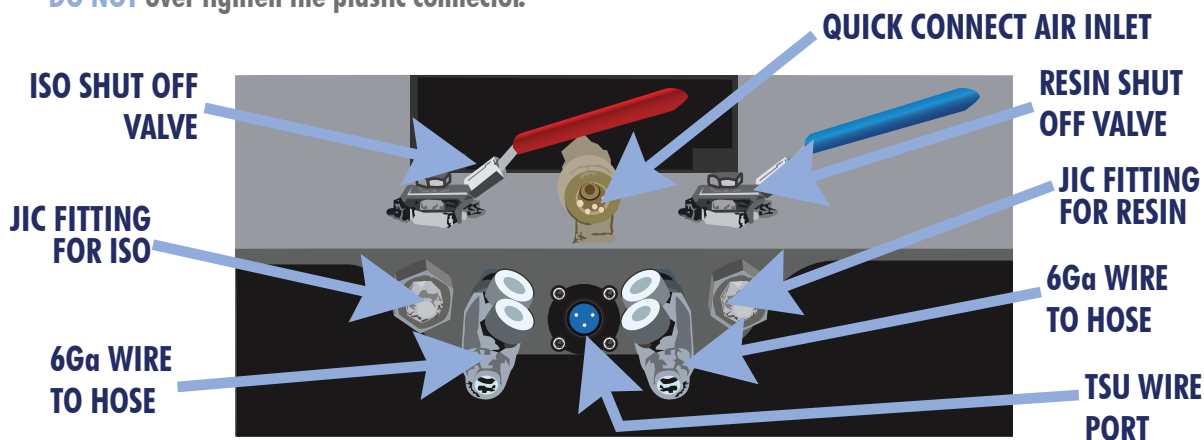
(image 10)

**VERY IMPORTANT**  
The machine must  
be unplugged  
before proceeding  
with the steps  
on this page



(Refer to image 11 for the following steps)

3. Connect the ISO hose (Red) to the JIC fitting connector (SIDE A / Red / Left) on the front of the machine. Tighten to between 13 and 15 psi.
4. Connect the Resin hose (Blue) to the JIC fitting connector (SIDE B / Blue / Right) on the front of the machine. Tighten to between 17 and 19 psi.
5. Connect the yellow air hose to the quick connect air inlet and the black power wires to the electrical leads located on the front of the machine. (make sure after electrical wires are connected there are no bare wires exposed).
6. Connect the purple 3-pin thermal coupler (TSU Wire) to the port on the front of the machine. **DO NOT** over tighten the plastic connector.



(image 11)





### 50' to 400'

Set up to amperage and voltage.

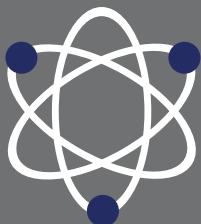
<u>HOSE LENGTH IN FEET</u>	<u>LEAD VOLTAGE</u>
50' .....	20-35V
100' .....	50V
150' .....	64V
200' .....	76V
250' .....	90V
300' .....	105V
350' .....	120V

(chart 2)



It is essential that the correct amperage is running through the hose at all times. Incorrect amperage can cause inconsistent heating of the hose which can lead to overheating. This can result in damage to the hose, electric shock, fire and explosion.

Amerpage should be between 33-40 amps. If the amperage is too low or too high, the voltage should be adjusted by a qualified technician.





# MACHINE SETUP

## PLURAL COMPONENT PROPORTIONER



### SETTING UP YOUR MACHINE

Choosing the correct power requirements for your machine is one of the most important aspects of the setup so you can receive optimal performance and reduce the risk of damage to the machine. Using the correct size of generator and the proper air compressor will enable your Revolution Series Spray Foam Proportioner to operate at a nearly constant speed. Failure to have everything running correctly will cause voltage fluctuations that may cause damage to the electrical components. Ensure that the generator you are using matches the voltage and phase of the machine.

#### DETERMINE THE CORRECT GENERATOR SIZE

1. List your system components that use peak load requirements in watts.
2. Add the wattage required by the system components.
3. *Perform the following equation:*  
**Total watts x 1.25 = kVA (kilovolt-amperes)**
4. Select a generator size that is equal to or greater than the determined kVA.

#### NOTICE

To ensure steady voltage with optimal electrical equipment performance, follow all steps correctly. Refer to connection procedure, (pg. 15) hose setup, (pg. 16) and hose chart (pg.17). Failure to follow proper installation, startup and shutdown procedures will cause voltage fluctuations that can damage your machine and void your warranty.

#### WIRING YOUR MACHINE

Use power cord requirements that meet or exceed the requirements listed on the Connection Page. (pg.15) Failure to use required wire will cause voltage fluctuations that can damage electrical equipment. (A licensed electrician is recommended for this procedure)



Installing this equipment requires access to parts which may cause an electric shock, serious injury or death if it is not performed correctly. We highly recommend having a licensed electrician connect the power and the ground to the main power switch terminals located in the disconnect box (see pg. 15). Make sure that your installation complies with all applicable local codes and ordinances.

#### POWER REQUIREMENTS

1. Use an air compressor that has constant speed head unloading devices. Using direct, online air compressors that start and stop during operation will cause voltage fluctuations that can damage the electrical equipment.
2. As per the manufacturer recommendations, it is important to maintain and inspect the generator, air compressor, and other equipment to avoid any unexpected shutdowns. If an unexpected equipment shutdown occurs, it will cause voltage fluctuations that can damage the electrical equipment.
3. Use a wall power supply source that has enough current to meet the electrical requirements. Failure to do so will cause voltage fluctuations that can damage electrical equipment.

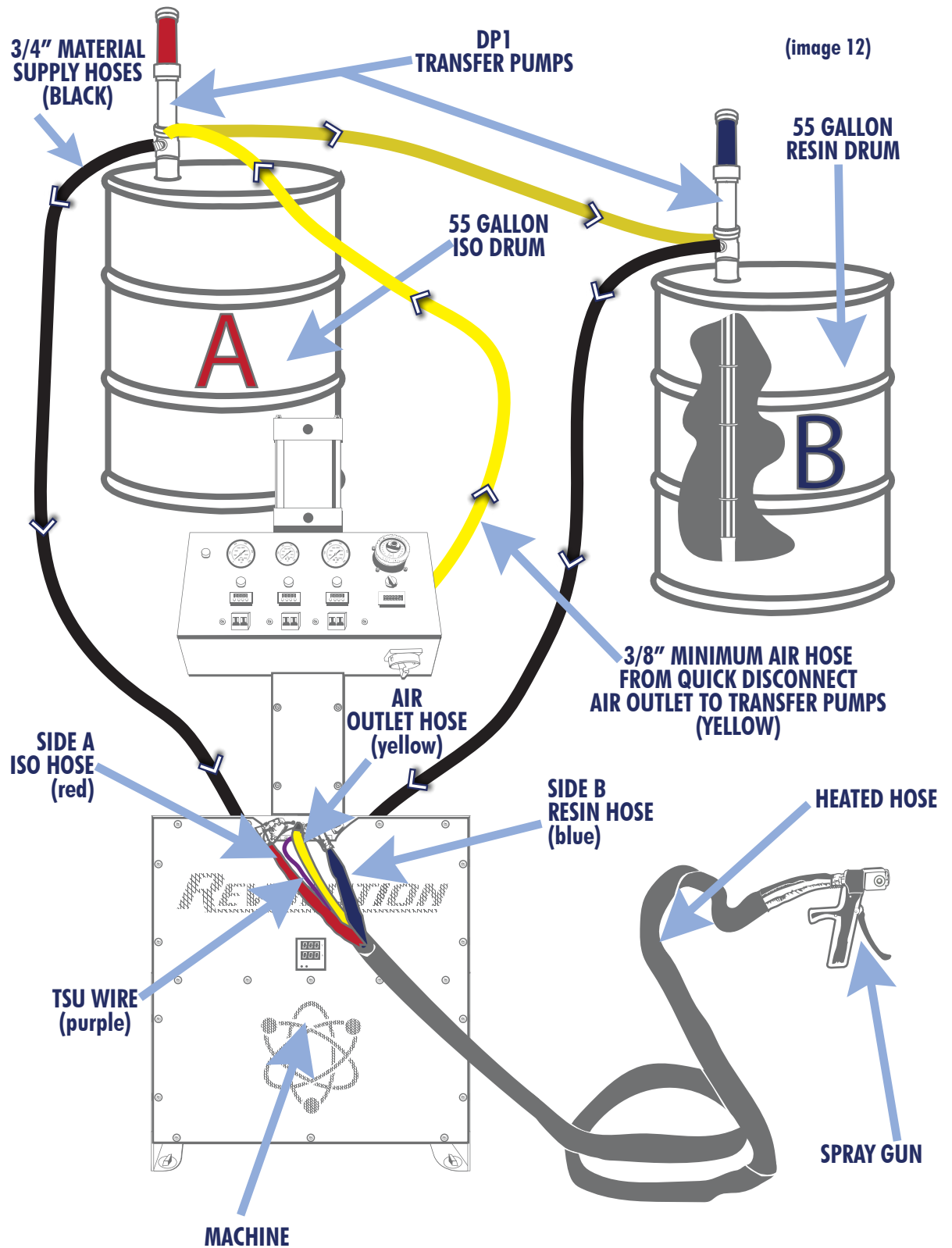
To view correct electrical requirements, see Revolution Series Models on Page 4





## MACHINE VIEW (INSTALLATION)

### PLURAL COMPONENT PROPORTIONER














# SAFETY GUIDELINES

## PLURAL COMPONENT PROPORTIONER



**NEVER** point the spray gun in the direction of the face or any body parts. The material sprayed is heated and under high pressure.

**MISUSE** of this equipment can cause serious injury or death.

-  *The machine and hose should be inspected daily.*
-  *All equipment should be checked daily. Any worn or damaged parts should be replaced immediately.*
-  *When you are troubleshooting or flushing out the machine, use the lowest pressure setting.*
-  *Only use fluids that are compatible with the machine.*
-  *Keep the hose away from sharp edges and hot surfaces.*
-  *Regularly inspect the machine for leaks.*
-  *Service of equipment should be performed by qualified personnel only. (Follow manufacturer specifications when setting pressure for materials). **DO NOT** exceed maximum pressure of machine.*
-  *Ensure proper protective equipment (PPE) is worn at all times while operating the machine.*
-  *To avoid excessive wear on the equipment, hoses and cords should be neatly organized when not in use.*

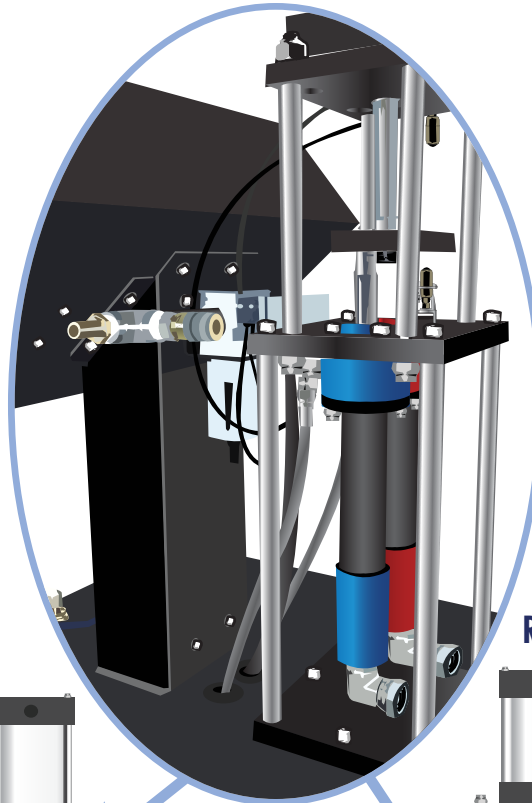
**SAFE USE OF SPRAY POLYURETHANE AND POLYUREA STARTS WITH YOU!**





## MACHINE VIEW (COMPONENTS)

### PLURAL COMPONENT PROPORTIONER

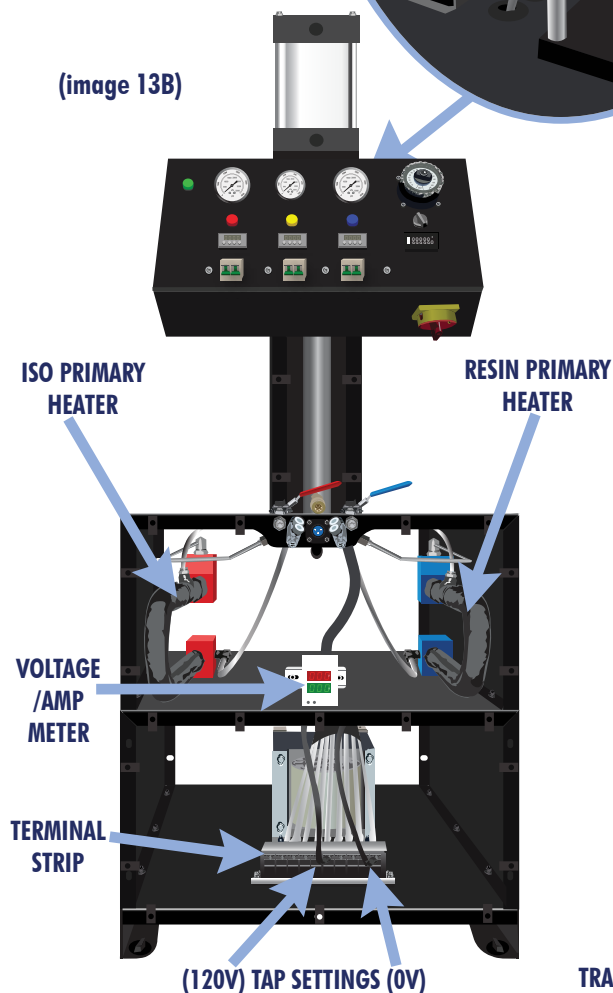


(image 13A)

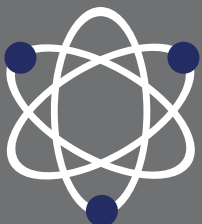
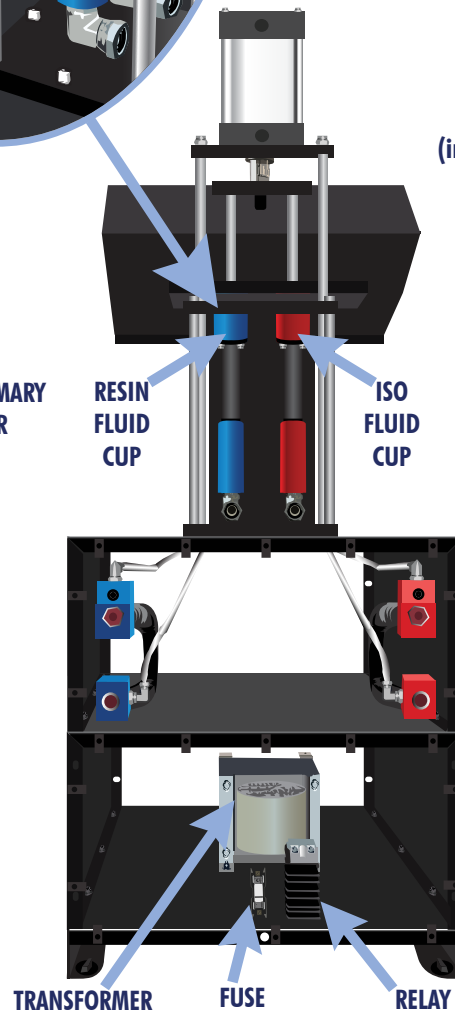
Refer to Page 13 for a detailed description of the pump assembly components

3D RENDERING OF REAR PUMP ASSEMBLY

(image 13B)



(image 13C)





# STARTUP PROCEDURE (PART I)

## PLURAL COMPONENT PROPORTIONER



### BEFORE STARTING THE MACHINE

1. Check that the machine is securely fastened to a surface (if applicable)
2. Make sure all removable panels are securely fastened.  
*NOTE: If machine is located in a trailer, driving creates a high vibration rate that can loosen bolts. Check that the panel bolts are securely fastened after driving to a location.*
3. Check that the inlet Y-Strainer/Screens are clean before every use. (refer to cleaning on pg.24)
4. Check level and condition of TSL Oil before every use. (refer to cleaning on pg.24)
4. Review the safety guidelines on pg. 20 before starting the machine



### NOTICE

To ensure steady voltage with optimal electrical equipment performance, follow all steps correctly. Failure to follow proper installation, startup and shutdown procedures will cause voltage fluctuations that can damage your machine and void your warranty.

### IF USING A GENERATOR

Check generator fuel level. Running out of fuel during operation will cause voltage fluctuations that may damage your machine. Ensure the main breaker on the generator is in the OFF position before starting. Start the generator and let it run until the working temperature is reached.

#### STEP ONE:

Make sure all switches on the machine are in the OFF position and the Parker® Air Regulator is set at (0) Zero. Refer to the Machine Dash Board (pg. 12) for the location of the Parker® Air Regulator. Check to make sure that the valves on your spray gun block is closed.

#### STEP TWO:

Close the bleed valve on the air compressor and then turn it on.

#### STEP THREE:

To start the machine, turn the master power switch to the ON position. The power light will illuminate indicating that the machine has been switched on. Refer to the Machine Dash Board (pg. 12) for the location of the power light.

#### STEP FOUR:

Turn the red and blue inlet valves located on the back of the machine to the OPEN position.

Note: When the valves are in the CLOSED position they will be pointing away from the machine.

#### STEP FIVE:

Turn the red and blue outlet valves located on the front of the machine to the OPEN position.

Note: When the valves are in the CLOSED position they will be parallel with the front surface of the machine.

#### STEP SIX:

Open the gun block valves. Prime the machine and the full length of hose using the transfer pumps. (Transfer pumps are optional but strongly recommended by the manufacturer for optimal performance). Collect any waste material into a chemical resistant container. Once primed, turn off transfer pumps and close the gun block valves.



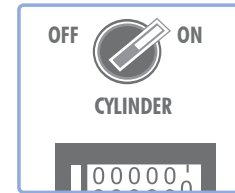


## STARTUP PROCEDURE (PART II)

### PLURAL COMPONENT PROPORTIONER

#### STEP SEVEN:

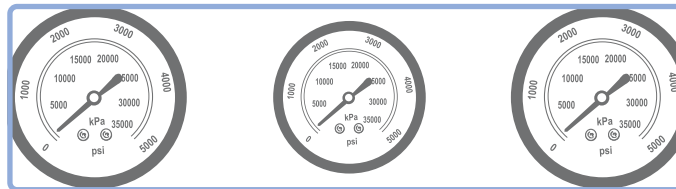
Turn the pneumatic air cylinder switch to the ON position. This switch is located above the stroke counter. (image 14)



(image 14)

#### STEP EIGHT:

Adjust the Parker® Air Regulator to 30 psi. This will allow the pump to build up pressure in the system. When the pump stops, check the gauges to establish there is even pressure throughout the system. (image 15) If the pressure is uneven, bleed off excess pressure until side A (ISO) and side B (Resin) are equal. This can be achieved by using the gun or the recirculating kit.



(image 15)

#### STEP NINE:

When the pressure is equalized, the Parker® Air Regulator can be adjusted to the working pressure required for the material the machine will be spraying.

**\*\*\*UNEQUAL PRESSURE MAY RESULT IN INFERIOR FOAM AND/OR CROSS CONTAMINATION.\*\*\***

**\*\*\* Inspect the hose and machine thoroughly for leaks.**

***If a leak is detected, turn off the power and air supply to the machine\*\*\****

#### STEP TEN:

**IMPORTANT:** Turn the hose heater on by switching the hose breaker to the ON position. Set the digital temperature controllers to the desired target temperature by using **ONLY** the up and down arrows.

**PLEASE NOTE: IT IS VERY IMPORTANT THAT THE HOSE REACHES THE DESIRED TEMPERATURE BEFORE TURNING THE HEAT BLOCKS ON.**

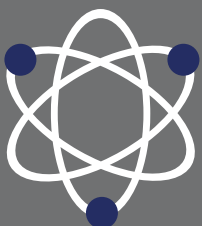
#### STEP ELEVEN:

Turn the ISO and the RESIN on by switching their breakers to the ON position. Refer to the Machine Dash Board (pg. 12) for the location of the breaker switches. Set the digital temperature controllers to the desired target temperature by using **ONLY** the up and down arrows.

#### STEP TWELVE:

Install the spray foam gun on to the gun block. Open the gun block valves. Check safety guidelines on (pg. 20) and then proceed with spray application.

**NOTE:** The pressure will rise when the heaters are on due to the expansion of the material. When the hose has reached the correct temperature and the heat blocks are on, spraying may commence. Please ensure that the ISO and RESIN pressure is within 200 psi of each other.





# CLEANING PROCEDURE AND SHUTDOWN

## PLURAL COMPONENT PROPORTIONER



*Learning how to take care of and clean your new Revolution Spray Foam Proportioner machine is just as important as learning how to use it safely. Taking the time to clean your machine after each use will not only extend the life of it, it will also boost its performance and increase the yield out of the materials used.*

### STEP-BY-STEP GUIDE TO CLEANING YOUR MACHINE AFTER EVERY SHUTDOWN

1. Turn hose breaker, iso breaker and resin breaker to the OFF position.
2. Turn the red and yellow master power safety switch to the OFF position.
3. Clean the pump rods by extending them UP all of the way. Liberally clean extended rods and the rod base cups with brake or carb (aerosol) cleaner. Apply TSL Oil (Throat Seal Oil) to the base of the pump rods.
4. Make sure to re-grease the pump rods with white lithium grease every time you clean them.
5. Retract the pump rods to the full down position by turning off the pneumatic air cylinder switch and follow the pressure relief procedure on page 27. The machine will auto-stop in the down retracted position.

### SCREEN CLEANING PROCEDURE

- 6A. Double check that everything is in the OFF or CLOSED position. (inlet valves, main power, air supply and transfer pumps)
  - 6B. Place a bucket under the Y-strainer/Screen located at the inlet of the machine
  - 6C. Loosen the cap and pour any excess material that's in the line into a chemical resistant bucket.  
**\*\*\*NOTE: ONLY CLEAN ONE SCREEN AT A TIME TO AVOID CROSS CONTAMINATION\*\*\***  
(it is very important to keep ISO away from moisture. Moisture can cause crystallization)
  - 6D. Remove the screens and clean with an approved cleaner. (eg. Naked Gun® Gun Cleaner by Klean Strip) You can also use brake or carb (aerosol) cleaner if necessary.
  - 6E. If the screen is unable to be thoroughly cleaned, replace the screen.
  - 6F. Once the screen has been cleaned and it is free of debris, insert it back into the Y-strainer/Screen and refasten the cap.
  - 6G. Tighten the cap and repeat the process for the other side.
7. Perform a visual inspection of your machine to locate loose or worn parts. Replace if necessary.
  8. Drain Parker® Air Filter
  9. Drain moisture from air compressor daily.

#### Changing Spray Materials

Contact your material manufacturer for MSDS or ask them about chemical compatibility before switching materials in the machine. (Material manufacturer may recommend a thorough flushing prior to changing materials.)

### WARNING:

**If the machine is not scheduled to be in service for more than 10 days, it should be flushed thoroughly and stored with hydraulic fluid so crystallization does not occur within the machine or hoses. This is most common on the ISO side.**





Employees should care for and maintain all equipment as instructed by the manufacturer.

### Before Operation Check List

Perform a visual inspection.

Check to make sure all connections are secure.

Look for leaks.

Perform a visual inspection of your machine to locate loose or worn parts. Replace if necessary.

Check volume of material left in Barrels (A) ISO and (B) Resin to ensure you don't run out of material in the middle of an application.

**WARNING:** If the machine is not scheduled to be in service for more than 10 days, it should be flushed thoroughly and stored with hydraulic fluid or material recommended by the manufacturer

### Important Notes



*Liquid materials should be stored in a dry, clean, sanitary location away from direct sunlight as instructed by manufacturer.*



*Part A: Isocyanate is moisture sensitive.*



*Part B: Resin should be opened slowly to allow built up pressure to escape.*

**NOTE: ALL REVOLUTION SERIES MACHINERY AND EQUIPMENT IS DESIGNED FOR PROFESSIONAL USE ONLY.**





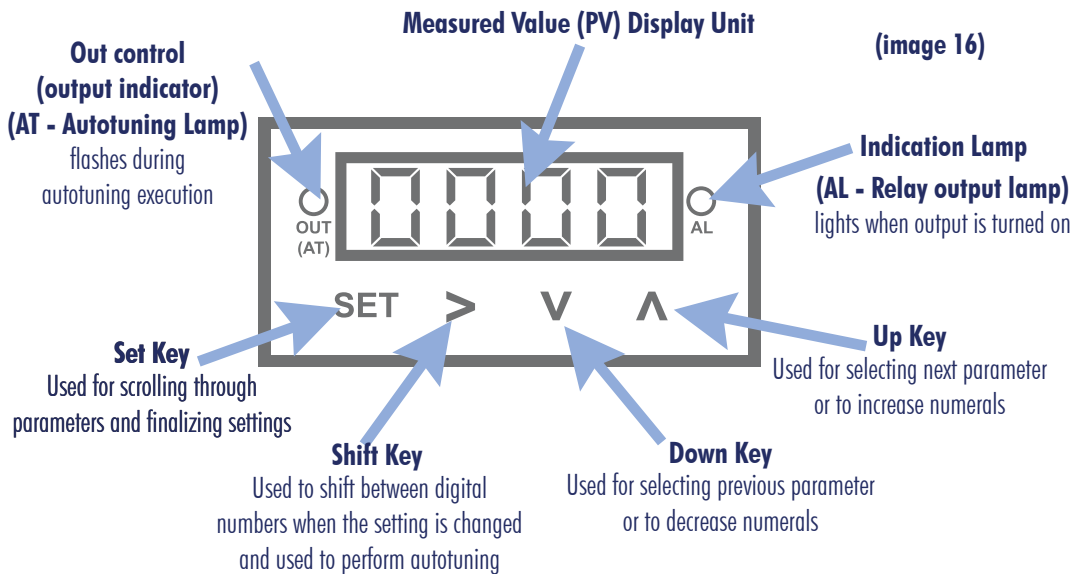
# TEMPERATURE CONTROL REPROGRAMMING

## PLURAL COMPONENT PROPORTIONER



### XMT7100 TEMPERATURE CONTROLLER

#### PANEL DESCRIPTION



#### REPROGRAMMING PROCEDURE

1. Begin procedure by pressing the [SET] key on the front panel of the temperature controller.
2. Once the display shows (0000), input code (0036) using the [>] button to cycle between digits. Press the [^ and V] buttons to change the selected digit. Enter the selection by pressing [SET].
3. The display will respond by displaying (P). Press [SET] to adjust the setting. Using the [^ and V] buttons, adjust the value for (P) according to the table in (figure 13). Press [SET] to enter this value. It has now saved this setting.
4. Press the [^] button to select the next setting. Press [SET] to adjust the value according to the table in (figure 13). Press [SET] to save this setting.
5. Repeat step 4 until all values have been adjusted according to the table in (figure 13)
6. When finished, the display will show (END). Press [SET] to complete programming.

*This must be done for all three parameters (Codes: 0036, 0089 and 0001). Once one code is completed, the next one can be selected with the same method used in the beginning of this procedure.*

#### CODES

STEP 1 - (0036)		STEP 2 - (0089)		STEP 3 - (0001)	
P	15.0	Inty	E	Su	
I	0005	Outy	3	AH1	0800
D	010	HY	0003	AL1	0800
SouF	1.0	PS6	0000		
OT	015	RD	0		
FILt	0	CorF	1		

(chart 3)





### PRESSURE RELIEF

Pressure Relief may be achieved by using optional Fluid Recirculation Kit (Part#RA100)

To relieve pressure from pressurized system in the machine and spray hose you may dump pressure back into the drums by closing rear valves and opening the fluid recirculation kit valves.

**-or-**

Remove the spray gun from the gun block with the supplied spray gun nut driver and gently open the A side valve and then open the B valve until all pressure is released from the machine.

Collect all waste material in chemical resistant container.

Please adhere to all applicable (PPE) Personal Protection Equipment guidelines.

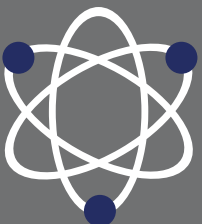
### FLUID RECIRCULATION

Fluid Recirculation may be achieved by using optional Fluid Recirculation Kit (Part#RA100)

To recirculate material throughout the system, open the rear inlet valves. Start the machine at less than 500 psi fluid pressure and open the (optional) fluid recirculation valve located on the front of the machine. The material should automatically purge back into the material drums.

Primary A and B heaters may be used to preheat the material.

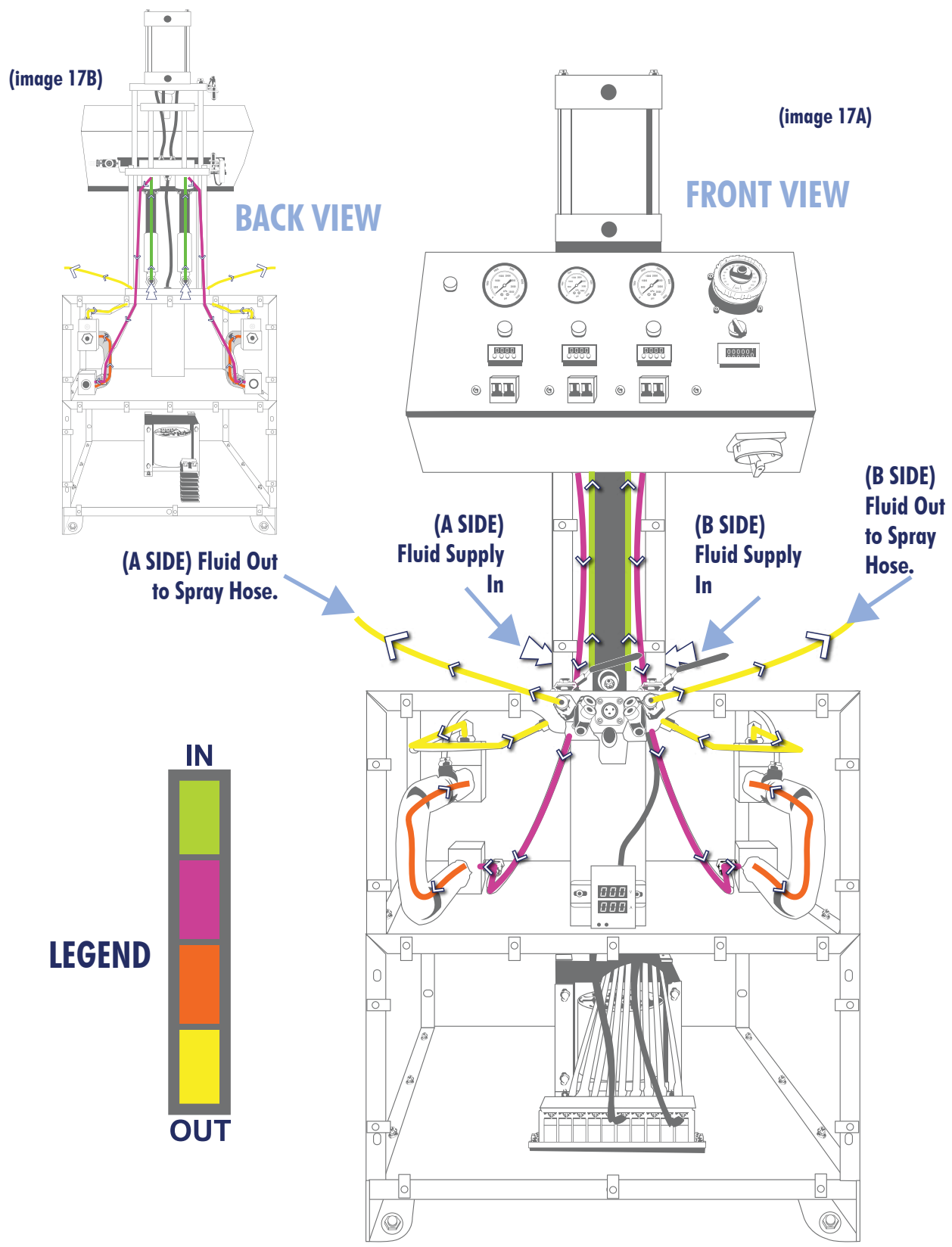
Please adhere to all applicable (PPE) Personal Protection Equipment guidelines.





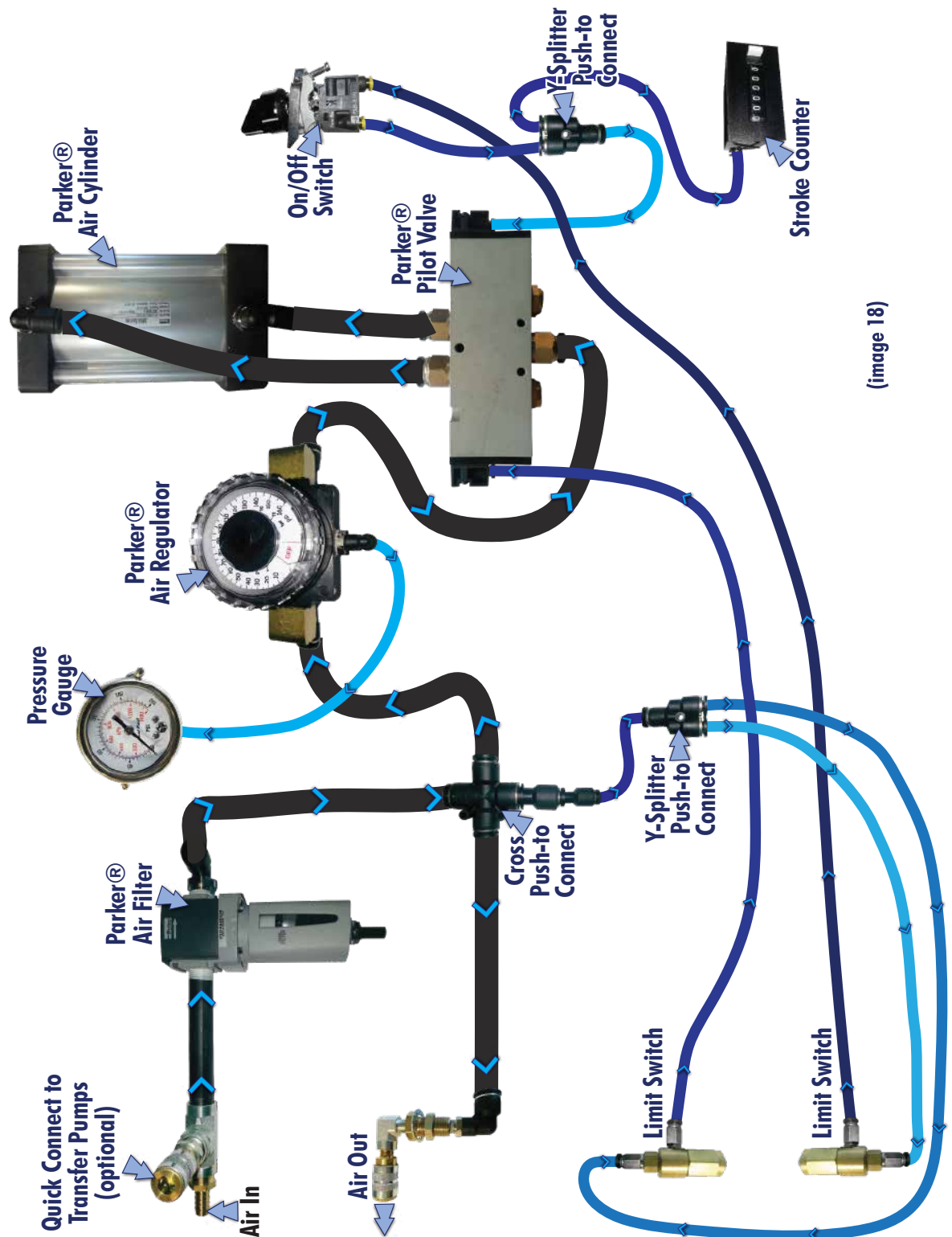
# DIAGRAM (FLUID FLOW)

## PLURAL COMPONENT PROPORTIONER

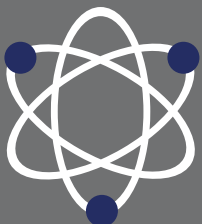




## DIAGRAM (AIR FLOW) PLURAL COMPONENT PROPORTIONER



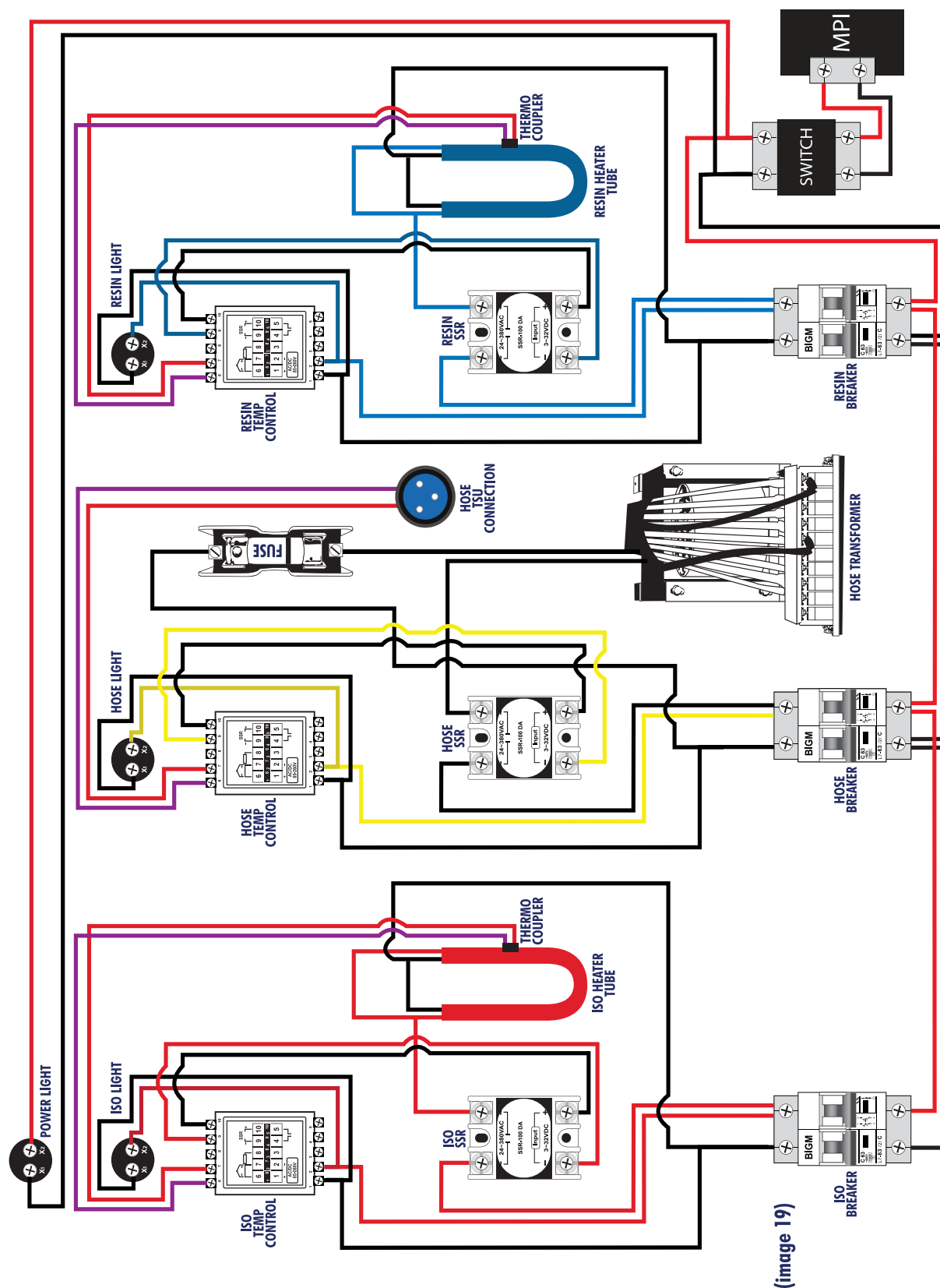
(image 18)





# DIAGRAM (WIRING)

## PLURAL COMPONENT PROPORTIONER





### 1. My spray pressure of the machine is off balance by more than 200 psi?

- A) Refer to the Pressure Relief procedure on page 27 to reduce higher pressure to match the lower pressure component.
- B) Refer to the Cleaning and Shutdown procedure on page 27 for possible clogged, contaminated Y-Strainer/Screen.
- C) Refer to your spray gun manual for possible obstruction in the gun chamber or spray tip.

### 2. How do I adjust my spray pattern / or if pattern is small?

#### A) Fluid Pressure Setting

If you are experiencing uneven spray patterns, poor mixing, low material flow or coarse droplet size, your pressure is too low. If you have an excessive amount of overspray, high flow rates, excessive wear or difficulty in controlling the spray, your pressure is too high. Adjust the pressure as necessary.

#### B) Fluid Temperature

Material temperature that is either too hot or too cold can result in the same variables listed above under uneven pressure (A). Adjust the material temperature as necessary.

#### C) Mix Chamber Size

Your desired flow rate and the viscosity of your material is based on your choice of mix chamber.

### 3. How do I turn the heat up or down on the controllers?

Use the up or down arrow temperature controllers to adjust the temperature.

### 4. How do I know if the machine is calling for heat?

On each temperature controller, the small red light on the left side will be illuminated to indicate it's calling for heat. If a small red light is present on the right side, that indicates an error in the temperature controller.

### 5. Why do the main heaters in the proportioner overshoot in temperature?

This is due to the residual reading from warming up the steel tube. After the machine warms up, it balances out. This can also happen if the fluid coming into the machine is too cold.

### 6. What amps should my hose be set at?

The amperage going through your hose should measure between 33-40 amps. The length of hose does not matter.

### 7. When should I flush out the machine?

If the machine sits idle for a (10)ten day duration, it is VERY IMPORTANT that you circulate the material for a minimum of 20-25 minutes. If the machine is not scheduled to be used for an extended period of time, it is imperative that you completely flush out the system or circulate the material every 10 days to prevent the machine from seizing.





# TROUBLESHOOTING (HOSE HEAT)



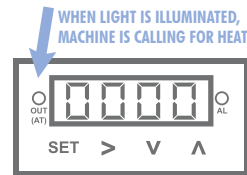
## PLURAL COMPONENT PROPORTIONER

### HOSE HEAT TROUBLESHOOTING

If you are not fully trained in these testing procedures or are not comfortable testing electronic components, please secure a qualified technician before continuing. These test procedures are strictly used as guidelines and under no circumstance does Austin Foam Systems, Corp. or any of its affiliates take responsibility of your health or safety.

#### VERIFY VOLTAGE RAILS (USE A QUALIFIED TECHNICIAN OR A LICENSED ELECTRICIAN)

1. Ensure you have a solid 120 +- volts per leg going into the machine. 220-240 volt AC across the two hot legs.
2. Turn the hose heat breaker to the ON position. The hose controller should illuminate and show the current hose temperature.
3. Turn all breakers, including the main to the OFF position.



(image 20)

#### VERIFY RELAY (USE A QUALIFIED TECHNICIAN OR A LICENSED ELECTRICIAN)

1. Remove the front cover of the machine.
2. Turn the main and the hose heat breakers to the ON position.
3. Ensure that the light on the left hand side of the temperature controller is illuminated. This indicates that it is signaling/calling for heat. If the light is not illuminated, increase the target temperature by pressing the up arrow on the temperature controller.
4. Inspect to ensure that the light on the 100 amp relay in the rear transformer compartment is blinking or constant. Either blinking or constant indicates the digital controller is calling for heat and communicating with the relay to turn on that which in turn will send voltage down the hose.
5. Referring to the hose chart on page 17, use a multi-meter to determine the proper voltage needed based on your hose length. Set the multi-meter at 200V AC and probe the supply side of the fuse and (No. 2) load side of relay. (eg. 150' hose = 64V)

#### VERIFY FUSE

1. Turn all breakers, including main to the OFF position and remove the fuse. Using a multi-meter, check the fuse continuity to ensure it is good and operational. If it is in working condition, replace back into the holder or when checking the relay, and it is operational, you can probe the load side of the fuse to determine it's functionality. (If 64V is showing on the supply side of the fuse to the relay, 64V on the load side should also be showing)

#### VERIFY TRANSFORMER (OUTGOING AMPERAGE AND/OF VOLTAGE)

1. If available, use an amp clamp around one of the outgoing heater wires. (These are the thick wires running out of the front of the machine and down into the hose). It should display 33+- to 40+- amps. As an alternative, you can also disconnect the thick wires at the gun end of the hose, separate them and verify AC voltage with a multimeter across the two open wires. Refer to the hose chart in this manual to check for proper voltage. (eg. 150' hose = 64V)

**IF YOUR HOSE HEAT HAS BEEN DIAGNOSED AND IS NOT OPERATIONAL BY THE ABOVE STEPS, IT IS MOST LIKELY THAT ONE OF THE LISTED COMPONENTS HAS FAILED AND WILL NEED TO BE SERVICED OR REPLACED.**

**(Controller replacement is usually the last component that needs to be replaced.)**

**BEFORE DIAGNOSIS, BE SURE TO CHECK THAT ALL CONNECTIONS IN THE HOSE ASSEMBLY ARE CONNECTED PROPERLY**

\*To eliminate the possibility of a bad fuse or relay, you can temporarily bypass them while troubleshooting. If either one has been deemed faulty, replace with a new, operational one immediately.





### THERMO SENSOR WIRE TROUBLESHOOTING

#### CONTROLLER

1. Ensure that the digital controller is illuminated and has power.
2. If the controller reads (EEEE), the TSU is disconnected or there is a disconnection/break in the TSU (purple wire).

#### CONTROLLER TROUBLESHOOTING

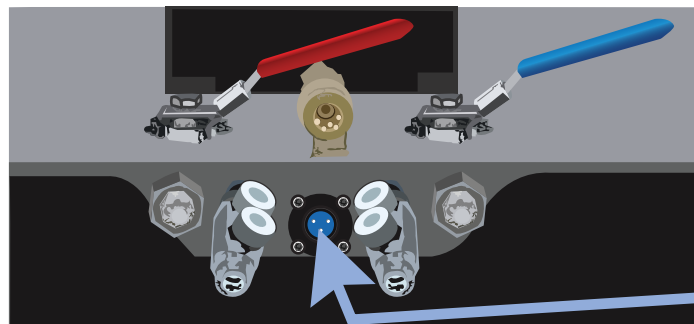
##### (Quick Test If Reading EEEE)

1. Power OFF the machine
2. Disconnect the TSU 3 pin connector from the TSU wire port from the center front base of the machine.
3. From the machine, carefully find the first connection point between the first hose and the second hose.
4. Remove any tape, scuff jacket or heat shrink at this hose connection point. aka Point B
5. Find female 3 pin connector TSU SENSOR which should be hanging out of the A side RED
6. Bring the 3 pin connector TSU SENSOR from the hose connection you just unwrapped (point B) and directly plug into 3 pin connector at center front base of machine (point A)
7. Power machine ON
8. Inspect controller for temperature display.
9. If temperature is displayed, controller IS working and there is a disconnection in the TSU purple wire somewhere down the hose.

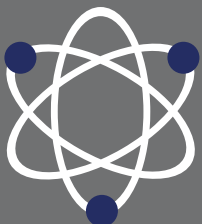
#### TESTING TSU PURPLE WIRE FOR EACH SECTION OF HOSE.

1. Power OFF machine.
2. Disconnect the TSU 3 pin connector from the TSU wire port from the center front base of the machine.
3. Disconnect the 3 pin connectors at the first and second hose connection points. (the next TSU 3 pin connector going to the second section of hose or to the gun.
4. Between sections of disconnected hose, plug open 3 pin connector into the 3 pin TSU SENSOR attached to A side RED.
5. Connect the TSU 3 pin connector from the first section of hose into the 3 pin connector at center front base of machine (point A).
6. Power ON machine.
7. Inspect controller for the temperature display.
8. If the temperature is displayed, the controller and first section of hose IS working correctly. This means that there is a disconnection somewhere in the TSU (purple wire) in another section of hose.
9. **REPEAT** each section of hose until you find the break, bad connection or short in the TSU wire.
10. You can check TSU accuracy by disconnecting the buried TSU wire attached to the hose and placing it in a known temperature. (eg. body temperature is roughly 98.5 degrees)

(image 21)



(POINT A)





# WARRANTY (PART I)

## PLURAL COMPONENT PROPORTIONER



### ONE YEAR LIMITED WARRANTY FOR MANUFACTURER DEFECTS

#### AUSTIN FOAM SYSTEMS, CORPORATION LIMITED WARRANTY

All equipment referenced within this document is manufactured by Austin Foam Systems, Corp. The equipment bearing its name is guaranteed to be free from defects in materials and workmanship from the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Austin Foam Systems, Corp., they will, for a period of TWELVE (12) months from the date of sale, repair or replace any part of the equipment determined by Austin Foam Systems, Corp. to be defective.

This warranty is only valid when the equipment is installed, operated and maintained in accordance with Austin Foam Systems, Corp. written recommendations.

This warranty does not cover, and Austin Foam Systems, Corp. shall not be liable for general wear and tear, seals, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Austin Foam Systems, Corp. component parts. Nor shall Austin Foam Systems, Corp. be liable for malfunction, damage or wear caused by the incompatibility of Austin Foam Systems, Corp. equipment with structures, accessories, equipment or materials not supplied by Austin Foam Systems, Corp., or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Austin Foam Systems, Corp.

This warranty is conditioned upon the **prepaid return** of the equipment claimed to be defective to an authorized Austin Foam Systems, Corp. dealer or distributor for verification of the claimed defect. If the claimed defect is verified, Austin Foam Systems, Corp. will repair or replace, free of charge, any defective parts. The equipment will be returned to the original purchaser with transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Austin Foam Systems, Corp. sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within one (1) year of the date of sale.

**AUSTIN FOAM SYSTEMS, CORP. MAKES NO WARRANTY, AND DISCLAIMS THAT ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN THE CONNECTION OF ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY AUSTIN FOAM SYSTEMS, CORP.**





### ONE LIMITED WARRANTY FOR MANUFACTURER DEFECTS

#### AUSTIN FOAM SYSTEMS, CORP. LIMITED WARRANTY

Items sold, but not manufactured by Austin Foam Systems, Corp. (such as Parker® air cylinders, motors, switches, hose, etc.), are subject to their individual manufacturers warranty, if any, which may include a longer duration than the time outlined in this limited warranty. Austin Foam Systems, Corp. will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Austin Foam Systems, Corp. be liable for any indirect, incidental, special or consequential damages resulting from Austin Foam Systems, Corp. supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Austin Foam Systems, Corp., or otherwise.

Any covered part by warranty will be shipped by Austin Foam Systems, Corp. by standard ground shipping. If parts need to be expedited resulting in overnight shipping costs, the purchaser will be responsible for all shipping and handling expenses over the cost of ground shipping.

**This warranty is non-transferable.**

**If the pump or heating systems are frozen up with ISO, foam, cross-contamination etc. it will not be covered under warranty.**

**MISUSE OF THE MACHINE IS NOT COVERED.**

**Spraying unapproved material through machine is not covered.**

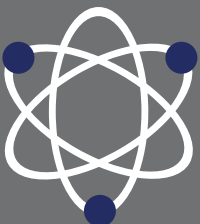
**Electrical components may not covered if generator produces (over amperage or under amperage)**

**EXCLUSIONS may include:**

- Dented machines, broken, cracked or damaged parts.
- Shorted wires due to misuse or over heating are not covered.
- Gauges if glass is broken are not covered
- Heat blocks (electrical due to overheating)
- Pneumatic stroke counter
- Parker® two position switch
- Parker® pilot valve
- Parker® auto drain filter
- Machine decals are not covered

**Parts listed below, but not limited to; may be excluded from this warranty if the power supply / generator used in the operation of this machine is found to be faulty by an authorized generator repair center or any Austin Foam Systems, Corp. authorized dealer or service center.**

- Transformer
- Relays
- Breakers / switches
- Panel lights





## NOTES

## PLURAL COMPONENT PROPORTIONER





## EQUIPMENT QUESTIONNAIRE (PART I)

### PLURAL COMPONENT PROPORTIONER

Fill out and check each box upon completion. When form is complete, please sign, detach and return to Austin Foam Systems, Corp.

I \_\_\_\_\_, hereby certify that I have completed a training session provided by an authorized Austin Foam Systems, Corp. trainer or dealer. All of the following procedures for operation of the Revolution Series equipment outlined on this document have all been covered and explained in detail. I understand that this is only to be used as an outline and may not cover every situation for operation of this specialized equipment. I acknowledge and accept full responsibility in the operation of this machine and the training of others from this date forward. \_\_\_\_\_

#### SPRAY GUN

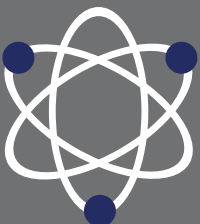
1. I have received the manufacturer owner's manual. ☐
2. Trainer has demonstrated 100% disassembly and re-assembly of the spray gun. ☐
3. Trainer has explained the use of sand paper on side seals and mixing chamber, as needed to remove surface scratches. ☐
4. Trainer has shown me all of the handle ports and how to clean them. ☐
5. I understand that this spray gun will need redundant parts for operation. ☐
6. Trainer has answered all of my questions regarding this spray gun. ☐
7. I understand this gun has a manufacturer limited warranty and does not hold Austin Foam Systems, Corp. or any of its affiliates liable for any losses generated in the event of equipment failure. ☐

#### HOSES

1. Trainer has shown me the purple TSU wire and 3 pin connectors. ☐
2. Trainer has explained how the TSU wire works. ☐
3. Trainer has unplugged the TSU and demonstrated a controller ERROR. ☐
4. I understand that there are (A) and (B) side hoses with different fittings. ☐
5. I will, or will own a multi-meter with an amp clamp. ☐
6. I am knowledgeable of how the amp and multi-meter operates. ☐
7. Trainer has demonstrated where to check amperage on the hose. ☐
8. I understand that the heater system is a closed circuit to the transformer. ☐
9. I understand not to kink the hose and/or pull on it vigorously. ☐
10. Trainer has answered all of my questions in regards to the hose. ☐
11. I understand the hoses have a manufacturer limited warranty and does not hold Austin Foam Systems, Corp. or any of its affiliates liable for any losses generated in the event of equipment failure. ☐

#### TRANSFER PUMPS

1. Trainer has explained the 2:1 ratio of pump and how much air to provide. ☐
2. Trainer has removed top section of air motor to demonstrate internals. ☐
3. I have been shown lower fluid section of transfer pump and internals. ☐
4. I understand that periodic maintenance and cleaning will be needed. ☐
5. I understand that ISO (side A) is moisture sensitive and will crystalize. ☐
6. Trainer has explained that over two weeks of storage may result in hardening of the ISO (side A) chemical and running the unit every week or a thorough flush of the pumps may be required. ☐
7. Trainer has answered all my questions in regard to the transfer pumps. ☐
8. I understand the transfer pumps have a manufacturer limited warranty and does not hold Austin Foam Systems, Corp. or any of its affiliates liable for any losses generated in the event of equipment failure. ☐





# EQUIPMENT QUESTIONNAIRE (PART II)

## PLURAL COMPONENT PROPORTIONER

# R

### SPRAY FOAM PROPORTIONER MACHINE

1. I understand that this equipment is specialized and may be different in operation compared to competitors equipment. ☐
2. I am aware this equipment operates with high voltage and highly compressed air. ☐
3. I understand this equipment may operate under high fluid pressures  
(EXTREME CAUTION should be taken for 2 and 3) ☐
4. Trainer has demonstrated how to turn unit ON and OFF. ☐
5. Trainer has explained that hose heat should be turned on first and may take up to 30 minutes to reach target temperature. Leaving A and B primary heaters on may char the material, reducing heat capacity / flow of material. ☐
6. Trainer has demonstrated operation of controllers including current and target temperatures. ☐
7. Trainer demonstrated the use of an amp clamp to check hose heat amperage. ☐
8. I understand that the high performance primary A and B heaters should only be turned on for 3-5 minutes before spraying commences. ☐
9. Trainer has shown how to relieve all pressure from machine and hoses. ☐
10. Trainer demonstrated how to balance pressures as needed. ☐
11. I understand that the ISO, (A side) is moisture sensitive and will crystalize. ☐
12. Trainer has explained that over 2 weeks of storage may result in hardening of the A side chemical and running the unit every week or a thorough flush of the pumps may be needed. ☐
13. Trainer has demonstrated the proper shut down and storage procedure of equipment. ☐
14. I have been instructed a minimum of 3 times on how to clean the ISO rod in the up position with carb or brake cleaner and how to oil it with TSL oil and park in the down position. ☐
15. Trainer has answered all of my questions in regards to the hose. ☐
16. I understand this spray foam proportioner machine has a manufacturer limited warranty and does not hold Austin Foam Systems, Corp. or any of its affiliates liable for any losses generated in the event of equipment failure. ☐

### TRANSFORMER TAP SETTINGS

1. I have been instructed on how to change the tap settings for specified hose length. ☐  
Current tap setting left by instructor is: \_\_\_\_\_

### COMPRESSOR, GENERATOR, AIR DRIER, TRAILER & ACCESSORIES

1. I understand that any third-party accessories are under their own manufacturer's warranty and that Austin Foam Systems, Corp. or any of its affiliates are not liable for any losses generated by failure of this equipment. ☐
2. I understand that these accessories may need periodic maintenance for proper operation and to prolong the longevity of the equipment. ☐

I \_\_\_\_\_, hereby certify on this date: \_\_\_\_\_ that all of the above items have been examined and the trainer provided has answered all of my questions to the best of his/her ability to my satisfaction. I also understand that if needed or required, further training or technical updates may be completed and/or performed at a later date via phone, e-mail, text, on-site or off-site. I acknowledge and accept full responsibility in the operation of this machine and the training of others from this date forward. \_\_\_\_\_

Fill out and check each box upon completion. When form is complete, please sign, detach and return to Austin Foam Systems, Corp.





## WARRANTY (REGISTRATION AND ACTIVATION) PLURAL COMPONENT PROPORTIONER

cut along the dotted line on this portion and return the card to activate your warranty

cut along the dotted line on this portion and return the card to activate your warranty

### REVOLUTION SERIES WARRANTY ACTIVATION CARD

I, the undersigned do hereby acknowledge that I have read and fully understood the contents of the owner's manual for the Revolution Series Spray Foam Proportioner Machine. I recognize that I have competent knowledge on how to install, hardwire, setup, operate, clean and maintain this machine. I understand that failure to follow the guidelines set forth in this manual can void my warranty.

COMPANY NAME: \_\_\_\_\_

CONTACT NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

CITY / STATE / ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_

DATE OF PURCHASE: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

cut along the dotted line on this portion and return the card to activate your warranty

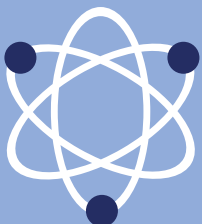
To activate your warranty, please complete the registration card above and return it to:

**AUSTIN FOAM SYSTEMS, CORPORATION**

**500 ELK STREET**

**BUFFALO, NEW YORK 14210**

**(800) 724-8403**





cut along the dotted line on this portion and return the card to activate your warranty

**BUSINESS REPLY MAIL**

AUSTIN FOAM SYSTEMS, CORP.  
500 ELK STREET  
BUFFALO NY 14210

PLACE  
POSTAGE  
HERE



cut along the dotted line on this portion and return the card to activate your warranty

  
**austin**  
FOAM SYSTEMS CORP  
(800)724-8403  
[www.afs247.com](http://www.afs247.com)



**REVOLUTION**  
MACHINERY

(844)251-8324  
[www.revolutionmachinery.com](http://www.revolutionmachinery.com)

DATE OF PURCHASE: \_\_\_\_\_

SERIAL NUMBER: \_\_\_\_\_

DEALER NAME: \_\_\_\_\_

DEALER PHONE: \_\_\_\_\_