

BECCA®

Solvent Saver Systems Operation and Maintenance Manual

55-Gallon Recycler



Approved to
UL2208 &
Class I Div 1

BECCA Inc.

2010 Cobb International Parkway
Kennesaw, GA 30152

Phone: 1-800-655-5649 Fax: 1-800-655-5684
www.Beccainc.com

Introduction

Dear Customer:

BECCA wishes to thank you for the purchase of your new BECCA 55-Gallon Solvent Saver.

In order to maximize the use of your new Solvent Saver System, it is important to read and understand this manual BEFORE attempting any distillation of product.

This manual will be of great use in order to proceed with the set up and use of your equipment. To assure continued successful operation and maintenance of your equipment please assure that your manual is placed for easy access and reference.

Please find below contact numbers for BECCA if you should require additional information:

BECCA Inc.
2010 Cobb International Blvd.
Kennesaw, GA 30153

Phone: 1-800-655-5649
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Sincerely Yours;
BECCA Inc.

MODEL DESIGNATION

<u>MODEL #</u>	<u>UNPACK./WEIGHT & DIMENSIONS</u>	<u>PACK./WEIGHT & DIMENSIONS</u>
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550 XPM	1000 lbs (454 kg) 66'' H x 60'' L x 41'' W (168cm H x 152cm L x 104cm W) Note:Height w/ Winch System 112'' (284cm)	1150 lbs (523 kg) 70'' H x 72'' L x 60'' W (178cm H x 182cm L x 152cm W)
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Carefully remove unit from crate. Remove all packaging inside the tank and around the retainer basket. Check packaging for any loose parts. Upon reception of unit, visually verify unit for damage or missing parts. Notify the freight company should any damages occur.

<u>MODEL #</u>	<u>DESIGNATION</u>
550 XPM-PC 550 XPM-VC	BECCA = Solvent Saver System ----- ----- 550 = 55 US Gallons ----- XP = Explosion Proof, Class 1, Div. 1 Group D Temp. Code T2 – 300°C ----- M = Microprocessor Control ----- ----- PC = Pressure Control VC = Vacuum Control -----

All Of the Above models are NEMA 7, CSA Approved and CSA certified to UL STD 2208



SPECIFICATION FOR INDUSTRIAL 55 GALLON SOLVENT SAVER™ RECYCLERS

SPECIFICATIONS	<i>55 GALLON UNIT</i>	
	U.S. Units	Metric Units
Geometrical capacity of boiler	70 Gallons	265 Liters
Useful capacity of boiler	55 Gallons	208 Liters
Operating temperature	104°-450°F	40°-232°C
Solvent protection	Class I, Div. 1, Group D	
Solvent temperature class	T2B – 260°C	
Absolute operating pressure	223 – 1,000 hPa	
	170 – 760 mmHg	
	-0.223 – 1 bar	
Relative operating pressure	-776 – 0 hPa	
	-590 – 0 mmHg	
	-0.776 – 0 bar	
Time per cycle of distillation	6 – 8 Hours (estimate)	
Yield	90% – 99%	
Cooling system	Fan Cooled	
Boiler material	Teflon Coated Aluminum	
Cover material	Aluminum	
Condenser material	Copper (standard) / Stainless steel (optional)	
Voltage	240 V – 1 ph	
Absorbed power	10kw/hr	
Amperage	50 amps	
Dimensions inches (cm)	42" (107) width x 60" (152)depth x 66" (168) height	
Weight	1000 Lbs.	454 Kg
Groundable Collection Container	1 (not included)	
Warranty	12 months	

SAFETY

Operate the Solvent Solvent Saver System in a **WELL VENTILATED AREA** that is isolated from welding equipment, cutting systems, or any other potential spark producing equipment. The designated area should be equipped with an appropriate fire extinguisher.



The operator should wear :



Safety Glasses, Respirator, Gloves, Protective Clothing

To avoid inhalation of possible fumes, **DO NOT STAND DIRECTLY OVER RECYCLER WHILE IN OPERATION OR WHEN OPENING LID.**

Check the « Material Safety Data Sheet » from your solvent supplier for flammability, toxicity, boiling points and auto-ignition.

NEVER REMOVE THE LID OF A UNIT WHILE IT'S UNDER OPERATION. If you need to do so, turn the cycle switch to the « OFF » position, leave the power switch to the « ON » position and let the unit run until cool to the touch (the fan will keep running). Then, turn the power switch to the « OFF » position, this will stop the fan. Now, you can open the lid.

TRAINING

All solvent recycler operators must be familiar with chemical products and labels that they are placing in the BECCA 55 GAL Solvent Saver.

WARNING LABELS



Placed On Lid



Placed on Control Box



Placed On Control Box



Placed On Lid



Placed On Lid



Placed On Lid



Placed on Boiler Tank



Placed on Condenser



Placed on identification Plate
On Condenser



On the boom (Crane)

WARNING LABELS

TO REDUCE THE RISK OF FIRE OR EXPLOSION, INSTALL, OPERATE AND MAINTAIN THIS EQUIPMENT IN ACCORDANCE WITH THE INSTRUCTION MANUAL.

THIS UNIT IS FOR USE IN A 40 0 C – 104 0 F ENVIRONMENT WITH NO FORCED VENTILATION.

UNDER THESE CONDITION, THE UNIT SHALL BE SPACED A MINIMUM 5 FEET – 1,5 METERS FROM POTENTIAL SOURCES OF IGNITION SUCH AS ELECTRICAL RECEPTACLES, SWITCHES, PILOT LIGHTS, FIXTURES, CONTACTS, AND OTHER SIMILAR EQUIPMENT THAT CAN PRODUCE SPARKS. IF THE EQUIPMENT IS USED IN HIGHER AMBIENT TEMPERATURES AN INCREASE IN SPACING TO SOURCES OF IGNITION SHALL BE CONSIDERED. THIS UNIT HAS BEEN INVESTIGATED FOR USED WITH THE SOLVENTS INDICATED IN THE INSTRUCTION MANUAL. (SEE ANNEX 2 IN THE MANUAL

Placed on the Condenser

Assure all operators are familiar with each Warning Label and its content.

LOCATION

***** THE FOLLOWING ARE GUIDELINES ONLY. INSTALLATION MUST BE PERFORMED ACCORDING TO LOCAL REGULATIONS. *****

WHEN IN A ROOM, IN THE MAIN WORK AREA

A cool, well ventilated room, in a shaded area away from sun light, away from any source of heat or ignition (sparks), away from a passageway, away from a doorway, away from a working station, away from an oxidant and flammable liquid storage area.

That room MUST have:

- Construction per NFPA 30 or like standard (see pages 33-36 for layout drawings).
- Fire fighting equipment MUST be easily accessible.
- A « No Smoking » sign MUST appear in the distillation area.
- A ventilation system to an exterior wall.
- At least one exterior wall permitting access to the room for fire fighting in an emergency situation.
- All the electrical equipment MUST be certified Class 1, Div 1 for the area 5 feet around the recycler and for the rest of the room, it has to be in accordance with dangerous zones from local electrical code.
- The motor for the exhaust fan MUST be located outside of the duct conduit or comply to Class 1, Div 1.
- Every tool in that room MUST be spark proof.
- There MUST be sufficient space for safe operation around distillation unit.
- Check for local regulations.
- Unit must be placed on a level Surface.

WHEN IN THE MAIN WORK AREA

A cool, well ventilated area, in a shaded area away from sun light, away from any source of heat or ignition (sparks), away from a passageway, away from a doorway, away from a working station, away from an oxidant and flammable liquid storage area.

That room MUST have:

- Located per NFPA 30, 33, IFC or like standard (see pages 33-36 for layout drawings).
- Fire fighting equipment MUST be easily accessible.
- A « No Smoking » sign MUST appear in the distillation area.
- All the electrical equipment MUST be certified Class 1, Div 1 for the area 5 feet around the recycler and for the rest of the room, it has to be in accordance with dangerous zones from local electrical code.
- There MUST be sufficient space for safe operation around distillation unit.
- Check for local regulations.
- Unit must be placed on a level Surface.

ELECTRICAL HOOK-UP

	MODEL	
	BECCA, Inc.550 XPM	
WATTS	10 000	
VOLTAGE	240*	
AMPS	45	
CYCLE/HERTZ	60	
PHASE	1	
MAXIMUM BRANCH CIRCUIT	60A	

*Note: These units can also operate on 220V, 50 or 60 Hz **but will not perform to their maximum capacity.**

- **All electrical components (i.e. Lighting, heating, ventilation and other) MUST be certified Explosion Proof for hazardous locations: Class 1, Div. 1 for area of 5 feet around the recycler and for the rest of the room, it has to be in accordance with local codes (electric code).**

The hook up must be performed by qualified personnel, a certified electrician, for example and in accordance with all applicable laws and regulations.

This unit must be permanently connected stationary.

Final acceptance of the installation is subject to local inspection authorities having jurisdiction.

INSTALLATION OF UNIT

Solvent Saver must be installed on a stable, level ground, preferably on concrete. Unit must be leveled before starting distillation. The condenser drainpipe **MUST** be higher than the top of the collecting vessel (catch can) a minimum of 1'' per foot between recycler and collection container. Secure drain tube with hose clamp to condenser drainpipe. Install stopper in the spout of the solvent collection container. Ensure rubber stopper fits properly.

***** NOTE *****

CLIP GROUND WIRES TO ANY METAL PART OF THE COLLECTING CONTAINER.

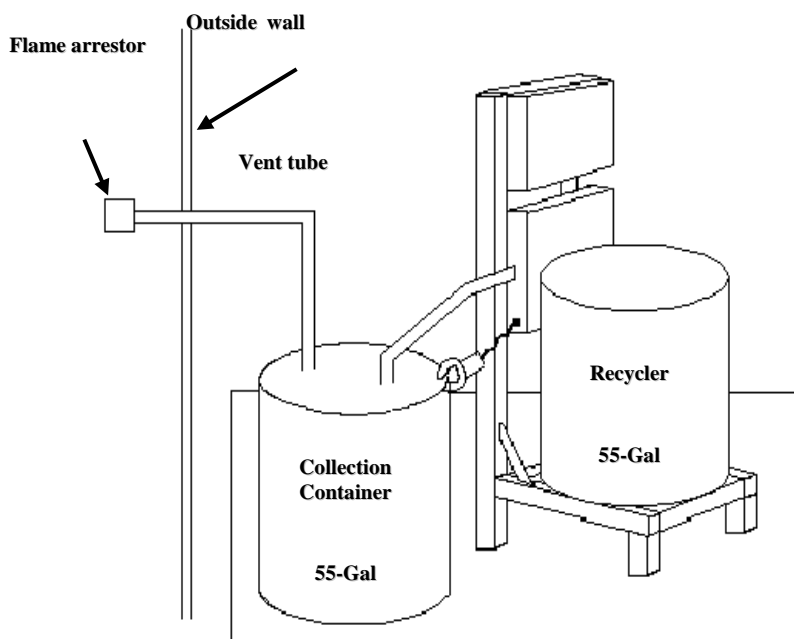
DRAIN AND VENT PIPES CANNOT BE SUBMERGED in collection container solvent. If submerged, pressure will build inside the tank and hot burning and dangerous vapor of solvent will escape from the cover possibly creating a situation where nearby operators could be injured (burned).

Should this ever occur, before approaching the unit in order to turn the cycle switch off, the operator must make absolutely sure operator can turn the cycle switch off without being splashed with burning solvent. If this is not the case, the unit must be turned off using the circuit breaker (allowing operator to keep away from solvent splash). NB: The unit must not be opened under any circumstance until the unit is cool to the touch.

COLLECTION CONTAINER:

Containers for collecting the distilled solvent and waste products shall be:

- Constructed so that they can be installed, removed and handled without spilling flammable or combustible liquids and
- Able to hold the contents of at least the volume of the distillation unit.
- Grounded with provided wires.

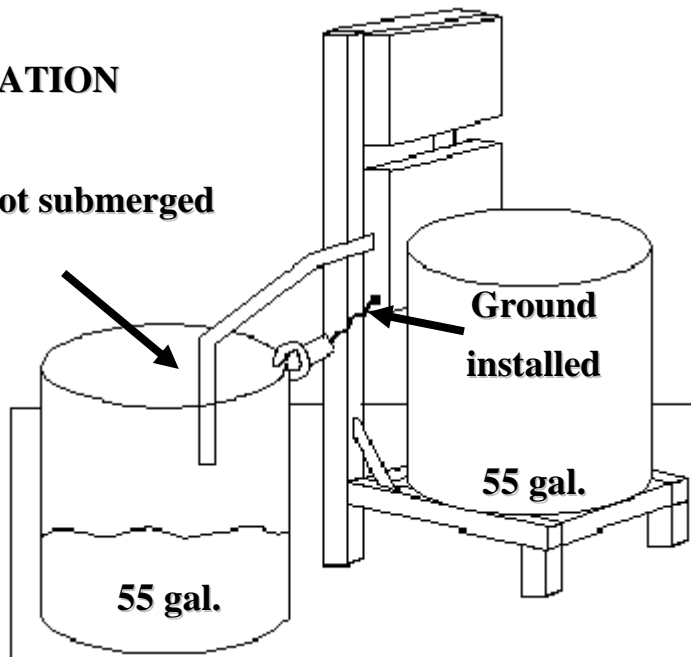


(Vent Tube is not required in all applications)

GOOD & BAD INSTALLATION OF DRAIN TUBE & GROUND WIRE

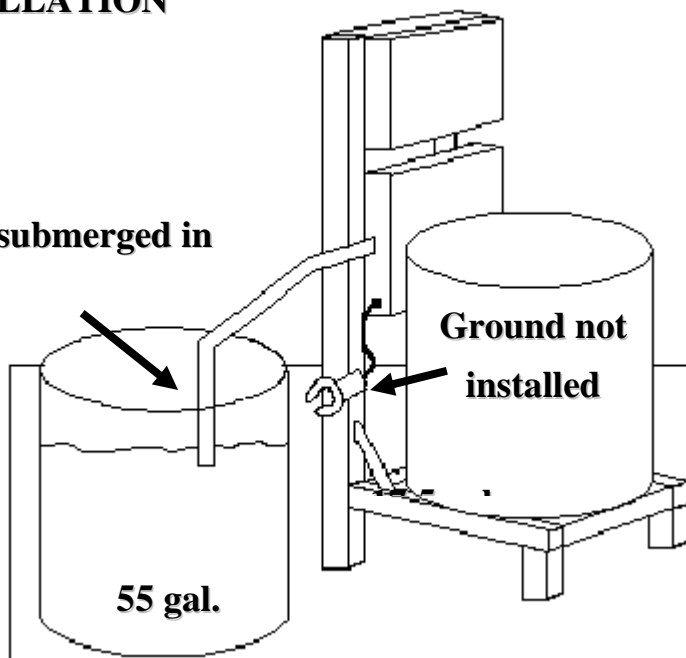
GOOD INSTALLATION

Drain tube not submerged

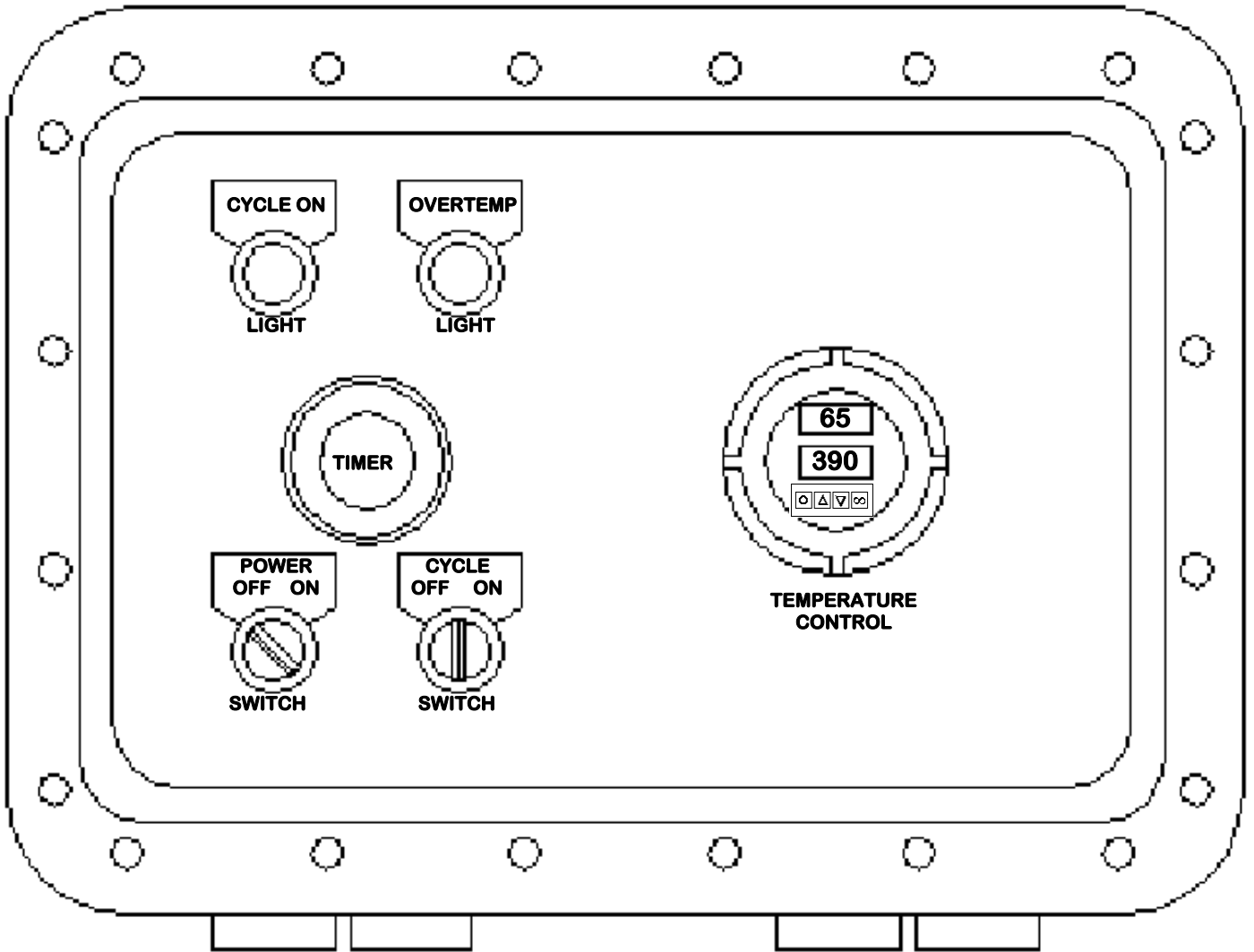


BAD INSTALLATION

Drain tube submerged in solvent



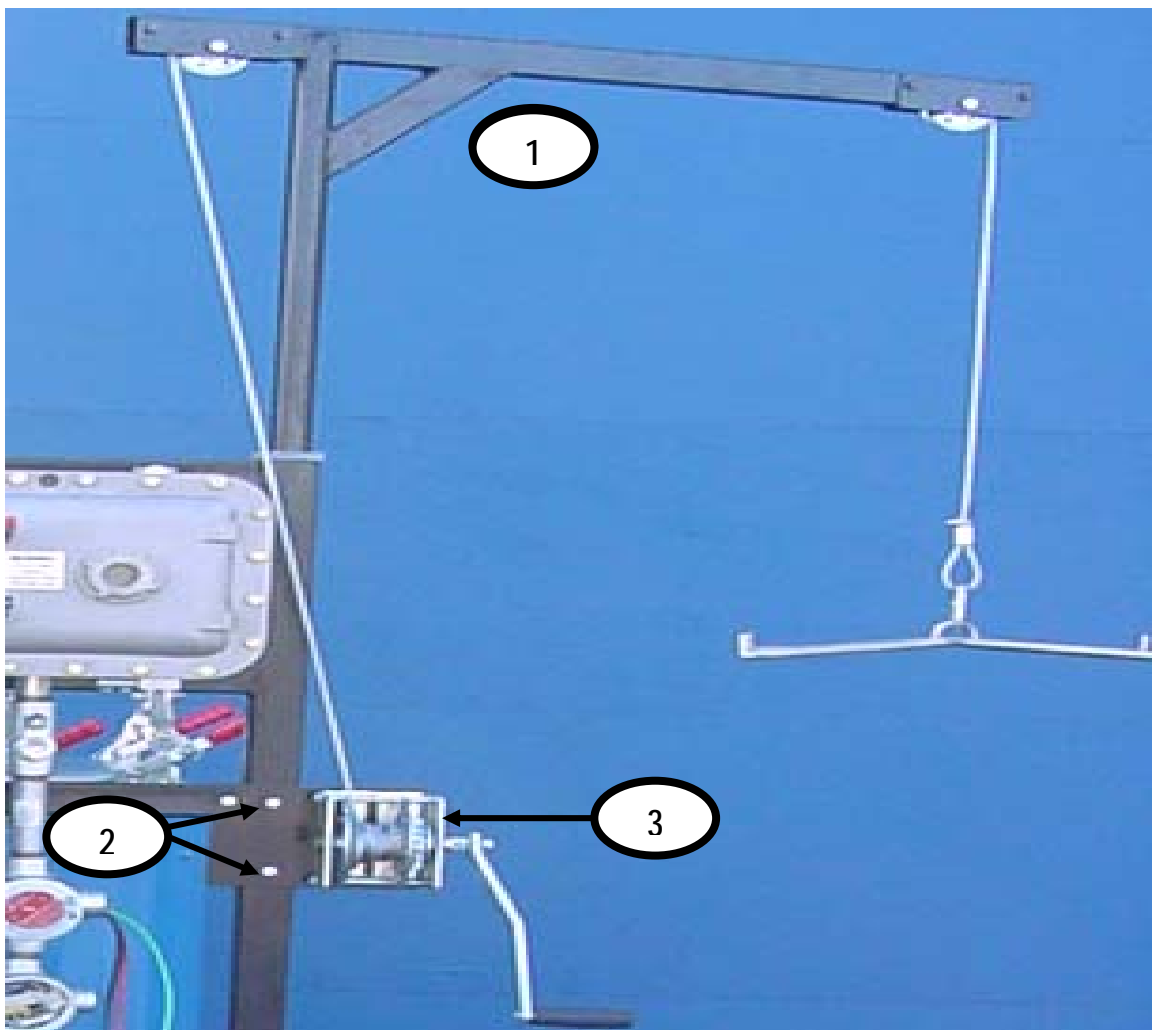
Control Box 55-Gallon BECCA Solvent-Saver



INSTALLATION OF WINCH SYSTEM (MODEL 550 XPM)

- A} Lift Pole (1) to clear winch screw hole (2)
- B} Position the winch (3) to fit screw hole (2)
- C} Bring down winch pole (1) to sit on screw (3)

Note: Winch pole Maximum lift 150LBS



Control Box Description

"POWER OFF/ON" SWITCH

When turned to position « ON », it supplies voltage to the control box, starts the condenser fan and turns on the temperature control. When turned to position « OFF », power is removed, and the unit stops to function.

"CYCLE OFF/ON" SWITCH (CENTER SPRING RETURN)

When turned to position « ON », it starts the distillation cycle for the set time. « Cycle On » light will come on and the button will reposition at the center. When turned to position « OFF », « Cycle light » goes off and the button will reposition at the center. Reset over temp safety limit and turn off overtemp light if light was « ON ».

"TIMER" POTENTIOMETER

Adjust the length of time for the distillation cycle. The time setting can't be modified unless the cycle is « OFF » (The knob moves only when you move it). **It is adjustable between 0 and 100% (0 % = 1 hour and 100% = 10 hours). If other time range is required contact us (Minimum time = 1 hour Apr.).**

"OVERTEMP" LIGHT

The over temperature light will turn « ON » when there is a system malfunction. It could be the tank temperature reached 525°F or more. This means that the thermocouple is damaged. When the over temperature light is « ON », the heating elements are « OFF » (see Annex 1 - Trouble Shooting on pages 26 and 27).

"CYCLE ON"

The « Cycle On » light will be « ON » when the distillation cycle is on and will turn « OFF » when cycle is completed.

“TEMPERATURE CONTROL”

The temperature processor has many functions:

- A) Top display indicates the actual temperature of the tank
- B) Bottom display indicates the set point (maximum temperature)
- C) The 2 arrows ▲ ▼ allow user to adjust the set point (bottom display).
(Between 32 - 505°F)

CONDENSER

The function of the condenser is to collect the vapor coming from the boiling chamber, to condense it back to a liquid and discharge it to a receiving container.

A standard condenser is made of copper. Be sure that the material that you distil is copper compatible (stainless steel condenser is optional).

The condensed solvent coming out of the condenser should be cool. Should the unit be located in a well-ventilated area and the liquid coming out warm, this means that the distillation is done too fast. You need to lower the intensity of the element by reducing the power level of the controller, which has been set at 100% of its power. Should you need to reduce it, do it 10% at a time until the liquid comes out cool

DESCRIPTION OF CONTROLS FOR MODEL 550 XPM

Lid switch

The function of the lid switch on models 550 XPM is to prevent this unit to operate if lid is not in place.

When the lid is in place, the switch is closed and allows the activation of the distillation cycle when the cycle switch is turned to the « ON » position.

The distillation cycle will automatically stop should the lid be lifted (even for 1 second) during the distillation process. The distillation cycle needs to be manually re-started by re-activating the « Cycle On » switch.

Pressure switch:

The function of this switch is to automatically control the amount of pressure inside the boiling chamber.

Should (during distillation) the pressure of solvent vapor built inside the boiling chamber be too high for the condenser, the pressure switch will open and stop the elements from heating and producing new vapor pressure. This will allow the vapor to get from the boiling chamber into the condenser and be cooled and condensed into liquid. When enough vapor has escaped the boiling chamber, the pressure will drop and the pressure switch will automatically re-energize the elements

TEMPERATURE CONTROL

HOW TO USE THE KEY AND DISPLAYS

After 60 seconds with no key press, the controller reverts to the default display - the process value in the upper display and the set point in the lower display.

UPPER DISPLAY: Indicates the process value, actual temperature, operating parameter values or an open sensor. When powering up, the Process display will be blank for five seconds.

LOWER DISPLAY: Indicates the set point, output value, and parameters for data in the upper display or error and alarm codes.

SCROLLING KEY: Press to step through the Operations, Set-up and Calibration Menus.

OUTPUT 1 INDICATOR LIGHT: Lit when Output 1 is energized.

OUTPUT 2 INDICATOR LIGHT: Lit when Output 2 is active. This output can be configured as a control or an alarm output.

% PERCENT POWER INDICATOR LIGHT:

- Lit: The controller is in Manual operation.

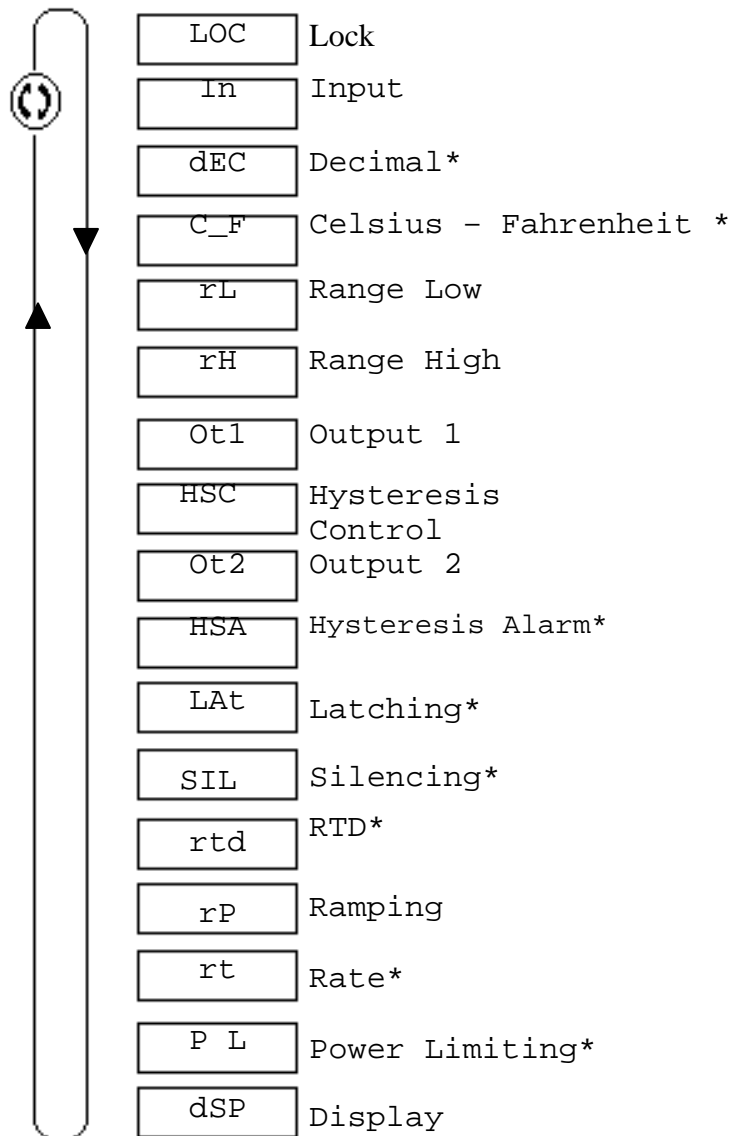
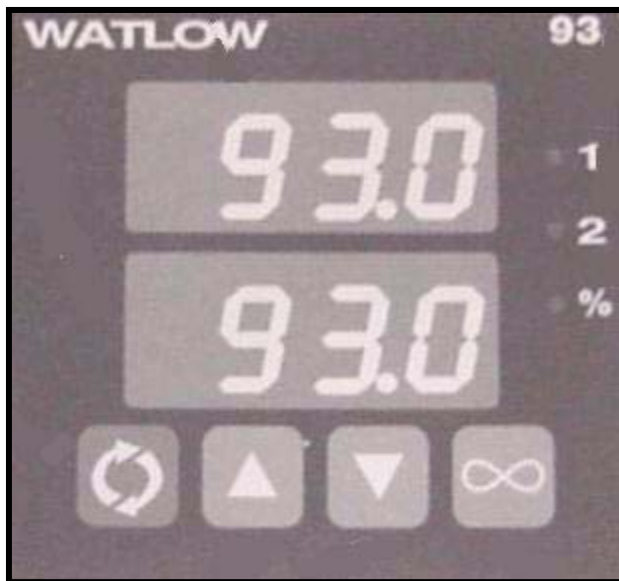
UP-ARROW AND DOWN ARROW KEYS: Increases or decreases the value of the displayed parameter.

- Press lightly to increase or decrease the value by one.
- Press and hold down to increase the displayed value at a rapid rate. New data will self-enter in five seconds or can be entered by pressing the Scrolling Key.
- Press both simultaneously for three seconds to enter the Set-up Menu. The **LOC** Lock parameter appears.

TO CHANGE POWER LEVEL

Enter the set-up menu by pressing the ▲ Up-arrow and ▼ Down-arrow keys simultaneously for 3 seconds. The lower display shows the **LOC** Lock parameter and the upper display shows its current level. All keys are inactive until you release both keys. You can reach the Lock parameter from anywhere.

Use the ⌚ Scrolling key to move through the menus until you see PL in Lower display and the ▲ Up-arrow and ▼ Down-arrow keys to select data (Factory set at 100%. Lower by 10 % and try again. If set too low, recycler might not bring solvent to boiling point). You will not see all parameters in this menu, depending on the controller's configuration and model number. After stepping through the menu, it returns to the set point parameter under the Operation Menu. If no keys are pressed for approximately 60 seconds, the controller returns to the default display. Process over Set Point.



* Parameter may not always appear.

Description of Operation

Step 1 - Open Lid

Step 2 - Install a new liner bag (It is recommended to change after each cycle)

Step 3 - Pour or transfer used solvent to Solvent Saver

Step 4 - Secure lid closing

Step 5 - Assure the capture vessel is in place and ground clamp is attached.

Step 6 - Start the unit

Step 7 - Solvent Saver will run the set cycle- Time & Temperature

Step 8 - Solvent Saver will automatically shut down when set time has been achieved

Step 9 - Let Solvent Saver cool down to a save temperature of 150 F or below.

Step 10 - Open lid and remove the Solvent Saver Bag dispose of properly.

Lid Removal

550 XPM

Lid plate is held in place by 8 clamps. To lift cover, completely pull back clamp handles.

Then:

1. Turn control valve on lift jack to a full clockwise. Rotation (See picture below).
2. Use the pump handle to lift the lid. When lid is clear of clamp handles, slowly move lid to the side to clear the tank opening.

Under normal operation conditions, the Over Temperature Light should never be « ON ». Should it light up, turn the cycle switch to the « OFF » position and leave the power switch to the « ON » position (the fan will keep running). When unit is cool to the touch, locate the cause of the problem before continuing the process. Consult the manual or call BECCA 1-800-655-5649



Installation of Solvent Saver Liner Bag

If using a liner bag, place the liner bag inside the wire basket and flip over the top ring the excess of the bag. Place assembly inside solvent tank **BELOW** the tank elbow. **BE SURE EXCESS LINER BAG MATERIAL DOES NOT BLOCK VAPOR PASSAGE OUT OF SOLVENT TANK.**



CAUTION !

If the liner bag were to prevent the vapors from escaping the boiling chamber through the elbow found in the boiling chamber, this would create a pressure build up and the lid, designed to act as a relief valve in these cases, would let the excess pressure and hot burning solvent escape from the lid possibly creating a situation where nearby operators could be injured (burned).

Should this ever happen, before approaching the unit in order to turn the cycle switch off, the operator must make absolutely sure he/she can turn the cycle switch off without being splashed with burning solvent. If this is not the case, the unit must be turned off using the circuit breaker (allowing him/her to keep away from solvent splash). **WARNING! : The unit must not be opened under any circumstance until the unit is cool to the touch.**

In this event, please check the following:

If the liner bag is properly installed so as to not cover up the elbow piping inside the boiling chamber:

- Make sure the condenser is not clogged up with residue of any kind by pushing air through the condenser system from the outside to the inside with the help of an air compressor.
- Make certain the drain tube is gradually sloping downwards so as to allow the solvent to freely flow down and out of the drain tube. Also make sure the end of the tube is not submerged inside the catch container.

Liner Bags

LINER BAG:

Liner bags can get damaged mainly in two different ways:

- a) Excessive temperature
- b) Excessive Use

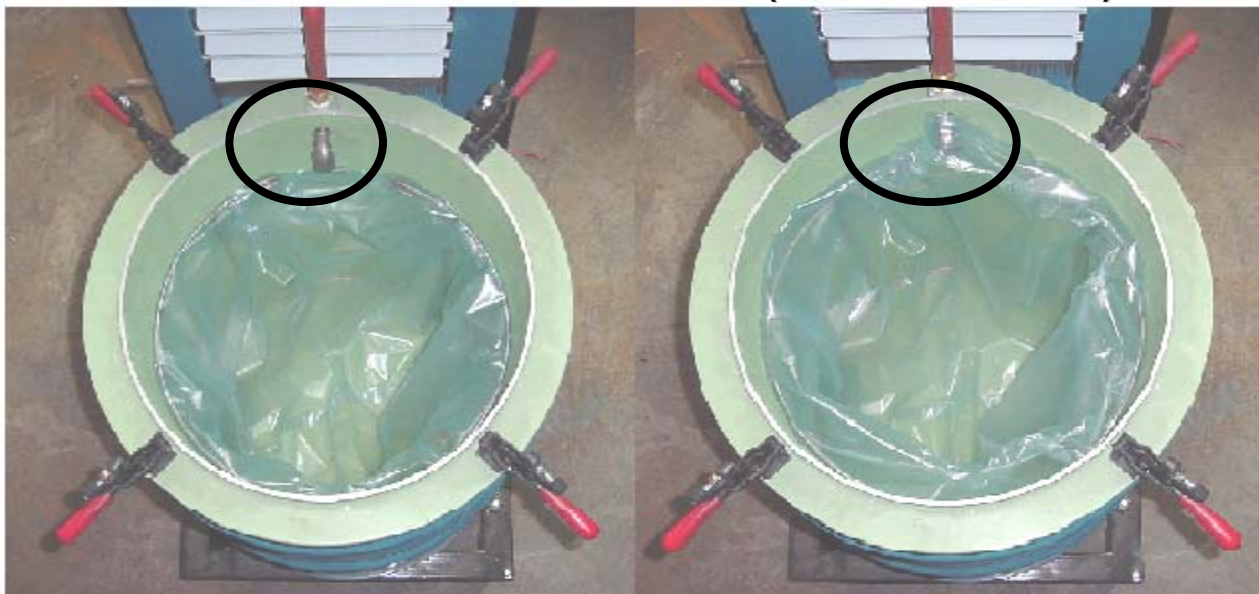
Liner bags are meant to be used once, however, should you be using low boiling products, you can try to re-use the same liner bag twice (at your discretion) if solid at the bottom of the bag is soft and very minimum ($\frac{1}{4}$ " (0.55 cm) - $\frac{1}{2}$ " (1.10 cm)).

- 1) Make certain the drain tube is gradually sloping downwards so as to allow the solvent to freely flow down and out of the drain tube. Also make sure the end of the tube is not submerged inside the catch container.



GOOD INSTALLATION

**BAD INSTALLATION
(BAG OVER ELBOW)**



POURING SOLVENT INTO TANK

MAXIMUM QUANTITY OF USED SOLVENT

MODEL

MAXIMUM DISTILLATION CAPACITY

550 XPM **

55 gallons (208 liters)

All measurements are U.S. measurements.

- Liquid must not be over the top ring of the basket, which is the maximum level of liquid (or 3 inches below the vapor exit.)
- A level rule is included with all recyclers. When hanged on the tank rim, the bottom part of the level indicates the maximal quantity to fill.

** For model 550XPM, do not overfill the basket.

Filling can be done manually with regulation of NFPA 77 or by a pumping system by adding dirty liquid inside the distiller tank. For all liquid transfer, container must be grounded.

Certain chemicals may expand with heat.

SECURE CLOSING OF LID

Make sure before closing the lid, that the rubber seal and tank edges are clean and free from any particles. Use a damp rag to clean every time you close the lid.

Put lid in place. **FEEL AROUND LID EDGES TO ENSURE THAT IT IS CENTERED ON THE TANK.** Close all of the clamps by lifting handles up. Be sure clamps are vertical and snapped in place properly.

Clamps are adjusted at the manufacturers and can't be modified by users.

DISTILLATION

TIME & TEMPERATURE SETTINGS

PRINCIPLE OF DISTILLATION

Distillation requires bringing a liquid to a vapor stage, collecting and condensing it back to a liquid.

TIME & TEMPERATURE SETTINGS – DESCRIPTION

Time and temperature are needed to obtain optimal results.

A) Set the temperature 50°F higher than boiling point. Refer to MSDS Sheets

B) Set time accordingly to the product and the volume.

- Model 550 XPM will take approximately 4 – 10 hours (for most solvents) per batch. Set time at 80 = 8 hours.

If at the end of a cycle, there is still is much liquid, increase the distillation time by 25% for the next batch. If set for 4 hours, then increase to 5 hours. **Never distil a product having an auto ignition point below 572°F (300°C).**

Timer:

The timer is related to the “Cycle ON” switch. Before starting a batch cycle, set the timer for the time required.

Once set, the dial will stay put. Even though 2 hours of distillation are requested, the dial will still indicate the time you had originally set. Only the memory inside the timer will remember the time left to go. When you turn the cycle switch to the “ON” position, the unit will remember the time set on the timer and will stop automatically at the end of the cycle. **When the cycle is engaged and the unit still running, you can't change the time unless you turn the cycle switch to the “OFF” position.** Timer has a minimum set time of 1 – 1.5 hour. So, the unit can't run automatically for less than that. This unit can operate manually for any length of time.

OPERATION

Before starting the unit, set the timer according to the first batch load of distillation. Allow for approximately 45 to 90 minutes to heat-up before distillation occurs. **UNDER NO CIRCUMSTANCES SHOULD YOU OPEN THE LID COVER WHILE UNDER OPERATION.**

Turn the power « OFF/ON » switch (located on control enclosure) to the « ON » position. This activates the condenser fan and supplies power to the microprocessor, timer and switches.

Turn the cycle switch to the « ON » position, the amber light will turn « ON ». The unit is now under heat.

Under normal operation conditions, the Over Temperature Light should never be « ON ». Should it light up, turn the cycle switch to the « OFF » position and leave the power switch to the « ON » position (the fan will keep running). When unit is cool to the touch, locate the cause of the problem before continuing the process. At this point, check the Trouble Shooting Guide or call BECCA at 1-800-655-5649

TERMINATION

AUTOMATIC

When the pre-set time is reached, the amber light will go « OFF » and the distillation will stop. The condenser fan will continue to operate and must be kept running for 1 hour after cycle light goes off.

***** NOTE *****

WAIT UNTIL THE LID IS COOL TO THE TOUCH BEFORE OPENING IT. THEN, TURN THE POWER SWITCH TO THE « OFF » POSITION. THIS WILL DE-ENERGIZE THE FAN MOTOR. YOU CAN NOW OPEN THE LID.

To remove the lid, pull the clamps straight back on until they are horizontal and remove the lid and clean per cleaning instructions of this manual. Clean tank after each use.

MANUAL

Turn the cycle switch to the « OFF » position, the amber light will go « OFF » and distillation will stop. The condenser fan will continue to operate.

***** NOTE *****

WAIT UNTIL THE LID IS COOL TO THE TOUCH BEFORE OPENING IT. TURN THE POWER SWITCH TO THE « OFF » POSITION. THIS WILL DE-ENERGIZE THE FAN MOTOR. YOU CAN NOW OPEN THE LID.

To remove the lid, pull the clamps straight back until they are horizontal and remove the lid and clean per cleaning instructions of this manual. Clean tank after each use.

RESTART

When the distillation cycle is ended, either manually or by Cycle Off Timer (automatically), it can be restarted by positioning the Cycle switch to the « ON » position.

In case of power failure, the unit will terminate its cycle and must be restarted manually. Set time according to the remaining volume of the liquid to be distilled (minimum 1.5 hour).

REMOVAL OF WASTE

At the end of a distillation cycle, the waste needs to be removed.

- a) Wait until the unit is cool to the touch.
- b) Remove the lid.
- c) If using a liner bag, remove it (with waste) and dispose of it according to regulations. If liner bags are not used, remove all solid and liquid waste and clean tank properly prior to the next distillation cycle. Sludge should be disposed of according to local safety regulations. **Note: It is recommended to use BECCA Liner Bags Part # 655055**

MAINTENANCE

CLEANING TANK

Clean the tank with a new damp cloth or rag after each use. Make sure that the inside of the elbow is free of dirt before starting a new batch.

***** NOTE *****

TANK IS TEFLON COATED. DO NOT SCRATCH WITH ABRASIVES OR METAL INSTRUMENTS. USE WOODEN TOOLS (INSTEAD OF PLASTIC) TO CLEAN OUT STILL BOTTOM IF NECESSARY.

* If teflon scrapes or peels off, this will not interfere with the performance of the unit.

SHOULD DISTILLED PRODUCT BE COLORED, INSPECT ELBOW AND CONDENSER TUBE TO MAKE SURE THERE IS NO WASTE OR DEBRIS THAT WILL BLOCK VAPOR TO GET INTO CONDENSER. MAKE SURE YOUR CHEMICAL IS COMPATIBLE WITH COPPER (IF USING A COPPER CONDENSER).

Keep the condenser coils and fins free of dirt and dust. Use an air hose attachment to clean between fins and coils.

WEEKLY INSPECTION & MAINTENANCE

- ◆ Visually check the lid gasket for any cuts, nicks, dirt, etc. Should the gasket show any sign of weakness, it should be replaced with an original gasket, immediately. Normal use of the unit will require that a gasket be changed once a year.
- ◆ Inspect condenser for excess dust, dirt, etc. and blow out inside and outside if necessary.

- ◆ It is recommended to keep maintenance records

MONTHLY MAINTENANCE

- ◆ Blow out condenser fins with compressed air.
- ◆ Blow out condenser from outside into the tube. Put air nozzle in outlet pipe and blow air.
- ◆ It is recommended to keep maintenance records

VACUUM OPERATION – 550 XPM

Safety Warning ! Safe vacuum operation :

A vacuum switch is installed behind recycler. The recycler will not heat if the vacuum in the tank is under 13 inches of mercury.

Note: Always reverse the pressure by opening the bleeder valve on top of the top of tank before opening the lid.

Monthly Maintenance

Make sure the outside of the condenser is also cleaned with a soft brush or air.
Assure boiler is clean
Lid seal is not damaged.

*** IMPORTANT**

MAKE SURE TO WEAR GLOVES AND GOGGLES.



Insert air gun in the exhaust pipe.



Cover with a rag, creating a seal around the pipe.

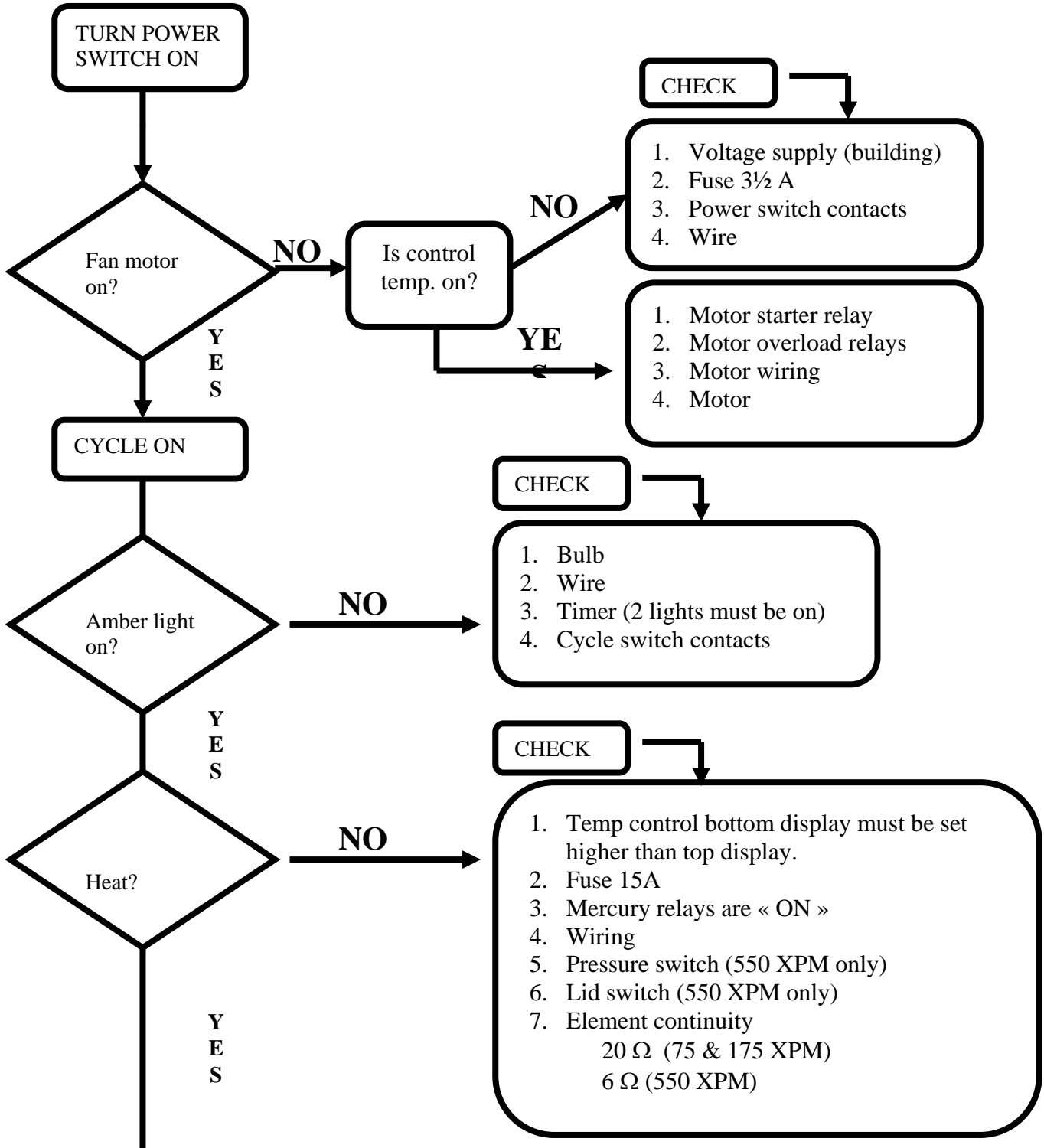


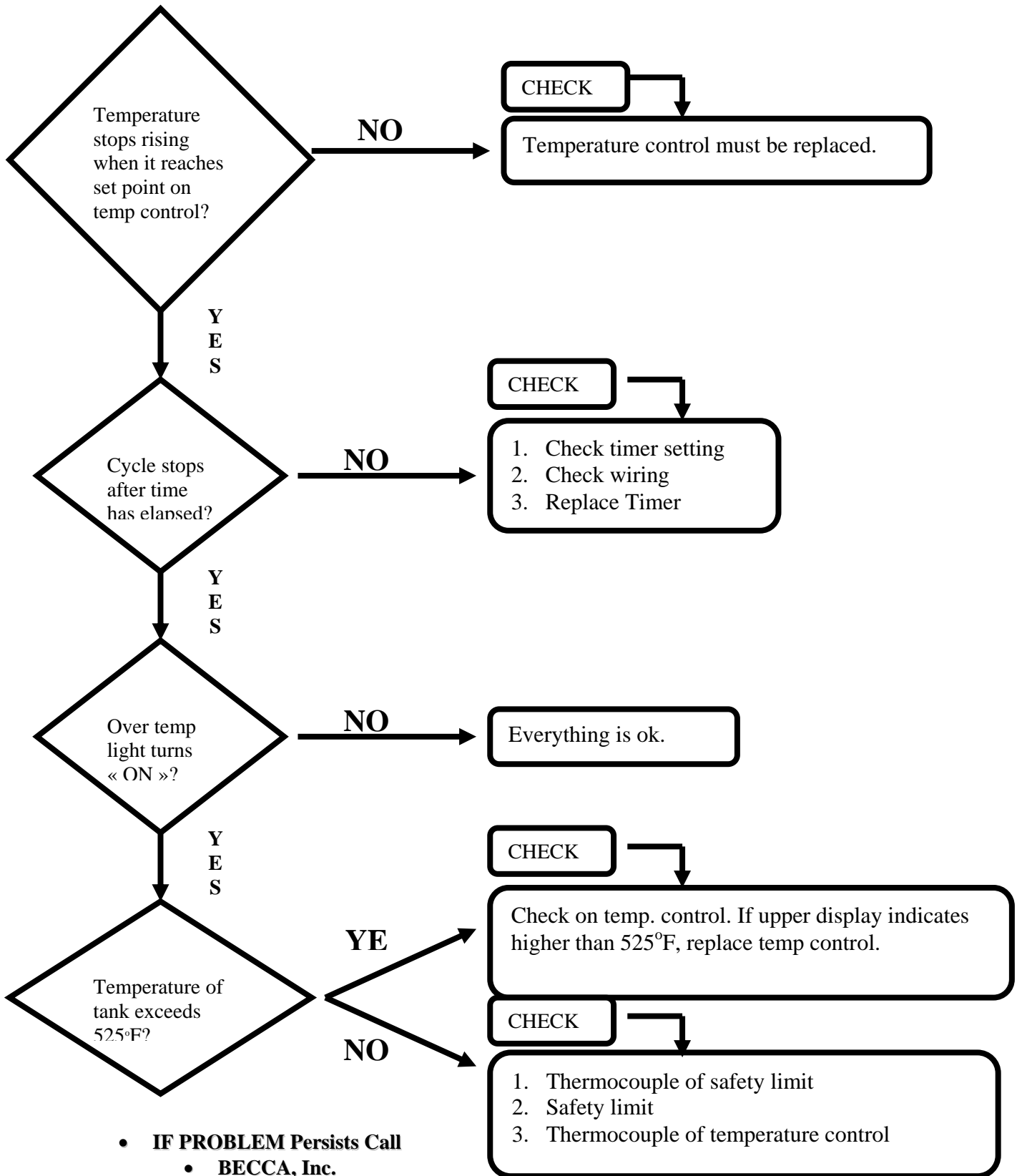
Blow air into the pipe until all objects (liquids & solids) have been ejected from the radiator.

Repeat operation above until you get a free flow of air inside the tank.

Trouble Shooting

THIS TEST SHOULD BE DONE WITH AN EMPTY RECYCLER.





- **IF PROBLEM Persists Call**
 - **BECCA, Inc.**
 - **1-800-655-5649**

SOLVENT BOILING DEGREES

SOLVENT	BOILING RANGE IN DEGREES		AUTO-IGNITION POINT IN DEGREES	
	<u>Celsius</u>	<u>Fahrenheit</u>	<u>Celsius</u>	<u>Fahrenheit</u>
ALIPHATICS				
150 FLUID	184-195	363-383	443	829
200 FLUID	235-278	446-532	484	903
TOLU-SOL 20	93.5-114.5	200-238	320	608
TOLU-SOL 30	91.5-113.5	197-236	500	932
ALIPHATICS & AROMATIC				
AROMATIC 150 SOLVENT	184-204	363-399	443	829
AROMATIC 200 SOLVENT	231-276	448-530	484	903
EXXSOL ISOPENTANE SOLVENT	28	82	399	750
HI-SOL 15	177-216	350-420	400	752
ISOPROPANOL 91%	80-81	176-178	399	750
METHYL CHLORIDE	12	25	632	1170
PCP SOLVENT	205	401	450	842
PCPL SOLVENT	200	392	450	842
SHELLSOL + A100	160	320	462	864
SHELLSOL + A200	233	451	450	842
TOLUENE	110-111	230-232	545	1013
XYLENE	139-141	282-286	500	932
ISOPARAFFINS				
ISOPAR C SOLVENT	98-104	208-219	399	750
ISOPAR E SOLVENT	118-137	244-279	382	720
ISOPAR H SOLVENT	178-188	352-370	349	660
ISOPAR K NAPHTHA	182-204	360-399	349	660
ISOPAR K SOLVENT	178-197	351-387	349	660
PARABASE	217	423	415	779
SHELLSOL + OMS	175	347	348	658
SHELLSOL + TC	98	208	417	783

SOLVENT	BOILING RANGE IN DEGREES		AUTO-IGNITION POINT IN DEGREES	
	<u>Celsius</u>	<u>Fahrenheit</u>	<u>Celsius</u>	<u>Fahrenheit</u>
ESTERS AND KETONES				
ACETONE	55-57	131-134.6	538	1000
DIBASIC ESTER	193-212	385-414	370	698
EXXATE 1000	220-250	428-482	300	572
EXXATE 1300	240-285	464-545	302	575
ISOPROPYL ACETATE	89	192	460	860
METHYL ETHYL KETONE	79-81	174-178	460	860
METHYL ISOBUTYL KETONE	114-117	237-243	443	829
N-BUTYL ACETATE (90-92%)	128	262	421	790
N-BUTYL ACETATE (99%)	126	259	421	790
N-PROPYL ACETATE (90-92%)	102	205	450	842
ISOBUTYL ACETATE	112-119	223-246	421	790
ETHYL ACETATE	71-79	160-174	426	799
ETHYL ACETATE (99%)	79-78	169-172	426	799
METHYL ACETATE	53-59	127-138	454	849
ISOPROPYL ACETATE	85-90	185-194	479	894
ALCOHOLS				
AMYL ALCOHOL	127-137	261-279	437	819
ISOBUTYL ALCOHOL	106-109	223-229	415	780
N-BUTYL ALCOHOL	116-119	242-247	343	649
SEC-BUTYL ALCOHOL	98-101	208-214	406	764
CYCLOHEXANOL	160-161	320-322	300	572
ETHANOL, ANHYDROUS	74-80	165-176	363	685
N-HEXANOL	151-159	304-319	290	554
ETHANOL 95%	74-79	166-175	363	685
ETHANOL, ANHYDROUS	75-81	171-176	363	685
ISOPROPANOL 99%	80-81	179-181	350	662
ISOPROPYL ALCOHOL	81-83	178-181	350	662
METHANOL	64-65	147-151	464	867
N-PROPANOL	96-98	207-208	399	750
SECONDARY BUTYL ALCOHOL	98-101	208-213	350	662
ISOPROPYL ALCOHOL, 91%	79-80	175-176	399	750
N-PROPYL ALCOHOL	96-98	204-208	412	774
ALKANOLAMINES				
DIETHANOLAMINE (DEA)	168-169	334-336	662	1224
MORPHOLINE	259-266	498-511	310	590

SOLVENT	BOILING RANGE IN DEGREES		AUTO-IGNITION POINT IN DEGREES	
	<u>Celsius</u>	<u>Fahrenheit</u>	<u>Celsius</u>	<u>Fahrenheit</u>
CHLORINATED				
METHYLENE CHLORIDE	40-41	104-106	640	1184
MONOCHLOROBENZENE	131-132	269-270	593	1099
TRICHLOROETHYLENE	87-88	188-190	420	788

COMMON SOLVENTS USED IN INDUSTRY

<u>INDUSTRY</u>	<u>COMMON SOLVENTS USED</u>	<u>PRODUCTS IN SOLVENTS</u>	
Auto Body Shop	Acrylic & Lacquer Thinner	<ul style="list-style-type: none"> ✦ Alcohol ✦ Butyl Acetate ✦ Ethyl Acetate ✦ Toluol (Aromatic Hydrocarbon) 	<ul style="list-style-type: none"> ✦ Methyl Ethyl Ketone ✦ Methyl Isobutyl Ketone ✦ Acetone
	Acrylic Enamel Reducer	<ul style="list-style-type: none"> ✦ Butyl Acetate ✦ Methyl Ethyl Ketone ✦ Toluol (Aromatic Hydrocarbon) 	<ul style="list-style-type: none"> ✦ Lacquer Diluent (Aliphatic) ✦ Methyl Isobutyl Ketone
	Enamel Reducers	<ul style="list-style-type: none"> ✦ Lacquer Diluent (Aliphatic) 	<ul style="list-style-type: none"> ✦ Toluol (Aromatic Hydrocarbon)
Commercial Printers	Press Wash	<ul style="list-style-type: none"> ✦ Methylene Chloride ✦ Toluene ✦ Naphtha 	<ul style="list-style-type: none"> ✦ Alcohol ✦ Methyl Ethyl Ketone
	Blanket Wash	<ul style="list-style-type: none"> ✦ Methylene Chloride 25% 	<ul style="list-style-type: none"> ✦ Naphtha
	Deglazing Solvent	<ul style="list-style-type: none"> ✦ Methylene Chloride 100% 	
Boat Builders (Fiberglas)		<ul style="list-style-type: none"> ✦ Acetone 	
Silk Screen Printers	Screen Cleaner	<ul style="list-style-type: none"> ✦ Acetone 	<ul style="list-style-type: none"> ✦ Methyl Ethyl Ketone
	Lacquer Thinner Enamel Reducer		
Furniture Refinishing	Paint Remover	<ul style="list-style-type: none"> ✦ Methylene Chloride 	
	Lacquer Thinner Enamel Reducer		
Manufacturing Paint Spray Shop	Lacquer Thinners Enamel Reducer		

Warning!

Nitro-Cellulose

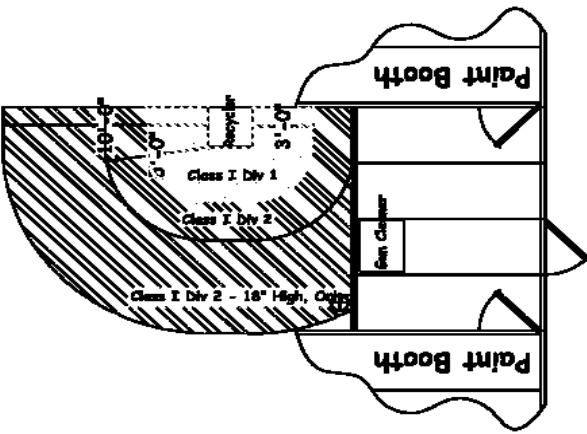
**BECCA units are CSA certified to UL 2008 STD and these Standards
Prohibit the use of Nitro-Cellulose**

For additional information contact BECCA Direct 1-800-655-5649

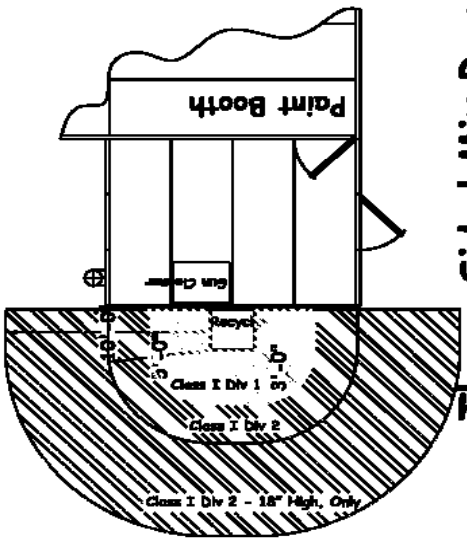
REVISION DESCRIPTION		DATE	BY/NO.
11/16/07 NEW			
1/8/08 Code & Equipment Certification			
9/10/08 Model Update & Project Identification			
GENERAL ARRANGEMENT		DATE	BY/NO.
11/27/09			



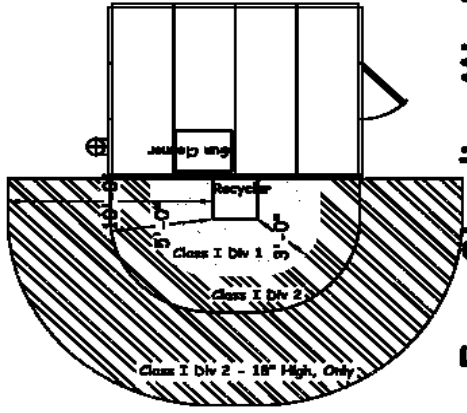
DESCRIPTION OF DRAWING	
Equipment Locations	
DRAWING NO.	BECCA-6A
SHEET NO.	1/2



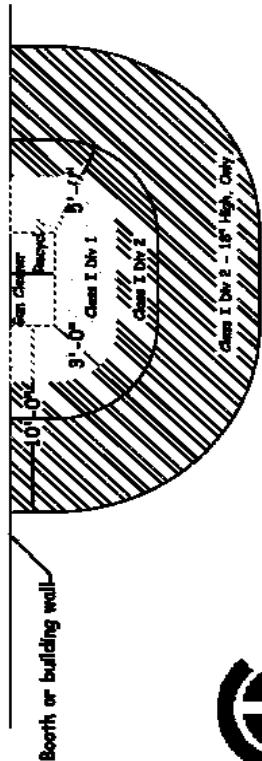
Intermediate Mix Room



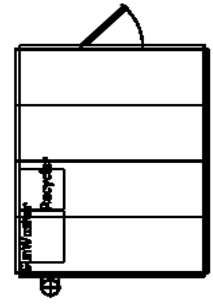
Three-Sided Mix Room



Free Standing Mix Room



Entire System Outside Mix Room



Entire System Inside Mix Room

Classification Zones are per:

- A) NFPA 33 Standard for Spray Application Using Flammable and Combustible Materials, Section 4.3.5
 - B) International Fire Code, Chapter 34 Flammable and Combustible Liquids 3403.1.1
- Zone requirements apply to both Gun Cleaners and Recyclers together and stand alone



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All Dimensions are approximate and subject to change without notice. See drawings for details and all dimensions to building foot contours.

DATA AND SPECS

Electrical Requirements

Amp Draw listed is for entire unit - including motor and heating element

Model	Full Load Amp Draw	Location
3-6000	220 Volt/ 50 Hz/ 1 Phase	Non-Classified Area
3-6000	4.5 Amps	For Mix Room/Classified Area
6-6000	10 Amps	- General Purpose - Disconnect - Minimum 6 ft. away from unit - Minimum 18 in. off the floor Equipment Power Disconnect Required
17.5-6000	13.8 Amps	
80-6000	80 Amps	

NOTE: 600V Control Cable C-L-X Type MC-HL for Hazardous Locations
Some jurisdictions may require hard conduit all the way to the unit

Air Requirements

Item	Air Line Specification	Notes
Air Cleaner	3/8" @ 110 PSI	Secondary regulator made with Factory set of 87-50 PSI

Oil

Model	Capacity	Description
3-6000	2 Gallons Oil	BECCA Thermal Heat Transfer Oil Part # 650006 (1 Gallon Container)
6-6000	9 Gallons Oil	

Recycler Bags

Model	Description
3-6000	BECCA Thermal Recycling Bags Part # 650003
6-6000	BECCA Thermal Recycling Bags Part # 649006
17.5-6000	BECCA Thermal Recycling Bags Part # 617017
80-6000	BECCA Thermal Recycling Bags Part # 649003

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DISCLAIMER NOTE: This print is an uncontrolled drawing of a BECCA product. It is not intended to be used for any other purpose or as a substitute for the original drawing or any other BECCA drawing.

Filters

Item	Model	Description
Air W/Filter	NEXT 70 NEXT 80	30" x 20" Fiberglass Filter

CODE INFORMATION

BECCA offers a complete line of spray gun cleaners and solvent recycler that conform to the requirements of:

- * NFPA-33 Standard for Spray Application Using Flammable and Combustible Materials
- * NFPA-30 Flammable and Combustible Liquids Code
- * IFC International Fire Code

The Recycler has been Certified and Listed:

- * UL 2208 Standard for Solvent Distillation Units



The Recycler has been reviewed and approved by:

- * CSA for U.S. & Canada Requirements Report # 1150926

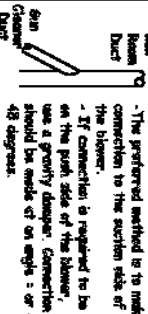
Conformance to all these requirements is dependent upon the manner in which the equipment is installed. The contractor will make certain that all of the electrical wiring and conduit, piping, gas supply, roof penetrations, atmospheric fire protection systems, and the location of the equipment within the building also conforms to the cited codes and other references.

EXHAUST INFORMATION

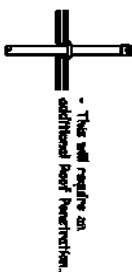
Model	Description	Preferred Exhaust Option	Notes
NEXT 30	4" Dia Exhaust	Separate Exhaust Stack (see below)	Exhaust must run straight out and vertical of the fan diameter
NEXT 70 H	6" Dia Exhaust	Attach to Mix Room Exhaust or Separate Exhaust Stack (SEE BELOW)	For approx. 3-4 feet before making any offsets

EXHAUST OPTIONS

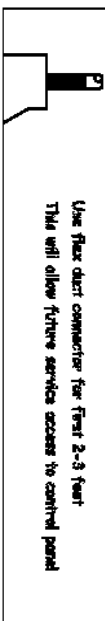
Attached to Mix Room Exhaust



Separate Exhaust Stack



EXHAUST FLEX CONNECTOR - NEXT 70/80 WORKSTATIONS



All dimensions are approximate and subject to change. Dimensions and other equipment may vary in labeling and all dimensions to industry standards.

Model and Specifications
 BECCA-6A
 2/2



NAME OF PROJECT:	REV:	DATE:	REVISION DESCRIPTION:	BY / NO:
GENERAL ARRANGEMENT	1	11/21/03	None	
DESIGN NO:	2	02/17/03	None & Exhaust Certification	
CHECKED BY:	3	04/02/03	Final Update & Safety Certification	
DATE:			Model Update 17.5 & 80 Gallon Units	
SCALE:				

WEEKLY INSPECTION OF YOUR BECCA SOLVENT SAVER™ SYSTEM

Date	Items to inspect	Conditions	Operator
	Check lid gasket for any cuts, nicks, etc.	Good <input type="checkbox"/> Fair <input type="checkbox"/> Needs replacement <input type="checkbox"/>	
	Condenser for excess dust, dirt, etc.	Clean <input type="checkbox"/> Needs air blow <input type="checkbox"/>	
	Ground wire	Good <input type="checkbox"/> Needs replacement <input type="checkbox"/>	
	Is the unit easily accessible	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Comments :			

Date	Items to inspect	Conditions	Operator
	Check lid gasket for any cuts, nicks, etc.	Good <input type="checkbox"/> Fair <input type="checkbox"/> Needs replacement <input type="checkbox"/>	
	Condenser for excess dust, dirt, etc.	Clean <input type="checkbox"/> Needs air blow <input type="checkbox"/>	
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	Is the unit easily accessible	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Comments :			

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	Is the unit easily accessible	Yes <input type="checkbox"/> No <input type="checkbox"/>	
Comments :			

Date	Items to inspect	Conditions	Operator
	Check lid gasket for any cuts, nicks, etc.	Good <input type="checkbox"/> Fair <input type="checkbox"/> Needs replacement <input type="checkbox"/>	

WARRANTY INFORMATION / TECHNICAL ASSISTANCE

The Warranty of your system begins with the Certified Start-up by your local BECCA Distributor. Make sure this is completed and you receive a copy of the Certified Start-up document.

For more information, prices or technical assistance,
contact your local BECCA distributor or call / fax our
BECCA Care™ Numbers:



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Kennesaw, GA 30152

Tel: (800) 655-5649

Fax: (800) 655-5684