BECCA®

Solvent Saver™ Recycler Systems

Operation and Maintenance Manual

17.5-Gallon Recycler

Approved to
UL2208 &
Class I Div 1

BECCA Inc.
2010 Cobb International Parkway
Kennesaw, GA 30153
Phone: 1-800-655-5649 Fax: 1-800-655-5649
Beccainc.com

Introduction

Dear Customer:

BECCA wishes to thank you for the purchase of your new BECCA 17.5-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
Fax: 1-800-655-5684
E-Mail: Sales@beccainc.com
Web Site: beccainc.com

MODEL DESIGNATION

MODEL #	UNPACK./WEIGHT & DIMENSIONS	PACK./WEIGHT & DIMENSIONS
175 XPM	300 lbs (136 kg) 56'' H x 41'' L x 23'' W (142cm H x 104cm L x 58cm W)	400 lbs (182 kg) 60'' H x 44'' L x 26''W (152cm H x 112cm L x 66cm W)

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.

MODEL #	DESIGNATION
175 XPM	BECCA = Solvent Saver™ System --- 175 = 17.5 US Gallons --- XP = Explosion Proof, Class 1, Div. 1 Group D Temp. Code T2 – 300°C --- M = Microprocessor Control

All Of the Above models are NEMA 7, CSA Approved and CSA certified to UL STD 2208 & Class I Div 1

BECCA®

SPECIFICATION FOR INDUSTRIAL 17.5 GALLON SOLVENT SAVER™ RECYCLERS

SPECIFICATIONS	*17.5 GALLON UNIT*	
	U.S. Units	Metric Units
Geometrical capacity of boiler	20 Gallons	76 Liters
Useful capacity of boiler	17.5 Gallons	66 Liters
Operating temperature	104º-450ºF	40º-232ºC
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	4.5 – 7.0 Hours (estimate)	
Yield	90% – 99%	
Cooling system	Fan Cooled	
Boiler material	Teflon Coated Aluminum	
Cover material	Stainless Steel	
Condenser material	Copper (standard) / Stainless steel (optional)	
Voltage	220-240V – 1 ph	
Absorbed power	3000 W	
Amperage	13.5 amps	
Dimensions inches (cm)	24" (61) width x 40" (102)depth x 62" (155) height	
Weight	400 Lbs.	182 Kg
Groundable Collection Container	1 (not included)	
Warranty	12 months	

SAFETY

Operate the Solvent Recovery 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:

Goggles 

Protective Clothing 

Gloves 

Respirator 

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 the operation of the 17.5 BECCA Solvent Saver™ Unit.

WARNING LABELS

On lid

On Control Box

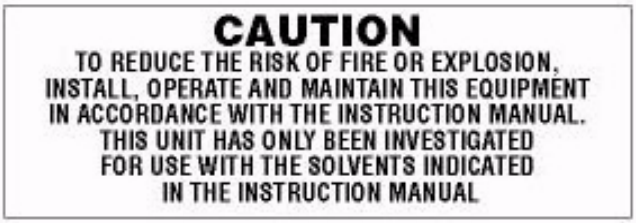
On Control Box

On Lid

On Lid

On Lid

On Tank



On Identification Plate on Condenser

On Identification Plate on Condenser

Optional Crane Boom

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 50 °F - 100°F environment with no forced ventilation.

Under these conditions, the unit shall be spaced a minimum 5-feet from potential sources of ignition such as electrical receptacles, switches, pilot lights, fixtures, contacts and other similar equipment that can produce sparks. If equipment is used in higher ambient temperatures increase in spacing to sources of ignition shall be considered. This unit has been investigated for use with solvents indicated in this instruction manual.

Label on 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

	BECCA 17.5
WATTS	3000
VOLTAGE	220 – 240*
AMPS	13.5
CYCLE/HERTZ	60
PHASE	1
MAXIMUM BRANCH CIRCUIT	20A

* Note: The BECCA 17.5 Gal unit can also operate on 208 V, 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 The BECCA 17.5 Gal Solvent Saver Shall be installed in accordance with dangerous from local electric code.**

The Electrical installation 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

Recycler 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).

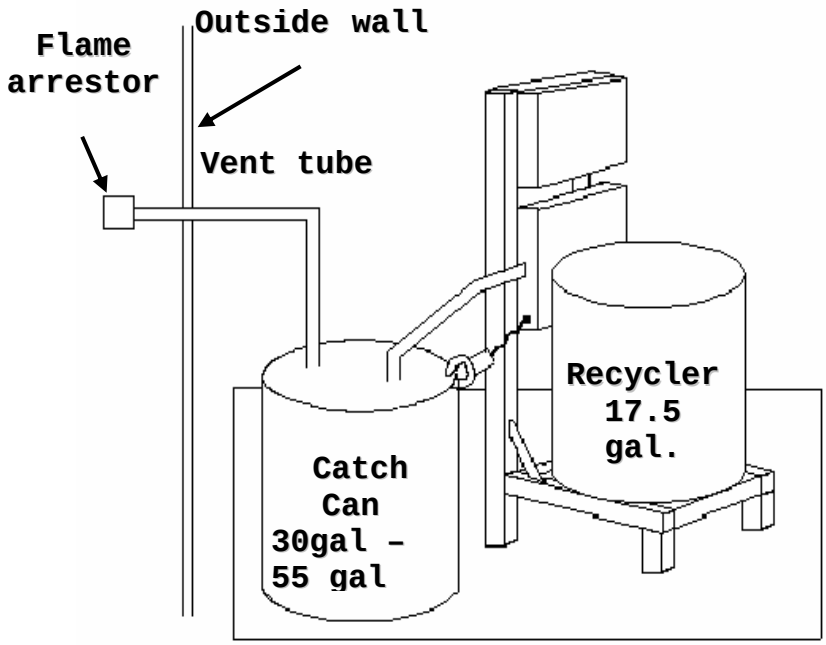
Should this ever happen, before approaching the unit in order to turn the cycle switch off, the operator must make absolutely sure he/she can turn the cycle switch off without being splashed with burning solvent. If this is not the case, the unit must be turned off using the circuit breaker (allowing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

COLLECTION CONTAINER

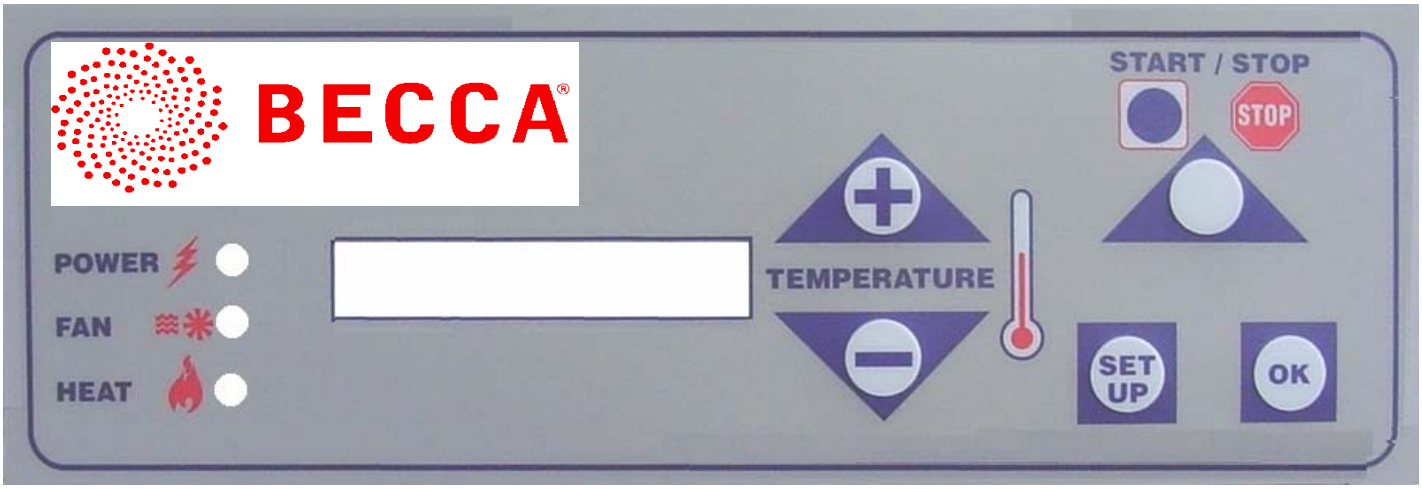
Containers for collecting the distilled solvent and waste products shall be:

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

(D) The containers must be closed and have a vent tube to evacuate vapors.
The type of liquid containers **MUST** be in accordance with NFPA 30.



BECCA 17.5 Gallon
Control Panel



CONTROL BOX DESCRIPTION

LUMINOUS INDICATOR

POWER: Shows that the unit is supplied with electricity.

FAN: Shows that the fan is on.

HEAT: Shows that the heating element is on.

COMMUTATOR

SET UP : Scroll down the program menu: Timer, Temperature and Power

+-: Adjust the set point: Timer 2 to 10 hours
Temperature 50-400 F
Power 10 to 100% (10% at a time)

OK: Save in the unit's memory the timing, temperature & power.

DISPLAY

Display the function in process.

DESCRIPTION OF COMPONENTS

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.

THE FAN BLADE

The fan blades are spark proof.

THE FAN MOTOR

The fan's motor is certified Class I, Div. 1 and is equipped with a heat engine protection and is also protected against power surcharge.

DESCRIPTION OF OPERATION

Step 1- Unit HAS BEEN PROPERLY LOCATED AND INSTALLED BY A CERTIFIED ELECTRICIAN.

STEP 2 – Lid opening (See page 15)

STEP 3 – Installation of liner bag (See page 15)

STEP 4 – Adding solvent into tank (See page 18)

STEP 5 – Secure closing of lid (See page 18)

STEP 6 – Distillation – Time & temperature settings (See page 19)

STEP 7 – Operation (See page 20)

STEP 8 – Termination (See page 22)

STEP 9 – Restart (See page 23)

STEP 10 – Removal of waste (See page 23)

STEP 11 - Maintenance (See page 23)

STEP 2 – LID OPENING

Model BECCA Solvent Saver 17.5

Lid is held in place by clamps. To open completely, pull back clamp handles and remove lid.

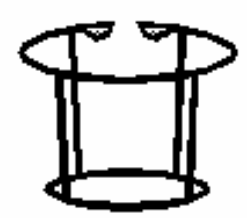
Under normal operation conditions, the Over Temperature Light should never be « ON ». Should it light up, turn the cycle switch to the « OFF » position and leave the power switch to the « ON » position (the fan will keep running). When unit is cool to the touch, locate the cause of the problem before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

Model 17.5 has 4 clamps.

STEP 3 – INSTALLATION OF LINER BAG

*** * * LOCATE THE UNIT IN THE APPROVED WELL-VENTILATED AREA * * ***

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). **Important!:** The unit must not be opened under any circumstance until the unit is cool to the touch.

STEP 3 – INSTALLATION OF LINER BAG

In this event, please check the following:

1) If the liner bag is properly installed so as to not cover up the elbow piping inside the boiling chamber.
2) 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.
3) 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 bag :

Liner bags can get damaged mainly in two different ways:

a) Excessive temperature b) Multiple Cycles

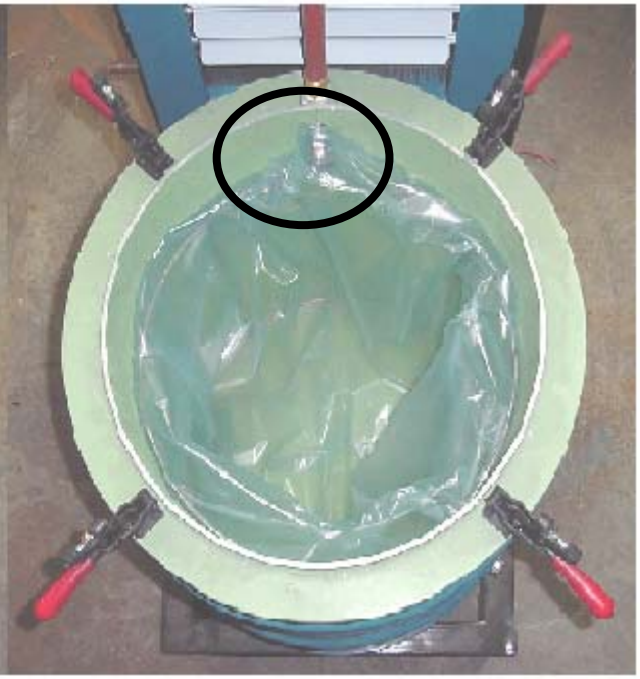
Liner bags are meant to be used once, however, should you be using low boiling products, you can try to re-use the same liner bag twice (at your discretion) if solid at the bottom of the bag is soft and very minimum 1/4”(0.55cm) – 1/2“(1.10 cm).

- * Certain chemical mixes and high temperature can occasionally split open or melt bags.

INSTALLATION OF LINER BAG

GOOD INSTALLATION

BAD INSTALLATION
(BAG OVER ELBOW)



STEP 4 – ADDING SOLVENT INTO TANK

MAXIMUM QUANTITY OF USED SOLVENT

MODEL	MAXIMUM DISTILLATION CAPACITY
BECCA 17.5 *	17.5 gallons (66 l)

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.)

Filling can be done manually following NFPA 77 requirements 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.

STEP 5 – SECURE CLOSING OF LID

Make sure before closing the lid, that the rubber sealing 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.

STEP 6 – DISTILLATION
TIME & TEMPERATURE SETTINGS

PRINCIPLE OF DISTILLATION
Distillation consists of 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 at least 50^{o}F higher than boiling point.

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

- BECCA Solvent Saver 17.5 will take approximately 3.5 – 5 hours (for most solvents) per batch.

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

C) Power adjustment
- The power is set at the factory at 100%. At the beginning of the distillation, the liquid must be cold when going out of the condenser. If the liquid is hot, the power of the element must be adjusted downwards. Lower the power by 10 degrees at the time and check to see if liquid is cold. When it becomes cold, the power is properly adjusted.

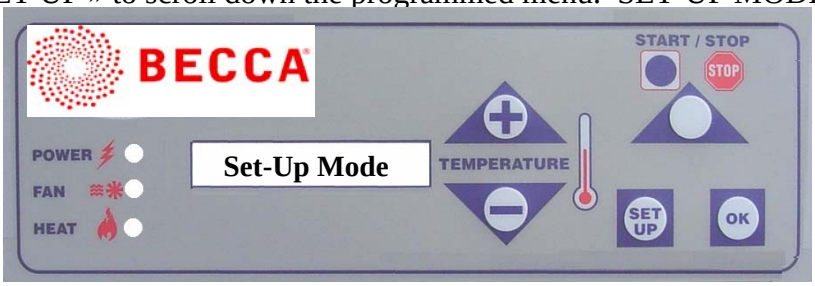
Timer:
The timer is related to the “Cycle ON’’ switch. Before starting a batch cycle, set the timer for the time required.

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 is 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.

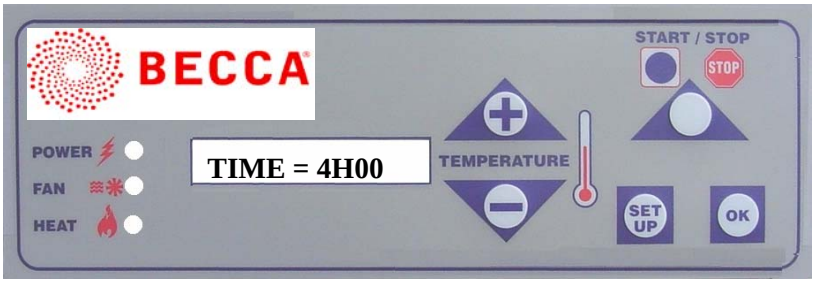
STEP 7 – OPERATION

1. Switch on the unit. The luminous indicator «POWER» will appear and will remain until the unit is off. A short beep will be heard. The display will show « UNIT READY »

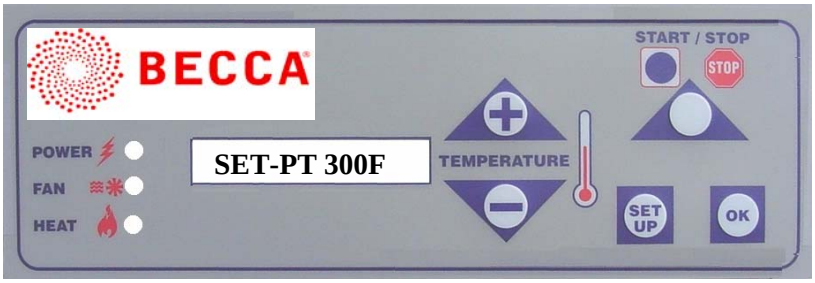
2. Press on « SET UP » to scroll down the programmed menu. SET-UP MODE will appear.



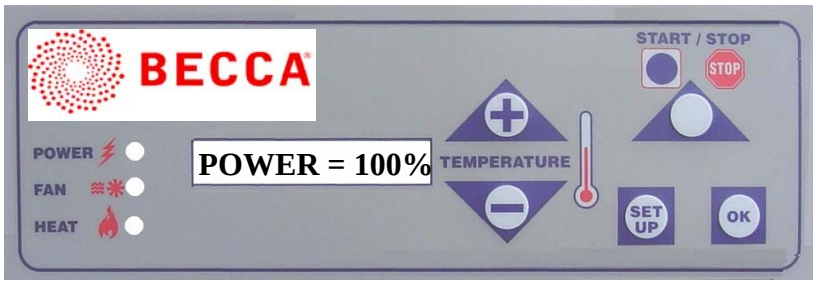
3. Press on « SET-UP » to scroll down the menu. TIME = 4 H 00 will appear. This value can be changed by using the + or - keys. Adjustable from 1 to 10 hours. Once the value has been chosen, press on OK to save your selection. A long « beep » will be heard.



4. Press on « SET UP » to scroll down the menu. SET-PT 300^{o}F will appear. This value can be changed by using the + or -keys. Adjustable from 50 to 400^{o}F. Once the value has been chosen, press on OK to save your selection. A long « beep » will be heard.

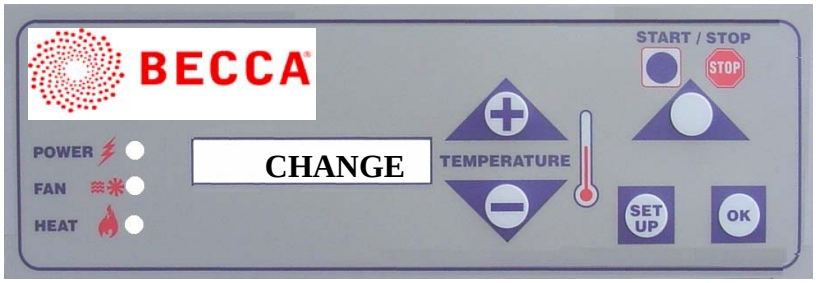


5. Press on « SET UP » to scroll down the menu. « POWER = 100 %» appear. This value can be changed by using the + or - keys. Adjustable from 10 to 100%. Once the value has been chosen, press on OK to save your selection. A long beep will be heard.
   The power and temperature values will be kept in memory even if unit is shutdown.

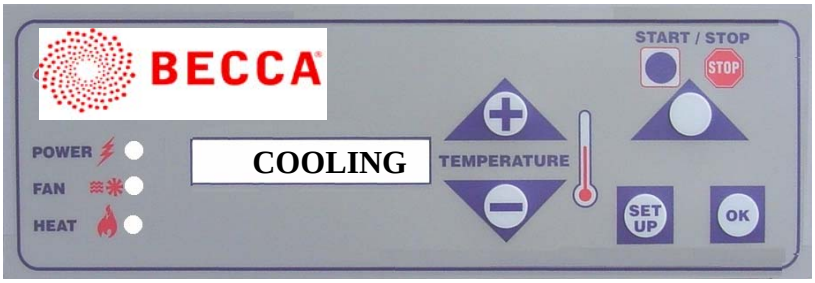


6. When all values has been chosen, UNIT READY is showing on display, that the product to distilled is in the unit, that the cover is properly closed and the temperature, power and timer are adjusted, press on START. A short « beep » will be heard. The indicator « FAN » and « HEAT » will light up, the fan and the heat will start to operate. The display will show successively:

a) Time left for the distillation 4H00, 3h59, 3h58…
b) Current temperature of unit 80°F and more.
c) Set point temperature (300°F)



7. When the time is done, the HEAT indicator light will go off and COOLING will appear.



STEP 8 – 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 as per 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 the 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 then remove the lid and clean as per instructions of this manual. Clean tank after each use.

POWER FAILURE

DO NOT TOUCH THE UNIT, WAIT UNTIL THE POWER COMES BACK.

Power failure less than 5 seconds: The display will show « RESET OCCURED » and the fan will be functioning for 1 hour if the temperature exceed 123 F.
Power failure more than 5 seconds: If the temperature doesn’t exceed 123°F the display will show « UNIT READY ». If it exceed 123°F the display will show « COOLING » and the fan will be functioning for 1 hour.

STEP 9 – RESTART

When the distillation cycle is ended, either manually or by Cycle OFF Timer (automatically), it can be restarted by pressing on the « start »key.

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).

STEP 10 – 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. BECCA does recommend the use of liner bags. Sludge shall be treated as a hazardous waste. Note: It is recommended to use BECCA Liner Bags Part # 617017

STEP 11 – 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 * * ***

THE 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.

STEP 11 – MAINTENANCE (continued)

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.

- Fill in weekly reports (see end of manual).

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.
- Fill in monthly reports (see end of manual).

MONTHLY MAINTENANCE

*** 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

ERROR MESSAGES

CHK COND. SENSOR → Appears when the condenser thermocouple is disconnected or defective.

CHK TANK SENSOR → Appears when the tank thermocouple is disconnected or defective.

CHECK HEATER → Appears 10 minutes after the cycle has started if the temperature of the tank did not increase by 20°F or more.

Check on the element wire

1. Open the XP Box
2. Unplugged the wires 1 & 2 and check the continuity of these 2 wires and the reading should be 20 Ω

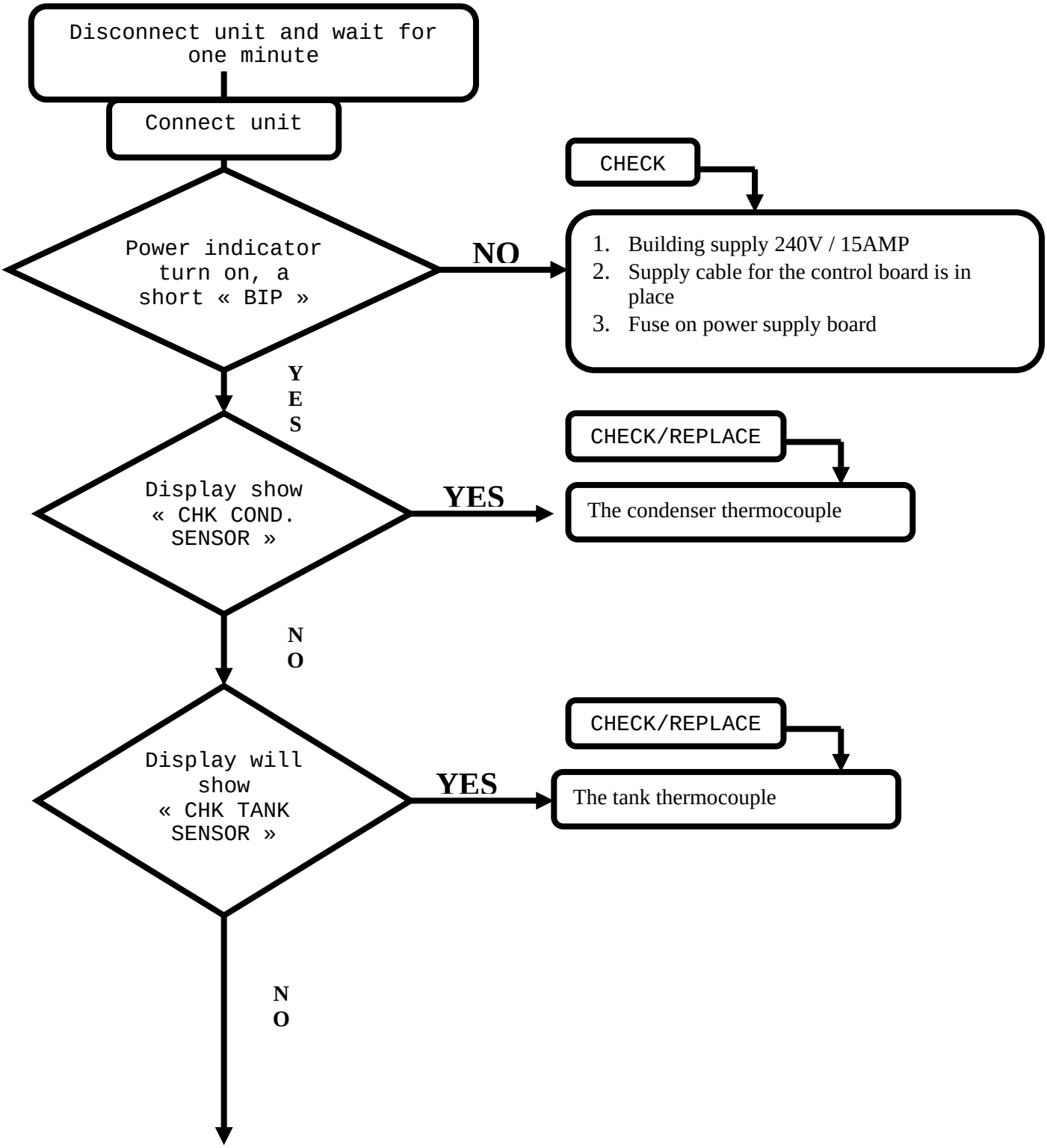
OUTLET TOO HOT → Appears when the temperature of the clean solvent going out of the condenser exceeds 40°C for more than 30 seconds.

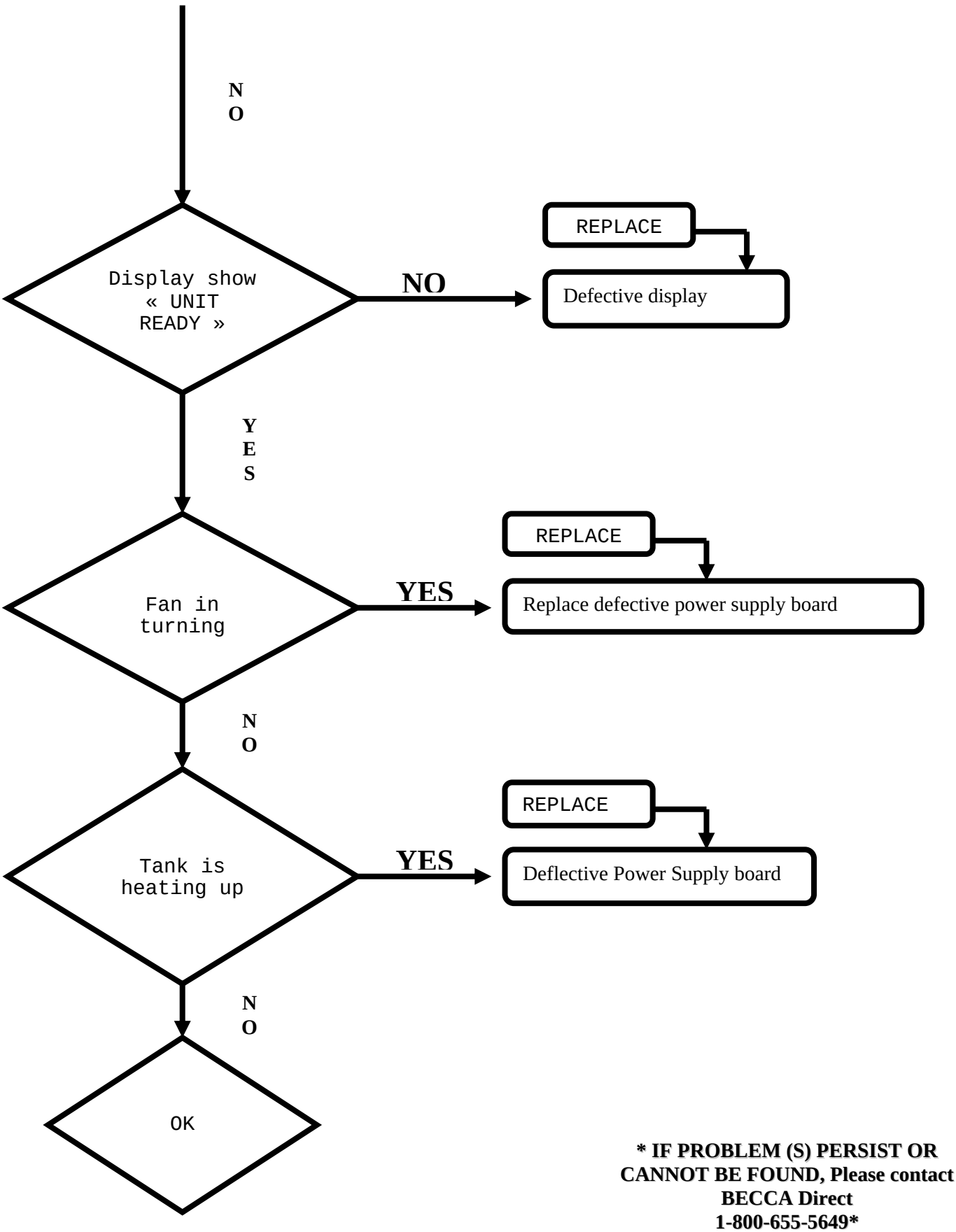
1. Is the fan on function?
2. Are the condensers fins clean?
3. Lower down the element power by 10%?

RESET OCCURED → Appears when the current is out for less than 5 seconds.

TROUBLE SHOOTING

THIS TEST MUST BE DONE WHEN THE RECYCLER IS EMPTY AND COLD





*** IF PROBLEM (S) PERSIST OR CANNOT BE FOUND, Please contact BECCA Direct 1-800-655-5649***

SOLVENT BOILING DEGREES

SOLVENT	BOILING RANGE IN DEGREES		AUTO-IGNITION POINT IN DEGREES	
	Celsius	Fahrenheit	Celsius	Fahrenheit
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	
	Celsius	Fahrenheit	Celsius	Fahrenheit
ESTERS ANS 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

	Celsius	Fahrenheit	Celsius	Fahrenheit
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

INDUSTRY	COMMON SOLVENTS USED	PRODUCTS IN SOLVENTS	
Auto Body Shop	Acrylic & Lacquer Thinner	✦ Alcohol	✦ Methyl Ethyl Ketone
		✦ Butyl Acetate	✦ Methyl Isobutyl Ketone
		✦ Ethyl Acetate	✦ Acetone
		✦ Toluol (Aromatic Hydrocarbon)	
	Acrylic Enamel Reducer	✦ Butyl Acetate	✦ Lacquer Diluent (Aliphatic)
		✦ Methyl Ethyl Ketone	✦ Methyl Isobutyl Ketone
		✦ Toluol (Aromatic Hydrocarbon)	
	Enamel Reducers	✦ Lacquer Diluent (Aliphatic)	✦ Toluol (Aromatic Hydrocarbon)
Commercial Printers	Press Wash	✦ Methylene Chloride	✦ Alcohol
		✦ Toluene	✦ Methyl Ethyl Ketone
		✦ Naphtha	
	Blanket Wash	✦ Methylene Chloride 25%	✦ Naphtha
	Deglazing Solvent	✦ Methylene Chloride 100%	
Boat Builders (Fiberglas)		✦ Acetone	
Silk Screen Printers	Screen Cleaner	✦ Acetone	✦ Methyl Ethyl Ketone
	Lacquer Thinner Enamel Reducer		
Furniture Refinishing	Paint Remover	✦ Methylene Chloride	
	Lacquer Thinner Enamel Reducer		
Manufacturing Paint Spray Shop	Lacquer Thinners Enamel Reducer		

Warning!

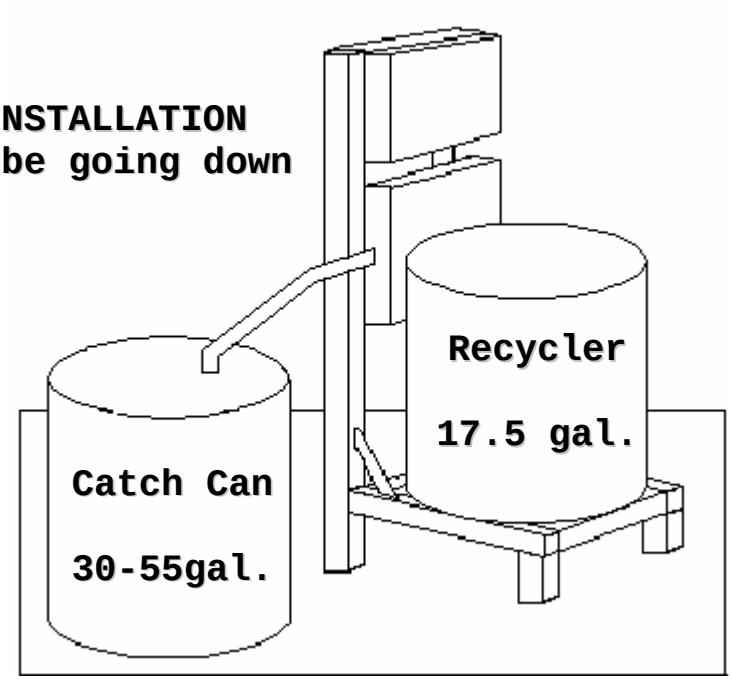
Nitro-Cellulose

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

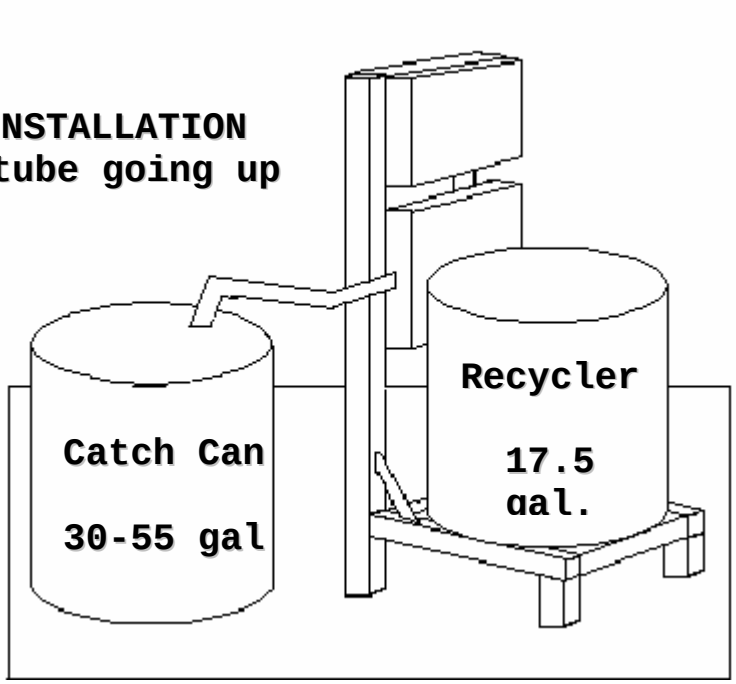
For additional information contact BECCA Direct 1-800-655-5649

GOOD & BAD INSTALLATION OF THE DRAIN TUBE

GOOD INSTALLATION
Drain tube going down

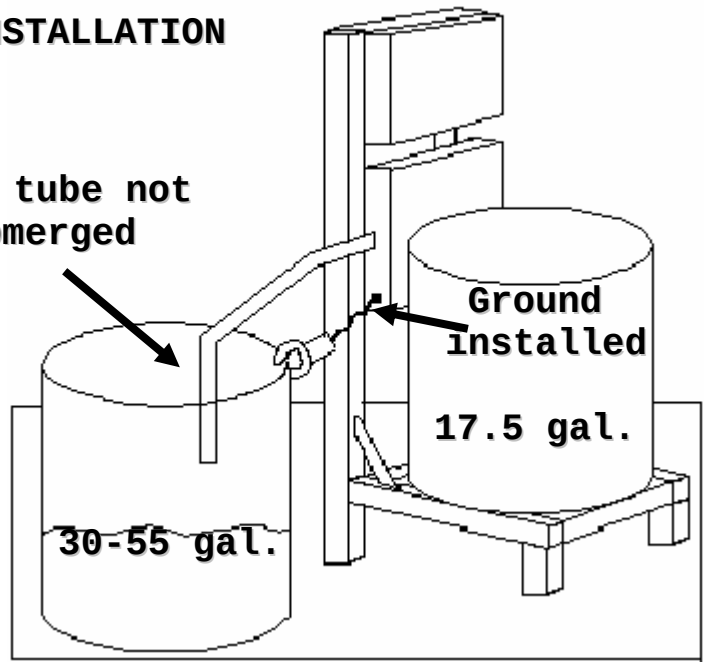


BAD INSTALLATION
Drain tube going up

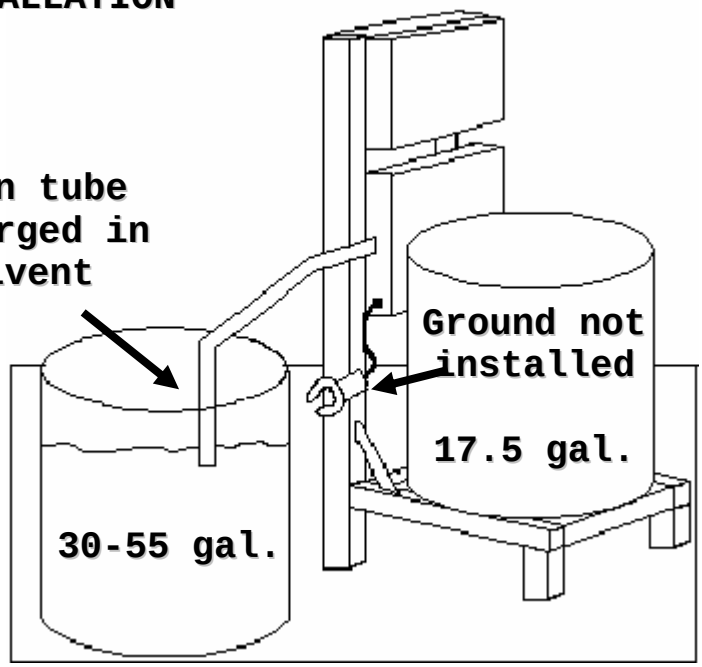


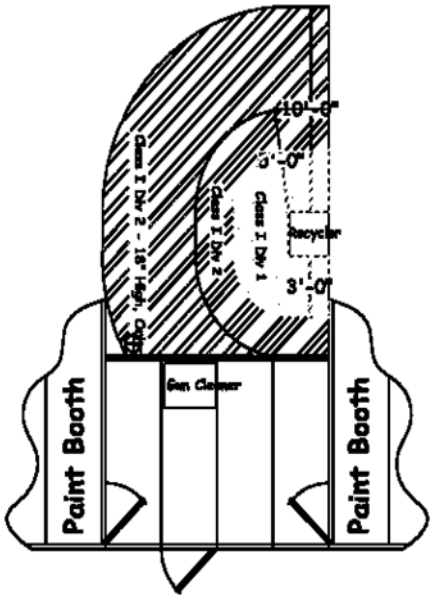
GOOD & BAD INSTALLATION OF DRAIN TUBE & GROUND WIRE

GOOD INSTALLATION

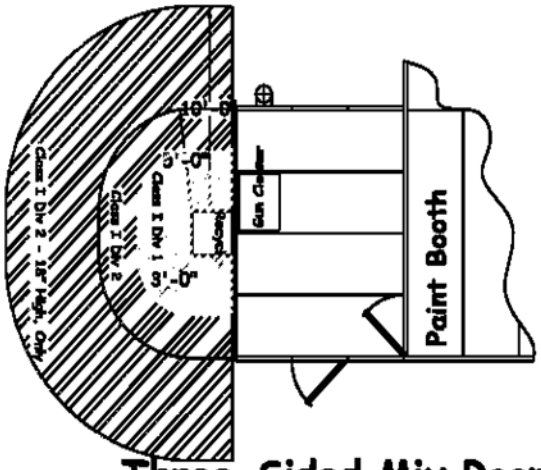


BAD INSTALLATION

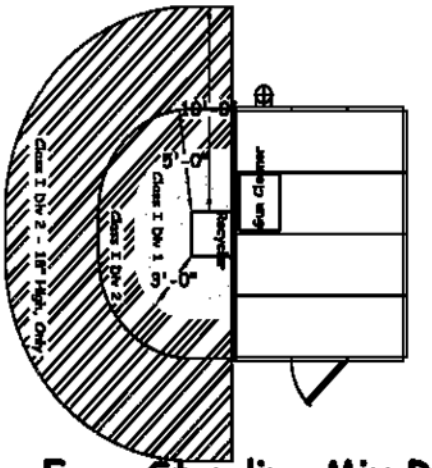




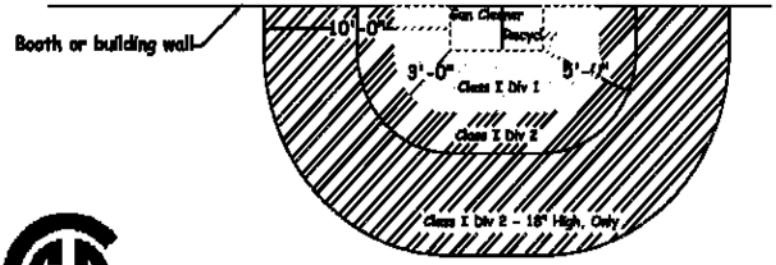
Intermediate Mix Room



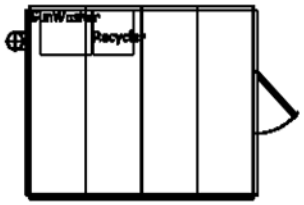
Three-Sided Mix Room



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

All Dimensions are approximate and subject to change. Customer must check equipment size, location in building and all clearances to building and coolants.

BECCA

NAME OF PROJECT:

GENERAL ARRANGEMENT

DRAWN BY: DESIGNED BY: DATE: 11/7/2003 SCALE:

REV:	DATE:	REVISION DESCRIPTION:	BY/AS
1	11/7/03	Code & Exhaust Certification	
2	9/10/04	Model Update & Exhaust Clarification	

DESCRIPTION OF DRAWING: Equipment Locations

DRAWING NO:	SHEET NO:	REV:
BECCA-GA	1/2	

DATA AND SPECS

Electrical Requirements

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

Model	Full Load Amp Draw 220 Volt/ 60 Hz/ 1 Phase	Location	
		Non-Classified Area	In Mix Room/Classified Area
3-Gallon	4.5 Amps	- General Purpose Disconnect - Minimum 6 ft. away from unit - Minimum 18 in. off the floor	Explosion Proof Disconnect Required
6-Gallon	10 Amps		
17.5-Gallon	13.5 Amps		
55-Gallon	60 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
Gun Cleaner	3/8" @ 110 PSI	Secondary regulator inside unit Factory set at 85-90 PSI

Oil

Model	Capacity	Description
3-Gallon	2 Gallons Oil	BECCA Thermic Heat Transfer Oil Part # 630086 (1 Gallon Container)
6-Gallon	5 Gallons Oil	

Recycler Bags

Model	Description
3-Gallon	BECCA Thermal Recycling Bags Part # 630003
6-Gallon	BECCA Thermal Recycling Bags Part # 660006
17.5-Gallon	BECCA Thermal Recycling Bags Part # 617017
55-Gallon	BECCA Thermal Recycling Bags Part # 655055

Filters

Item	Models	Description
Gun Washer	NEXT 70 NEXT 80	20" x 20" Fiberglass Filter

CODE INFORMATION

BECCA offers a complete line of spray gun cleaners and solvent recyclers 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, automatic fire protection systems, and the location of the equipment within the building also conforms to the cited codes and other references.

EXHAUST INFORMATION

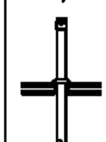
Model	Description	Preferred Exhaust Option	Notes
NEXT 30 NEXT 30 H	4" Dia Exhaust	Separate Exhaust Stack (see below)	Exhaust must run straight out and vertical of the Gun Cleaner for approx. 3-4 feet before making any offsets
NEXT 70 NEXT 70 H NEXT 80 NEXT 80 H	6" Dia Exhaust	Attach to Mix Room Exhaust or Separate Exhaust Stack (see below)	

EXHAUST OPTIONS

Attached to Mix Room Exhaust

- The preferred method is to make connection to the suction side of the blower.
- If connection is required to be on the push side of the blower, use a gravity damper. Connection should be made at an angle = or > 45 degrees.

Separate Exhaust Stack



- This will require an additional Roof Penetration.

EXHAUST FLEX CONNECTOR - NEXT 70/80 WORKSTATIONS

Use flex duct connector for first 2-3 feet

This will allow future service access to control panel

All Dimensions are approximate and subject to change. Customer must check equipment size, location in building and all clearances to building and contents.

REV:	DATE:	REVISION DESCRIPTION:	BY / NO:
	11/18/05	NEW	
1	1/8/08	Code & Exhaust Clarification	
2	5/10/08	Model Update & Exhaust Clarification	
3	4/6/07	Model Update 17.5 & 55 Gallon Units	

BECCA

NAME OF PROJECT: GENERAL ARRANGEMENT

DRAWN BY: [illegible] | CHECKED BY: | DATE: 11/18/01 | SCALE:

DESCRIPTION OF DRAWING: Data and Specifications

DRAWING NO: BECCA-6A | SHEET NO: 2/2 | REV:

WEEKLY INSPECTION OF YOUR BECCA SOLVENT SAVER™ SYSTEM

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

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

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	Is the unit easily accessible	Yes ☐ No ☐	
Comments :			

Date	Items to inspect	Conditions	Operator
	Check lid gasket for any cuts, nicks, etc.	Good ☐ Fair ☐ Needs replacement ☐	

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:

2010 Cobb International Blvd Ste H
Kennesaw, GA 30152

Tel: (800) 655-5649 Fax: (800) 655-5684