



USER MANUAL

URS2000 SERIES



UNI-RAM CORPORATION • ONTARIO • CANADA

Revision 2007-09A

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INTRODUCTION

Uni-ram holds many patents on designs used in its innovative products. Every machine is tested for compliance with Quality Assurance standards. Follow the instructions on preparation, use and operation to operate this machine safely and effectively. Ensure that this manual is readily available to the operator at all times. If you have any questions about the operation of this machine, contact:

North America:
Uni-ram Technical Service
1-800-417- 9133
Other Continents:
Contact Your Supplier

SAFETY APPROVALS

This unit is certified under UL standards U2208 and CSA standards C22.2 No. 30 and No. 88 by ETL for use in non-hazardous locations as well as for use in hazardous locations Class 1, Division 1, Group D – T2C and and Class 1, Division 2, Group D -T2C.



CAUTIONS AND WARNINGS

- Wear protective clothing according to local safety and environmental regulations, with a minimum of face goggles, gloves and mask.
- Disconnect from the power source before performing maintenance.
- DO NOT SMOKE OR USE THIS EQUIPMENT NEAR A POTENTIAL SOURCE OF IGNITION SUCH AS SPARKS OR AN OPEN FLAME. This unit must be located at least 15 feet (4.6 m) from all potential sources of ignition including electrical receptacles, switches, pilot lights, fixtures and contacts when installed in non - hazardous locations.
- The ambient temperature must be between 5°C (41°F) and 35°C (95°F).
- Do not distill solvents which may contain Nitrocellulose or any other unstable components.
- Do not distill solvents with an Ignition Temperature lower than 250°C (482°F).
- Do not install, operate or maintain this unit in a location where the Ignition Temperature of the hazardous atmosphere(s) is lower than 250°C (482°F).
- Solvents that are recycled can be flammable. Establish and follow safe practices to store and handle solvents. Such safety procedures will result in safely contained solvents free from spillage.
- Units must be installed by a qualified electrician.
- Install on a dedicated circuit with sufficient current capacity (see specifications section).

FEATURES AND SPECIFICATIONS

All Uni-ram Solvent Recyclers feature **rapid-start** direct electric heating of solvent (so there is no diathermic oil to change) as well as high-efficiency condensers, air cooled with a motor driven fan. All of the Recyclers can be used with any Uni-ram Automatic Apray Gun Cleaner. The "E" models are designed to be linked directly to a Uni-ram "E" series Automatic Spray Gun Cleaner or to an external container. The direct connection creates a self-contained Recycling System allowing Timer-controlled Transfer In and Out between the Solvent Recycler and the other component.

MODEL	URS2000	URS2000PW
VOLTAGE (V)	220/240	220/240
RECOMMENDED CIRCUIT AMPS	20	20
MAX TEMPERATURE SET POINT	200°C	240°C
TIME TO RECYCLE	4-6 HOURS	4-6 HOURS
TANK DRAIN VALVE	YES	YES
TANK CAPACITY	20 US GAL (80L)	20 US GAL (80L)
CONSENER AND FITTING	COPPER**	COPPER**
LID GASKET	NEOPRENE***	VITON***
SOLVENT TRANSFER SYSTEM	YES	YES
SHIPPING DIMENSIONS (WDH")	47 X 27 X 50	47 X 27 X 50
WEIGHT (LB/KG)	450/205	450/205
** ALSO AVAILABLE IN STAINLESS STEEL		
*** ALSO AVAILABLE IN TEFLON ENCAPSUALTED RUBBER		

Safety Features:

- **Certified** to UL standards U2208 and CSA standards C22.2 No. 30 and No. 88 by ETL. Approved for use in non hazardous locations as well as approved for use in hazardous locations Class 1, Division 1, Group D and Class 1, Division 2, Group D.
- **Explosion proof construction** and intrinsically safe electric circuitry.
- **Computer controlled** with many built-in safety programs including temperature control of all critical points including tank, condenser and fan motor. Power is cut when the temperature at any of these points rises above a pre-set level. Operation also terminates when other abnormal conditions exist (eg: boiling does not start on time or the distillation process takes too long).
- **Automatic pressure relief** lid system prevents pressure in the Distillation Tank from exceeding 0.5 to 1.0 psi. (0.035 to 0.070 kg/cm²).
- **Self Diagnostic** error messages are displayed on the Display Panel.
- **Dual lid** cover system.
- **Compact, enclosed cabinet** for safe storage of the Solvent Receiving Container inside the cabinet.

Operating Features:

- **Rapid-start** due to direct electric heating of solvent, no diathermic oil to change.
- **Short cool-down time.** High efficiency condenser, air cooled with motor driven fan.

Warranty: 1 year on unit, 2 years on pump.

PREPARATION AND SETUP:

- Carefully inspect the shipping carton for any sign of transport damage.
- Carefully remove the unit from the shipping carton.
- Check the unit for damage. **Report any transport damage immediately to the carrier and your vendor. Initiate a freight claim with the carrier.** The manufacturer is not responsible for freight damage.
- A Liner Bag and Retainer Ring are already installed inside the distillation tank.
- Check the Accessory Kit for the parts listed below. If any parts are missing, contact your supplier. Additional consumables and accessories are also listed.
- Level the unit using the adjustable feet and install the Door Handle.

ACCESSORY KIT (Included Parts)

All Models	Replacement Part Number
Manual	NA
Airline Filter	10-220
Lid Gasket, Standard (Neoprene)*	960-2150N
Liner Bag, 2 Spares	See below for re-order numbers
Door Handle & 2 Screws	120-318 & 909-404S
Solvent Outlet Tube	960-8131
Hose Clamp, Extension Tube	50-261
Filler Hose and Suction Pipe Assembly	960-8240

*Not included with Models using Teflon Gaskets

ADDITIONAL CONSUMABLES, ACCESSORIES AND REPLACEMENT PARTS

Receiving Container, Stainless Steel	960-9010
Lid Gasket, Standard (Neoprene)	960-2150N
Lid Gasket, Special (Viton)	960-2150V
Lid Gasket, Special (EPDM)	960-2150E
Lid Gasket, Special (Teflon Encap.)	960-2150TE
Retainer Ring	960-9110
Fuse Kit	KIT-FUSE692
Liner Bag, Standard, Pkg of 10	LB2000E-10
Liner Bag, Standard, Pkg of 100	LB2000E-100
Liner Bag, Standard, Pkg of 250	LB2000E-250
Liner Bag, Standard, Pkg of 1000	LB2000E-1000

CAUTION:

USE ONLY GENUINE UNI-RAM LINER BAGS WHICH ARE 3 MIL THICK, LIGHT BLUE IN COLOUR WITH A SAWTOOTH EDGE AND A 3/16" WELD.

THEY ARE SPECIALLY MANUFACTURED TO BE STRONG, HEAT RESISTANT AND CHEMICAL RESISTANT.

USE OF A NON-UNI-RAM LINER BAG MAY VOID THE WARRANTY.

LOCATION AND CONNECTION:

This unit is certified for use in non-hazardous locations and hazardous locations Class 1, Division 1 Group D and Class 1, Division 2, Group D.

• **Non-hazardous Location:**

If using a non-hazardous plug, the unit must be located outside of a hazardous location. In a non-hazardous location, we recommend that you use a receptacle located a minimum of 6 feet (185 cm) from the unit and a minimum of 30" (80 cm) from the floor. We also recommend that the unit be located at least 6 feet from any potential source of ignition such as electrical receptacles, switches, pilot lights, fixtures, contacts and similar equipment. To clarify the definition of an appropriate location, contact your local authority. This unit must be connected to the power supply only by a qualified electrician in accordance with the National Electrical Code.

- **Hazardous Location:**

In hazardous locations (Class 1, Division 1, Group D and Class 1, Division 2, Group D), the power cord must be connected to the main power supply only by a qualified electrician, in accordance with the National Electrical Code. This equipment must be properly connected to an explosion proof outlet (receptacle or hard wired).

Select a Location That Meets EACH AND EVERY Requirement, Described Below.

1) Comply with the instructions in the section: CAUTIONS AND WARNINGS.

2) Position the solvent recycler in a location so that there is at least 6 inches (15 cm) of space all around the unit. Ensure that the safety lid and door freely opens fully and a container for receiving the distilled solvent can freely move in and out of the cabinet. The unit must be in a location where people or equipment cannot disturb the cable or connection. The cord must be connected directly to the main power supply; an extension cord cannot be used.

3) Connect the unit to a dedicated 20A, 200/240V branch circuit.

On first power up and when the unit is ready to begin a new cycle, the Display Panel shows "READY S.P. = XXX°C".

SOLVENT REQUIREMENTS

This unit recycles flammable solvents and combustible solvents. Flammable solvents include lacquer thinner, paint thinner, acetone and other paint diluents. Flammable Solvents have a flash point below 38.7°C (100°F). These solvents are commonly used in the industry as a cleaning solvent, or as a paint diluent.

Dirty solvent to be distilled must meet **each requirement** described below. The MSDS, material solvent data sheet, provides data on the properties of the virgin solvent.

- 1) The BP (Boiling Point) of the dirty solvent must be less than 200°C (392°F) for the URS2000 Series and 240°C (464°F) for the URS2000PW Series. BP increases with greater contamination.
- 2) The auto-ignition temperature of the solvent to be distilled must be higher than 250°C (482°F) for safe operation. Do not recycle Nitrocellulose. The auto ignition temperature is 135°C (275°F).

Notes:

- Recycle recently contaminated solvent only. Standing solvent can become acidic over time.
- To avoid "FISH EYE" problems, do not recycle both paint diluents and parts washer solvent in the same unit.

Definitions

Flash Point:

The lowest temperature at which the vapor of a solvent can be made to ignite momentarily in air.

Auto-ignition Temperature (often referred to as "ignition Temperature" or "Ignition Point"):

The temperature at which solvent ignites by itself.

OPERATING PROCEDURES

Wear protective clothing in accordance with local safety and environmental regulations. Use face goggles and gloves as a minimum. Use an apron and respirator if required.

Summary of Operating Steps:

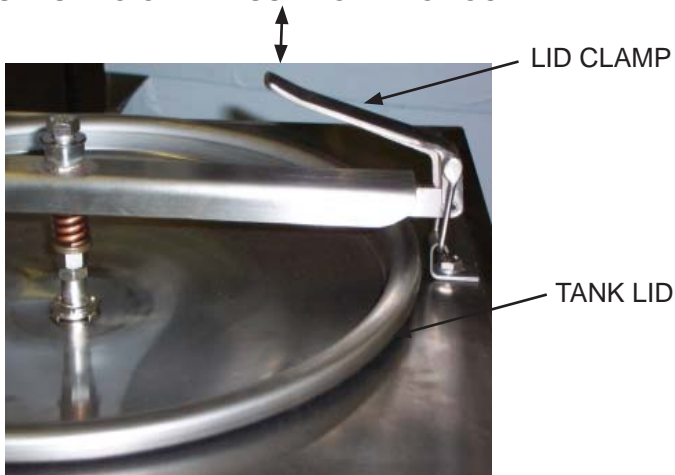
- 1) Open the Tank Lid and Safety Cover
- 2) Install the Receiving Container, the Transfer Hoses and the air Supply
- 3) Transfer Solvent to the Recycler Tank
- 4) Check distillation conditions and change, if necessary, using SETUP MODE
- 5) Recycling
- 6) Finish Recycling
- 7) Transfer clean solvent
- 8) Remove waste debris
- 9) Clean Distillation Tank and Lid Surface
- 10) Install new liner bag
- 11) Inspect Lid Gasket, Remove and Replace if necessary

Each Step is described in detail below.

1) Open the Tank Lid and Safety Cover

- Open the safety cover.
- Open the inner lid by releasing the Lid Clamp.
- Make sure that Tank is empty and that a Liner Bag is properly installed in the Tank.

PULL UP TO OPEN. PUSH DOWN TO LOCK



2) Install the Receiving Container, the Transfer Hoses and the air Supply



Receiving Container

- A 20 US Gal (80 liter) container must be used to receive the distilled solvent. Make sure the Solvent Outlet Tube is properly inserted into the top opening of the Receiving Container by at least 1 inch (2.5 cm).
- When placing the Solvent Receiving Container, make sure the alligator clamp of the Grounding Strap is firmly connected to the exposed metal surface of the container.

Air Supply

- This model is equipped with an air operated Dual Diaphragm pump and requires a supply of clean, dry air of at least 85 PSI (6 kg/cm²).
- Connect the air supply to the Air Inlet Fitting (1/4" NPT Female Threads) located at the right side of the unit. Make sure that there are no leakages at the connection. Make sure that the air is free of dust, rust and other contaminants.
- These models are equipped with a Pressure Regulator pre-set to 85 PSI (6 kg/cm²).

Hose Connections

- Place the drum/container with the dirty solvent to be distilled close to the unit.
- Connect the **Solvent In Hose** to the **Solvent In** port of the unit and insert the other end (with the Tank Filler Suction Pipe) into the drum/container.
- Connect the alligator clamp at the end of the Ground Strap to the container with dirty solvent.
- Place the drum/container for the clean solvent close to the unit.
- Connect the **Solvent Out Hose** to the **Solvent Out** port of the unit and insert the other end with the Outlet Tube (short and curved) into the drum/container. The Outlet Tube must extend below the rim of the pail to prevent solvent spillage.
- If the pail is metal, connect the alligator clamp of the Ground wire to the rim of the drum/container.

3) Transfer Solvent to the Recycler Tank

- Turn the Handle of the Filler Valve counter-clockwise to open the filling passage.
- Turn the Filler Timer Knob clockwise fully. After a few seconds, dirty solvent will start flowing into the Distillation Tank.
- After the filling process has been completed, turn the Handle of the Filler Valve clockwise and close the Tank Lid. Make sure that the sealing area around the top of the Tank is clean and damage free.
- Close the Distillation Tank Lid and secure with both Lid Clamps. Make sure that the Lid is firmly seated to avoid leakage.
- Close the Safety Cover.

4) Check distillation conditions and change, if necessary, using SETUP MODE.**Estimate Boiling Point**

Add 40°C (100°F) to the boiling point of the pure solvent as shown on the MSDS (Material Safety Data Sheet) or another reliable source.

Recycle more often

The boiling point of the waste solvent mixture increases as it gets dirtier. To reduce the boiling point, recycle more often.

Minimize Temperature Set Point

After recycling there will be a small amount of solvent, about 1/8 US gal (500 ml), remaining in the distillation tank due to condensation. Select the lowest Temperature Set Point that recycles the solvent to this level.

If all the settings are acceptable, press START to begin distillation.

To change settings, enter Setup Mode

SETUP

To change settings, enter Setup Mode: while pressing SETUP, press START. "SET-UP MODE" is displayed. **To change the temperature units from °C to °F, press and hold the + and - keys together for 2 seconds.**

STEP	SETTING	ADJUST	ACCEPT	DESCRIPTION
1	SET-PT = XXX°C (°F)	+ OR -	OK	To choose a SET POINT, look up the solvent's BP (boiling point (MSDS, online etc) and add about 40°C (100°F).
2	POWER = XXX%	+ OR -	OK	If boiling is too vigorous due to one or more of the following conditions, decrease POWER by one increment or more. <ul style="list-style-type: none"> • vapour leaks at the Lid Gasket • recycled solvent comes out too hot • waste material is carried into the recycled solvent Otherwise, use 100%.
3	SHUT-OFF = AUTO**	+ OR -	OK	If too much solvent remains in the Distillation Tank after recycling and the problems in the Troubleshooting Guide have been ruled out, over-ride the AUTO SHUT-OFF and manually select a heating time (eg: 4 hours). The heater will stay on for this amount of time and then cooling will begin.
4	BAKE TIME = XXM	+ OR -	OK	Only available when SHUT-OFF = AUTO. Increase if residue (puck) is too wet.
**WARNING: SHUT-OFF TIME MUST NOT BE SET TO MORE THAN 8 HOURS FOR THE URS900 SERIES AND 12 HOURS FOR THE URS2000 SERIES				

5) Recycling

On first power up and when the unit is ready to begin a new cycle, the Display Panel shows "READY S.P. = XXX°C" (S.P. = SET POINT). When Setup is complete and START has been pressed, the "HEAT" light comes on and the recycling process begins. During the boiling phase, 3 temperatures will alternate on the Display: "SET-PT", "TANK" and "VAPOR EX." When the boiling phase is complete, "COOLING" will be displayed. Note: the fan may still be running; this is normal as it continues to run until the temperature drops below 50°C. To cancel the cycle, press the "START/STOP" key.

6) Finish Recycling CAUTION: DO NOT OPEN LID UNTIL COOLING IS COMPLETE

The clean, recycled solvent is available for use when the display shows "READY S.P. = XXX°C". After the clean solvent is transferred, the unit will be ready for another cycle.

7) Transfer Clean Solvent

- For models without the Solvent Transfer System: remove the pail and replace with an empty one.
- For models with the Solvent Transfer System: turn the Transfer Timer knob clockwise fully. The clean solvent will flow out of the Solvent Receiving Pail into either a free-standing, external container or the Clean Solvent Pail of a Spray Gun Cleaner. The transfer will stop when the timer runs out.

8) Remove Debris:

Remove the Retainer Ring and slowly pull the Liner Bag containing the debris out of the distillation tank in a way that the Liner Bag does not break. Dispose of the debris in accordance with local regulations.

9) Clean Distillation Tank and Lid Surface

Distillation Tank:

Wipe inside the Tank with a cloth.

Remove any remaining debris from the Distillation Tank using if necessary, plastic or wooden tools (not supplied). Do not clean with abrasive or hard metal instruments that can damage the tank. The warranty does not cover such damage.

Note: There will be about 1/8 Gal (500 ml) of solvent remaining in the Distillation Tank after recycling due to condensation. This solvent, if left in the tank, can cause corrosion. Dirt and debris left in the tank can prevent full heat from reaching the dirty solvent during recycling.

Caution: Acidic or chlorinated solvents typically cause corrosion on an aluminum tank. It appears as black pitting spots on the tank. Excessive pitting leads to an unsafe condition of holes in the walls of the tank and solvent leakage. Inspect your tank after each batch. If there is excessive pitting, call a Service Technician and replace the tank with a corrosive resistant, stainless steel one.

Lid Surface:

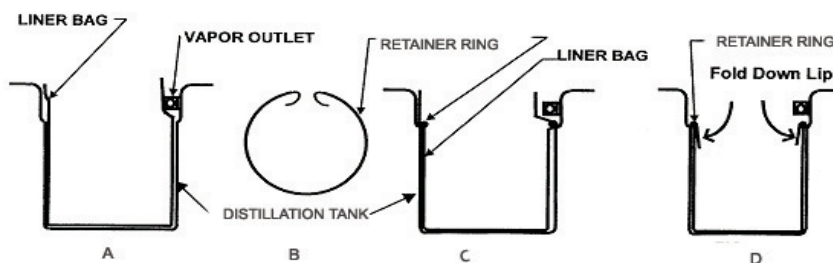
Use a cloth. Dry and clean the lid and the top of tank where the Lid Gasket sits to extend the life of the Lid Gasket and prevent leakage. Avoid rotating the lid during cleaning. The lid gasket is a wear item.

10) Install a new Liner Bag

Lift Recycler Safety Cover and Tank Lid fully; lids will stay in the open position.

- Install the Liner Bag so that the bottom of the Bag sits flat on the bottom of the Distillation Tank as shown.
- With thumb and index finger, squeeze the Retainer Ring and insert into inside of the Liner Bag. Let go and make sure it fits securely in the groove.
- Fold the flap of the liner bag over the retainer ring.

Caution: Ensure that the bag material does not block the Vapor Outlet.



NOTE: This is a schematic drawing only; not all components are exactly as shown.

11) Inspect Lid Gasket, Remove and Replace if necessary as required

Inspect the Lid Gasket for shrinking, hardness and cuts. The Lid Gasket is a wear item as it is exposed to high temperature and solvent vapor during distillation. Damage to the lid gasket will cause solvent to leak.

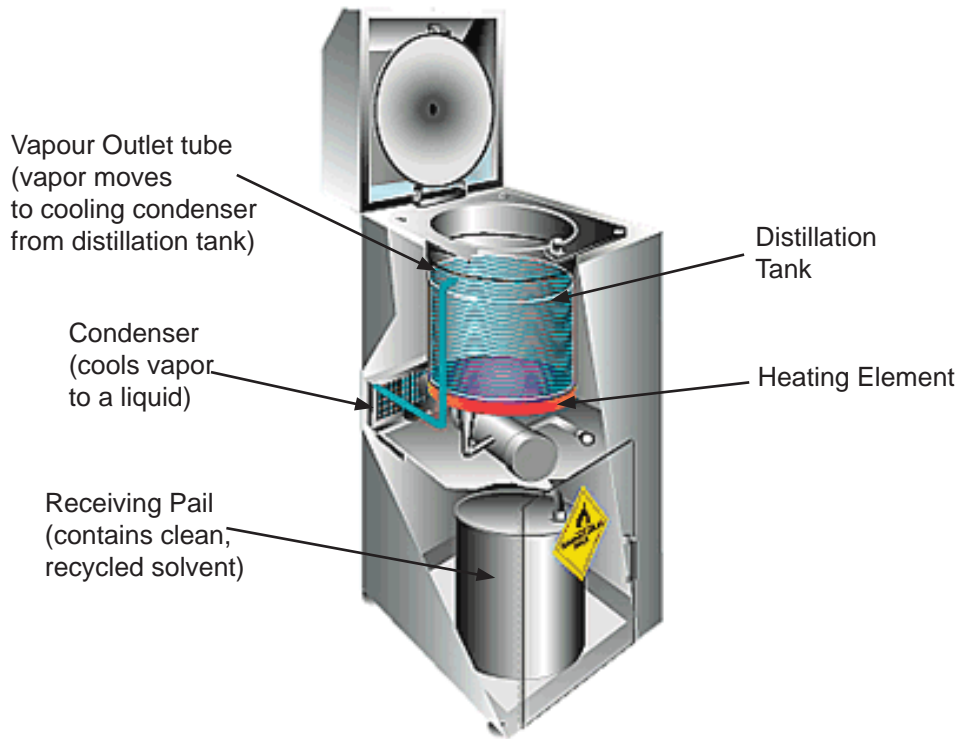
To remove, open the Safety Cover and Tank Lid. Lift out the old gasket by hand and clean the cavity with a cloth. To Install, place the new gasket in the cavity, rub solvent or soapy water on the gasket to make insertion easier. Press the gasket firmly into the cavity all around.

Note: Keep a spare in stock. One extra is included with the unit.

THEORY OF OPERATION - DISTILLATION PROCESS

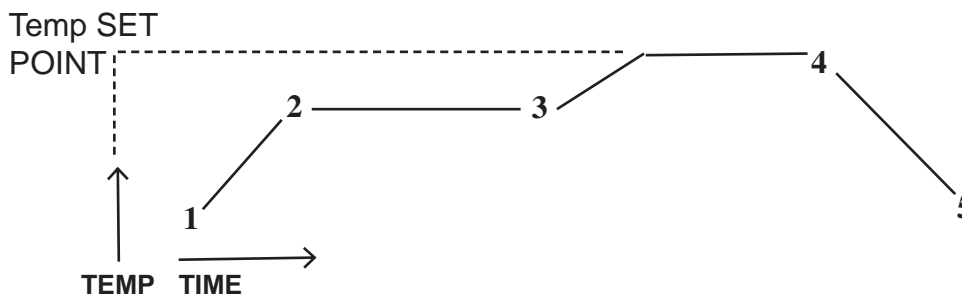
Waste solvent consists of the original solvent plus liquid and solid materials picked up during use of the solvent. Recycling separates the original solvent from the waste materials. During the recycling process, the distillation tank fills with dirty solvent and the heating element heats the mixture. The solvent mixture boils and the vapour passes through a cooling condenser where purified, clean solvent, ready for use condenses out. Waste materials in the dirty solvent boil at a temperature substantially above the Temperature Set Point so they remain in the distillation tank for disposal.

Solvent Recycling



Distillation Cycle

1. Heating starts, temperature rises
2. Vapourization starts
3. Vapourization ends, AUTO SHUT-OFF / BAKE TIME starts (see SETUP)
4. Baking finishes, cooling begins
5. Cooling is complete



TROUBLE SHOOTING GUIDE

Carry out each action step until a solution is found. If the recommended actions do not solve the problem call Uni-ram Service in North America or contact a qualified Service Technician.

Caution: Disconnect the power supply before conducting maintenance or service.

PROBLEM	CAUSE	ACTION STEPS
Unit is plugged in, power light is off, Display Panel is not working.	Power is not getting to the unit.	Reset breaker or replace fuse. If power is still not getting to the unit, call a Qualified Service Technician. Ensure that the unit is the only device on a circuit with sufficient capacity.
Unit is plugged in, power light is on, Display Panel is not working.	Power board or computer board not functioning.	Call Uni-ram Service
Recycled solvent is not clear	1) The solvent is reacting chemically.	1) Run SETUP and lower the Temperature Set Point.
	2) The solvent flow path is dirty. One cause is overfilling the distillation tank.	2) To clean the path, follow Service Procedure 2 and then recycle 3 gal of clean solvent.
	3) Orange colour due to rust in receiving pail.	3) Place a jar under outlet tube and capture some solvent. If the solvent is clear, replace the pail with a non-corrosive one.
	4) Milky colour due to presence of water.	4) Eliminate source of water in solvent.
Dirty solvent remains in Distillation Tank after recycling Note: 1/8 Gal (500 ml) of recycled solvent is expected due to condensation.	1) Poor heat transfer due to dirt and debris left in the tank.	1) Clean the tank, replace the Liner Bag, recycle with pure solvent to test. If successful, the problem is due to a dirty tank, debris left in the tank or the solvent is too contaminated. Adjust accordingly. Follow Operating Procedures closely. If the level of contamination is too high, recycle more often.
	2) Boiling point of solvent is above Temperature Set Point.	2) Run SETUP, raise the Temperature Set Point and repeat the recycling operation. The Temperature Set Point should be the BP of pure solvent (as determined from the MSDS or other source) plus 45°C (113°F) to allow for contamination. If the boiling point is above the maximum Temperature Set Point for your model (either 200°C or 240°C), dirty solvent cannot be recycled in this unit.
	3) The Auto Shut Off system is shutting the unit off too soon.	3) Run SETUP and over-ride the auto SHUT-OFF. Select a time period long enough to recycle the solvent. The heater will stay on for this duration. Repeat the recycling operation.

PROBLEM	CAUSE	ACTION STEPS
Solvent vapor leaks from the Lid Gasket	1) The Lid Gasket has excessive wear as indicated by cracks, shrinkage, hardness etc	1) Replace the Lid Gasket (See Operating Procedure 11).
	2) The Solvent flow path is blocked.	2) Follow Service Procedure 2.
	3) Lid Tension is not adequate	3) Follow Service Procedure 4.
	3) The Lid is not seated correctly.	3) Follow Service Procedure 5.
	4) The temperature SET-PT is too high, resulting in excessively high solvent vapour pressure	4) Run SETUP, reduce the Temperature Set Point and repeat the recycling operation. If successful, continue to recycle using the lower Temperature Set Point. If not, reduce the POWER %.
Sections on Bag are brown and thin due to High Temperature	1) Use of inferior low temperature bag.	1) Use new genuine Uni-ram high temperature Liner Bag and recycle.
	2) The temperature SET-PT is too high.	2) Run SETUP, reduce the Temperature Set Point and repeat the recycling operation. If successful, continue to recycle using the lower Temperature Set Point.
The computer appears to be operating erratically.	The computer may require re-booting.	Disconnect the power supply for 30 seconds. Restore power and operate unit.
Residue (puck) in Tank is too wet.	1) BAKE TIME is not long enough.	1) Run SETUP and increase the BAKE TIME.
	2) Residue cannot be dried completely due to its composition.	2) None.

TEST MODE

Use this mode as part of your troubleshooting procedures.

1. Make sure Display Panel shows "READY SP = XXX °C".
2. Press and hold the OK key while pressing the + key for about 3 seconds or until the display shows the Model No. and software version followed by "TEST MODE". The testing cycle will begin.

TESTING CYCLE

- The Display shows "TC#1 = XXX °C, TC#2 = XXX°C".
 - Press "OK" to proceed to the next step.
 - The Display shows "FAN ON" for 5 seconds while the Cooling Fan runs.
 - The Display changes to "DO NOT TOUCH KEYS" for 5 seconds while a key check is performed.
 - If the keys are ok, the Display shows "NO KEY STUCK" for 5 seconds.
 - The Display changes to "HEATER TEST ON" for 10 minutes or until the computer detects a 3°C increase in temperature at TC#1, then the Display should change to "TEST PASSED".
3. If the display does not show "TEST PASSED", there is a problem in the heater circuit such as a defective Heater TRIAC, Heater Element or Fuse.
 4. Press "STOP" to end the test. The Display will return to "READY SP = XXX °C".

ERROR MESSAGES

If an abnormal condition is detected by the unit's Self-diagnostic System, the Display Panel shows one of the following error messages:

MESSAGE	POSSIBLE CAUSE	ACTION
READY TIME OUT	Recycling was not completed within 9 hours and/or dirty solvent remains in the Tank.	If dirty solvent remains in the Tank, see the Troubleshooting Guide.
RESET OCCURRED	The computer has been reset due to a power interruption or drop in voltage during the recycling operation.	Press the "SET-UP" key twice to restore the message: "READY-SP = XXX° C".
CONDSR OVER-HEAT	Over-heating occurred at the Condenser.	The Condenser is dirty or the Fan stopped for another reason (see below). Clean the Condenser. When the Fan Motor has recovered (4-5 min), this message will disappear and normal operation will resume.
CHECK FAN	Appears 10 min after the message above if the problem is a loose fan blade, blown fuse (F3 or F4) or other fan-related problem. Also appears if the condenser is dirty.	Clean the Condenser. Run TEST MODE to check for defective fan motor. If necessary, check for a loose fan blade or blown fuse (see next section).
CHK HEATER FUSES	Appears if the computer does not detect a rise in tank temperature after 15 minutes.	There may be a short circuit in the Heater circuit causing fuse F3 and/or F4 to blow or poor electrical contact in the Heater circuit. Check circuit condition with a tester. Correct as required.
WARNING! VERY IMPORTANT! IF TRIAC IS FAULTY, DISCONTINUE USE IMMEDIATELY!		
CHK HEATER TRIAC	Short circuit in the TRIAC (a switching transistor that controls heater power, located on the Power Control Board).	To confirm, first disconnect and re-connect the power supply. If the Distillation Tank becomes hot to the touch and both the Heat Light and the Fan Light are off, the TRIAC is defective. Disconnect the power supply immediately and do not use again until the Power Control Board has been replaced.

SERVICE PROCEDURES

1) CLEAN CONDENSER

Remove the 2 screws at the back of the Side Cover and carefully move the Side Cover forward just enough to reach the front of the condenser with a vacuum. Using a brush attachment, vacuum the front of the condenser where most of the dust accumulates and then vacuum the back if necessary. Put the Side Cover back into position and re-install the screws.

2) CLEAR BLOCKED SOLVENT FLOW PATH

CAUTION: WEAR SAFETY GOGGLES.

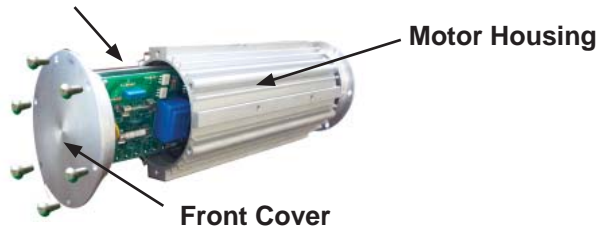
A blockage in the solvent flow path (Vapour Outlet - Condenser - Solvent Outlet Tube) can cause solvent to leak. To determine the location of the blockage, first check the Solvent Outlet Tube and the Vapour Outlet Fitting for visible signs of blockage or damage. If the problem is not in either of these locations, the Condenser is probably blocked. To clear the condenser, pour some clean solvent into the Vapour Outlet and check if it comes out of the Solvent Outlet Tube. If the blockage persists, blow air at about 30 PSI (2 kg/cm²) into the Vapour Outlet. If the air comes out of the Solvent Outlet Tube, the blockage has been cleared. If not, call for service.

3) REPLACE FUSES

Fuses are located on the Power Control Board inside the Motor Housing.

- Disconnect power supply.
- Remove the Guard Screen by unscrewing two metal screws to get access to the Motor Housing

Power Control Board



- Unscrew the 6 screws from the Front Cover and pull it gently from the motor housing to expose the fuses. **Note: Care should be taken not to pull the Front Cover too far as some wires may disconnect.**

Fuses F1 & F2: 240 VAC, 20.0 A, 3AG, fast action, for Heater

Fuses F3 & F4: 25 VDC, 2.0 A, 3AG, slow action, for Fan Motor

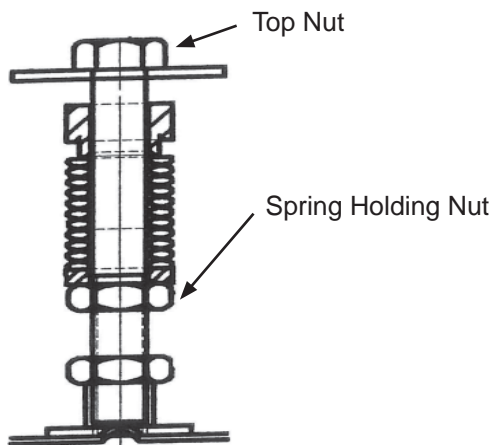
Fuse F5: 240 VAC, 0.0625 A, 3AG, fast action, for Computer Board

- Remove the fuses from the board and, using a meter, test each one and replace as needed.
- Carefully push the Power Control Board back into the Motor Housing.
- Ensure that the wire to the computer board is secure.
- Re-install the Front Cover using all 6 screws..
- Install the Guard Screen using two metal screws.
- Close the Door and re-connect the power supply.

4) INCREASE LID TENSION (BY ADJUSTING THE SPRING BOLT)

CAUTION:

SHOULD BE DONE ONLY AS A LAST RESORT - FIRST CHECK FOR A WORN LID GASKET, A BLOCKAGE IN THE SOLVENT FLOW PATH, LOOSE HINGE BOLTS OR A SET POINT THAT IS TOO HIGH FOR THE SOLVENT BEING RECYCLED.



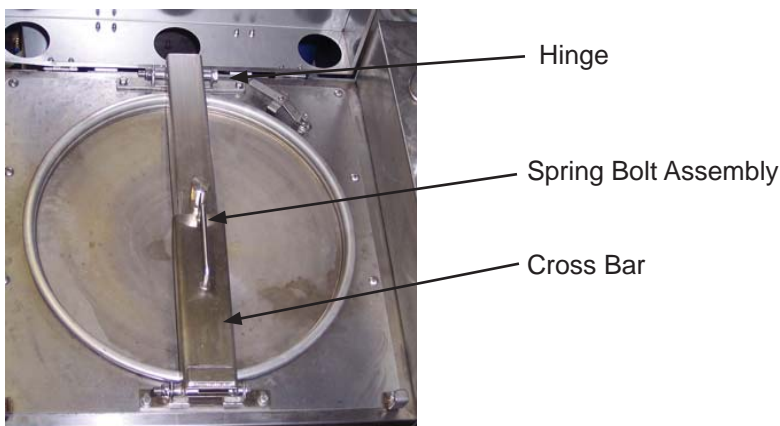
Spring Bolt Assembly

This procedure tightens the Lid by increasing the tension on the spring attached to the Lid Bar Spring Bolt Assembly. The Lid and Bolt Assembly is carefully designed as a Safety Pressure Relief system to prevent a dangerous build up of pressure inside the closed tank. **Do not adjust the Spring Holding Nut by more than 2 full turns maximum.** If 2 full turns do not solve the problem, call for service.

- While holding the top nut with a wrench, turn the Spring Holding Nut no more than a 1/2 turn at a time. Turn in a counter-clockwise direction (as you look down on it).
- After each 1/2 turn, operate the unit normally and check for leaks.

5) REPOSITION LID and TIGHTEN HINGE BOLTS

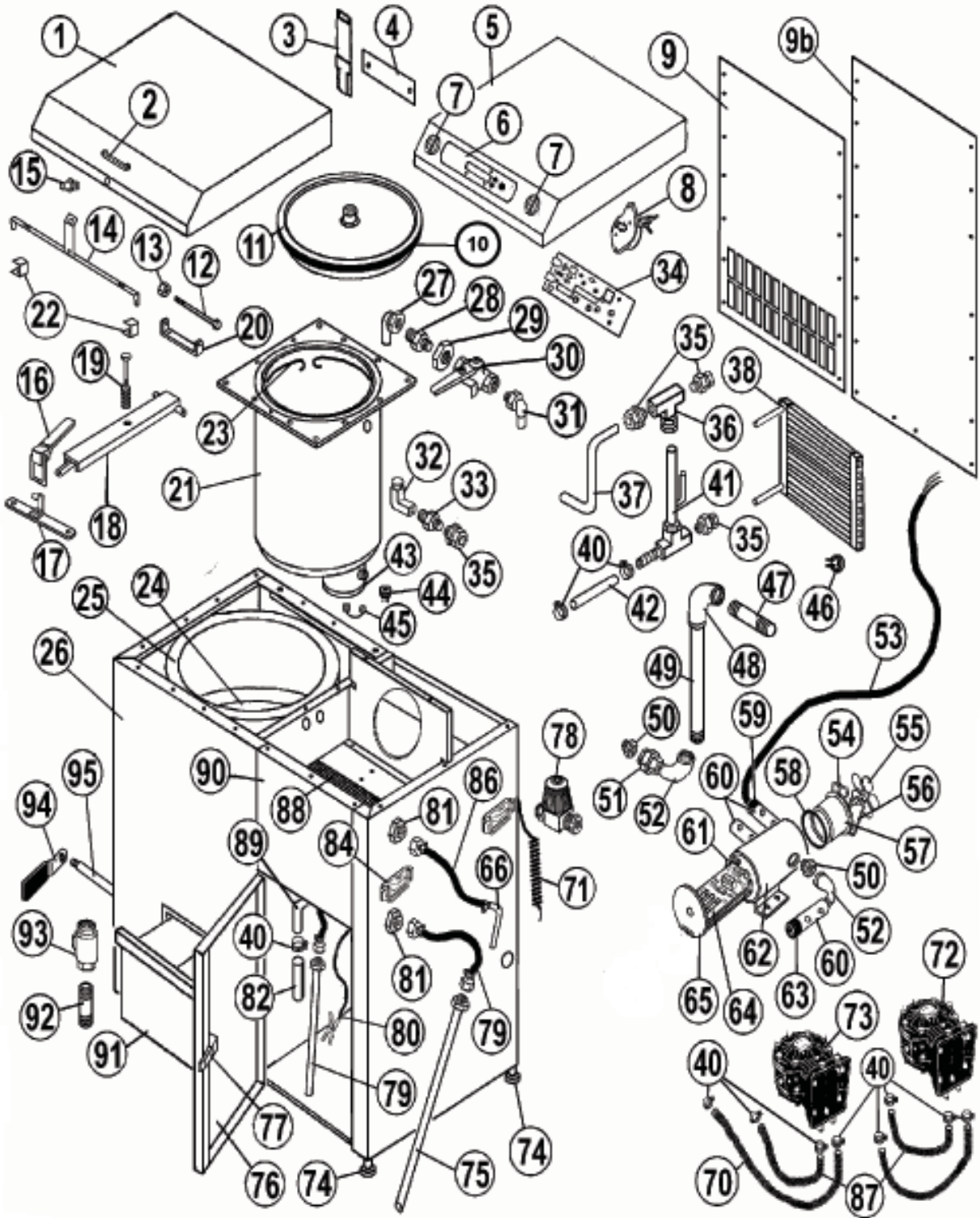
The Hinge bolts can loosen over time, causing the lid to shift off center. This can lead to an inadequate seal and leaking around the Gasket. Loosen the bolts, reposition the lid and re-tighten the bolts.



6) RECOMMENDED 6-MONTH MAINTENANCE

- Vacuum the condenser (see Service Procedure 1).
- Clean the solvent flow path by recycling 3 Gal of clean solvent.
- Inspect Distillation Tank for debris, pitting and/or other damage.
- Inspect Lid Gasket for wear or damage (see Operating Procedure 11).

REPLACEMENT PARTS



NOTE: This is a schematic drawing only; not all components are exactly as shown.

REPLACEMENT PARTS

ITEM	DESCRIPTION	PART NO.	ITEM	DESCRIPTION	PART NO.
1	SAFETY COVER ASSY	960-3310	43	HEATER TERMINAL COVER	770-1365
2	PULL HANDLE, DOOR & LID	120-318	44	HEATER THERMOSTAT	960-1830
3	STAY, SAFETY COVER	960-3410	45	WIRE, HEATER - THERMOSTAT	770-4850
4	FRICITION PLATE, LID	770-3370	46	CONDENSER THERMOSTAT	770-5150
5	SIDE COVER ASSY STAY	770-3730	47	SHORT NIPPLE, 1/2"NPT, 2"L	960-4261
6	SWITCH PANEL, URS900/2000	770-3460	48	ELBOW, 90 DEG, 1/2"NPTx2	960-4262
7	TIMER KNOB, BLACK	100-261F	49	LONG NIPPLE, 1/2"NPTMx2, 8"L	960-4265
8	TIMER ASSEMBLY, 5 MINUTES	115-200/5	50	HEX NIPPLE, 1/2"NPT-3/4"	770-4281S
9	RIGHT BACK PANEL, URS2000	960-3751	51	UNION ASSY, 1/2"NPTx2	700-4283
9b	LEFT BACK PANEL, URS2000	960-3753	52	STREET ELBOW, 1/2", 90	770-4282
10	LID GASKET, NEOPRENE	965-2150N	53	POWER CORD, URS500-URS2000	770-4710
	LID GASKET, EP	965-2150E	54	MOTOR HOUSING COVER	600-4115
	LID GASKET, VITON	965-2150V	55	FAN ASSY, 10", 5 FIN, CW	770-4220
11	TANK LID ASSY, SS, URS2000	960-2000S			
12	HINGE PIN BOLT, 3/8"-16	99-436HH	57	FAN MOTOR ASSEMBLY	960-4210
13	HEX LOCK NUT, HINGE PIN, 3/8"	99-543DH	58	O-RING, MOTOR SUPPORT	600-4137
14	PUSH LEVER, SAFETY COVER, SS	960-3371	59	CONNECTOR, POWER CORD	770-4284
15	PUSH BUTTON, SAFETY COVER	960-3374	60	SEALING FITTING, 1/2"NPT	770-4286
16	LID CLAMP ASSY	900-2220	61	SNAP RING, MOTOR SUPPORT	600-4133
17	FRONT CLAMP CATCH ASSY, SS	770-2237	62	MOTOR HOUSING ASSY, URS2000	770-4110
18	LID HOLDER BAR ASSY, URS2000	960-2230	63	CONNECTOR, COMPUTER CORD	770-4283
19	LID CLOSER SPRING	960-	64	POWER BOARD ASSY, 220/240V	700-4310
20	U-BRACKET ASSY, LOWER HINGE	960-2251	65	FRONT COVER, MOTOR HOUSING	900-4320
21	TANK & HEATER, SS, URS2000	960-1100SAF	66	TRANSFER OUTLET, COPPER	960-8365
22	LOCK PLATE, SAFETY COVER	960-1911		TRANSF. OUTLET ELBOW TUBE, SS	960-8365S
23	RETAINER FRAME, SS, URS2000	960-9110	70	TANK FILLER HOSE ASSEMBLY	960-8240
24	BOTTOM INSULATOR PAD	960-1230	71	GROUND WIRE ASSEMBLY	
25	SIDE INSULATOR PAD	960-1210	72	DIAPHRAGM PUMP	UDP4TA
27	TANK FILLER OUTLET, BRASS	Z105-B	73	DIAPHRAGM PUMP	UDP4TA
	TANK FILLER OUTLET, SS	Z105-BS	74	ADJUSTABLE FOOT	110-531L
28	REDUCER NIPPLE	Z123-DB	75	TANK FILLER SUCTION PIPE, BRASS	960-8250
	REDUCER NIPPLE, SS	Z123-DBS		TANK FILLER SUCTION PIPE, SS	960-8250S
29	HEX NUT, BRASS, 1/2"NPT	Z111-D	76	CABINET DOOR, SS18G, URS2000	960-3210
30	TANK FILLER VALVE, BRASS	750-3310	77	POSITIVE DOOR LOCK ASSY	
	TANK FILLER VALVE, SS	750-3310S	78	AIR INLET ASSY w/PRESS. REG.	120-020PR
31	ELBOW FITTING, 90°, BRASS	770-8140	79	TRANSFER SUCTION PIPE, BRASS	960-8350

NOTES:

**ITEMS WITHOUT PART NUMBERS ARE NOT USER SERVICEABLE
WHEN ORDERING PARTS, PLEASE PROVIDE SERIAL NUMBER**

REPLACEMENT PARTS (continued)

ITEM	DESCRIPTION	PART NO.	ITEM	DESCRIPTION	PART NO.
	ELBOW FITTING, 90, SS	770-8140S		TRANSFER SUCTION PIPE ASSY, SS	960-8350S
32	VAPOR OUTLET, BRASS	770-1151L	80	GROUND WIRE w/CLIP	960-8310
	VAPOR OUTLET, SS	770-1151LS	81	UNION COUPLER, MALE, BRASS	600-8311
33	HEX REDUCER, 3/8"NPT-1/4"NPT	Z123-CB		UNION COUPLER, MALE FITTING, SS	600-8311S
34	COMPUTER BOARD	960-3450V230	82	TANK FILLER SUCTION HOSE ASSY	960-
35	TUBE CONNECTOR, 1/4"NPTM	Z668-8B	83	SOLVENT OUTLET TUBE	960-8121
	TUBE CONNECTOR, 1/4"NPTM, SS	Z668-8BS	84	CARRYING HANDLE	600-3112
36	CHECK VALVE "T" ASSY, BRASS	960-8150	86	TRANSFER HOSE ASSEMBLY, 4'	960-8360
	CHECK VALVE "T" ASSY, SS	960-8150S	87	SOLVENT HOSE	
37	VAPOR OUTLET TUBE	960-1155	88	FAN SHROUD PANEL	960-
	VAPOR OUTLET TUBE, SS	960-1155S	89	SOLVENT OUTLET ELBOW PIPE	960-8131
38	CONDENSER ASSY, COPPER		90	SERVICE ACCESS DOOR ASSY	960-
	CONDENSER ASSY, SS		91	WASTE HOLDING TANK ASSY	
40	HOSE CLAMP #5, SS	100-261S	92	DRAIN NIPPLE	
41	3-WAY CONNECTOR ASSY, BRASS	960-8140	93	MANUAL DRAIN VALVE ASSY	
41	3-WAY CONNECTOR ASSY, SS	960-8140S	94	DRAIN VALVE HANDLE	
42	SOLVENT HOSE, PE,T-OUTLET	960-8123	95	DRAIN VALVE SHAFT	

NOTES:

**ITEMS WITHOUT PART NUMBERS ARE NOT USER SERVICEABLE
WHEN ORDERING PARTS, PLEASE PROVIDE SERIAL NUMBER**

Full Product Warranty

These Uni-ram products have been engineered and manufactured to high performance standards. Each unit has been subjected to detailed factory testing before shipment.

This product comes with a one-year full warranty from the date of purchase. Uni-ram Corporation reserves the right to repair or replace the unit, free of charge, to the original purchaser if a part is found to be defective in material or workmanship as determined by factory service personnel. The items listed below under "Conditions of Warranty" as consumables are not covered.

Uni-ram reserves the right to direct the customer to ship the unit collect to the Uni-ram factory or to an approved Service Center for repair using the Uni-ram Return Goods Procedure or to repair the unit on-site. To prevent damage in transport, the purchaser must ship the unit in the original packaging or use alternate adequate packaging. All units must be shipped clean and free of solvent.

Conditions of Warranty:

As Uni-ram Corporation has no control over the working conditions or circumstances under which the purchaser stores, handles or uses the product, Uni-ram makes no warranty or claim, either expressed or implied with respect to this product's fitness for any purpose or the result to be obtained from its use. This condition applies to the sale of all products and no representative or distributor of Uni-ram Corporation has the authority to waive or change these conditions.

This warranty applies only to the original purchaser and does not apply if the unit has been misused, overloaded, neglected, altered or used for any purpose other than those specified in the operating and installation instructions. Deterioration due to normal wear is not covered by this warranty. Damage due to accident, transportation, fire, floods or acts of God is also not covered. Units whose serial numbers have been altered or removed are not covered. The warranty is invalid if unauthorized abrasives are used in this unit. Unauthorized attempts at self-repair or alterations by the owner also invalidate this warranty. Interior or exterior finishes are not covered by this warranty.

Consumable Items are not covered by this warranty.

This warranty replaces all other warranties expressed or implied by statute or otherwise.

To make a claim, call Uni-ram Service at 1-800-417-9133 and quote the serial number of the unit.

USE ONLY GENUINE UNI-RAM LINER BAGS WHICH ARE 2 MIL THICK, LIGHT BLUE IN COLOUR WITH A SAWTOOTH EDGE AND A 3/16" WELD.

THEY ARE SPECIALLY MANUFACTURED TO BE STRONG, HEAT RESISTANT AND CHEMICAL RESISTANT.

USE OF A NON-UNI-RAM LINER BAG MAY VOID THE WARRANTY.