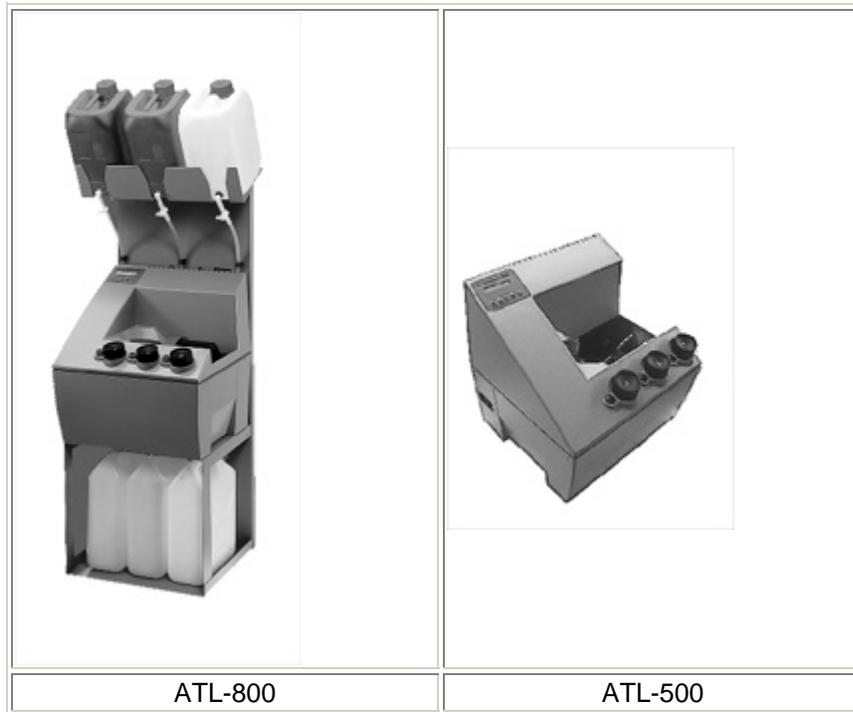


## Instructions for the

AutoLab ATL-500 #4235  
and the  
AutoLab ATL 800 #4237



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## Instructions for the

AutoLab ATL-500 #4235  
and the  
AutoLab ATL 800 #4237

# 1. WARNINGS FOR YOUR SAFETY

## WARNINGS FOR YOUR SAFETY

1. The unit should only be used at the voltage indicated on the specification plate at the side of the unit, right under the socket for the electrical power.
2. Use only a grounded, proper socket, with GFCI protection. Never touch the main power switch with wet fingers.
3. Before you ever open the unit, disconnect the electrical cord from the Mains.
4. Only an authorized person should service the unit.
5. Make sure, that no moisture can enter the air vents at the top of the unit.
6. Never place the appliance in a sink where draining water can rise up and damage the unit.
7. Never transport or move the unit while it is filled with water. (See Section 12)
8. Strong motors drive this unit, therefore never reach into the running unit with your hands.
9. The unit is equipped with a battery back up which automatically operates, when electric power fails. The processor can only be stopped by using the reset mode ("Up Arrow"+"Down Arrow"+F1).
10. When switching off the appliance, the lift arm moves into the position, where it empties the water jacket and only 5 minutes afterwards comes back to its rest position to switch off the unit completely.
11. The processor is built only for use with standard photographic chemicals.
12. To protect your eyes, skin and respiratory tract we recommend you take appropriate safety measures when handling chemicals. Follow the warning instructions of the chemical manufacturers.
13. The processor transfers water and liquid chemicals, therefore it is always necessary to operate it with a tank connected.

## 2. Technical Specifications

### 2. TECHNICAL SPECIFICATIONS

	<u>ATL-500</u>	<u>ATL-800</u>
Front-to-Back Size:	35 cm, 13¾ inches	39.5 cm, 15½ inches
Height:	42 cm, 16½ inches	130 cm, 51¼ inches
Width:	40 cm, 15¾ inches	44 cm, 17½ inches
Empty Weight:	12 kg, 26½ lbs.	27 kg., 60 lbs.
Water-jacket Volume	5 liters, 1.3 gallons	5 liters, 1.3 gallons
Voltage:	230V 50Hz or 115V 60Hz	230V 50Hz or 115V 60Hz
Power:	1100 W, 4.8 Amps at 230V 9.6 Amps at 115V	1100 W, 4.8 Amps at 230V 9.6 Amps at 115V

### Allowable Ambient Temperatures:

- operation +18° to +27°C 64° to 80°F
- storage +5° to +40°C 41° to 104°F
- shipping -30° to +40°C -22 to 104°F

### Maximum Film Quantities:

2 – APS (24mm)

2 - 135

2 - 120

1 - 220

6 - 4x5" (with sheet film reel, Item No. 2509n, included with ATL-800)

### 3. INTRODUCTION

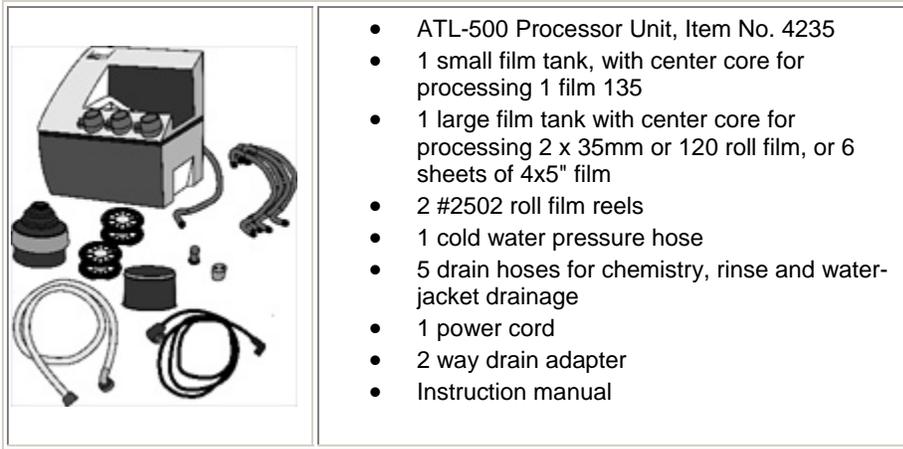
Thank you for buying the JOBO AutoLab 500/800. This compact automatic processor is designed to process APS, 35mm, 120/220 and 4x5" sheet film using standard 3-bath E-6 and C-41 chemistry as well as conventional black and white materials. 24 programs are pre-set at the factory giving a full range of process conditions, including several push and pull film speed options for both E-6 and C-41. Each process program can be fully edited to provide personalized custom times and temperatures. All the AutoLab needs is a power connection, a cold water supply and a drain.

Five liter storage capacity makes the ATL-800 ideal for repeated process runs with the same chemistry. Up to 30 films can be processed before the solutions will need to be replenished.

#### 4. PACKAGE CONTENTS AND UNPACKING

Unpack the AutoLab carefully. Be sure to keep all the packaging materials, as these will be required should it be necessary to return the unit for service or repair.

The following items are included with the ATL-500:



For the ATL-800 processor, the following items are included:



The ATL processor should be positioned on a firm, dry and level surface, close to a cold water supply, drain and power source. The water supply should be capable of supplying cold water at a pressure between 2 and 6 bar (36 to 108 p.s.i.). If the water pressure is higher than this, a pressure reducer should be used. The AutoLab should be installed in accordance with local water and sewerage regulations.

If the ATL-500 is to be installed with the optional reclamation rack, Item No. 4245, please see chapter 10 of this manual for installation instructions.

The ATL-800's metal frame can be placed on the floor, on a low table or attached to a wall. If the frame is placed

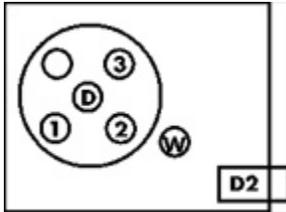
on the floor, take care to ensure that the water outlet has a natural fall to the drain. When wall mounting, make sure the mounting hardware can support at least 30 kg (66 lbs.) each, and that the unit is level.

Please ensure that the unit is not installed in the direct vicinity of air conditioning systems or radiators.

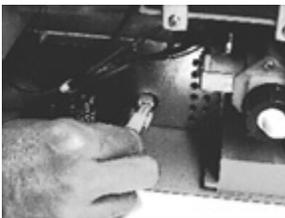
Never place the ATL-500/800 into a sink where water can rise up to the machine. For safety reasons the bottom plate of the ATL-500 has openings at various points. Penetrating water can damage the unit. If the AutoLab is standing in a basin filled with water, do not put your hand into the water! Pull the power plug first to prevent an electric shock.

**Warning:** To avoid the possibility of damage to the processor, make sure the water supply valves are within reach in case there is a leak. Always close the taps when the processor is not in use!

Turn the ATL unit onto its back, and make the hose connections as follows:



- Connect the cold water pressure hose between the cold water supply point and input connector 'W'.
- Connect drain hoses to points '1', '2' and '3'. These are the drains for the first, second and third chemical baths respectively. The other ends of these hoses can be positioned in a sink, over a drain or in separate containers for chemistry reclamation. There should be a natural fall of the hoses to facilitate drainage.
- Connect a drain hose to point 'D'. This is the drainage point for rinse water, and should be positioned either over a drain, or connected to the main drainage system using the adapter provided.
- Connect a drain hose to point 'D2'. This is the drain for the processor water jacket. The other end should be positioned over a drain point, or connected to the main drainage system using the adapter provided.
- Connect the battery plug to its matching receptacle.
- Restore the ATL to its working position.

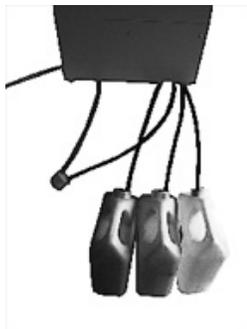


For the ATL-800 the following additional steps are needed for installation.

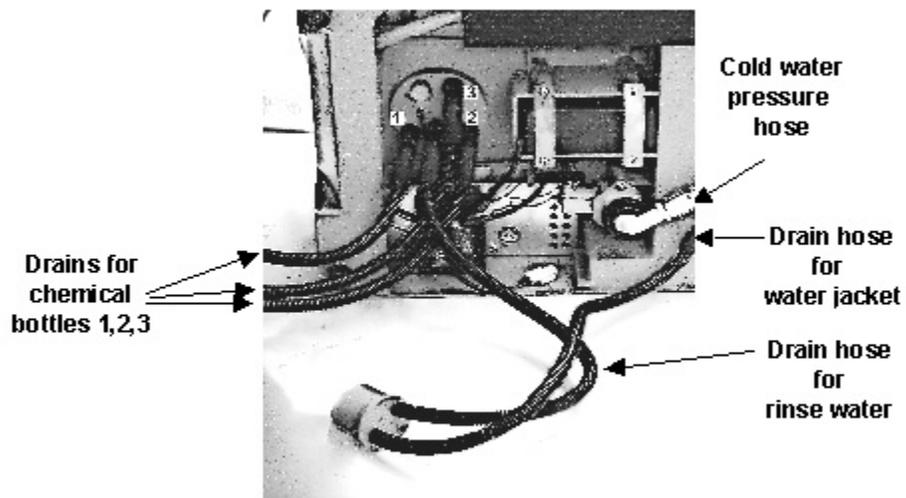
- The ATL-800 is supplied with three chemical hoses connected with a coupling device at the end. Place the processor on the reclamation rack in its working position, guiding the hoses between the processor and the metal frame.

- The ATL-800 should be positioned with its feet in the positioning holes in the reclamation unit. The drain outlets for the three chemistry baths connect to the storage containers without the need of interconnecting hoses. When lowering the processor, be certain that the outlets align with the tubes of the reclamation containers.
- The rinse water and drain hoses need to be routed to a drain at the side of the unit, and care needs to be taken to make sure these hoses are not trapped between the reclamation unit and the ATL-800 chassis.
- Place the five-liter storage tanks on top of the metal frame in their positions. Working from left to right, start with the blue container marked "1", then place the blue container marked "2", and finally place the translucent container marked "3" on the right.
- Connect the three hoses from the processor unit to the five-liter containers using the coupling devices.
- Cover the three hoses with the gray plate, which hangs on the four round connectors.
- Connect the ATL-500/800 to a grounded power supply capable of providing 115V at 10A or 230V at 6A, as appropriate. It is recommended that a Ground Fault Circuit Interrupt (GFCI) be used for safety reasons.

**Note:** In certain locations, the use of a GFCI may be mandatory for this equipment.

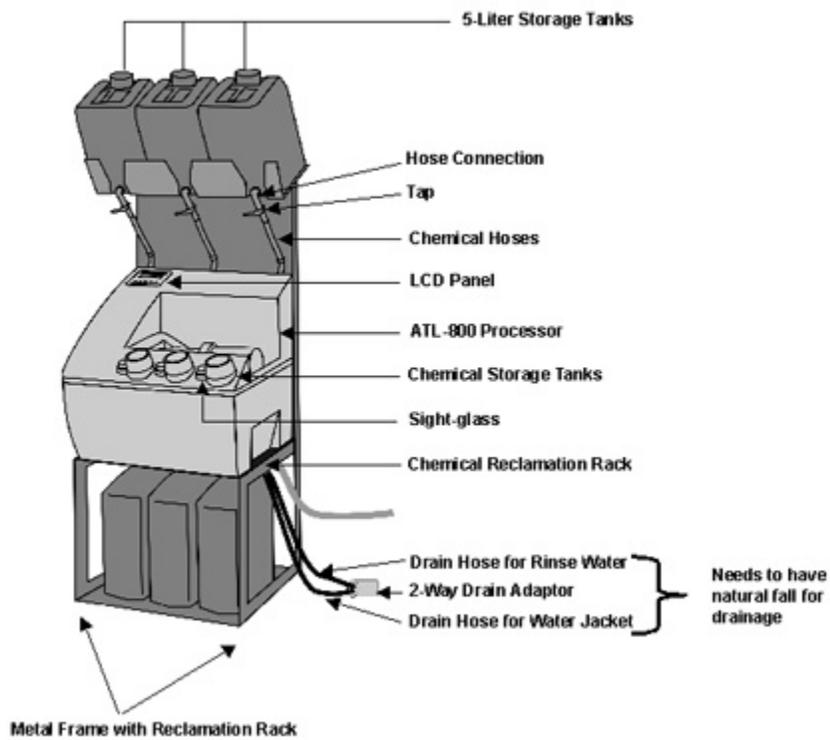


All hoses must provide natural fall for drainage.



•

ATL-800 Detailed Description:



## 5. THE ATL-500/800

The ATL-500/800 is designed to process small quantities of film to professional standards using standard 3-bath processes. It can handle APS, 35mm, 120/220 roll film and sheet film in sizes from 6x9cm to 4x5 inch. It can process up to 2 x 135 films or up to 2 x 120 roll films per run using the reels and tanks provided, and up to 6 - 4x5 inch sheet films per processing run using the optional #2509n sheet film reel. (The #2509n reel is included with the ATL-800.)

Film is loaded into the tank in complete darkness, and the tank then coupled to the processor in normal lighting. The chemical storage bottles are then filled with the correct quantities of solutions, and the processor started. On the ATL-500, measuring the chemicals and then pouring them into the chemical bottles. On the ATL-800, this is done by opening the taps on the five liter storage bottles, while looking at the level indicators located to the left of the filling caps. When half of the indicator turns black, the bottles contain 150ml of solution, suitable for processing 1 roll of 35mm film in the small tank. When the indicator turns black fully, the bottles contain 300ml of solution, suitable for processing all film quantities and types in the large tank. The processor can then be started.

The ATL-500/800 will then temper the water jacket, chemicals and rinse water to the correct process temperature. The process sequence can then be started. The chemical baths and rinses are introduced into the processing tank in turn for the programmed times, and then drained separately. At the end of the process run, the processor will give an audible signal and the tank will continue to rotate. Pressing ↵ (ENTER) will stop the rotation and cause the lift arm to raise. The tank can then be removed from the processor. Any stabilization should be carried out away from the processor, out of the tank and off the reels. Then the films should be dried.

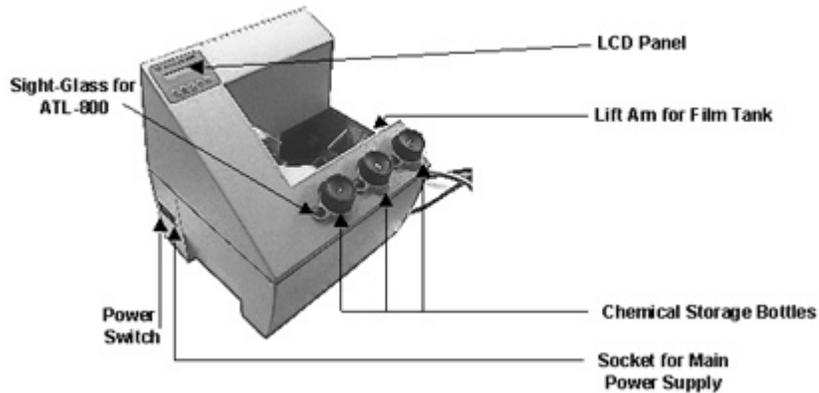
The five-liter storage containers of the ATL-800 should be used for the most frequently used process. Fill the bottles manually for less frequently used processes as described for the ATL-500. Select and run a cleaning program each time the process is changed to clean the processor, hoses, and bottles. In that case, fill the bottles with no more than 700 ml of fresh water, connect the large tank to the processor, and start the processor

The chemical bottles should be filled as follows:

Bottle No:	1	2	3
E-6	FD	CD	BL/FIX
C-41 2-Bath	CD	-----	BL/FIX
C-41 3-Bath	CD	BL	FIX
B&W	D	STOP	FIX

## 6. ATL-500/800 CONTROLS

The operating controls of the ATL-500 and ATL-800 are identical. The ATL-800 includes chemical supply and recovery bottles in a single, framed unit to provide extra convenience for those running a single process most of the time.



### 6.1 Operating the ATL-500/800

Power to the ATL-500/800 is controlled by a power switch at the rear left hand side of the unit. Five buttons are used to control the functions of the processor:

- 

The 'Up' and 'Down' arrow buttons allow scrolling through the various functions.

- The F1 key allows access to special functions.
- ↵

The 'Enter' button confirms data entry.

- START This button is used to start processing.
- 

"UP" + "Down" + F1 This combination will reset the processor's electronics.

- F1 + ↵

SET-Mode is displayed, primarily for programming functions.

A 16 character, alphanumeric LCD panel displays function and menu choices.

### 6.2 Special Features

### Turning off the processor

When switching off the processor with the main switch at the side of the unit, it automatically empties the water jacket. After 5 minutes the lift arm goes back to its rest position and then turns off the unit completely.

### Run a cleaning program to prevent contamination

When changing processes (from E-6 to C-41), it is necessary to clean the hoses and storage bottles. The ATL 500/800 is supplied with several cleaning programs. You can read more about them under Section 6.5 ABOUT TEMPERATURE AND PROCESS CHANGES. It is also recommended that you run a cleaning program at the end of each processing session, to prevent chemical buildup within the supply bottles.

### You can save on chemicals

For processing 1 roll of 120 film, or 1 or 2 sheets of 4x5" film, only 150 ml of working solution is needed. For this to work, the JOBO reels are loaded only in their outer spirals.

### Fast heating

The extremely short heating phase is reached by temporarily overheating the water jacket during warm-up. The electronically controlled system assures accuracy when the process starts.

## **6.3 Details of Pre-set Programs**

The following process programs are pre-set at the factory:

No.	name	temp.	pre-warm	pre-wash	chem1	wash1	chem2	wash2	chem3	wash3	
1	E-6	38°C	7:00		6:30	2:30	6:00	2:30	6:00	4:00	
2	E-6 +1	38°C	7:00		8:30	2:30	6:00	2:30	6:00	4:00	
3	E-6 +2	38°C	7:00		12:00	2:30	6:00	2:30	6:00	4:00	
4	E-6 +3	38°C	7:00		14:00	2:30	6:00	2:30	6:00	4:00	
5	E-6 -1	38°C	7:00		4:30	2:30	6:00	2:30	6:00	4:00	
6	Cleaning										
7	C41 3B	38°C	7:00		3:15		6:00	1:00	6:00	4:00	
8	C41 3B+1	38°C	7:00		3:45		6:00	1:00	6:00	4:00	
9	C41 3B+2	38°C	7:00		4:30		6:00	1:00	6:00	4:00	
10	Cleaning										
11	C41 2B	38°C	7:00		3:15		*		6:00	4:00	1=CD 2=Empty 3=BX
12	C41 2B+1	38°C	7:00		3:45		*		6:00	4:00	1=CD 2=Empty 3=BX
13	C41 2B+2	38°C	7:00		4:30		*		6:00	4:00	1=CD 2=Empty 3=BX
14	Cleaning										
15	C41 2B	45°C	7:00		2:00		*		4:00	2:00	1=CD 2=Empty 3=BX
16	C41 2B+1	45°C	7:00		2:20		*		4:00	2:00	1=CD 2=Empty 3=BX
17	C41 2B+2	45°C	7:00		2:50		*		4:00	2:00	1=CD 2=Empty 3=BX

18	Cleaning									
19	B/W 5	ATC20		5:00	5:00		1:00		6:00	4:00
20	B/W 7	ATC20		5:00	7:00		1:00		6:00	4:00
21	B/W 9	ATC20		5:00	9:00		1:00		6:00	4:00
22	B/W 11	ATC20		5:00	11:00		1:00		6:00	4:00
23	B/W 13	ATC20		5:00	13:00		1:00		6:00	4:00

\* Bottle 2 not used!!

#3 E-6 +2 38°C' indicates that process 3 has been selected, an E-6 process with a two stop push running at 38°C. If the processor is in 'Temp' mode, the selected process can be changed within the same group. For example E-6 or C-41 2-Bath are two separate groups.

As the process proceeds, the LCD panel will indicate the step in progress as follows: 'Preheat 5:00' indicates the processor is in the preheat stage, and 5 minutes still have to run. 'Chemical 1 3:15' indicates the processor is in the first chemical bath stage, and there are 3 minutes 15 seconds left to run. The time indication will count down as the process step proceeds. (Press F1 to display the running process)

**Note:**

The wash water is heated up automatically to the process temperature. The wash water is changed at minimum every 40 seconds including filling and emptying. This ensures efficient rinsing and reduced water consumption.

**6.4 SET-MENU: Changing Process Times, Options**

The process selected, the process temperature, the individual times of each process and the language can be modified using the 'SET' mode.

- To enter 'SET' mode, press F1 and
  - ↵ . The display will show SET: ↵, Escape: F1
- Press
  - ↵, and the display will show **Process data** (By pressing the "down arrow" button you can select the language used in the display. Pressing the "Down Arrow: button again brings you to the **OptionMenu.**)
- In the **Process Data** menu, press the
  - ↵(Enter) key again. One of the 24 process channels will be displayed. The cursor can be advanced horizontally with the ↵(Enter)button and the values (process number, temperature and time) can be changed with the "Up Arrow" and "Down "Arrow" buttons. The temperature can be adjusted to ATC 20,

ATC 24, 35 degrees C and 45 degrees C. (ATC stands for automatic temperature conversion and is used for b/w film processing.)

- Values are confirmed by pressing  
↵(Enter) which then advances you to the next adjustable space within the current step of the process.
- Set the cursor on the first digit and select steps with the "Up Arrow" or "Down Arrow" buttons.
- Press F1 to escape the SET-mode.

The available processing steps are as follows:

Preheat  
Pre-wash  
Chemical 1  
Wash 1  
Chemical 2  
Wash 2  
Chemical 3  
Wash 3

A pre-wash of 5 minutes is generally preferred for B&W processing, a pre-heat of 7 minutes for all other processes (changing them is not recommended).

#### **Pre-wash versus pre-heat**

Pre-wash immerses the film in a single rinse of water for the programmed time. If it were used with a color process, it could cause a very slight color shift. But using it for B/W film helps to prevent the contrast from getting too high due to the constant agitation of rotary processing.

Pre-heat rotates the tank in the water bath, but with no liquid inside the tank for the programmed time. Its purpose is to raise the temperature of the tank, reel, and film so they will not chill the developer when it flows into the tank.

The ATL-500/800 will only use a single pre-wash quantity, irrespective of the pre-wash time. Rinses, however, are changed every 40 seconds, as follows:

Up to 40 seconds - no change (one rinse)

Up to 80 seconds - one change (two rinses)

120 seconds or longer - two changes (three rinses)

Final washes consist of three changes (four rinses) for wash times between 160 and 200 seconds, and four changes (five rinses) for wash times longer than 200 seconds.

- Special changes can be activated under **options**. As of this writing, the only option available is the alignment of the horizontal position of the lift arm.  
Press

↵(Enter) and the display will show **Pos. lift arm** ↵. Press ↵(Enter) to continue with the alignment. Make sure the processor itself is level before continuing. The lift arm will move up and down and then stop at what it expects to be the horizontal position for normal processing activity. Put the big tank on and check it with a level. If it needs to be raised or lowered to achieve a true horizontal position, press the "Up Arrow" or "Down Arrow" buttons. After you press the arrow buttons once, the lift arm will raise and lower to a new position. Continue to adjust the lift arm using the arrow keys until it is level. Then press the ↵(Enter) button to confirm its position. Now press **F1** to exit this option menu.

#### **6.5 About Temperature and Process Changes**

The ATL-500/800 is pre-programmed to process color at 38° C and 45° C, and B&W at 20° C. If you wish to change from a process using a temperature of 38° C or 45° C, to a B&W process, then a cleaning program needs to be used. This is available as process No. 6,10, 14, 18 or 24, and can be selected using the "Up Arrow" or "Down Arrow" buttons. Attach a large tank without reels to the lift arm and fill the bottles with 700 ml of clean water.

This process will empty the chemical bottles in the water jacket, drain the water jacket and empty pre-warmed rinse water. When the next process is started, the processor is refilled automatically with cold water ready for the new temperature process.

#### **6.6 Changing Process Temperature**

To set the temperature:

- Enter SET mode by pressing F1+  
↵.
- Advance the cursor through the fields until the temperature field is blinking.
- Use the

"Up Arrow" + "Down Arrow" buttons to select ATC 20, ATC 24, or any temperature between 35° C and 45° C.

- Confirm by pressing

↵.

- Then press F1 three times to exit the SET mode and return to the operating mode.

### **6.7 Selecting Languages for the LCD**

- Enter the SET mode by pressing F1+

↵. The display will show: SET: ↵, Escape: F1.

- Press

↵ (Enter) and use the "Up Arrow" + "Down Arrow" buttons to select from French, ( F; Langue), Spanish (E; Idioma), Italian (I; Lingua), German (D; Sprache), or English (GB; Language).

- Press

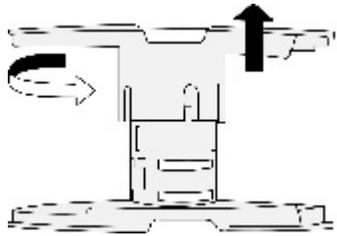
↵ to confirm.

- Then press F1 three times to exit the SET mode and return to the operating mode.

## 7. LOADING TANKS AND REELS

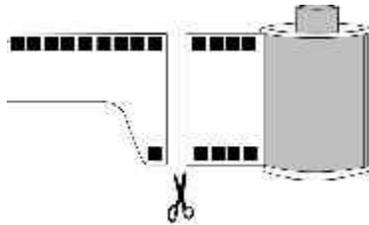
### 7.1 Loading the Processing Tank:

The #2502 film reels provided can process both 35mm and 120/220 roll films. Two 120 films can be processed simultaneously by using the DuoClip. The reel can be set to the film width required by turning either half counter-clockwise, setting the correct width, and locking the reel back together by turning clockwise.

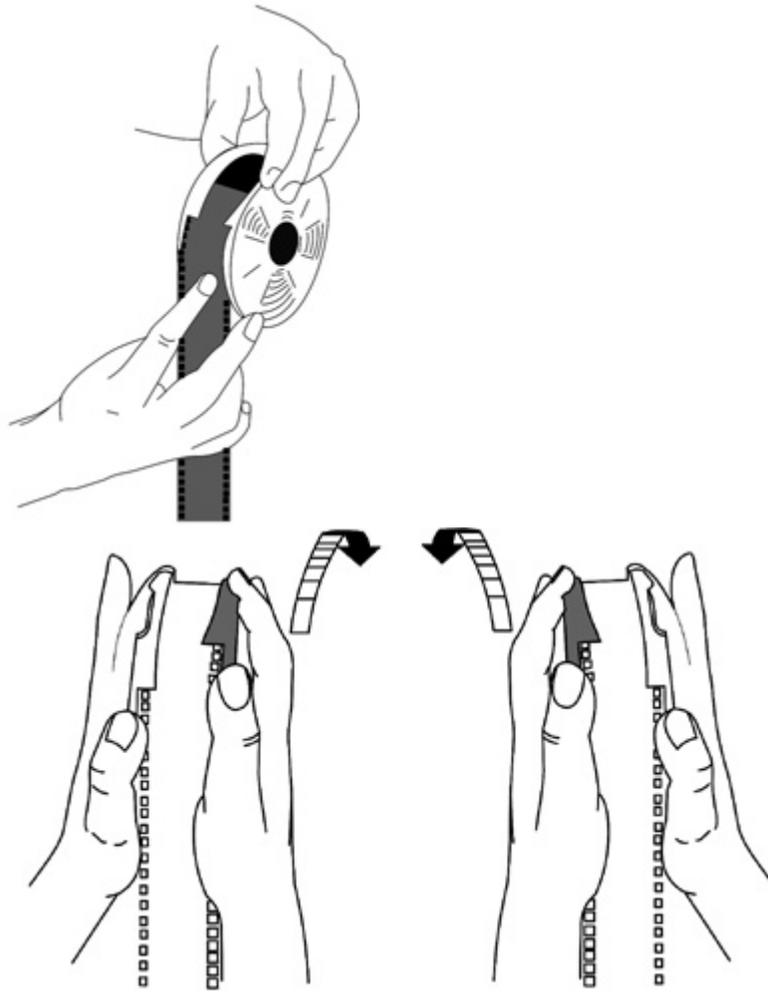


Now, in total darkness:

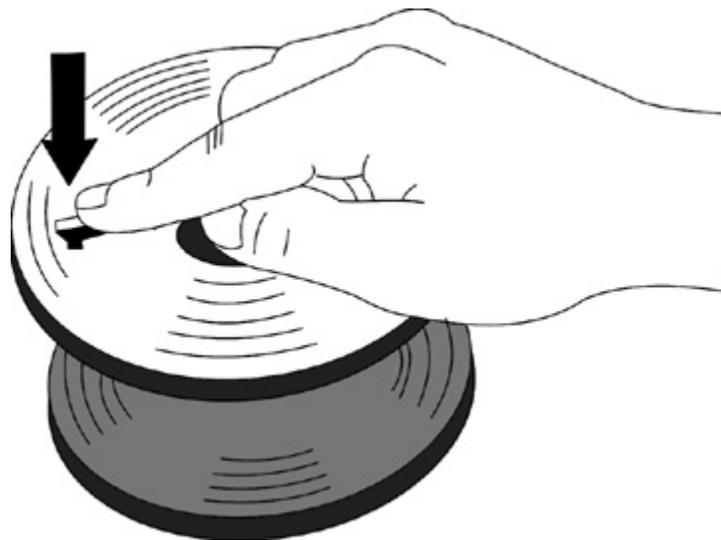
- Cut off the end of 35mm film at right angles. With 120/220 film, remove the paper backing. Then snip off the corners on the lead end of the film.



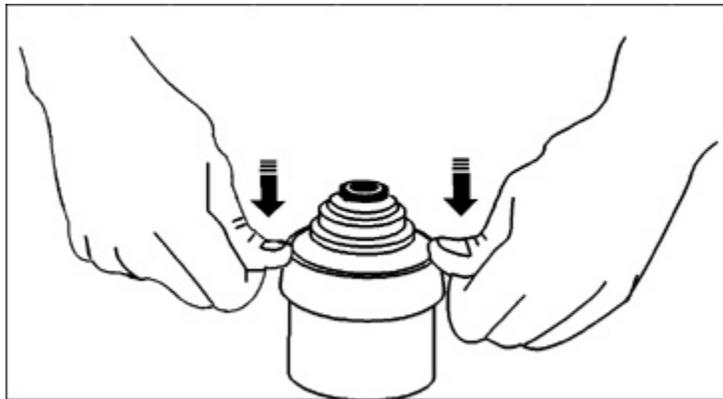
- With the emulsion side inwards, introduce the film into "mouth" of the reel until it is past the recessed section of the reel. (The "window")
- Put your right hand finger on the film edge protruding through the window. Turn the right hand side of the reel away from you until it stops. Lift your right hand index finger and repeat the operation with the left side of the reel and your left-hand index finger. By turning the reel halves alternately, load the film completely into the reel.



- If two 120 roll films are to be processed, press the DuoClip into position, after loading the first roll, to separate the two films, and load the second film in the same way as the first.



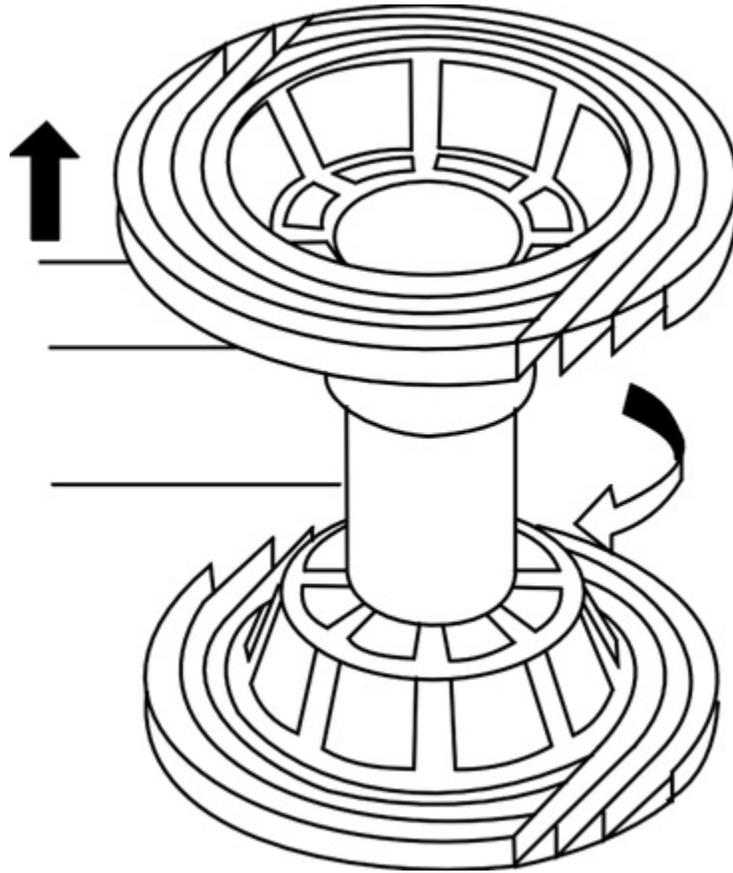
- Place the loaded reels onto the center core of the tank, and place them in the tank ensuring, that the larger inside-diameter of the center core is towards the lid of the tank, and the larger outside diameter of the center tube at the bottom of the tank.
- Place the cover on the tank, ensuring that the funnel is positioned in the top of the center core, and the locking ring is in the upward position.
- With both hands, press down on the red locking ring until it clicks into place, locking the tank cover. Check to be sure that it is tight, by twisting the lid.



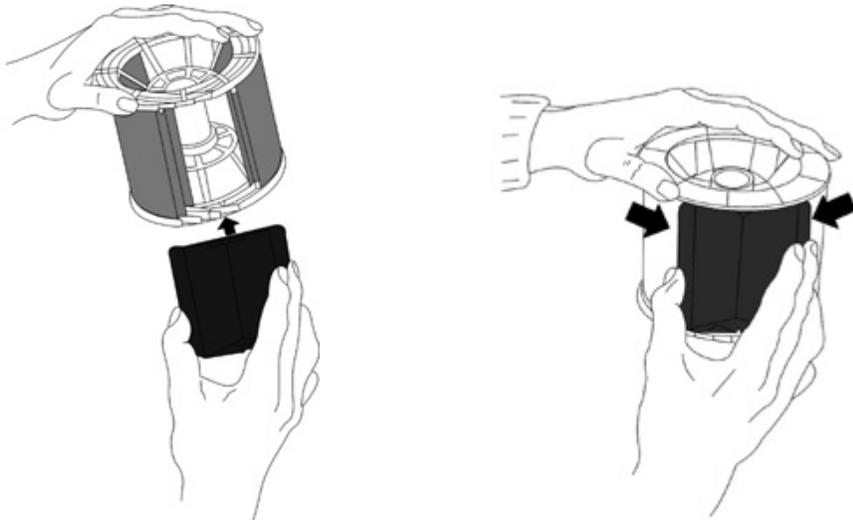
- Switch on the room lights.

## **7.2 Loading Sheet Film**

Sheet film can be processed in the ATL-500/800 using the sheet film reel, #2509n. This reel can be adjusted to suit 6x9cm, 9x12 cm and 4x5 inch formats in essentially the same way as the #2502 film reel. While sheet films can be loaded manually, it is recommended to use the optional sheet film loader, #2508, along with film templates #2510 for 6x9cm, #2511 for 9x12 cm, and #2512 for 4x5inch film.



After inserting the all the film into the spirals of the reel, attach the black panels to lock the film into place. It is essential to use these panels when processing 9x12cm and 4x5 inch films to assure the best possible results. 6x9cm film does not need the panels.



## **8. PROCESSING IN THE ATL 500/800**

### **8.1 38°C and 45°C Processes**

Switch on the ATL. The processor will automatically perform a self-check. When this is complete, the LCD display will show the previously used process number and type. All displayed digits will blink on and off. Then, using the "Up arrow" or "Down arrow" buttons, select the required process number and type.

### **8.2 Auto-Start and Standby Modes**

The ATL 500/800 now offers you two alternative modes of operation:

- **Auto-Start** -- Start the process with the tank coupled to the processor. In this case, the typical warm-up time from room temperature to 38°C will be approximately 15-20 minutes.
- **Standby Mode** -- Temper the water jacket first. Coupling the tank and adding solutions later. In this case, tempering time will be reduced to approximately 10-15 minutes.

Auto-Start: Mount the loaded tank to the processor by coupling it to the lift arm. Fill the chemical bottles with the correct amount of solution using a graduated cylinder as follows:

Small Tank

- 1x 135 150 ml

Big Tank

- 1x 120 150 ml
- 1-2 sheets of 4x5" film 150 ml
- 2x 120 300 ml
- 2x 135 300 ml
- 3-6 sheets of 4x5" film 300 ml

On the ATL-800 you can also select the easy-fill technique, when using the chemicals in the upper supply bottles. Just open the taps and let the solution fill into the bottles until one half of the level indicator turns black for 150 ml or until the whole indicator turns black for 300 ml. Then close the taps.

### **Press the 'START' button**

- **Select 'big' or 'small' tank using the "Up Arrow" or "Down Arrow" buttons**
- **Press the 'START' button again.**

The processor will start heating the water, chemicals and tank, and 'START' will blink. As soon as the correct process temperature is reached in the first chemical bottle, the process will start automatically and finish with the final wash.

After pressing ↵ (Enter) the tank will stop rotating, the lift arm will rise, and the tank can be removed from the processor. The processor will then remain in its waiting position, with the heater switched off and the LCD display flashing. If no further processing is planned, the ATL-500/800 can be switched off using the main power switch. The film can then be removed from the reel, and stabilized in a separate container for one minute. The film should then be wiped using a clean squeegee (such as the JOBO #3350 Film Wiper) and hung up to dry, preferably in a closed film dryer (such as the JOBO #3523 Mistral II.)

**Standby Mode:** This is a suggested mode of operation to allow the ATL-500/800 to be prepared for processing before a tank is loaded. The application here would be a photographer who wanted the unit to be ready for immediate processing after photography.

- Fill the chemistry bottles with an appropriate amount of solution. (Make sure to close the bottle caps firmly.) Switch on the ATL-500/800.



- The processor will automatically perform a self-check. When this is complete, the LCD window will show the previously used process number and type. All displayed digits will blink on and off.
- Using the "Up arrow" or "Down Arrow" buttons, select the required process, and confirm using the ↵ (Enter) button.
- Select either the big or small tank by using the arrow buttons.
- If the temperature is less than 22.1°C, the temperature will flash.
- Press ↵ (Enter) to activate the Standby Mode. The wash water and chemistry will now temper, and the ATL-500/800 will enter the standby mode, awaiting tank connection.
- Connect the tank to the processor lift arm.



•

Press the START button. The tank will rotate during a 5 to 7 minute pre-warm cycle, and then the process will start automatically.

**Note:** The chemicals and tank should not be pre-warmed outside the processor. Mounting the tank, filling in chemicals and pressing 'START' should be done in a quick sequence. When operating in standby mode, the water jacket is tempered continuously. To avoid excess energy consumption, this mode should not be used continuously.

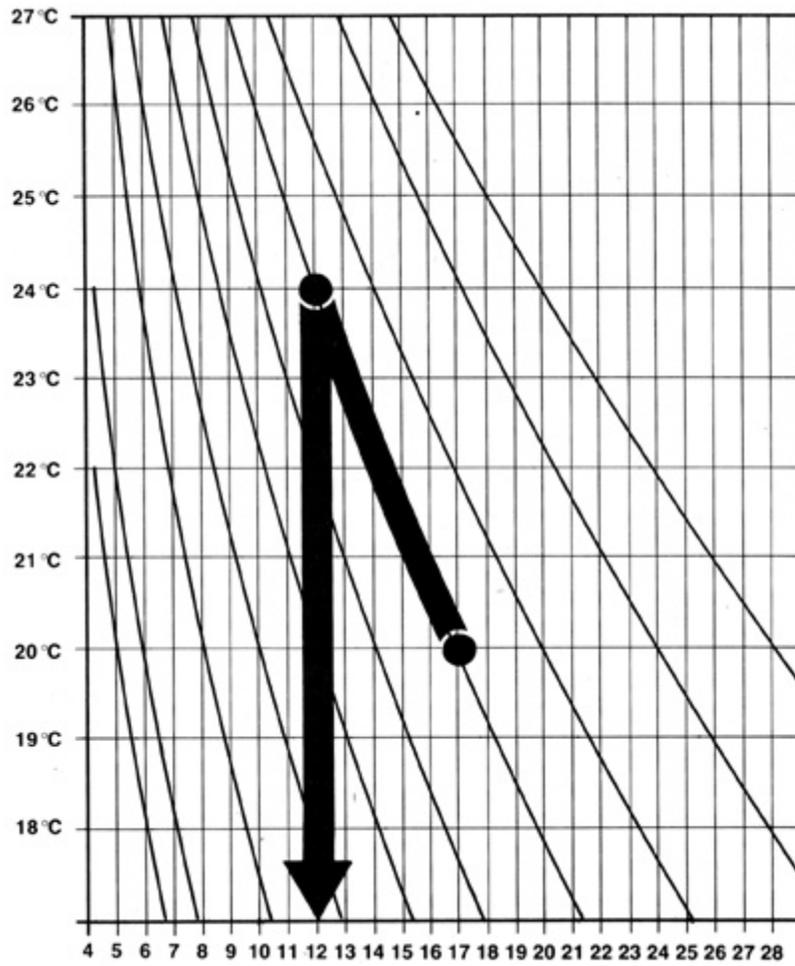
-

**Filling the chemical storage bottles:**

Make sure the bottle caps are closed firmly, as air pressure is used to transport the chemicals to the tank.

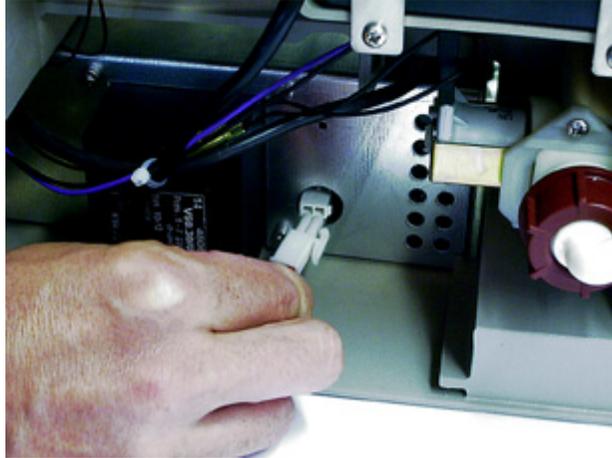
**8.3 20°C and 24°C B/W Film Processing (ATC)**

The ATL-500/800 continuously measures the temperature of both the wash water and the chemistry for the 20°C and 24°C processes. If either of these is higher than the selected process temperature, the ATL-500/800 will automatically increase the process temperature to the higher measured temperature. It will start the process once the chemistry in bottle 1 and the wash water are all at the correct temperature. The developer time will then be modified according to the time and temperature curves shown below. This function is ATC, automated temperature conversion.



The maximum allowable temperature difference is +4° C from the selected process temperature. If the difference is higher, the process will stop, displaying: "out of range". Select a 24° C process instead of a 20°-process, if 20°C-process is out of range.

## 9. BATTERY BACKUP



If the power fails during a process run, a built-in battery backup system will ensure the process continues to the end, providing at least one chemical bath has been started. It should be noted that while the battery is powering the processor, the heater is not in operation. This means that all-subsequent chemical baths, the water-jacket, and wash water will gradually cool following the power interruption, and there *could* be a reduction in process quality. Generally temperature accuracy requirements become more tolerant with each step of the process. An '!' will appear in the display during battery operation

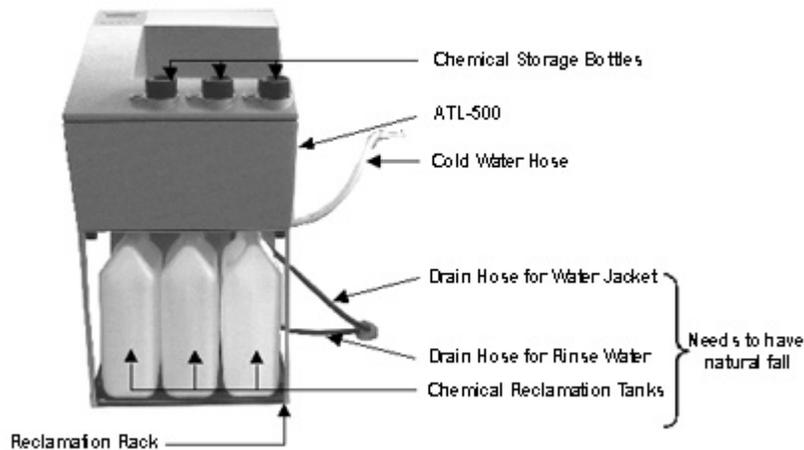
The battery is maintained in a charged state and is ready for use at any time. It requires no maintenance, and life is expected to be in the order of six years. If the processor needs to be switched off during the process or while powered by the battery, this can be done by pressing RESET ("Up Arrow"+"Down Arrow"+F1 simultaneously).

## 10. OPTIONAL RECLAMATION RACK

The ATL-500/800 allows for separate collection of used chemicals using the optional reclamation rack, Item No. 4245 (included with the ATL-800). This provides storage for up to 5 liters of each of the chemical baths in translucent containers. It consists of a sturdy metal frame, which can be placed on a level floor or hung on the wall by means of 3 mounts. These need to have a minimum carrying capacity of 25kg (55 lbs.) each, and the unit needs to be mounted so that it is absolutely level.



The processor should be positioned with the feet in location holes in the reclamation unit. The drain outlets for the three chemistry baths connect with the storage containers without the need of interconnecting hoses. Drain hoses for rinse water and the water jacket must be connected. When lowering the processor, take care that the outlets of the processor align to the tubes of the reclamation rack.



## 11. MAINTENANCE

The ATL-500/800 unit requires little maintenance. If the unit is not used for some time, it is wise to perform a cleaning program before processing film. Use a coupled tank without reels and fill the bottles with 700ml of clean water. The unit should be stored with all water drained out. The outside of the unit may be cleaned, but use a damp cloth only. Do not put the unit under running water for cleaning, do not use caustic detergents, and make sure no cleaning fluids enter the unit via the ventilation slots.

## 12. SHIPMENT OF PROCESSOR FOR SERVICE

- Before shipping, close the water tap and carry out a cleaning program with a tank connected (fill all the chemical bottles with 700ml of water)
- Switch off the unit and disconnect the power cable
- Disconnect all of the chemical and water hoses as well as the cold water pressure hose from the bottom of the unit.
- Slowly lift the processor on the left side and turn it completely to the right side. The water will drain out of the system.
- After a few minutes lift the processor according to the picture below so that any remaining water can escape through the ventilation slots at the top rear of the processor. This prevents penetration of water which might cause damage to electronic parts in the processor during shipping
- If the unit is completely empty it can be packed for shipping.
- If shipping will involve freezing temperatures, remove any remaining water in the solenoid valve by draining it completely.



### 13. ERROR MESSAGES

The ATL-500/800 performs a self-test each time it is switched on. If an error occurs during the self-test, the display will indicate an abbreviation of the error. If an error occurs during a process, the LCD display will alternately display an error indication number.

No.--Indication --Cause --Remedy

1. WATERJACKET PUMP Water jacket pump defective. Needs to be replaced, inform service department.
2. RINSE WATER PUMP Rinse water pump defective. Needs to be replaced. Inform service department.
3. AIR DISTRIBUTOR Air distributor defective. Inform service department.
4. DRUM NOT RAISED Lift arm defective. Inform service department.
5. WATERJAC. SENSOR Water-jacket sensor needs to be replaced. Inform service department.
6. RINSE WATER SENS Rinse water sensor defective Needs to be replaced, Inform service department.
7. CHEMISTRY SENSOR Chemistry sensor defective Needs to be replaced, Inform service department.
8. WATER SUPPLY? No water entering the processor. Open water tap.

- **CHEMDISTRIB** Used chemistry distribution error: If the self-test shows an error in the distribution of used chemistry, the self-test procedure will be interrupted, and the error indicated on the LCD. The user, however, has the option of ignoring the error by pressing ↵(Enter). The self-test will then continue, and processing can take place. If this happens, used chemistry may not be routed to the correct disposal drains.

- **Water jacket empties slowly during processing**

. Either the drain valve has become dirty or the lift arm is constantly pressing on the valve lever. Here's how the valve works: The overflow valve (at the right side in the unit) is pressed on the bottom of the unit by means of a spring. In case this overflow valve, which is a tube, gets out of position, the seal will leak. Remedy: Agitate the valve lever so that dirt in the valve area is cleaned away. In case the lift arm is out of position, select SET menu (see section 6.4); options; adjust the lift arm and follow the next paragraph.

- **Loss of original calibration in the electronics.**

(The battery has lost power, or p.c. board was exchanged) The ATL-500/800 automatically recalibrates itself during the self-test. Part of this recalibration is to determine the distance between lift arm and overflow tube support. When this is 2 - 4 mm, it is correct. If the distance is not correct, the operator can adjust this setting by using the "Up Arrow" or "Down Arrow" keys.

**Difference in the volume of used and collected chemical solutions:** The drain hoses for wash water and the water jacket must be positioned to guarantee an absolutely free flowing outlet.

## **14. DEVELOPING FAULTS**

### **Trouble, Cause, Remedy**

Streaks –

- Not enough solution. Check the filling quantity of solutions
- Processor is not level. Check with a level.
- Tank is not dry. Use only dry tanks, reels and lids.

Light fog.

- The center core is missing; always use a center core.
- The light trap funnel missing; insert a light trap funnel