

**Thank you for downloading this pdf file of our catalog.  
The file is fairly large so the download will take a few moments.  
Once you've downloaded the file however, you can use your Adobe  
Acrobat Reader plug-in to easily navigate to your area of interest and  
print out the information you need. You may even print the entire catalog or  
save it to a file for future reference. You can use the “bookmarks” to more  
easily find the info you want. For details on using your Acrobat Reader plug-in,  
please consult the help file in Acrobat reader.**

# Selecting a Treatment System

Outlined in the Silver Recovery Selection Guide is the expected silver discharge from various combinations of silver recovery processes. Please keep in mind that the expected results are based on actual and laboratory performance data and properly maintained systems that are operated within recommended specifications. Also, consider that the results are from "source-point" testing, directly exiting our recovery systems. Much lower silver discharge numbers will be registered if a 24 hour composite sample is collected at the facility's main drain.

## Silver Recovery Selection Guide

SOLUTION TYPE and TREATMENT LEVEL	EQUIPMENT TYPE								COMMENTS
	Electrolytic			Ion-Exchange (Steel Wool)			Ion-Exchange (Resin)	Optional	
	RU, ARU, ARU-7B, ABS	ARU-7R, ARU-11R, or ARU-21R	ML-25B	Vaults, RePAC-10, or RePAC-20	ATS-2, Big Wooley, or Hi Flo-II	METS with RePACs	In-Situ 2, 4, 7.5, or 15 (GPM)	Neutralization Chamber	
Fixer < 5 ppm*	X			X				X	Under 0.5 GPD use RePAC-10
Bleach-Fix < 5 ppm"			X	X					Under 0.5 GPD use Vault-I
Fixer and Bleach-Fix c 5 ppm"			X	X					Under 0.5 GPD use Vault-I
Fixer and Bleach-Fix <1ppm*						X			N/A
Fixer and Wash < 5 ppm' (Treated Separately)	X				X			X	N/A
Fixer and Wash < 3 ppm' (Treated Separately)		X			X			X	N/A
Fixer and Wash < 0.5 ppm' (Treated Separately)	X						X	X	N/A
Wash Water Only < 0.25 ppm*		X					X	X	Developer and Fixer Hauled or Evaporated

### Notes

Medical and Graphic Arts

"Color Photographic Labs

\*\*Medical, Graphic Arts, and Color Photographic Labs

## IMG Silver Recovery Systems



**Automatic & Semi-Automatic Electrolytic Silver Recovery Units  
for the following applications:**

**X-Ray • Graphic Arts • Microfilm • B&W Photo Processing**

Reliable, state-of-the-art IMG electrolytic silver recovery systems from CPAC meet the environmental needs of any X-Ray, graphic arts, or photo processing facility. CPAC, Inc., a leading worldwide manufacturer of silver recovery systems, provides unsurpassed technical and compliance support to its customers. Our staff of chemists, engineers, and environmental specialists can help you select the ideal system to meet increasingly tougher regulations. Call CPAC today for the IMG silver recovery system that's best for your facility.

*Manufactured by*

**CPAC Equipment Division**

---

2364 Leicester Road • Leicester, New York 14481 • Telephone (716) 382-3223 Fax (716) 382-9481

# ARU (Automatic) and RU (Semi-Automatic) Silver Recovery Systems

The **ARU-7**, **ARU-11**, and **ARU-21** silver recovery units are completely automatic. Plating current is controlled and optimized as the silver concentration varies in the fixer solution. These units automatically increase plating current during peak operating periods to recover the maximum amount of silver, and to reduce current during slow periods to virtually eliminate sulfiding. The **RU-4 (Semi-Automatic)** features two-stage low/high plating current settings. Like all IMG electrolytic silver recovery units, the RU-4 has a rotating, cylindrical, heavy duty, reusable cathode. It can be operated in either batch or continuous mode applications.

Specifications	RU-4	ARU-7	ARU-11	ARU-21
Recovery Capacity Typical Application (8 hr/day 0.4 troy oz/gal)	0.5 Troy oz/hr 1.5 gal/day	0.75 Troy oz/hr 2.5 gal/day	1.5 Troy oz/hr 4 gal/day	3 Troy oz/hr 8 gal/day
Application Range	1 to 4 gal/day	1 to 6 gal/day	2 to 9 gal/day	4 to 14 gal/day
Tank Capacity	1.8 gal	5 gal	5 gal	9 gal
Dimensions (inches)	10 W x 10 D x 17 H	15 W x 15 D x 20 1/8 H	15 W x 15 D x 21 H	15 W x 15 D x 27 1/2 H
Cylindrical Cathode Size	5 1/2" Dia. x 6" H	8" Dia. x 4" H	8" Dia. x 6" H	8" Dia. x 12" H
Anodes	2 carbon	4 carbon	4 carbon	4 carbon
Dimensions (inches)	1 3/4 W x 1/2 D x 8 1/4 H	4 W x 1/2 D x 12 H	4 W x 1/2 D x 12 H	4 W x 1/2 D x 18 H
Net Weight	13 lbs	29 lbs	35.5 lbs	43.5 lbs
Shipping Weight	15 lbs	33 lbs	42.5 lbs	49.5 lbs
Electrical Specifications	115/230 VAC	115/230 VAC	115/230 VAC	115/230 VAC
Power Requirements	50/60 Hz 20 W max.	50/60 Hz 20 W max.	50/60 Hz 20 W max.	50/60 Hz 100 W max.
Typical Semi-automatic and Automatic Plating Range*	0.5 - 4.0 amps	0.2 - 7.0 amps	0.5 - 11.0 amps	1.0 - 21.0 amps

\* Tolerance typically  $\pm 10\%$

Minimum silver concentration 0.5 gm/l (0.056 Troy oz/gal) pH 4.5; max. silver concentration 5.0 gm/l (0.63 Troy oz/gal) pH 4.5

## Standard Features

MODEL	Semi-Automatic SRU	Automatic SRU	U.L.(1) Listed	Manual Bypass of Automatic Controls	Amp Meter	Locking Feature	Inlet/Outlet Fitting Size (2)	Inlet/Outlet Tubing Size & Length	Drain Fitting & Tubing Length	Adapting Kit Included	Power Head Sealed From Fixer Fumes	Heavy Duty Motor
RU-4	Yes	N/A	Yes	N/A	Yes	Yes	1/2"	1/2" ID - 10	N/A	Yes (3)	Yes	Yes
ARU-7	N/A	Yes	Yes	Yes	Yes	Yes	3/4"	3/4" ID - 10	1/2" - 32"	Yes (4)	Yes	Yes
ARU-11	N/A	Yes	Yes	Yes	Yes	Yes	3/4"	3/4" ID - 10	1/2" - 32"	Yes (4)	Yes	Yes
ARU-21	N/A	Yes	Yes	Yes	Yes	Yes	3/4"	3/4" ID - 10	1/2" - 32"	Yes (4)	Yes	Yes
(1) U.L. Listing 388T (2) Barbed hose fitting				(3) Two 3/4" hose clamps, one 1/2" x 1/2" insert coupler, one 1/2" x 3/4" insert reducer (4) Two 3/4" hose clamps, one 3/4" x 3/4" insert coupler, one 1/2" x 3/4" insert reducer								

## Questions?

Please call **CPAC/IMG** technical service at 800-477-1 **417** to discuss your specific requirements or for additional information on cartridges or other IMG systems.

## CPAC Equipment Division

2364 Leicester Road • Leicester, New York 14481  
Telephone (716) 382-3223 • Fax (716) 382-9481

Printed on Recycled Paper  
2/95-1



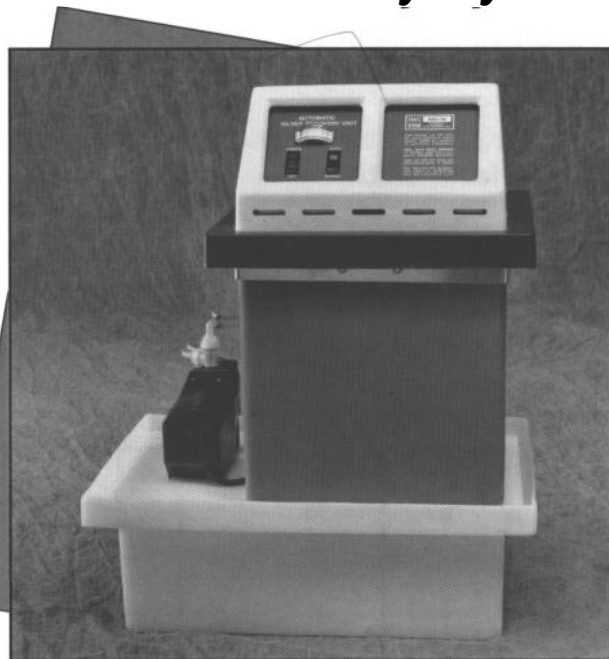
# ARU-7R™ and ARU-11 R™

---

## *Automatic Closed-Loop Electrolytic Silver Recovery Systems*

CPAC, the worlds leading manufacturer of silver recovery and pollution control systems, introduces ARU-7R and **ARU-11 R** for graphic arts and medical X-Ray applications. These systems utilize IMG's well-known, silver sensing electronics combined with closed-loop operation to efficiently desilver fixer in a processor's working fixer tank.

Each system includes a neutralization tank. The tank combines the developer, desilvered fixer, and wash water to maximize the natural dilution benefit, eliminate odors, and neutralize the total effluent.



ARU-7R



ARU-11R

### *Features and Benefits*

---

- Reduces silver content in wash water
- No interfacing with processor's electrical controls
- Can be used in terminal batch or **closed-loop** operations
- Includes a recirculation pump and a neutralization tank

Manufactured by

**CPAC Equipment Division**

2364 Leicester Road • Leicester, New York 14481 • Telephone (716) 382-3223 Fax (716) 382-9481

# ARU-7R™ and ARU-11 R™

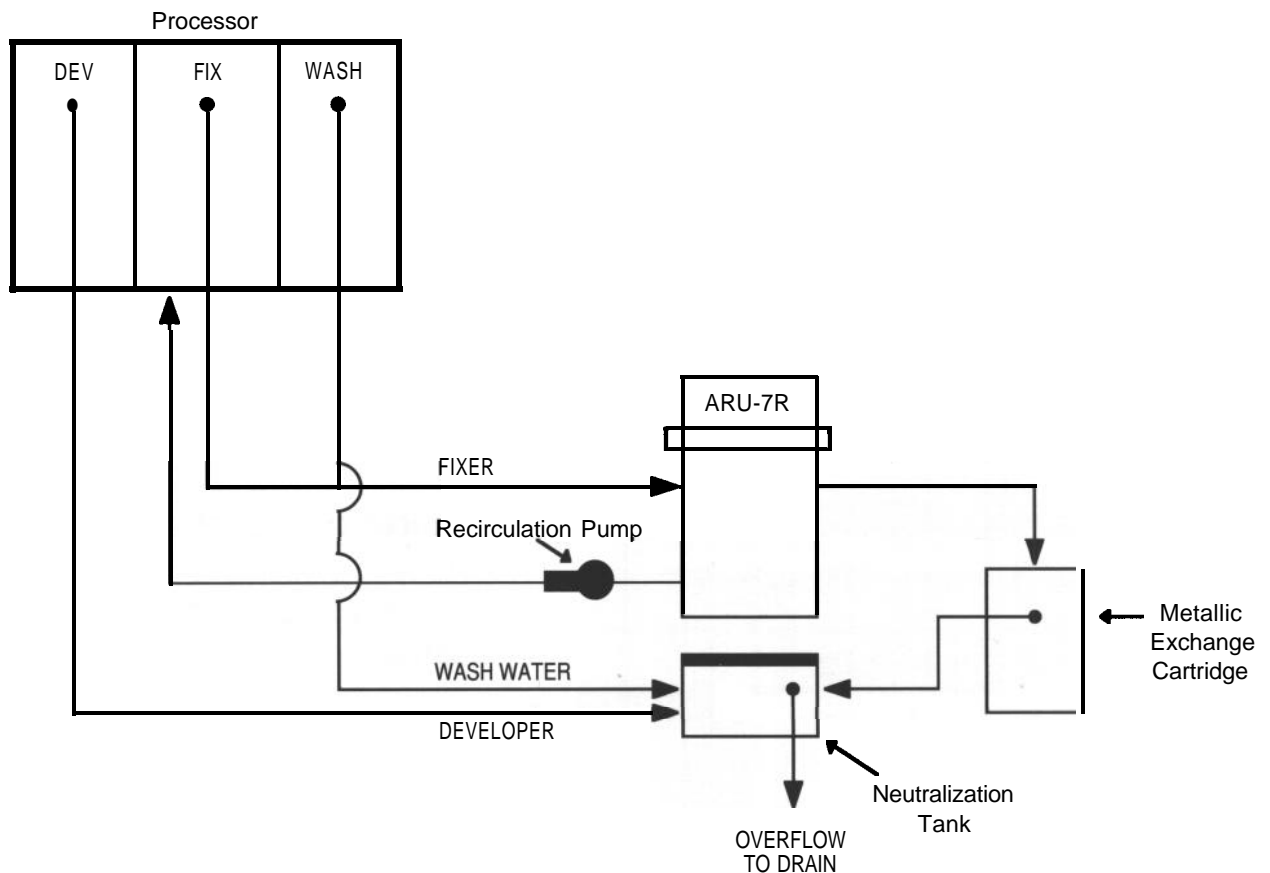
## Specifications

	<u>ARU-7R</u>	<u>ARU-11 R</u>
Application Range:	1 - 6 gallons per day	6 - 12 gallons per day
Recovery Rate:	0.75 Troy oz. per hour	1.5 Troy oz. per hour
Plating Current:	0.2 - 7 amps	0.5 - 11 amps
Cathode Size:	8" dia. x 4" H	8" dia. x 6" H
Holding Tank:	5 gallon	5 gallon
Electrical:	115/230 VAC, 50/60 Hz, 250W max	115/230 VAC, 50/60 Hz, 250W max
System Dimensions:	27 1/2" H x 17" W x 15" D	27 1/2" H x 17" W x 15" D
Shipping Weight:	60 lbs.	60 lbs.
U.L. Listing:	Pending	Pending

Materials of Construction  
for both Units:

Tanks: Polyethylene  
Electronics Covers: ABS Plastic  
Cathodes: Stainless Steel  
Anodes: Carbon

Expected Results: The total combined effluent exiting the neutralization tank will be less than 5 ppm, typically 0.5 ppm to 2 ppm.



## CPAC Equipment Division

2364 Leicester Road • Leicester, New York 14481  
Telephone (716) 382-3223 • Fax (716) 382-9481

Printed on Recycled Paper  
2/95-1

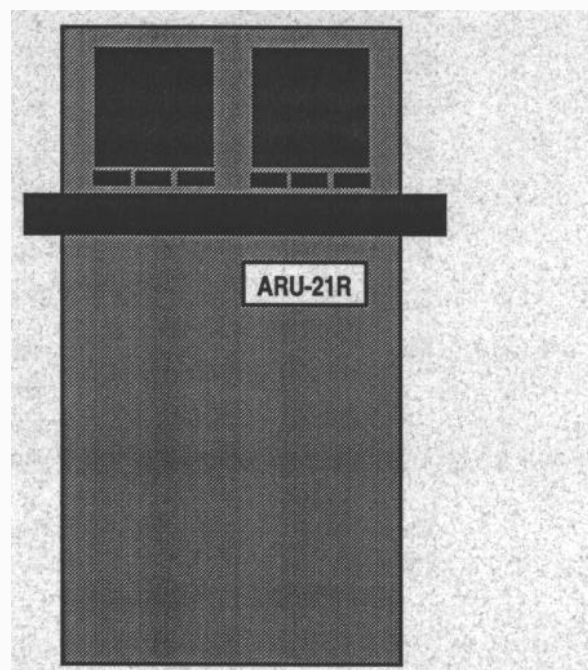


# ARU-21 R™

## ***Closed-Loop Electrolytic Silver Recovery System***

CPAC, the world's leading manufacturer of silver recovery and pollution control systems, introduces ARU-21 R. This unique electrolytic silver recovery system uses IMG's well-known, silver-sensing electronics combined with closed-loop operation to efficiently desilver fixer in a processor's working fixer tank.

The result is consistently high silver yields without sulfiding the fixer.



### ***Features and Benefits***

- Includes a recirculation pump
- Reduces silver content in wash water
- Ideal for multiple processor installations
- No interfacing with processor's electrical controls
- Can be used in terminal batch or closed-loop operations

*Manufactured by*

**CPAC Equipment Division**



# ARU-21 R™ Product Data

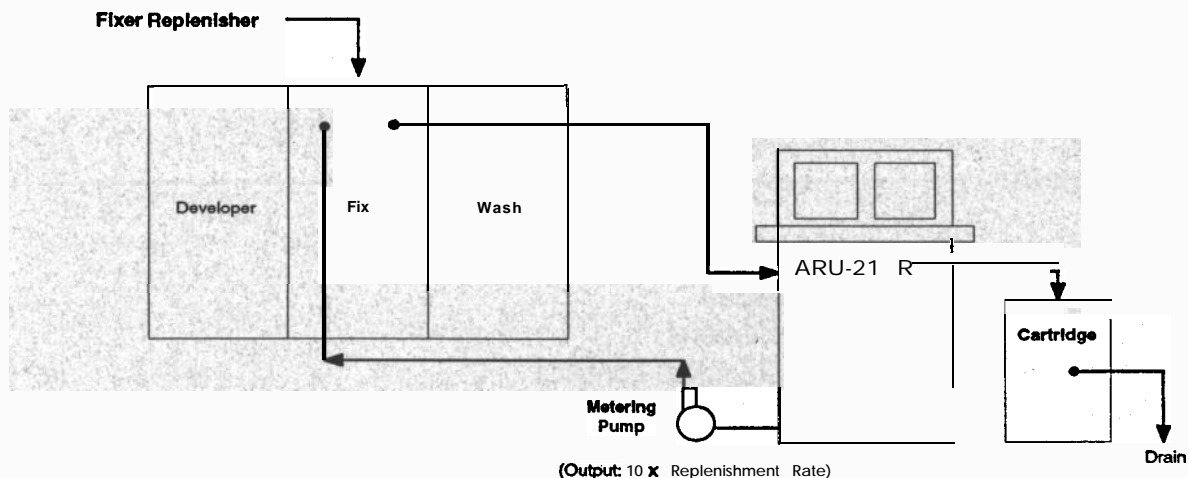
## Specifications

**Application:** Recommended for closed-loop fix circulation for processors that generate a maximum silver yield of 3 Troy oz. per hour. The ARU-21 R has three modes of operation: high desilvering, low desilvering and stand-by. The silver sensing circuit will choose the appropriate mode based on the amount of silver in the fix loop. Once the silver in the loop has been removed to the desired level (500 ppm), the unit will go to a stand-by mode. In stand-by, the unit will check the silver concentration every 15 minutes until there is enough silver to turn the unit on.

**NOTE:** The ARU-21 R can only be used with straight fix-no bleach-fix or **carry-over** bleach. For specific recovery efficiency and application information, call CPAC Technical Service at (716) 382-3223.

<b>Recovery Rate:</b>	<b>3 Troy oz. per hour</b>
<b>Plating Current:</b>	1 .0 --21 .0 amps
<b>Cathode Size:</b>	<b>8" dia. x 12" H</b>
<b>Holding Tank:</b>	<b>9 gallons</b>
<b>Electrical:</b>	115/120 VAC, 50/60 Hz, 1 OOW maximum
<b>System Dimensions:</b>	<b>27 1/2" H x 15" W x 15" D</b>
<b>Shipping Weight:</b>	<b>49.5 lbs.</b>
<b>U.L. Listing:</b>	Pending
<b>Materials of Construction:</b>	Tanks: Polyethylene Electronics Cover: ABS Plastic Cathode: Stainless Steel Anodes: Carbon

**Expected Results:** ARU-21 R silver recovery unit alone reduces silver content to 0.5 grams/liter (500 ppm).



CPAC Equipment Division  
2364 Leicester Road • Leicester, New York 14481  
Telephone (716) 382-3223 • Fax (716) 382-9481



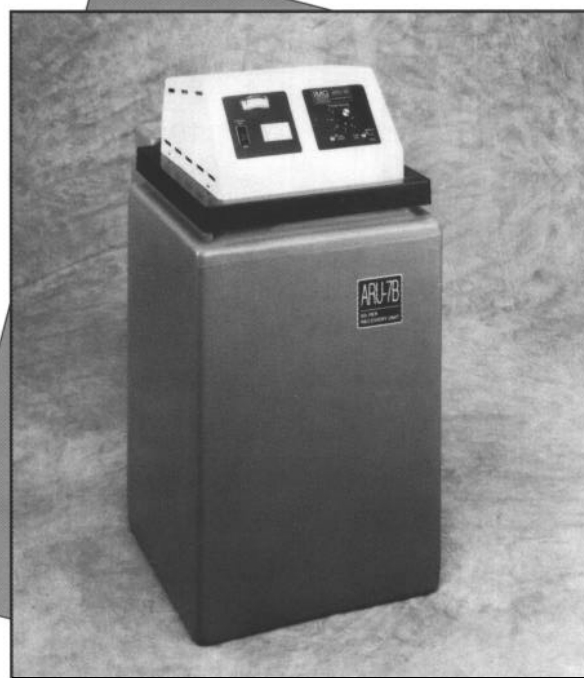
# ARU-7B™

---

## ***Batch Electrolytic Silver Recovery System for Fixer Applications***

CPAC, the world's leading manufacturer of pollution control systems, introduces ARU-7B. This unique electrolytic silver recovery system uses IMG's well-known, silver-sensing electronics combined with true batch operation to efficiently desilver all X-Ray, B&W photo and graphic arts fixers.

The result is consistently high silver yields and very low silver discharge, without sulfiding the fixer. When properly operated and used with high quality metallic exchange cartridges for secondary treatment (tailing), ARU-7B can reduce silver concentrations in your film processing effluent to 5 ppm or less.



### ***Features and Benefits***

---

- . Ideal for multiple processor installations
- . Processes up to 25 gallons (95 liters) per day
- . True batch processing ensures consistent desilvering
- . Automatically adjusts time and amp for each batch processed

*Manufactured by*

**CPAC Equipment Division**

**2364** Leicester Road . Leicester, New York 14481 . Telephone (716) 382-3223 Fax (716) 382-9481

# ARU-7B™ Product Data

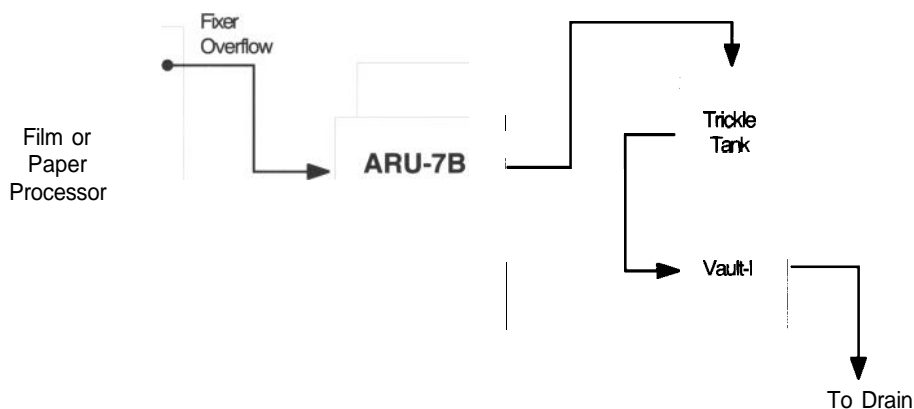
## Specifications

**Application:** Recommended for maximum of 25 gallons per day (24 hours).

Example: starting with a silver concentration of 0.36 Troy oz per gallon (3 grams per liter), ARU-7B will desilver fixer to 0.12 Troy oz per gallon (one gram per liter), then switch to low current for one hour to reduce silver concentration to 0.06 Troy oz per gallon (0.5 grams per liter) before pumping out.

*Note: Fixer formulations and starting silver concentrations vary greatly, For specific recovery efficiency, application information, and off-line fixer regeneration information, call CPAC Technical Service at 716-382-3223.*

<b>Recovery Rate:</b>	0.75 Troy oz. per hour (23 g/hr)
<b>Plating Current:</b>	2 to 7 amps
<b>Cathode Size:</b>	8" dia. x 4" H (20.5 cm x 10.2 cm)
<b>Batch Size:</b>	4.5 gallons (171)
<b>Holding Tank:</b>	10.5 gallons (401)
<b>Total Capacity:</b>	15 gallons (571)
<b>Batch Timer Range:</b>	0 to 6 hours
<b>Electrical:</b>	115 VAC, 50/60 Hz or 230 VAC, 50/60 Hz, 350W
<b>System Dimensions:</b>	16" W x 22" D x 32" H (40.6 cm x 55.8 cm x 81.2 cm)
<b>Shipping Weight:</b>	75 lbs. (165 kg)
<b>U.L. Listing:</b>	Pending
<b>Materials of Construction:</b>	Tanks: Polyethylene Electronics Cover: ABS Plastic Cathode: Stainless Steel Anodes: Carbon



CPAC Equipment Division

2364 Leicester Road . Leicester, New York 14461  
Telephone (716) 382-3223 . Fax (716) 382-9481

Printed on Recycled Paper  
1 1/94-2

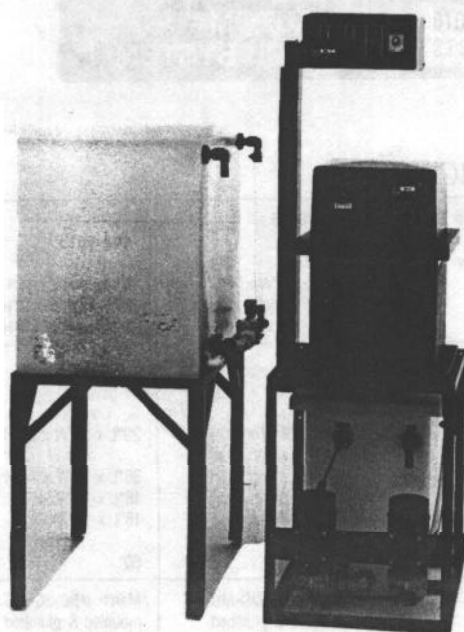


**IMG**IMG PHOTO  
PRODUCTS**ABS-6015  
ABS-9015****AUTOMATIC  
BATCH SYSTEM**

# AUTOMATIC BATCH SYSTEM FOR SILVER RECOVERY

## Ideal for Centralized Systems

## Easy to-use • Simple Controls • Increase Silver Recovery



### SYSTEM DESCRIPTION

The ABS-6015 and ABS-9015 are completely automatic batch systems for removal of silver from photographic fixer. The ABS systems include a controller, accumulation and cycle tanks, pumps and mounting stands for electrolytic silver recovery units. These systems provide a means of accumulating, desilvering and discharging fixer on a batch basis, and recording the number of batches desilvered. The ABS-6015 includes a 60 gallon accumulation tank; the ABS-9015 includes a 90 gallon accumulation tank.

The ABS systems are modular and flexible. The location of major system components can be varied to match your available space. Different sizes and numbers of silver recovery units can be used to provide the recovery capacity needed to match your operations. The controller can be mounted on the stand provided or on a nearby wall.

While the ABS systems are designed to use several different IMG silver recovery units, other silver recovery units can be used with the system, provided certain liquid level criteria are met. Check with your dealer or IMG for applications assistance.

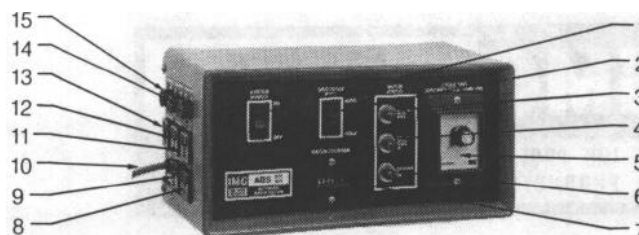
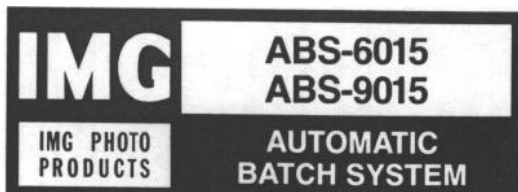
The ABS-6015 and ABS-9015 are cost effective systems to monitor and help comply with pollution control requirements.

Unit is preplumbed, complete with all fittings, electrical interconnections and plugs, accumulation tank, cycle tank and with pumps installed. All interconnections, electrical cables, plugs and sockets prewired at the factory and ready for fast, easy installation.

Note: ABS-6015 and ABS-9015 do not include a silver recovery unit as shown in photo above

### AUTOMATIC OPERATING SEQUENCE

1. For typical applications, system collects a minimum of 13 gallons of fixer in the accumulation tank, either gravity fed or pumped from processor(s). For special applications using very large silver recovery units, system must collect a minimum of 30 gallons or more for each batch. In all applications the system functions automatically.
2. Lower float switch in empty cycle tank opens, which then opens motor valve on accumulation tank.
3. Approximately 13 gallons of fixer flows by gravity from accumulation tank into cycle tank. When cycle tank is full, upper and lower float switches close. Motor valve closes. SRU and cycle pump turn on and stay on for period set on controller timer.
4. SRU and cycle pump turn off at end of time period. Timer automatically resets itself for the next batch.
5. Discharge pump turns on automatically and desilvered fixer is pumped out to a final holding tank or thru cartridge to drain. Discharge cycle may be set on HOLD, to allow operator to test silver concentration of fixer in cycle tank before final discharge to drain.
6. When cycle tank is empty, lower float switch opens, motor valve on accumulation tank opens, and cycle automatically repeats.
7. The controller includes a batch counter which counts each cycle at the end of the discharge step.
8. The controller includes batch status indicator lites which show the operating step currently in process.
9. All batch steps are interlocked to prevent one function from interfering with another.



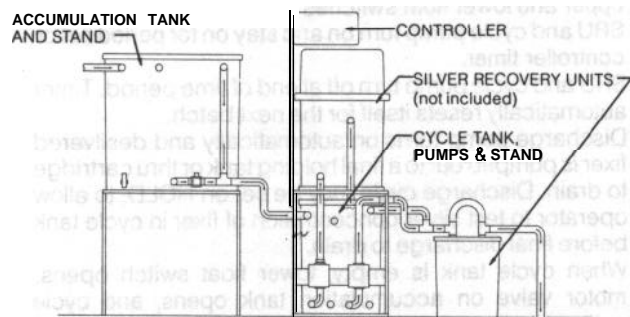
## SPECIFICATIONS

Accumulation Tank and Stand Liquid capacity Tank size Stand size Overall size	<b>ABS-6015</b> 60 gallons 36"L x 20"W x 20"H 36"L x 24"W x 24"H 36"L x 24"W x 44"H	<b>ABS-9015</b> 90 gallons 36"L x 24"W x 24"H 36"L x 24"W x 24"H 36"L x 24"W x 48"H
Cycle Tank and Stand Liquid capacity Stand size, w/ standard SRU mount (1 SRU) Stand size, w/ optional SRU mount (2 SRU) SRU mount shelf Optional SRU mount shelf Overall height w/ ABS controller	15 gallons 29"L x 18"W x 24"H 36"L x 18"W x 24"H 18"L x 17"W 18"L x 17"W 60"	15 gallons 29"L x 18"W x 24"H 36"L x 18"W x 24"H 18"L x 17"W 18"L x 17"W 60"
Pumps	March #BC-3C-MD mounted & plumbed	March #BC-3C-MD mounted & plumbed
Electrical	115VAC, 60Hz 3.5A, 400W	115V, 60Hz 3.5A, 400W
<b>Weights (approximate)</b> Empty, accum tank/stand Empty, cycle tank/stand Operating wt. accum tank/stand Operating wt. cycle tank/stand (with 1 RU-21 SRU) Operating wt. total system (with 1 RU-21 SRU) Shipping wt., ABS controller, tanks, stands and pumps	60 lb 75 lb 575 lb 325 lb 900 lb 165 lb	80 lb 75 lb 865 lb 325 lb 1190 lb 190 lb

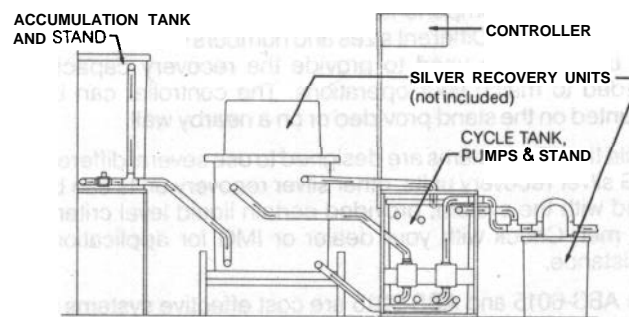
## ABS CONTROLLER

1. System power on/off
2. Discharge pump auto/hold. When on hold, system will not pump out automatically at end of time period
3. Motor valve indicator lite turns on when valve open
4. SRU/cycle pump indicator lite turns on when SRU and cycle pump operating
5. Cycle timer can be set to operate system for any time up to 12 hours. Automatically resets at end of time period to the time originally set
6. Discharge pump indicator lite turns on when pump operating
7. Batch counter to record number of batches processed; advances at end of each discharge cycle
8. Power socket for optional second SRU
9. Power socket for optional second cycle pump
10. Main power cord
11. Power socket for SRU
12. Power socket for cycle pump
13. Power socket for discharge pump
14. Sockets for upper and lower float switch connectors
15. Socket for motor valve connector

### ABS 6015 TYPICAL APPLICATION (30-60 gal/day user)



### ABS-9015 SPECIAL APPLICATION (60-200 gal/day user)



## HOW TO ORDER

Contact IMG's Authorized Dealer, or  
**IMG Photo Products -A CPAC Company**  
 2364 Leicester Road  
 Leicester, NY 14481  
 Phone (800) 477-1417 Fax (800) 944-2721

## AUTHORIZED DEALER

EXCELLENT PRODUCTS AND EXCELLENT DEALERS INSURE EXCELLENT SERVICE

# ML-25B<sup>T</sup>

---

## *Automatic Batch Electrolytic Silver Recovery System*



ML-25B helps...

- **Minilabs**

- Professional Labs

- Commercial Labs

- School Finishers

to meet pollution control  
standards for environmental  
compliance

- Fully automatic electrolytic silver recovery system for all types of fixer used in photo finishing: C-41, B&W, E-6, bleach-fix, and bleach-fix NR with or without low-flow wash, plus silver bearing solutions from **washless** stabilizers.
- All functions are controlled by a programmable microprocessor providing truly automatic operation.
- Produces high quality silver flake of up to 96% purity on its reusable, rotating, **cylindrical** stainless steel cathode.
- Utilizes a programmable automatic two level plating amperage system to desilver solutions to an extremely low silver concentration, aiding in pollution abatement.
- Status indicating **LEDs** display the exact stage of system operation.

*IMG Silver Recovery Equipment is manufactured by*

**CPAC Equipment Division**

---

2364 Leicester Road • Leicester, New York 14481 • Telephone (800) 477-1417 Fax (716) 382-9481

# ML-25B™ Product Data

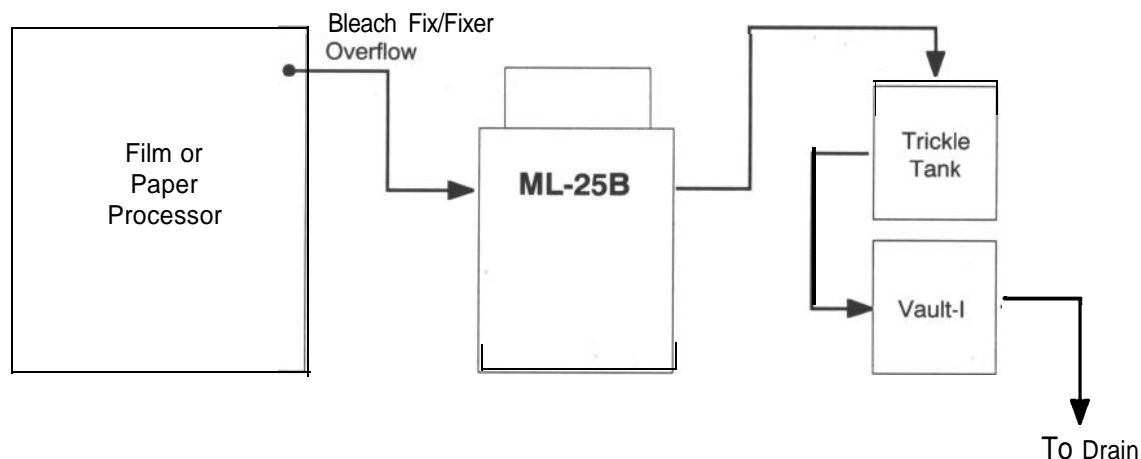
## Specifications

**Application:** Recommended for 250 to 500 rolls per (10 hour) day. ML-25B treats all combinations of RA-4 and EP-2 bleach-fix, C-41, C-41 B, C-41 RA fixers, and E-6 fixer. **Washless** stabilizers may also be desilvered. This system can be plumbed directly to processor fix/bleach-fix overflow lines, or **silver-bearing** chemicals may be easily added via an integral funnel assembly.

*Note: fixer formulations and starting silver concentrations vary greatly. For specific recovery efficiency and application information, call CPAC Technical Service at 716-382-3223.*

<b>Recovery Rate:</b>	1 Troy oz per hour (31.1 g/hr)
<b>Plating Current:</b>	0 to 21 amps
<b>Cathode Size:</b>	8" dia. x 4" H (20.5 cm x 10.2 cm)
<b>Batch Size:</b>	4.5 gal (17ℓ)
<b>Holding Tank:</b>	10.5 gal (40ℓ)
<b>Total Capacity:</b>	15 gal (57ℓ)
<b>Batch Timer Range:</b>	0 to 12 hours
<b>Electrical:</b>	115 VAC, 50/60 Hz or 220 VAC, 50/60 Hz, 350W
<b>System Dimensions:</b>	32" H x 16" W x 22" D (81.3 cm x 40.6 cm x 55.9 cm)
<b>Shipping Weight:</b>	75 lbs (165 kg)
<b>U.L. Listing:</b>	<b>No. 388-T</b>
<b>Materials of Construction:</b>	Tanks Polyethylene Electronics Cover ABS Plastic Cathode Stainless Steel Anodes Carbon

**Expected Results:** The ML-25B unit alone reduces silver content to 25 ppm (mg/ℓ). Tailed with a Trickle Tank™ & Vault-I metallic exchange cartridge, ML-25B reduces silver content to less than 5 ppm (typically 2 ppm or less).



## CPAC Equipment Division

2364 Leicester Road . Leicester, New York 14481  
Telephone (800) 477-1417 . Fax (716) 382-9481

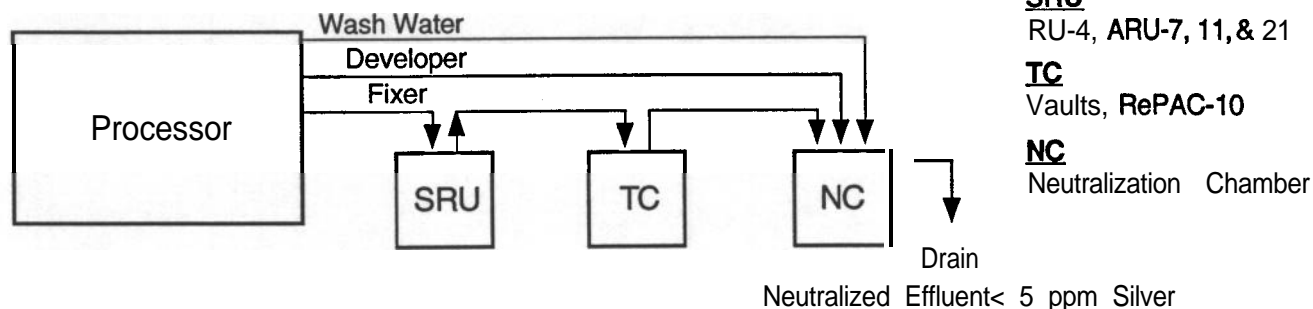
Printed on Recycled Paper  
6/93-2



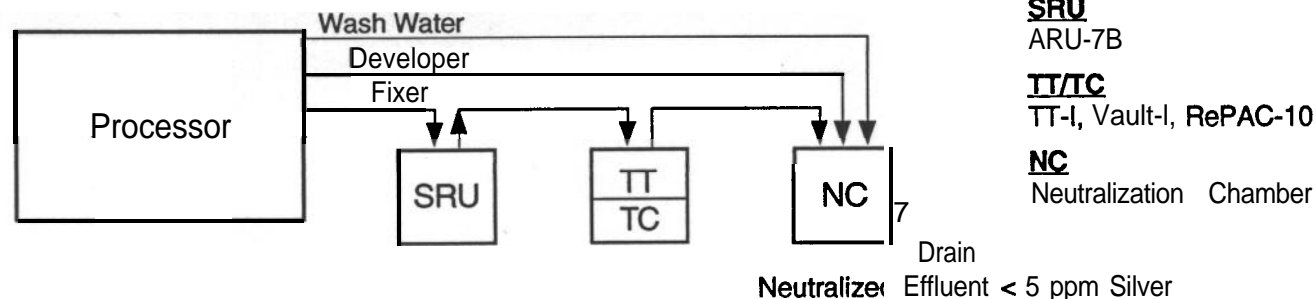
# Electrolytic Silver Recovery \_\_\_\_\_ Application Notes

## Medical and Graphic Arts Processors

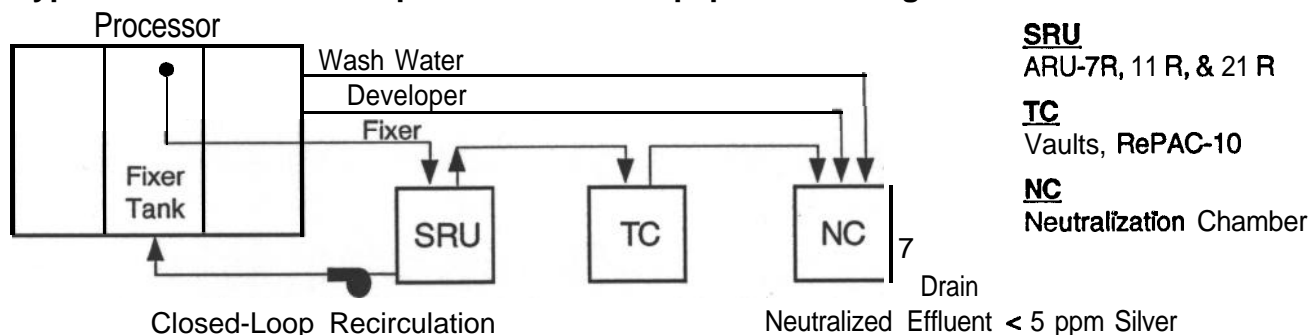
### Typical Fixer Terminal Batch Equipment Arrangement



### Typical Fixer "Isolated" Batch Equipment Arrangement

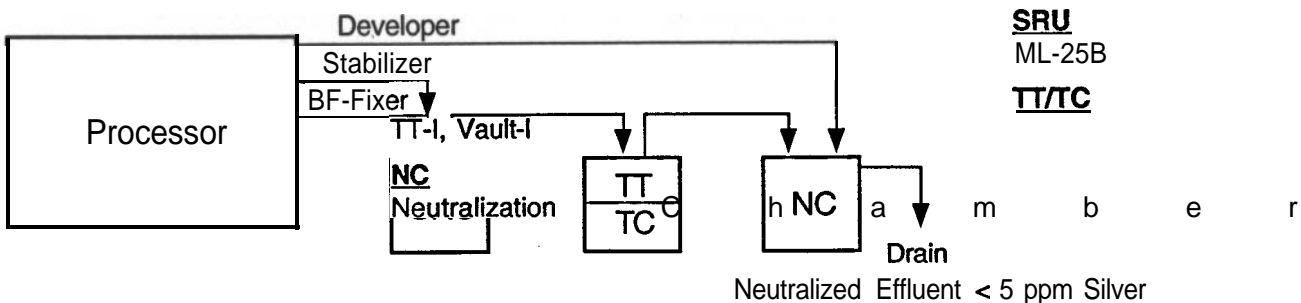


### Typical Fixer Closed-Loop Recirculation Equipment Arrangement



## Color Photographic Processors

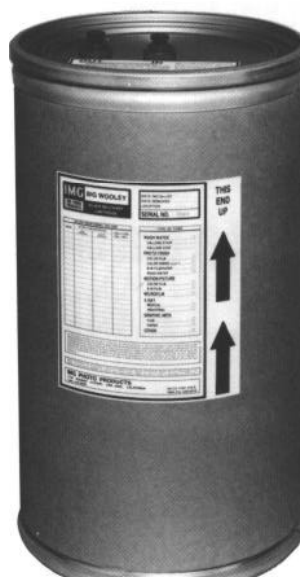
### Typical Bleach-Fix "Isolated" Batch Equipment Arrangement



**IMG**IMG PHOTO  
PRODUCTS**BIG WOOLEY™  
VAULTS &  
TRICKLE TANKS****SILVER RECOVERY  
CARTRIDGES**

# Comply With Most Silver Discharge Guidelines

*IMG's complete line of metallic replacement cartridges are safe, reliable, easy-to-use, and provide cost effective environmental control.*

**BIG WOOLEY™****VAULT-I™****VAULT-JR™**

## The Answer to Environmental Silver Discharge Concerns

Used with a well managed electrolytic silver recovery unit, the silver discharge from IMG's cartridges can be consistently below Federal EPA guidelines of 5 ppm.

## Technical Service and Clear Instructions Ensure Proper Usage and Maximum Results

To ensure proper equipment use and cartridge installation, technical service is available from IMG and its dealers. To help you obtain maximum efficiency from each cartridge, easy-to-use operating instructions and a monitoring chart are attached to each VAULT, TRICKLE TANK and BIG WOOLEY. Each cartridge is serial numbered for positive identification.

## Slide Port Entry/Exit Saves Space

VAULT-I™ and VAULT-Jr™ feature side port entry/exit fittings, eliminating circulation bypass hardware. This saves space and allows easy stacking for shipment, or for use with TRICKLE TANKS. Each VAULT and BIG WOOLEY has a usage label to record type of chemical treatment and gallon throughput.

## Practical Technology Satisfies Environmental Needs

IMG's cartridges will remove silver from wash water and most fixers. By properly removing silver from solutions with low silver **concentrations** (5 to 50 ppm) you can meet EPA silver discharge guidelines.

SPECIFICATIONS	Vault-Jr	Vault-I	Big Wooley	ACCESSORIES
Dimensions	10" H 9 1/2" Dia.	15 1/2" H 13" Dia.	28" H 16 1/4" Dia.	<b>Vault Cartridges:</b> <u>Part No.</u> <u>Description</u> 146P2006 (2) 1/2" x 1/2" Hose Adaptor 114P2093      1/2" Plugs
Height w/Bypass	N/A	N/A	36 1/2"	
Height to Inlet	6 3/4"	12 1/2"	28"	<b>Big Wooley:</b> <u>Part No.</u> <u>Description</u> SP-120M0001 Circulation/Bypass Unit SP-120M0003 Washer for Bypass Unit SP-142A8003 Circ./Bypass Adaptor Kit SP-142P2004 Elbow 3/4" MPT x 3/4"H SP-142P2006 Plug 3/4"
Liquid Capacity	2 gal	5 gal	20 gal	
Shipping Weight Dry	5 lb	14 lb	51 lb	
Apprx. Weight Wet	32 lb	55 lb	200 lb	





# Meet EPA and Local Discharge Regulations with TRICKLE TANK™

*Inexpensive and effective pollution control for the low volume user.*



## New From the Leading Manufacturer of Electrolytic Silver Recovery Units

IMG's TRICKLE TANK/VAULT combination is perfect for low volume users in medical and dental X-ray applications as well as print shops and other small volume graphics applications. The TRICKLE TANK/VAULT combination provides effective silver recovery and pollution control.

When used properly, TRICKLE TANK's VAULT cartridge will remove silver from wash water and most fixers to keep effluent consistently below Federal EPA guidelines of 5 ppm.

Easy-to-use operating instructions and a monitoring chart are attached to the TRICKLE TANK system to help you obtain maximum environmental control efficiency.

ACCESSORIES	
<b>Trickle Tank:</b>	
<u>Part No.</u>	<u>Description</u>
107P2115	1/2" Hose
11P2011	Clamp
146P2006	1/2" x 1/2" Hose Adaptor
<b>Vault Cartridges:</b>	
<u>Part No.</u>	<u>Description</u>
146P2006	(2) 1/2" x 112" Hose Adaptor
114P2093	1/2" Plugs

NOTES
CAUTION: Do not use with 2 bath stabilization solutions, diffusion transfer, black and white reversibles, bleach or reducing solutions. To help prevent a build-up of precipitate in the drains, an acid-type drain cleaner containing sodium <b>bisulfite</b> , or the equivalent should be used periodically. Flow rates may vary in different system applications. For more information call your dealer or IMG Photo Products.
NOTICE: This product will be replaced if defective in manufacture, labeling or packaging. Except for such replacement, this product is sold without warranty or liability even though defect, damage or loss is caused by negligence or other fault.

*For more detailed information on the TRICKLE TANK, VAULT, BIG WOOLEY, or any IMG silver recovery product, contact your IMG dealer or call us directly at 1-800-477- 14 17.*

## HOW TO ORDER

IMG PHOTO PRODUCTS - A CPAC company  
2364 Leicester Road  
Leicester, New York 14481, U.S.A.  
(800) 477-1 417 • FAX (716) 382-3031

## AUTHORIZED DEALER



## RePAC™ Cartridges

### **Why PRS?**

PRS metallic replacement cartridges maximize your environmental compliance program, and minimize your "cradle-to-grave" liability. Our RePAC cartridges have an iron-saturated, repackable core that can desilver to 1 part per million (1 .0 mg/l) or less, to provide consistent environmental control in photo labs.

### **RePAC features and benefits:**

- Simple to install and monitor
- Resistant to corrosion
- Easily reused
- No moving parts or handling hazard
- No channeling

### **Durable, Convenient Design**

RePAC cylinders are made of heavy PVC plastic with a removable top end cap.

### **Effective Environmental Compliance**

These units perform well in primary and tailing silver recovery applications. RePACs can consistently desilver photo processing solutions to 1 ppm or less, and the capacity is typically three to four times greater than conventional steel wool cartridges. PRS offers RePAC cartridges in three sizes to meet any lab's processing volume.

**NOTE:** Whenever economically feasible, electrolytic silver recovery is recommended as the primary method, in conjunction with a metallic replacement cartridge to maximize silver recovery income.

## **PRS Refining Services**

*Operations Headquarters*

2364 Leicester Road, Leicester, NY 14461  
ph. 800-934-9234 • fax 716-382-3031



### **Refining, The Final Step**

We provide repacking and refining of RePAC cores as the final step in your silver recycling program. PRS Refining Services reduces your environmental and financial risk by:

#### **1. Minimizing your "cradle-to-grave" liability.**

All material you send to us for refining is converted into usable product-no waste is generated in the refining process and/or deposited in a landfill, sewer or other disposal system.

#### **2. Guaranteeing payment on all silver shipped to us for refining.**

Your shipment is fully insured from the time it leaves your hands until you receive payment. The title to your silver remains in your name. We settle your silver within 10 business days based on 100% of the Handy & Harman market. Several flexible payment options are available-cash, bullion and banking (at no extra charge). No competitors can match our record for financial stability!

*(over for technical data)*

**For Cartridges, Refining & Environmental Support, You Can't Beat PRS!**

# RePAC" Cartridge Technical Data

When properly sized according to solution volume and type, RePAC cartridges consistently desilver photo processing solutions to 1 part per million (1 .0 mg/ℓ) or less. RePACs incorporate a porous iron filled core that is resistant to the corrosive effects of photographic solutions and channeling.

Processed solutions can be safely discharged directly from RePAC cartridges into most municipal sewer systems with no further pretreatment. Note: check with your local sewer authorities for specific discharge limits.

Cartridges & Cores*	Gallon Capacity <sup>(1)</sup>	Flow Rate <sup>(2)</sup>	Silver Capacity <sup>(1)</sup>	Dimensions	Shipping Weight
RePAC 250	up to 400	100 mℓ/min.	Up to 90 Troy oz.	9" dia. x 19" H	27 lbs.
RePAC 1000	Up to 2500	200 mℓ/min.	Up to 600 Troy oz.	11" dia. x 33" H	70 lbs.
RePAC 2000	up to 4500	200 mℓ/min.	Up to 600 Troy oz.	13" dia. x 50" H	138 lbs.

\* RePAC cores are available in other sizes. Call 800-934-9234 for more information.

<sup>1</sup> Combined silver-bearing waste from an amateur or professional lab containing 2.0 g/ℓ silver. Capacity performance will depend on silver concentration, flow rate, solution composition and pH, which must be below 7.8. Silver results vary based on total volume treated.

<sup>2</sup> RePAC 2000 is recommended for wash water applications. Flow rate varies from 2 - 4 gallons/minute. Preliminary gallon and silver capacity test results shown for RePAC 2000.

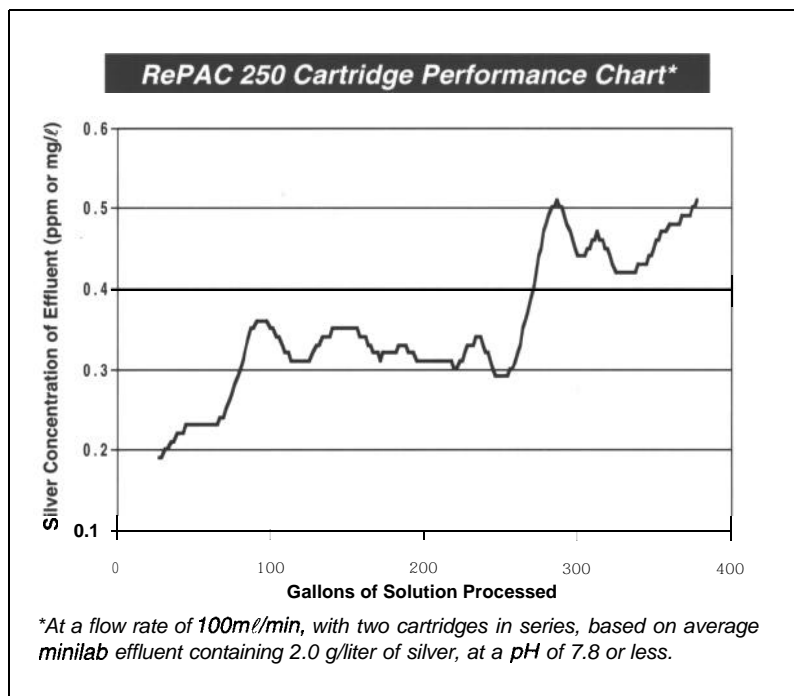
## Technical Notes:

– Developers can be added to bleaches, fixers, bleach-fixes, and stabilizers as long as the pH is below 7.8. For best results, do not allow cartridges to drain or dry out while in use.

– RePAC cartridges should be used two in series for primary or secondary silver recovery.

– For best results maintain the flow rate using a calibrated metering pump. PRS recommends the Mini Environmental Treatment System (METS).

– Be sure to use a pressure relief valve with every cartridge system. PRS Part No. 240 PPV is recommended.



For Technical Assistance or Refining Information Call 800-934-9234.





## Silver Recovery Cartridges

### Why PRS?

PRS metallic replacement cartridges maximize your environmental compliance program, and minimize your "cradle-to-grave" liability. When used properly, PRS cartridges desilver photo processing solutions to 5 ppm or less. As a primary (total) silver recovery method in small labs, PRS cartridges surpass all other designs in efficiency. For secondary (tailing) recovery, they provide the optimum final treatment to an electrolytic silver recovery system.

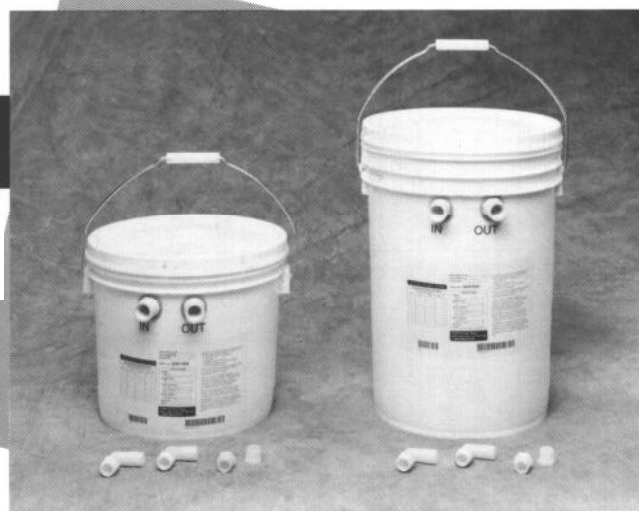
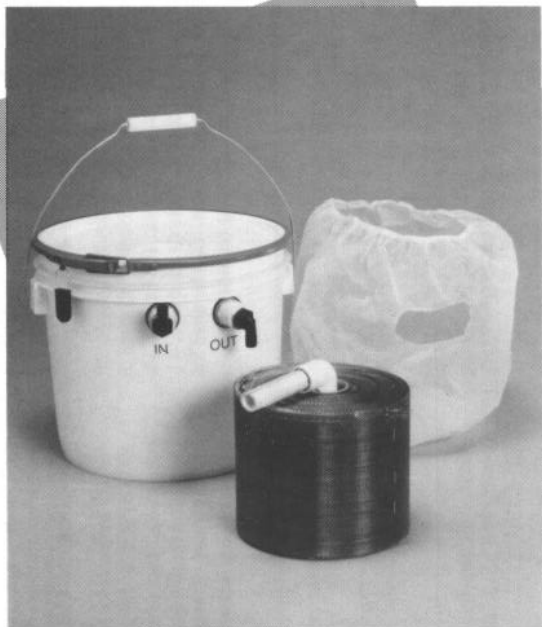
### Special features:

- Special internal bypass to prevent overflows and channeling
- Side entry and exit ports for convenient stacking and multiple tailing

### Two Core Designs Available

#### • Iron Mesh

PRS's patented iron mesh core recovers over 99% of the available silver in most applications. It prevents channeling and clogging, and can be easily rinsed to meet federal hazardous waste shipping regulations. Both repackable and single-use designs are available. A curved inlet port is available on some sizes to minimize plugging with high-silver fixers.



#### • Steel Wool

Our steel wool core maximizes pollution control and silver recovery, and minimizes costly service calls. Easy-to-follow operating instructions and a monitoring chart are included. The units also are serial numbered for positive identification.

### Many Environmental Applications

PRS cartridges come in six sizes to handle a wide range of environmental needs. Note: Whenever economically feasible, *electrolytic silver recovery is recommended as the primary method, in conjunction with a steel wool cartridge to maximize environmental compliance.* PRS offers a full line of electrolytic equipment and can tailor an environmental compliance system for any size lab.

### Refining, The Final Step

We provide refining services as the final step in your silver recycling program. PRS Refining Services reduces your environmental and financial risk by:

1. **Minimizing your cradle-to-grave liability.** All material you send for refining is converted into usable product-no waste is generated in the refining process and/or deposited in a landfill, sewer or other disposal system.
2. **Guaranteeing payment on all silver shipped to us for refining.** Your shipment is fully insured from the time it leaves your hands until you receive payment. The title to your silver remains in your name. We settle within 10 business days based on 100% of the Handy & Harman market. Several flexible payment options are available-cash, bullion and banking (at no extra cost). No competitors can match our record for financial stability!

**PRS, Inc.**

*a CPAC company*

2364 Leicester Road, Leicester, NY 14481  
phone 800-777-5778 • fax 716-382-9481

Cartridge Specifications:		STEEL WOOL		IRON MESH			
		2 gallon LCS	5 gallon SCS	15 gallon Hi Flo-II	3/4 gallon Mini	3.5 gallon SDS (single use) & RepAC-10 (repackable)	6 gallon SAS (single use) & RepAC-20 (repackable)
Applications:	Primary recovery for low volume medical, dental, industrial & graphic arts fixers; low volume bleach-fix & C-41 fixers. Recommended for tailing recovery.	Primary recovery for medical, dental, industrial & graphic arts fixers; bleach-fix & C-41 fixers. Recommended for tailing recovery.	Primary recovery for high volume medical, dental, industrial, & graphic arts fixers; wash waters with concentrates & regular wash waters. Recommended for tailing recovery.	Primary recovery for low volume medical, dental, industrial & graphic arts fixers. Not recommended for C-41 fixers or tailing recovery.	Primary recovery for medical, dental, industrial, & graphic arts fixers. Not recommended for C-41 fixers. Can be used for tailing recovery.	Primary recovery for high volume medical, dental, industrial, & graphic arts fixers. Not recommended for C-41 fixers. Can be used for tailing recovery.	
Maximum processing capacity per 24 hours:	10 gal (37.85 liters)	25 gal (95 liters)	75 gal (285 liters)	2 gal (7.6 liters)	25 gal (95 liters)	50 gal (190 liters)	
Overall dimensions:	10" H x 12" diameter	15" H x 12" diameter	22" H x 15" diameter	14.5" H (18.5" w/recirc. head) x 1.375" diameter	11.25" H x 12" diameter	18" H x 12" diameter	
Container:	Plastic, high density polyethylene DOT-E8151	Plastic, high density polyethylene DOT-E8151	Plastic, high density polyethylene DOT-E6787 34-1	Transparent butyrate tubing w/colored end caps	Plastic, high density polyethylene DOT-E8151	Plastic, high density polyethylene DOT-E8151	
Inlet:	Side port 3/4" PVC hose connection	Side port 3/4" PVC hose connection	3/4" PVC hose connection	1/2" CVPV hose connection	Side port 3/4" PVC hose connection	Side port 3/4" PVC hose connection	
Outlet:	Side port 3/4" PVC hose connection	Side port 3/4" PVC hose connection	3/4" PVC hose connection	1/2" CVPV hose connection	Side port 3/4" PVC hose connection	Side port 3/4" PVC hose connection	
Fluid capacity:	New: 1.75 gal (6.6 liters)	New: 4.75 gal (18 liters)	New: 1.5 cu. ft. 11.25 gal (42.5 liters)	New: 0.32 gal (1.1 liters)	New: 2.25 gal (8.5 liters)	New: 4.25 gal (16 liters)	
Flow rates for tailing as primary recovery:	100 ml/min	200 ml/min	500 ml/min	75 ml/min	150 ml/min	250 ml/min	
Flow rates for tailing after electrolytic recovery:	250 ml/min	300-350 ml/min	0.5 gpm (2.0 l/min) for concentrated bleach-fixes; 4.0 gpm (19.0 l/min) for wash waters w/concentrates; 5.0 gpm (19.0 l/min) for wash waters	150 ml/min intermittent	350 ml/min	500 ml/min	
Flow rates when used for environmental compliance:	30 ml/min for B&W, C-41, graphic arts, E-6 & X-Ray fixers	50 ml/min for B&W, C-41, graphic arts, E-6 & X-Ray fixers; 30 ml/min for R-3, EP-2 & RA-4 bleach-fix	100 ml/min for B&W, C-41, graphic arts, E-6 & X-Ray fixers; 75 ml/min for R-3, EP-2, & RA-4 bleach-fix	N/A	40 ml/min for B&W, C-41, graphic arts, E-6 & X-Ray fixers	60 ml/min for B&W, C-41, graphic arts, E-6 & X-Ray fixers	
Loading:	Approximately 3 lbs. steel wool fiber	Approximately 8 lbs. steel wool fiber	Approximately 35 lbs. #2 chopped steel wool	Approximately 2.25 lbs. woven wire mesh	Approximately 10 lbs. woven wire mesh	Approximately 20 lbs. woven wire mesh	
Typical pressure drop:	N/A	N/A	1.5 - 1.8 psi @ 5 gpm	N/A	N/A	N/A	
Max operating pressure:	5 psi	5 psi	10 psi for source	5 psi	5 psi	5 psi	
Shipment to reinter:	Up to 4 units-UPS; 5+ units-common carrier	Up to 4 units-UPS; 5+ units-common carrier	Common carrier	Typically UPS	Up to 4 units-UPS; 5+ units-common carrier	Up to 4 units-UPS; 5+ units-common carrier	

---

# Metallic Exchange Cartridges ——— Application Notes

---

## ***Cartridge Recommendations***

### **Medical, Dental, and Graphic Arts**

RePAC-10, RePAC-20, or Mini Cartridge

### **Color Photographic**

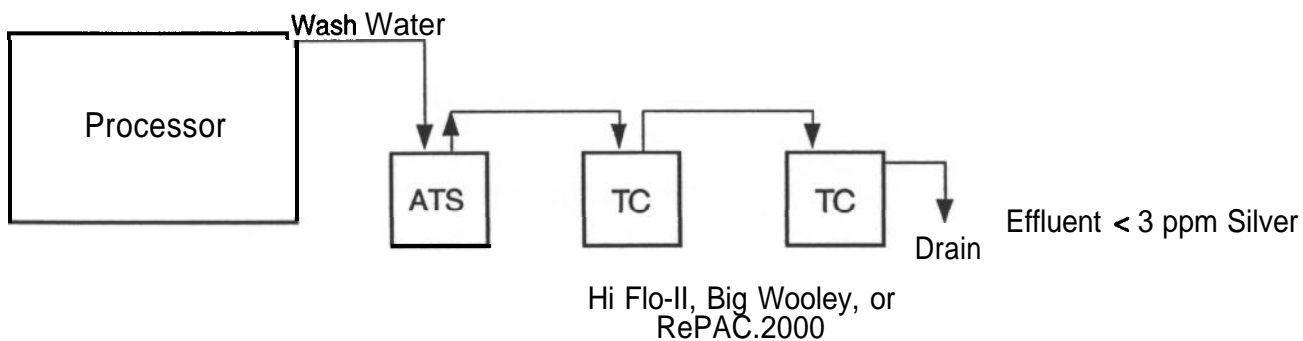
Vault-Jr.™, Vault-I™

RePAC™ 250, 1000, or 2000

### **Wash Water from all Processors**

Hi Flo-II™, Big Wooley™, or RePAC 2000 with ATS-5 or ATS-IO

## **Typical Wash Water Treatment System**



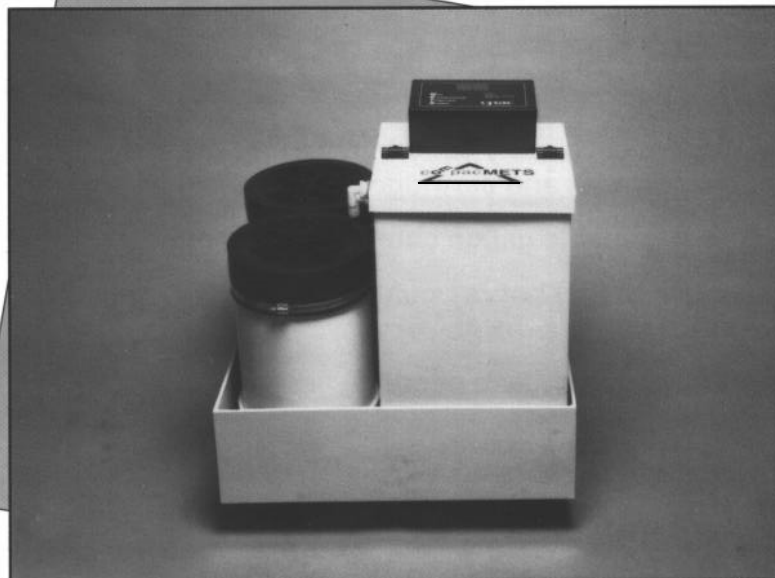
# METS™

## An Environmental Treatment System for Reducing Silver Discharge

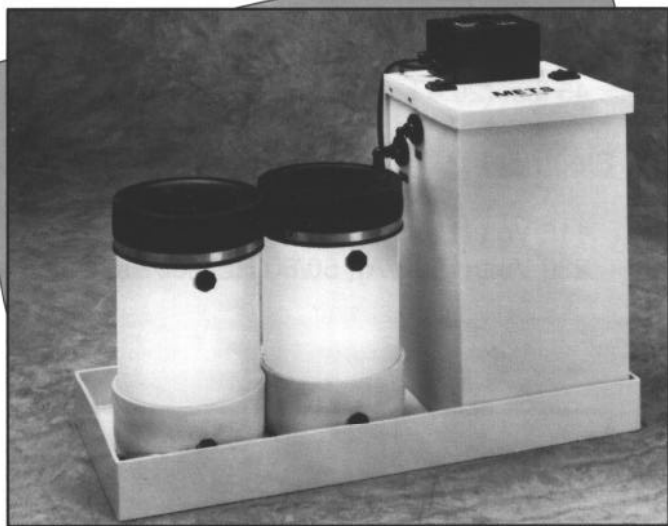
***METS is the easiest way for  
your lab to stay in compliance!***

*CPAC's new **METS** is designed  
to help mini, micro, and small  
professional photo labs meet  
tough environmental compliance  
regulations.*

*With its unique metering pump/  
collection tank design, **METS** is  
built to maximize silver recovery  
cartridge performance and  
reduce silver discharge to **very**  
low levels.*



**METS Model A-101I**



**METS Model E-I 00**

- Simple to operate
- Maintenance-free
- Easy to install & monitor
- Compact
- Can be used with any combination  
of bleach-fix & fixer
- Two models available

## **METS" Features & Product Data**

The METS effluent treatment system is designed for use with **RePAC™** 250 cartridges for the best results and are available from CPAC. All combinations of fixer and bleach-fix can be treated, up to 144 liters per day. Solution can be plumbed directly into the METS or easily poured via its hinged cover.

METS (Models A-I 01 & E-I 00) feature: a reliable pre-calibrated metering pump adjustable to 0-1 25 ml/min. for optimum flow and silver recovery efficiency in any application; resettable external hours counter which keeps track of the volume of solution that has been processed; and durable, corrosion-resistant plastic tanks, trays and fittings. METS units also have the following safety features: an automatic pressure relief mechanism designed into the pump assembly, low voltage operated liquid level switches, and circuit breakers.

### **METS Model A-101**

- **Built-in 110% secondary containment for both the collection tank and cartridges**
- **Fully programmable gallon counter**
- **Resettable external hours counter**  
(0.1 to 999.9 hours)
- **Adjustable metering feed pump**  
0-1 25 ml/min.
- **Audible cartridge change alarm**
- **Battery back-up**
- **7.5 gallon capacity**
- **'Pump-on' indicator**
- **Quick-disconnect fittings**
- **Pressure relief valve**
- **Solid-state electronics**
- **METS A-I 01 components are easily removed for cleaning**

#### **Construction**

- Leak-proof, one-piece polyethylene collection tank
- Polypropylene cabinet
- Easy-roll casters

#### **Dimensions & Weight**

22½" W x 20" D x 27¼" H  
65 lbs. (29.5 kg)

#### **Electrical**

115 Volt (150 VA), 50/60 Hz  
230 Volt (150 VA), 50/60 Hz models available

### **METS Model E-100**

- **Resettable external hours counter**  
(0.1 to 999.9 hours)
- **Adjustable metering feed pump**  
0-1 25 ml/min.
- **7.5 gallon capacity**
- **Quick-disconnect fittings**
- **Pressure relief valve**

#### **Construction**

- One-piece polyethylene collection tank
- Drip tray for cartridges

#### **Dimensions & Weight**

33½" W x 14½" D x 24½" H  
45 lbs. (20.4 kg)

#### **Electrical**

115 Volt (150 VA), 50/60 Hz  
230 Volt (150 VA), 50/60 Hz models available

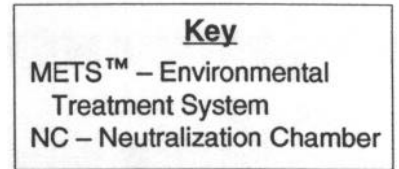
**cpac**  
Equipment Division

2364 Leicester Road • Leicester, New York 14481  
Telephone (716) 382-3223 • Fax (716) 382-9481

Printed on Recycled Paper  
11/94-4

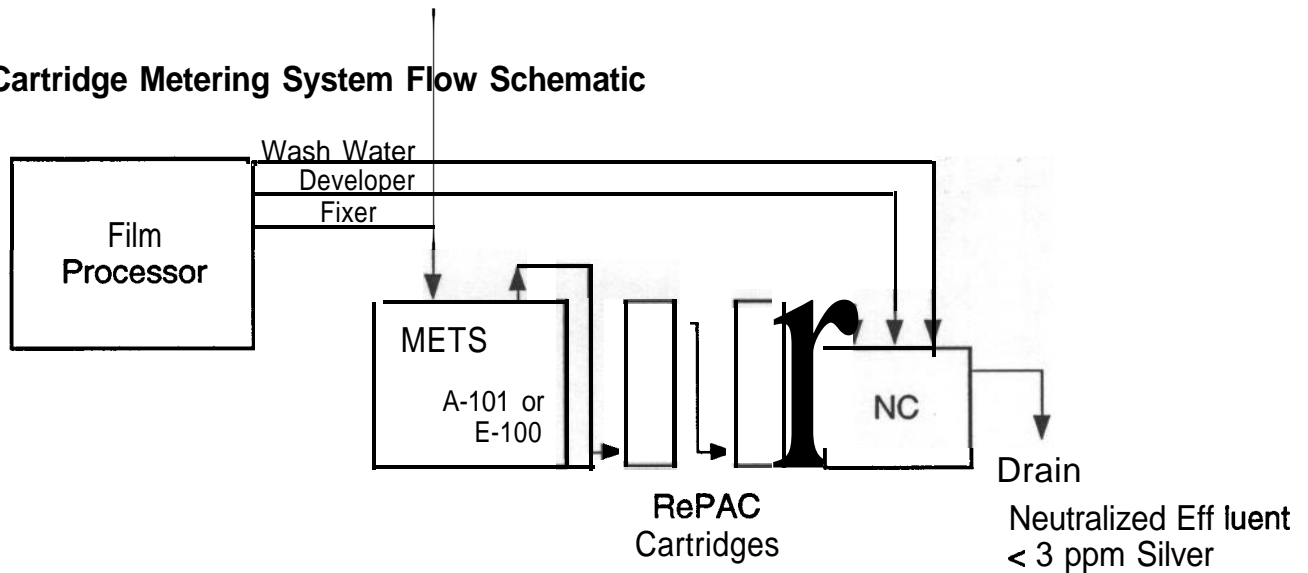






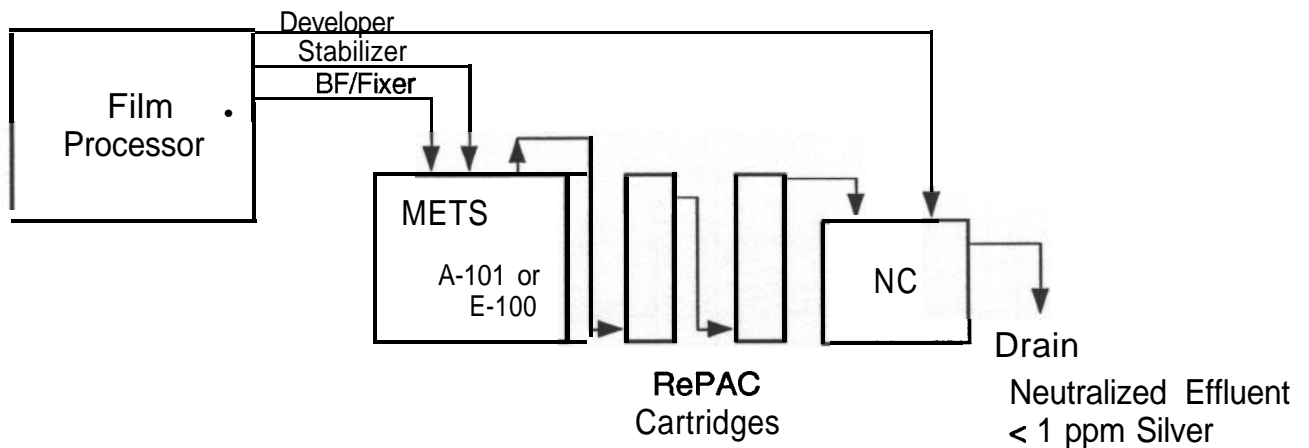
### ***Medical and Graphic Arts Processors***

**Cartridge Metering System Flow Schematic**



### ***Color Photographic Processors***

**Cartridge Metering System Flow Schematic**

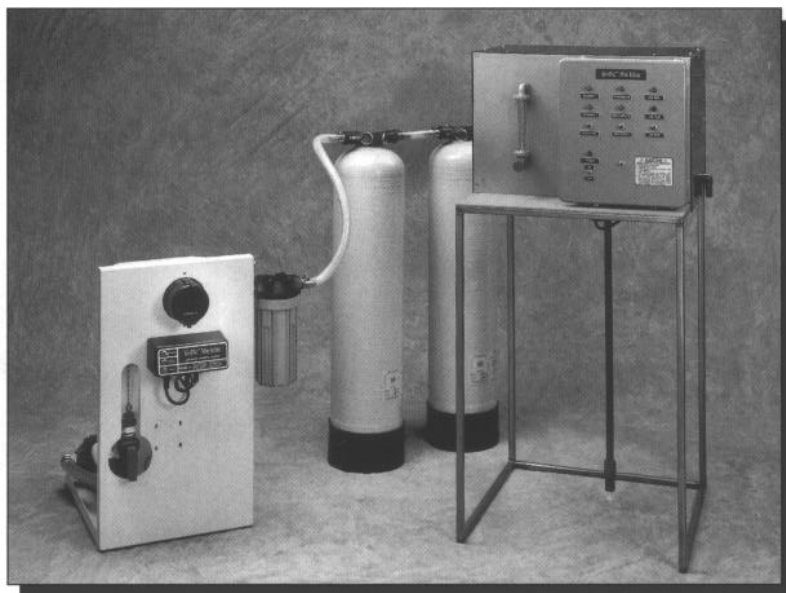


**Note:** METS unit can be directly plumbed or manually filled.

## SilvPAC® Mini In-Situ

---

***The Most Effective  
System Available for  
Silver Recovery &  
Environmental  
Compliance!***



Thanks to CPAC, medical X-Ray, graphic arts, minilabs and smaller professional photo labs can now attain the silver recovery and environmental benefits that larger labs do.

**SilvPAC®** Mini In-Situ uses ion-exchange-the most effective recovery technology available- to remove silver from wash water. When used with an electrolytic unit to treat fix and/or bleach-fix, Mini In-Situ recovers up to 99.9% of the available silver from wash water solutions. Consistent effluent silver concentrations of 0.5 mg/liter can be achieved, to help your lab reduce waste disposal costs and comply with even stricter discharge regulations.

Since space is often tight, SilvPAC Mini In-Situ is designed to use a minimal amount of floor space. The service pump module collects wash water overflow directly from the processors. This solution is automatically pumped through the ion-exchange column(s) where the silver collects on the resin. Mini In-Situ's redesigned neutralization tank uses Hydrolite Mg to neutralize acidic solution in the columns. This on-site resin regeneration process eliminates the need for a pH controller and expensive metering pumps. You save time and money by simplifying maintenance and cleaning.

After regeneration, the column is put back into the service position. Normally, 30 or more cycles can be completed per year before the resin is saturated and must be sent to a refinery for final treatment.

SilvPAC Mini In-Situ is available in two standard sizes: two and four gallons per minute.

For more information about the benefits of this innovative means of silver recovery and pollution control, contact your local CPAC sales representative.

# SilvPAC® Mini In-Situ Specifications

Service Module		
Model	2	4
Recommended Wash Water Feed Rate, gpm (ℓpm)	4 (15)	4 (15)
Columns Required	1	2 in series
Resin per Column, ft³ (liter)	1 (28)	1 (28)
Average Silver Capacity per Cycle, Troy oz. (grams)	10 (310)	20 (620)
Flow Meters Provided Full Scale, gpm (ℓpm)	1 @ 5 (19)	1@ 5 (19)
Electrical Service Requirements: Amperes @ 115 VAC (230 VAC), 1 phase	10 (5)	10 (5)
Service Feed Pump Tank Capacity, gal (liters)	10 (38)	10 (38)
Column Dimensions, in. (cm)	9 dia. x 40 H (23 dia. x 102 H)	9 dia. x 40 H (23 dia. x 102 H)
Service Control Module & Pumping Station Dimensions, in. (cm)	24 W x 25 D x 31 H (60 W x 62.5 D x 77.5 H)	24 W x 25 D x 31 H (60 W x 62.5 D x 77.5 H)
Features: Liquid level sensing controller, flow meter, filter housing, and flow totalizer		
Materials of Construction: Metal frame (2 part epoxy painted), fiberglass columns, PVC plumbing and valves, polyethylene collection tank		
Regeneration Module		
Application:	The modular regeneration system regenerates one (9" dia. x 40" H) column in approximately two hours. A diluted acid (2%) solution is used to regenerate the resin columns. A neutralization tank is provided to neutralize the spent dilute acid after regenerating the columns.	
System Dimensions:	<u>Reaeneration Module</u> 25" W x 24" D x 53" H	<u>Neutralization Tank</u> 12" W x 12" D x 32" H
Electrical:	115 VAC or 230 VAC 50/60 Hz	
Shipping Weight:	75 lbs.	
Materials of Construction:	Tanks - Polyethylene Electrical Enclosure - Fiberglass Shroud - ABS, plastic	Frame - Stainless Steel Plumbing - PVC SCH:80

## Environmental Compliance Assistance

If you have any questions on meeting environmental impact regulations, please call our **Environmental Compliance Hotline at 800-477-1417**. Our professional staff can guide you through this process, perform chemical analyses, and recommend the proper system to meet your specific requirements.

## SilvPAC® In-Situ SA

---

***The Most Effective Semi-Automatic Ion-Exchange System Available for Silver Recovery & Environmental Compliance!***



SilvPAC® In-Situ uses the ion-exchange method of silver recovery to effectively remove silver thiosulfate from large volumes of photographic film processing wash water. By reducing wash water discharge silver concentration to less than 0.5 milligrams per liter (mg/l), SilvPAC In-Situ has helped photo processors worldwide meet stringent environmental protection regulations.

### Operation

SilvPAC In-Situ ion-exchange columns house millions of tiny resin beads. As wash water is pumped through the columns, these beads attract silver thiosulfate. Once full of silver thiosulfate, the resin beads are regenerated with a mild acid solution to precipitate silver sulfide within the beads, hence the Latin term "in situ" meaning "in place". The insoluble silver sulfide becomes trapped in the resin beads releasing ion-exchange sites for additional silver recovery. Used acid regenerant solution is then automa-

tically neutralized before reaching the drain to comply with local pH discharge requirements.

Unlike some ion-exchange systems that require off-site regeneration of the resin columns, SilvPAC In-Situ resin is regenerated on-site. Thus the cost and liability of shipping silver-bearing resin columns to an off-site regeneration center is avoided.

### After Silver Recovery

When ion-exchange resin becomes saturated with silver sulfide (usually in 12 to 14 months), it is replaced. Silver content of exhausted resin is 100 to 300 Troy ounces per cubic foot. Actual resin life and silver capacity depend on the amount of wash water that has been treated and its silver concentration. After the spent resin is removed, it is sent to a refinery in plastic drums. New resin is added to the columns, regenerated, and the service cycle is initiated.

# SilvPAC® In-Situ SA-Series Specifications

Specifications	Model SA 7.5	Model SA 15	Model SA 22	Model SA 30
Service Flow Rate	7.5 gpm (28 <i>l</i> /pm)	15 gpm (57 <i>l</i> /pm)	22 gpm (83.3 <i>l</i> /pm)	30 gpm (113.5 <i>l</i> /pm)
Water Flow Rate	3 gpm (11 <i>l</i> /pm)	3 gpm (11 <i>l</i> /pm)	4.5 gpm (17 <i>l</i> /pm)	6 gpm (23 <i>l</i> /pm)
Regeneration Cycle Time	3 hours	3 hours	3 hours	3 hours
Utilities				
Water	3.5 gpm @ 40 psi	6.5 gpm @ 40 psi	10 gpm @ 40 psi	10 gpm @ 40 psi
Floor Drain Minimum Capacity	15 gpm	20 gpm	30 gpm	38 gpm
Electrical (115/208 - 240 VAC, 50 Hz units available)	20 amp, 1 phase 60 Hz, 3 wire + ground	30 amp, 3 phase 60 Hz, 3 wire + ground	30 amp, 3 phase 60 Hz, 3 wire + ground	50 amp, 3 phase 60 Hz, 3 wire + ground
Dimensions and Capacities				
Resin Column	15" dia. x 54" H	16" dia. x 65" H	21" dia. x 62" H	24" dia. x 71" H
Resin Volume (per column)	2 cu. ft.	4 cu. ft.	6 cu. ft.	8 cu. ft.
Resin Volume (system total)	4 cu. ft.	8 cu. ft.	12 cu. ft.	16 cu. ft.
Resin Silver Capacity (per cubic foot)*	100-300 Troy oz.	100-300 Troy oz.	100-300 Troy oz.	100-300 Troy oz.
Resin Silver Capacity (system total)	400-1200 Troy oz.	800-2400 Troy oz.	1200-3600 Troy oz.	1600-4800 Troy oz.
Valve Rack/Control Module Dimensions	40" W x 46" H x 36" D	40" W x 46" H x 36" D	40" W x 46" H x 36" D	40" W x 46" H x 36" D
Feed Tank	30" dia. x 45" H	38" dia. x 67" H	38" dia. x 67" H	48" dia. x 52" H
Feed Tank Volume	100 gal	250 gal	250 gal	400 gal
Regenerant Tank	30" dia. x 45" H	38" dia. x 67" H	38" dia. x 67" H	48" dia. x 52" H
Regenerant Tank Volume	100 gal	250 gal	250 gal	400 gal
Neutralization Tank	30" dia. x 45" H	30" dia. x 45" H	30" dia. x 45" H	30" dia. x 45" H
Neutralization Tank Volume	100 gal	100 gal	100 gal	100 gal
Concentrate Holding Tank	26" dia. x 36" H	26" dia. x 36" H	26" dia. x 36" H	26" dia. x 36" H
Concentrate Holding Tank Volume	55 gal	55 gal	55 gal	55 gal
Chemical Usage				
Regenerant (Sulfuric Acid) per Cycle	1.5 gal	3 gal	4.5 gal	6 gal
Neutralizing (Sodium Hydroxide) per Cycle	3.5 gal	7 gal	10.5 gal	14 gal
<b>Materials of Construction</b> Valve Rack Assembly Frame: Polyester baked finished steel Electrical Control Box: Fiberglass Tanks: Polyethylene Plumbing and Valves: PVC				

\* Estimated—actual capacity is dependent on volume and silver concentration of solutions treated, as well as actual operating parameters of these systems.



2364 Leicester Road, Leicester, New York 14481  
Phone (716) 382-3223 • Fax (716) 382-9481



SilvPAC® is a trademark of CPAC, Inc.  
Printed in U.S.A. 11/94

# ATS-5 and ATS-10

## *Automatic Transfer Stations for Photo Chemicals*

### Preliminary Data Sheet

CPAC utilizes high quality components in the **Automatic Transfer Stations** to make them the finest pumping stations commercially available. They are engineered to meet a variety of photo chemistry transfer, flow rate, and pressure requirements.

The **ATS-5 and ATS-10** are designed to transfer photographic chemicals: developer, wash water, fixer, and bleach-fix for desilvering, regeneration, disposal, or to a replenishing tank.

### *Features and Benefits*

- Corrosion-resistant components
- Simple controls – easy installation
- Complete systems – ready to install
- Dependable, compact, and efficient
- Complete technical service available
- Reliable long life magnetic drive pumps
- Heavy duty translucent linear polyethylene tanks

Manufactured by

CPAC Equipment Division



# ATS-5 and ATS-10 Product Data

## Specifications

	<u>ATS-5</u>	<u>ATS- 10</u>
<b>Connections:</b>		
Inlet	3/4" ID	3/4" ID
Outlet	3/4" ID	3/4" ID
Overflow	1" ID	1" ID
<b>March Pump:</b>	March AC-5C-MD	March AC-5C-MD
6' Head*	12 gpm	11 gpm
9' Head*	10 gpm	8 gpm
20' Head*	5 gpm	4 gpm
*Head measured using water at outlet of transfer station.		
<b>Electrical:</b>	115 VAC, 50/60 Hz, 250 W Fuse 5A, 220 V	115 VAC, 50/60 Hz, 250 W Fuse 5A, 220 V
<b>Dimensions:</b>	12" W x 19" D x 22" H	19" Wx24" D x 31" H
<b>Net Weight Empty:</b>	26 lbs.	44 lbs.
<b>Shipping Weight:</b>	34 lbs.	53 lbs.
<b>Materials of Construction:</b>		
Tanks	Polyethylene	Polyethylene
Electronic Covers	P l a s t i c	Plastic
Frame	Plastic	Metal

## Standard Features

MODE	U.L. Listed	Holding Tank	Float Switches	Check Valve	Flow Meter	Gallon Totalizer	Controller	Power Indicator	Bleed Screw
ATS-5	Pending	5 gal	Yes	Yes	No	No	Yes	Yes	Yes
ATS-10	Pending	10 gal	Yes	Yes	Yes	Yes	Y e s	Yes	Yes

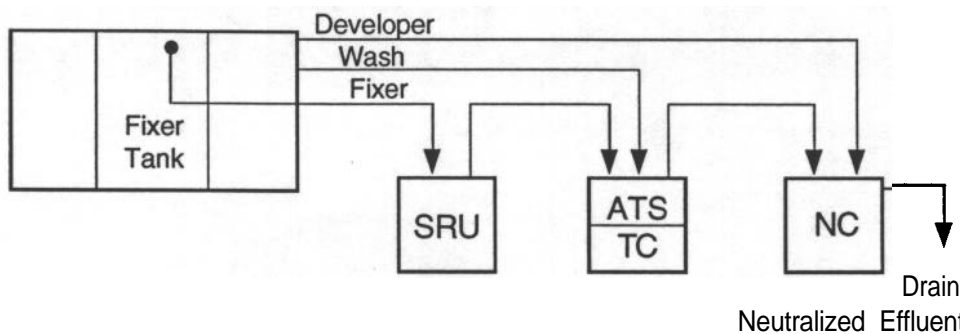
## CPAC Equipment Division

2364 Leicester Road • Leicester, New York 14481  
Telephone (716) 382-3223 • Fax (716) 382-9481

# Wash Water Treatment Systems — Application Notes

## Medical, X-Ray, and Graphic Arts Processors

### Fixer and Wash Water Treatment System < 5 ppm



#### SRU

RU-4, ARU-7, 11, & 21

#### ATS

ATS5 or ATS-10

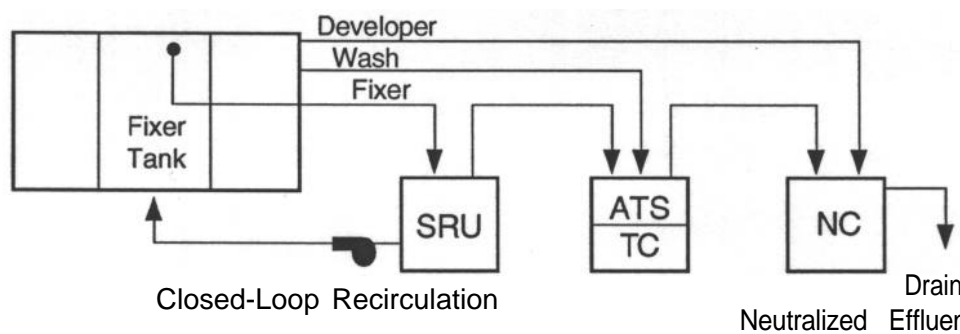
#### TC

Hi Flo-II, Big Wooley, or RePAC 2000

#### NC

Neutralization Chamber

### Fixer and Wash Water Treatment System < 3 ppm



#### SRU

ARU-7R, 11 R, & 21 R

#### ATS

ATS-5 or ATS-10

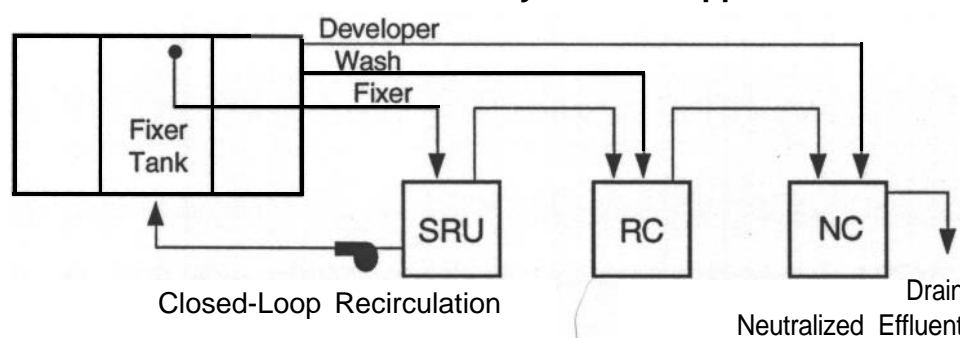
#### TC

Hi Flo-II, Big Wooley, or RePAC 2000

#### NC

Neutralization Chamber

### Fixer and Wash Water Treatment System < 0.5 ppm



#### SRU

ARU-7R, 11R, & 21R

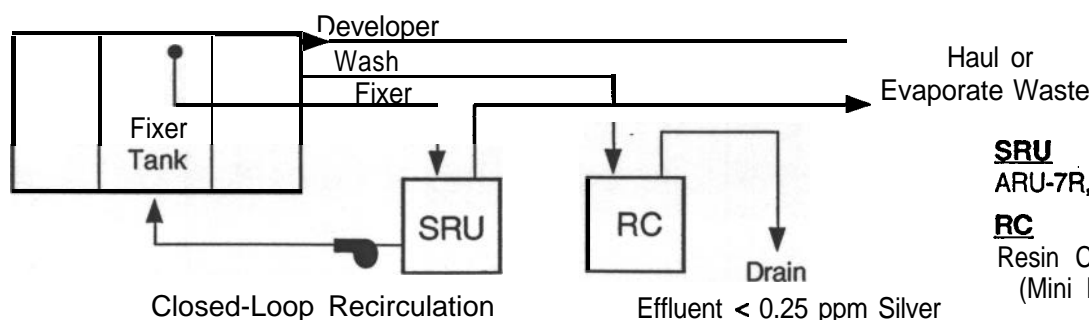
#### RC

Resin Column (Mini In-Situ)

#### NC

Neutralization Chamber

### Fixer and Wash Water Treatment System < 0.25 ppm



#### SRU

ARU-7R, 11 R, & 21 R

#### RC

Resin Column (Mini In-Situ)



---

## Silver Refining Services

---

This section describes the IMG silver refining program. We handle flake, cartridges, sludge, and film material. Our refinery operates at **zero discharge -the** refining process does not produce any waste to a landfill, sewage treatment plant, or disposal facility – eliminating “cradle-to-grave” liability.

We provide a variety of ways to assist you with silver recycling needs:

- Shipping paperwork and flake containers are provided
- Fast settlements – 10 banking days from receipt of material
- Updated information regarding OSHA and EPA regulations
- A Silver Specialist to answer you or your customers' refining and technical questions and to help maximize your refining returns -- 800-934-9234

The following information illustrates our programs for flake and cartridges and should help you understand a settlement summary and give you an idea of what kind of results to expect for each.

### Flake Refining Settlement Explanation

The example is based on 10 pounds of silver flake (145.83 troy ounces of flake material). The figures are based on a purity level of 94%. Electrolytic flake silver is generally between 92 - 96% pure.

- |        |   |
|--------|---|
| Step 1 | Silver weighing 145.83 troy ounces is received at the refinery (gross weight received)  |
| Step 2 | $145.83 \text{ t.o.} \times \$0.35 \text{ per troy ounce} = \$51.04$ to refine the silver to a pure state (first refining charge)   |
| Step 3 | $145.83 \text{ t.o.} \times 94\% \text{ purity} = 137.08 \text{ t.o. pure silver}$  |
| Step 4 | $137.08 \text{ t.o.} \times 97\% \text{ M/A} = 132.96 \text{ t.o. of actual silver}$ (M/A = metal accountability, second refining charge equalling 3% of the pure silver) |
| Step 5 | $132.96 \text{ t.o.} \times \$5.00 = \$664.80$ (gross return, based on Handy & Harman pricing)  |
| Step 6 | $\$664.80 - \$51.04 \text{ refining charge} = \$613.76 \text{ net } \textit{return}$  |

### Cartridge Refining Settlement Explanation

Below is an example detailing settlement results for a batch of three metallic exchange cartridges (100 t.o. of raw silver sludge). These cartridges were used for primary silver recovery.

- |        |   |
|--------|---|
| Step 1 | $100 \text{ t.o.} \times \$0.50 \text{ per troy ounce} = \$50.00$ to refine the silver to a pure state (first refining charge)                                  |
| Step 2 | $100 \text{ t.o.} \times 94\% \text{ M/A} = 94 \text{ t.o. actual silver}$ (M/A = metal accountability, a second refining charge equally 6% of the pure silver) |
| Step 3 | $94 \text{ t.o.} \times \$5.00 \text{ per t.o.} = \$470.00$ (gross return, based on Handy & Harman pricing)   |
| Step 4 | $\$470.00 - \$50.00 \text{ refining charge} = \$420.00 \text{ net } \textit{return}$  |

# ***Silver Refining Services Continued***

## **Settlement Options**

- Check or wire transfer to your account
- Silver rounds or bars (fabrication fee, shipping, and insurance are extra)
- Consignment/Pool Account – Sell on any day by calling the refinery before 11 a.m. EST

## **PRS Refining Proposal**

### **I. Electrolytic Flake**

Refining Charge:	<b>\$0.35/net troy oz. or \$45 minimum</b>
Metal Accountability:	97%
Market Accountability:	100% of Handy & Harman market price-
Settlement Time:	10 banking days after receipt
Insurance:	Paid by PRS
Shipping:	Paid by customer
Assay Charge:	None
Individual Lot Refining:	No charge

*Note: Numbered, sealable shipping containers are provided free of charge with preaddressed shipping labels and packing slips.*

### **II. Metallic Replacement Cartridges**

Refining Charge:	<b>\$0.50/net troy oz.</b>
	<b>or</b>
Minimum Charge:	\$30.00 for mini cartridges and \$50.00 for all other cartridges
Metal Accountability:	94%
Market Accountability:	100% of Handy & Harman market price
Settlement Time:	10 banking days after receipt
Insurance:	Paid by PRS
Shipping:	Paid by customer

**There are 14.583 troy ounces in an avoird. pound.**

---

## Chemical Mixers/Blenders \_\_\_\_\_ Application Notes

---

### Graphic Arts

#### **MK-1**

Recommended for all processors using **ULTRATEC™**, **ULTRALINE™** and similar chemistries. The MK-1 **ULTRAMIX™** has the pumping and mixing capacity to meet a wide range of applications. It is the ideal replenishment system for **ULTRATEC** users processing 10 square feet to well over 15,000 square feet of paper or film per week.

#### **RAM-I**

Compatible with all one part developer replenishment systems, rapid access chemistries and rapid access materials. It stores the developer and fixer, then accurately meters, mixes and pumps the replenisher solutions to the processor as required.

#### **RAM-2**

Compatible with all one or two part developer replenishment systems, rapid access chemistries and rapid access materials. It stores the developer and fixer, then accurately meters, mixes and pumps the replenisher solutions to the processor as required.

#### **RAM-C™**

Recommended for all graphic arts processors using rapid access and similar chemistries. It is the ideal centralized replenishment system for supplying up to six processors.



# AUTOMATIC REPLENISHMENT SYSTEM FOR ULTRATEC™ TYPE CHEMICALS



## RUGGED, RELIABLE CONSTRUCTION

Welded steel construction with corrosion resistant baked epoxy finish. Solid state controls. Uses a dependable four-bellows tandem pump driven by a single motor, which insures consistent chemical replenishment accuracy. All of this, plus pride in manufacturing, make the MK-1 ULTRAMIX the ultimate in reliability.

## COMPLETELY SELF-CONTAINED

10 gallon tanks for developer and fixer concentrates, precision metering pumps, easy-to-set, automatic electronic controls, high pressure inlet water hose with machined female hose fitting and a float valve controlled water tank. The pumps are factory adjusted to the correct mix ratios and replenishment rates.

## COMPATIBILITY

Ready for simple installation on all replenishable processors. Adaptable to any processor with overflow in chemical tanks.

## SIMPLE ONE TIME SETTING FOR AUTOMATIC OPERATION

One time settings for processor operating hours per week and for processor tank capacity in gallons. All that is required thereafter is to turn the MK-1 "ON" when the processor is "ON" and "OFF" when the processor is "OFF" - and to add chemistry before the tanks get empty. A bulk add switch is provided for manual replenishment.

## SAVES TIME - NO HAND MIXING

Automatic metering of concentrates and water provides fresh, precisely-mixed chemicals directly into the processor, putting an end to hand mixing chemicals.

## APPLICATION

Recommended for all processors using ULTRATEC, ULTRALINE and similar chemistries. The MK-1 ULTRAMIX has the pumping and mixing capacity to meet a wide range of applications. It's the ideal replenishment system for ULTRATEC users processing 10 square feet to well over 15,000 square feet of paper or film per week.

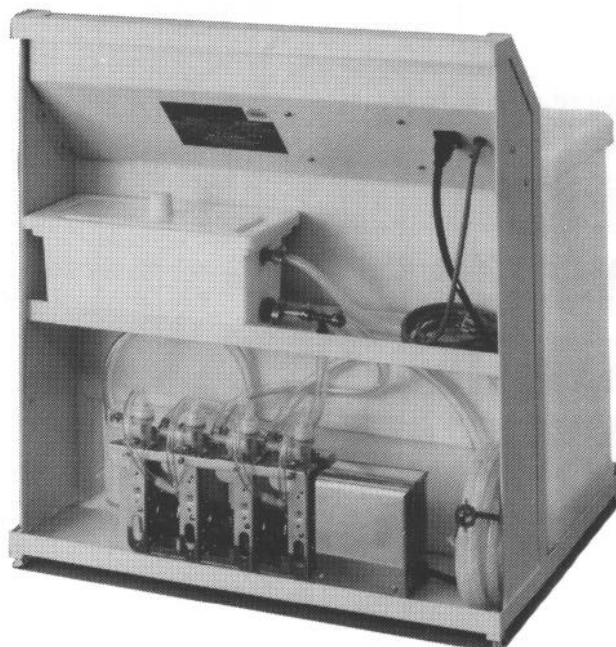
ULTRAMIX is a trademark of IMG PHOTO PRODUCTS

ULTRATEC and ULTRALINE are trademarks of EASTMAN KODAK CO



## SPECIFICATIONS

	US	METRIC
ELECTRICAL	115VAC 50/60Hz 100W	220VAC 50/60Hz 100W
CHEMICAL TANKS CAPACITY	10 gal ea	37 85L ea
DIMENSIONS	19" D 24 1/4" W 25 1/2" H	483mm D 622mm W 648mm H
PUMP RATES		
DEVELOPER	500 ml/min	500 ml/min
DEV WATER	100 ml/min	100 ml/min
FIXER WATER	450 ml/min	450 ml/min
FIXER	150 ml/min	150 ml/min
WATER SUPPLY	16 ft Female Hose Fitting	4 9 m Female Hose Fitting
CHEMICAL HOSES	16 ft x 1/4" ID For Each Chemical	4 9m x 6mm ID For Each Chemical
NET WEIGHT	54 5 lbs	24 8 kg
SHIPPING WEIGHT	73 lbs	28 6 kg



## INSTALLATION

Locate MK-1 Ultramix near a source of filtered water (less than 100 psi) and conveniently close to processor. Connect water hose & open water valve 1/4 to 1/2 turn. Check that floating shut-off valve in water reservoir closes when tank is about 1/2 full. Bend float arm to adjust if necessary. Connect chemical hose marked "D" to the wye of the developer pumps and the hose marked "F" to the wye of the fixer pumps. Connect the other end of the "D" hose to the developer tank in the processor and the "F" hose to the fixer tank in the processor. The most convenient way to do this on most processors is to use the "J"-shaped injection tubes provided — hanging

them over the side of the tank. Be certain that the hoses are securely attached to the tubes with hose clamps. Fill the tank labeled "D" with developer and the tank labeled "F" with fixer. Install floating lids. Plug power cord into a 115VAC outlet and turn power on. Push bulk add button while watching pump. Make sure all 4 pumps are pumping liquids. (if necessary, loosen lock nut at elbow on pump and let trapped air out to prime pump. Retighten before running pump again). Set the two dials on the Ultramix to the specific application, as indicated on the label. Turn on the MK-1 Ultramix when the processor is on and turn it off when the processor is off. Do not operate the MK-1 Ultramix when storage tanks are empty.

## HOW TO ORDER

Our New Address Is:

IMG Photo Products  
2364 Leicester Road  
Leicester, NY 14481

{Phone: 1-800-477-1417}  
{FAX: 1-716-382-3031}

570

## AUTHORIZED DEALER

EXCELLENT PRODUCTS AND EXCELLENT DEALERS INSURE EXCELLENT SERVICE



# AUTOMATIC RAPID ACCESS DEVELOPER AND FIXER **MIXING** UNIT



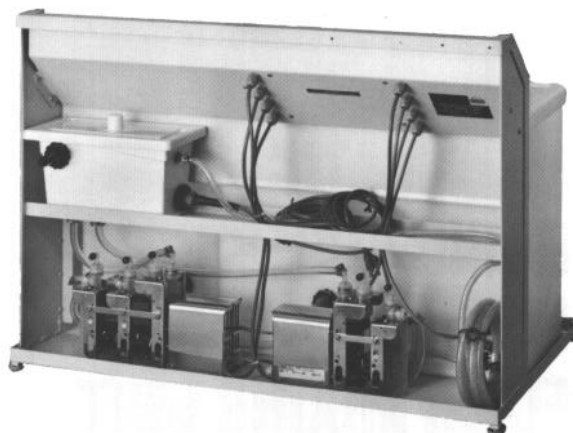
## Complete System – Ready to Install -Compact and Easy to Use

### STANDARD FEATURES

- Functional design; easy access to all controls and adjustments
- Compatible with all one part developer systems
- Developer & fixer metering pumps adjustable from 383 to 3000 ml/min
- Complete hookup kit provided; no accessories to purchase
- Simple one time setting for automatic replenishment
- Complete electrical compatibility; interface with any processor signal
- Audible and visual low level chemical alarms in each tank
- Separate controls to bulk add developer or fixer

### BENEFITS

- Easy to install and set up; saves mixing time
- Freedom of choice; not locked into single source
- Eliminates hand mixing; fresh chemistry provided as required
- No expensive, special trips to the hardware store
- Provides accurate and repeatable mixing of chemistry
- No special electrical interface components required; everything provided
- Alarms when 1 gal of concentrate remains or water tank empty
- Manual back-up bypasses electronic control PC board

**IMG****RAM-1****IMG PHOTO  
PRODUCTS****RAPID  
ACCESS MIXER****FRONT PANEL CONTROLS****SPECIFICATIONS**

ELECTRICAL CORD TO WALL SOCKET CORD TO PROCESSOR	115 VAC, 50/60Hz, 200W	SITE REQUIREMENTS  ELECTRICAL 115 VAC. single phase electrical outlet required 3A capacity minimum  WATER Filtered water with hose bibb connector within 16 ft and water pressure 40 to 100 psi  FLOOR SPACE 37¼"W x 19"D (within 4 ft of processor) plus space to pour chemistry												
CHEMICAL TANKS CAPACITY	8 ft													
DIMENSIONS	16ft													
PUMP RATES' DEVELOPER DEV WATER FIX HARDENER (diluted 1 2 water) FIX WATER	<table><tr><td>MIN</td><td>MAX</td></tr><tr><td>63 ml/min</td><td>630 ml/min</td></tr><tr><td>320 ml/min</td><td>2937 ml/min</td></tr><tr><td>63 ml/min</td><td>630 ml/min</td></tr><tr><td>63 ml/min</td><td>630 ml/min</td></tr><tr><td>320 ml/min</td><td>2674 ml/min</td></tr></table>	MIN	MAX	63 ml/min	630 ml/min	320 ml/min	2937 ml/min	63 ml/min	630 ml/min	63 ml/min	630 ml/min	320 ml/min	2674 ml/min	OPERATION OF THE RAM-1 RAPID ACCESS MIXER  The RAM-I Rapid Access Mixer is compatible with all one part developer systems. It is designed for the large rapid access user that operates a "dedicated" system; that is, a system where processing speed, chemistry, and width and type of material used are fairly constant.  The RAM-I Rapid Access Mixer stores concentrated developer, fixer and hardener. The RAM-1 uses either the processor's dry contacts or any 5V to 250V signal from the processor to start and stop its replenishment pumps. The RAM-1 then accurately meters, mixes and delivers replenisher solutions to the processor, as required to meet the replenishment specifications of the material and chemistry being used.  During initial set up, the installer must know the width of the material being processed, the processor's throughput speed and the developer/fixer replenishment rates required per unit area of material. With this information, the output of the metering pumps is adjusted to provide the required replenishment when material is being processed. The pumps' output rate should only be recalibrated if the material, its width or the processor's speed is changed.
MIN	MAX													
63 ml/min	630 ml/min													
320 ml/min	2937 ml/min													
63 ml/min	630 ml/min													
63 ml/min	630 ml/min													
320 ml/min	2674 ml/min													
WATER SUPPLY	16 ft Female Hose Fitting													
WATER SUPPLY PRESSURE	40 to 100 psi													
CHEMICAL HOSES	16 ft x ¼"ID For each Chemical													
WEIGHTS NET WEIGHT OPERATING WEIGHT, FILLED WITH CHEMISTRY SHIPPING WEIGHT	<table><tr><td>93 lb</td></tr><tr><td>370 lb</td></tr><tr><td>122 lb</td></tr></table>	93 lb	370 lb	122 lb										
93 lb														
370 lb														
122 lb														
'DEV adjustable from MIN 383 ml/min to MAX 3000 ml/min FIX adjustable from MIN 446 ml/min to MAX 3000 ml/min														

**HOW TO ORDER**

Our New Address Is:

 IMG Photo Products  
 2364 Leicester Road  
 Leicester, NY 14481

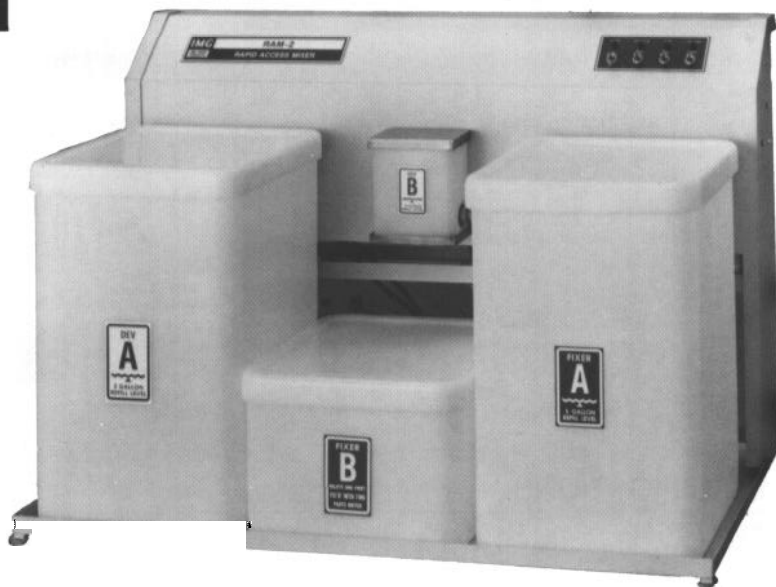
(Phone: 1-800-477-1417)

(FAX: 1-716-382-3031)

**AUTHORIZED DEALER****EXCELLENT PRODUCTS AND EXCELLENT DEALERS INSURE EXCELLENT SERVICE**

**IMG**IMG PHOTO  
PRODUCTS**RAM-2**RAPID  
ACCESS MIXER

# AUTOMATIC RAPID ACCESS DEVELOPER AND FIXER MIXING UNIT FOR TWO PART DEVELOPER



## Complete System • Ready to Install • Compact and Easy-to-Use

### APPLICATION

The RAM-2 Rapid Access Mixing System is compatible with all one or two part developer replenishment systems, rapid access chemistries and rapid access materials. The RAM-2 Rapid Access Mixer stores the developer and fixer, then accurately meters, mixes and pumps the replenisher solutions to the processor as required.

### RUGGED, RELIABLE CONSTRUCTION

Welded steel construction with corrosion resistant baked epoxy finish. Conveniently located solid state controls. Uses dependable bellows pumps which insure consistent chemical mixing. All of this, plus pride in manufacturing, make the RAM-2 the ultimate in reliability.

### QUICK TO INSTALL

The RAM-2 Rapid Access Mixing System arrives complete, ready for a simple and quick installation. High pressure water inlet hose included.

### SAFE TO USE • NO HAND MIXING

The RAM-2 Rapid Access Mixing System puts an end to the fuss and muss of hand mixing and eliminates exposure to chemicals. The RAM-2 Rapid Access Mixing System saves mixing time and assures accurate and repeatable mixing of your chemistry.

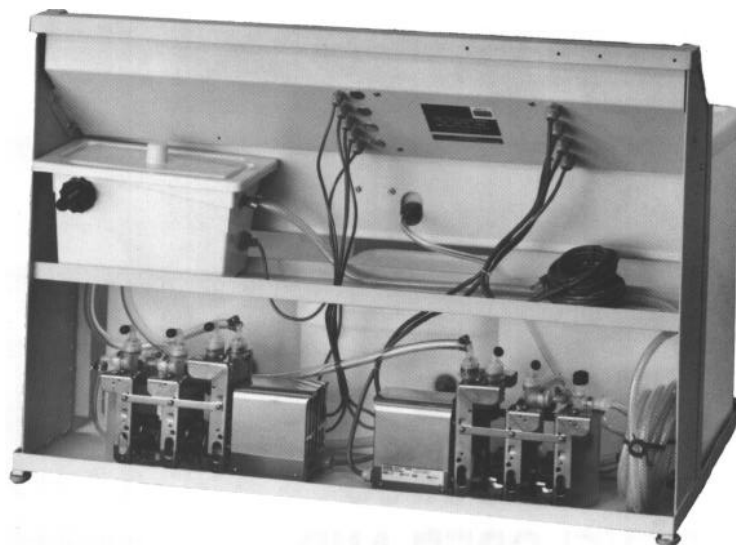
### SIMPLE EASY-TO-USE CONTROLS

The RAM-2 Rapid Access Mixing System replenishes automatically upon receipt of a signal from the processor. Individual replenisher rate adjustment control on both developer and fixer. Bulk-add switch for both developer and fixer. The RAM-2 even has its own minimum daily replenishment (MDR) control that operates in either an additive or subtractive mode. Audible and visual low level alarms on all chemical concentrate and water tanks.





FRONT PANEL CONTROLS



## SPECIFICATIONS

<b>ELECTRICAL</b> CORD TO WALL SOCKET CORD TO PROCESSOR		115 VAC, 50/60 Hz, 200W  8 ft.  16 ft.		<b>SITE REQUIREMENTS</b>  <b>ELECTRICAL</b> 115 VAC single phase electrical outlet required, 1 OA capacity minimum  <b>WATER</b> Filtered water with hose bibb connector within 16 ft and water pressure 40 to 100 psi  <b>FLOOR SPACE</b> 36"W x 20"D (within 4 ft of processor) plus space to pour chemistry.																											
<b>CHEMICAL TANKS</b> CAPACITY DEV A DEV B FIX A FIX B		10 gal. 32 oz. 10 gal. 4.25 gal. (Hardener)		<b>OPERATION OF THE RAM-2 RAPID ACCESS MIXER</b>  The RAM-2 Rapid Access Mixer is compatible with all two part developer systems. It is designed for the large rapid access user that operates a "dedicated" system: that is, a system where processing speed, chemistry, and width and type of material used are fairly constant.  The RAM-2 Rapid Access Mixer stores concentrated developers, fixer and hardener. The RAM-2 uses either the processor's dry contacts or any 12V to 250V signal from the processor to start and stop its replenishment pumps. The RAM-2 then accurately meters, mixes and delivers replenisher solutions to the processor, as required to meet the replenishment specifications of the material and chemistry being used.  During initial set up, the installer must know the width of the material being processed, the processor thruput speed and the developer/fixer replenishment rates required per unit area of material. With this information, the output of the metering pumps is adjusted to provide the required replenishment when material is being processed. The pump's output rate should only be recalibrated if the material, its width or the processor's speed is changed.																											
<b>DIMENSIONS</b>		20"D x 38"W x 29"H																													
<b>PUMP RATES</b>		<table><tr><td></td><td>MIN</td><td></td><td>MAX</td></tr><tr><td>DEV A</td><td>63 ml/min</td><td>630</td><td>ml/max</td></tr><tr><td>DEV B</td><td>6 ml/min</td><td>30</td><td>ml/max</td></tr><tr><td>WATER</td><td>300 ml/min</td><td>3000</td><td>ml/max</td></tr><tr><td>FIX A</td><td>63 ml/min</td><td>630</td><td>ml/max</td></tr><tr><td>FIX B</td><td>63 ml/min</td><td>630</td><td>ml/max</td></tr><tr><td>WATER</td><td>300 ml/min</td><td>3000</td><td>ml/max</td></tr></table>					MIN		MAX	DEV A	63 ml/min	630	ml/max	DEV B	6 ml/min	30	ml/max	WATER	300 ml/min	3000	ml/max	FIX A	63 ml/min	630	ml/max	FIX B	63 ml/min	630	ml/max	WATER	300 ml/min
	MIN		MAX																												
DEV A	63 ml/min	630	ml/max																												
DEV B	6 ml/min	30	ml/max																												
WATER	300 ml/min	3000	ml/max																												
FIX A	63 ml/min	630	ml/max																												
FIX B	63 ml/min	630	ml/max																												
WATER	300 ml/min	3000	ml/max																												
<b>WATER SUPPLY</b>		16 ft. Hose, Female Fitting																													
<b>WATER SUPPLY PRESSURE</b>		40 to 100 psi																													
<b>CHEMICAL HOSES</b>		16 ft. x ¼" ID For Each Chemical																													
<b>WEIGHTS</b> NET WEIGHT OPERATING WEIGHT FILLED WITH CHEMISTRY SHIPPING WEIGHT		93 lb.   370 lb. 122 lb.																													

## HOW TO ORDER

Our New Address Is:  
 IMG Photo Products  
 2364 Leicester Road  
 Leicester, NY 14481  
 (Phone: 1-800-477-1417)  
 (FAX: 1-716-382-3031)

## AUTHORIZED DEALER

EXCELLENT PRODUCTS AND -EXCELLENT DEALERS INSURE EXCELLENT SERVICE

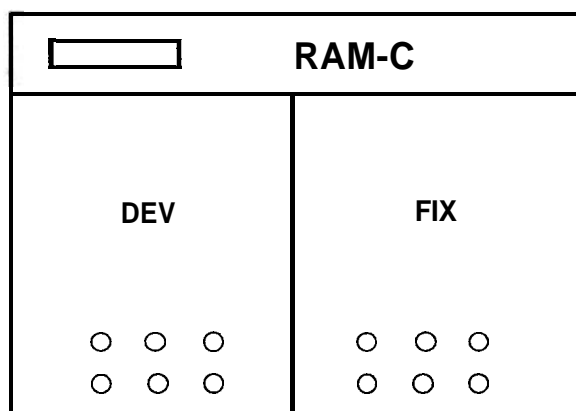
# RAM-C™

## ***Central Mixing System for Graphic Arts Chemistries***

High volume chemical mixer and replenishment holding tanks. Feeds up to six processors from one system.

### **Application:**

Recommended for all graphic arts processors using rapid access and similar chemistries. It is the ideal centralized replenishment system for supplying up to six processors.



### ***Rugged & Reliable Construction***

Welded steel construction with corrosion resistant baked epoxy finish. Solid state controls. Uses two dependable four bellows tandem pumps, which insures consistent chemical replenishment accuracy.

### ***Save Time -- No Hand Mixing***

Concentrates from 15 or 55 gallon storage drums are automatically metered to mix with precisely measured water to ten gallon replenishment holding tanks. The ten gallon replenishment tanks are equipped with separate agitation pumps to ensure the chemicals are properly mixed. To assure proper equipment operation, each chemical and water holding tank is monitored with a float switch. The switches interrupt the mixer operation if a low level in the water, concentrate, or premixed solution tanks is detected.

*Manufactured by*

**CPAC Equipment Division**



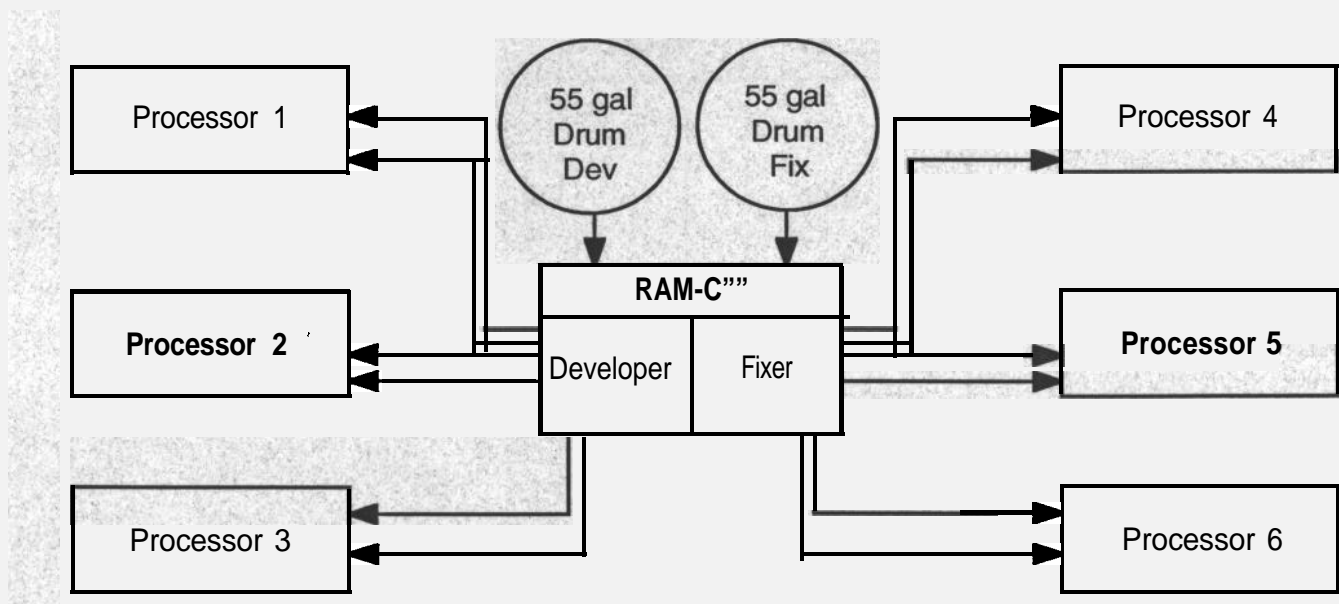
# RAM-C''' Product Data

## Specifications

Electrical:	115 VAC, 50/60 Hz, 300W
Chemical Tanks:	10 gallons each
Dimensions:	19" D x 24 1/3" W x 25 3/4" H
Pump Rates:	Dev: 63 ml/min. Dev. Water: 320 ml/min. Fix: 63 ml/min. Fix Water: 320 ml/min.
Water Supply:	16 ft. hose with fittings
Net Weight:	60 lbs.

## Typical Installation:

### RAM Centralized Mixing System



## CPAC Equipment Division

2364 Leicester Road • Leicester, New York 14481  
Telephone (716) 382-3223 • Fax (716) 382-9481