

Silver Trap™
Windows™
Disposable Series™

*Complete Installation
& Operating Instructions*

Stage 2 of 3 Stages



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USII ENVIRONMENTAL RECLAMATION, Div.
825 Schoenhaar Dr • West Bend, WI 53090-2633 USA
P.O. Box 835 • West Bend, WI 53095-0835 USA
INTERNATIONAL, INC. 1-262-334-3000 • Fax 1-262-334-6222 • www.silverprofit.com

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SILVER TRAP WINDOWS DISPOSABLE SERIES

Installation Guidelines

The **Silver Trap Window Series** is an ultra-compact, high catalyst density device specifically designed for long lasting electrolytic backup use but also makes an excellent low volume primary recovery system. It can be utilized for convenient, space-saving wall mounting or floor stand installation:

- A. Input from processor or electrolytic device must be equal or higher height than **Silver Trap** inlet.
 - B. Outlet of **Silver Trap** must be of equal or higher than drain opening.
 - C. Output tubing of **Silver Trap** must not be higher at any point than **Silver Trap** outlet.
1. If wall mounting, securely attach wall mount bracket using hardware provided or other expanding type wall anchors.
 2. Snap Window cell(s) into wall mount bracket(s).
 3. As many Window cells may be installed in series as needed, to facilitate the level of silver removal efficiency required, for each individual compliance application.
 4. Window cells must be installed side-by-side of equal or progressively slightly lower, height alignment toward the output flow side.
 5. Connect tubing from processor fix tank overflow outlet to the inlet of the first Window cell (*the inlet is located closest to the outer edge of the head assembly*). Connect a new piece of tubing from the outlet of the first Window cell to the inlet of the next cell in a series. Connect the hose from the last cell's output to the sewer drain or EPAN Chamber.* On initial installation, it is advisable to pre-fill the Window cell with fixer, or to operate the processor's replenishment pump until cell is full. This will allow checking for leaks.
 6. Hose clamps, supplied but optional, are often not required due to the tight fit of the tubing connections and lack of solution pressure on the passive flow through installation. Hose clamps may also hinder the rotation process time requirement. When utilizing Window cells with pumped recirculating batch systems, the use of hose clamps and the removal of, or height extension of, the "U"-shaped bypass tube is recommended.
 7. Window cell performance can be monitored with any paper or foil silver estimating strips.* Simply test the input and output solutions for any test color differential, indicating cell functioning ability. Removing the "U"-shaped bypass tube can facilitate ease of inserting the test strips into the input and output solutions. **The cell catalyst can also be conveniently monitored for deterioration and silver accumulation, directly through the clear visually observable housing.**
 8. The Windows' unique clear housings makes the cells ideal for VISUAL PERFORMANCE EVALUATION.
 - A. Window cells used as primary recovery unit should appear light gray indicating good silver buildup.

- B. Window cells used as secondary electrolytic backup unit should appear black indicating little silver buildup. This confirms that the primary electrolytic unit is collecting the majority of the silver and is working properly.
9. **Replacement for Disposable Window**, simply drain and replace with a new Silver Trap Disposable Window.
10. Multiple cell installations may benefit from rotation replacement of individual cells for optimum cost effective results, if remaining cells catalysts are NOT significantly deteriorated.
- A. Remove the entire first cell in the series (closest to the solution input).
- B. Move the entire second cell to the first position, the third cell to the second position, and so on.
- C. Install the new cell in the last position (furthest from the solution input).

This rotation is simplified by the ability to move the entire cell, less the wall mount bracket, rather than unscrewing each cell jar.

11. **Silver Trap Windows** can be carefully rinsed under slow running water. The containers can then be carefully decanted of liquid and then safely shipped for refining and recycling. A coffee filter can be utilized to drain the cell jar for shipping. Simply include the filter media inside the cell jar. In addition, absorbent material, such as sawdust, may be added to the drained cell jar to meet special "no liquids" shipping rules or allow the cells to dry before shipment.
12. **Refining Silver Traps** can be refined in entirety. All inert contents will quickly burn off in the refining process. **NOTE:** Please be sure no liquid remains in the unit before shipping.

USI can provide complete refining services. For instructions, please visit our website www.silverprofit.com or www.silverprofitphoto.com or call us at 1-262-334-3000.

Notification will be sent upon receipt of unit(s). Settlement payment turnaround time - approximately 30 days. A check for the silver value, less refining charges, will be sent unless silver bullion is requested.

* The EPAN Chamber-EPA compliance, drain saver pretreatment device is available from your Silver Trap Windows Series dealer as are Silver Test Strips.

Please Note: When using **Silver Trap Windows** for recirculating electrolytic backup, the silver content of the solution entering may be extremely low in the 150-500 ppm range (compared to 2500-4000 ppm range of untreated used fixer solution). This low silver content can actually cause a much more rapid deterioration of any iron catalyst. This is due to the fact the iron is now directly exposed to the acidic fixer solution and not protected by the usual silver coating. This phenomenon exists in all metallic replacement devices but is not usually visually detectable because of their design. The less durable the catalyst (such as steel wool), the faster the deterioration will occur. Replace **Silver Trap Window** unit whenever the catalyst is $\frac{2}{3}$ deteriorated or unit effluent silver content is excessive.

BASIC TROUBLESHOOTING GUIDE

PROBLEM	CAUSE	REMEDY
1. Solution fails to flow into Silver Trap	<p>A. Silver Trap inlet at higher elevation than processor solution overflow outlet.</p> <p>B. Air lock present in processor overflow tube to Silver Trap</p> <p>C. Silver Trap inlet clogged. (Under extremely low volume application or when Silver Trap is used as an electrolytic backup device, the Silver Trap may become temporarily clogged with chemical precipitates).</p>	<p>a. Lower Silver Trap or raise processor.</p> <p>b. Remove any sag in processor overflow tube in Silver Trap. The overflow tube should be highest at processor outlet and lowest at SilverTrap inlet with little or no sagging in between.</p> <p>c. Dislodge blockage by sharply pushing down on top of Silver Trap lid several times. It may be necessary to repeat this procedure periodically under these unusual circumstances.</p>
2. Solution fails to flow out of the Silver Trap into drain	<p>A. Silver Trap outlet tube lower than drain opening.</p> <p>B. Silver Trap outlet tube clogged at the end into drain opening. (The developer effluent upon contacting the Silver Trap effluent, can cause an iron precipitate to form in the inside of the Silver Trap discharge tube inserted into the drain opening.)</p>	<p>a. Raise Silver Trap or lower drain opening.</p> <p>b. Unclog Silver Trap discharge tube with long thin object such as a pencil or screw driver. Do not insert Silver Trap outlet tube farther into drain than necessary. Use EPAN Chamber to pretreat Silver Trap effluent.</p>
3. Drain into which Silver Trap overflow is discharged becomes clogged	<p>A. Drain may become clogged with an iron precipitate as described above, Problem 2, Cause B.</p> <p>B. Biological growth on drain pipe.</p> <p>C. Condition may be aggravated by drain pipe size, angle of slope, low volume or flow of other wastes.</p>	<p>a. Treat drain with an acid type drain cleaner such as FOTEX Drain Clear, available from your Silver Trap dealer.</p> <p>b. Use algicide control on processor effluent. Use FOTEX Drain Cleaner.</p> <p>c. Use separate drain for Silver Trap effluent. Use EPAN Chamber to prevent Silver Trap effluent.</p>
4. Silver Trap passes silver while not exhausted	<p>A. Inadequate number of Silver Trap used for application.</p> <p>B. Defective Silver Trap.</p>	<p>a. Use additional Silver Trap installed in series.</p> <p>b. Replace Silver Trap.</p>
5. Silver Trap contains little silver after refining. Use factor is low	<p>A. Insufficient volume of solution processed through Silver Trap.</p> <p>B. Solution too alkaline, above 6 pH.</p>	<p>a. Increase volume of solution processed through Silver Trap.</p> <p>b. Reduce alkalinity to below 6 pH.</p>
6. Silver Trap contains little silver after refining. Use factor is high	<p>A. Solution silver concentration very low.</p> <p>B. Solution too acidic, below 4 pH.</p> <p>C. Silver Trap used as electrolytic backup unit.</p>	<p>a. Decrease replenishing rate of processor.</p> <p>b. Increase acidity to above 4 pH.</p> <p>c. Continue such use if economically feasible or required by law.</p>
7. Silver Trap inlet outlet fittings leak	<p>A. Loose hose connection.</p> <p>B. Defective Silver Trap.</p>	<p>a. Add hose clamps.</p> <p>b. Replace Silver Trap.</p>
8. Solution flows into Silver Trap too slowly	<p>A. Solution entering Silver Trap at excessive flow rate, such as when dumping entire processor solution tank through Silver Trap at once.</p> <p>B. Silver Trap outlet drain tube clogged.</p> <p>C. Wash water tank overflow plugged, water backing up into fix tank.</p>	<p>a. Restrict flow rate of solution to below 100 ml/min when dumping entire tank through Silver Trap.</p> <p>b. See Problem 2.</p> <p>c. Remove obstruction.</p>
9. Silver Trap leaks	<p>A. Leak develops around threaded top.</p> <p>B. Silver Trap cracked or defective.</p>	<p>a. Tighten jar-counter-clockwise.</p> <p>b. Replace damaged Silver Trap.</p>
10. Fix solution overflowing	<p>A. Solution not reaching Silver Trap.</p>	<p>a. See Problem 1.</p>