



# PlateVac<sup>™</sup> Flexo Washout Solvent Recovery

Safe, Self-Contained | Piped Directly to Plate Processor | Simple, Automatic Operation



## The Photopolymer Recovery Problem

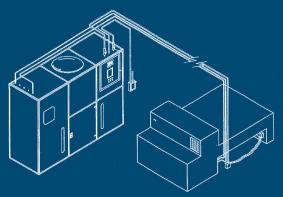
Onsite recovery requires a special enclosure, and offsite is expensive...

Producers of flexographic solvent wash plates face numerous challenges in dealing with the combustible washout solutions used in this process. Reclaiming the valuable spent washout solvent is essential to maintaining competitive operating costs. However, using an off-site distillation service increases risk exposure due the possibility of being held liable for environmental cleanup in the event of an accidental spill during transportation. Additionally, a recovery service cannot deliver the lowest operating cost for the plate-making process, so companies utilizing this service forfeit a critical edge against completion with their own distillation system.

Standard in-house solvent recovery systems require placement in a specially designed and often expensive room engineered to safely allow the processing of hazardous materials. Most in-house recyclers are not capable of being hard-piped directly to the plate process. These systems require the constant handling of 55-gallon drums of wash solution, increasing the risk of worker injury or a hazardous liquid spill. These systems offer little automation, so the operator is forced to monitor the system continually to keep it running properly.

The PlateVac<sup>™</sup> flexo washout solvent recovery system solves those problems:

- a return of as much as 97% of waste solvent
- a fraction of the cost over off-site recovery systems
- operating costs are lowered and environmental risks diminished
- installed in the plate room, hard piped to the plate maker
- no transportation or manual handling is required
- safe, automatic operation
- · operators are freed for other tasks



Sample Room & Connection Layout



## The PlateVac™ Answer

### Fully integrated, enclosed, on-site, automatic solvent recovery.

PRI's PlateVac™ provides fully integrated, automatic control of recovery and recycling operation, minimizing human operator involvement and streamlining the printing process. Additionally, PlateVac™ offers several distinct advantages over traditional distillation systems:

### Automatic, Closed Loop Operation:

PlateVac™ interfaces directly with the plate processor. Dirty solvent storage, distillation, clean solvent storage and automatic feed are all made on demand - with minimal manpower involved.



#### Class 1, Division 2 Enclosure:

PlateVac<sup>™</sup> can be located in the plate-making room; no special rooms or areas need to be constructed or modified; no change to the plate room is required. PlateVac<sup>™</sup> provides a total system solution. Distillation, clean and dirty solvent storage, and controls are packaged in one clean enclosure.



#### More Cost Effective than Offsite Recovery:

Don't let haul away services make off with your money. Offsite haul away recovery services are expensive, and increase liability during transportation and handling. The PRI PlateVac™ system costs up to 86% less than haul-away recovery services.



#### **SSR Maximizes Recovery Rate:**

Every PlateVac™ is equipped with our proprietary SSR system that is injected back into the distillation vessel during the distillation process. Toward the end of the process, the SSR is injected to keep the material flowing and to take the place of valuable solvent. By utilizing the SSR system, we can recover up to 97% of process solvent.

### Take A Look Inside a PlateVac<sup>™</sup> System:

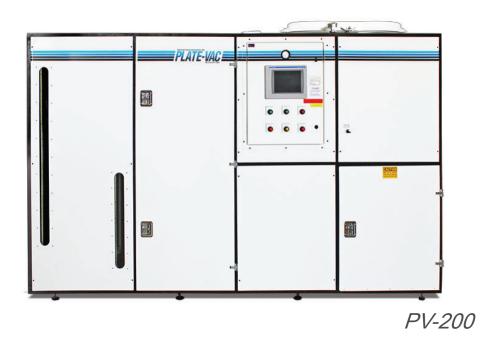


- Class 1, Division 2 Enclosure
- Operational control panel
- Manual clean solvent access panel
- Piping and utility connections

- Vacuum system
- Solids discharge (drum size opening)
- Vessel top lid access
- Tank level sight glasses

## PlateVac<sup>™</sup> Models & Dimensions

MODEL	RATE*	Height	Width	Depth	WEIGHT
PV-50	15.1 L/h (4 G/h)	2235 mm (7' 4")	1753 mm (5' 9")	889 mm (2' 11")	907 kg (2000 lbs)
PV-100	26.5 L/h (7 G/h)	2400 mm (7' 10.5")	2616 mm (8' 7")	838 mm (2' 9")	1134 kg (2500 lbs)
PV-200	53 L/h (14 G/h)	2375 mm (7' 9.5")	3324 mm (10' 11")	895 mm (2' 11.3")	1814 kg (4000 lbs)
PV-300	114 L/h (30 G/h)	2895 mm (9.5')	4877 mm (16')	1219 mm (4')	2948 kg (6500 lbs)
PV-500	170.3 L/h (45 G/h)	3251 mm (10' 9")	4877 mm (16')	1219 mm (4')	3175 kg (7000 lbs)



## **Custom Configurations Available**

### Large-Scale PV-R

PRI also manufactures larger PlateVac™ systems that incorporate our scraped distillation vessels, designed in a vacuum swept, self-contained environment. The larger PlateVac™ 750-R and 1000-R systems, while the distillation vessel is not contained within the cabinet, the entire system is swept and Class 1, Div 2 rated.



### Surrogate Solution Replacement™ (SSR)



## What is SSR? Why Do We Use It?

Maximize Your Solvent Recovery with SSR

During the cook-down process in any distillation system, there becomes a point in which enough solvent is pulled from the solid waste that it becomes dry and will not come out of the distillation vessel. In order to remove the waste from the bottom of the distillation system, a small amount of solvent must be left behind. Due to the cost of the photopolymer washout solvent, clients prefer to recycle as much as possible.

The patented process in the PlateVac<sup>™</sup> injects SSR into the distillation unit at a certain point during the cook-down process. The SSR is a very high boiling liquid that will stay in the chamber to keep the waste flowable while the extra solvent is pulled from the solid waste. This allows users to recover up to 97% of the solvent, compared to other standard systems that may approach 85 to 90%.

SSR allows as much as 97% solvent recovery