

Polishing Filter Kits Models PF420 & HM420

for Silver CTP Processor Effluents

Features/Benefits

- ❖ Unlike steel wool, does not require a very low pH to work efficiently, allowing a higher pH to be dispensed to drain, lowering neutralization solution usage.
- ❖ Will not generate foul odors & hazardous fumes due to low pH chemical reactions.
- ❖ Will not exchange iron ions for the silver, therefore, no increase in iron in the effluent.
- ❖ Less expensive than steel wool columns.
- ❖ Does not require hazardous material removal service costs.

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Procam Controls, Inc. offers a cost effective, safe and reliable method for reducing the particulate and dissolved silver found in CTP processor effluent. The Polishing Filter Kits are offered in two stages and designed to work on the drain line from Procam's Effluent pH Neutralization systems.

The PF420 is a sub-micron particulate filter that removes the colloidal silver that is too small for the one-micron filter on the Neutralization System to remove. The PF420 will typically reduce silver levels in the effluent to 2ppm or below. It must be used in conjunction with an LSN-SR or PropH Neutralization System. In many municipalities the PF420 is sufficient to reach local compliance regulations, for stricter requirements, the HM420 should be used after the PF420.



The HM420 is a unique absorption media that reduces any dissolved silver that may be present that a particulate filter is unable to remove. It must be used in conjunction with a PF420 to prevent premature fouling of the media. The HM420 will typically reduce the silver levels in the effluent to 1ppm or below. HM420 units can be added in series to increase contact time and further reduce silver to 0.5ppm or below.

Both stages are wall mounted, plumbed in series and come complete with a wall-bracket, filter wrench, one filter element and a drain valve. The kit includes inlet and outlet fittings along with a length of tubing and clamps to join the housings together. Spent cartridges can be allowed to air dry and in most cases can be disposed of in your normal trash since silver will not leach.

Specifications:

Overall Dimensions:	26" tall x 9" deep X 10" wide
Inlet/Outlet:	1/2" Hose Barb
PF420 Replacement Element:	PCM-0.35BB-20
HM420 Replacement Element:	PC-HMBB-20

Technical Detail:

Procam Controls, Inc. offers two models of Neutralization systems for CTP processors. The LSN-SR was designed in conjunction with Agfa personnel for LithoStar processors to 1) continuously monitor and adjust the pH of the processor effluent and 2) filter the effluent down to one micron to remove most of the particulate silver. The PropH is designed for the smaller processors that utilize the silver-based plates such as the Heidelberg Pro Processor or G&J Raptor Processor. Everything is the same for both units except the size of the tank and filter.

Virtually all of the silver in the effluent of the CTP processors is in the particulate form. That means that it is large enough to be filtered out with the one micron filter on the Neutralizers. However, there is also colloidal silver (smaller than 1 micron) and a trace of dissolved silver (which varies and may be in the water to begin with). In some municipalities the waste treatment authorities will have different rules and methods of collection and measurement. If the local authorities have strict silver requirements it may be necessary to utilize some polishing treatment to remove the remaining silver.

Procam offers a Polishing Filter Kit that will remove the colloidal silver by filtering the effluent from the LSN-SR or PropH down to 0.35 micron; effectively removing all of the undissolved silver. This will generally satisfy most requirements. However, in some areas the requirements are so strict that the dissolved (or ionic) silver will need to be removed. The Dissolved Silver Adsorption Kit will remove heavy metals such as ionic silver from the effluent through an adsorption process via a unique bone-char media. This media is designed for treating water with heavy metals efficiently and economically at a higher pH.

The Polishing Filter Kit and the Dissolved Silver Adsorption Kit are offered separately to provide the user with the most cost effective system as possible while still meeting local requirements. They come complete with a wall mount bracket, drain tap, inlet/outlet fittings and sump removal wrench. Both units can be mounted remotely from the Neutralizers, and the back-pressure gauge on the Neutralizers will indicate when to change the cartridges. We do not recommend the Dissolved Silver Adsorption Kit to be used without the Polishing Filter Kit. It would still work, but the life of the Adsorption media would be greatly reduced.

Another option is to contact a local silver recovery company to provide a steel wool or iron exchange tailing unit to use as a polishing filter for the dissolved silver. The downside to this is the expense, typically \$200+/exchange and the effluent would then contain high levels of iron. In addition, the units may generate some bad odors and will not work if the pH is higher than 7.5-8.0. Flowrates through these must be very slow to work efficiently.

Due to variations in processes, load, production, and local water conditions, it is impossible to predict cartridge life. However, the on-board filter will have the most frequent change requirement with the Polishing filter lasting much longer and the Adsorption Cartridge lasting the longest. In most cases, the Polishing treatment cartridges would last 8+ weeks.

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