

Application Case Study



LIQUID PROCESS FILTERS GRAVER TECHNOLOGIES 1-888-353-0303

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ACS-002

QXL Success in Solvent Based Ink

Application:	Solvent Based Ink filtration
Other Products Evaluated:	GE Water polypropylene fiber and glass fiber capsules Parker Glassmate 0.2 μm nominal PTI Polyflow G 5, 2.5 and 1 μm
Graver Product:	Graver Technologies QXL 3-10PE and QXL 1-10P3E

Discussion:

A manufacturer of solvent based inks was having difficulty with agglomerated particles in the ink. They required a filtration scheme that would remove the large agglomerates while maintaining the colored pigments in the ink.

Several competitive products from GE, Parker and PTI were evaluated along with the Graver QXL series products. Pall filters were considered, but excluded from consideration due to high cost.

Criteria used to evaluate the filters were consistency in ink quality, pressure drop, and on-stream life. They also desired products that would work for all ink colors as well as for aqueous based inks.

To evaluate the filters, ink particle counts were measured and a small batch of ink was filtered through lab scale media to estimate the batch process time and filter usage.

Results

- Customer was able to reduce number of filtration steps from 4 to 3 by using the Graver QXL Series and still improve the filtration efficacy.
- The QXL filtration scheme resulted in higher throughput rates and higher product yields.
- QXL Series filters met the requirements of the most challenging black ink as well as the other colors and the aqueous based inks.
- QXL series on-stream life exceeded the customer's expectations, allowing for increases in batch size.
- Filtration consistency, batch to batch was excellent, meeting the stringent requirements of a major ink jet printer manufacturer.
- Although the QXL filters were not the lowest priced filter evaluated, the combination of reduced filtration steps and ink quality improvement more than justified their usage.
- Graver's distributor was instrumental to this success by providing on-site technical support and by bringing in Graver's technical resources to optimize the customer's filtration scheme.