



Clean to the last drop

After spending thousands of pounds on glazing and optical manufacturing equipment, trying to claw back your investment can take time and isn't always an easy process. The main emphasis these days is on customer service. The labs that survive and thrive are the ones that go that extra mile for their customer in providing the ultimate glazing experience. However, money talks and optical practices sometimes select their lab on price as much as the service they get from their supplier. That environment means labs have to offer great products and service to match, but all at the right price so the chance to save money anywhere in the lab is welcomed.

One area many labs are looking at making some kind of saving is the supply and use of the water needed for the glazing process. This often unseen expense is addressed with the Euro Aquasave on show at the recent Optrafair.

The Euro Aquasave constantly clears and isolates the problematic plastic pieces using the very latest technologies, allowing clean recirculated water to be returned to the lens edging machine time and again. The separation process is achieved by a vortex in the self-cleaning separation unit that forces the clean water upward and the cleared fines down into the dirt pot. This process is progressive and clears more and more on each pass. The final step is to pass the water through a housing that contains a material called DFDM; this captures ultra-fines prior to the water being returned to the lens edging machine. The single stage clearance without discharge is simply impossible by filtration, hydrocyclone or centrifuge. The DFDM material will capture these minute particles during the processing of approximately 1,500 lenses. The tank sits within a frame and is filled with 40-50 litres of water. The system clears coarse, fine and ultra-fine plastic pieces and leaves clear recirculated water without any sign of white film.

This is a system that is not entirely new but it has never been used in the optical industry before. The Filstar, elementless filtration system, the kit behind it all, was originally invented

Labs looking to save costs and become greener were treated to a viewing of a water cleaning and saving device at Optrafair.

Kevin Bowers investigates



The Euro Aquasave isolates the plastic pieces, allowing clean water to be returned time and again

for in-house use during the 1990s in Japan. Its ability to remove grinding sludge and avoid filtration blinding meant a maintenance and waste-free method that can be achieved without discharge, eliminating the costly need to dump coolant. There was such interest in it, that three multinational vehicle manufacturing companies around the world showed great interest and had the product made for use in

their large manufacturing facilities. It is now used in many industries with problematic filtration issues including motor, pharmaceutical, chemical, glass and engineering. For the first time it is being applied to plastics. It also works with glass.

The Euro Aquasave improves production quality, cuts down on water consumption and is an efficient separation system that is easily washed out. It is also water authority approved so it meets legislation covering the safe disposal of unclean water. Importantly, it cuts down on pollution and makes potentially major cost savings. According to supplier Europtica, the Aquasave will cut down on the volume and therefore the cost of water required by over 90 per cent. It also means water can be made clean enough to be disposed of using traditional methods and the solid wastes are removed separately.

Maintenance-free

The option shown at Optrafair has the ability to clear 15 litres per minute, but systems of 2,000 litres per minute with the same clearance level and without discharge are possible. The final stage DFDM strips out the residual ultra-fine plastic like a magnet, sucking it out. The ultra-compact Filstar is very much maintenance free and is a self-cleaning system that can be expected to last as long as the edging machine without a performance drop.

Systems in other industries have been running continuously, clearing highly abrasive material without noticeable change for 10 years.

For those of us used to the spectacle glazing world over the decades, a clean system with no messy water change would be welcomed. I couldn't tell you the amount of times I have left the lab pretty messy thanks to changing the filter system on the lens edging machine or machines. Maybe with this system we can finally wave goodbye to the white lab coats forever. ●

● **Kevin Bowers** is a professionally qualified spectacle maker with over 20 years' experience in the optical industry