

# NEW PRODUCTS

## What's Cool Products that are smart, make your tasks easier and provide cost or labor savings

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## Accurate Membrane Filter Integrity Testing

Exchange the subjectivity of a bubble test with the accuracy of a pressure decay test.

**EARLIER THIS YEAR** I found an integrity tester for membrane filters called the **CUNO MiniCheck** (a **3M Company**). It combines a lot of great features into a small, hand-held device perfect for any bottling line. Membrane filtration, just prior to bottling, is the last line of defense for the winery since contamination issues should be taken very seriously.

Today many bottling lines still rely on the traditional but questionable "bubble-point" test. CUNO's foolproof tester is far more accurate with its "pressure hold or decay test."

The inherent problem with bubble-point testing, the "test of convenience" in our industry, is that increasing pressure until some bubbles appear in a sight glass on the housing is too subjective. "The human element often has problems in determining how many bubbles are too many," said **Durs Konig**, operations manager at **Sonoma Wine Company**. Instead, a successful pressure decay test will take the membrane up to the exact amount of pressure, as specified by the manufacturer, and then hold it.

The CUNO tester is not proprietary to any particular brand of membrane, so wineries can create specific test procedures based on their choice of filtration. This tester comes with 19 single, key-stroke "protocols," based on the type of filter. As a plus, the operator can easily modify and create new protocols via the main menu. This is ideal for the larger winery with a wide range of filtrations, possibly using different filter housings, in both shape and size, with varying flow rates.

That said, my first thought was how this unit would really benefit the custom crush facility or mobile bottler. These folks are constantly faced with customers who have a myriad of filtration preferences. It would be nice to accommodate any request and not feel as if the quality of the test might be questioned.

What is cool is these units store up to 200 test results. At the end of a singular test or continuing tests as the case may be, the bottler can then download the numbers and print a hard copy permanent record (insurance) for himself and the customer. Simply link the MiniCheck to a PC with the supplied interface and software program. All test numbers are only accessible by a security code. Later, if need be, proof-positive results can be revisited in the event of any contamination issues.

The MiniCheck also has a self-test protocol that runs a diagnostic program to check and verify all the system components and parameters. Again, this is a nice record to keep on file for the customer.

Coming from the bio-tech industry in Europe, membrane integrity testers have typically been expensive, complicated and not nearly as affordable and portable as



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The tester is accurate for any size winery, custom crush pad or mobile bottler.



COURTESY OF CUNO

The MiniCheck is easily attached with a stainless, quick-disconnect fitting.

these. The MiniCheck was designed specifically for use in the food and beverage industry. These units easily transport from one filter housing to another or remain permanently attached to a singular housing. The inlet pressure connector (included) is a stainless, sanitary, quick-disconnect fitting.

Recently König handed me such a tester for the first time, and the procedure was incredibly simple. Basically it is pass-fail, usually within a five-minute time-frame. The tester is attached, the housing is pressurized, the time expires and you are done. The tester will then signal red or green depending on the results. Manufacturers typically allow for a deviation of one PSI within that five-minute period. The pressure range of the MiniCheck is a maximum 58 PSI, and the accuracy is plus/minus 0.116 PSI. It could not be any easier.

The MiniCheck comes with four rechargeable NiCad batteries and will run up to 12 hours (depending on use) before recharging. I was also told that the tester will hold all data in the memory for up to four months without a charge.

The "splash-proof" ABS plastic case is 4x8 inches and weighs a mere one pound. LED indicators are simply red/green (pass/fail) or yellow for low charge. Since it comes from Europe, pre-programmed languages include English, French, German, Italian and Spanish. Other languages can be requested. Finally, the testers come with a one-year warranty.

**What's Cool:** For something as important as the final integrity test of the membrane filter, it is nice to exchange the subjectivity of the bubble test with the accuracy of the pressure decay test.

Convenient, affordable and easy to use, this tester is a welcome addition to any bottling line start-up. It should be a must-have for any large facility, custom crush or mobile bottler faced with the need to document a wide range of filtration requirements.

**FOR MORE INFORMATION, CONTACT:** Conor O'Hara, director of marketing, Global Food & Beverage, [cjohara@mmm.com](mailto:cjohara@mmm.com) or (203)238-8923.

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