

# In the Spotlight

## Pharmaceutical Science & Technology Innovations



**DSS Pilot Unit Combi M39/M3.8**  
(Alfa Laval Inc.)

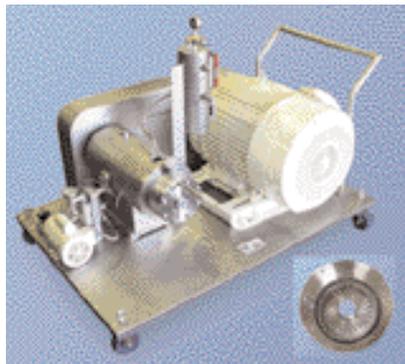
### Membrane Filtration Test Unit Combines Two Technologies

Alfa Laval Inc.'s (Richmond, VA) "DSS Pilot Unit Combi M39/M3.8" uses microfiltration and ultrafiltration for flat sheet membrane screenings, pilot-scale spiral tests, and small-scale production.

Combining spiral bound and plate-and-frame membrane configurations, the system enables customers to select the best configuration for their sites by using one test unit. "Depending on our customers' needs, we can either direct clients to a more economical and compact system using spiral wound technology or to the flat sheet design that is suitable for large ranges of suspended solids and high viscosity levels," says Jose Carpio, business development manager for membrane technology at Alfa Laval.

With the plate-and-frame design, as many as five different membranes can be installed into one housing so that different molecular-weight separations can be screened with one batch. In addition, the system can be configured for ultrafiltration, microfiltration, nanofiltration, and reverse osmosis.

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**MegaShear**  
(Charles Ross and Son Company)

### High-Shear Mixer Provides Product Stability and Fast Solubilization

Charles Ross and Son Company (Hauppauge, NY) has introduced an inline high-shear mixer that combines high flow rates and ultra high-shear rates.

According to Ken Langhorn, product manager and coinventor of the "MegaShear" at Charles Ross and Son, "The MegaShear mixer uses a new rotor-stator technology that is designed to impart a high level of shear to liquid products." Able to achieve flow rates as fast as 500 gal/min without an auxiliary pump, the MegaShear mixer can disperse large particles and droplets in a single pass. The mixer also can reach tip speeds in excess of 18,000 ft/min.

In addition, the rotor-stator mixer can create dispersions and emulsions on the first attempt, with uniform size distribution. Thus, the need for inline recirculation is eliminated.

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**Komarek Model B050PH**  
(K.R. Komarek, Inc.)

### Roller Compactor for Small Batches

The compact "Komarek Model B050PH" roller compactor from K.R. Komarek, Inc. (Elk Grove Village, IL) is specifically designed for small research and testing projects.

The machine is self-contained in a compact, free-standing unit with all drive components separated from the material processing path. Although the roller compactor was designed for use in the laboratory, it also can serve as a production unit for clients with low capacity requirements.

"We tried to simplify the design and at the same time keep the ability to record or visually control all main process parameters," says Roman Dec, research director at K.R. Komarek Briquetting Research, Inc. "In addition, the unit is specifically priced to make it affordable for small research companies to own."

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### New Product Announcements

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