**DrM, Dr. Mueller AG** - The specialist for solid/liquid separation & vibraratory Mixers & Single Use Technology . DrM's products enjoy a worldwide market in various industries in the chemical, petrochemical, pharmaceutical, steel and food production.

**FUNDABAC® Filter** wet and dry discharge: The filtered solids are deliquored and discharged by gas back pulse. As an alternative, the cake can be reslurried in another liquid.

**CONTIBAC®** continuous thickening: This filter type allows continuous filtration without interruption of flow. The solids are flushed back into the liquid and discharged in slurry form. **STERIBAC®** GMP Filter, enhanced version of the FUNDABAC® design to comply with the high production standards of pharmaceutical and biotech industries. Surface finish and design of internals allow effective cleaning of all parts in contact with product. Our key competence: Filtration and heel volume filtration, cake and spray washing, cake drying, in-situ filter cleaning, application know-how.

T**he FUNDAMIX® Vibratory Mixer** is a universal device for mixing liquids in open or closed vessels, under vacuum or pressure, even in sterile conditions.

The electro-magnetic drive operates at 50 to 60 Hz and transmits the vibration via the mixing device or mixing plate attached to a special clamp coupling into the medium.

The amplitude resp. mixing effect is controlled by an electronic system and can be adjusted from 0 to 4 mm. The flow direction can be adapted to suit the medium and required mixing effect. The mixing direction depends on the orientation of the conical holes.

Standard mixers are in 316 stainless steel, but can be manufactured from a wide range of materials including Hastelloy, Titanium and various plastics.

FUNDAMIX® can operate continuously without overheating or amplitude variations.

**Single Use Filter**

**FUNDABAC® SU** – Filtration Technology

DrM’s new single-use filter type, FUNDABAC® SU, consists of large surface area filter elements, packed into a fully contained plastic enclosure. It is a clever alternative for disposable filter cartridges for harvest and purification in biopharmaceutical processes.

The increased surface area boosts the filtration efficiency and results in a higher throughput. All exposed plastic surfaces are pre-sterilised and validated which makes CIP/SIP redundant. The filter bag is installed in a pressure vessel during filtration. This design opens up the possibility to compress the filter bag by applying an external pressure, resulting in very low liquid heel. The unique design allows a number of cycles, where the cake can be back-flushed and accumulated on the bottom of the bag. Finally the compressed bag including the solid waste is in very compact form and can be removed and safely disposed of.

**FUNDAMIX® SU** – Mixing Technology

Biopharmaceutical manufacturers are facing an ongoing change in terms of operational techniques and the selection of process equipment.

The current market demands and industry trends, i.e. industry 4.0, perfusion/continuous process, inline measurement, real time control and singleuse

systems (SUS) offer best conditions to the biopharmaceutical manufacturers to decrease the COGS and increase speed, quality and flexibility throughout their entire production process.

To meet these demands, DrM has developed a new type of single-use mixing reactor, the FUNDAMIX® SU system, which combines the proven FUNDAMIX® mixing technology (over 1900 stainless steel executions) with the advantages of a closed and disposable plastic enclosure. A broad range of different connections allows for a modular and very flexible approach in the design of the production chain. The bags are delivered

sterilized and therefore cleaning/sterilization processes as CIP/SIP is no longer necessary.

**FUNDAWAVE® Crossflow Filtration**

**The FUNDAWAVE®** is a new filtration concept which targets applications that so far could not give satisfactory results with any type solid/liquid separation equipment. The equipment is based on the cross-flow principle with membrane-based filtering media adapted to specific filtration duties. The flow rate is maintained by constantly removing the solids layer forming on the membrane. In contrast to standard tangential flow filtration equipment (TFF) the cross-flow is accomplished by movement of the filter membrane across a stationary liquid.