Twin-Syringe Biomaterial Delivery System
**Twin-Syringe Biomaterial Delivery System**  
*(M-System)*

**Field of Application**  
The main applications for this system are the handling of multi-component biomaterials such as tissue-adhesives, fibrin-glues for tissue sealing, materials for wound treatment, as well as stem-cell preparation.

**Twin-Syringe Delivery System**  
MEDMIX offers a family of twin-syringe dispensers for use with off-the-shelf luer-lock syringes. The individually pre-filled syringes are simply snapped into the single use dispenser. Different interface adapters attached to the outlet end of the syringes allow the use of various mixing and application accessories. Simultaneous and accurate dispensing is assured due to the innovative design of the twin-syringe dispenser.

<table>
<thead>
<tr>
<th>Syringe Volume (Each)</th>
<th>Ratio *)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.0 ml</td>
<td>1:1</td>
</tr>
<tr>
<td>2.5 ml</td>
<td>1:1</td>
</tr>
<tr>
<td>3.0 ml</td>
<td>1:1</td>
</tr>
</tbody>
</table>

*) Other ratios will be available on request

**Twin-Syringe Dispenser**  
The filled syringes are snapped into the twin-syringe dispenser in defined positions given by their respective flanges resulting in a mechanically stable device.

**Safety Transfer Devices**  
MEDMIX offers a number of transfer devices to safely open and transfer liquids from ampoules or vials of different volumes to luer or luer-lock syringes.
Interface Adapters
Luer-Lock, K-System or L-System adapters for connecting to the outlet end of the syringes are available.

Mixers
Mixers of various diameters and different numbers of mixing elements are available for the mixing of components with different viscosities and/or ratios. The static-mixing method ensures consistent mixing performance.

Spray Nozzles
For spray applications of tissue-adhesives and sealants, MEDMIX has developed low pressure air-assisted and unassisted spray nozzles. The design ensures an even spray pattern on a small spray field and a narrow droplet size distribution. The air-assisted spray nozzle incorporates a pressure-limiting valve.

Application Accessories
For precise placement of mixed biomaterial, especially under constrained space conditions, attachable tips such as spreaders, angled tips or cannulas are available.

Engineering
For customized solutions, MEDMIX offers engineering support.

Patents or Patents Pending
Standard MEDMIX Medical Mixing and Delivery Systems:

- Bone-Cement Delivery System (P-System)
- Powder / Liquid Mixing System (F-System)
- Bone-Graft Delivery System (G-System)
- Twin-Syringe Biomaterial Delivery System (M-System)
- Double-Syringe Biomaterial Delivery System (K-System)
- Double-Syringe Prefilled Delivery System (L-System)
- Double-Cartridge Prefilled Delivery System (S-System)
- Safety Vial Transfer Device
- Safety Ampoule Transfer Device