**Main advantage**
- Crease-and spot-free sample dyeings
- Knitted and woven fabrics as well as yarn can be dyed
- Natural and synthetic materials
- State of the art process controller with large integrated program memory
- Low liquor ratio: 1:5 fabric dyeing cotton
- Stainless steel cabinet
- Dosing without opening the beakers
- No glycerin or cooling water needed
- Very good price / performance value

**Simple operation**
- Filling dye liquor and textile
- Simple fixation of the beakers into the machine
- Calling of the dye program from memory and starting the dye process

**Beaker support**
- Three-dimensional movement and 360° rotation (clockwise and counterclockwise) allow even and dyed through samples
- The multifunctional beaker holder allows the use of different beaker sizes
- Reversible rotation and speed between 5 and 100 rotations per minute

**Beaker sizes**
- 175 ml x 16 beakers (standard: Piece samples only)
- 350 ml x 12 beakers (for yarn or piece samples)
- 500 ml x 8 beakers
Disadvantages of no adding possibility

- Time is lost (opening and closing beaker) and cooling down of the dye bath takes place. This increases the possibility of creases and wrinkles.
- Adding over time (as dosing on the production machines) is not possible.
- Danger of having spots on fabric, because of adding chemicals directly into the dye bath.
- Time consuming operation and great care of the operator is needed. Errors are frequent and reproduction from lab to production is not optimal.

Disadvantages of the injection method

- Time consumption during adding relatively big, since for every beaker approx. 10 to 15 seconds are being lost (on a 16 beaker machine, adding takes therefore approx. 3 - 4 minutes). This increases the possibility of crease marks and wrinkles on fabrics.
- Only solutions (no powder chemicals) can be added. This increases liquor ratio, e.g. when soda ash has to be added. Reproduction from lab to production is not optimal.
- The solution is given to the bath in a very short time. Spots are very frequent since the chemical is not added in a time frame as on the production machine.
- Membranes and injection device need spare parts and are therefore costly.

Our system

- With the optional specially designed lids, powder as well as liquid chemicals can be put into a small beaker (separated from the dye bath).
- Actuating a lever (time approx. 3 seconds per beaker = less than 1 minute for a 16 beaker machine) initiates the slow dilution of the chemical into the dye bath (beaker lid must not be opened to activate this process).
- Comparing the above systems with our system: Beakers do not move for only one minute. This increases the quality (less wrinkle and crease marks).
- Since the chemical mixes slowly with the dye bath, concentrated chemicals are not touching the fabric and the fabric is dyed spot-free.
- It is the optimal method for the cotton and cotton/polyester dyers but also for any other materials.
**Process controller**
- Setex 575 CE or Sedo-Treepoint 1808+ controllers
- Controllers can be connected to Orgatex or Sedomaster
- Graphical display showing dyeing curve, process steps, temperature, speed and rotation direction.

**Temperature measuring**
The measuring of the temperature takes place inside the beakers allowing the direct measurement of the dye liquor. This enables the machine to accurately control and regulate the temperature.

**Heating system**
- The laboratory dye machine is equipped with two 1 kW or 1.5 kW (max.) infrared heating tubes.
- Maximal temperature: 140 °C.
- Heating rate can be varied between 0.1 °C/min and 4°C/min.

**Cooling system**
Air cools down to the required temperature. The machine does not need any cooling water.

**Options**
- The standard beaker holder has 16 positions. Optionally, a holder with 12 beaker positions is available.
- To dye yarn we suggest our yarn holder. This accessory is available in combination with the 350 ml beakers.
- Teflon foil to dye crease sensitive and delicate materials.

**Specifications**
<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Dimensions (W x D x H)</td>
<td>810 x 650 x 910 mm</td>
</tr>
<tr>
<td>Machine weight</td>
<td>120 kg</td>
</tr>
<tr>
<td>Power consumption</td>
<td>2.5 to 3.5 kW</td>
</tr>
<tr>
<td>Heating power</td>
<td>3 kW</td>
</tr>
<tr>
<td>Voltage</td>
<td>400 V, 50 or 60 Hz</td>
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<tr>
<td>Max. ambient temperature</td>
<td>40 °C</td>
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</tbody>
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