CONTAINER MIXER CMQ
THE NEXT GENERATION

PATENTED

MIXING TECHNOLOGY

www.zeppelin-systems.com
Benefit from Zeppelin’s global leadership in mixing technology!

Based on the pioneering HENSCHEL-Mixers® Zeppelin has been setting standards in the mixing technology for decades and has well-proven expertise in the areas of plastics, additives, colors, paints, pigments, toners, food, ceramics, minerals and metal compounds.

We know what is important and we have the skills to process and handle sensitive materials. We offer ground-breaking solutions for any mixing task and procedure as well as for up- and down-stream handling and processing.

The mixing technology of the 21st century is characterized by innovations, inventiveness and solution-oriented engineering. As one of the world leading mixing technology experts we not only provide mixers and mixing solutions but understand the entire manufacturing process.

Perfect first-hand mixing solutions

Container Mixers are versatile mixers providing enormous benefits for many applications (e.g.: color toner, TPU/TPE, technical polymers like Peek and PTFE, any additive premix, masterbatches, powder coatings) thus achieving excellent qualities in homogenizing, dispersing and coloring for bulk materials.

Unlike for stationary installed mixers, the mixing bowl (container) is movable. Filling and discharging can be done remotely from the mixing station.

The new Container Mixer CMQ

Specially designed for coloring applications, mainly Powder Coatings and Color Masterbatch, the CMQ provides highest flexibility and reduces cleaning time to a minimum. Integrated in an automated material handling system, Zeppelin offers a sophisticated process solution. This innovation ensures our customers a competitive edge in the international market.
The three coordinates represent the lightness ($L^* = 0$ yields black and $L^* = 100$ white), the position between red and green ($a^* \leq 0$ green, $a^* \geq 0$ red) and the position between yellow and blue ($b^* \leq 0$ blue and $b^* \geq 0$ yellow) of the color.

**Optimized design for best results**

The innovative wing profile tool with its unprecedented lifting abilities makes the bottom shell radius and a deflection via that radius unnecessary. The tool is no longer near-ground and the special airfoil shape generates a suction effect that directs the material upwards. The combination of the flat mixing head with the wing profile tool provides high lifting forces, minimal turbulence and low mixing resistance. This ensures a fast and effective homogenization and a very good color strength.

Thanks to the high bottom clearance, no pressure is generated on the surface of the mixing head and any material deposits or build-ups are eliminated. This results in hardly any temperature increase (approx. 1.5 - 2 °C/min), a low power consumption and less wear on the mixing tool.

Watch and experience how efficient our mixers work
FIRST CLASS MIXING – MOST EFFICIENT CLEANING DESIGN
Save up to 80 % cleaning time

**Patented wing profile tool**
- Airfoil shaped mixing arms with winglets for lowest mixing resistance
- Optimized mixing with lowest cleaning effort

**Fast and easy cleaning**
- Flat panel mixing head
- Most minimal cleaning effort
- Unprecedented cleanability
- Allows shortest cleaning times

**Dust Reduction System**
- Container venting integrated in container seal
- Drop in two stages

**No guiding installations**
- Self centering container
- No obstacles on the floor for cleaning

**Options:**
- **Safe handling**
  - Monitored automatic container grounding
- **Preventative maintenance**
  - Monitoring of the bearings via vibration and gyroscopic sensors
- **ATEX**
  - EU type-examination certificate for ATEX equipment category 1/3 D
**DESIGNED FOR MAXIMUM EFFICIENCY**

**ATEX certified**

The ATEX certified design of our Container Mixer CMQ with EU-type examination certificate for equipment category 1/3D guarantees a high degree of safety. **Benefit from high safety standards while reaching maximum quality and productivity!**

<table>
<thead>
<tr>
<th>Size</th>
<th>Net volume</th>
<th>Batch weight *</th>
</tr>
</thead>
<tbody>
<tr>
<td>[l]</td>
<td>[kg]</td>
<td></td>
</tr>
<tr>
<td>150</td>
<td>120</td>
<td>35–70</td>
</tr>
<tr>
<td>300</td>
<td>240</td>
<td>65–135</td>
</tr>
<tr>
<td>450</td>
<td>360</td>
<td>100–200</td>
</tr>
<tr>
<td>600</td>
<td>480</td>
<td>135–270</td>
</tr>
<tr>
<td>1000</td>
<td>800</td>
<td>225–450</td>
</tr>
<tr>
<td>1200</td>
<td>960</td>
<td>270–540</td>
</tr>
<tr>
<td>2000</td>
<td>1600</td>
<td>450–900</td>
</tr>
</tbody>
</table>

*Assuming an average bulk density \( \rho_b = 0.6 \text{ kg/l} \)

- Mixing time approx. 3–5 minutes
- Mixing tool speed up to 15 m/s
CONTAINER SYSTEM AND SURROUNDINGS

**Easy transport**
- Rail conveyor
- Chain conveyor
- Roller conveyor
- AGV (Automated Guided Vehicle)
- Manual or with mover

**Container feeding**
- Automated or manual design for a precise loading solution

**Operator Safety**
- Safety fence or light barrier

**Different container discharging solutions**
- Drive-in
- Load-on

**Central aspiration unit**
- Efficient venting

**Use different container sizes**
- Up to 3 different container volumes for the same machine size

**Fully automated container plant**

**Modular**
WE MAKE YOUR BUSINESS EFFICIENT AND MANAGEABLE

Advantages at a glance

- **Most efficient cleaning effort**
  Reduces cleaning times up to 80%

- **Fast and effective homogenization**
  Even distribution of all components

- **Consistent color strength**
  Low measurable ∆E
  (total color difference)

- **High dispersion**
  Prevention of any pigment agglomeration
  Equalizing of particle size

- **Wide range of batch sizes**
  Use different container sizes on one machine size

- **Low mixing resistance**
  Minimal temperature increase,
  approx. 1.5 - 2°C/min

- **Trusted technology**
  For reliable function and long life-time

- **Guaranteed reproducible quality**
  For optimum products

- **Reliable batch tracking**
  Allows for trouble-free quality management

- **Low material pressure**
  No caking or material build-ups

- **High flexibility**
  Quick set-up and change-over

- **Intelligent machine frame design**
  No edges, deadspots and obstacles
  for fast and easy cleaning of the surroundings

- **Safe operation**
  ATEX-certified with EU-type-examination certificate (option)

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**Invitation**

We gladly invite you to our Mixing Technology Center in Kassel. Convince yourself of the CMQ effectiveness and its outstanding benefits.

All essential mixing processes can be tested in our Technology Center under production conditions.