

**PATENTED  
Mixing Tool\***



**CONTAINER MIXER CMO  
THE NEXT GENERATION**



**MIXING TECHNOLOGY**

Intelligent

## **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 21<sup>st</sup> 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.

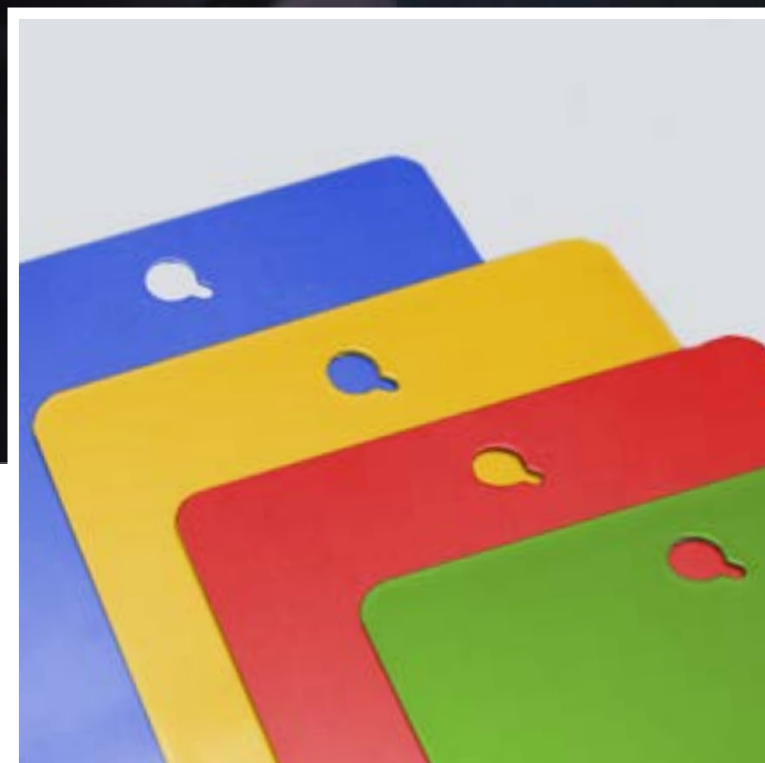
Unlike for stationary installed mixers, the mixing bowl (container) is movable. Filling and discharging can be done remotely from the mixing station.

### **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.



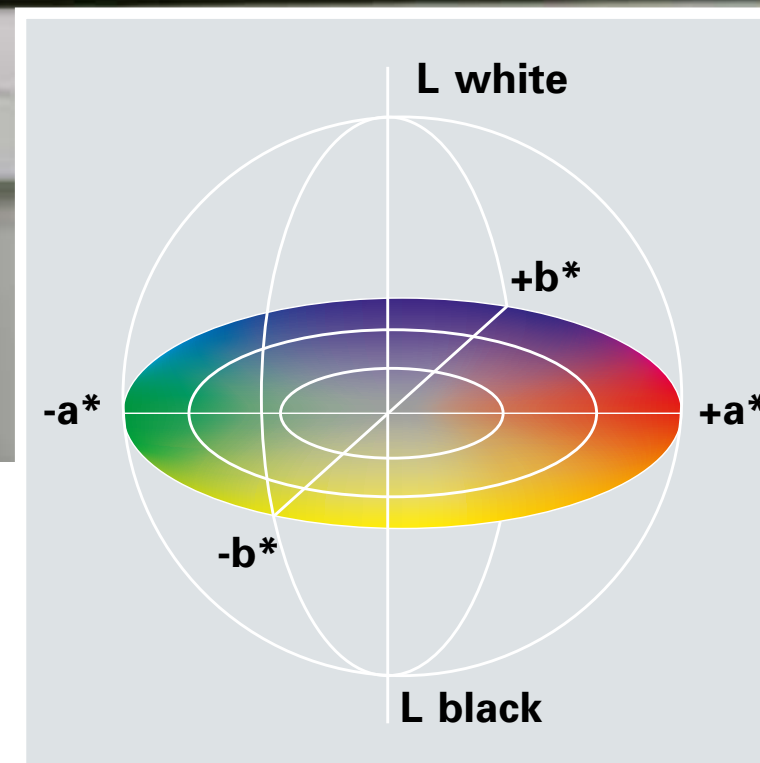
High-performing



Q-Panels



Colormark test specimens



CIELAB Color Space

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

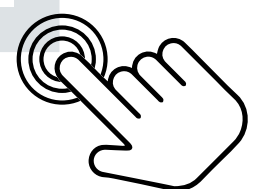
The innovative wing profile tool with its unprecedented lifting abilities makes the bottom shell radius and a deflection via that radius unnecessary. The tool is no longer near-ground and the special airfoil shape generates a suction effect that directs the material upwards. The combination of the flat 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



Scan or click

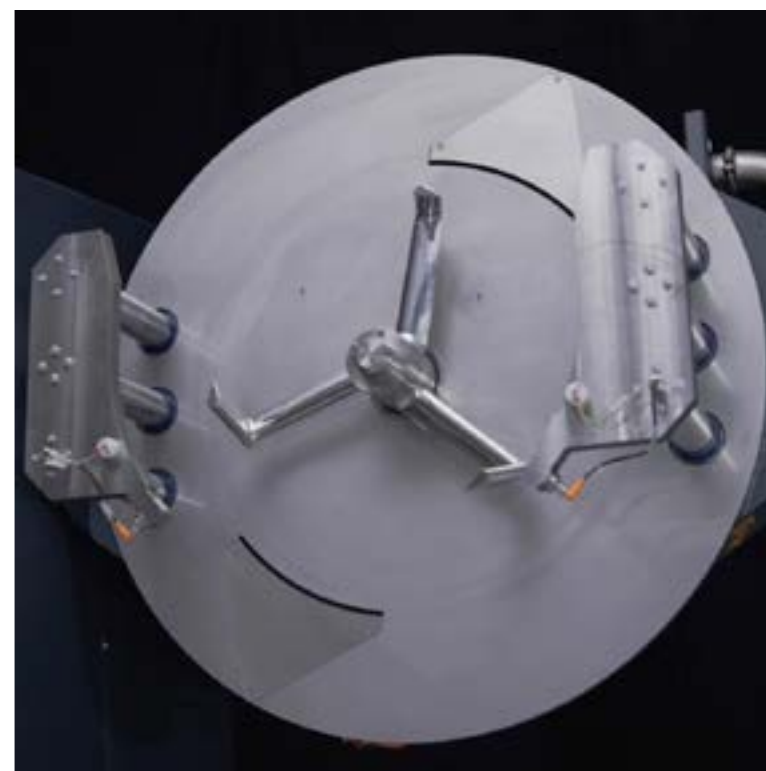


**FIRST CLASS MIXING – MOST EFFICIENT CLEANING DESIGN**  
Save up to 80 % cleaning time



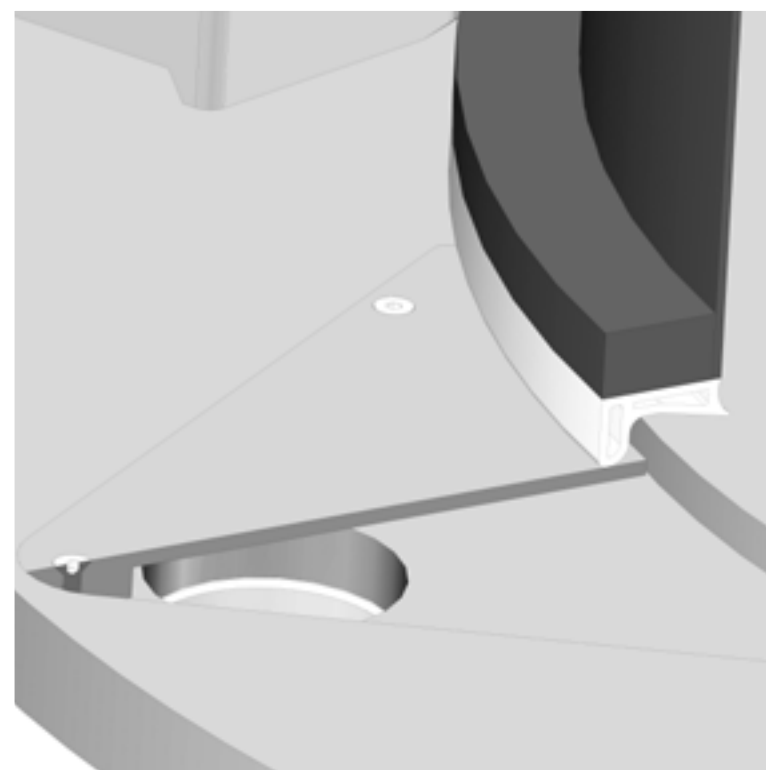
**Patented wing profile tool\***

- 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**

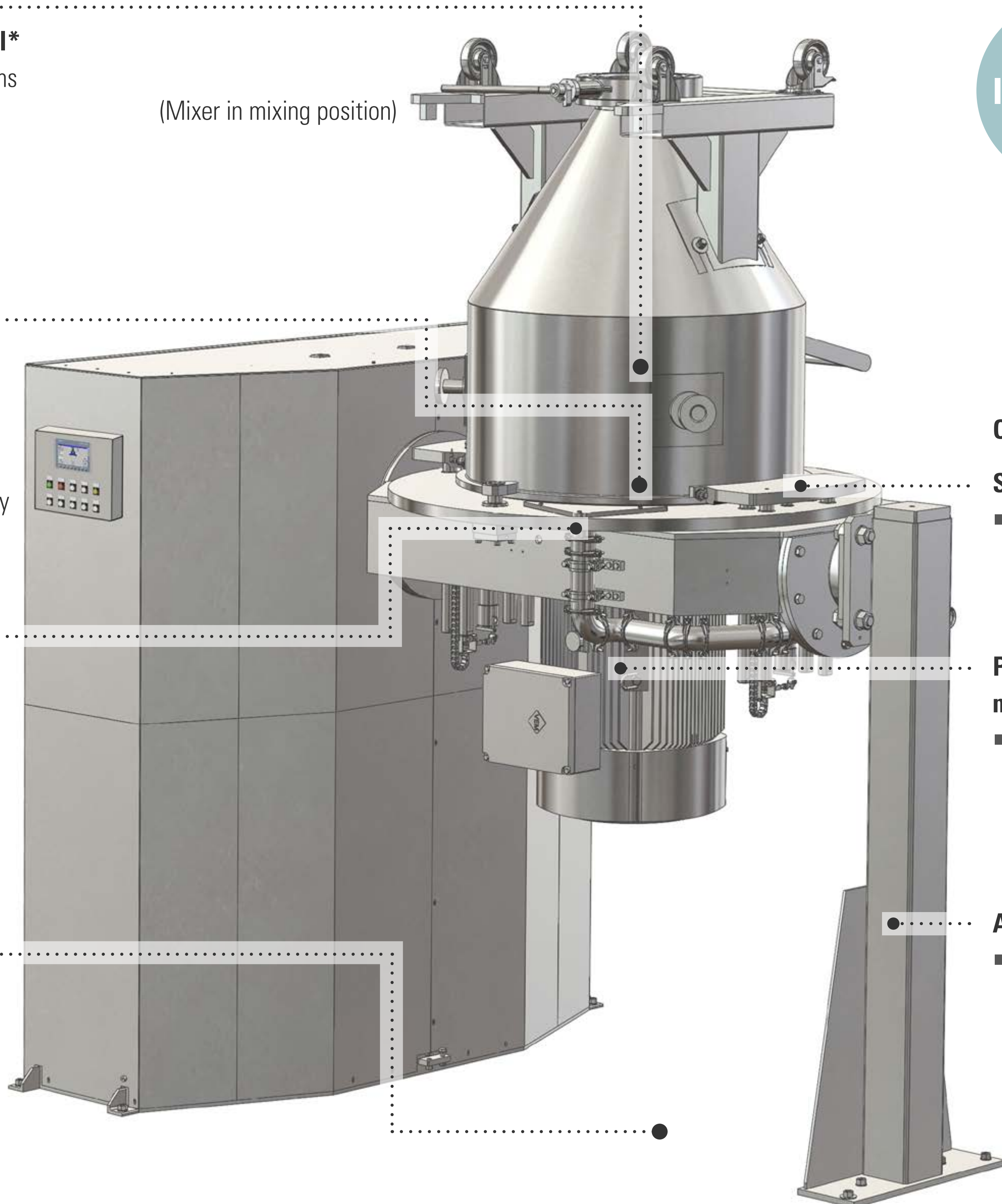
- Container venting integrated in container seal
- Drop in two stages



**No guiding installations**

- Self centering container
- No obstacles on the floor for cleaning

(Mixer in mixing position)



**Options:**

**Safe handling**

- Monitored automatic container grounding

**Preventative maintenance**

- Monitoring of the bearings via vibration and gyroscopic sensors

**ATEX**

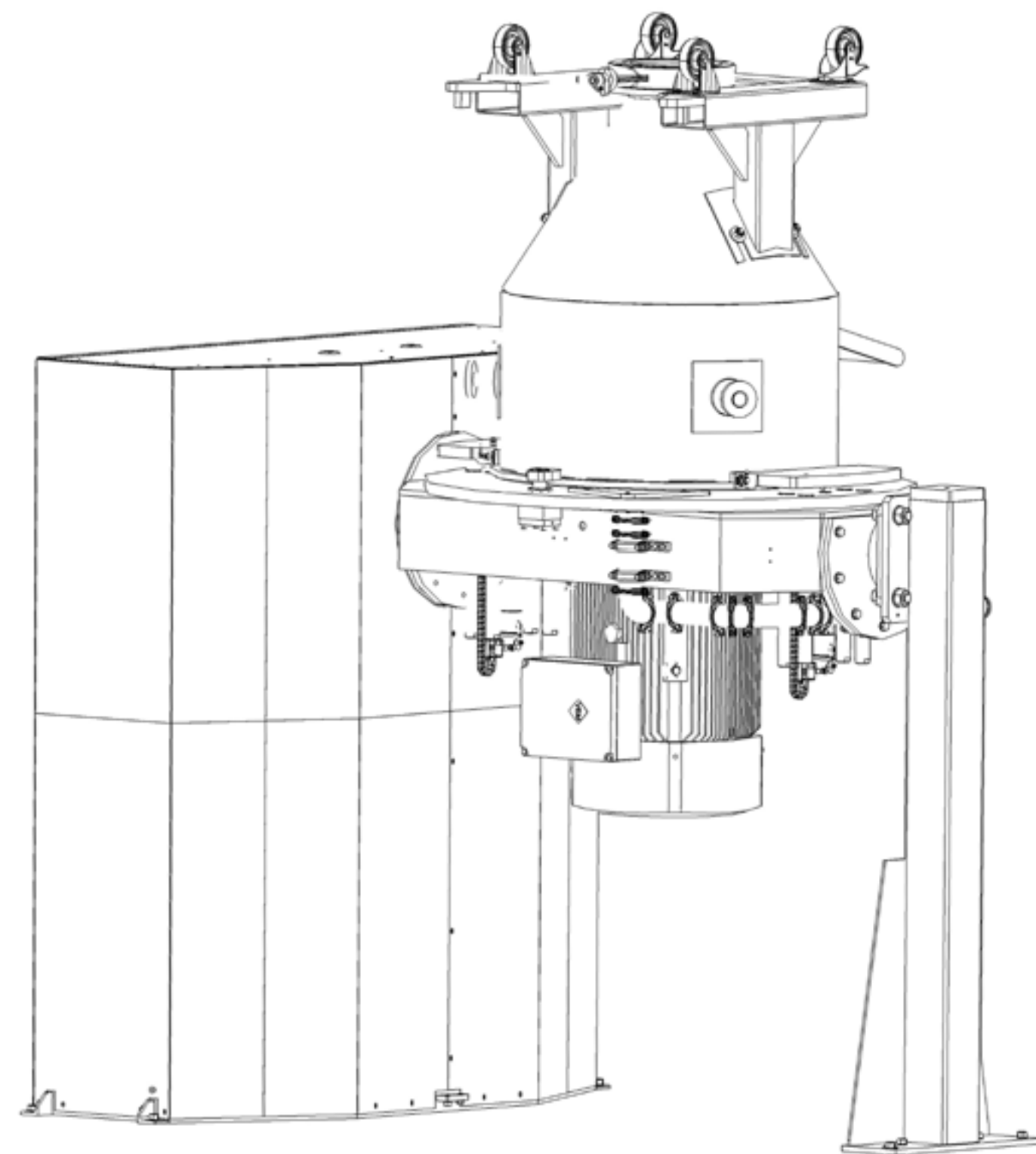
- EU type-examination certificate for ATEX equipment category 1/3 D

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!**



**TECHNICAL DATA**

Size	Net volume [l]	Batch weight * [kg]
150	120	35–70
300	240	65–135
450	360	100–200
600	480	135–270
1000	800	225–450
1200	960	270–540
2000	1600	450–900

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

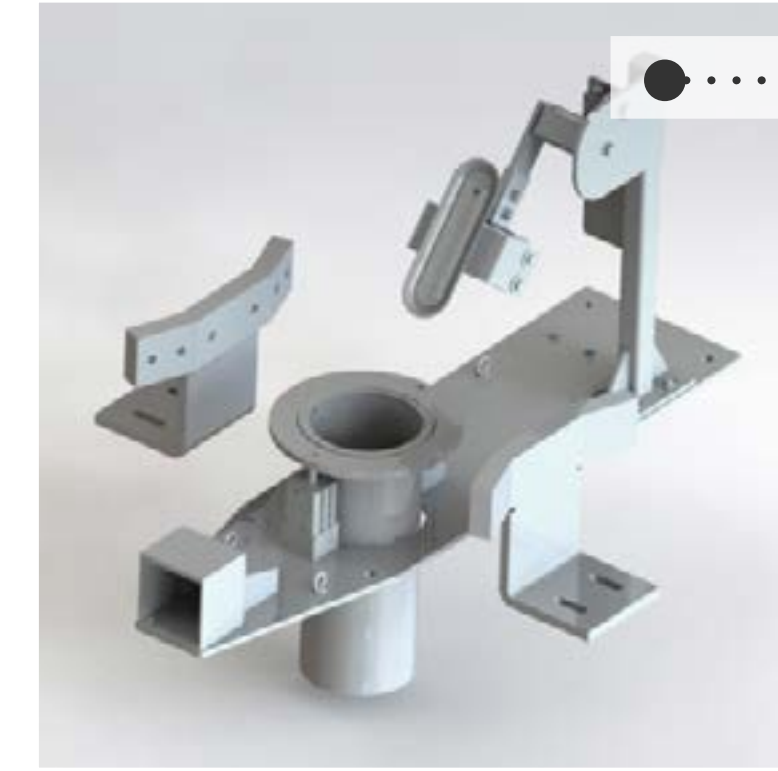
- Mixing time approx. 3-5 minutes
- Mixing tool speed up to 15 m/s

Modular

## CONTAINER SYSTEM AND SURROUNDINGS

### Easy transport

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

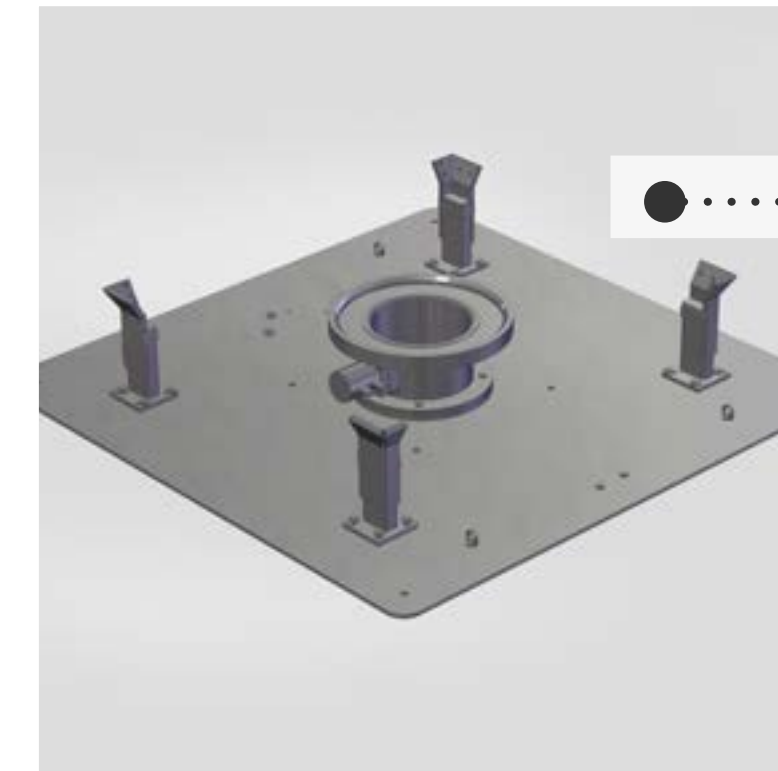


### Different container discharging solutions

- Drive-in
- Load-on

### Container feeding

- Automated or manual design for a precise loading solution



### Central aspiration unit

- Efficient venting



### Operator Safety

- Safety fence or light barrier



### Use different container sizes

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

Fully automated container plant

Intuitive



## Invitation

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

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

## WE MAKE YOUR BUSINESS EFFICIENT AND MANAGEABLE

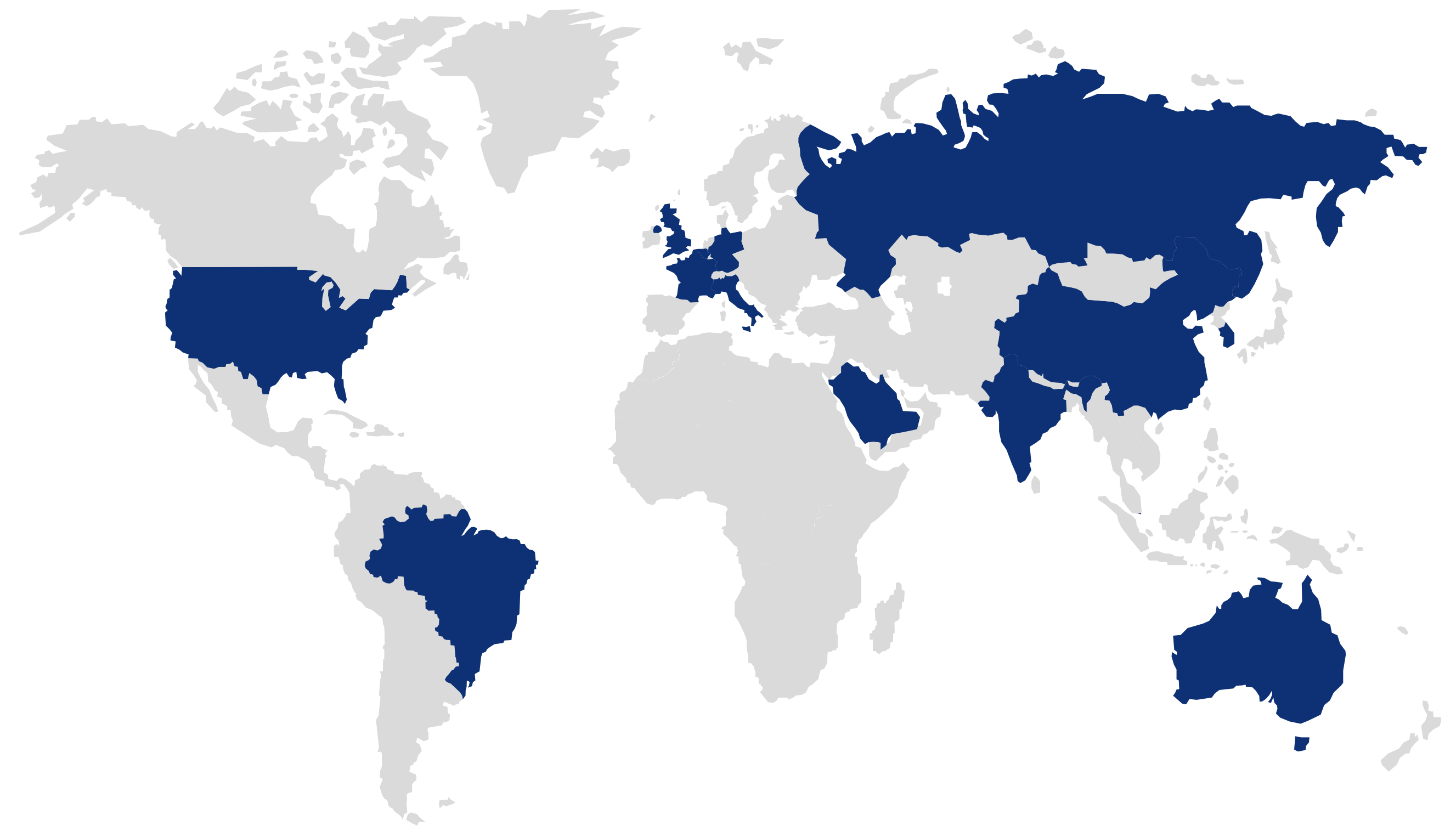
### Advantages at a glance

- **Most efficient cleaning effort**  
Reduces cleaning times up to 80 %
- **Fast and effective homogenization**  
Even distribution of all components
- **Low mixing resistance**  
Minimal temperature increase, approx. 1.5 - 2 °C/min
- **Low material pressure**  
No caking or material build-ups
- **Consistent color strength**  
Low measurable  $\Delta E$  (total color difference)
- **High dispersion**  
Prevention of any pigment agglomeration  
Equalizing of particle size
- **Trusted technology**  
For reliable function and long life-time
- **High flexibility**  
Quick set-up and change-over
- **Wide range of batch sizes**  
Use different container sizes on one machine size
- **Guaranteed reproducible quality**  
For optimum products
- **Intelligent machine frame design**  
No edges, deadspots and obstacles for fast and easy cleaning of the surroundings
- **Reliable batch tracking**  
Allows for trouble-free quality management
- **Safe operation**  
ATEX-certified with EU- type-examination certificate (option)





Scan or click



### Presented by

Zeppelin Systems GmbH  
Mixing Technology  
Henschelplatz 1  
34127 Kassel GERMANY

Tel.: +49 7541 202 4100  
mixingtechnology@zeppelin.com

For the complete Zeppelin  
Systems range please visit  
our website at  
**[www.zeppelin-systems.com](http://www.zeppelin-systems.com)**

### Global presence

- Australia
- Belgium
- Brazil
- China
- France
- Germany
- India
- Italy
- Korea
- Russia
- Saudi Arabia
- Singapore
- United Kingdom
- USA