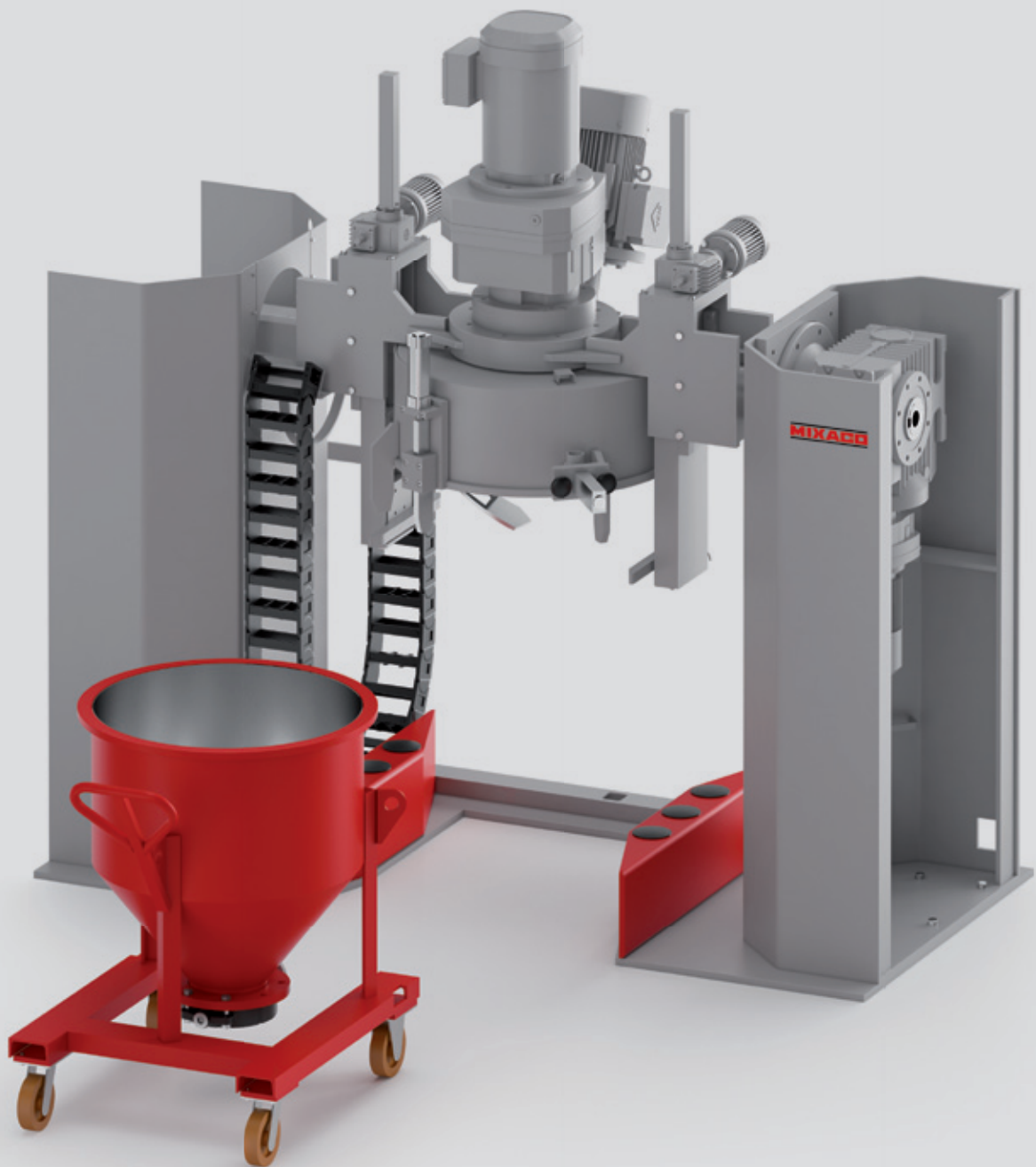


CONTAINER MIXER | UNIVERSAL MIXER | HIGH SPEED MIXER | HEATING-COOLING MIXER | LABORATORY MIXER | SPEEDY

CONTAINER MIXER



Function

One mixer - maximum flexibility

Function

The container mixing system consists of a mobile container and the actual mixer.

The container serves as transport container, as mixing container during mixing and as reservoir container for the further processing.

The container filled with raw materials is connected with the mixing head of the mixer and turned through 180° into the mixing position.

After mixing has been completed and the mixer has been turned back into its basic position, the mixed product in the container is transported on for the further processing.

In the cleaning position the mixer can be cleaned quickly and without any residues being left.

Basic position



Mixing position



Cleaning position

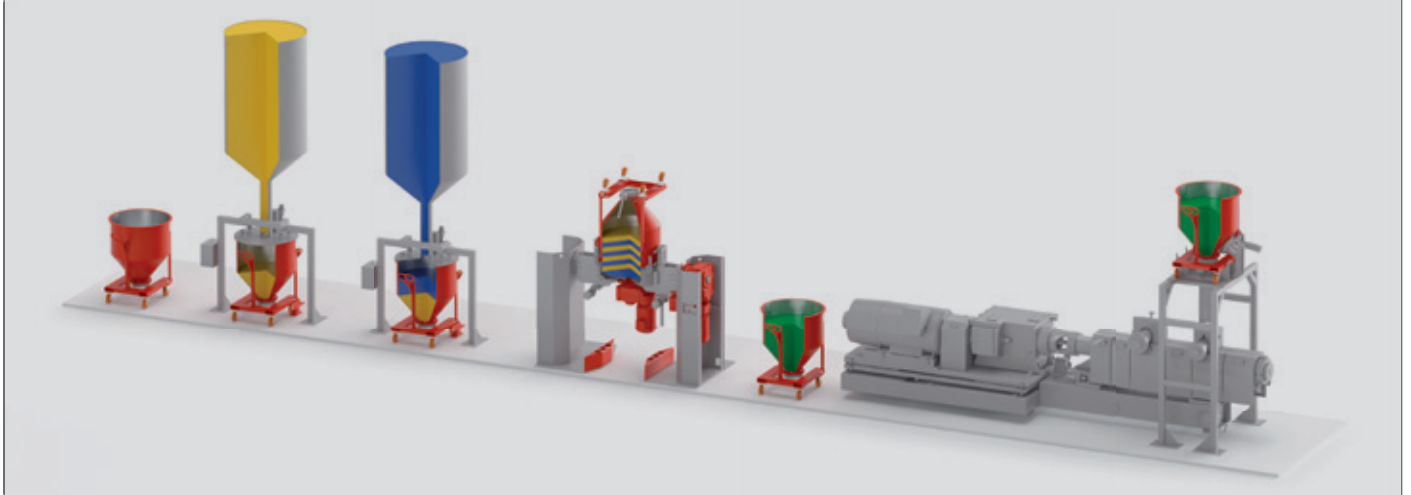


Handling

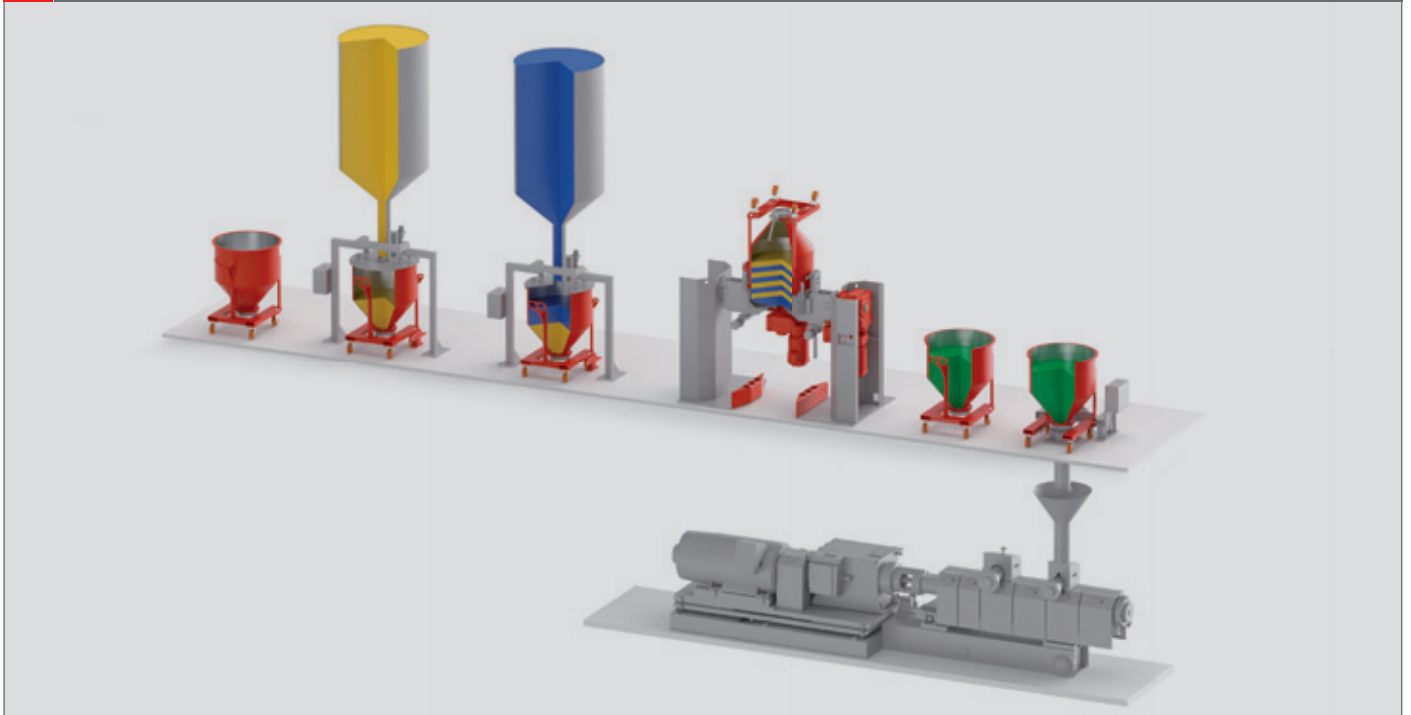
Material flow

With the aid of the well thought-out accessories, the container mixer can be operated not only in single level but also in two-level mode.

1-Level-operation



2-Level-operation



Applications

One mixer - multiple mixing tasks

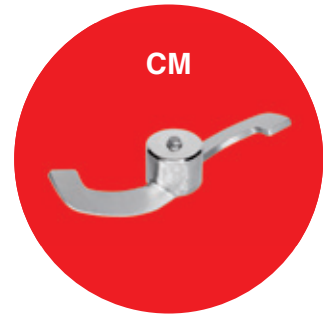
Applications

- Powder coatings
- Master batches (PE, PP, PA, PVC, PS, ABS, TPE, EPS ...)
- Colour concentrates / SPC
- Additives (e.g. TiO_2 , CaCO_3 , Zn, MgO ...)
- Toners (pre- and finished-mixtures)
- PVC (rigid/soft) preparation (without cooling)
- Metal compounds (MIM)
- PTFE
- Silica with liquids
- Brake linings
- Leather fibres
- Construction materials
- Foodstuffs
- Cosmetics
- Coloured pencil leads

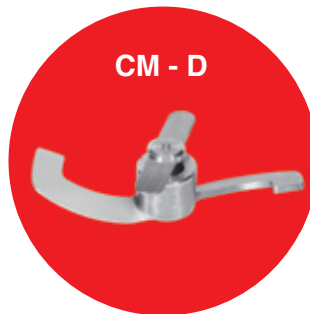
Processes

- Homogenizing
- Pigmenting
- Coating
- Wetting
- Dispersing
- Preparing
- Agglomerating
- Comminuting
- Drying
- Disaggregation and dyeing of fibres
- Bonding

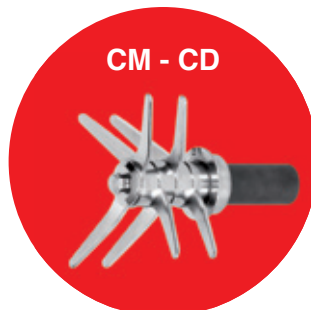
CM



CM - D



CM - CD



Forms of execution

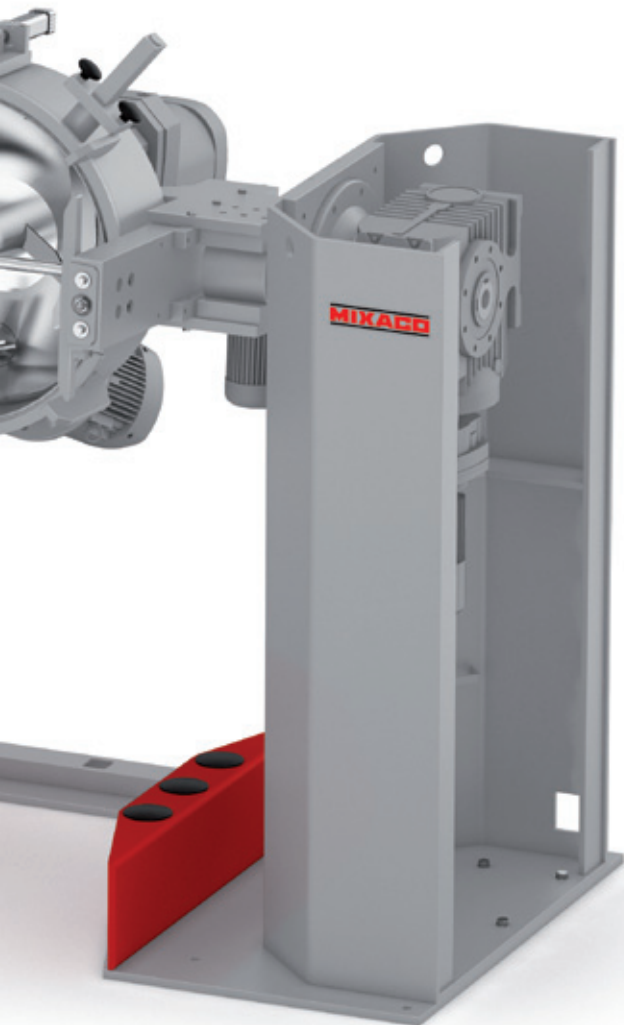
CM - SM



CM - CC



CM - MB



Product advantages

- Rapid changing over of the formulation thanks to short cleaning time
- One mixer can serve a number of further processing systems
- Optimum accessibility of the mixer for cleaning and maintenance
- One container from charging to discharging

Options

- Dedusting
- Temperature measuring point
- Liquid injection
- Mixing head cooling
- ATEX execution
- Ventilating and charging during mixing
- Nitrogen inertization
- Oxygen concentration measurement
- Remote maintenance

Installation sizes

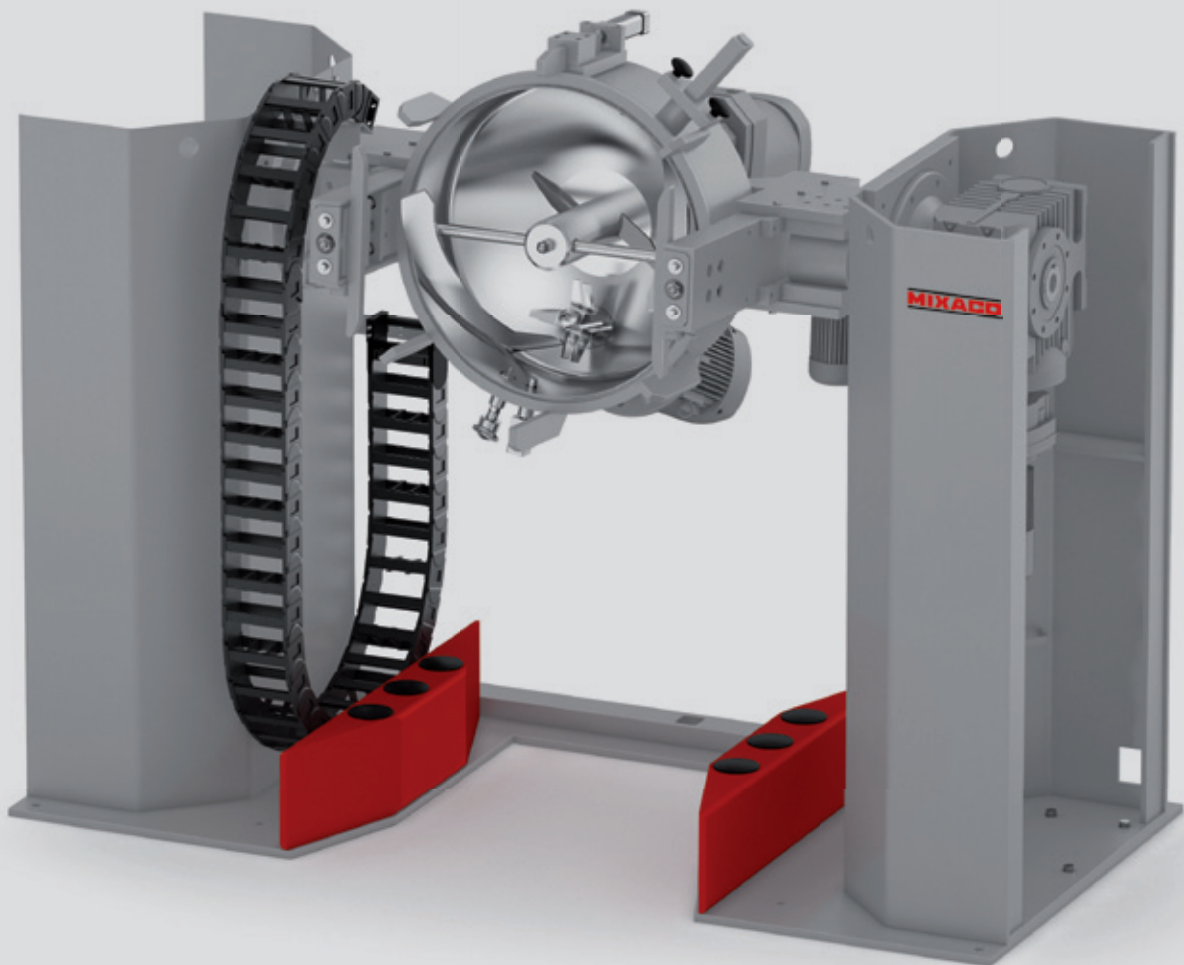
Installation size	Usable volume in l
CM 1.5	1.2
CM 6-12	5-10
CM 30	24
CM 50	40
CM 150	120
CM 300	240
CM 450	360
CM 600	480
CM 1000	800
CM 1300	1.040
CM 2000	1.600
CM 4000	3.200

CONTAINER MIXER

Multi Tool

Container Mixer MT

Multi Tool with Chopper Tool



All in one

The special positioning and use of combination mixing tools results in high dispersions and homogeneity to be achieved without transferring excess mechanical energy into heat in the product. This makes the MT mixer ideal to process heat sensitive materials previously problematic to process in conventional mixers.

Within the mixing chamber two different material flows are created – the primary flow and the secondary flow.

The slowly running conveying tool continuously transports material (primary flow) into the operating area of the chopper drive (secondary flow). The combination of material flows ensure that the material is quickly mixed and high dispersion rates are achieved.

The temperature increase in the MT container mixer is up to ten times less than in conventional mixing tools – typically between 0.5 and 1°C per minute.

Depending on the mixing task at hand, container mixers may be used purely for homogenisation jobs or to achieve high dispersion rates depending on which additional tools are used.



Chopper



Paddle



Screw

Product benefits

- Minimal product heating
- Less material sticks to the mixer head / container
- Less cleaning work required / greater machine availability
- Modular mixing tools:
 - Gentle mixing / homogenisation
 - Distribution / high dispersion rates
 - Adjustable degree of crushing
- Lower energy consumption

Applications

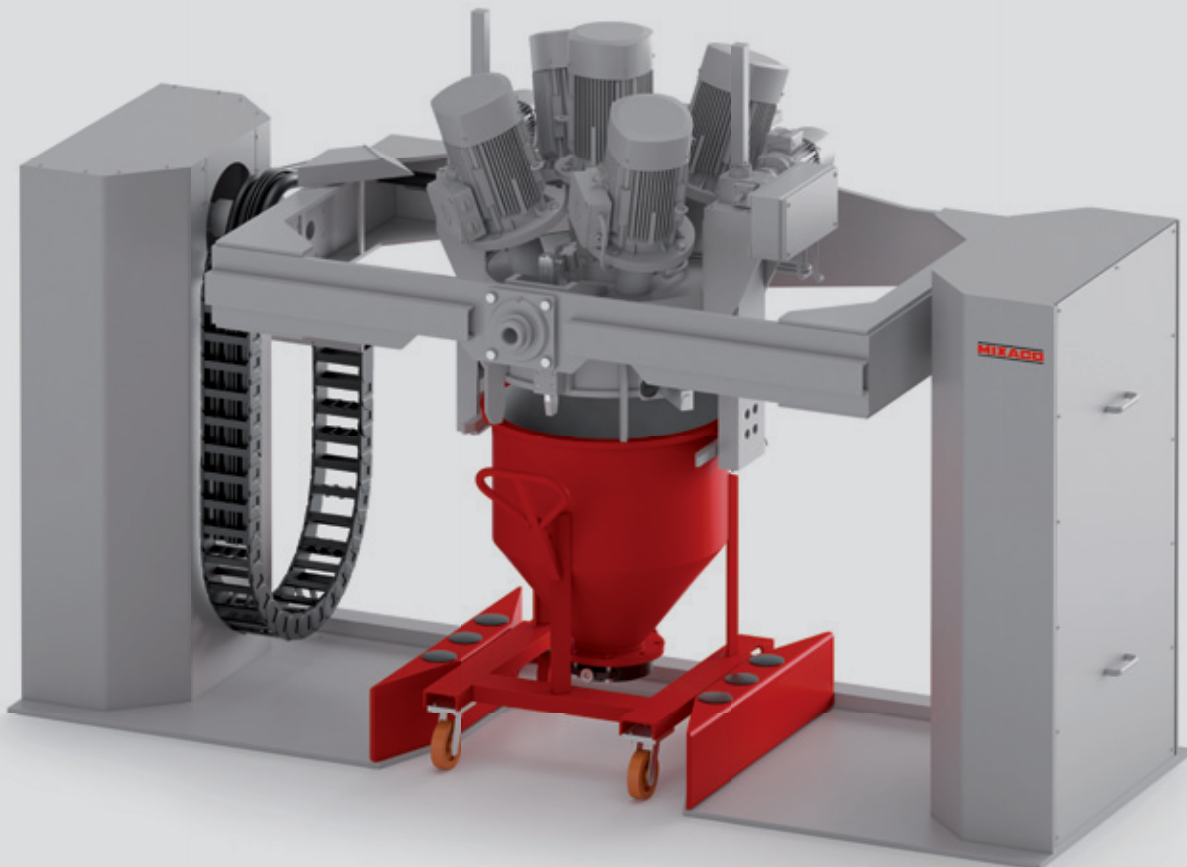
- Powder coatings
- Master batches
- Colour concentrates
- Toner
- Additives
- PTFE premixes
- Cosmetics
- And much more

CONTAINER MIXER

Multi Tool 3D

Container Mixer MT 3D

Multi Tool 3D



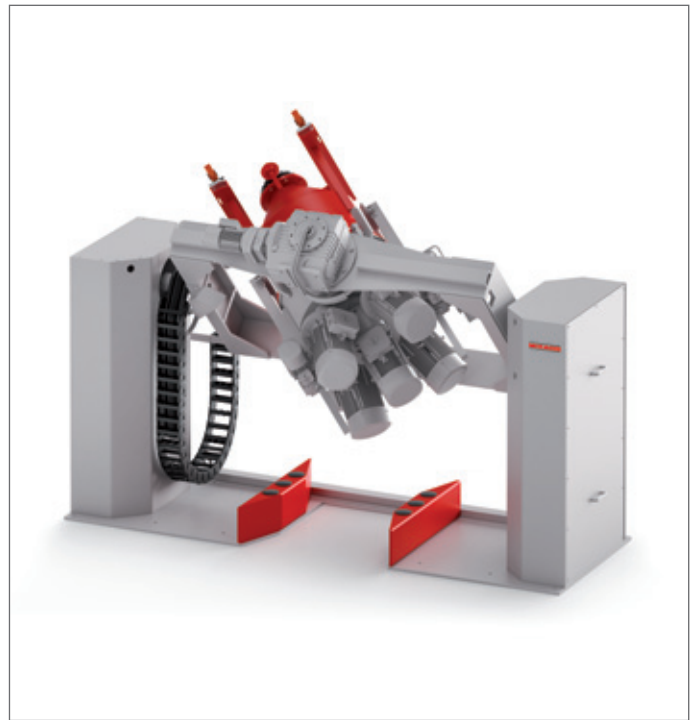
High Dispersion

The demands of mixing technologies are increasing due to deteriorating quality of some raw materials, i.e. pigments.

The Multi Tool 3D tool concept was developed to reduce product build up in the mixer while also achieving an excellent mix quality.

Three-dimensional tumbling movement, in combination with the chopper tools produce a dispersive mix. The configuration of the mixing tools (no transport tool) reduces the build up agglomeration of the product on the side walls of the mixer head.

The flexible tool concept can create a highly dispersing effect or a gentle homogenisation of the mixture.



Product advantages

- High dispersion capability – and thus more economical use of pigments
- No adhesions on the mixer head
- Short cleaning times
- Flexible tool concept



Standards

Container Mixer SM | CD | MB

Container Mixer SM (High-speed mixer)



High Experience

High-speed mixer (SM)

- Homogeneous Mixing and Dispersive Mixing
- High temperature and energy input
- Circumferential speed:
 - Mixing tool: 20-30 m/s



Mixer tool with side chopper (CD)

- Homogeneous Mixing and Dispersing Mixing
- Medium temperature and energy input
- Dispersed agglomerations using chopper
- Circumferential speed:
 - Mixing tool: 5-25 m/s
 - Chopper: 30-40 m/s



Master batch mixer tool (MB)

- Homogeneous Mixing and Dispersive Mixing
- Medium temperature and energy input
- Reduced build-up due to greater distances to mixer head base and side wall
- Circumferential speed:
 - Mixing tool: 15-20 m/s

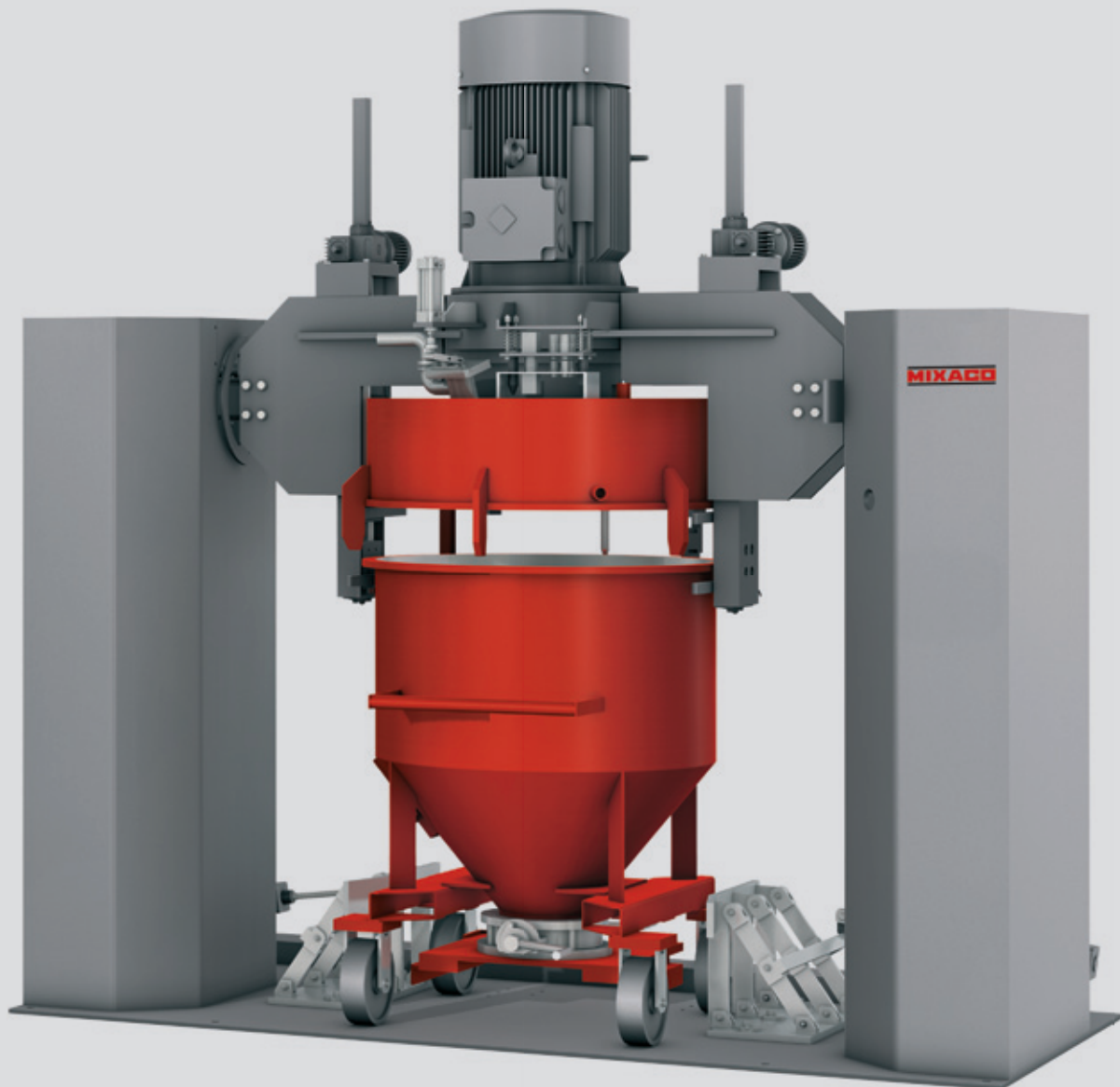


CONTAINER MIXER

Interchangeable mixing head

Container Mixer Option

Interchangeable mixing head system for Container Mixer



High Availability

The interchangeable mixing head system makes it possible to change recipes and colours in less than a minute. To do so, simply change the complete mixing head (red) including the mixing tool upon completion of the preceding mixing job.

Thanks to its interchange capabilities, recipes and colours can each be assigned their own mixing heads and mixing tools so that the cleaning required on standard mixing systems no longer applies. In the case of the small amounts, cleaning is carried out away from the mixing machine in a cleaning station.

The advantages of the interchangeable mixing head system are the maximization of machine availability and a minimization of cleaning times.

Mixing head storage and transport frame

Using the storage and transport frame, the mixing head is taken out of the mixer and can be driven to either the mixing head storage point or the mixing head cleaning station.

Handling station

The handling station is used for cleaning and servicing the interchangeable mixing heads.

This raises the mixing head and swings it into the required cleaning position.



Laboratory Mixer

Container Mixer LAB CM 6-12 | LAB CM 1,5

For laboratory applications, e.g. formula development, there is a container mixer that has been specially designed for small material batches.

The mobile container, with 6 or 12 liter volume, is manually placed into the container mixer and locked in place. The container is tilted into the mixing position using a manual tilting drive (motor drive is offered as an option).

The control system includes a frequency drive which provides complete speed control to maximize mixing efficiencies.

Different tool designs and mixer options mean that this mixer is ideally suited for laboratory use.

Product benefits

- Small batch sizes (6 or 12 liter container)
- Simple handling
- Cost-effective laboratory solution
- Easy to scale up to production machines
- Multiple tool designs

A laboratory mixer with a usable mixing volume of approximately 1.2 liters is available for extremely small quantities.

The speed of the mixing tool can be infinitely adjusted with a simple control.



Accessories

Container Mixer accessories

Discharging stations



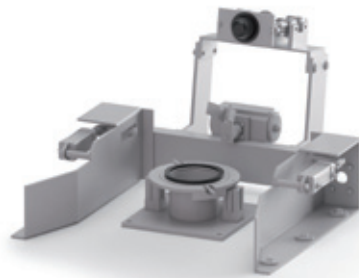
Accessories

Discharge

Discharge station, guide fork type

The discharge station is used for dust-free emptying of the mixture into downstream processing equipment.

The portable container is pushed into the discharge station and clamped. The discharge pipe flange is lifted to the container outlet via pneumatic cylinders.



Discharge station, platform type

The discharge station, which is built into an existing on-site steel structure, is used for dust-free emptying of the mixture into the downstream processing equipment.

The container is placed onto the discharge station using a lifting device (crane or forklift).



Options

The following options are available for the automation of the discharge station:

- Pneumatic or electrical control
- Pneumatic rotary cylinder for opening/closing the container valve with adjustable opening angle
- Knocker to assist with emptying of materials with poor flow characteristics
- Product sensor for monitoring product in the discharge pipe
- Interchangeable discharge pipe for faster turnaround times for color/formulation changes
- External control of discharge station

Accessories

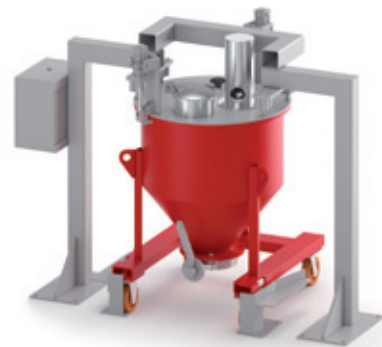
Charging | Moving

Charging station

The charging station is used for dust-free filling of the mixing container.

The charging station can be designed for automatic charging using dosing systems or using a manual feed hopper.

Filling can be monitored in combination with a floor scale. (Optional)



Container Mover

The container mover allows mixing containers to be transported quickly and easily. The mover is moved backward and forward by a high-performance electric drive.

The mover can be used with all container sizes, from CM 300 to CM 2000.

The battery charger is included in the scope of delivery.



Control

One mixer – individual control systems

Control system



The control units of our mixing systems are executed with a Siemens S7 SPS and allow manual or automatic operation.

Alternatively the control system can be equipped with Allen Bradley components.

Manual / automatic control Siemens KP400

The KP400 operation panel, with push button operation, provides entry and visualization of the mixing parameters. Up to 99 mixing programs with 3 sequence steps can be defined and displayed on a 4.3" colour display.



Programmable control system Siemens TP700

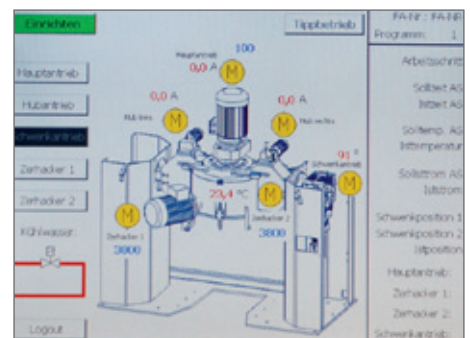


The TP700 touch control panel offers up to 99 mixing programs with 10 sequence steps that can be created in tabular form.

Data collection and storage of measured data is possible as an option.

Visualization

A large-scale process visualization can be realized via the 7" colour display. Customer-specific adaptations are available as an option.



Allen Bradley



As an option the control can be fitted with an Allen Bradley PLC and panelview control panel in accordance with NEMA / UL standards.

Test Center

Research and development center

Task

Do you have an idea of your new product?

Do you think about an innovative process or new applications?

Do you want to use previously unused additives?

Do you want to improve an already existing machine?

Then you have come to the right place in our Test Center!

„Anything man
can imagine
is possible.“

Wernher von Braun

Here, your visions meet our procedural know-how. The test center is our own research and development laboratory, in which we solve the most extraordinary tasks and optimize the results in test procedures until we have met your expectations 100 percent. You will receive the perfect machine for your application.

You have access to our two test centers and all of our experience in the development of mixer technology:

- **Neuenrade, Deutschland**
- **Greer, SC USA**



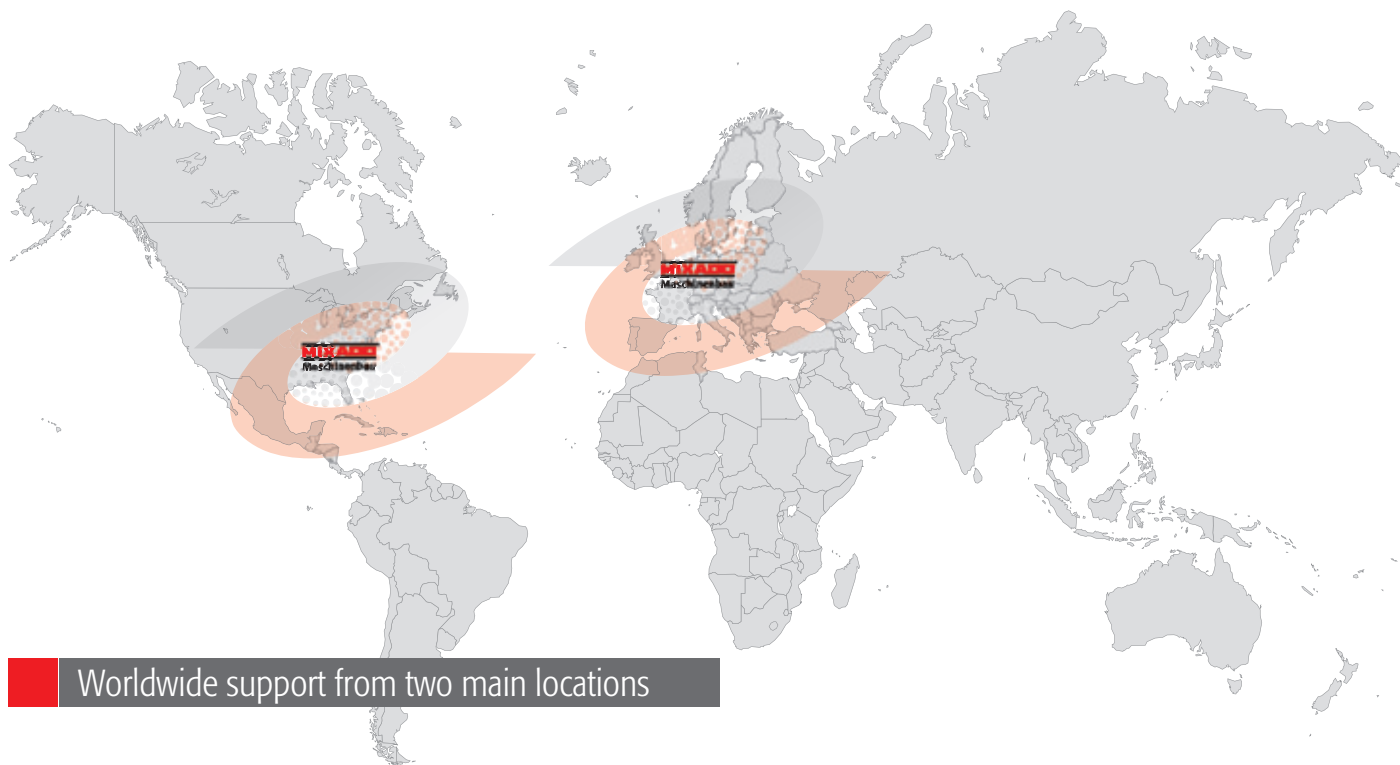
Global presence

Support

Maintenance & Service

Our service technicians are at your service at all times for the maintenance and service of your mixing system.

Spare and wearing parts are held in stock so that we can react rapidly to your requirements.



Worldwide support from two main locations

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