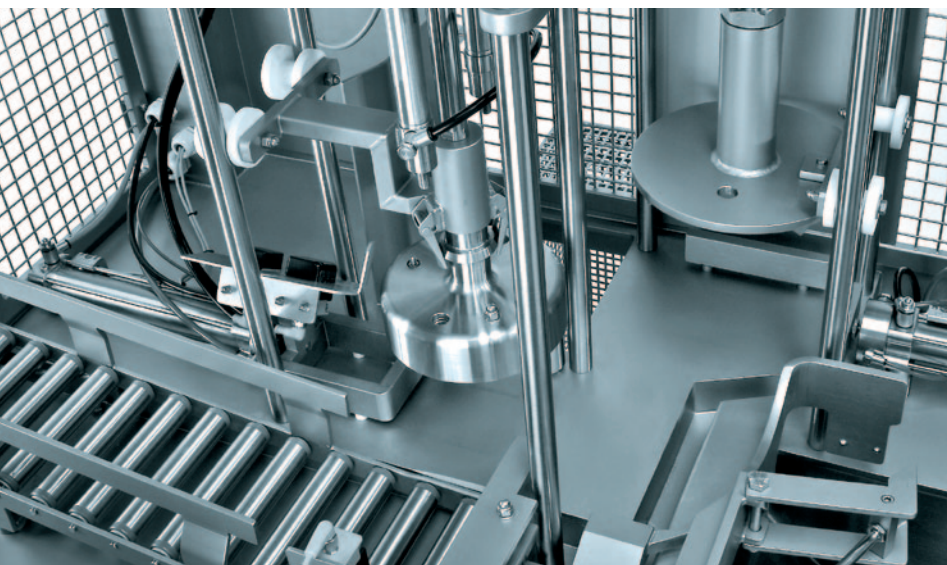


- **Can Opening Machines**
- **Vacuum Homogenisers**
- **Wet Mills**
- **Vacuum Deaerators**

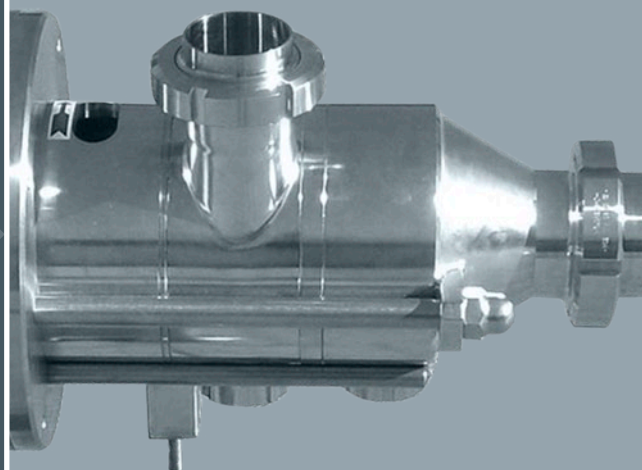
**K-MA**  
*process*

Applikations- und Verfahrenstechnik  
von Maschinenbau Kaltenbach GmbH



people for process

➤ [www.kma-process.de](http://www.kma-process.de) ➤







Contract manufacturing



Sophisticated steel structures



Machine and vehicle constructions

## Passion for stainless steel

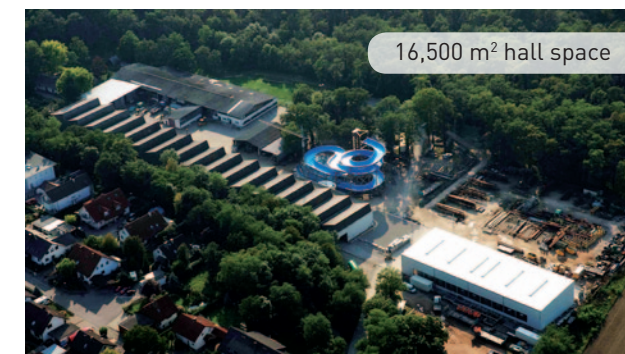
### Our scope of products

All under one roof - from individual parts to complete machines and plants. Together with our customers at our side we expand constantly, taking the market situation into account. In the future as well we will persevere and continue investing in our production capacities and technology.

### Our firm philosophy

#### Metalworking - geared to the future

The activity of Maschinenbau Kaltenbach has already been characterised by flexibility and on-time delivery since 1958. Today the company Maschinenbau Kaltenbach employs more than 100 people. It is a long-time partner of many firms based far beyond the region and working in the machine and vehicle construction area - whether it be in the manufacturing of individual parts or complete production lines.



Aerial view of Kaltenbach

### History

- 1958** The firm is founded by Werner Kaltenbach. Originally production involved agricultural machinery and vehicles
- 1965** Trade continues under Werner Kaltenbach GmbH & Co. The firm moves to new premises at Rheinweg 9, Neuenburg-Zienken. The production of conveying plants begins for the company Hans Kaltenbach
- 1971** Construction and completion of production hall 2. Phase one of developing own products: universal working stations
- 1973** Werner Kaltenbach GmbH employs its 50th worker. First extension of hall 2
- 1982** The machine range is upgraded with the addition of a drill section. Second extension of hall 2
- 1985** Production and development of a mobile on-site crane, the „walking crane“
- 1987** Modernisation of the drill section through the instalment of CNC-controlled central units
- 1988** New development of the positioning system „KWP“
- 1998** Assembly area is extended, increased assembly of silo transporters and complete machinery for customers
- 2000** Extension of the CAD construction department as a service option
- 2003** Build up of strategic partnerships. Production of sewage sludge drying plants
- 2004** Separate manufacturing area for stainless steel. Manufacture of process equipment for the food and cosmetics industries
- 2005** Total revenue exceeds 10 million. Werner Kaltenbach GmbH now has 100 employees and 14 apprentices. Construction of hall 3 with 6.500 m² hall space
- 2008** Maschinenbau Kaltenbach is 50 years old. Foundation of k-ma process: direct sales of machines and plants for the food and cosmetic industries





Applikations- und Verfahrenstechnik  
von Maschinenbau Kaltenbach GmbH

## Solutions for processes in the food and cosmetics industries

We have been supplying machines, plants and factory lines around the world for over 50 years. Our expansion led in 2008 to the foundation of the division „k-ma process“ whose activity is the sale of machines and plants for the food and cosmetics industries.

We offer you, as a partner, engineering skills and process expertise. From proven solutions to cutting-edge innovations – we will find the right solutions for your needs!

## High quality standards

We are convinced about quality „made in Germany“ and commit ourselves to manufacture our equipment in accordance with it. Choosing k-ma process means investing in high-grade products.

## Service

We offer customer service so the equipment of our customers can remain state-of-the-art in the face of rapidly changing markets. We know long-term success depends on short-term flexibility. That's why we will modify and update your plant and equipment and optimise processes, even if you have been using the products for many years.

## Intensive partnerships

We harness our experience and expertise to turn an idea into your ideal solution. We don't just supply, we are partners to our customers. Intensive partnerships with our customers secure a high level of confidence and an effective exchange of valuable know-how. On this basis we can work directly towards increasing our customers profits – the reward of mutual trust is high economic viability. In addition our solid company structure allows us to be highly flexible.

## Our scope of services

### Project phase

During a professional consultation we determine your requirements and work together on a solution suitable to you. Skilled experts from the food sector are at your disposal in a modern-featured test and research laboratory. There, you can test machines, manufacture test batches or scale up processes.

### Engineering and manufacturing

Our constructing engineers translate your project into a well-defined design of the machine by means of 3D-drawing programs. Our project manager coordinates the processing of your order on schedule and ensures that manufacturing and assembly are executed in a flowing way. Our company assures electrical engineering and control engineering as well. We test every machine in our premises before delivery to our customers. We take charge of the organisation of the shipment of the machine and prepare the customs clearance.

### Commissioning

Our service technicians assemble the machine in your factory, connect it and commission it. Training of the personal is part of commissioning; it enables you to efficiently use the machine from the first day on.

### Aftersale service

Whether it is spare parts, maintenance, repairs, upgrades or modifications we are at your service.

### Delivery scope

- Can Opening machines
- Vacuum Homogenisers
- Wet Mills
- Vacuum Deaerators

### New hygienic can opening machines entirely made from stainless steel AISI 304

The full automatic series CEM-600-NT processes cans of different sizes in a hygienic way without any need for modification of the machine. Cylindrical cans are opened, emptied and compressed in parallel operations.

#### Accessories

- Can washing tunnel with disinfecting station and drying station
- Conveying system for can feed
- Elevator for product or compressed cans

#### Further series of can opening machines

- Manual series HDO 100
- Semi-automatic series COM 600/800
- Full automatic series for products without pieces CEM 1200, CEM 2200
- Capacities from 100 – 2,200 cans/h

#### Technical features

- For cylindrical cans from 1 kg – 12 kg
- For all products, liquid up to high-viscous, even containing big pieces
- Capacity from 350 – 600 cans/h
- Opening, emptying and compressing of cans
- Compact design
- Processing of many can sizes without format change
- Hygienic punching head
- Dynamic emptying (can tilting) with rinsing unit
- Can emptying degree attaining nearly 100%
- Reduction in volume of the compressed cans up to around 80% by the use of can compactor
- High automation degree in standard



#### Your products

##### Food industry

- Tomatoes
- Cucumbers
- Beans
- Mushrooms
- Olives
- Carrots
- Pineapples
- Apples
- Pears
- Apricots
- Peaches
- Cherries
- Mangoes
- Tuna
- Pasty-like products such as tomato concentrate





**A first-class homogeniser – simple but effective**

Free-flowing solids and liquids are fed directly into the homogenisation tool, where they are de-agglomerated and dispersed without any unwanted entry of air.

A recirculation line returns the product to the interior chamber of the container. This line and the special scraper-agitator work together to macro-mix the product through vertical convection.

The conical shape of the container base directs the product to the multi-chamber homogenisation system, where the entire procedure is repeated.

The machine is emptied via a discharge valve on the homogeniser or via the downstream recirculation line.

**The homogenisers can also be provided as in-line units.**

**Technical features**

- Vessel volume from 15 – 3,500 litres
- Automatic dosing units
- Mixing, dispersing, homogenising, emulsifying
- Droplet size up to 1 µm
- Tight droplet dispersion
- Multi-chamber homogeniser
- Heating and cooling via double jacket
- Heating via direct steam injection
- Vessel emptying via homogeniser or pump
- Cleaning In Place (CIP)
- Modular process automation

**Advantages**

- Reduction of production times
- Aseptic design for quick and effective cleaning
- CIP / WIP
- Optimal reproducibility
- Good deaeration
- End-to-end automation



**Your products**

**Food industry**

- Mayonnaises and dressings
- Ketchup and emulsified sauces
- Pasta sauces and delicatessen products
- Marmelade
- Liquid dough
- Humus (chickpeas with tahena)

**Cosmetics industry**

- Emulsions
- Creams, lotions, gels
- Decorative cosmetics
- Hair cosmetics
- Sun blockers
- Toothpaste

**Mill technology in k-ma quality**

High productivity and versatility – just two of the many benefits of Kaltenbach’s k-ma process mill technology.

Customers use our mills for countless applications in laboratories, development and production across a variety of industries. Our wide product line includes toothed colloid and corundum stone mills.

The product is fed into the mill using a feed hopper or a pump. All product-contact surfaces can be easily cleaned – no disassembly required! The mills optimally empty out residues and satisfy strict hygienic standards.

**Technical features**

**Corundum stone mills K-MT 3, 4, 5**

- Capacity range from 100 – 5,000 kg/h
- Milling fineness up to approx. 30 µm
- Vertical or horizontal design
- Product feed via feed hopper or pump
- Cooled bearing and mill housing
- Manual or automatic milling gap adjustment
- 3-fold bearing on the motor side

**Colloid mills K-MT 60, 120, 160**

- Capacity range from 20 – 15,000 kg/h
- Milling fineness up to approx. 150 µm
- Vertical or horizontal design
- Product feed via feed hopper or pump
- Cooled housing
- Milling gap adjustment
- Easy incorporation into existing processes
- Different milling tools available

Our latest line of products set new standards in a field where the requirements continue to rise: hygiene and flexibility.

- Corundum stone mills
- Colloid mills
- Mill lines

**Your products**

**Food industry**

- Mustard seed
- Nuts
- Almonds
- Sesame
- Soya beans
- Cocoa beans
- Fruits and vegetables
- Chili
- Spiced pastes
- Baby food





**Efficient de-aeration for a higher product stability**

The vacuum de-aerator is suited for the de-aeration of liquid up to paste-like products that have not been manufactured under vacuum and therefore contain air. The plant operates continuously and is usually the last unit in a production line.

The product is fed via a feeding pump. The product flows on the rotating distributing disc via the feeding pipe. Through the centrifugal force the product regularly spreads forming a thin film. It passes through the sieving ring and is projected against the inside wall of vessel. Under vacuum action in the vessel the air bubbles stretch, burst and are continuously sucked off by the vacuum pump.

**Technical features**

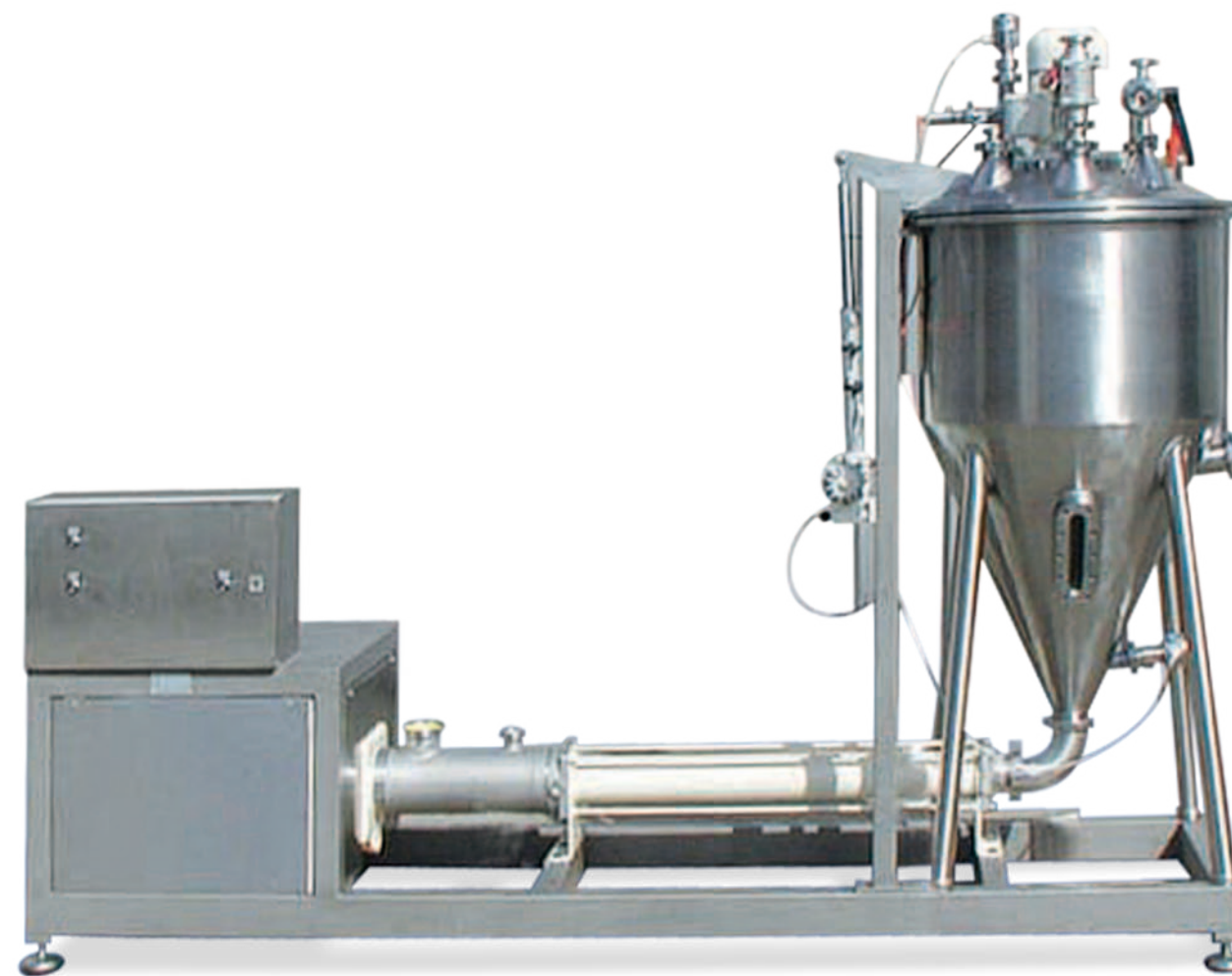
- Capacity from 200 – 20,000 l/h
- Vessel volume from 100 – 1,200 litres
- For liquid to viscous products
- Continuous process
- Dynamic or static distribution system
- Sieving ring in various mesh sizes
- Single-acting mechanical seals
- Discharge pump with speed adjustment
- Product level control in the vessel
- CIP cleaning
- Modular process automation

**Advantages**

- Enhanced product stability
- Prevention of oxidative modifications (discolouration, alteration in flavour and aroma)
- Regular glossy product surface
- Enhanced long-time stability
- Accuracy in dosing of downstream filling units
- Reduced packaging volume
- Easy maintenance and cleaning (manual or via CIP)

**Your products**

- Food industry**
- Mustard, ketchup, sauces
- Soya milk
- Tehina
- Marmelade
- Fruit juices
- Nut pastes, spreads
- Cosmetics industry**
- Shampoo
- Ointments
- Gels
- Lotions
- Creams
- Toothpaste
- Bath additives
- Shower gel
- Skin oils
- Lipstick bulk
- Chemistry**
- Paper coating
- Domestic chemicals
- Detergents
- Paints and lacquers







[www.kma-process.de](http://www.kma-process.de)

### Consultant network

We have been supplying machines, plants and factory lines around the world for over 50 years. During that time we have established an international network of sales engineers who are prepared to advise you.

You will find the consultant responsible for your area under [www.kma-process.de/contact](http://www.kma-process.de/contact)

### Our references

Our machines and plants are used worldwide in international well-known groups and firms.



➤ **k-ma process**  
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