



**CLAUDIUS PETERS**



mixing technology

**Technik**

**Technology you can trust**

[www.claudiuspeters.com](http://www.claudiuspeters.com)

# Claudius Peters...

## Proven Mixer Expertise

*Claudius Peters Technologies GmbH, Germany and Claudius Peters Technologies S.A., France are part of the Technologies Division of Claudius Peters Group GmbH, headquartered in Buxtehude, near Hamburg, offering technologies in the field of materials handling and processing, providing turnkey and semi-turnkey systems to a wide range of industries. Claudius Peters Group GmbH is a wholly owned subsidiary of Langley Holdings plc, a privately controlled UK engineering group, with regional offices in the Americas, Europe, China and the Far East.*

The mixing of different bulk material components is becoming an increasingly important process particularly in the building materials industry. Plant operators worldwide turn to Claudius Peters as a partner able to deliver solutions from single mixers to the planning and engineering of complete systems.

### When experience counts

Whether you are looking for a continuous mixing process or batch operation, we can provide both systems. Whatever process is preferred, the mixing quality is the decisive factor.

How will you receive a customized finished product? How will the system be equipped and engineered to meet your requirements?

Working with clients, our Technical Centre specialists will find solutions to these and other questions.



Technical Centre at Buxtehude

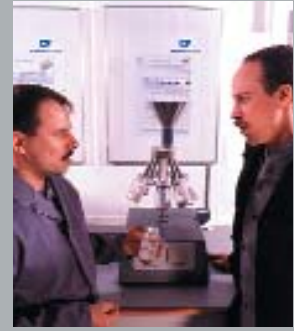


We have the latest pilot systems and a database holding information on the results of more than 13,000 bulk material tests.

For example, conducting field tests of mixing times, qualities and the use of different basic materials with a mixer will generate all the basic information to provide an investment decision.



Building material mixing plant for 180t/h



## Our technology sets everything in motion



In the varied requirements of the mixing technology, a safe and cost-effective system is the prime objective. In addition to this, consistent mixing in the entire area is a major requirement.

Claudius Peters mixers provide reliable technology that meets these requirements, namely mechanically generated fluidized bed. With this, an optimum mixing quality is guaranteed by a mixing tool arrangement on a horizontally rotating shaft that is specifically designed to suit the product.

This mixing principle is used throughout the entire inner mixing drum achieving a high quality mix within the entire mixer volume.



*Tulip blades*



*Multi-stage blades*

### High speed blades for the finished product

For the addition of dyes and additives, the mixer is equipped with blades moving at a speed of up to 3000 min<sup>-1</sup>.

This high speed prevents agglomeration and allows the use of fluids and pigments.

The following blades are used:

- Tulip blades for products with a high abrasion factor, such as coarse dry mortar
- Multi-stage blades for materials with a low abrasion factor such as coloured cement mixtures

### Durable systems

The systems are required to work hard in practice, as permanent operation is an endurance test. Differently mixed products require the selection of different materials. Thus best possible results regarding tool life are achieved, e.g. by using carbide steel or carbide steel lining material in the mixing drums, or by using special cast or welded carbide steel for mixing tools.





## Batch operation...

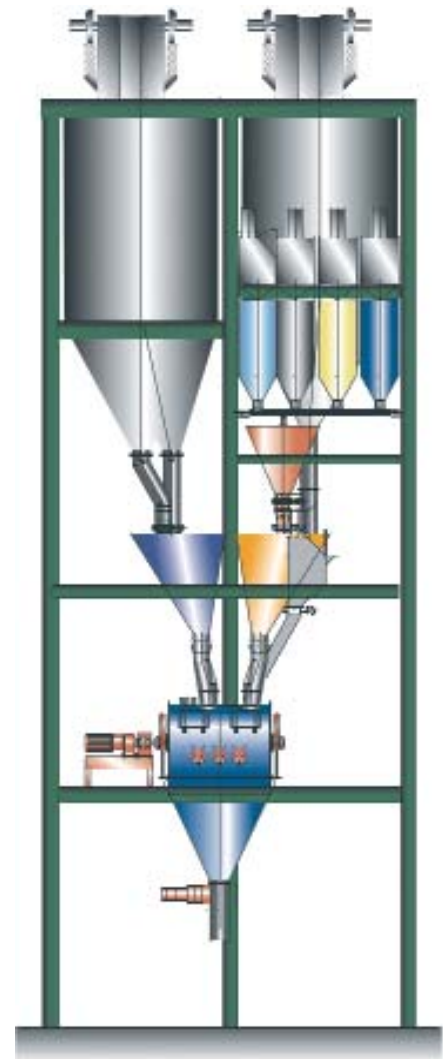
The batch operation offers the following advantages when

- More than 3 raw materials are used
- A lot of different recipes are produced
- Flexibility to change the recipe is frequently required
- Mixing times are kept variable according to type and quantity of the material
- It is necessary to inspect and correct single batches

According to our experience approx. 70% of the mixing processes are carried out in batch operation achieving a capacity of up to 250t/h.



Mixing system for batch operation



Batch mixer HTC 10000

The turbulence mixer HTC is in the centre of the process. With a gross volume of 140 - 12,000 litres it can be designed to meet your requirements. In most cases the mixer is fed via a weigh bin system.



## Flexibility as a concept

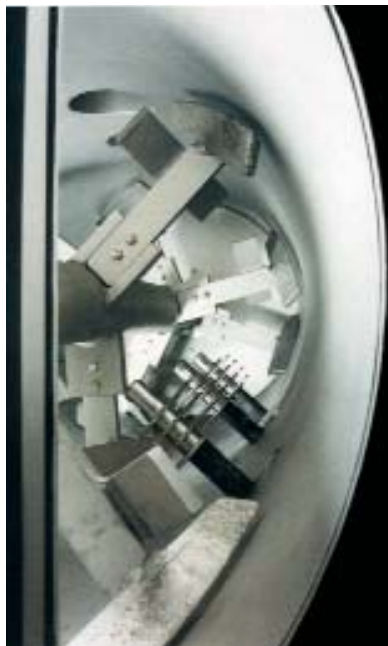
This guarantees a very high dosing precision even for the smallest quantities. After the mixing process, the mixture is discharged to a subsequent bin emptied via a rotary feeder or conveying aeroslides.

The turbulence mixer HTC is delivered on a base frame ready for operation, so that connection to the power and compressed air supply are the only requirement.

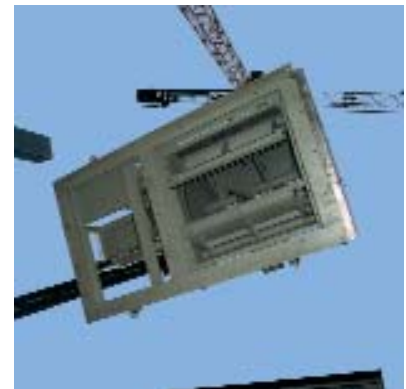
### Customized drive

Claudius Peters has the knowledge of the practical operation and the behaviour of raw materials and can provide a reliable solution for extreme requirements, for example the drive. Claudius Peters offers you the right concept for all applications:

- Hydraulic and electric drives
- Full-load start up capability
- Use in hazardous areas
- Mixing sensitive bulk material



Mixing tools



Assembly of a batch mixer with double-discharge flap system

### Fast change of products guarantee pure products

To meet the different requirements of your clients, a mixer must be designed for a fast changeover from one product to another while guaranteeing the products are absolutely pure. The turbulence mixer is also suitable in these applications. In addition to the usual discharge spouts and flaps, we can offer a double-discharge flap system that allows discharge of up to 99.9% of the mixer gross volume. Depending on the type of application, hydraulic or pneumatic opening systems are used. Both systems have one feature in common: they are effectively sealed.

In addition, highly efficient de-dusting concepts guarantee absolutely pure products and an environmentally friendly production.



Batch mixer HTC 6100

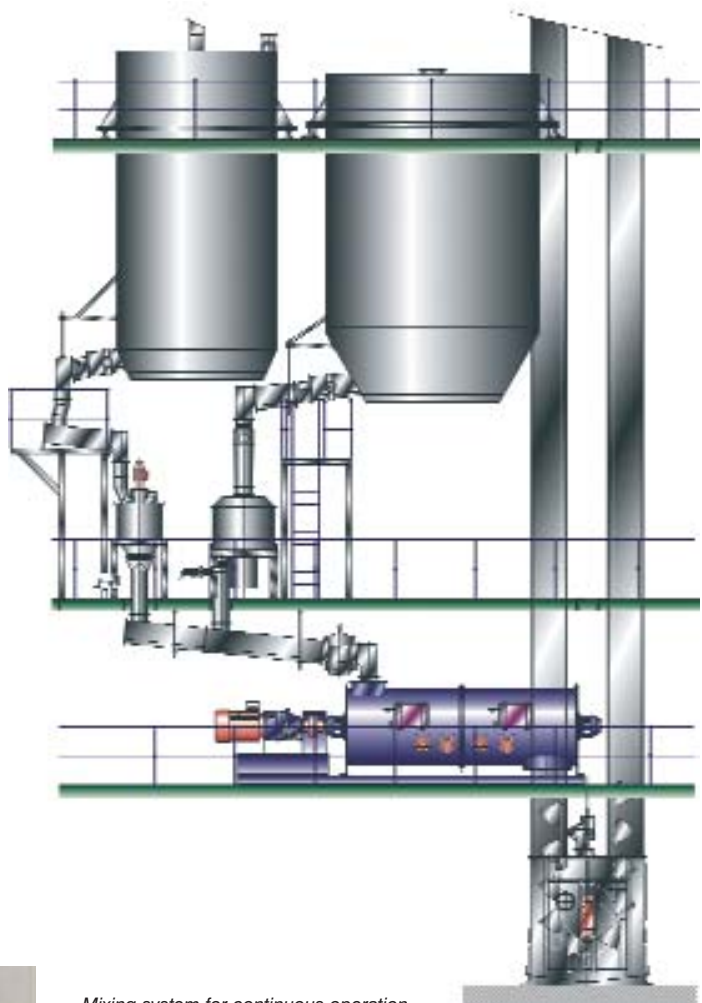
## Continuous mixing process... time after time with increasing quality

### Continuous mixers are used where:

- A low space availability plays an important role
- A high throughput is required while the product variety is low
- Mixtures of 2-3 components are produced
- A throughput of 200 - 500t/h is common with this process.

Claudius Peters offers the continuous mixer HTK with a gross volume of 300 - 20,000 litres particularly to this range of application. Dosing devices, individually designed according to efficiency and precision, are used for continuous mixer supply. A pneumatic or mechanical conveying system for further transport of the mixed product is directly connected in series to the mixer. To keep the installation time to a minimum, the continuous mixer is delivered ready for connection on a base frame equipped with a drive. Suitable drive concepts with hydraulic and electric motors facilitate full-load starting.

A constant product quality is also required from the continuous mixing process, although short term dosing variations during the feeding is not always possible.



*Mixing system for continuous operation*



In our continuous mixer HTK, a permanent back-mixing of the products within the mixing chamber is carried out to compensate feed variations. Some areas of the mixed material are moved against the conveying flow and re-mixed with the subsequent mixed material because of the special arrangement of the mixing tools.

The time the material remains in the mixer is determined by the mixer size and also by the variable height adjustment of the separating weir at the mixer outlet.



## Precise results for even the smallest mix



*Test mixing system in the Technical Centre*

Our laboratory mixer is designed with features such as gross volume of 3 litres facilitating different applications in science, technology and material testing.

Our test mixer with a gross volume of 140 litres is ideal for developing new products and guaranteeing quality.

Preliminary tests with these machines will deliver data that is applicable to your production plant avoiding wrong decisions.



*Technical Centre mixer*

This means

- Optimization of mixing times
- Recipe determination
- Usability test for new materials

Alternatively test can be conducted in our Technical Centre together with our experts, we can also provide a test mixer on loan if required.



Laboratory mixer

CALCINING . COOLING  
DISPATCH . DOSING  
DRY BLENDING . DRYING  
GRINDING . PACKING  
PNEUMATIC CONVEYING  
PULVERIZED FUEL SUPPLY  
SILO SYSTEMS  
STOCKYARD SYSTEMS  
ALUMINA HANDLING SYSTEMS  
TURNKEY PROJECTS



## Technology you can trust

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