

# INDUSTRIAL EXTRACTION SYSTEMS



# Extraction with method

Engineering. Production. Assembly. Maintenance.



The company MOTEC combines innovative problem solving, in-depth engineering knowledge and well-thought-out constructions for the production of modern industrial extraction and bulk material handling systems.

In close cooperation with the customer, the real requirements are analyzed and reliably implemented in the product.

The customer can not only rely on competent personal consultation, but also benefits from an assembly, maintenance, repair and spare parts service.

MOTEC is one of the younger German mechanical engineering companies, which harmonizes traditional engineering with the requirements globalized markets.

## History

**1993**

Foundation of MOTEC GmbH and move into an office building in Büdingen.

**1998**

The successful establishment of the products in various industries results in a steady growth of the company.

The team around the founders Dipl.-Ing. Claus Barckmann and Dipl.-Ing. Ingo Klintz is expanded by a construction and an assembly department.

**2005**

Further growth of the company demands the building of the current location in Orleshäuser Straße in Büdingen. Part of the production can now take place in the in-house workshop.

2006

A new warehouse is being built on the factory premises to enable short delivery times and quick maintenance.

2007

An additional covered storage area of 200 m<sup>2</sup> is being built, so that even large filter systems can now be stored temporarily in the correct manner until they are dispatched.

2011

A large-scale project for an extraction system at melting furnaces in Yokohama, Japan is being implemented, installed and put into operation by Motec technicians.

2012

A central vacuum system for PC production of a customer in Guangzhou, China is established. The piping system is managed by a MOTEC engineer installed by local fitters, while the entire control system is implemented by own technicians.

2015

Dr.-Ing. Katrin Barckmann takes up a position in the management. Company founder Dipl.-Ing. Ingo Klintz dies at the age of 54 as a result of a tragic traffic accident.

2016

The long-time employee and authorized signatory Dipl.-Ing. (FH) Sebastian Klossek becomes a member of the management. MOTEC presents itself for the first time at the Fachpack in Nuremberg.

2018

MOTEC expands its presence at the Anuga FoodTec.

## Effective flow management



MOTEC systems are flow-optimised high-end products and are based on the vortex principle.

With more than 25 years of know-how in the reduction of pollutant concentrations in manufacturing plants as well as bulk material handling, MOTEC is today one of the authorized, strategic suppliers of global industrial companies.

MOTEC supplies companies worldwide, e.g. in the chemical industry, battery construction, food or pharmaceutical industry.

## Holistic solutions

### MOTEC plans and realizes:

- Individually planned aspiration systems in production plants
- Dedusting / aspiration
- Central vacuum cleaning systems
- Pneumatic conveyor systems
- Plants for bulk product handling
- Ventilation systems
- New plant planning
- Modernization of existing plant systems
- Investment advice
- Individual service and maintenance concepts

## Individual service and maintenance concepts

MOTEC aspiration solutions focusses on the source of the pollutants and are as individual as the production process of each customer. The deliberate extraction strategy of the pollutants at the emission sources will prevent dust to spread in the surrounding efficiently.

### The advantages of MOTEC solutions:

- Little need for space
- No complete enclosures required
- Little to no deposits in pipes and extraction elements
- Reduction of maintenance and cleaning work on production plants
- Long filter service life thanks to individual design and planning of the filter units

# System components



## Aspiration / hoods

Professional extraction of pollutants begins with the dimensioning of the extraction elements. MOTEC extraction elements are based on the vortex principle.

A well thought-out system dimensioning, tailored to the needs of our customers, ensures optimal air flow control and efficient extraction of the substances. As a result, even the smallest particles are reliably captured and extracted.

MOTEC extraction elements are many times smaller than standard solutions on the market. This results not only in a smaller space requirement, but also in a reduced volume flow requirement with a more effective way of working.

## Aspiration filter systems

MOTEC filter systems are individually designed for the needs of the customer and the dust to be separated.

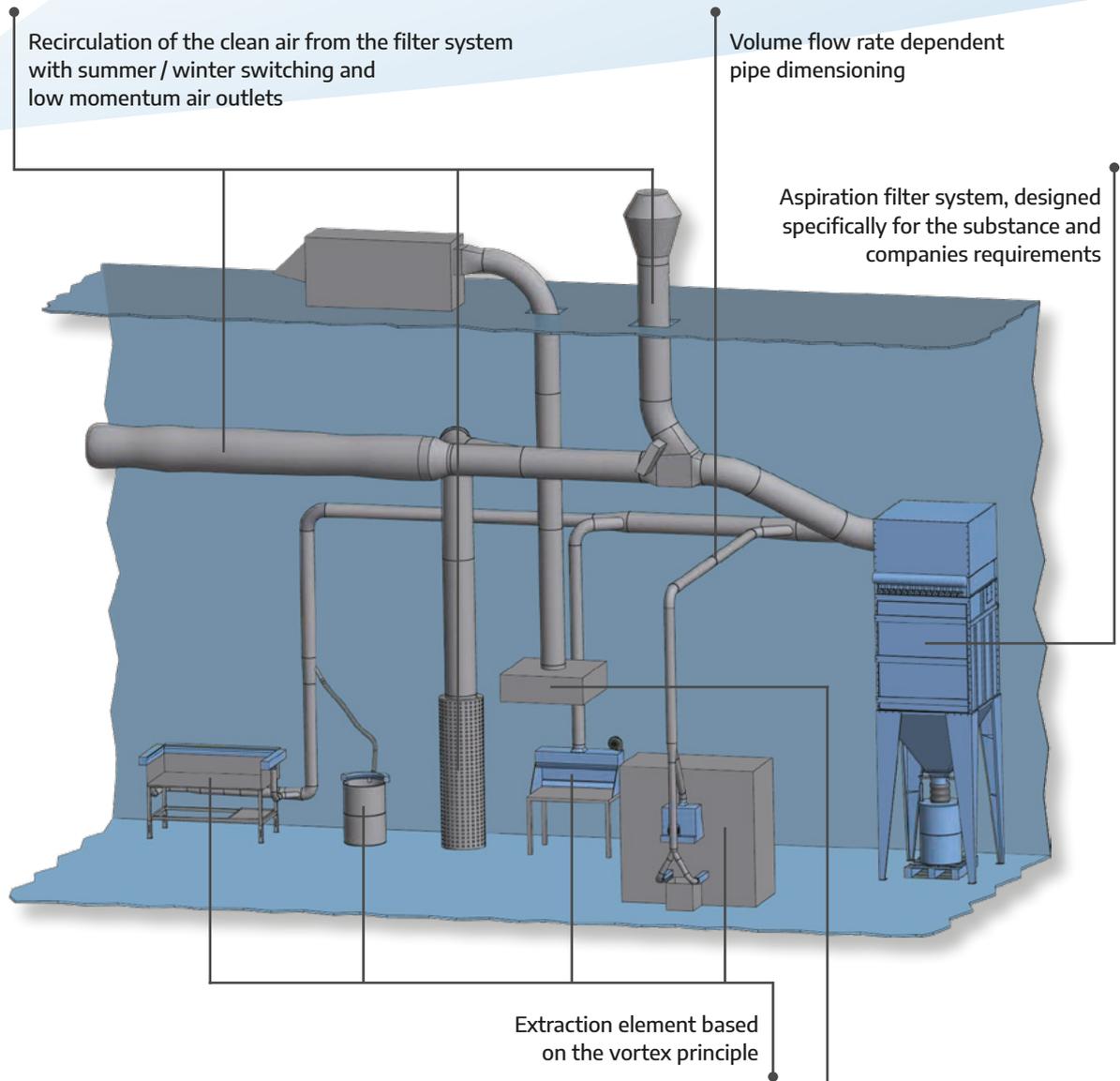
Depending on customer requirements, this naturally also includes configuration according to the ATEX guidelines.

## Combined supply and exhaust air system

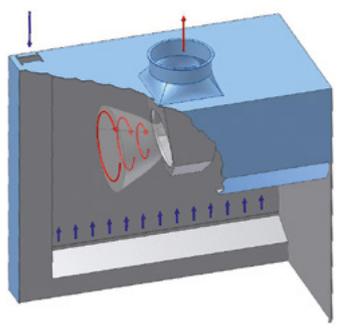
Appropriate piping system for the supply and exhaust air is always of great importance, both in terms of routing and dimensioning. MOTEC piping system stands out from the conventional systems in particular due to its volume flow-dependent pipe dimensioning with graduated cross sections.



## Schematic sketch of a holistic solution:



Functional principle of a vortex extraction hood



# Central vacuum cleaning systems



## Clean workplaces in self-responsibility

Central vacuum cleaning systems enables every employee to keep their workplaces clean when required.

With the individually planned solutions, the number and simultaneity of the suction points are adapted to your company. The simple cleaning of the production plants and the plant environment reduces wear, cleaning effort and dust carry-over.

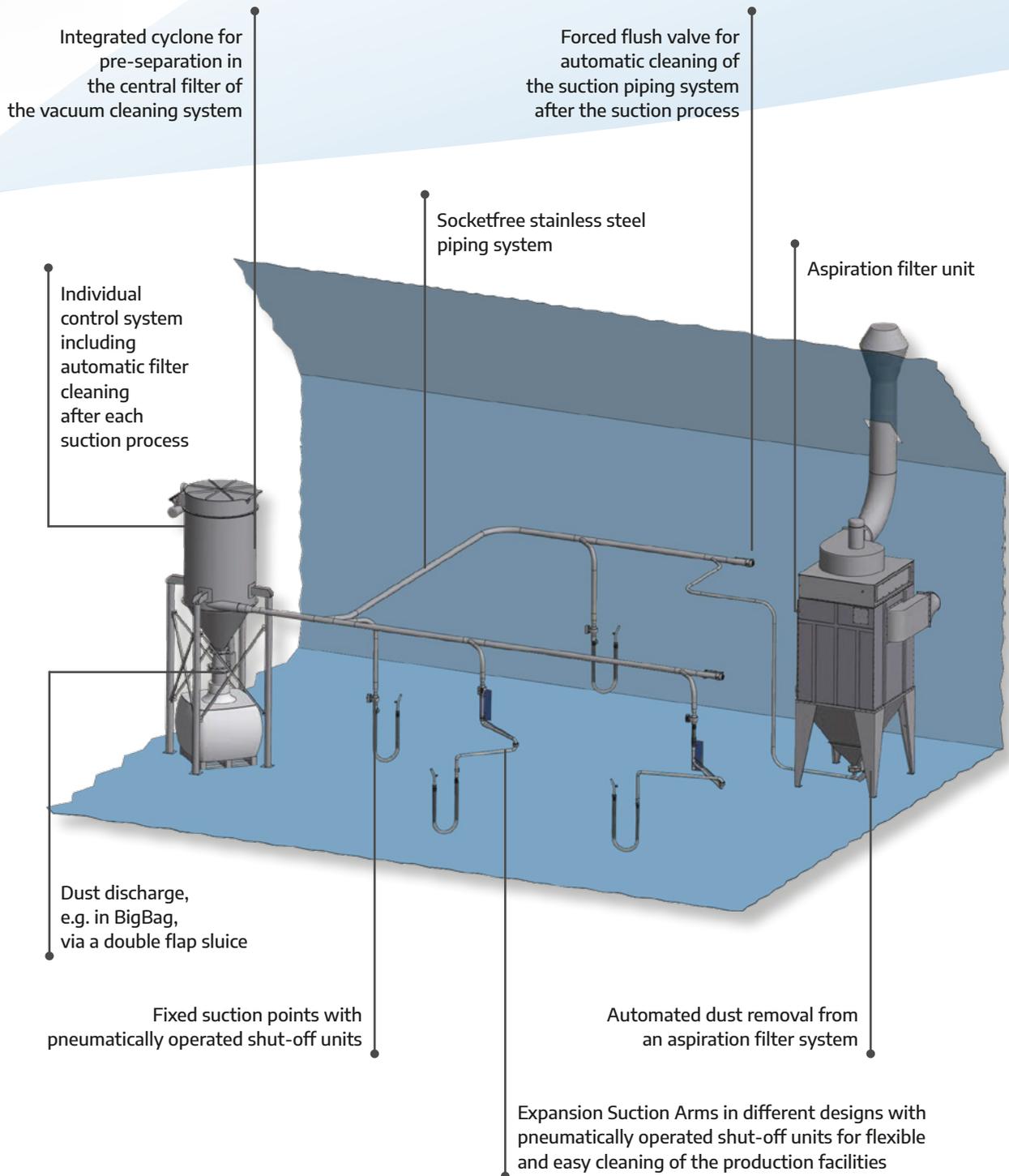
Smaller vacuum cleaning solutions can be connected to existing suction and filter systems at any time via an ejector, larger concepts are implemented with independent central devices, piping system and suction points.

### The following are adaptable:

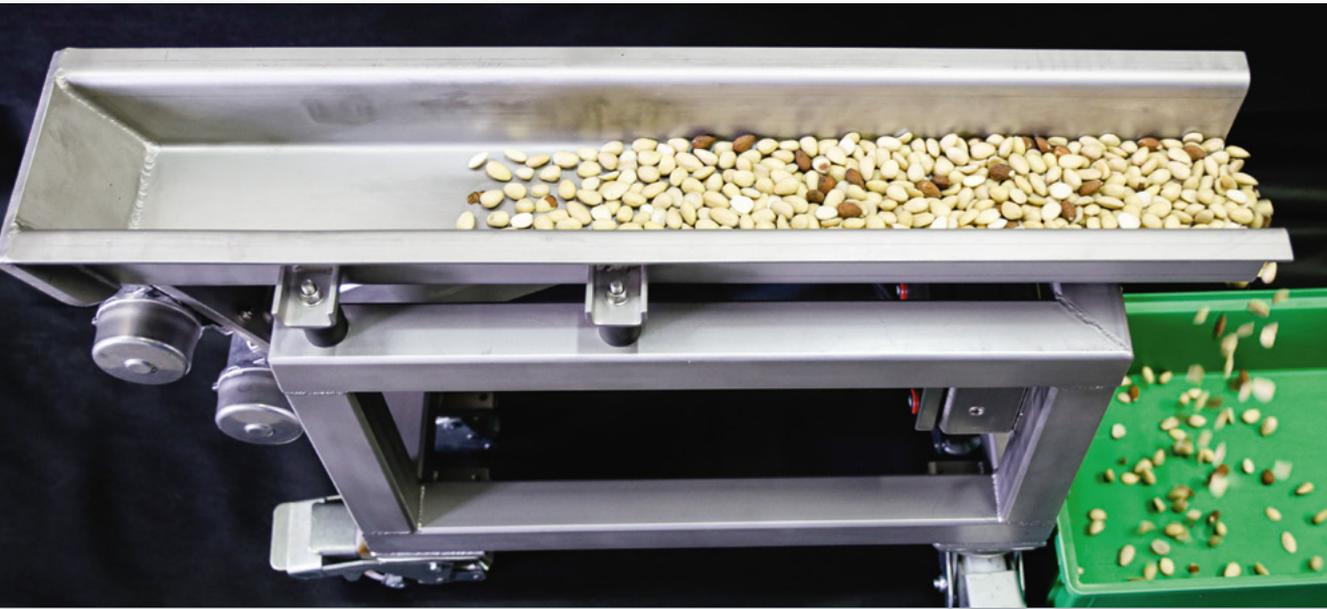
- Fixed MOTEC suction points
- Self-supporting MOTEC Expansion Suction Arms
- Dust disposal systems from aspiration filter systems
- Customer-specific suction points



## Schematic depiction of a central solution:



## Bulk material handling



### Emptying, conveying, dosing

Together with you, MOTEC designs and develops the bulk material handling systems required for your company.

This includes, for example, the pneumatic transport of bulk goods, the emptying of bags and big bags as well as the dosing of the products by means of a screw conveyor or vibration chute.

We take into account the individual requirements such as the quantity and speed of transport, dosing accuracy and protective sieves.

The customized solutions are presented in your company and implemented by experienced MOTEC fitters.

# Services



## Fields of activity

- Bag feed station
- BigBag emptying
- BigBag filling
- Weighing and dosing
- Protective screens and sieves
- Pneumatic suction conveying systems

Bag feed station with vibration sieve and vortex extraction hood



Aspiration and filter systems are nowadays closely linked to production technology and must always be available. To achieve this high availability, regular maintenance and control of the systems is required.

MOTEC looks after both MOTEC units and third-party systems. We offer the maintenance activities:

- Readjustment and adjustment
- Functional test of all system components
- Documentation of all system parameters from the differential pressure of the filter elements to the motor current
- Exchange of wear parts such e.g. filter elements, seals of door and dust collector bins
- Cleaning of system components

Regular maintenance and documentation of the system status can detect wear in good time and minimize downtimes.

MOTEC supplies you with all the components and spare parts required for repairs and maintenance.

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