

## Chamber System ZK

The well-established cleaning technique in our **ZK Series** provides a cost-effective, technically mature solution for small quantities. This single chamber system with several cleaning tanks and integrated spray cleaning system offers a wide range of cleaning processes for a relatively low quantity of pieces. A multi-chamber system can be used instead of a single chamber system in order to reduce the design-related problems with throughput times.



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### Technical Process

- Different cleaning processes possible in a single chamber
- Integrated spray cleaning system
- Automatic loading
- Separate cleaning agent container
- Process duration individually programmable
- Largely free of extracted air
- Throughput system possible

### Optional Components

- Air circulation drying
- Infrared drying
- Water treatment system
- Multi-chamber design possible to reduce throughput times

### Advantages

- Low servicing costs due to anti-twist snap closure on the nozzle line
- Cost-effective as it is a well-established process

### Suppliers

- Pumps: KSB, Grundfos
- Motors: Planetroll, SEW
- Electronics: Siemens, Pilz, Murr
- PLC: Siemens, Bosch
- Control cabinet systems: Rittal
- Sensors: Omron, IFM
- Pneumatics: SMC, Festo

This is only a selection of our suppliers. We will gladly cater for customised requirements from clients providing they are technically feasible within the overall design.

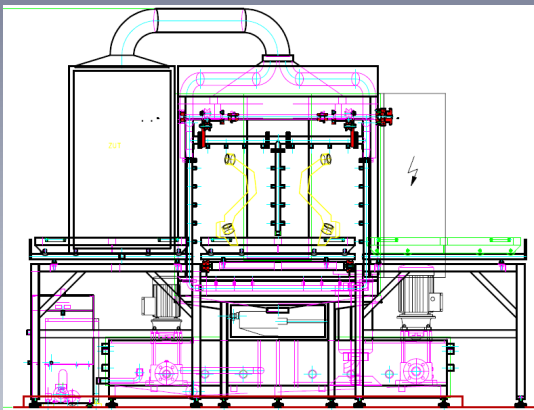
Detailed information regarding possible technical specifications can only be given after consultation with the client as each of our systems is customised and designed according to the client's requirements.

You will find two reference examples of our machines on the following pages.

## Chamber System - Example 1

### Technical data:

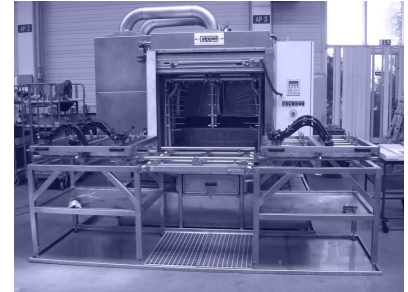
Design:	Single chamber principle
Length:	3,300 mm
Width:	2,500 mm + 1,070 mm conveyor system
Height:	2,400 mm



This example of a cleaning chamber system consists of a cleaning chamber with two cleaning agent containers underneath. The wash items are pushed into the machine in baskets by hand. After they have entered, the compartment is closed using a rolling shutter.



A pump is used to pressure-spray the washing liquid onto the work pieces through the cross-shape spray pipe and nozzles mounted on the compartment ceiling and floor. The used cleaning fluid is filtered and channelled into a collecting vessel and then goes back into the cycle. Cleaning compartment and containers are built in stainless steel and are heat-insulated on all sides



A gravity oil separator is attached to the cleaning container to continuously separate oils and thus increase the operating time of the wash. Large doors are included for servicing and inspection and enable individual components to be accessed easily.

A base trough is located under the cleaning machine to catch any liquid leaking from the containers.



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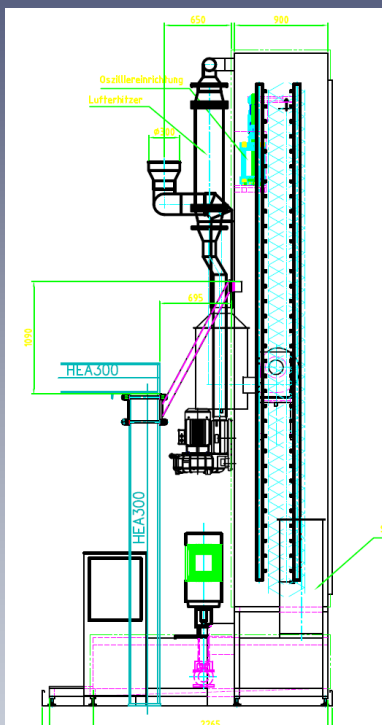
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## Chamber System - Example 2

### Technical data:

Design:	Dual chamber principle
Width:	3,850 mm
Depth:	2,800 mm
Height:	6,350 mm



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This example consists of two separate cleaning chambers with three cleaning agent containers underneath. The compartment washing agent is distributed by a pneumatically driven distributor in the respective containers. While the washing process takes place in one compartment, loading and unloading takes place in the other. The compartment is loaded completely automatically by a multi-axis gantry. The columns to be cleaned are transported through the front by screwing them on to a suspended pin which is then halted inside the compartment. The compartment is closed by electric slide doors which are moved by pivoted rollers located on top of the machine.



The rotary pumps, the drying blowers, the heat exchangers and the oil separator are mounted on the machine rear. The vapour extraction system and the double exchangeable filters are found at the side of the machine.

During the cleaning process the wash item is spun from top to bottom by a pneumatic cylinder. Parts are each dried by 2 blowers with a downstream heat exchanger. The cleaning compartment and containers are built in stainless steel and are heat-insulated on all sides.