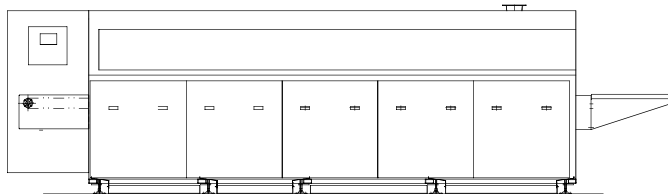




FLOW TYPE SPRAY CLEANING SYSTEMS

For precision cleaning of electronic components



TECHNICAL DATA:

Based on the modular principle the process can be composed for any specific application. Frequency controlled drives facilitate variable cleaning, rinsing and drying periods.

KLN's latest product is the so-called 6-tank system, which is at the same time also a standard version. The following processes are carried out in the individual tanks:

- γ 1 x cleaning
- γ 1 x rinsing (fresh water)
- γ 3 x rinsing (deionised water)
- γ 1 x hot recirculating air drying

The individual tanks have, for example, the following dimensions:

- γ W (mm) 450 x L (mm) 1800 x D (mm) 200 (cleaning)
- γ W (mm) 450 x L (mm) 600 x D (mm) 200 (rinsing)
- γ W (mm) 450 x L (mm) 1400 x D (mm) 200 (drying)

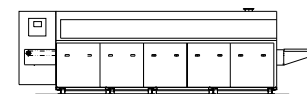
The transportation is realised through chain conveyors or eccentric stroke conveyors with a speed of 200 mm/min (adjustable). The connected load is 85 kVA.

The KLN ultrasonic product range

consists of the complete ultrasonic cleaning palette ranging from high frequency generators in user desired performance ranges through ultrasonic oscillators as submersible transducers or oscillating plates, oscillating tanks and modular units to complex special units with various cleaning media.

Since more than 60 years KLN Ultraschall AG is into developing and applying ultrasonic technology for industrial cleaning. With continuous advancement in this method they have made available a wide range of environment-friendly cleaning systems for a variety of industrial cleaning processes.

SPRAY CLEANING SYSTEMS



KLN Ultraschall
A Crest Group Company



Ultrasonic cleaning



Transport



Rinsing



Drying



Rust inhibition



Spray cleaning



FLOW TYPE SPRAY CLEANING UNITS

for precision cleaning of electronic components

KLN develops and produces equipment for precision cleaning of electronic components. Here the focus is on cleaning of DCB, ceramic and polymer-FR4-SMD in in-line spray units.



KLN manufactures spray-type cleaning units, completely made of stainless steel and thus providing high resistance to chemicals and also long-life cycles.

KLN units are flexible even when changing the cleaning media at a later stage and can be used for a wide temperature range.



Partnership

As system specialists we manufacture cleaning systems using state-of-the-art technologies. Our close cooperation with leading manufacturers of cleaning agents ensures optimal coordination between the cleaning systems and the cleaning agents and thus guarantees perfect cleaning results of your products.

THE KLN CLEANING PROCESS



The spray-type cleaning systems have 3 to 7 tanks with a continuous transport and automation system. Contaminations are removed from the surface of the electronic components and transferred to the surrounding medium. So they can be filtered from the cleaning tank. The filtration specially embedded in the KLN system ensures a long bath life.



Advantages of the process

Unit

- high resistance to chemicals
- extremely robust and durable
- low carryover
- wide temperature range

Cleaner

- for all flux material residues
- aqueous and solvent agents possible
- hazard-free spray cleaning
- extremely long life
- high efficiency/profitability

System diagram (multi-tank system)

