



# AF75

## CLEANING TECHNOLOGY

Made in Germany

Fully automatic system with turbulence air-in-immersion AirFlow® technology for all maintenance cleaning tasks

For the mass cleaning of condensation filters of virtually all manufacturers, carriers from flux, condensate, oil, dust, grease

Usable chamber dimensions: W 770 • D 1.280 • H 600 mm

Part number: 090575-AF



### Certifications:

This system in its basic version was certified for its energy and water saving processing, for easy operability and for the standard integration of comprehensive safety features.

- Fully automatic process: Cleaning - rinsing - drying
- Short cycle times
- Loading and unloading in an empty process chamber (no contact to detergent)
- Control unit in switch cabinet on the rear side
- Process and service intervals PLC controlled
- External 1000 l IBC releasing containers for cleaning and rinsing fluid
- Re-dosage directly from the IBC container
- External cleaning of cyclones and oven tubings possible
- Extremely compact - maximum capacity on a small footprint
- Certified for solar cell productions

### Key applications



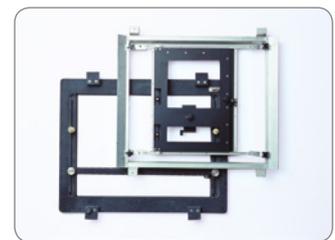
Coolers (e.g. Soltec)



Condensation filters (e.g. Rehm)



Oven tubings (e.g. ERSA)



Solder carriers

**kolb AF75** is a state of the art one chamber system with the economic and environmentally friendly AirFlow® turbulence air-in-immersion technology and ClosedLoop water reprocessing. The device is especially designed for the bulk cleaning of condensation traps and filters. It cleans traps of virtually all manufacturers from condensate from flux, oil, dust, grease.

Up-to-date reflow-soldering systems as well as solar process ovens usually have flux management systems (cooling unit, filters, heat exchanges, containers / plates) which during operation will be subject to contamination (with flux / colofonium). Thorough cleaning helps to regain proper functioning. The system is (in series use) perfectly suited for the construction of complete washing centers that comply with the latest technical state of the art (e.g. ZeroWater technology) and can deliver extremely high throughput quantities.

**The cleaning system can be operated with all common electronics cleaning supplies (detergents / chemistry, etc.) which are approved by the manufacturer.**



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### Application overview

				
<b>Not suitable</b>	<b>Not suitable</b>	<b>Most suitable</b>	<b>Not suitable</b>	<b>Most suitable</b>
Assembled PCBs Hybrids Misprints	Stencils Screens, PumpPrints Misprints	Solder frames Solder carriers Solder masks	ESD Boxes Containers Magazines	Condensation traps Filters Steel sheets

**Cleaning** (key process 1): The process chamber is empty during the loading (no contact to the detergent). After placing the goods to be cleaned into the chamber it is pressure flooded with fine filtered cleaning fluid from a separate IBC tank (tank A) through a PLC-controlled AirFlow® process. The AirFlow® technology is an air-in-immersion process. It differs from common spray-in-immersion applications, as the goods to be cleaned here are actively submerged by the cleaning fluid using compressed air. This whirling technology guarantees a permanent all over active flushing without dead spots so that the contamination is fast and efficiently cleansed off. The integrated PulseFlow technology allows the cleaning of external devices such as cyclones, tubings, etc.

**Rinsing with tap water** (key process 2): After the goods are cleaned the likewise filtered water, is pumped into the process chamber from a second IBC tank (tank B). Tap water has (compared to DI / DM water) the advantage of lower surface tension and thus flushes also critical points as low standoffs more efficient.

**Drying** (key process 3): Drying is carried out via a threefold HotSpeed hot air drying module integrated into the process chamber lid. The HotSpeed unit with fan and heating coil in one air duct evaporates completely the residual moisture at 55 - 60 °C.

**Maintenance:** The system has a large maintenance door on the right side and requires only little maintenance. In general, only exhausted cleaning mixture has to be exchanged, as well as the filters have to be cleaned or changed if necessary. In the maintenance area among others are the pump-out set and the optional re-dosage unit with space for a 5 l additive container.



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### Main standard features

- AirFlow® technology bundle: magnetically coupled XXL-Power pump unit, immersion / compressed air configuration
- Programmable Logic Controller (PLC)
- High resolution 7" (1.024 x 600 px) display with capacitive multi-touch
- Integrated control unit (switch cabinet) on the rear side
- Full flow coarse filter (process chamber)
- Skimmer fine filtration for cleaning circuit
- Skimmer fine filtration for rinsing circuit
- Threefold Hotspeed warm air dryer (55 .- 60 °C)
- ClosedLoop reprocessing of cleaning and rinsing fluids
- 1000 l IBC releasing containers for cleaning and rinsing fluid
- Feed device for waste water recycling
- Safety features: safety interlock on the process chamber door, overflow alarm for all tank sections, overheating protection for all heating and drying elements, end switches for all motor-driven valves and drives, personnel protection insulation
- Machine body made of stainless steel
- Process sections made of stainless steel

### Main options

- Automatic re-dosage unit for 5 l additive container
- Cycle unit for external cleaning of containers (e.g. cyclones, tubings)
- Drip & storage reservoir
- Exchange for rinse water and pump out unit
- Heater for tank A (cleaning)
- Load- and transport cart
- MB / DI cartridge for deionized (DI) and demineralized (DM) water
- Status light fivefold to display the current process state
- Wash basket



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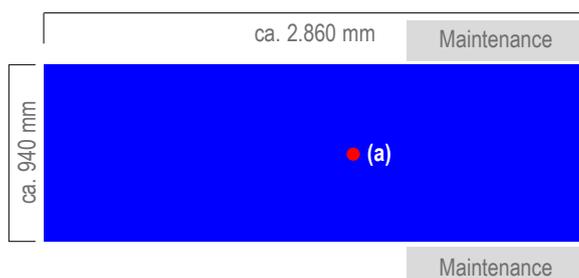
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### Technical data

Technology base	kolb AirFlow®, kolb PulseFlow®
Usable chamber dimensions	W 770 • D 1.280 • H 600 mm
Usable basket size	W 705 • D 1.165 • H 510 mm
Content process chamber	approx. 750 l
Volume IBC tank A (cleaning)	approx. 1.000 l
Volume IBC tank B (rinsing)	approx. 1.000 l
Power supply	400 V AC, 16 A CEE / 3PH / 50 or 60 HZ
Power consumption	approx. 6.3 kW
Control system	PLC (Siemens)
Temperature load	up to 55 °C
Filter system	up to three stage - 1. Full flow coarse filter < 2 mm, 2. Skimmer coarse filter, 3. Fine filter 20" / 100 - 50 - 10 µm in the circuits
Supply connection (compressed air)	6 - 10 bar (110 l / min.)
Rinse water drain connection	3/4", hose connection 25 mm with integrated pump out system
Exhaust connection	Ø 160 mm, exhaust capacity 200 to 300 m³ / h
Footprint	940 x 2.360 mm
Operating condition room temperature	20 - 35 °C
Operating noise	59 dB (A)
Empty weight	820 kg

#### Top view:

Space requirement  
cleaning system  
(a) = Status light



#### Front view:

with optional  
status light (b)

