WE ARE **THE** PARTNER FOR CUSTOMIZED **WET PROCESS** **EQUIPMENT**

CleanStep *Carrier Box*

The **CleanStep** *Carrier Box* significantly reducing the time required for carrier/FOUP cleaning and drying, delivers maximized productivity and superior technology by combining multiple work steps in one single tool.

Try our new product configurator to create your individual CleanStep I **www.ap-s.de**

BENEFITS

The Cleanstep Carrier Box tool offers many innovative and individual possibilities designed to clean and dry carriers and transport boxes of all current types. The compact tool allows cleaning and drying of the transport boxes simultaneously and enhances the performance for low production volumes. Key benefits and features:

> **Cleanstep I** Loading capacity:
  4 carriers, 4 boxes or 12 carriers without boxes at the same time
> **Cleanstep II** Loading capacity:
  8 carriers, 8 boxes or 24 carriers without boxes at the same time
> **Cleanstep III** Loading capacity:
  6 Foup's, 6 covers
> Cleaning of carriers and transport boxes till a maximum size of 300 mm; customers may specify their individual carriers / transport boxes size
> Enhancement of performance by utilizing standard rotary cages for 200 mm carriers/ boxes and 300 mm FOUPs
> carrier/box holders in a standard rotary cage can be adjusted to customer's individual carrier/box size
> Cleaning of the carriers / boxes with hot DI-water
> Hot air drying from top (including HEPA-filter with pressure control), fan unit with variable speed levels for stand-by and process mode

> LED-illumination inside the process chamber
> Particular leakage drip pan with sensor
> Automatic sliding door with window in tool's front side
> Graphical user interface which allows an easy control of the system
  • PLC with optimal 10" touch panel
  • Password protection for authorized access (different levels)
  • extendibility to 40 recipes with 50 steps
  • variable input data (time, temperature, speed, etc.) best fit alignment
  • easy loading/unloading process due to flexible, turnable loading boxes in a rotary cage

TECHNICAL DATA	CleanStep I *Carrier Box*	CleanStep II *Carrier Box*	CleanStep III *Carrier Box*
Voltage supply	400 VAC / 50–60 Hz	400 VAC / 50–60 Hz	400 VAC / 50–60 Hz
Max. rated input power	35 kVA	43 kVA	50 kVA
Nominal current	3 x 50 A	3 x 63 A	3 x 80 A
Pre-fusing	3 x 63 A	3 x 80 A	3 x 100 A
Appr. dimensions (LxDxH)	1250 x 1450 x 2450 mm	1560 x 1900 x 2490 mm	1865 x 1545 x 2630 mm (2850 open)
Max. rotation	200 rpm	200 rpm	120 rpm
Max. loading weight	8 kg	16 kg	36 kg
Hot DI-water	d25, 3 bar	d25, 3 bar	d25, 3 bar
Drain	d63	d63	d63
Compressed air (CDA)	Pk6; 6 bar; max.30Nm³/h	Pk6; 6 bar; max.30Nm³/h	Pk6; 6 bar; max.30Nm³/h
Nitrogen (N2)	PK6, 3 bar	PK6, 3 bar	PK6, 3 bar
Weight	710 kg	820 KG	1450 kg
Noise level	‹ 70 db(A)	‹ 70 db(A)	‹ 70 db(A)
Exhaust	Ø 200 mm; PPcustomer suction output 1000 m³/h	Ø 200 mm; PPcustomer suction output 1000 m³/h	Ø 250 mm; PPcustomer suction output 1300 m³/h

OPTIONS

Addition of Hot DI-Water

> Integrated DI-water storage tank with heating element (up to 60ºC) and level sensors
> Diaphragm pump for recirculation and hot water supply

Addition of cleaning detergent (tensides)

> Spiking pump for exact dosing of cleaning liquids to reduce the surface tension
> Fill level control of detergent bottle (max. 10 l)

Resistivity control for improved cleaning process

> Measuring and monitoring of the DI-water quality
> Resistivity controlling unit installed in the drain pipe
> Integrated and programmable in the process recipe

Chamber ionization unit

> Reducing electro static charges of carriers and transport boxes/FOUP's
> Integrated and programmable in the process recipe

Process and tool control from backside

> Additional 10" touch display located at the backside of the tool for comfortable maintenance and service access for "trough the wall" installation

Filter unit

> 10" Filter unit for DI-Waterl, insert not included in delivery

RFID reader and SECS/GEM communication interface

> Integrated RFID reader for FOUP identification
> SECS/GEM communication interface to host system

Greyroom loading

> Additional second chamber door at the backside to load the tool from the greyroom- and unload from the cleanroom-side

Tool compliance FM4910

> Tool complies to FM4910 Standard