Pos	Description	Amount
010	Tool general / Clean|Step CB II	1
020	Material option: FM compliant material	1
030	Standard rotary cage	1
040	Chamber Ionization Unit	1
050	Addition of Hot DI-Water	1
060	Addition of cleaning detergent (tensides)	1
070	Installation package	1

010 Tool general / CleanStep CB II

The CleanStep CB II combines cleaning and drying of carriers and boxes in one run. Easy handling, fully integrated process control and minimum required cleanroom space provide optimal quality with less cost of ownership. It is designed to support easy operation, latest process monitoring and control capabilities. Standard features are:

- A graphical user interface with PLC and touch panel for monitoring and control of the tool. Up to 40 different process recipes with 50 steps each are possible. All tool and process parameters such as timings, temperatures, speeds, etc. are handled through three different password protected access levels.
- Different nozzle stocks (spray-, rotary- and N2-nozzles) are located on the right, left and in the centre of the process chamber. The N2 nozzles are used to blow off residual DI-water.
- Hot air drying from the top (including HEPA-filter with back pressure control) based on a fan unit with variable speed- and temperature-levels for stand-by and process mode, guaranty an optimal drying procedure.
- LED illuminated chamber
- Sensor controlled safety drip pan
- Automatic control for correct and balanced loading
- Automatic sliding door with window
- Programmable three colour signal-tower with horn
- N2-Gun
- "Through the wall" installation possible
- Service access from front and rear only
- Facility requirements

TECHNICAL DATA

- Voltage supply 400 VAC / 50-60 Hz
- Max. rated input power 33 kVA
- Nominal current 3 x 51 A
- Pre-fusing 3 x 63 A

- Approx. dimensions (WxDxH) 1560 x 1900 x 2510 mm
- Max. rotation 200 rpm
- Max. loading weight 16 kg

- Hot DI-water d25, 3 bar
- Drain process chamber, d63 DN50
- Drain drip pan (pump+vales area), d63 DN50
- Compressed air (CDA) ½" Swagelok SS; 6 bar; max.30 Nm^3 / h
- Nitrogen (N2) ½" Swagelok SS; 3 bar
- Weight Approx. 1800 kg
- Noise level < 70 db(A)

- Exhaust process chamber, PPs, Ø 200 mm; minimum capacity 1000 m3/h required
- Exhaust lower part (pump+vales area), PPs, Ø 65 mm

020 Material option: FM compliant material

- Tool housing and process chamber made of FM compliant material according to FM4910 standard

030 Standard rotary cage

- Cleaning of all types of carriers and transport boxes for wafers and substrates up to 200 mm
- Adapter-set for one type of 6" carrier and box included:
  - *6" Carrier type:_____ (has to be specified)*
  - *6" Box type:_____ (has to be specified)*

  (other adapter-sets for additional types available as option)

  - *Always pay attention to balanced loading!*

- Loading capacity: 8 carriers and 8 boxes per run
- Rotary cage made of polished stainless steel
- Rotation speed up to 200rpm with high torque ramp controlled servo motor

- *In case of order, we need for the design phase one carrier and box of each type. A late delivery of the parts has an influence on the delivery time of the cleaner! For start-up phase at AP&S facility a complete set of carrier and box of each type for a complete loading of the rotary cage. All delivery costs are at customer-side.*

040 Chamber Ionization Unit

- Reducing electro static charges of carriers and transport boxes
- Integrated and programmable in the process recipe

050 Addition of Hot DI-Water

- Integrated DI-water storage tank (approx. 150 l) with heating element (up to 60°C) and level sensors.
- Diaphragm pump for recirculation and hot water supply.

060 Addition of cleaning detergent (tensides)

- Spiking pump for exact dosing of detergent to reduce any surface tension
- Fill level control of detergent bottle (max. 5 l)