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Vapormatt | Sabre

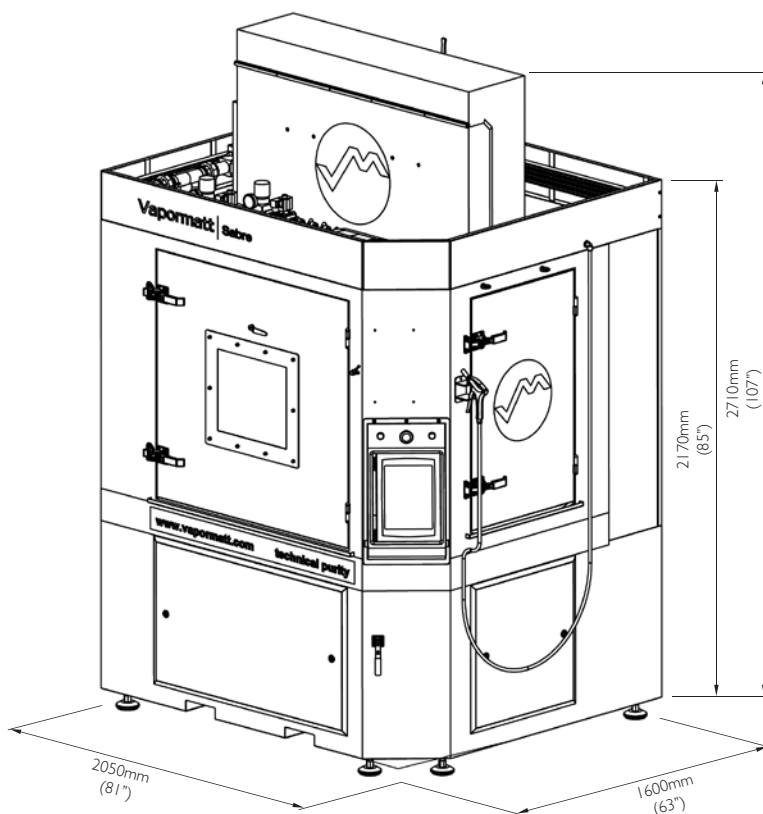
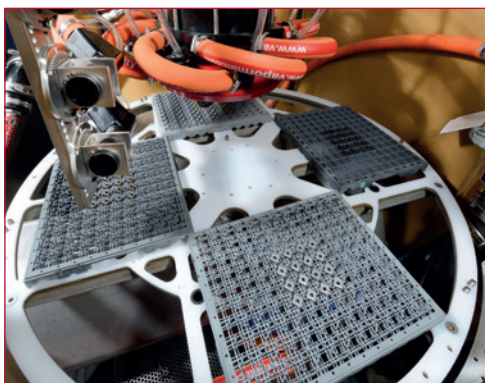


Sabre Key Benefits

- Sophisticated process control & monitoring
- Extremely consistent and reproducible processing
- Designed specifically for small and medium volume manufacturers
- Suitable for all insert trays
- Recipe driven parameter setting and post processing reporting
- Suitable for round shank tools ranging from 3mm to 30mm in diameter and 46mm to 300mm in length
- Hybrid functionality for processing inserts, hobs and round shank tools
- A great addition to any coating facility



Vapormatt | Sabre



The Vapormatt Sabre brings the ultimate edge preparation, surface conditioning and cleaning technologies to 3 specific user groups. Designed to give better control to medium sized manufacturers, coating centres and research and development facilities the "hybrid" design accepts both round shank tools (drills, end mills, hobs etc) and cutting inserts. Taking Vapormatt's established monitoring and control technology, the Sabre offers high process control on an extremely compact footprint.

Wet micro-blasting of substrates such as Cemented Carbides or HSS used for the manufacture of cutting tools is proven to enhance tool performance and life. To achieve these enhancements, improved surface finish and cleanliness using wet micro-blasting technology become essential. Improved cleanliness allows for excellent CVD and PVD coating adhesion, whilst the ability to peen and smooth coatings can reduce tensile stresses and increase the durability of tools post-coating.

Superior edge preparation/honing is also critical for improving tool life. Our research and development team have conducted studies into creating and managing the optimum edge honing process. The Sabre can produce controlled and consistent edge hones up to 100 microns.

Constructed from stainless steel, the Sabre provides a robust, non-corrosive and quiet structure (75dBA) for the sophisticated processing controls. Using the integrated HMI screen to develop recipes, programming becomes easy and transferring between systems effortless. With watchdog monitoring, the Sabre becomes self-reliant with monitoring systems ensuring consistent results with minimal supervision.

With its main turntable, up to 4 insert pallets can be processed using the gun crown on the X-axis. Additionally, 12 satellite turntables allow round shank tools up to 300mm in length and \varnothing 30mm to be processed by 3 targeted blast nozzles on the Y-Z axis. By adjusting angles and pressures a range of edge hones and shapes can be achieved to within \pm 5 micron of specification.

The Sabre can be supplied in 3 versions; for shank tools/hobs, for inserts or for all in a hybrid system that incorporates both blast heads. The use of servo motors allows for fast and highly accurate positioning with turntable speeds of up to 40RPM. With the rinse stage as standard, the majority of the process media is removed. Chemical additives in the process water are automatically monitored and controlled to limit cobalt leaching and prevent oxidation.

The Sabres fully integrated software program allows for the control of; soap (pH) and abrasive concentrations, to slurry and air pressures as well as axis kinematics and thermal controls. All these variables are displayed on trend screens which provide reliable feedback and, with the inbuilt password protection, accountability.

A full preventative maintenance programme is incorporated for all key components and service operations including slurry valve condition monitoring.

With several Vapormatt patented features such as continuous media classification by elutriation and slurry distribution using manifolds, the Sabre is a truly robust and controllable wet blasting system. With its customisable options and proven technologies the Sabre offers greater edge and face preparation to a wide range of users.

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