



# Vapormatt | Tiger<sup>+</sup>



## Tiger+ Processing Centre

- Fully automatic in-line wet blasting, cleaning and rinse machine optimised for tooling applications
- Sophisticated process control & monitoring
- Recipe driven parameter setting and post process reporting
- Extremely consistent and reproducible processing
- Fully self contained and ventilated unit suitable for location in quiet, controlled environments

## Tooling applications

- Edge honing (up to 100 micron)
- De-burring to remove burrs without dimensional change
- Surface cleaning/ Skin removal to enhance coating adhesion
- Polishing, pre & post coating
- Selective coating removal
- Peening for coating internal stress profile enhancement
- Suitable for replaceable inserts of varying geometries



Wet Blast 1

Rinse

Wet Blast 2

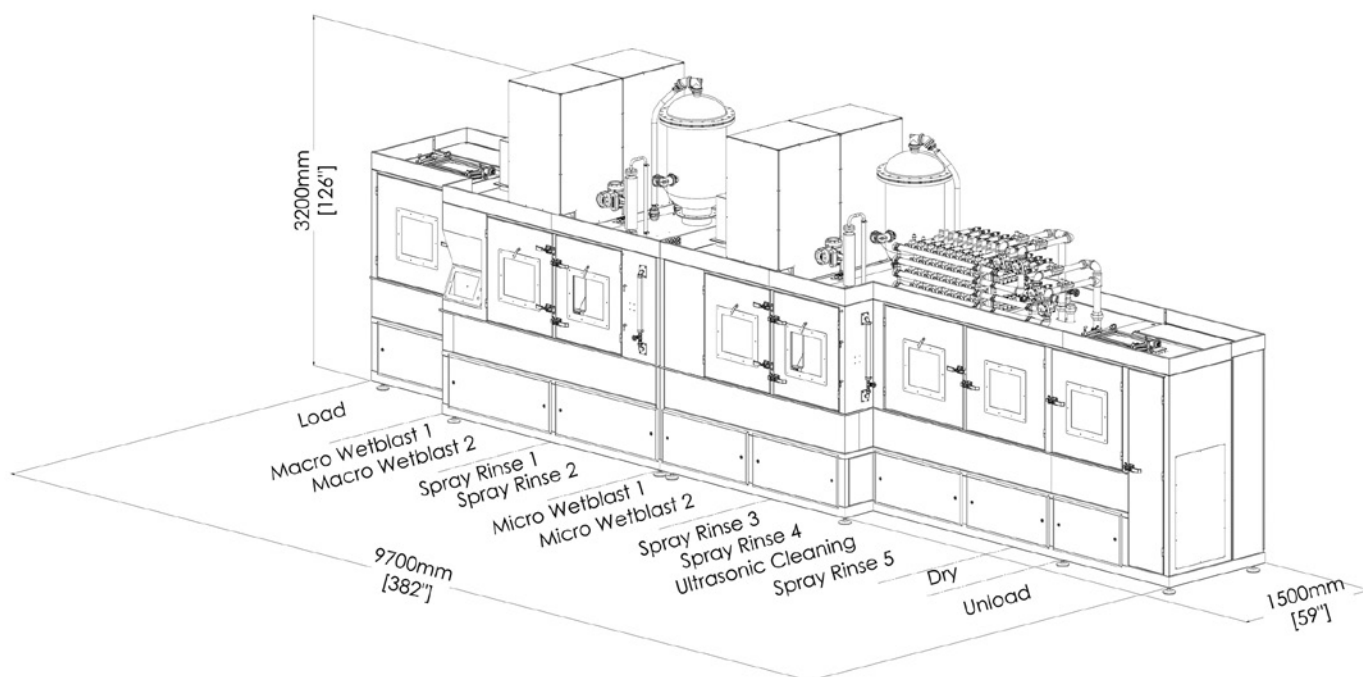
Rinse

Ultrasonic Rinse

DI Rinse

Dry

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The Vapormatt Tiger+ is a technically advanced self-contained edge preparation, surface conditioning, cleaning and drying centre designed for medium to high production capacities. The "in-line" design accepts cutting inserts direct from grinding for edge honing, polishing, cleaning and drying, leaving the inserts fully prepared for coating. This automatic machine ensures consistent, reliable and excellent results minimising non-conformities caused by conventional processing methods. With minimal supervision and a high capacity the Tiger+ is an economical investment for most high end tooling companies.

The Tiger+ is made from corrosion resistant high grade stainless steel, offering a watertight enclosure to meet the demands of the harsh blasting environment. It's design incorporates 6 chambers carefully linked together by a continuous conveyor system, which effortlessly transports the customers pocket or pin trays through the various processes.

All the process on the Tiger+ are driven by the machines HMI unit where recipes are produced and stored for each type of cutting insert. As the HMI controls all of the machines processing parameters, each stored recipe will produce unflinching results.

Up to 20 trays can be loaded onto the magazine cradle at one time which is housed in the first chamber. Each tray is automatically accepted by the conveyor subject to the selected recipe programme held within the HMI unit.

Trays are transported in to the edge preparation chamber housing 2 individual gun heads, each containing 8 boron carbide nozzles equally positioned around an abrasion resistant polyurethane disc. This chamber is where metal is precisely removed to form the desired shape and

tolerances of the edge honing radius using a macro abrasive. The unique Vapormatt gun design facilitates perfect processing equilibrium. If many different forms of edge honing (K factor) are required, an automated adjustable gun head can be fitted, which is controlled by the HMI unit.

After edge honing is complete a primary rinse removes abrasive before the conveyor transports the tray into the third chamber for surface finishing and polishing. Using a micro abrasive, delivered by a further 2 independent gun heads. Any abrasive is removed by a further primary rinse system before exiting the chamber.

Control of the blast heads is part of the recipe build and is precision controlled through the Y and Z axis as the conveyor transports the trays forward. This arrangement ensures 100% effective coverage. The blasting process is further enhanced by the "Vapormatt" elutriation tower that removes any non-allowable abrasive particles and frequent monitoring of the slurry concentration guarantees dependable processing results.

To remove any organic or non-organic surface contaminants the inserts go through a temperature controlled 4 stage washing and rinsing programme, initially spray washed with detergent fresh water rinse, ultrasonically cleaned using Di-ionised water and a final clean water rinse.

To prevent corrosion and to eliminate cobalt leeching the inserts are quickly dried by the integrated heated blower system, thus preserving the nascent surface. The conveyor finally transports the trays to the unloading magazine having fully processed the inserts.

Operational noise levels can be specified down to 75dB(A).

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