



**Vapormatt**

**Alloy wheel cleaning,  
repair, and refurbishment**



**Wet blasting is more efficient than other surface cleaning methods such as dry blasting because it can clean, degrease and refinish a surface in one step. There is no need to clean and prepare the surface before or after blasting. It also removes the need to process the wheels manually by hand.**



**Alloy wheel after and before wet blasting in a Vapormatt Puma**

## **Small to Medium Area Repair Technology (SMART) Repairs**

Whether it's scratches, scuffs, dents or repainting, wet blasting can prepare surfaces and offer an effective way to repair alloy wheels.

When refurbishing and repairing wheels, an efficient method is needed to quickly process them. If a wheel comes in with a scratch the first thing to do is prep the surface by removing any rust, old powder-coating, paint, grease, lacquer, and other contaminants - and that's where wet blasting comes in.

Wet blasting can easily remove impurities from the surface of the wheel without damaging the substrate due to the cushioning effect of the water mixed with the abrasive. It can also be gentle enough to process thinner panels without causing warping due to the controllable pressure variables.

The result of this is a smooth surface finish which is perfect for creating the optimal anchor profile for re-powder coating, re-painting, diamond cutting or any other cosmetic repair.

If a wheel being processed requires a chemical bath, wet blasting can be introduced in the repair and refurbishment process either before or after. Either way, wet blasting can easily strip the surface back to the bare metal and buff out scratches.

## **Wet blasting vs. dry blasting**

The biggest advantage of wet blasting wheels and surfaces is that the prep time is reduced significantly when compared with dry blasting as it can simultaneously degrease and clean. Additionally, using wet blasting results in less abrasive media embedment and increases the life of the abrasive. The use of inhibitors to reduce the chance of oxidation is also available with wet blasting.

Traditional dry or sand blasting tends to use more coarse and gritty media resulting in an increased risk of damage to the surface profile, a decrease in the level of control, and greater difficulty achieving a polished, etched or soft finish. Due to the nature of dry blasting, frictional heat can occur on the surface which can cause warping.

One of the major differences between dry or sandblasting and wet blasting is that with dry blasting the abrasive impacts at an angle, leaving a deep anchor profile. This does not happen with wet blasting as the water cushions the impact and disperses it over the surface profile more evenly. Lastly, if dry or sand blasting, an additional polishing step may be needed after the blasting is finished.



**Alloy wheel before and after wet blasting**

## Choosing the right blast media

When it comes to blasting alloy wheels, the most common abrasive medias used are glass beads or aluminium oxide.

Glass beads are effective at stripping aluminium surfaces to achieve a smooth or satin look. If the aim is to strip the wheel to add paint or powder coating, aluminium oxide is recommended. This will leave an anchor profile which will allow the new coating to grip the substrate more easily.

## Manual finishing

Our Puma manual wet blasting machine is well suited to the finishing of alloy wheels in relatively high volumes.

With its large, wide opening door and large working envelope, the Puma manual is a highly adaptable machine with an optional turntable, jigs, mats, and other items available.

The jig for holding alloy car wheels is designed to swing in and out of the cabinet, it makes the loading, cleaning, and unloading of wheels very easily.

This machine blasts, washes and prepares alloy wheels quickly, resulting in a surface that is ready for paint and lacquer to adhere to.



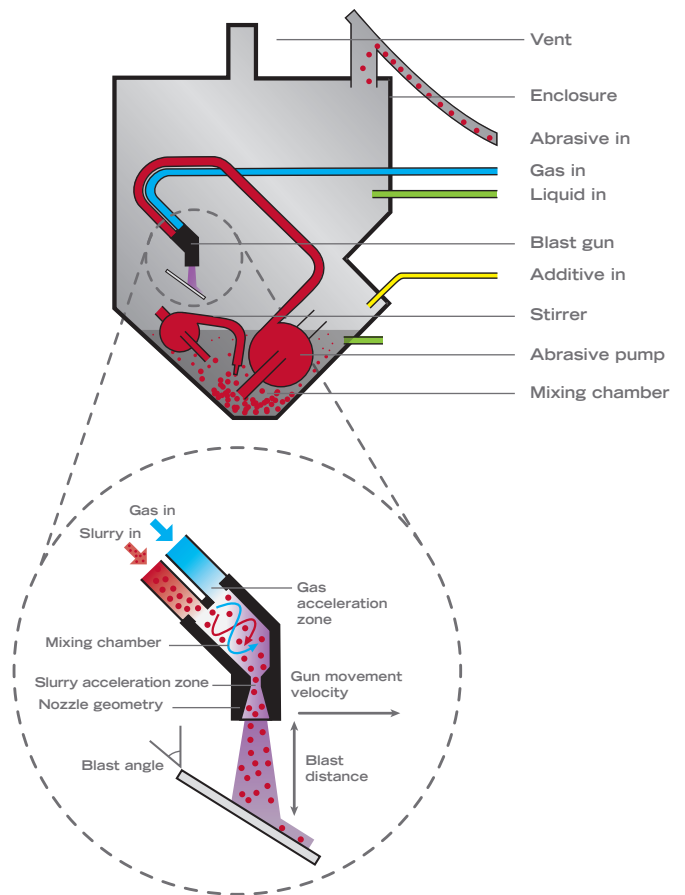
Vapormatt Puma

## The benefits of wet blasting

The advantages of wet blasting alloy wheels for repairs, lacquering or painting are numerous:

- Rapid efficient removal of resinous residues, grease, oils and other contaminants
- Creation of a surface that allows for the even application of powder coating, paints and other coatings
- An ever-present water buffer that prevents impregnation of abrasive media and that protects the metal of the wheel
- There are no health or environmental side effects, and the process is completely dust free
- Highly controllable so precisely the correct finish and coating removal can be applied to the wheels
- Cleans the alloy through the flow of slurry over the surface, not through direct impact

## The controllable factors of wet blasting



**Gas** - Type, pressure, flow speed and temperature

**Slurry** - Solid/liquid ratio

**Liquid** - Type, pressure, flow speed and temperature

**Solid** - Type, size, hardness and shape

**Gun/part kinematics** - Velocity, distance and angle

## Why work with us?

Vapormatt isn't just the world leader in wet blasting. We invented the process and remain solely focused on it to this day.

Since Norman Ives Ashworth developed the first wet blasting machines in the 1940s, we've been developing, improving and refining wet blasting for alloy wheel cleaning and refurbishment. And we're still led by the Ashworth family today, continuing to design and manufacture bespoke machinery and after-market services built to the specific requirements of your business.

Our expertise spans many different sectors: from automotive wheel repairs and refurbishments, to stainless steel weld cleaning. Our breadth of knowledge means we can explore a wider range of applications that benefit a business like yours.

Because at Vapormatt, while we might be pioneers of wet blasting technology, we never believe the job is done. We're constantly researching, developing our techniques and discovering new technological enhancements that we can apply to alloy wheels. Consequently, we hold and have patent applications pending in significant areas of process control and repeatability.

When working with you, we'll build a long-term technical partnership, giving you access to our know-how and world leading wet blasting services. As a result, we understand you may need us to develop methods and processes in confidence. You'll benefit from our discretion too – in fact, we have a long track record of doing just that with our key customers across a number of high-tech sectors.

## What you can expect of us?

- **Integrity** - We always conduct business with you in a confidential, honest, open and ethical manner
- **Commitment** - Every member of our team aims to exceed your expectations at every level
- **Innovation** - We're at the forefront of wet blasting technology, implementing our technical expertise
- **Value** - You gain value from us through our high levels of service and technical excellence
- **Collaboration** - As a customer focused company, we work collaboratively to ensure you enjoy the best possible experience

## The Vapormatt Promise

In designing and manufacturing specialist machines that meet your exact requirements, we're always improving. Always refining. Always pushing the boundaries. We build on the successes of the past, incorporating proven designs and approaches, and combine them with innovative thinking to meet the specific challenges we face together with you.

Throughout that collaborative process, we're also completely honest and discreet. And it's in this respect that we make a promise to you. As we develop more efficient, more seamless and more effective ways to deliver the benefits of wet blasting to you, any off-the-shelf solution is unlikely to be suitable.

So complete validation of every design detail is practically impossible, and some functions – software, for example – will inevitably need modification as they're integrated into your processes.

Equally, once the equipment is installed on your premises, things are unlikely to be up and running without a glitch from the first moment, in a plug-and-play manner. Performance will always improve as operators and maintenance teams become familiar with the machines and their operations.

Other manufacturers might shy away from such an honest admission. However, we accept that this is simply part of building and refining the right wet blasting machines for you. That's why we promise to make the entire Vapormatt team, including our engineers, designers and sales specialists, available to offer advice, guidance and practical assistance once the equipment is installed and integrated into your workplace.

**And we won't be satisfied until it's working to its full potential and this promise is kept.**

### The four pillars of our promise:

- To continuously improve the design and manufacture of our equipment
- To provide you with machines of the highest possible quality
- To support you in achieving optimal performance from your machines
- To collaborate with honesty and discretion

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