



aquablast®

It's time you came clean with us!

**VIXEN**  
Surface Treatments





Vixen is a market leader in the design and manufacturing of wetblasting machines.

## Welcome

Vixen's core range of products include wet blasting machines, dry blasting cleaning cabinets and degreasing & phosphating equipment.

Companies from around the globe purchase our products and we have established long-standing relationships with many world-renowned organisations.

Thousands of machines are produced in our manufacturing facility each year, but we also possess the technical capacity and expertise to develop bespoke machinery and equipment that are perfectly tailored and customised to client specifications for surface treatments.

Vixen is not solely focused on manufacture, it also strives to provide UK customers with regular servicing throughout the year. A dedicated team of highly trained service engineers fulfill monthly or quarterly contracts. In addition to servicing, our engineers are primed to deliver breakdown cover with rapid response throughout the UK.

Globally we have trained engineers that commission new machines and service machines worldwide.

After-sales care is a key element of our organisation and we have a dedicated team waiting to respond to any queries that customers may have. They are well versed in the finer details of Vixen's products and will be delighted to help.



Customers are welcome to examine our machines which are on display in Vixen's modern factory showroom.



## The Standard aquablast® range



1215

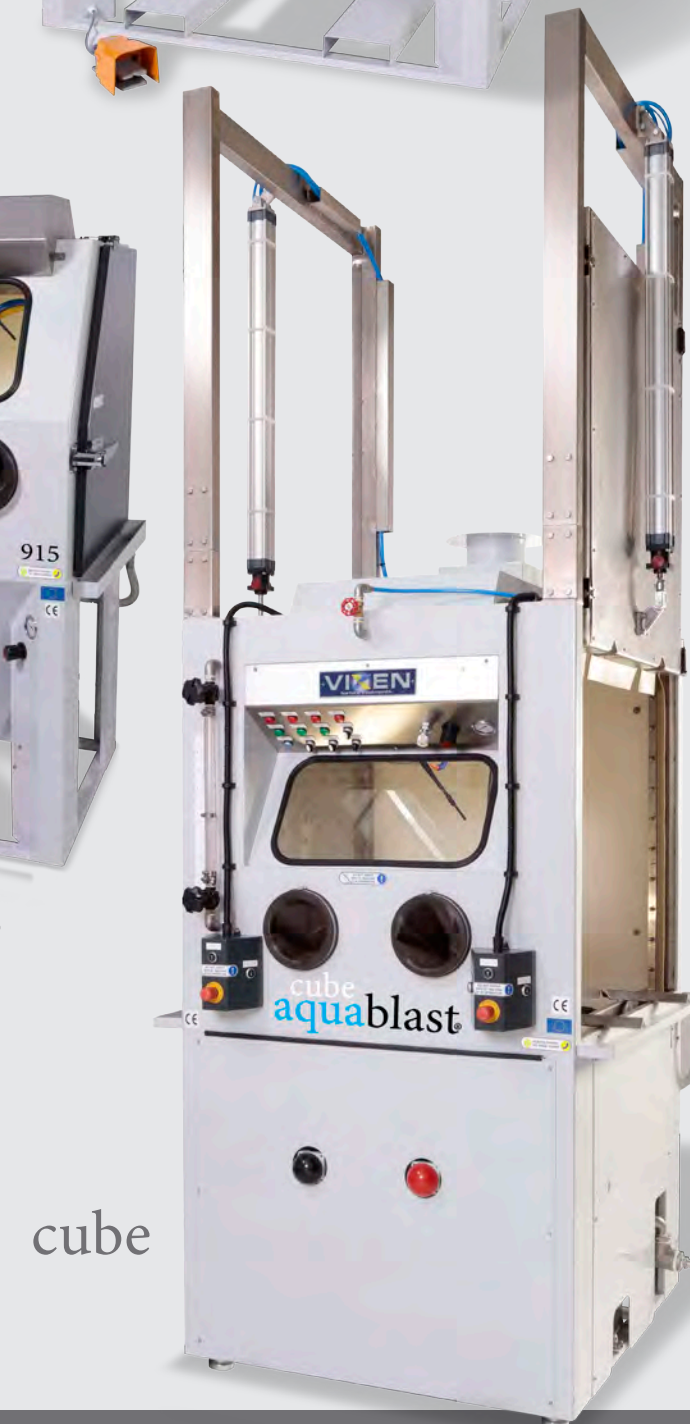


1515



915

## WheelBlaster



cube

[vixen.co.uk](http://vixen.co.uk)

email: [Info@vixen.co.uk](mailto:Info@vixen.co.uk)



# aquablast®

The Aquablast® range is designed to simultaneously blast and degrease components in a quick and easy dust-free process to achieve outstanding finishing results on a variety of components.

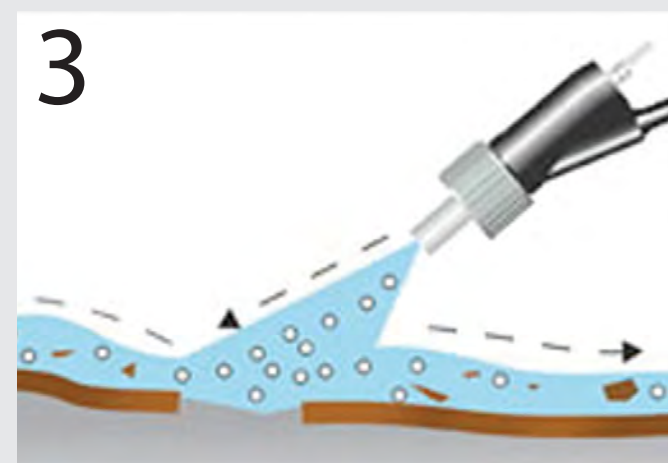
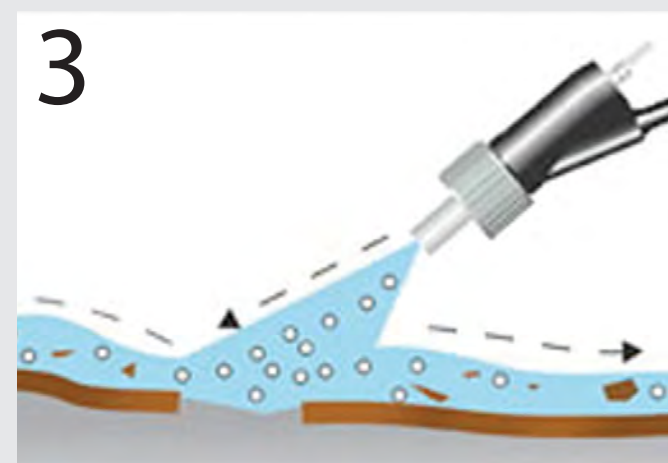
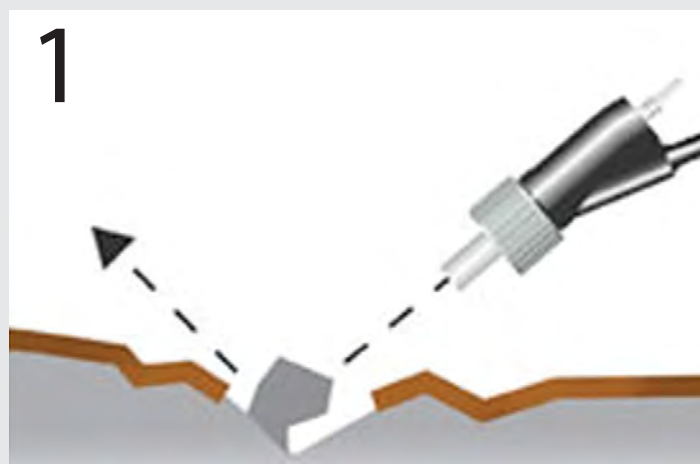
## The principle of wetblasting

The key to wetblasting is that the finish is produced through the flow of water borne abrasive. A finer finish is achieved due to the lubrication and flushing action of the water during the blasting process.

Dry grit and bead blasting processes are shown here in diagrams 1 and 2, which demonstrate the severe 90° ricochet that occurs when using these methods.

Diagram 3 shows the wetblasting method and how the cushioning from the water, along with the altered angle for the media, produces a lapping effect which travels across the surface of the component being blasted. A satin/polished finish is the result, desired and preferred by many industries.

The process eliminates unwanted media impregnation into components unlike dry blasting methods which are becoming outdated in achieving the best cosmetic surface finish.



## Aquablast® applications

*The Aquablast® is particularly effective for:*

- Cleaning of dies and moulds
- Removal of paint, rust, scale, carbon and similar deposits
- Surface preparation prior to bonding, re-painting and re-coating
- Satin finishing of stainless steel and other metals
- Cleaning of PCBs and electrical connectors
- Removal of small burrs from manufactured components
- Blasting in environments which must remain dust free



The Aquablast® range offers huge benefits to a wide variety of industry sectors, including aerospace, automotive, construction and specialist manufacturing



## The advantages of Wetblasting

- Dust free process
- Cleans by flow and not by impact
- Simultaneously degreases and blasts
- Produces a 'softer' finish
- Water acts as a lubricant between media and component
- Promotes longer media life
- Avoids media impregnation on softer materials

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email: Info@vixen.co.uk



# aquablast®

## How the Aquablast® works

*This annotated diagram shows the 5 stages of general operation with a brief description of some of the major working components of the machine.*

- 1 Water/media slurry is contained within the cabinet sump.



- 2 Delivery of the slurry to the hand-held nozzle is via a glandless polyurethane pump and hoses within the machine.

- 3 Compressed air is added at the blast nozzle to accelerate the slurry onto the component being blasted to provide the finishing effect.



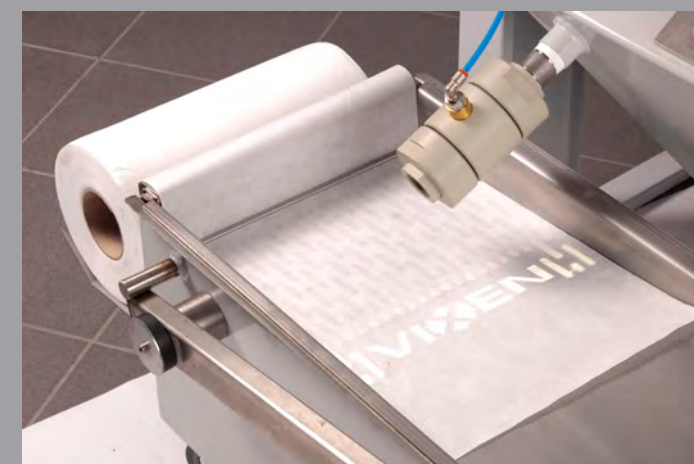
- 4 After contact with the component, the slurry drains back into the sump and is recirculated.

- 5 Fine and broken down media and other contaminants are fed via an overflow into a sedimentation filter at the rear of the machine.

Rear view of an Aquablast 1215 showing the closed loop system.



The Vixen closed loop system is our most popular option.



The image of the rear of an Aquablast 1215 shown opposite helps to explain how the Vixen closed loop system works.

The standard system works via a sedimentation box with waste water going to the drain but there are several other options available. An electrically operated solenoid valve which only allows water to drain via the overflow after the blasting operation ceases.

An adjustable time delay is set to allow the abrasive to settle in the machine hopper after which the valve opens to allow overflowing of water to drain out via the overflow valve to the sedimentation filter. The benefit of closed loop is that the machine can stand alone in a workshop without the need to be plumbed to a mains water supply or connected to a drain to dispose of additional rinse water.

The closed loop system basically re-cycles the water in the rear sedimentation tank for use with rinsing and window wash.

The additional benefit of a closed loop system is when any additives such as detergent or rust inhibitors are added, they do not get diluted with fresh water. Maintenance with the closed loop system is very easy. The sedimentation tank is fitted with castors and can be easily manoeuvred to dispose of dirty water periodically and re-fitted with clean water and ready to go again.

Dual purpose sedimentation filter, part of the closed loop system.

Air diaphragm pump which operates re-cycled rinse and wiper wash (Closed Loop machine).

The closed loop filtration system is available as a popular optional extra. This eliminates the requirement for mains water or drainage.

## info

A list of standard features and optional extras is shown on pages 6-7.



# aquablast®

## Standard features of the Aquablast® machines

Aquablast® machines are available in three different model sizes: the 915, the 1215 and the 1515. Each of these machines uses the same technology that Vixen specialises in.

The Aquablast® comes with many standard features that are specifically designed to enhance the blasting process for the operator and achieve the best finishing results. The machines can also be fitted with a variety of optional extras depending on the application. These can range from turntables, electrical settings, machine colours and much more. Any extras can be discussed as to the benefits after further consultations with a Vixen sales engineer.

### Standard features include:

- Powder coated finish
- Fully stainless steel
- Large viewing window with low voltage windscreen wiper
- Leg mounted pressure regulator and control
- Single footswitch operation
- Dual purpose sedimentation filter
- 3KW heater complete with thermostat
- Polyurethane abrasive pump fitted with stainless steel inlet filter and motor housing
- Lightweight polyurethane blast gun



Slam shut door handle



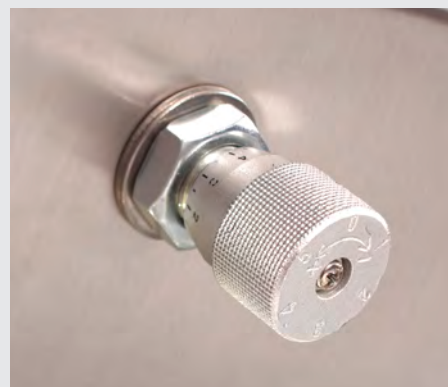
Leg mounted pressure regulator and gauge



Large viewing window with low voltage windscreen wiper



Easy access operation control switches



Fine adjustment for window washer



Flexi on/off rinse gun (top) has no external moving parts that could cause obstruction  
Lightweight polyurethane blast gun (below)



Foot control operation



Electric sump heater element

## Optional extras

*Shown below are a few of our most popular optional extras*



Aquablast 1215 with large external load table and trolley

### Trolley and turntable with external loading

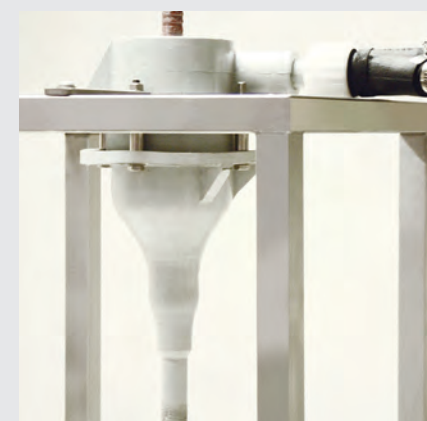
Where heavy items are to be processed it is often easier to load these items external to the blast cabinet using an overhead crane or perhaps a fork lift truck. Vixen offer this facility on all the Aquablast® range with standard and special load capacities where required. The turntable can be moved outside of the chamber, loaded and wheeled back in. In some cases where needed the turntables can be linked to an electric drive inside the cabinet for operator ease.

*Aquablast 915 with a 600mm diameter fixed turntable*



### Fixed turntable inside blast chamber

Turntables are a very popular option. A fixed turntable inside the machine enables easy manoeuvrability of the components to be blasted. These turntables can also be electrically gear driven if required, but in most cases can be manipulated by hand with loads of up to 50Kg.



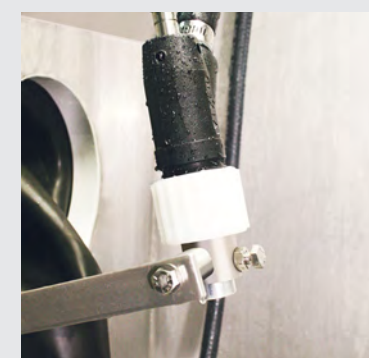
### Free standing hydro cyclone

This item comes complete on a stainless steel frame and being very light it can easily be lifted into the cabinet. Once inside the cabinet a bucket is placed under the cyclone and the blast gun is connected to the cyclone. The operator simply depresses the foot pedal and the abrasive begins filling the bucket which enables easy emptying of the machine of abrasive.



### Automatic media concentration monitor

Where the integrity of the abrasive is critical and the concentration must be absolutely constant it is often easier to use the media concentration monitor which enables the operator to check the abrasive mix periodically by simply pressing a button.



### Fixed blast gun holder

With small components it is often easier for the gun to be locked into a holder and the operator simply manipulates the small part in the blast stream.

### Wet cyclonic media clarifying

The wet cyclones are designed to automatically remove broken down abrasive and sediment from the blasting process. These are normally specified where the blasting process is critical such as Aerospace applications. The benefits of the wet cyclone are that any spent abrasive is removed and the finish integrity does not deteriorate in any way as the abrasive remains consistent.





# aquablast®

The Aquablast® 915 is the entry level machine in the Aquablast® range and brings huge benefits to a wide variety of industry sectors, including aerospace, automotive, construction and specialist manufacturing.

## The Aquablast® 915

The Aquablast® 915 is the smallest standard machine in the Vixen Aquablast® range. Being the smallest it still shares the very same technology and components used in the larger models, so although being the smallest the power output and performance of the 915 is the same as the larger models in the range.

The main features of the Aquablast® are its robustness and quality of manufacture. The urethane pump gives fabulous performance combined with ultra-hard wearing components for the application. The bonded white rubber lining has 3 functions; a white reflective chamber with noise suppression and prevents wear on the blast chamber walls. LED lighting with windscreen wiper and wash enable good viewing for the operator at all times.

See dimensions of the Aquablast® 915 on page 20.



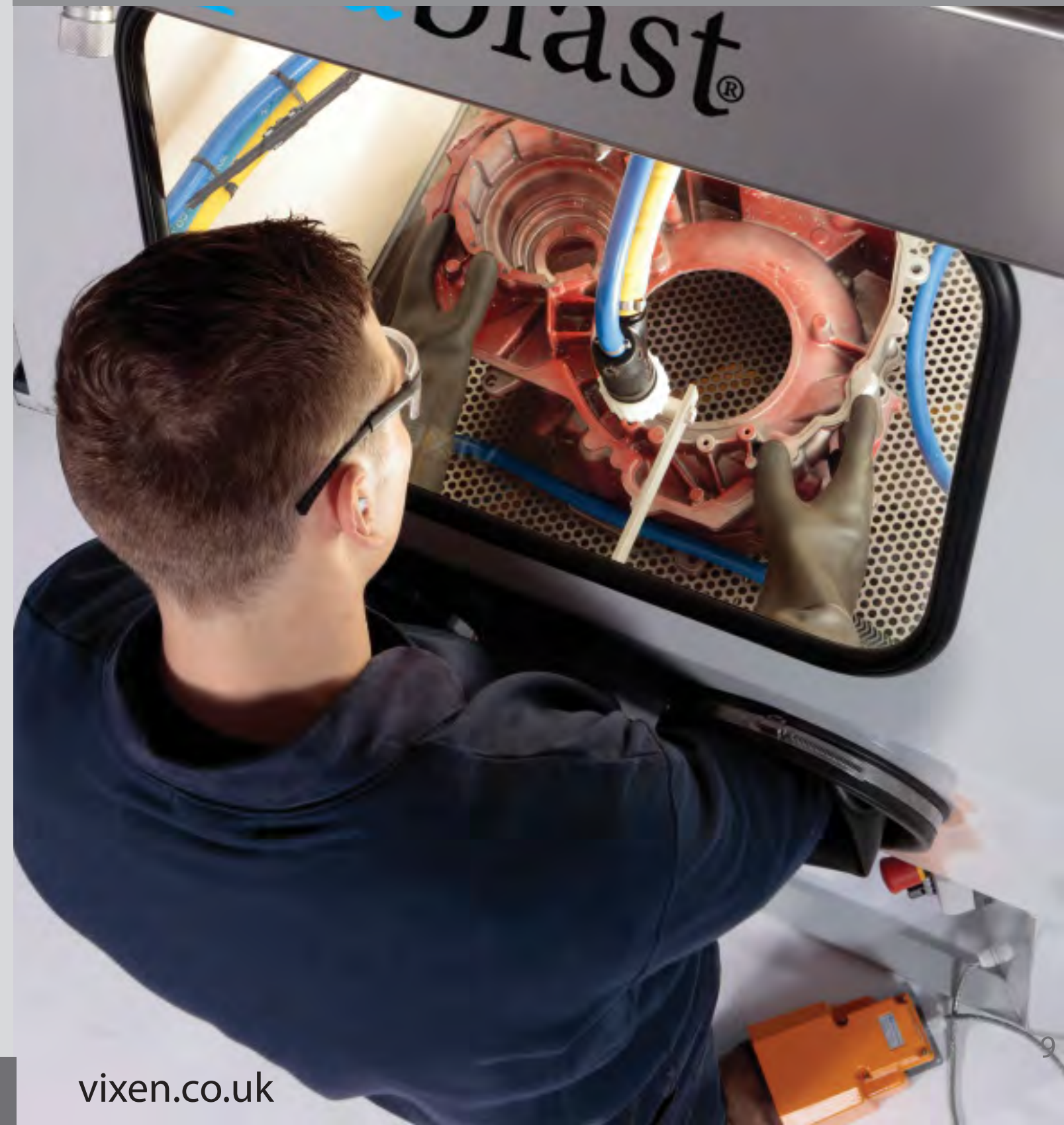
## Effective applications

- Cleaning of dies and moulds.
- Removal of paint, rust, scale, carbon and similar deposits.
- Surface preparation prior to bonding, re-painting and re-coating.
- Satin finishing of stainless steel, aluminium, titanium and other metals.
- Cleaning of PCBs and other electrical connectors.
- Removal of small burrs from manufactured components.

## Stunning results



Products showing before and after treatment



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# aquablast®

The Aquablast® 1215 wet blasting machine is designed by Vixen to harmoniously degrease and blast many sizes of components. This machine is the next step up from the Aquablast® 915.

## The Aquablast® 1215

The Aquablast® 1215 is the mid-size model in the standard range of machines and one of the more popular. The robust stainless steel cabin with white wall rubber lining and LED lighting gives great visibility for the operator. The large opening side hinged door is fitted with a rubber bulb type seal and a slam shut door with a large chrome handle for operator ease. Below the door is a drip tray to encourage any drips from the door when first opened to return to the sump. A moveable foot switch and good wiper and wash adjustment make this machine ideal for production purposes.

The 1215 is available in numerous voltages and 50 and 60 hertz, just ask your representative, we have every electrical combination for global installations.

See dimensions of the Aquablast® 1215 on page 20.

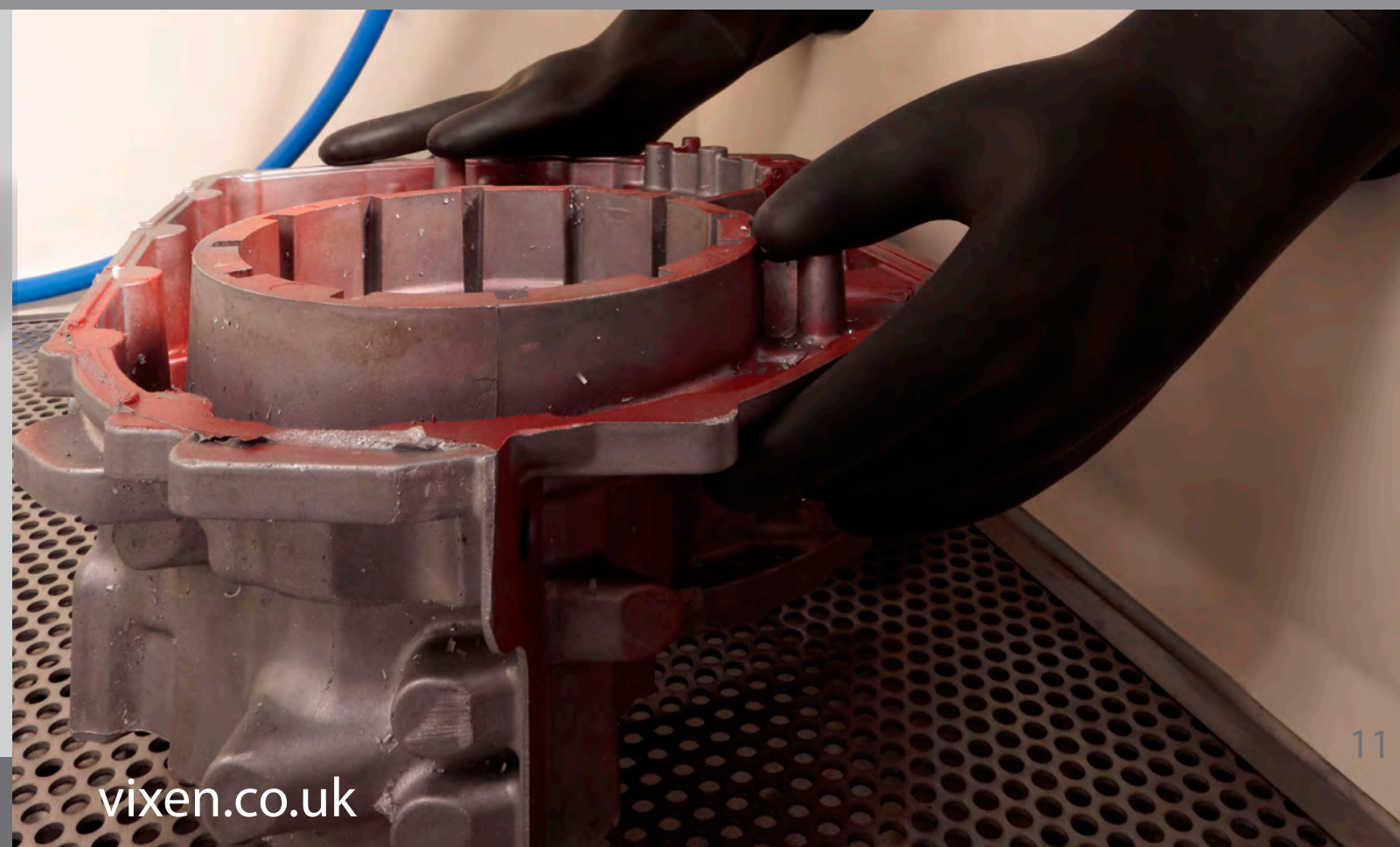
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- Cleaning of PCBs and other electrical connectors.
- Removal of small burrs from manufactured components.



## Amazing results

Products before and after treatment



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# aquablast®

The Aquablast® 1515 wet blasting machine is designed by Vixen to harmoniously degrease and blast a multitude of components. This machine is the top-of-the-range of the standard Aquablast® models.

## The Aquablast® 1515

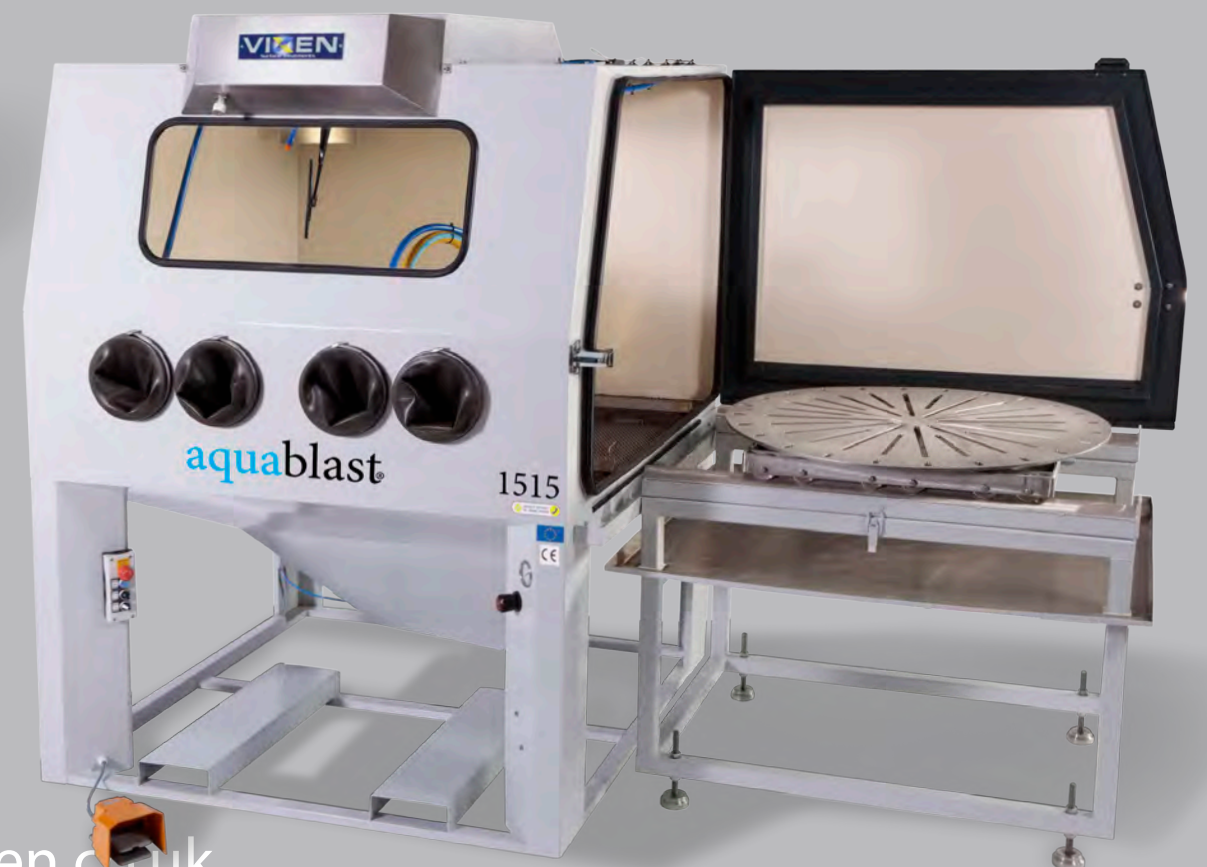
The Aquablast® 1515 is the largest model in the standard range of machines. It can be specified as standard with 2 armholes or can have 4 armholes which are useful if you are processing very long parts. The very large work chamber is LED lit for good visibility and has a 250Kg standard load capacity. For those people wanting to load heavy castings, engine blocks etc etc there are a standard range of turntables available, fixed or mounted to trollies which enable easy manoeuvring of the component for the operator while blasting.

See dimensions of the Aquablast® 1515 on page 20.



## Effective applications

- Cleaning of dies and moulds.
- Removal of paint, rust, scale, carbon and similar deposits.
- Surface preparation prior to bonding, re-painting and re-coating.
- Satin finishing of stainless steel, aluminium, titanium and other metals.
- Cleaning of PCBs and other electrical connectors.
- Removal of small burrs from manufactured components.



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# aquablast®

Vixen's Aquablast cube is the ideal machine to fit seamlessly into a busy workplace or production line, due to its cubic shape and double guillotine doors.

## Aquablast® Cube Range

The Aquablast® Cube range comes standard with 1 pneumatic guillotine opening door. The guillotine door system enables easier loading of turntables or baskets of components into the machine than the standard hinged door arrangement. Often in production lines components are transported on conveyors and the cube range can be mounted adjacent to the conveyor very easily and parts are manoeuvred through the guillotine door. In some cases the Cube range is specified with double guillotine doors enabling a pass through facility. The Cube range of machines have all controls mounted above the viewing window for the operator and the work chamber is slightly larger being rectangular in shape. The machine is also available in 3 standard Aquablast® sizes, the 915, 1215 and 1515. Alternatively Vixen is able to modify the machine to meet the customer's specification and requirements.

See dimensions of the Cube range on page 20.



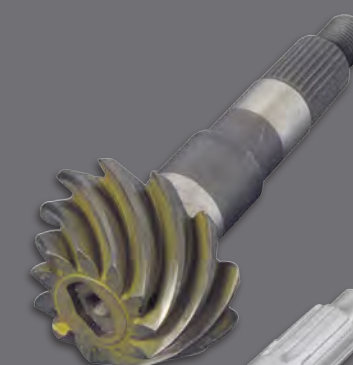
## Effective applications

- Cleaning of dies and moulds.
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- Satin finishing of stainless steel, aluminium, titanium and other metals.
- Cleaning of PCBs and other electrical connectors.
- Removal of small burrs from manufactured components.



The results speak for themselves

Products showing before and after treatment



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# aquablast® WheelBlaster

The Aquablast® WHEELBLASTER uses wetblasting technology to simultaneously blast, wash and prepare alloy wheels after kerb damage in one quick and simple step, ready for painting and lacquering.

The machine combines the standard six stage process of manually preparing wheels into one application, and can reduce the application time from one hour per wheel to just three minutes in one compact cabinet.

The process uses water mixed with an abrasive to blast the wheel inside the machine to create an etched finish, ready for the next stage of the repairing process. The use of water in the application ensures that no media is impregnated onto the alloy wheel. The water also provides a washing action and does not strip the wheel back to bare metal.

Vixen has designed a revolutionary new wetblasting machine specifically for smart alloy wheel repairs – The Aquablast Wheelblaster.

## Why choose the Aquablast Wheelblaster?

Vixen's Aquablast Wheelblaster is designed exclusively for the operator working in the automotive industry.

The dry blasting method of finishing alloy wheels creates dust, which is a major hazard in the body shop environment, and also requires additional washing / drying facilities before the wheel can be painted and lacquered. The wetblasting process used in the Aquablast Wheelblaster does not require a specific room for siting, eliminates the risk of dust and combines all of the preparation processes in one cabinet – ideal for the workplace.

## How it works

- 1 The wheel is loaded onto the pneumatic lift (optional) which is raised up to the opening of the cabinet. The operator then loads the wheel onto an internal spigot, which is mounted on a pivoting arm to allow for easy and hassle-free loading.
- 2 Once loaded, the operator applies pressure to the foot pedal, and the water/media slurry which is contained in the cabinet sump is delivered to the manual blast nozzle via a glandless polyurethane pump. Compressed air is added to this stage to accelerate the slurry.
- 3 After contact with the alloy, the slurry drains back into the cabinet sump to create a re-circulation system, while other contaminants are fed into the sedimentation filter. Before removing the wheel it is rinsed using the integral rinse system and usually compressed air blown dry before removal.



### Wheel lift

Today's modern SUVs/4 x 4s are fitted with large alloy wheels. It is worth considering the repetitive lifting of wheels when some alloy wheels with tyres can weigh over 40Kg.



### Knuckle / swivel arm

The multi point locking system of the Wheelblaster is integral to the fabrication of the machine. This system allows the operator to manipulate the wheel in almost any position for convenient ergonomic processing.



## Features

- Optional pneumatic lift complies with health and safety.
- Internal spigot ensures ease of handling and loading.
- Durable high pressure pump.
- Dust – free process.
- Compact cabinet design.
- Blow off gun to remove excess water and media ready for painting.
- Combines six processes in one machine.
- Wheels can be prepared in less than three minutes.
- After processing, the original paint of the wheel will be totally clean and perfectly etched ready for recoating with paint.

## X6 Processes all in one machine



Acid wash



Power wash



Quick dry



Abrasive key



Residue removal



Dry pre-paint



# aquablast® Special Build

Vixen prides itself on the variety of special build machines it has supplied to companies worldwide. The diverse range of machines that we have designed has enabled customers to blast a huge variety of components effectively, ranging from precise surgical instruments to large train engines.

Our expert in-house design department work closely with each customer to develop ideas that are specifically tailored to their individual application or requirements whether it is size, shape or even colour of the Aquablast®.

The automated range of custom built Aquablast® machines are controlled via PLC programming. Vixen can set the PLC to specific customer specifications such as Mitsubishi or Siemens formatting. The automated machines are also controlled via a manual machine interface unit which allows the operator to control the machine easily using a touch sensitive panel.

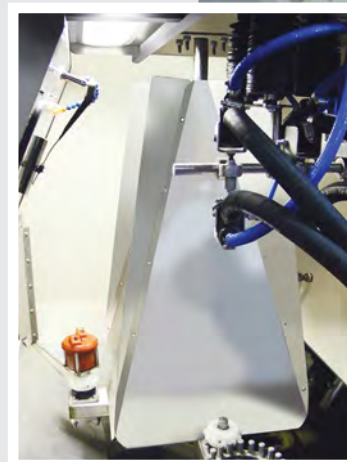
We are also able to design machines with vertical and radial arm options which automatically blast irregular sized components that are not suitable for a standard Aquablast® model. The component, which can be any size, is automatically rotated on a turntable while the blast guns move from side to side or up and down.



A special build machine for a 2 stage Aquablast® process without unloading the component as it simply moves through the dividing wall



The Aquablast® Tumbler machine featured with 2 stage rinsing, hot and cold, hot rinse not standard. This machine batch processes small parts which are turned in the drum and simultaneously blasted



Satellite blasting machine for processing long tubular type components



A special build Robo Aquablast®

## robo aquablast®

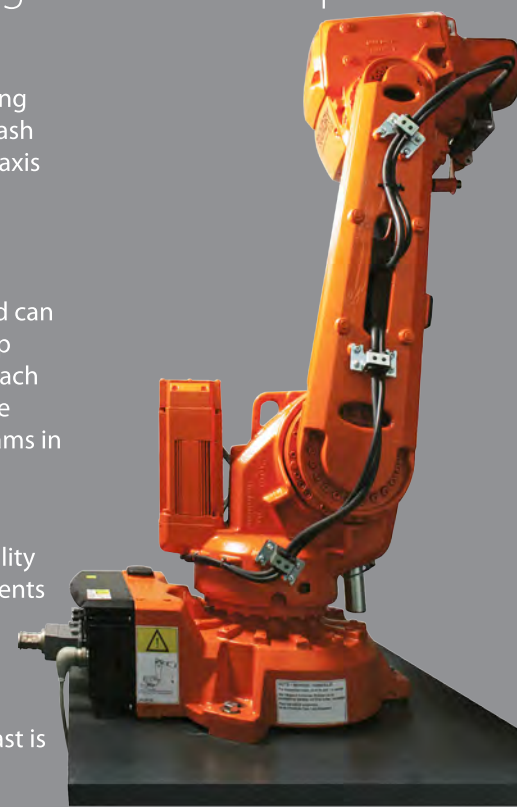
Vixen have launched the Robo Aquablast, a range of automated wetblasting machines complete with robotic blasting arms.

The Robo Aquablast uses Vixen's wetblasting technology to simultaneously blast and wash components with a fully integrated seven axis robotic arm in a controlled environment.

The robotic arm is particularly effective at maintaining a consistent high standard of finishing on parts in the blast chamber and can repeat processes with extreme accuracy up to 1mm. The machine is controlled via a teach pendant and touch screen HMI and has the ability to store hundreds of pre-set programs in its internal memory.

The machine is totally designed with the operator in mind and has an auto load facility to ease loading and unloading of components which is particularly useful for larger and heavier parts.

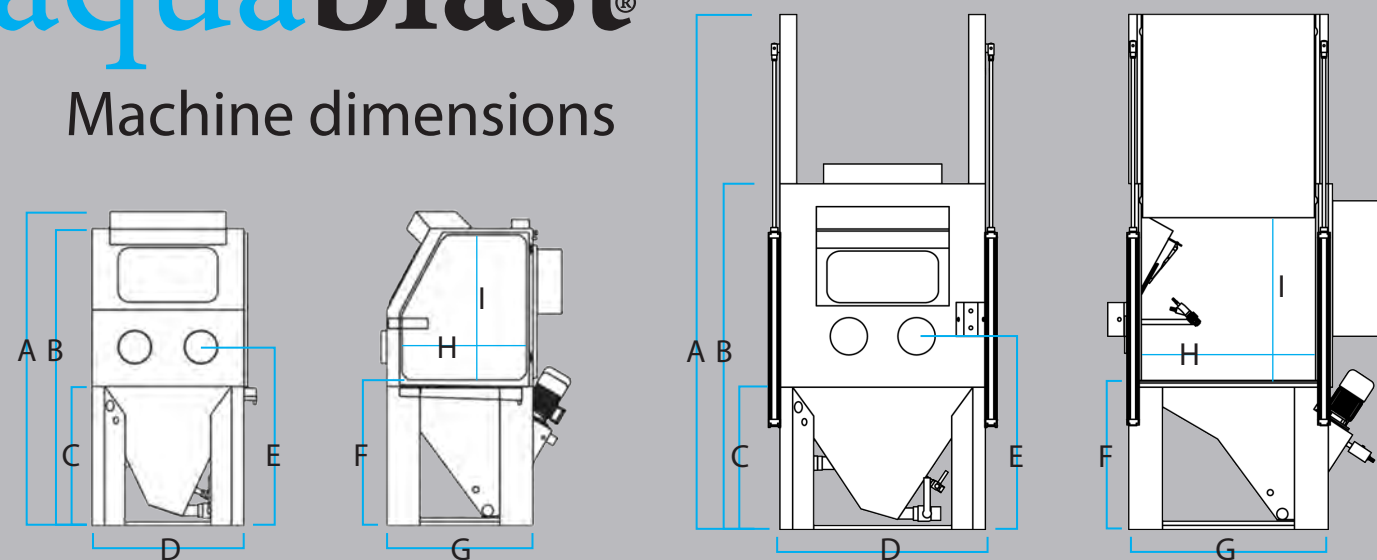
Our design team work closely with the customer to ensure that the Robo Aquablast is tailored specifically for each application.





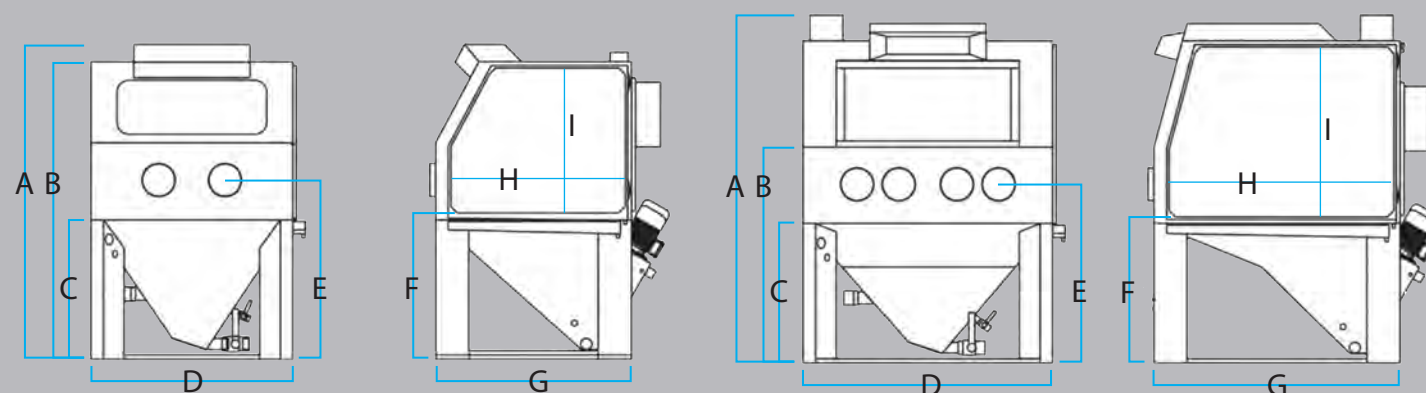
# aquablast®

## Machine dimensions



915

cube



1215

1515

Model Dimensions (mm)	A	B	C	D	E	F	G	H	I
915	1890	1790	840	915	1140	880	880	750	870
1215	1890	1790	840	1215	1140	880	1180	1050	870
1515	2095	1970	870	1500	1170	880	1480	1325	1020
cube (1215)	3040	2040	840	1215	1140	880	1180	1000	1000

Electrical	415v 3 Phase + Neutral    240V Single Phase *We can accommodate almost any electrical configuration worldwide (50-60Hertz)	
Air supply	7 bar (100psi) 1.14m³/ min (40cfm)    1/2" BSP / 12.5mm Connection	
Water supply	2-6 bar (30-80psi) 1/2" BSP / 12.5mm Connection	
Drain	Floor Level - Approximately 10 Litres / Min	
Ventilation	4" / 110mm Duct to outside atmosphere	
<b>Sump capacity</b>	<b>915</b>	<b>1215</b>
Water Media	50 Litres	100 Litres
Load	80 / 100 KG	250 KG

Vixen are a leading manufacturer and supplier of quality blast cleaning and degreasing equipment, with a well-established customer base:

Atlas Copco	Kawasaki
BAE Systems	London Underground
Black & Decker	Matthew Algie
BMW	Metron Technology
BP	Mitras Automotive
Cummins Engines	Nestlé
Dunlop Aviation	Pepsi
Ebara	Qioptic
Edwards	Redbull F1
Federal Mogul	Royal Ordnance
Ford Motor Company	Sebastien Vettel
Fiskars	Sharp Electronics
GE	Sytner BMW
Hampshire Tobacco	Tata Steel
Henkel	Triumph Motorcycles
Hotpoint	TRW Automotive Systems Ltd
IMI Group	Walkers Crisps
Jaguar Land Rover	Weetabix Ltd

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