



Spraywash and Phosphating FRONT LOADING MACHINES

Our latest generation of high performance industrial cleaning machines

VIXEN
SURFACE TREATMENTS LTD



Founded in 1990, Vixen Surface Treatments has enjoyed continual growth and is now accepted as a leading force in the production of machines for degreasing and blast cleaning.

"Our success can be attributed to our ability to manufacture a growing range of standard and custom built machines which will provide cost effective solutions for a wide range of applications".

Vixen's customers include well known market leaders who are operating in the manufacturing, aviation and engineering industries, whose decisions to buy our equipment have been influenced by the quality of our machines, their reputation for reliability and the value for money that our products represent.

Vixen's experience, knowledge and versatility together with a continuing need to reduce costs, means that machines from our diverse range of equipment are consistently chosen as the right solution for washing and degreasing applications.

"We pride ourselves on our ability to provide practical solutions to most degreasing problems, with a standard or custom built range of products"

A handwritten signature in blue ink that reads "Aidan J. Mallon".

AIDAN J. MALLON
Managing Director

Our Single and and how

Vixen's range of front loading machines have evolved over the years and now offer a comprehensive range of large and medium capacity front loading spray washers. Our standard range of machines incorporate basket sizes from 1 metre up to 3 metres in single and multi stage applications.

Most of these machines are fitted with guillotine doors for easy access. Where high cleanliness is required Vixen offer multi stage PLC controlled washing machines where the initial wash is followed by 1 or 2 rinse cycles for example.

The benefit of the PLC controlled machines is that various wash and rinse cycles can be saved to the memory edit function which eliminates the operator continually selecting wash times etc.

PLC controlled machines have within the software the ability to control many other functions including vapour extraction, automatic start up and maintenance for example. The multi stage system has been modified with PLC controls for use in the phosphating machines also where phosphate washing is followed by rinse and passivation stages.

MAIN FEATURES:

DOUBLE SKIN CONSTRUCTION

The machines are constructed with an outer skin cavity which is injected with polystyrene to minimise heat loss during operation and thus saving energy.

STAINLESS STEEL CONSTRUCTION

All material in contact with water within the wash chamber is non corrosive. Standard manufacture includes the front loading face in a brushed stainless finish to aid cleaning.

GUILLOTINE DOOR WITH POLYURETHANE SEALS

This gives maximum opening for loading purposes without any obstructions and also the polyurethane seals give durable sealing in use.

MULTI STAGE WASHING

Multi stage washing, 2, 3 or 4 stages produces high cleanliness levels where the cleaning is critical. The final stage can even be rinsing with distilled water

PHOSPHATING MACHINES

A comprehensive range of phosphating machines have been developed using the latest state of the art wash and phosphating solutions combined.

CHOICE OF UNLOAD MECHANISMS

The machines can be fitted with external fixed rails or bogeys to enable the cleaned parts to be moved around the work



Multi Stage Washing Machines they work...



Model Illustrated
FL250



Master
Control
Panel



Custom setting
for material type
and surface finish
required.



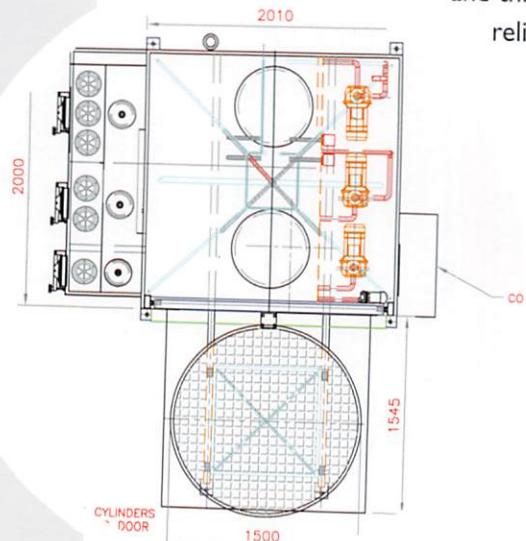
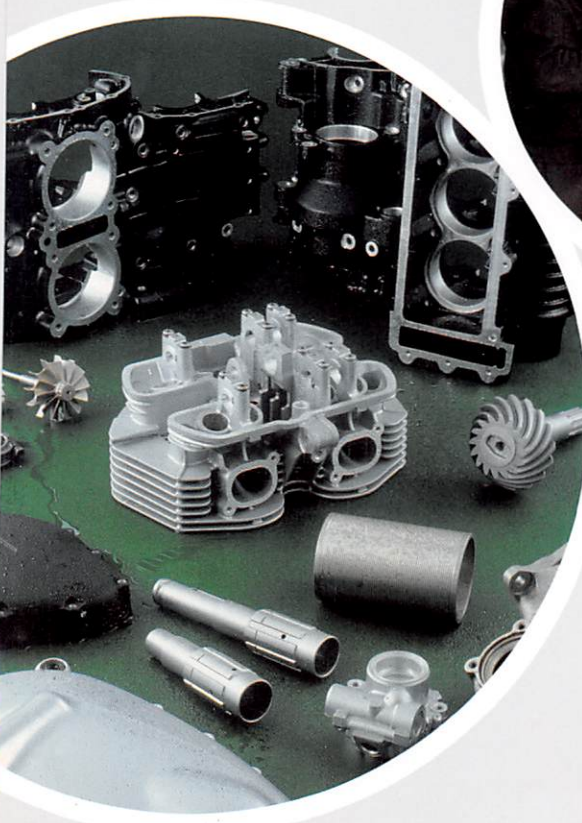
Automatic Spray working

Vixen's front loading spray wash machines range from single stage wash units to 3 stage wash and rinse machines depending on the application, e.g. 1 stage wash only, 2 stage wash and rinse, 3 stage wash, wash, rinse. The 3-stage machine can also be used with a phosphate solution where by the machine washes and phosphates simultaneously (further details regarding this process are detailed overleaf).

The front loading machines are designed for washing heavy components. The front door is an air operated vertical guillotine type door with polyurethane heavy duty seals, side hinged doors or drop down doors are available where overhead height restrictions do not accommodate guillotine doors. Component parts can be loaded manually (heavy parts by overhead crane) onto the wash basket which sits on either a fixed steel frame with rails mounted to the floor or a heavy duty bogey which can be manoeuvred around the workshop with washed parts. The benefits of the bogey are that you can have as many bogeys as the facility requires enabling dirty parts to be loaded in readiness of the washing programme.

The machines are of a double skin stainless steel construction, the cavity between the 2 skins being injected with polystyrene which acts as insulation giving good heat retention to the hot water inside the wash chamber when in operation.

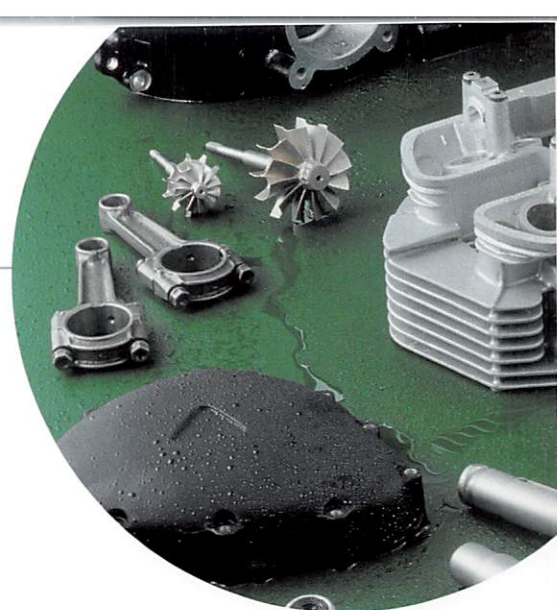
The machine is available as standard with one door, however double doors are available allowing a pass through facility to a clean room for example. The controls can be set via a digital timer through an LCD display linked to a PLC touch sensitive keypad. The main advantages of the PLC operation are that all the functions are mostly automatic and certain functions can be programmed for certain products and this brings greater reliability.



As well as our standard range of front loading machines we can also provide a custom build service at a reasonable cost when our standard machines do not suit the application.



Wash Machines for you...



Digital timer and temperature controls through a LCD display linked to a PCB touch sensitive keypad

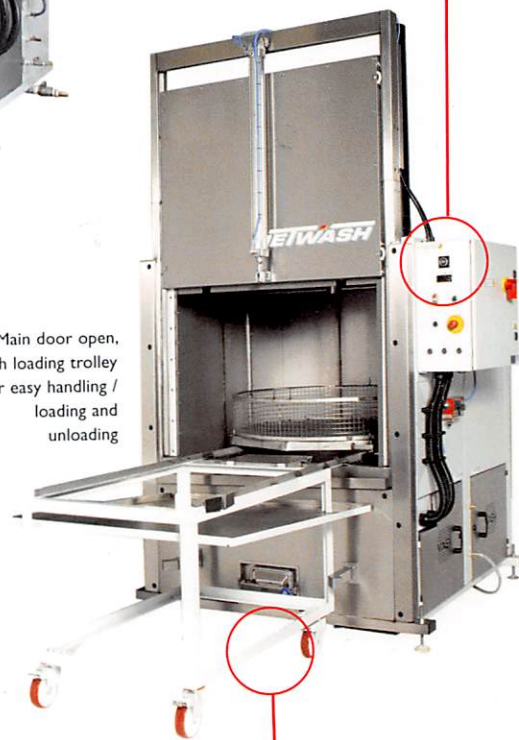


STANDARD FEATURES:

- 100% STAINLESS STEEL CONSTRUCTION
- FULLY INSULATED
- 3 PHASE ELECTRICS
- STEAM VENT
- OIL TAP & WEIR
- PNEUMATICALLY OPENING DOOR
- MULTIPLE BASKET DEBRIS FILTER
- LOW WATER SENSOR
- EASY TO USE CONTROLS
- ADJUSTABLE FEET



Main door open, with loading trolley for easy handling / loading and unloading



All front loading machines are available with either fixed legs or bogey trolley for loading / unloading purposes

OPTIONAL EXTRAS:

- AUTO FILL WASH OR RINSE TANKS
- STEAM EXTRACTION FAN
- WATER VAPOUR CONDENSER
- OIL DISK SKIMMER OR OIL WATER SEPARATOR
- MANUAL HAND HELD SPRAY LANCE (HIGH PRESSURE)
- ADDITIONAL BOGEYS AND TROLLEYS
- ADDITIONAL LEVELS OF FILTRATION

'Phosphating' - cleaning without

VIXEN PHOSPHATING MACHINES

Vixen have developed a comprehensive range of aqueous pre-treatment phosphating plants which are becoming increasingly popular with companies involved in pre-treatment/powder coating. Powder coatings exhibit higher cohesion properties and lower adhesion properties than wet paints. The coating is usually tougher but the adhesion to the product is lower and therefore the metal surface to be powder coated should ideally be prepared chemically to give a good 'key' for the powder to adhere to. This chemical process is known as 'Phosphating'.

Debris filtration fitted to all standard FL machines, additional filtration available down to 5 micron.

THE CHEMISTRY BEHIND PHOSPHATING

The phosphating process is a complex chemical process which involves converting the surface layer of certain metals into strong, adherent, insoluble metal phosphates. Phosphating creates a rust resistant layer and also gives an excellent key for the coating which is to be applied. If the underlying metal surface gets scratched it will not corrode as quickly as it would without the phosphate layer.

Phosphating solutions usually consist of iron or zinc phosphates dissolved in dilute phosphoric acid. When the phosphating solution is applied to the product the coating reaction between the phosphoric acid and metal creates a metallic phosphate which becomes insoluble on the surface and forms a layer with metallic colour. This is shown on the photos where a blue tinge can be seen on the metal to the right which has been subjected to the phosphating process



Before

After

ADVANTAGES OF PHOSPHATING

- ERADICATION OF HEALTH AND SAFETY ISSUES ASSOCIATED WITH CHLORINATED SOLVENTS
- REDUCTION/ELIMINATION OF ETCH PRIME PROCESSES
- EXCELLENT PAINT ADHESION-SALT SPRAY TESTS INDICATE UP TO 260 HOURS
- FAST AND FLEXIBLE PROCESSING OF METALS
- LOW RUNNING COSTS
- 500 LITRES PER MINUTE CLEANING CAPACITY
- EASE OF HANDLING OF LARGER COMPONENTS
- FULL TECHNICAL BACK UP REGARDING PHOSPHATE SOLUTION



and pre-treatment solvents...

THE PHOSPHATING PROCESS IN VIXEN MACHINES

Vixen's phosphating machines consist of a 3-stage cycle and are used in conjunction with phosphating and passivate solutions as follows:

STAGE 1 – HOT WASHING WITH PHOSPHATE SOLUTION

The phosphating solution is heated and sprayed onto the metal surface of the components to remove oil or grease by emulsification and chemically converts the surface to an iron phosphate coating. This clean, water break free surface, allows full wetting of the paint film across the metal substrate, improving paint adhesion and enhancing corrosion resistance.

STAGE 2 – HOT RINSING

The parts are rinsed in mains water (recycled) to remove excess process solution from the metal components prior to the passivation stage.

STAGE 3 – HOT PASSIVATION

The passivate solution is added to de-mineralised water and the parts are rinsed with this solution which is a reactive seal, ensuring a full and complete coating for the paint to adhere to. The passivation stage is important as it prevents air accumulation under paint cover and extra corrosion resistance.

At the end of this stage the parts mostly flash dry.

PHOSPHATING PRODUCTS AND TECHNICAL BACK UP

Vixen work in close partnership with suppliers of the phosphating solutions, ensuring that every machine supplied is set up and maintained correctly and full technical back up is provided at all times. The solutions used are user friendly and give a superb clean finish to the components as well as creating a phosphate layer on the surface of the product which improves adhesion. The passivation process also protects the metal surface from moisture and so parts can be stored for short periods without the risk of rusting.



FL250 3 Stage Phosphating Machine

Photograph shows one untreated and one treated litter bin.





Jetair Dry Blast Cabinet



Aquablast 915 Wetblast Machine

Jetwash Hot Spray Wash Machine



Archimedes Screw Washer



Large Range of Front Loading Machines with Multi Stage Wash Function



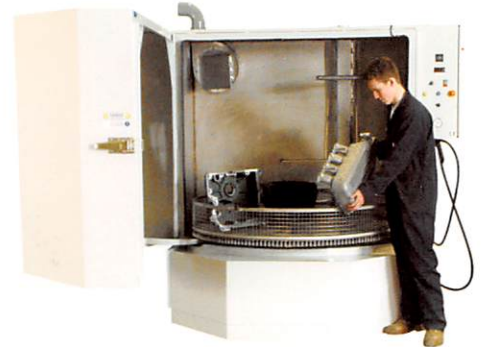
Miniwash Hot Spray Wash Machine



Tristar Conveyor Tunnel Wash System



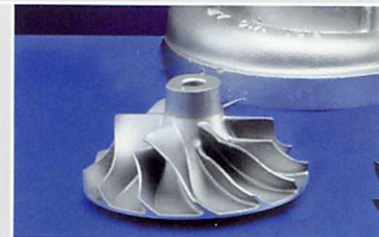
Carousel Hot Spray Wash Machine for Overhead Crane Loading



WE manufacture a wide range of industrial washing machines, along with our dryblast cabinet ranges and wetblast cabinets.

TECHNICAL ADVICE

Our team of trained sales staff and engineers are only a phone call away and can give helpful advice on all your degreasing and blast cleaning requirements. For a more comprehensive consultation we can arrange for one of our sales engineers to visit you on site to discuss your particular requirements.



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