



Vapormatt



Manual wet blasting machines

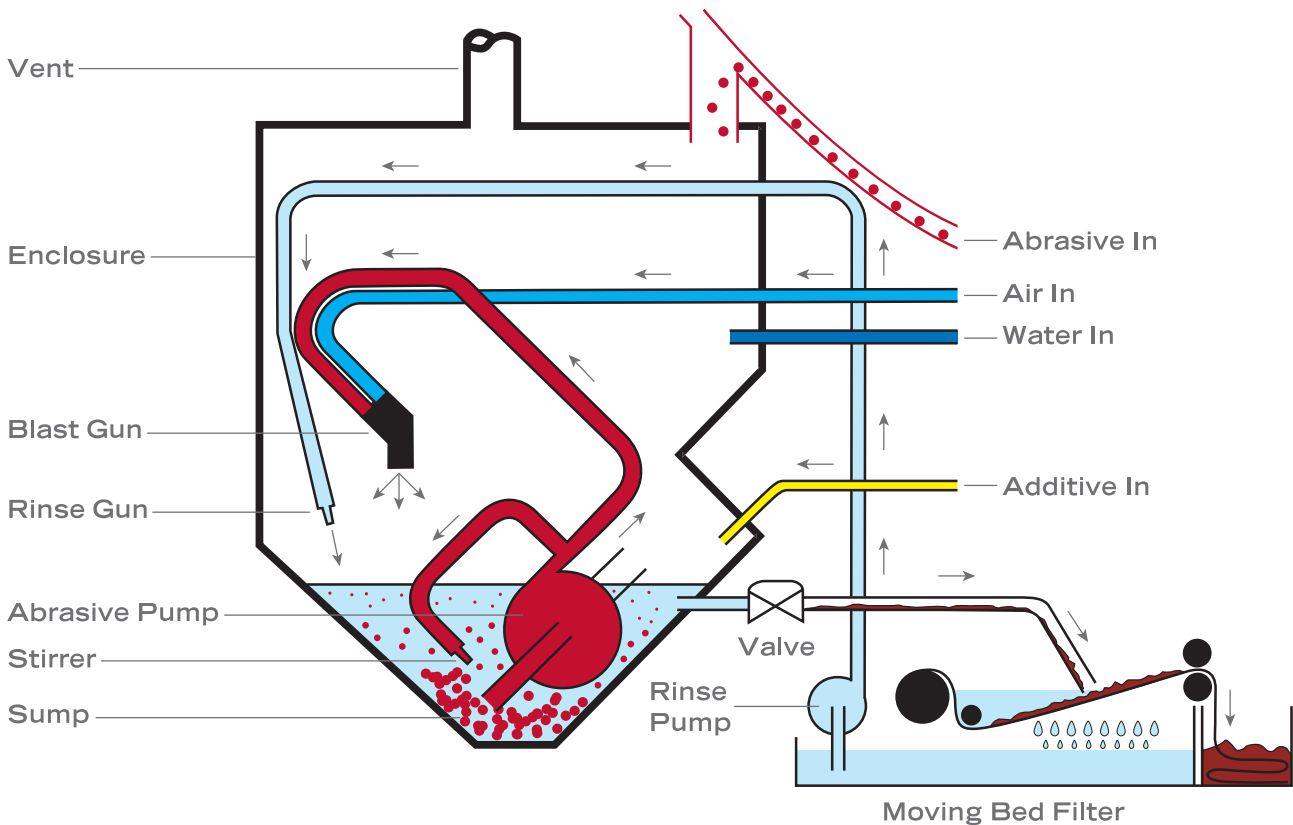
Fully featured manual wet blasting machines from the original wet blasting innovators

From our popular compact Vapormate to our large Leopard machine, all our manual machines are high quality, robust and fully featured.

As the original innovators of the wet blasting process, we understand that your surface finishing results will be compromised if, for example, you cannot control blast pressure, or cannot see what you are doing because there is no window wash.

That is why all our manual machines include everything you need to ensure excellent finishing results. Features like pressure control, filtration, rinse and air blast guns are all included because we know that is what is needed to achieve the best results.

We have also designed our machines for longevity and easy maintenance, with features like boron carbide blast nozzles (silicon carbide in the case of the Vapormate), tough stainless steel cabinets and food grade liners that will not rot over time.



The wet blasting system for a manual machine with a moving bed filtration system

The wet blasting process

Wet blasting uses water and an abrasive medium, accelerated from a nozzle by compressed air, to provide a very effective and environmentally friendly 'closed-loop' and controllable surface finishing, cleaning and conditioning process.

Many different surface finishes can be produced.

The process can operate with all common blasting medias including aluminium oxide, glass beads, silicon carbide, ceramic shot, stainless steel shot and plastic media.

Media size can range from very coarse to ultra fine, typically from 16 to 1200 mesh.

Bio-degradable degreasing agents can be added and the water can be heated on some models, further extending the capability and operator comfort of the process and enabling parts to be degreased and cleaned in a single operation.

Corrosion inhibitors can be utilised to protect the surface after cleaning.

Advanced design from the leaders in wet blast technology

Advanced cabinet construction technology incorporates the use of stainless steel, composites and moulded polymers to create rugged, corrosion free, sound insulated cabinets.

Cabinets are very long lasting.

Patented sump designs allow low loading and working heights which eliminate the need for high operator work platforms, even on our largest cabinets.

Specialised agitation systems prevent slurry system blockages even after prolonged shut downs.

Most machines do not need access to the rear face and so can be located directly against a wall. This reduces overall space requirements.

High efficiency pumps and blast guns maximise processing speed and effectiveness whilst optimising energy use.

Machines are available with a patented water overflow system that minimises abrasive usage.

Manual wet blast machines



Vapormate

The Vapormate is our highly versatile entry level manual system. It is a very popular system for users who need a compact system for smaller spaces or want to test the wet-blasting process before investing in a larger system. The Vapormate comes packed with all the features you would expect to find on one of our larger manual systems.

Component envelope	Ø 400mm (16")
Load capacity (max)	25kg (55lb)
Overall dimensions	1150 x 850 x 2025mm (45 x 33 x 80")

Visit our dedicate website page for more technical details and to see a video of the Vapormate in operation:

www.vapormatt.com/machines/manual/vapormate

Vapormatt | Puma

With its large, wide opening door and large working envelope, the Puma Manual is ideal for processing larger components within a relatively small footprint. It is a highly adaptable machine with an optional turntable, jigs, mats, and other items available so the machine can be customised to precisely match the needs of the user.

A jig for holding alloy car wheels is also available. Designed to swing in out of the cabinet, it makes the loading, cleaning, and unloading of wheels very easy.

Component envelope	Ø 500mm (17")
Load capacity (max)	50kg (110lb)
Overall dimensions	1350 x 1150 x 2082mm (53 x 45 x 82")

Visit our dedicate website page for more technical details and to see a video of the Puma in operation:

www.vapormatt.com/machines/manual/puma



Vapormatt | Cougar

Versatile wet-blasting from our robust large capacity manual machine. The Cougar Manual is well suited to manufacturers and workshops that need to wet-blast large components. It comes with all the features you'd expect to make wet blasting as easy and controllable as possible.

Component envelope	Ø 1100mm (43")
Load capacity (max)	250kg (550lb)
Overall dimensions	1766 x 2201 x 2339mm (70 x 87 x 92")

Visit our dedicate website page for more technical details and to see a video of the Cougar in operation:

www.vapormatt.com/machines/manual/cougar



Ideally suited to larger or unusually shaped components, both the Lion and larger Leopard sumps will deliver the wet blast process as part of a closed loop system. Parts to be processed sit on the GRP work grids. With its stainless steel construction customers can build their own enclosure to suit their needs under the guidance of Vapormatt.

Vapormatt | Lion Sump

Component envelope	Ø 1350mm (53")
Load capacity (max)	Dependent on specification
Overall dimensions	1700 x 1700 x 1700mm (67 x 67 x 67")

Vapormatt | Leopard Sump

Component envelope	Ø 1850mm (73")
Load capacity (max)	Dependent on specification
Overall dimensions	2000 x 2800 x 2050mm (79 x 110 x 81")

Visit our dedicate website page for more technical details:
www.vapormatt.com/machines/vapormatt-sump



Vapormatt | Lion

With additional process handling gloves and an exceptionally large cabinet, the Lion is capable for finishing most large components.

The Lion is built around a rigid steel chassis and supported by durable GRP panels and replaceable food grade rubber curtains to prolong the life of the cabinet.

The Lion can also be automated and an optional radial arm can be added for more efficient processing. A powered turntable on rails can also be specified for loading heavy components.

Component envelope	Ø 1350mm (53")
Load capacity (max)	750kg (1650lb)
Overall dimensions	3320 x 2000 x 2861mm (131 x 79 x 113")

Visit our dedicate website page for more technical details:
www.vapormatt.com/machines/manual/lion



Vapormatt | Leopard

Our largest standard wet blasting machine offers a degree of bespoke design and build options to suite a range of options. Incorporating advanced cabinet construction technology, this machine is built with stainless steel, composites and moulded polymers to create rugged, corrosion free, sound insulated cabinet.

One of the key highlights of the manual Leopard is its patented doughnut sump. This feature benefits then end user as not only does it negate the need to dig a pit, but it also lowers the level height for ease of loading and operator safety.

Component envelope	Ø 1850mm (73")
Load capacity (max)	1500kg (3300lb)
Minimum overall dimensions	2600 x 2000 x 2400mm (102 x 79 x 95")

Visit our dedicate website page for more technical details:
www.vapormatt.com/machines/leopard-manual



Ergonomics and operator safety

Process guns are light and easy to use and can be supplied with a hands free facility. All blast guns are fully compliant with relevant hand arm vibration regulations.

All machines operate within current EU regulations for workshop environmental noise levels.

Machines are fitted with safety glass windows, door safety interlocks, ergonomic foot switch controls, cushioned arm holes and have low loading heights.

Easy maintenance

Machines are provided with:

- Long life polyurethane pumps that can be speedily and easily removed without the need to drain the sump. The long life nature of our pumps means they are designed to cope with abrasive slurry without risk of damage.
- Long life VSPS slurry pipe work, which can be disconnected without tools.
- Long life polyurethane blast guns with boron carbide nozzles (silicon carbide in the case of the Vapormate), fitted with replaceable boron (and ceramic) nozzles.

Filtration

A large range of effluent handling and filtration systems are available to allow open, re-circulatory or fully closed loop machine operation.

Effluent control systems can be provided that are suitable for a range of environments from regular workshops to facilities involved with the processing and decontamination of highly toxic components.

STD = Standard

Manual Wet blasting machines	Vapormate	Puma	Cougar	Lion Sump	Leopard Sump	Lion	Leopard
Work envelope (nominal)							
Loading maximum available (kg (lb))	25 (55)	50 (110)	250 (551)	-	-	750 (1653)	1500 (3307)
Diameter (mm (inch))	400 (16)	500 (20)	1100 (43)	-	-	1350 (53)	1850 (73)
Height (mm (inch))	300 (12)	1140 (44)	1000 (39)	-	-	1175 (46)	1250 (49)
Width (mm (inch))	580 (23)	1100 (43)	1250 (49)	1700 (67)	2080 (82)	1600 (63)	2100 (83)
Depth (mm (inch))	400 (16)	920 (36)	1150 (45)	1200 (47)	2000 (79)	1450 (57)	1850 (73)
Compressed air requirement							
Pressure (bar / psi)	5.5 / 80	5.5 / 80	5.5 / 80	5.5 / 80	5.5 / 80	5.5 / 80	5.5 / 80
Low power (Nm ³ /min / SCFM)	0.3 / 10	0.3 / 10	-	-	-	-	-
Flow standard power option (Nm ³ /min / SCFM)	0.6 / 20	1.13 / 40	1.13 / 40	1.13 / 40	1.13 / 40	1.13 / 40	1.13 / 40
Flow high power option (Nm ³ /min / SCFM)	-	-	1.7 / 60	3.4 / 120	3.4 / 120	1.7 / 60	1.7 / 60
Blast power (1 being the lowest and 12 being the highest)							
Low power	1	-	-	-	4	-	-
Standard power option	2	4	4	4	12	4	4
High power option	2	4	6	12	-	6	6
Cabinet internal dimensions							
Height above over grids (mm (inch))	300-520 (12-20.5)	500-1200 (20-47)	1350 (53)	-	-	1100 (43)	1500 (59)
Width (mm (inch))	680 (27)	1150 (45)	1400 (55)	1700 (67)	2000 (79)	1600 (63)	2300 (91)
Depth (mm (inch))	680 (27)	1100 (43)	1250 (49)	1700 (67)	2800 (110)	1650 (65)	1950 (77)
Sump capacity							
Liquid volume (l (g))	25 (7)	127 (34)	145 (38)	100 (26)	400 (106)	100 (26)	400 (106)
Abrasive weight (kg (lb))	4 (9)	13-36 (29-79)	45 (99)	30 (66)	100 (220)	30 (66)	100 (220)
Electrical requirement (others available)							
Phases (all require n+e)	1	3	3	3	3	3	3
Voltage (V) 50hz	220 / 240	380 / 440	380 / 440	380 / 440	380 / 440	380 / 440	380 / 440
Current requirement (amps)	13	7	20	20	25	20	40

STD = Standard

Optional specification items	Vapormate	Puma	Cougar	Lion Sump	Leopard Sump	Lion	Leopard
Cabinet enhancements / operator comfort / process effectiveness							
Additional food grade rubber sheet lining	X	✓	✓	✓	✓	✓	✓
Exhaust extractor fan complete with centrifugal mist eliminator	X	X	✓	X	X	✓	✓
Immersion heater (kW)	X	X	4.5	4.5	13.5	4.5	13.5
Component blow off nozzle	STD	STD	STD	STD	STD	STD	STD
Automatic chemical dosing system	X	X	X	X	X	✓	✓
Work areas/component handling (enhanced load capacity available)							
Raised level worktable	X	X	X	X	X	✓	✓
Turntable mounted on stand, Ø mm/UDL (kg (lb))	X	500 / 50 (20 / 110)	X	1350 / 750 (53 / 1654)	1850 / 1500 (73 / 3307)	1350 / 750 (53 / 1654)	1850 / 1500 (73 / 3307)
Turntable mounted on swing out arm, Ø mm (inch) / UDL (kg (lb))	X	X	1100/250 (43 / 551)	X	X	X	X
Turntable mounted on trolley + exterior load station, Ø mm / UDL (kg (lb))	X	X	X	X	X	1350 / 750 (53 / 1654)	1850 / 1500 (73 / 3307)
Barrel unit Ø 280mm (11"), length 300mm (12")	X	✓	X	X	X	X	X
Barrel unit Ø 700mm (28"), length 400mm (16")	X	X	X	X	X	✓	✓
Barrel unit Ø 400mm (16"), length 1800mm (71")	X	X	X	X	X	X	✓
Slurry system enhancements							
Hydrocyclone, for fast media removal	X	X	X	✓	✓	✓	✓
Sump water decant valve, for dirty water drain off	X	STD	STD	✓	✓	✓	✓
Auto sump overflow bubble valve and timer, for optimising media usage	X	X	✓	✓	✓	✓	✓
Abrasive level sight glass, for process parameter monitoring	X	X	STD	STD	STD	STD	STD
Alternative blast gun (s)	✓	X	✓	✓	✓	✓	✓
Effluent filtration and water re-circulation							
Filter type "S" - sedimentation filter	X	STD	STD	STD	STD	STD	STD
Filter type "MB" hand operated paper filter 340mm (13")	STD	X	X	X	X	X	X
Filter type "MB" hand operated paper filter 450mm (18")	X	X	✓	✓	✓	✓	✓
Filter type "MB" automatic paper filter 450mm (18")	X	X	✓	✓	✓	✓	✓
Re-circulated rinse pump and cartridge filter system	STD	STD	STD	✓	✓	✓	✓

The perfect finish is only the start

Key benefits of wet blasting

- Fast cleaning and gentle action that will not damage the component's surface
- Concurrent blasting and degreasing
- Consistent and uniform processing
- Operates without dust or harsh chemicals

Suitable for a wide range of different industries and applications, for example:

- Additive manufacturing
- Aerospace
- Alloy wheels
- Composites
- Hygienic surfaces
- General use
- Medical implants
- Medical instruments

Wet blasting can produce surfaces that are:

- Highly reactive - perfect for coating or bonding
- Fine grained and ideal for rapid subsequent coating
- Surgically clean with a perfect Ra surface roughness range for the most effective sterilisation
- Satin polished and anti-glare
- De-coated without substrate damage
- Free of dust or embedded abrasive



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