

Theory of blasting.

The basic principle of the blasting operation is performed by abrasive being thrown at high velocity against the surface to be cleaned. The throwing action is achieved through centrifugal force where a wheel with paddle type blades attached radially is revolved at a continuous shaft speed. Onto this wheel abrasive is fed in such a manner that it travels along the radial length of the blades and is then thrown off in a high velocity stream at the surface to be cleaned. The energy placed into the abrasive is sufficient to enable it to rebound from the work surface. This rebound (kinetic energy) is used to recover the abrasive for re-use. The machine is designed so that the blast wheel is throwing abrasive at an inclined angle relative to the work surface. This means after striking the work surface the abrasive rebounds at a similar angle into the reclaim duct, which directs it back into the hopper for, re-use. Assisting with this reclaim cycle the airflow created by the dust collector enters the machine through a brush screen at the rear of the Cabinet and flows across the work surface, up the reclaim duct, through the separator and into the duct collector, then through the fan and into the atmosphere. All surface contamination, which is being collected in the dust collector, must be disposed of under the COSHH and health and safety guidelines.



CONTAMINATED SURFACE
REMOVED BY VACUUM
AND KINETIC ENERGY

ABRASIVE PROPELLED
ONTO SURFACE AT
HIGH VELOCITY

SHOT SPECIFICATION DETAILS

The abrasive is harbrosteel shot manufactured and tempered steel of approximately eutectoid composition and conforms to the internationally quoted specifications SAEJ827 and SAE J444a. The product also conforms to size requirements of BSS 2451. Bags are 25kg in size and can be from S330 to S780 in size.

The following table shows the correct abrasive size for SPE machines:

Machine	S330	S390	S460	S550	S660	S780
9ES	YES	YES	YES	NO	NO	NO
12E	YES	YES	YES	YES		
16E	YES	YES	YES	YES		
20E	YES	YES	YES	YES	YES	YES

STEEL:

The following table shows the abrasive size and application on steel:

Abrasive size	Mesh size	Machine	Production m ² /hr*	Application
S780	2.00-2.80 mm	20E	30 - 40	Rapid removal of a thick coating but would not produce SA 2½
S660	1.70-2.36 mm	20E	30 - 40	- as above -
S550	1.40-2.00 mm	12ES 16F 20E	20 - 30 25 - 35 30 - 40	- as above -
S460	1.18-2.00 mm	12ES 16E 20E	15 - 20 15 - 25 20 - 30	Removal of medium thickness coating & commercial blasting standard
S390	1.00-1.70 mm	9ES 3 12ES 16E 20E	10 - 15 15 - 20 15 - 25 20 - 30	Removal of thin coating to an SA2½ standard. Removal of light corrosion
S330	0.85-1.40 mm	9ES 3 12ES 16E 20E	10 - 15 15 - 20 15 - 25 20 - 30	SA2½ on lightly corroded steel

* only approximate rates

W H SURFACE PREPARATION EQUIPMENT

AUTOBLASTING



SPE 9ES AUTOBLAST MACHINE 230mm

**Hire includes triple motor dust control unit, 2 x 14mtr 110v
32 amp ext leads, and 2 x 5kva 32AMP transformers,**

DAY	£411.00
WEEKEND	£548.00
WEEK	£685.00

**Additional leads available to max 3 per machine,
two separate mains sockets required of at least 30amps**

A small compact machine suitable for the small contractors and the rental industry. Self propelled and infinitely variable in all operations. Electrically powered. Recognised in industry as the modern fast versatile environmental dust free means to dry abrasive cleaning and texturing of horizontal or slightly inclined surfaces. This eliminates mess normally associated with hand blasting. Leaves an ideal surface for coatings and overlays to be applied.

THIS MACHINE OPERATES AT APPROX 50 SQ MTRS PER HOUR , (these estimations are based on single passes over an unpainted floor). POWER SUPPLY MUST BE ON A SUBSTANTIAL NATURE OR PROBLEMS MAY OCCURE, A GENERATOR OF AT LEAST 12VA 110V IS REQUIRED TO OPERATE THE BLAST UNIT AND DUST CONTROL TOGETHER.

VARIOUS GRADES OF SHOT ARE AVAILABLE IN 25 KILO BAGS @ £42.00 bag EACH BAG WILL DO UP TO 150 SQ MTRS, THE STANDARD SIZE FOR THIS MACHINE IS S390. (we suggest a magnetic sweeper is used with all blasting)



MAGNETIC SWEEPER 600MM WIDE PUSH ALONG

DAY	£30.00
WEEKEND	£40.00
WEEK	£50.00

The SPE range of magnetic floor sweepers has been designed to collect up ferrous and other metallic particles remaining on floor surfaces after blasting has taken place. The simply operated release mechanism enables easy depositing of debris after collection. The permanent magnet will retain its power for 50 years and require no maintenance.

NOTES: INEXPERIENCED OPERATORS MUST OBTAIN ON SITE INSTRUCTION OF BLAST EQUIPMENT; THIS CAN BE ARRANGED DEPENDING ON LOCATION AND TIME OF JOB.

To arrange any of the above please contact us on 01633 619129 or visit our website at www.whsurfacepreparation.co.uk

TECHNICAL GUIDE 2011



SPE 9EG MANUAL AUTOBLAST MACHINE 230mm
Hire includes triple motor dust control unit, 2 x 14mtr 110v
32amp ext leads, 2 x 5kva 32amp transformers rated 3.3kva.

DAY **£348.00**

WEEKEND **£464.00**

WEEK **£580.00**

Additional leads available to max 3 per machine,
two separate mains sockets required of at least 30amps ring main

This is a manual version of the automatic 9e and suitable for small and awkward areas such as corridors, where speed is not a necessity.

Machine operates at approx 25 sq mtrs per hour (these estimations are based on single passes over an unpainted floor) and uses only S330 or S390shot.

Shot is supplied in 25 kilo bags @ £42.00 per bag and 1 bag will cover up to 120 sq mtrs
Power supply must be of a substantial nature or problems may occur, a generator of at least 12 kva 110v is required to operate the blast and dust control unit together.



MAGNETIC SWEEPER 600MM WIDE PUSH
ALONG

DAY **£30.00**

WEEKEND **£40.00**

WEEK **£50.00**

The SPE range of magnetic floor sweepers has been designed to collect up ferrous and other metallic particles remaining on floor surfaces after blasting has taken place. The simply operated release mechanism enables easy depositing of debris after collection. The permanent magnet will retain its power for 50 years and require no maintenance. The height is adjustable to cope with large waste and uneven surfaces. The standard magnets range in size from 300mm to 900mm wide

NOTES: INEXPERIENCED OPERATORS MUST OBTAIN ON SITE INSTRUCTION OF BLAST EQUIPMENT; THIS CAN BE ARRANGED DEPENDING ON LOCATION AND TIME OF JOB.

NOTES. THESE PRICES ARE USED AS A GUIDELINE ONLY AS WE SUGGEST A SITE SURVEY BY ONE OF OUR TECHNICAL MANAGERS

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W H SURFACE PREPARATION UK 8

12es



SPE 12ES AUTOBLAST MACHINE 300mm 3PHASE
Hire includes dust control unit, 20mtrs Vacuum hose 20 mtrs 3 phase leads.

DAY	£450.00
WEEKEND	£675.00
WEEK	£950.00

additional extension leads are available at extra cost.
25kva towable diesel generator £200.00 per week & diesel

The SPE 12E Super is a medium size Autoblaster machine suitable for all applications of floor surface preparation. Mainly used for the preparation of concrete floors but equally effective on steel surfaces. The machine is electrically driven with forward and reverse drive being infinitely variable. The dust collection unit as with larger machines has continuous reverse air jet filtration cleaning. Recognised in the industry as the modern fast versatile environmental dust free means to dry abrasive cleaning and texturing of horizontal or slightly inclined surfaces. This eliminates mess normally associated with hand blasting. Leaves an ideal surface for coatings and overlays to be applied. Abrasive and debris is contained to prevent hazardous working and environmental pollution.

The machine operates at approx 100 sq mtrs hour (**These estimations are based on single passes over an unpainted floor where a coated floor could be down to 50m² per hour**) and requires a power supply within 20m of work area and 32 amp 5 pin 3 phase supply, either direct from a factory or via 25 Kva 3 phase generator £200.00 per week

On steel it is approx 25m² per hour to produce SA2 ½ or 20m² per hour on painted surfaces.)

Various grades of shot are available in 25 kilo bags @ £42.00 per bag, each bag will do up to 200 sq mtrs approx (standard grade of shot is S390)



MAGNETIC SWEEPER 600MM WIDE PUSH ALONG

DAY	£30.00
WEEKEND	£40.00
WEEK	£50.00

The SPE range of magnetic floor sweepers has been designed to collect up ferrous and other metallic particles remaining on floor surfaces after blasting has taken place. The simply operated release mechanism enables easy depositing of debris after collection. The permanent magnet will retain its power for 50 years and require no maintenance.

NOTES: INEXPERIENCED OPERATORS MUST OBTAIN ON SITE INSTRUCTION OF BLAST EQUIPMENT; THIS CAN BE ARRANGED DEPENDING ON LOCATION AND TIME OF JOB.

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W H SURFACE PREPARATION UK 12

16ES



SPE 16ES AUTOBLAST MACHINE 400mm 3PHASE
 Hire includes dust control unit, 20mtrs Vacuum hose 20 mtrs 3 phase leads.

DAY	WEEKEND	WEEK
£650.00	£975.00	£1350.00

additional extension leads are available at extra cost.
 35 kva towable diesel generator £200.00 per week & diesel

The SPE 16E Super is a large size Autoblaster machine suitable for all applications of floor surface preparation. Mainly used for the preparation of concrete floors but equally effective on steel surfaces. The machine is electrically driven with forward and reverse drive being infinitely variable. The dust collection unit as with larger machines has continuous reverse air jet filtration cleaning. Recognised in the industry as the modern fast versatile environmental dust free means to dry abrasive cleaning and texturing of horizontal or slightly inclined surfaces. This eliminates mess normally associated with hand blasting. Leaves an ideal surface for coatings and overlays to be applied. Abrasive and debris is contained to prevent hazardous working and environmental pollution.

The machine operates at approx 125 sq mtrs hour (These estimations are based on single passes over an unpainted floor where a coated floor could be down to 75m2 per hour) and requires a power supply within 20m of work area and 32 amp 5 pin 3 phase supply, either direct from a factory or via 35 Kva 3 phase generator £200.00 per week

On steel it is approx 40m2 per hour to produce SA2 ½ or 30m2 per hour on painted surfaces.)

Various grades of shot are available in 25 kilo bags @ £40.00 per bag, each bag will do up to 200 sq mtrs approx (standard grade of shot is S390)



MAGNETIC SWEEPER 600MM WIDE PUSH ALONG

DAY	ADD DAY	WEEK
£25.00	£12.50	£50.00

The SPE range of magnetic floor sweepers has been designed to collect up ferrous and other metallic particles remaining on floor surfaces after blasting has taken place. The simply operated release mechanism enables easy depositing of debris after collection. The permanent magnet will retain its power for 50 years and require no maintenance.

NOTES: INEXPERIENCED OPERATORS MUST OBTAIN ON SITE INSTRUCTION OF BLAST EQUIPMENT; THIS CAN BE ARRANGED

To arrange hire or enquiries call on 01483 619129 or visit our website at www.whsurfacepreparation.co.uk W H Technical guide 2010.1