



Sponge **BLASTING**



www.dryiceblasting.co.za

What is *Sponge Blasting*?

From delicate cleaning to aggressive coating removal, Sponge Blasting provides an almost dustfree solution to sand blasting. Utilising closed-cell urethane sponge granules which is impregnated with abrasive aluminium oxide, it is a dry, safe and low dust process to strip exterior paint or create a profile on a steel surface.

How does it work?



- Compressed air propels sponge media to the surface.
- Upon impact, sponge media absorbs collision energy and flattens on the surface. When the abrasive aluminium oxide is exposed to the surface, the contaminants are removed. The coating is removed, leaving the required profile on the substrate.
- The sponge media entraps most airborne dust.

Benefits:

- Low dust emissions.
- Low ricochet and clear visibility.
- Reduce the need for dust suppression and on-site dust extraction.
- Greater operator safety – low abrasive rebound, low dust.
- Dry surface preparation.
- Enhanced surface cleaning and chloride removal from steel.
- The option to create a surface profile of 5-200 microns, dependent on type of steel.
- Replace mechanical cleaning tools for faster and easier treatment of curved surfaces with a near-perfect finish.
- The process is dry and non-conductive, therefore suitable for use on electric motors and electrical circuitry.
- The sponge media is 95 % recyclable, providing the following benefits:
 - Reduce waste
 - Simplify clean-up procedure
 - Reduced impact on the environment
 - Reduce waste disposal



Applications of *Sponge Blasting*

Power Stations and Sub Stations

Power stations require a non-conductive, environmentally responsible cleaning process which allows for equipment to be cleaned in-situ.

General Maintenance

Remove rust on steel surfaces, create desired profile prior to application of paint.

Vehicle Restoration and Panel Beaters

Remove rust and prepare steel surface for painting of bodywork.

Civil Engineering

Remove process stains, graffiti, environmental pollutants and soot from concrete buildings, bridges and other structures, which is an excellent method for cleaning building façades and interior refurbishing.

Aerospace

Utilised by aircraft maintenance specialists to remove paint coatings, layer-by-layer, without damaging sensitive metallic or composite substrates.

Nuclear power generation; reactor coolant piping and turbine rotors

Ideal for nuclear decontamination and general industrial coating and rust removal.

Technical Information: **Sponge Blaster**

Sponge media contains different sizes and grades of abrasives for use on various surfaces.

The blasting machine is a fully pneumatical operating system, fitted with an air motor oil lubricator to lubricate the entire pneumatic system.

Regulating and adjustability specifications: The machine's air motor is fitted to a gearbox and to enhance the performance and efficiency of regulating the sponge media.

- The machine is fitted with an air regulator, sponge feeder regulator and emergency e-stop. the two regulators and emergency stop makes the machine safer and very easy to adjust and monitor the blasting pressure and sponge feeding rate.
- By controlling the blasting air pressure and sponge feeding pressure, one can control the efficiency and blasting quality.

The sponge blasting tank capacity vary from 100 Litre to 200 Litre.

The sponge blasting machine is designed and fitted with rear wheels, to make the machine mobile and easy to move around the working areas.

Minimum air requirements: 6-10 m³/min (200-400 cfm) at 7 bar (100 psi).

The sponge blasting machine is originally supplied with a 30 m blasting hose, blasting nozzle and blasting gun. All blasting guns are fitted with a safety trigger which operates as a dead man switch. Blasting hoses can be extended to meet any customers requirements.

The Brilliant Sponge Blaster is proudly designed and built in South Africa by an experienced team of mechanical engineers and artisans, taking cognizance of the harsh working environment in Africa.



Technical Information: **Re-grader**

The Brilliant Sponge Re-grader is specifically designed to be able to regrade various grades of abrasive sponge media.

Re-grading capacity: The Brilliant Sponge Re-grader delivers up to 600 kg high quality regraded sponge media.

Brilliant Sponge Re-grader is fitted with a 3-levels filtering system. Large debris, re-useable sponge and fine dust.

- The large debris and fine dust will be disposed of.
- The large debris grid has an aperture of approximately 9-10 mm. The dust sieve has an aperture of 2-2,5 mm.

The Brilliant Sponge Re-grader has a proven feeding action of sponge media, and the sponge does not flow over intermittent levels of the machine.

- The sponge media passes over at least 10 cm of vibration grid before being fed through the exit chute. This ensures high-quality, regraded sponge media.

Electrical specifications: The sponge re-grader operates with an 0,18 kW (220-240 Volt - 50 Hz) electrical vibrating motor.

- Centrifugal Force KN – 2.07
- Centrifugal Force KG – 211
- Closing Force KG – 193

All Brilliant Sponge Re-grader machines are designed and fitted with front and rear wheels. Thus making the regrading machine mobile and easy to move around the working areas.

The Brilliant Sponge Re-grader is proudly designed and built in South Africa by an experienced team of mechanical engineers and artisans, with due consideration of the harsh working environment in Africa.



Proudly South African

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Dry Ice Services has been providing South Africa with innovative Dry Ice and Sponge Blasting technology and solutions. We are known for our dedicated national client service, creativity and highly qualified and experienced team of engineers and technicians.