



Upgrade and modernise your shot blasting equipment

Improve your process using today's technology to upgrade yesterday's equipment



wheelabrator
plus+ shaping industry

Get more from your machine

An equipment upgrade from Wheelabrator Plus will enable you to completely modernise your current shot blast equipment, giving you all the advantages of a new machine at a lower cost.

Our engineers spend time to understand your challenges and provide the latest Wheelabrator technology solutions to upgrade and modernise your equipment so that you can meet your customers' needs whilst cost effectively extending the lifespan of your current investment.

Wheelabrator Group has over 100 years of experience and is committed to differentiating its offer through design, innovation and manufacturing. We understand that it is far more expensive to run a machine ineffectively than it costs to identify problems and make improvements, so we will calculate the savings your investment will deliver for you.

Why upgrade shot blasting equipment?

There are many operational, process and/or health and safety reasons why your current equipment may not be meeting your needs adequately and why you may benefit from an equipment upgrade:

Operational and process issues

- You are treating a different product or the original product has been altered
- Your manufacturing method has changed
- Machine reliability has reduced
- You are unable to meet output demands
- It is taking longer to clean the product
- A superior standard of cleaning is required
- A higher level of contaminant is present after cleaning

- The machine is already working at full capacity leaving your maintenance team with no time to inspect equipment and complete any necessary repair
- You are aware that advances in technology could enable your process to be faster, cheaper or better

Health and Safety issues

- Housekeeping issues, such as the amount of abrasive carry out currently requiring manual tidying
- Ergonomic improvements are needed, for instance product handling may need to be automated if the product has increased in weight
- To meet legislation requirements, for example emission regulations
- To improve waste disposal



Wheelabrator and non Wheelabrator equipment

As all equipment upgrades are customised to meet your individual needs, any make or model of shotblast equipment can be upgraded.

Additionally, Wheelabrator Plus will provide follow up support and advice on an ongoing basis providing your maintenance teams with confidence and technical assistance should they require it.

Benefits of an equipment upgrade

By restoring your equipment to its original operational state with the introduction of new technology, your business can become more profitable.

The benefits of an equipment upgrade can include:

- Increased production
- Reduced blast cycle time
- Lower maintenance costs
- Optimised machine uptime and availability
- Achieving higher cleaning standards

- Superior abrasive separation
- Intelligent design / details in regard to assembly of the blast wheels
- Higher wear life of housing and liners
- Improved cost / performance ratio
- Enhanced machine reliability and available uptime
- Reduced machine wear
- Improved machine flexibility
- Less operational risks
- Reduced abrasive costs
- Reduced energy costs



Choosing to upgrade is a viable alternative to buying new equipment. Benefits include:

- Lower cost: Wheelabrator Plus engineers work to the principle that it is worth upgrading equipment providing it is less than 60% of the cost of a new machine
- Easier to finance: an equipment upgrade can be financed by the maintenance budget rather than requiring additional capital
- Quicker turnaround: usually an equipment upgrade can be completed within a few months of the problem being identified and a solution sought
- Enhanced ROI: faster payback on your investment, and get more from your initial investment
- Added value to the overall process: your maintenance team know the machine and will be involved in the upgrade so there is limited training required
- Easier to implement: less disruption to production
- Environmentally responsible: you 'recycle' rather than replace your existing machine

Equipment upgrade solutions



Blast wheels

There are a variety of ways in which your blast wheels and the pattern of the blast can have a significant impact on your cleaning performance:

- Current blast wheels may need to be repositioned to clean the product more effectively
- Additional wheels can be added to ensure maximum output is achieved or to effectively clean the product if it has been changed or altered
- Wheels can be converted to use the latest Wheelabrator technology, for example upgrading from a belt drive to a direct drive is proven to be up to 20% more efficient in energy usage.

SATURN HD Wheel

Suitable for all heavy duty applications, the SATURN HD Wheel is available in both full cast manganese housing and a fabricated housing with full cast chrome liner for hard grit applications. The SATURN HD Wheel uses a direct coupled motor which maximises energy usage, increases abrasive flow rate and requires less space compared to conventional blast wheels.

Advantages of the SATURN HD Wheel include:

- Direct coupled motor
- Wear life improvements of 'hot parts'
- Maintenance reduction
- Reduced noise
- Blast pattern repeatability
- Optional blade length to allow for variable abrasive velocities
- Bi-directional, so only one set of spares is required on site
- The cast housing unit uses less component parts which has the additional benefit of reducing the number of spare parts required.

TITAN Wheel

The TITAN wheel is recommended for clean applications such as blast cleaning steel stock fabrications. The TITAN Wheel comes in various sizes and materials ensuring flexibility for all production processes.

Advantages of the TITAN Wheel include:

- Direct coupled motor
- High efficiency due to improved blast pattern
- Low media consumption
- Low energy consumption
- Quick and easy maintenance
- Reduced noise and wear
- Optional blade length to allow for variable abrasive velocities
- Bi-directional, so only one set of spares is required on site
- Blast pattern repeatability

Equipment upgrade solutions



Machine conversions and upgrades

Depending upon your specific requirements your equipment can have a complete overhaul to meet your blasting requirements.

- Tumbler machine conversions may include mill upgrades, dual wheel packages, recycling system upgrades, loaders and the addition of discharge conveyors.
- Cabinet liners can be upgraded to reduce the wear caused by the abrasive. If the abrasive has changed you may need to review the lining of the machine, this could dramatically reduce the amount you spend on replacement parts
 - Rubber → polyurethane
 - Rubber → manganese plate
 - Manganese plate → cast liners
- Roof tunnels and floors (louvre plates) can also be upgraded to prevent excessive wear.

Health and Safety improvements

- **Safety gates** are a legal requirement in many countries and Wheelabrator recommends that you have them installed for operator safety.
- The **'pull and lock'** system is a mechanism developed by Wheelabrator for ease of closing cabinet doors. The 'pull and lock' system alleviates manual handling which improves the speed of working and reduces operator fatigue when closing heavy doors on blast machines.
- As standard, Wheelabrator includes an **anti run back** on elevator direct drives, this ensures that the belt does not reverse and fall back when any blockage is released, preventing injury to personnel. This can be added to older machines to ensure operator protection.
- A **hydraulic loader** can automatically load parts into your machine to save time, manual handling and improve safety procedures.

You may need to upgrade your equipment for legislation purposes and your local Wheelabrator Plus representative can discuss with you the legal requirements in your region.

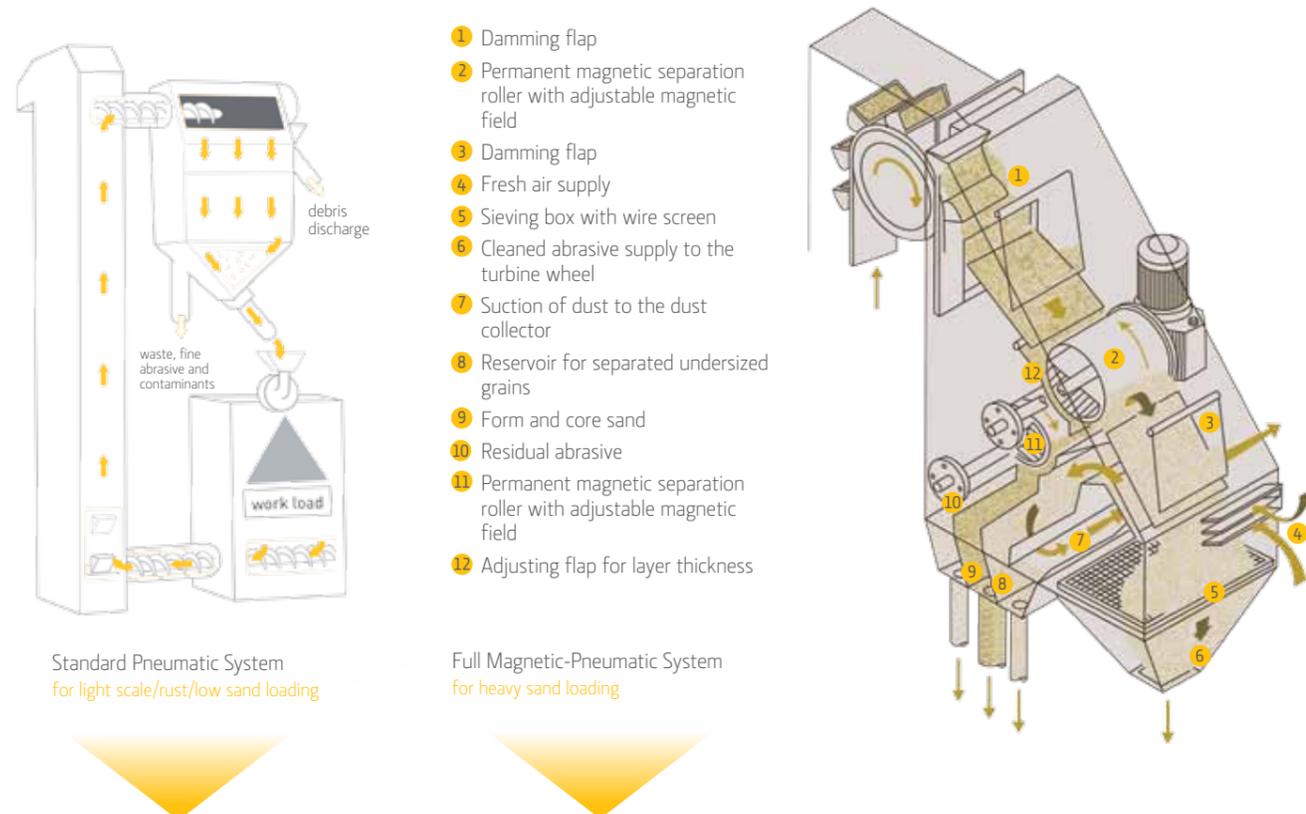
Dust collectors / waste disposal

- Replacing a bag dust collector with the latest technology of a **cartridge filter** unit is the most effective way to remove dust in the airflow. Cartridge filters are designed for continual operation and maintain suction using online cleaning, this allows the blast machine to operate continually. The efficiency of cartridge type systems enables air to be discharged back into the factory, therefore having the flexibility to be situated where convenient, whereas the bag system must be located next to an external wall for outside discharge.
- Options of adding **stack monitors and alarms** to a dust collector will allow you to detect any abnormal dust discharge levels, ensuring compliance to health and safety standards.
- Introducing an **automated differential pressure monitor unit** to your shot blast machine will measure the differential pressure ensuring compressed air is only used when necessary, thereby reducing your running costs and optimising the most economical use of the dust collector.
- **Discharge of waste** into euro bags is the most effective process to remove dust waste in a responsible way, reducing health and safety risks and improving the working environment.

Abrasive recycling systems

It is important to assess the recycling system when reviewing the level of contaminants. The contaminant level may increase over time because of process or product changes and your current recycling system may not be effective enough to deal with the changes.

Wheelabrator offers 2 different recycling systems:



The Standard Pneumatic system: an airwash separator with sieves is installed on all new Wheelabrator shot blast equipment where required.

Pneumatic / Full magnetic system: this is the most thorough recycling system available. In addition to the technology used in the bypass system, the full magnetic process will clean all abrasive and

sand before being air washed. This recycling equipment would be required for heavy duty foundry applications enabling handling of full core knock out of large sand amounts held in castings.

Abrasive and abrasive replenishers

It is imperative that the exact abrasive operating mix is established and accurately maintained by continually adding the correct amount of abrasive.

Adding an automated abrasive replenisher to your equipment protects your abrasive mix; the auto replenishers sense the abrasive level and automatically feed on demand which removes the chance of human error.

About Wheelabrator and Wheelabrator Plus



As the world's leading surface preparation company, **Wheelabrator** offers a complete range of equipment, replacement parts and services.

For more than 100 years, companies from the foundry, automotive, aerospace, energy, shipbuilding, railway, engineering and many other industries have been using the products and services of Wheelabrator Group. Using insight gained from thousands of different applications, Wheelabrator's technical experts work in close cooperation with customers to design specific solutions to meet their operating needs, and to increase their productivity and profitability.

With approximately **15000 active customers** in nearly **100 countries**, and over **35000 machines installed throughout the world**, Wheelabrator continues to use the experience of having the largest installed base in the industry to deliver the best solution for the customer.

This approach has been so well received by the market that approximately two thirds of Wheelabrator's surface preparation equipment sales are custom-engineered to the precise specifications of the customer. The remaining third consists of standard machines which

incorporate the same level of Wheelabrator quality and reliability, but can be delivered more quickly at a competitive price.

Wheelabrator is part of the Norican Group, and offers together with its sister company DISA, a global service from moulding, to wheel- and air blasting, to coating applications.

- **5 Technology Centres** in Canada, France, Germany, Denmark and Switzerland
- **6 Manufacturing sites** in India, China, USA, Mexico, the Czech Republic and Poland plus a global service support network
- More than 100 years of experience in air and wheel blasting machines
- More than 35000 machines operating in the field
- Broadest range of products available on the market
- Quality products which provide flexible solutions to deliver consistent performance
- Full service from product development and installation, through to continued service and maintenance delivered by the global **Wheelabrator Plus** team

Wheelabrator Plus offers the largest aftermarket parts, supply, service and technical support for the surface preparation industry globally. With the capability of maintaining and upgrading surface preparation equipment from both Wheelabrator and most other brands within the industry, Wheelabrator Plus continually strives to help you to profitably meet or even exceed your customer's requirements.

Our service can be developed to fit your specific needs to ensure you have minimum downtime whilst achieving maximum productivity. Services include:

- Replacement parts
- Service contracts and inspections
- Machine maintenance
- Equipment modernisation and upgrades
- Technical support
- Training
- Equipment relocation

Your local Wheelabrator Plus team

Below is a list of our main global locations, however, we support all surface preparation equipment globally with our extensive list of approved technical partners.

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