## THE SURFACE FINISHING EQUIPMENT GROUP

SALES – SERVICE - HIRE TRAINING – INSTALLATION

NORTH EAST BRANCH

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NORTH WEST BRANCH

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Tel: 0161 480 8087 sales@abraclean.co.uk

- Shot Blasting Equipment
- Paint Spraying Equipment
- Powder Coating Equipment
- Fixed Extraction Booths
- Mobile Dust Extraction
- Personal Protection
   Equipment
- Shot Blasting Abrasives
- Spares and Consumables
- Plural Component Systems

Ercon Finishing Systems Willenhall. UK. WV13 2JW

Tel. 01902 601 312 sales@erconfinishing.com

- Complete Finishing Plants
- Design engineers and CAD
- Industrial Ovens
- Conveyors
- Pre-treatment systems
- Electroplating Systems



## **Blast Rooms**





A blast room, when specified, designed and equipped correctly, can be a very productive facility and a valuable asset to a business.

- Many companies choose to purchase a blast room to offer them the control and cost advantages of bringing blast cleaning in-house.
- The room is used to contain both the work piece and the operator, and is designed to handle work too large even for the biggest blast cabinet such are vehicles, or large fabrications.
- Can be located inside a factory or weather proofed to site outside where space is limited.
- Due to the abrasive being contained with the blast room, it can be recovered and recycled.
- Media such as chilled iron or aluminum oxide can offer significant cost savings when recycled.
- Various types of abrasive recovery system can be incorporated to collect used abrasive, remove dust and fines and return the cleaned abrasive to the blast pot for re-use.
- A dust extraction system is included to keep the blast room air clear.

### **FEATURES:**

A site survey and consultation is recommended to determine requirements and provide a quotation for the most appropriate system. The optimum specification will be based on several factors and trade offs between frequency of use, initial cost, and features. Our blast rooms incorporate:

- Pressure blast pot for speed with remote control system for operator safety.
- Efficient dust extraction system to keep the work area clear for operator safety and productivity. This is achieved using an electrically driven dust extractor and suitably positioned inlet and outlet ducts in the blast room. The dust laden air is drawn through cartridges or bags.
- A Filter cleaning system by means of a reverse jet air pulses or via a shaker motor.
- Breathing air filtration system and air fed blast helmet for the operator.
- Abrasive recovery system vacuum, bucket elevator, bucket elevator fed by a screw conveyor.
- Rubber lining to protect the room structure.
- Dust proof lights and Safety Door interlock to shut off blasting if door is opened.

### **CONSTRUCTION:**

Blast rooms come in many shapes and sizes with various construction methods. Small rooms are often made from a shipping type container with the necessary modification. Medium sizes rooms are often custom made in a similar fashion using corrugated steel panels to form a one piece blast room structure and larger rooms are assembled on site using interlocking panels.

Consideration is needed to the size, weight, and access requirements of the blasted work-pieces. Work pieces are generally positioned on a trestle or bogie in the middle of the room for blasting and should not be leant against blast room walls otherwise premature wear will occur. Heavy products can be transferred into the room either by forklift truck, bogie on tracks or via overhead crane using a crane slot in the blast room roof.

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# Blast Rooms - Abrasive Recovery





Options for Abrasive Recovery –

Vacuum Driven (left) and Bucket Elevator (right)

### **ABRASIVE RECOVERY SYSTEM:**

The abrasive recovery system:

- Returns the used abrasive to the blast pot ready for re-use.
- Clean and grade the abrasive to remove dust and fines.
- · Provide additional abrasive storage capacity.

### **VACUUM DRIVEN RECOVERY:**

Our Vacuum Unit incorporates a vacuum generator and cartridge dust extractor unit and the storage silo and dust separation unit, which fits on top of the blast pot.

Abrasive is swept into a floor hopper in the blast room from where the vacuum system conveys it to the separation unit and storage hopper. Dust and fines are removed to the cartridge dust collector and the cleaned re-usable abrasive falls into the storage hopper ready for re-use. As the complete system is air driven the air supply normally used for the blast pot can be used to power the recovery system once blasting has stopped.

### **BUCKET ELEVATOR:**

The overall principle is similar, but instead of a vacuum being used as above, an electrical motor drives abrasive collection buckets on a belt. The initial cost is greater, but higher volumes of grit can be recovered.

#### **SCREW CONVEYOR / SCRAPER FLOOR:**

In very high production environments screw conveyors can be incorporated into the floor to reduce the time to sweep the used abrasive to the recovery collection chute.

A Screw Conveyor consists of helical screws which sit in troughs below the blast room floor and move abrasive to the bucket elevator. An alternative is the Scraper Floor where a row of pneumatic cylinders drive blades across the abrasive, transferring it to the bucket elevator. Both systems are located below an open mesh floor so that all the abrasive is automatically recovered and recycled without operator intervention.