



BLAST ROOM SYSTEM

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CLEANING

PEENING

DEBURRING

FINISHING

PAINTING

BLAST ROOM SYSTEM

Blast room equipment is used in a wide variety of industries that require surface preparation prior to the application of a protective coating. The surface of the work piece is cleaned by a mixture of abrasive and high pressure compressed air being directed at the work piece by blast nozzle. The blast room contains the abrasive being shot at the work piece, and well providing lighting & ventilation for the operator's safety.

"ABRABLAST" offers a variety of Blast Room designs and room configurations which allow us to design a blast room facility uniquely tailored to meet the economic production, safety and environmental concerns of each customers.



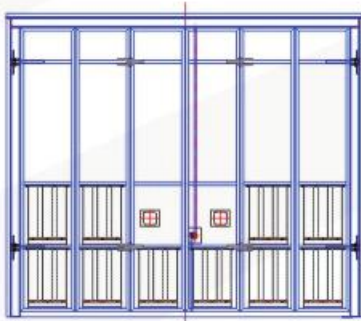
Essentially an efficient blast Room System consists of :

- Enclosure
- Abrasive Blasting Machine
- Dust Collector (Fabric/Pleated/Cartridge/Cyclone)
- Blasting Media Recovery & Separation System
- Operator Safety Wears
- Optional Equipment

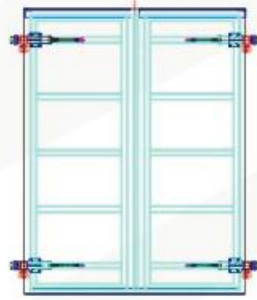
Doors

The doors are the main constituents of any blast room system. The doors can be of Hinge, Sliding, Collapsible, Folding, Motorized, with roof Opening Types are being used as per the applicability for the blast room enclosures. ABRABLAST supplies these doors as per the requirement of the customer & maintain their operation safety & trouble free movements.

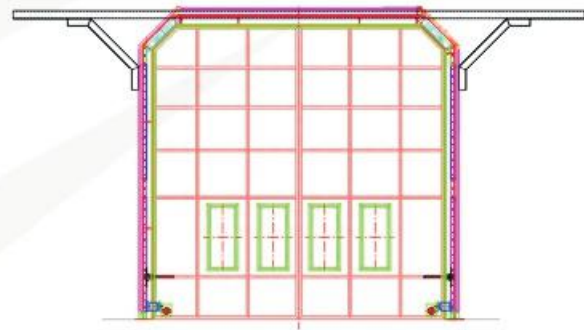
1. Hinge Type Door
2. Pneumatic Door
3. Motorized Horizontal Sliding Door
4. 'L' Shape Motorized Sliding Door



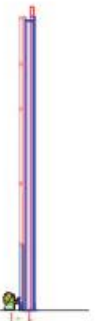
FRONT DOOR HINGED TYPE



FRONT DOOR PNEUMATIC OPERATED



FRONT SLIDING DOOR MOTORISED



Work Car or Trolley

For conveying heavy & big components/job are loading & conveyed on trolley mounted turn table in blast rooms. ABRABLAST supplies many types of turn table & trolley for 1 -100 Tons as per the requirement of customers.



Conveyor Belt System

Like other media recovery system, rubber belt media conveying system is used to transport the abrasive/shot in during blasting operation in blast room system. The abrasive falling in the blast room during blasting operation gets conveyed for recycle by the belt conveyors fitted under the floor hoppers.

DUST COLLECTOR/ EXTRACTOR UNIT



Choice of the correct model of dust collector is integral to any closed environment blasting system. It is very essential to remove dust and fine abrasive particles from the environment of the blast chamber to maintain the efficient operation.

The Dust collectors are broadly classified into four types

1. Cyclone Type
2. Fabric Bag Type
3. Cartridge Filter Type
4. Pleated Bag Type

In operation, the exhaustor fan on the clean air side of the collector draws dust laden air from the blast room through the fabric filter bags. Dust collects on the inner side of the bags and when the exhaustor fan is turned off the bag shaker mechanism reconditions the filters by shaking most of the caked dust from in side of the bags into a dust collecting hopper.



Pleated Bags (Latest Innovation in Filter Bag Technology)

High efficiencies upto 90.999% of 3 microns, and very easy release characteristics with a high tolerance to moisture and temperature. Latest design, the Pleated Bag, has been developed with the following advantages.



- No Steel, top & bottom in polyurethane.
- Low pressure drop because of surface filtration.
- Very easy to install.
- Very compact, 2-3 time greater filter area than traditional bags.
- Low consumption of air (cleaning process)
- VERY COST EFFICIENT

BLASTING MEDIA RECOVERY & SEPARATION SYSTEM

Bucket Elevator

The buckets are of seamless type made of 3.15mm thick steel sheet. bucket Elevator is fabricated from MS material of 5 mm thick at boot section 3.15mm thick at trunk and top section, respectively A one-piece cast iron pulley, which has been crowned for tracking & rubber lagged to prevent slippage, are located in the boot & head section of the elevator to drive the belt.



All abrasive recovery system include three basic functions :

- Delivering the abrasive which rebounds off the workpiece too a central recovery point.
- Transporting the abrasive from that central point to an abrasive cleaner.
- Removing dust, fines & other unwanted material from the abrasive before it enters the blast machine to re-use.

Mechanical Recovery System

Consists of Bucket Elevator, Abrasive Cleaner & Screw conveyor System

Pneumatic Recovery System

Consists of Mini Hopper, Plenum, Reclaimer & Dust Collector



Abrasive Cleaner

The media separation unit is an air wash rotary screen separator which receives all media and debris from blasted work piece by the bucket elevator. Contaminants are abrasive that passes through the screen then cascade over the air wash where fine contaminants and small abrasive particles are removed Reusable abrasive falls in the machine.

Screw Conveyor

The reclaim floors utilize a heavy-duty screw to return the abrasive to the separator/classification system. The standard screw is 9" in diameter, which consists of a 5" diameter schedule - 40 pipe wrapped with 1/4" thick flighting.

ENCLOSURE



The Modular blast room is specially ventilated and illuminated for enclosed abrasive blasting, and is a fully sealed, dust tight, all steel structure. The components are prefabricated for simple bolt-together erection, with little or not job site welding required. The ENCLOSURE stands by its own structural support without connections to the surrounding facilities. The size of the enclosure depends on

- a) The size of the job
- b) Number of operators
- c) Adequate working space around the job.

it also influences size of the dust collector and reclaimer installation costs.

Air Consumption & Media Delivered

Figures shown are for general reference only; many variables affect actual consumption. Rely on actual experience for job decision - making

Nozzle Model Nozzle Orifice	Pressure System PSI					Air, Media & Power Requirements
	50	60	70	80	90	
No.3 5 mm	26 1.5 6	30 1.8 7	33 2.0 8	38 2.2 9	41 2.4 10	Air (cfm) Media (cfh) Compressor (hp)
No.4 6 mm	47 2.7 11	54 3.1 12	61 3.5 14	68 4.1 16	74 4.5 17	Air (cfm) Media (cfh) Compressor (hp)
No.5 8 mm	77 4.6 18	89 5.3 20	101 6.0 23	113 6.7 26	126 7.4 28	Air (cfm) Media (cfh) Compressor (hp)
No.5 10 mm	108 6.7 24	126 7.6 28	143 8.6 32	161 9.6 36	173 10.5 39	Air (cfm) Media (cfh) Compressor (hp)

Pressure System Ratio: hose ID to nozzle orifice ID should be between 3:1 and 4:1.

Optional Equipments

Several additional equipments are available to increase efficiency of Blast Room System. A few are:

- 🔧 Work car or Trolley For Loading of Job.
- 🔧 Overhead Beam Or Crane.
- 🔧 More No. of Blast Nozzles To Increase Production Output.
- 🔧 Automatic Movement of Blast Nozzle or job or both (for Small Blast Room)
- 🔧 Vacuum Recovery Unit For Collection of Abrasive From Intricate Parts /Portion of The Job

Abrasive Blasting Machine

Blast Rooms are generally provided with P7-501R and P7-1001R models. During the blasting process, the mushroom valve and exhaust valves are closed, the vessel is pressurized and the media is forced out through the feed valve to the nozzle. when the blasting ceases, the vessel is depressurized by opening the exhaust valve. The vessel remains depressurized except when blasting in process.

The remote control valve provide in the system releases the pressure, stopping the blasting process thereby ensuring safe working conditions for the operator in case the hose and nozzle drops accidentally.



A complete solution provider in the field of surface preparation provides its expertise for every industries. ABRABALST has designed, manufactured, installed, erected & commissioned huge turnkey projects for various renowned giant industries like BHEL, Air India Hindustan Aeronautics. The various few industries catered by ABRABLAST are as :

Railway Industries

The Diesel Locomotive, Electro Locomotive, Coach Factories, Metro Rails requires surface treatments the blast technology is already used in many applications through out the rail transportation industry and its suppliers ABRABLAST provides technologically proven solutions and eco-friendly meeting pollution norms by using different production methods of internal blasting machines, paint rooms, blast rooms and more.



Wind Mill Industries

Wind Mill structures are affected by varying environmental conditions after their installation & during service. These structures are protected by using different painting technology. ABRABLAST provides vast rooms & paint rooms for wind mill towers.



Aviation Industries

In aviation industries every components are given precise surface treatment to make them safe for the flyers. ABRABLAST provides big blast room system for surface treatment of structures like : wings, rotors, fuselage, engine turbines & components.



Automotive Industries

For Automotive industry ABRABLAST has manufactured variety of typically equipment with high grade of technologies used to combat or minimize the effects of corrosion, reduce frictional energy loss, reduce wear, or to improve the aesthetic appearance of surfaces.



Offshore Industries

The oil extractor structures submersed in sea water are severely & directly affected for contamination of the structures in the field of offshore drilling industries. ABRABLAST has provided vast blast rooms & paint rooms for off shore structures.



Marine Industries

The Turnkey structures of the ships under manufacturing is one of the challenging task to protect those Structures from high humidity effect of high seas The common structures hulls, belly, deck & various parts of in the Marine Industry required to be cleaned and painted. The engineering expertise of ABRABLAST has many references of preservation lines, blast room and the materials handling equipment located all over the world.



Power Industries

In the power generating units the structures & components are directly affected with water falling from the heights steam gases burner & atomic reactions and require frequent maintenance for enhancing the service life. ABRABLAST manufactures and provide solution through blast room system & preservation line.





BLAST ROOM SYSTEM

- ▲ BLAST ROOM ENCLOSURE
- ▲ BLAST ROOM DOORS
- ▲ DUST COLLECTOR FOR BLAST ROOM
- ▲ BLASTING MEDIA RECOVERY SYSTEM
- ▲ BLAST ROOM ACCESSORIES



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