Blastechnik

Productivity by Design

blastroom applications

- *Lowest cost per square meter blasted.*
- *Environmentally friendly non-polluting facility.*
- *Operator friendly and safe working environment.*
- *High quality surface preparation and finishing.*

www.blastechnik.com

About Us

A BLASTROOM FOR EVERY APPLICATION

In today's competitive manufacturing environment there is a constant drive to find more economical, environmentally friendly solutions for surface preparation, blast cleaning and finishing applications.

Our range of high quality, dependable and innovative blastrooms satisfy this requirement, providing a fully sealed blasting enclosure to perform abrasive blasting, grit blasting, bead blasting and surface preparation and finishing operations.

HIGH PRODUCTION & LOW POLLUTION

With the installation of one of our standard or custom built blastrooms you will have a surface preparation facility that provides:

- Lowest cost per square meter blasted.
- Environmentally friendly non-polluting facility.
- Operator friendly and safe working environment.
- High quality surface preparation and finishing.








Dangerous chemical paint stripping and sand blasting operations as well as environmental pollution can be eliminated with the installation of operator safe and environmentally friendly blast cleaning equipment.

We do not believe in a "one size fits all" philosophy for blastroom selection. Different applications require different solutions in order to meet the blasting and throughput requirements. Careful consideration of these requirements will permit the selection of the correct blastroom.

We offer a selection of blastrooms designed and built for specific applications, including blastrooms for blasting steel fabrications, ship blocks and wind towers; blastrooms for blasting with steel abrasives, plastic media, garnet and non ferrous abrasives, as well as portable, dual abrasive and combination blast and paint rooms.

We welcome your enquiry and look forward to working with you to satisfy your blasting and surface preparation requirements.

Blastrooms

TruGrit Blastroom

The most common use for a blastroom is for surface preparation of fabricated steel items prior to the application of a protective coating.

The most economical way to blast items manufactured from steel, is with steel grit. This tough angular abrasive can be recycled up to 200 times, resulting in minimal abrasive consumption per square meter.

Blast cleaning costs decrease as the number of times the abrasive can be recycled increases. Our steel abrasive blastroom is built specifically for use with steel grit, recovery and room components are built with additional strengthened components and wear points are eliminated.

Steel abrasive blastroom design features include:

- Mulitiple operators are able to blast in the blastroom at the same time.
- Low energy consumption TruGlide abrasive recovery floor system manufactured to minimize running and maintenance costs. Modular bolt together design permits quick and easy installation. Grating and floor pans included. With minimal moving parts inside the blastroom the TruGlide recovery floor system requires very little maintenance.
- Lowest per square meter blasting cost. Our equipment design ensures the optimal use of the steel abrasive, good abrasive is not wasted, and waste product is not recirculated.
- Our high efficiency TDF dust collectors provide maximum visibility in the blastroom and ensure surrounding work areas (especially the painting area) are not contaminated with dust escaping from the blastroom.

Wind Tower Blastroom

The blasting of wind towers requires high quality surface preparation and high production rates. Our wind tower blastrooms are designed and engineered to meet both of these requirements.

Due to the large surface area of the wind tower multiple blasters are required. The wind towers are blasted with steel grit and abrasive is recovered with the Polyglide sweeper recovery floor. This robust and durable recovery floor is able to easily handle the high volume of abrasive being used. The recovery floor may be designed to provide continuous abrasive recycling, or in the case of smaller wind towers the abrasive may be brushed/blown into a recovery trough after blasting has been completed.

Abrasive from the internal of the tower is removed and recycled by high powered vacuum recovery units.

To ensure maximum visibility, and a dust free environment in surrounding areas, the wind tower blast room is fitted with a high efficiency TDF ventilation dust collector. In instances of extremely large wind towers the ventilation air is recycled to the blastroom and processed through a dehumidifier to reduce the relative humidity level within the blast room enough to prevent flash rusting occurring on the freshly blasted surface.

Blastrooms

Ship Block Blast & Paint Facility

The blasting and painting of fabricated ship blocks requires a climate controlled environment in which to process the parts due to the size of the items and the time required to process them. The blocks can be processed in a combination, or separate blasting and painting chambers.

Our ship block blasting and painting systems are designed to minimise initial installation and subsequent production running costs. Where more than one chamber is installed, if possible, we will share ventilation, blasting and recovery equipment to minimise capital outlay.

When used in combination rooms our uniquely designed blasting and painting exhaust plenum permits quick change over from blasting to painting mode. Blasting ventilation airflow is produced by our highly efficient TDF ventilation dust collector which ensures the required air changes per hour are maintained.

In locations with high humidity (>50%RH), immediately after blasting the large steel structure is susceptible to flash rusting. To prevent this our blasting ventilation system incorporates dehumidification equipment to reduce the relative humidity level in the blast chamber. During blasting, and prior to primer painting, the humidity level within the blasting chamber is maintained at approximately 50% RH. This low humidity level will greatly slow down the corrosion rate of the freshly blasted steel surface and will prevent rust bloom occurring.

In painting mode the humidity level within the painting chamber is maintained at approximately 75% RH. This level is below the maximum RH level required by IMO and most common paint application specifications, ie 85% RH.

Blasting is conducted with multiple blast pots fitted with remote controls that permit the operator to select blasting or blow down mode.

Abrasive recovery from the ship block internal sections is performed by high powered vacuum recovery units and deposited into an anti-flood recovery screw conveyor, along with abrasive recovered from the blasting chamber floor.

Abrasive and waste are processed through a Rotary Grit Cleaner to remove all dust and oversize waste from good reusable abrasive and ensure only good clean abrasive is recycled to the abrasive storage hopper, good abrasive is not wasted and waste product is not recirculated.

Dual Abrasive Blastroom

As items produced from stainless steel become more common, steel fabricators are frequently required to abrasive blast stainless steel products. However this presents a problem as carbon steel and stainless steel products cannot both be blasted with the same abrasive as this would result in ferrous contamination on the stainless steel surface. Stainless steel must be blasted with an abrasive that will not contaminate the surface, ie glass and ceramic beads, garnet, aluminium oxide etc.

Our dual abrasive blastroom has been developed to offer a cheaper space saving option to having separate blastrooms for ferrous and non ferrous parts. The dual abrasive blastroom enables both carbon steel and stainless steel items to be blasted using different blasting media in the same facility. Change over from one abrasive type to the other is fully automatic and is achieved by the switch of a button.

The recovery of the abrasive is through our W Series pneumatic conveying recovery floor and the different abrasive types are automatically separated into 2 separate storage hoppers ready for reuse. The recovery system is fully inter-locked to prevent cross contamination of the different abrasive types.

Blastrooms

W Series Modular Blastroom

The W Series Modular Blastroom is designed and built to allow quick, easy assembly on site and to provide a safe, efficient, environmentally clean facility to carry out abrasive blast cleaning. The room is suitable for use with most commonly available recyclable abrasive types, ie steel grit, aluminium oxide, glass beads, ceramic beads, stainless steel shot, cut wire etc. The equipment is designed to permit quick and easy clean out to change to other abrasive types if required.

The facility consists of a bolt together blasting enclosure fitted with a W Series pneumatic recovery floor covering the whole working area of the floor. The W Series floor is used to both ventilate the blastroom and recover the spent abrasive media simultaneously. The strength of the W Series floor modules enables rail track to be run directly on top of the floor, no special foundations are required.

The system operates on the principle of vertical downdraught ventilation air movement, to immediately capture dust and abrasive.
The highly efficient down draught ventilation technique provides excellent visibility, increases productivity and ensures surrounding areas and operators are not subjected to nuisance dust and abrasive particles. The abrasive recovery and blastroom ventilation airflow are generated through a high efficiency TDF dust collector.

The low profile height of the floor modules permits the W Series blast room to be located directly onto a flat concrete floor. If the blastroom floor level is required to be flush with the surrounding factory floor level the entire blastroom can be situated into a pit approx. 275mm deep.

During operation the abrasive is continually recovered and recycled, good reusable abrasive is separated from dust and oversize particles ensuring only correctly sized and fully cleaned abrasive is returned to the blasting pots.

The W Series Modular Blastroom is supplied with ASME certified blast pot and NIOSH approved operator safety equipment. Included in the facility as standard is a rubber roll up access door, manufactured from a tough abrasion resistant rubber. The rubber roll up door greatly reduces the total floor space required and reduces noise levels emitted from the blastroom.

Plastic Media Blastroom

Plastic media blasting (PMB) is ideal for a wide range of uses including paint removal, mold cleaning, deflashing and deburring and is suitable for the treatment of soft or delicate substrates i.e. aluminium, fibreglass and composites. Coatings can be removed layer by layer without damaging or etching the underlying surface.

Plastic media blasting is commonly used on aerospace components which are inherently of high value. For this reason the blasting process must be tightly controlled to avoid blasting damage to valuable parts.

PMB is an environmentally friendly, safe and cost effective alternative to wet chemical stripping and significantly reduces the generation of hazardous waste.

Our PMB blastroom is designed and built specifically for the unique requirements of using plastic media as the blasting abrasive. Media recovery is accomplished with our P Series pneumatic conveying recovery floor to ensure no abrasive breakdown occurs during recovery.

Reusable plastic media is separated from dust and paint chips in a 4 stage high efficiency reclaim separator. This fully adjustable unit ensures only correctly sized and fully cleaned media is returned to the blasting pot. Precise abrasive metering permits micro adjustment to obtain the perfect abrasive flow rate. The blasting pressure is controllable from inside the blastroom, enabling the blasting operator to monitor and adjust the blasting parameters from inside the blastroom without having to stop blasting.

Blastrooms

Portable Blastroom

Our range of portable blastrooms allows the blasting facility to be brought to the work site location, rather than bringing the parts to a fixed location blastroom. This range of blastrooms is ideal for blasting and painting contractors performing project based work at various locations.

The portable blastroom is manufactured either as a custom built fabrication, or from a used 20 or 40 foot shipping container. The blasting chamber and machinery room, containing the blasting pots, dust collectors and abrasive recycling system, are separate units and the whole system is a bolt together design to allow it to be dismantled, transported and reassembled at other work sites. Larger blastrooms are built from smaller sections with each section having built in forklift lifting channels to permit easy movement.

All portable blastrooms are fully water proofed enabling them to be located outside regardless of the weather conditions. Rubber roll up doors and TDF dust collectors are incorporated to increase productivity and minimise floor space.

Several configurations of recovery floor are available to suit the blasting through-put requirements, ranging from a brush in pneumatic recovery hopper located at one end of the blastroom through to a full floor recovery system. All floors are suitable for use with commonly available recyclable abrasives.

Abrasive Recovery System

If you are currently blasting steel items with an expendable abrasive, ie mineral slags, silica sand etc, you can reduce your blast cleaning costs by as much as 75% by converting to blasting with steel grit. This tough angular abrasive can be recycled hundreds of times, resulting in minimal abrasive consumption per square meter. Blast cleaning costs decrease as the number of times the abrasive can be recycled increases.

The key to cost savings achieved by using steel grit is the abrasive recovery and recycling system. In order to produce high quality blasted surfaces, and maximise the abrasive life, the abrasive must be thoroughly cleaned between blasting cycles to ensure only good, clean and correctly sized abrasive is returned to the blasting nozzle.

We offer a range of abrasive recovery and recycling systems including; vacuum recovery units, pneumatic conveyors, sweeper floors, cyclone reclaimers, bucket elevators and rotary grit cleaners. All systems can easily be configured to fit into an existing blasting chamber or shed converted into blasting chamber.

It is a fairly straight forward operation to convert a suitable enclosure into a blastroom. With the addition of an abrasive recovery system and a ventilation dust collector all the costs and environmental concerns associated with open blasting can be eliminated and cost savings can be realised by switching to recyclable steel grit.

TDF Dust Collector

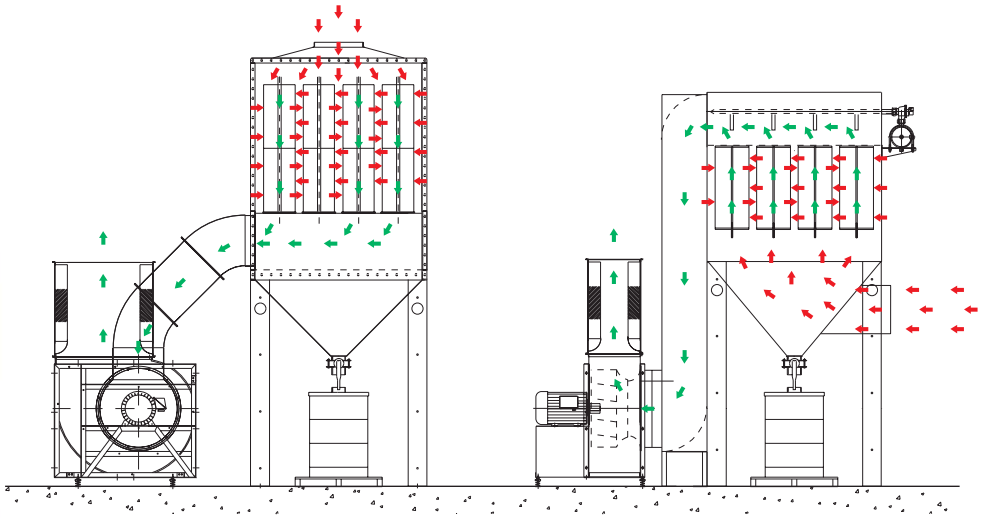
All our blastrooms are supplied with TDF (tru downflow) dust collectors to generate the blasting ventilation and or abrasive recovery airflow.

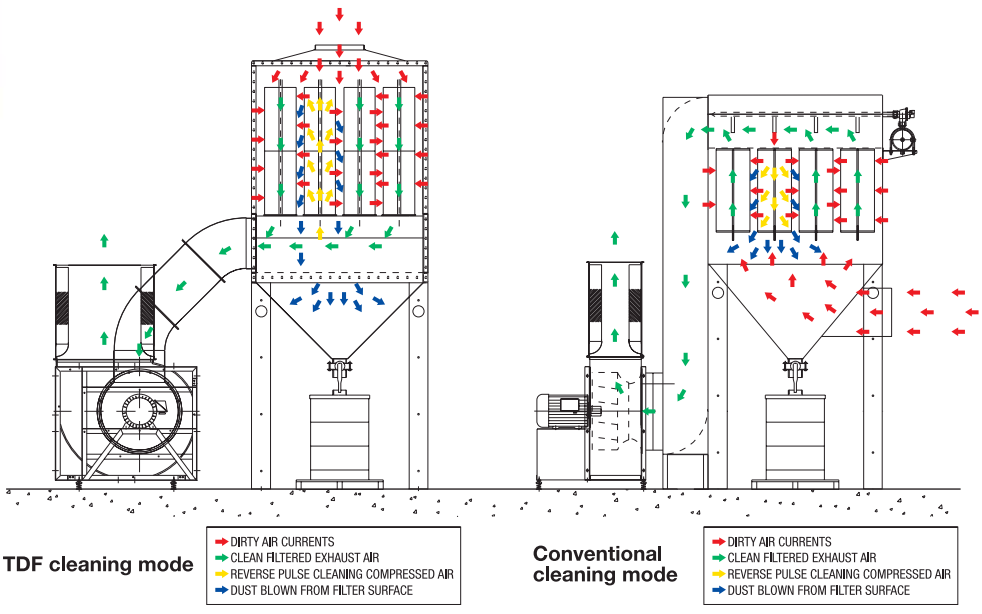
The TDF dust collector is uniquely designed. Unlike convention cartridge type dust collectors, in which dust pulsed from the filter cartridges is falling downwards into an incoming up-flow air stream, our design is the total opposite. The dust laden incoming air flow is from the top of the collector and the filter cartridges are pulsed clean directly into the outlet collection hopper. The airflow through the dust collector and the direction of the dust pulsed from the filter cartridges is the same direction. This unique feature greatly increases the filter cleaning efficiency and prevents the filter cartridges becoming clogged with dust. This results in the dust collector providing constant performance and extends the life of the filter cartridges.

Vital to running an efficient blast cleaning operation is the performance of the dust collector. If this is either designed incorrectly or not functioning correctly the consequences are serious;

- Abrasive is not cleaned properly between cycles.
- The blastroom is excessively dusty, dust leaks out of the blastroom and contaminates surrounding areas and workers.
- The work piece is dirty and coated with a layer of black dust.
- Dust is emitted to atmosphere causing environmental damage.

Our TDF dust collectors are designed specifically for use in the harsh environment associated with blast cleaning operations, and will eliminate all of the above issues. The TDF dust collector is also available as an upgrade to existing blasting equipment fitted with inefficient, under capacity or badly designed dust collectors.





Blastroom Optimisation & Ancillary Equipment

We produce a range of ancillary equipment to complement blastroom facilities and improve productivity and ease of use.

RUBBER ROLL UP DOOR This space saving design, provides perfect blastroom door sealing and reduces the noise level emitted through blastroom doors. The rubber roll up door is manufactured from a tough abrasive resistant rubber and is braced across its width to provide rigidity and support. An electric motor and gearbox provides the necessary power to raise and lower the door and limit switches automatically shut off the drive once the door has raised or lowered. Rubber roll up doors are available up to 12 meters wide.

WORK HANDLING In order to assist in processing the workpiece through the blastroom we supply a variety of work handling methods including trolleys, monorails, turntables etc. Options include wireless remote controlled cable and winch systems. Our designs permit work pieces up to 50 tonnes to be shifted with ease.

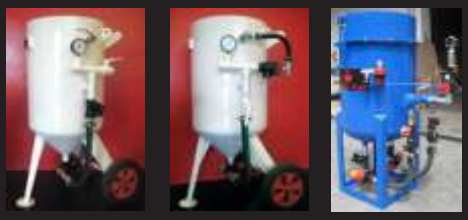
TRUGLIDE RECOVERY FLOOR

Simple Price - Less materials reduces capital investment and cost.

Simple Installation - Modular bolt together design for fast simple installation.

Simple Operation - Minimal moving parts keeps wear to a minimum.

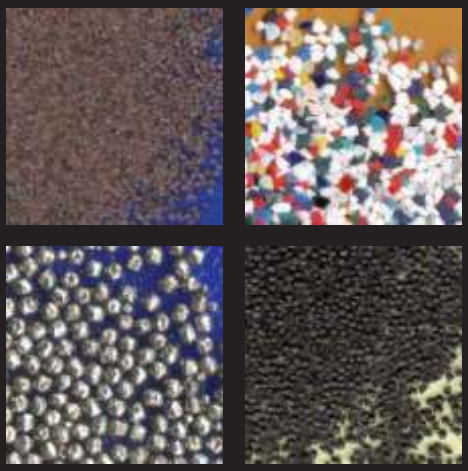
Simple Maintenance - A few hand tools and half a day per month.



BLASTING POTS Variety of capacities. Pressure release and pressure hold configuration. ASME certified, CE marking. Multiple outlet. Bulk blasters. Mini blast pot.

AIRBLAST ACCESSORIES Remote control valves & handles. Abrasive metering valves. Blast hose, couplings & nozzle holders. Blasting nozzles. Moisture separator. Blast lights.

OPERATOR SAFETY EQUIPMENT NOVA2000 helmet. Radex breathing air filter. Blasting suits. Lenses and ancillary equipment.



ABRASIVES Plastic Media. Ferrous and Non Ferrous Cut Wire. Aluminium Oxide. Glass Beads. Ceramic. Stainless Steel Shot. Steel Shot. Steel Grit. Walnut Shell. Zinc Shot. Silicon Carbide. Garnet.

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www.blastechnik.com

Blastechnik Pte Ltd
10 Admiralty St #02-69 North Link Building
Singapore 757695
Tel. +65 6505 9098 Fax. +65 6245 8785
sales@blastechnik.com