Blastechnik Blastrooms

BLASTROOMS

Lowest Cost Per Square Meter Blasted.

Environmentally Friendly Non-polluting Facility.

Operator Friendly and Safe Working Environment.

High Quality Surface Preparation and Finishing.







From the smallest aircraft component, precision stripped with gentle plastic beads, through to bulk tanker ships the size of 3 football fields blasted prior to protective painting. All these, and everything in between, have been blasted in a Blastechnik Blastroom.

That 0.6mm thin layer of paint, applied to the surface of steel, is all that is going to protect the steel from the elements and corrosion for many years.

And critical to that paint sticking to the surface of the steel is how well the steel is blasted before it is painted. If the blasting ain't right the painting won't be right. And to get the blasting right you need the right equipment.

Whether you are a manufacturer, blasting and painting your own parts, or a sub contractor blasting and painting for others, as a blastroom owner/operator you need a blastroom that is going to produce high quality finishing and be reliable, environmentally friendly and energy efficient.

All our equipment is designed and thought through in order to help you achieve this. Every day we get new challenging requirements for blastroom applications. We love working on engineered projects to meet our clients specific requirements. We provide cost effective, reliable and value for money blastrooms.

We welcome your inquiry and look forward to working with you to satisfy your blasting, surface preparation and spray painting requirements.

TruGrit Blastroom

BLASTROOMS

The Trugrit blastroom is designed and built to provide steel fabricators and processors with the highest quality cleaned and blasted surfaces at minimal operating and equipment investment costs.

Based on a modular bolt together design, even the biggest sized blastrooms can be assembled, commissioned and put into production in the minimum amount of time.

Moving parts and hard abrasive do not mix well in a blastroom. The TruGlide Abrasive Recovery Floor virtually eliminates all moving parts from inside the blastroom. Below the blastroom perforated floor grid are a series of recovery channels into which blasted abrasive and waste fall.

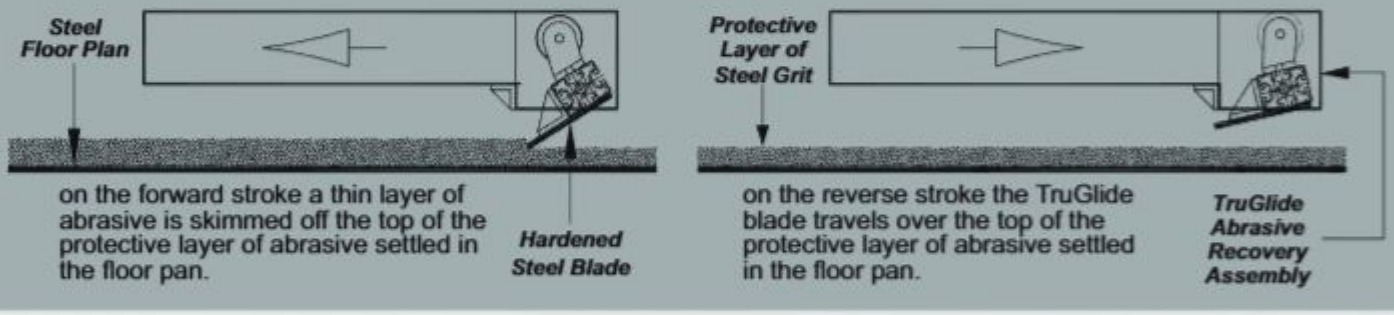
Each channel is fitted with a tough powder coated rack assembly containing a hardened steel blade that travels up and down the length of the blastroom to recover the abrasive and removed contaminants.

With fast and easy installation, low power consumption and minimal maintenance and consumable costs, the Blastechnik TruGrit Blastroom will reduce your blasting costs and increase the quality of your blasted products.

The TruGrit blastroom design features include:

- *Multiple operators are able to blast in the blastroom at the same time.*
- *Lowest per square meter blasting cost. The equipment design ensures the optimal use of the steel abrasive, good abrasive is not wasted, and waste product is not recirculated.*
- *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.*

TruGlide Recovery Floor Operation



SIMPLE PRICE

The TruGlide Abrasive Recovery Floor does not require a lot of materials to make, therefore we can keep the costs down and sell to you cheaper. Our scope of supply also includes steel floor pans and grating so you won't have any unpleasant hidden cost surprises having to supply these items yourself.

SIMPLE OPERATION

The simple minimal moving parts design ensures the TruGlide Abrasive Recovery Floor keeps on running. Press the start button and start blasting and the recovery floor will take care of returning and cleaning the abrasive ready to reuse.

SIMPLE RUNNING COSTS

The TruGlide Abrasive Recover Floor is extremely energy efficient. Full floor abrasive recovery can be achieved in small blastrooms for <10kw. Even very large blastrooms require approx. 15kw for full floor recovery. This minimal power requirement can provide abrasive recovery for multiple blasters and is a fraction of the power required for pneumatic and vacuum recovery systems. The TruGlide Abrasive Recover Floor will provide you with substantial yearly power bill savings.

SIMPLE INSTALLATION & MAINTENANCE

The TruGlide Abrasive Recovery Floor is a modular bolt together design. You supply a simple concrete foundation, to our design, and the floor drops and bolts together. The recovery floor is quick and easy to install. Within a very short period you will be up and running and blasting in production. No moving parts inside the blastroom ensures minimal maintenance is required. Regular checking and adjusting with a few hand tools is all that is required.

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 downdraft ventilation air movement, to immediately capture dust and abrasive. The highly efficient down flow 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/CE certified blast pot and NIOSH approved operator safety equipment. Included in the facility as standard is a Dura-Door 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.

Shipblock 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.

n painting mode the humidity level within the painting chamber is maintained at approximately 75% RH.

Ithis 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 Ferrous / Non Ferrous 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.

Portablast On Site Blast & Paint

Porta-Blast is a range of portable blasting and painting ventilation and abrasive recovery equipment all designed for on site use. Porta-Blast equipment is built into standard shipping containers. A flat concrete slab is required to position the system onto.

The equipment is bolt together design to allow simple assembly and disassembly. When relocation between worksites is required the equipment is disassembled and packed inside the shipping container. Upon arrival at the new worksite the container is unstuffed and reassembled.

Porta-Blast utilises a light weight fabric shelter, suspended between the containers, to form a spacious temporary blastroom or spray booth. The fabric shelter may also be disassembled and loaded into container when relocation is required.

During blasting the TDF dust collector is used to provide the ventilation airflow through the blastroom. This will provide adequate ventilation to prevent escape of dust and ensure a high level of visibility for the blasting operator.

During painting powerful exhaust fans, fitted inside the painting module create the required air flow to remove spray painting vapors and solvents from inside the enclosure.

Ventilation air is drawn through the working area to provide operators a safe and overspray free area in which to work.

After blasting the used abrasive is either vacuum or manually recovered from the floor. passed through a recovery and classifier system to remove all waste and dust.

It can then be directly reloaded into the blast pot or passed through a two stage separator to segregate good reusable abrasive from dust and oversize particles and ensures only correctly sized and fully cleaned abrasive is reused.

Combo Recovery & Ventilation System

The Blastechnik Combo is an economic system to convert any small to medium size building or shelter into a blastroom. A wide variety of reusable abrasives can be used with the system.

It utilizes one TDF dust collector to both ventilate the blastroom during blasting operations, and to recover the abrasive after blasting has been completed. Instead of two separate systems, and capital investments, one set-up accomplishes all. Selection between ventilation mode and recovery mode is accomplished at the press of a button.

In blasting mode the TDF dust collector provides adequate ventilation airflow through the blastroom to prevent escape of dust from the blastroom and ensure a high level of visibility for the blasting operator. During blasting mode the abrasive recovery system is not running and the blastroom is operated until the blast pot and storage hopper are emptied of abrasive.

In recovery mode the TDF dust collector is used to provide the recovery airflow to pneumatically recover the blasted abrasive. After blasting the used abrasive is manually brushed and blown from the blastroom floor to the pneumatic conveying duct located at the closed end of the blastroom.

Once cleaned the recovered abrasive is stored in a storage hopper prior to being automatically recycled to the blasting pots.

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.

Shipping Container Blastroom

Both 20' and 40' new or used shipping containers can be converted into a blastroom. With the addition of a steel floor and rubber curtains the internal is protected from harsh abrasives.

A ventilation dust collector fitted to the blank end creates the airflow to ensure good visibility and prevent dust leakage.

Abrasive recovery can be set up as manual, semi-automatic or fully automatic depending on the through put requirements.

To save costs we offer the option of you supplying and modifying your own container to our design drawings. We will supply all the equipment, components and fittings, that you can then install into the modified container.

Shipping container blastroom conversions can be designed for either internal or external use.

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.

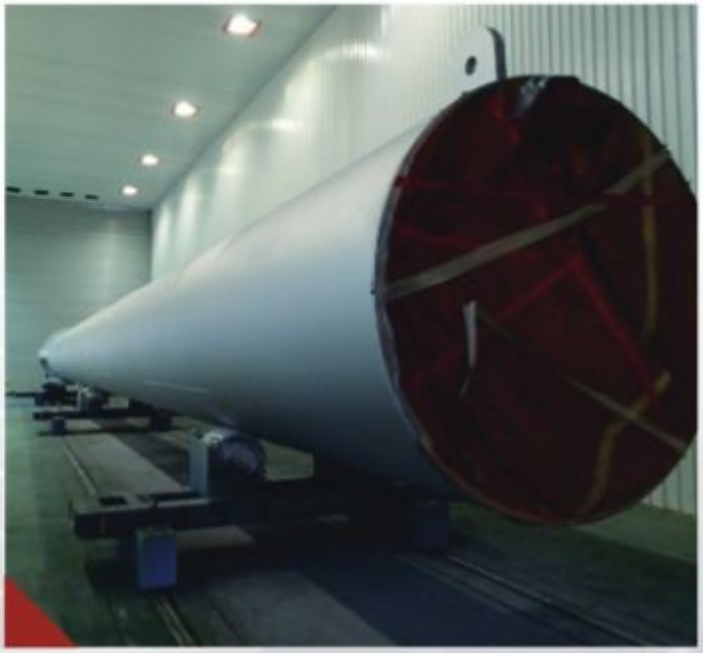
Open Spray Ventilation

Large building internal areas can be converted into open spray areas with the addition of spray painting exhaust plenums to evacuate paint over spray and prevent the build up of dangerous levels of toxic or explosive vapors and fumes. Spray painting equipment is interlocked to the exhaust system to prevent spraying without fans running.

The plenums are fitted with non sparking impeller and externally mounted electric motors to prevent explosion hazards from sparking. Exhaust fan inlet silencer reduces operators exposure to fan noise.

Progressive woven fiber glass outlet filters efficiently trap paint over spray and reduce environmental pollution from the exhaust air stream. If required electrical controls provide pre and post painting air change purges to ensure no dangerous levels of residual gas and fumes remain after painting. Digital or analogue differential pressure gauges, with auto shut down if required, provide visual feed back of condition of filters and amount of blockage.

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 TruGrit 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.

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.

Vacuum Recovery

The perfect solution for a temporary blastroom set up, or blastrooms with low production requirements. The Blastechnik Abrasive Vacuum Recovery Unit is produced in 7.5kw to 90kw models to suit the recovery rate requirements.

These will achieve 0.5 to 12 tonnes per hour recovery rate with various abrasive types. Abrasive collection is by operator walking around the blastroom floor with a vacuum pick up tool.

The heart of the unit is a German manufactured positive displacement vacuum pump which provides high vacuum recovery rates whilst requiring minimal electrical power. The power of the vacuum eliminates stalling and plugged hoses when blocked.

The recovered abrasive is automatically cleaned of dust and oversize waste prior to being deposited into an abrasive storage hopper.

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.

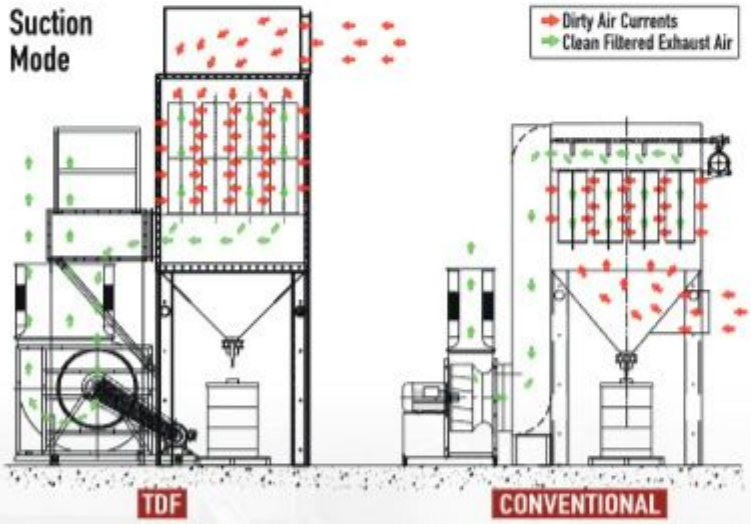
The airflow through the dust collector and the direction of the dust pulsed from the filter cartridges is the same direction. This unique feature greatly increases the filter cleaning efficiency and prevents the filter cartridges becoming clogged with dust.

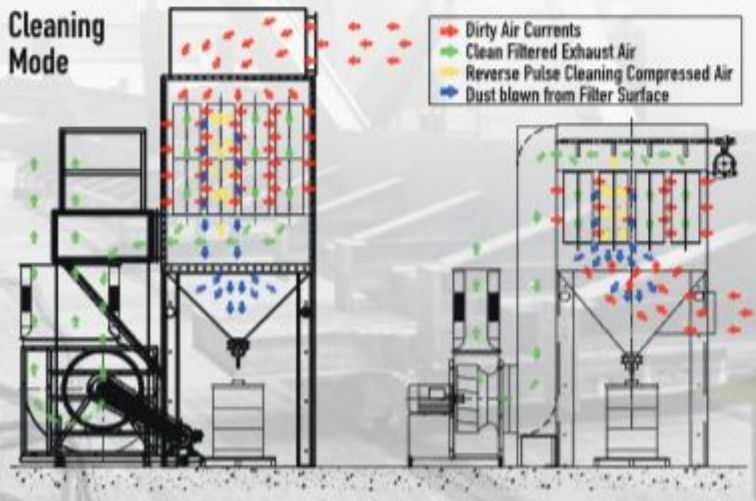
This results in the dust collector providing constant performance and extends the life of the filter cartridges

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.**

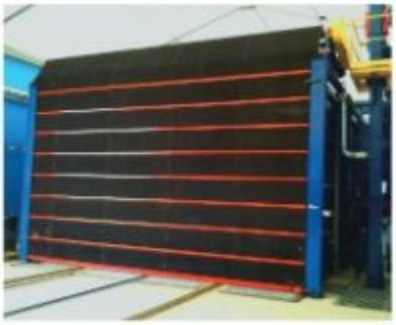
Our TDF dust collectors are designed specifically for use in the harsh environment associated with blast cleaning operations, and will eliminate all of the above issues. The TDF dust collector is also available as an upgrade to existing blasting equipment fitted with inefficient, under capacity or badly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



DURA-DOOR RUBBER ROLL UP DOORS

Save factory space and keep the blasting noise down at the same time. Dura-Doors are made from a 6mm thick tough rubber that will last for years.

Designed to be roof or front mounted to suit the requirements. The Dura-Door is available as a modernization upgrade to existing blast rooms.

FABRIC FOLD UP DOORS

If you have a large building opening to seal, we have a door to suit your requirements. Cost effective, safety designed and aesthetically pleasing fabric hoist up doors provide full width/height access and good insulation for shipyard blast and paint rooms.

Unlimited door size and built to withstand wind speeds up to 230km/hr.

WORK HANDLING

In order to assist in processing the work piece 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.

DEHUMIDIFIER

For the prevention flash rusting of the part after blasting and prior to painting we have a range of dehumidifiers and coolers specifically designed for blastrooms.

Blastechnik Dehumidifiers will maintain a blastroom environment of 25°C (+/- 3°) @ ≤45%RH, the perfect environment for workers and work piece.

BLASTING POTS

Full range of blast pots to suit your requirements. SuperFlow pots are fitted with steep lower cones for more consistent abrasive flow.

FatBoy bulk blasters allow multiple blasters to operate from one pot. All pots are ASME or CE certified to suit requirements.

OPERATOR SAFETY EQUIPMENT

A comfortable operator is a productive operator. RPB Safety manufactures a full range of comfortable and functional blasting and painting operator safety equipment.

All equipment is designed to optimize safety and productivity and to minimize worker downtime.

SPRAY PAINTING EQUIPMENT

The Paintechnik ATLAS 10 Airless Sprayer can handle high viscosity fluids which require extreme pressure ratios and high flow rates. Interchangeable lower pump assembly for low cost switching to different pressure requirements.

Paintechnik Plural Component Sprayers are available with two and three pump lowers for spraying a wide variety of plural component materials.

BLASTING ACCESSORIES

The alpha-blast range of blasting accessories is tried and tested in the field under real life work site conditions.

We carry a full range including: remote control valves, deadman handles, abrasive metering valves, blast hose, coupling, nozzles and holders etc.

Blastechnik Blastrooms

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