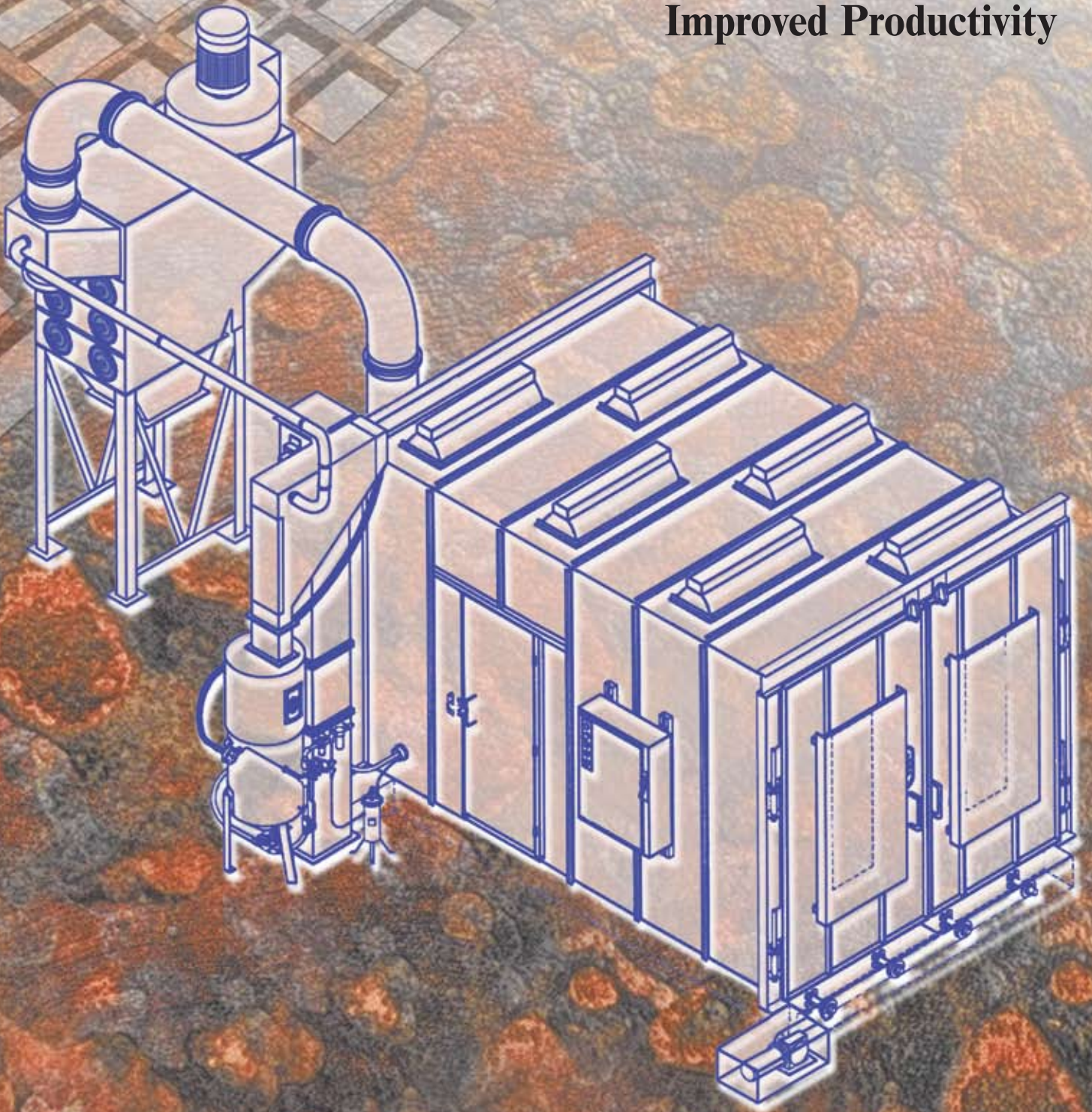




**Quality Engineered for
Environmental Safety and
Improved Productivity**



EMPIRE: A LEADER IN AIR-BLAST TECHNOLOGY FOR OVER 50 YEARS

Air-blasting equipment is our specialty. As a leader in the field, with more than fifty years of experience, Empire has developed a complete line of pneumatic blasting products including portables, cabinets, automated systems and rooms. In the process, we've designed hardware (such as air-wash and cyclonic media recycling systems, and patented features like our Sure-Flo® media regulator and Saf-Stop II™ control handle) which put our equipment ahead of the competition in terms of safety and performance. At the same time, our engineering staff stays abreast of evolving customer requirements to meet the challenges presented by a progressively more demanding marketplace.

When you buy a blast room from Empire, you can count on the fact that it's **furnished** to improve your blasting operations and boost your profits.



Empire Abrasive Equipment Company, headquartered in Langhorne, Pennsylvania, specializes in the development and production of abrasive air-blasting systems.

ENVIRONMENTALLY SAFE

Air-blasting eliminates many of the environmental problems and costs associated with chemical stripping because you don't have to manage or dispose of hazardous liquids.

An Empire blast room provides even greater potential for improving safety and reducing operating costs when you're cleaning, finishing or surface-profiling large work pieces. With the process contained in a specially designed enclosure, blast media and debris are isolated from the external environment. And the operator, equipped with Empire safety gear, is fully protected.

COST EFFECTIVE

A typical Empire room will pay for itself in less than a year through recycling of media. When "low-cost" abrasives such as sand or slag are used, you have to purchase large amounts of media and get rid of equally large amounts, some of which may be considered hazardous. By relying on a blast room, which recycles blast materials, you can move up to media with breakdown rates of lower than 5% per cycle versus the 100% loss of slag or sand.

The example below shows how quickly an Empire blast room can pay for itself. An empty grid to the right is offered so you can make your own comparison.

HOW MUCH CAN A BLAST ROOM SAVE FOR YOU?

Sample Cost Comparison			
(Based on 5,000 lb media use per day)			
	CONVENTIONAL With Silica* (100% Breakdown)	ROOM With Steel Grit (5% Breakdown)	SAVINGS
Media (cost/lb X breakdown rate X lb)	\$.10/lb X 100%	\$.50/lb X 5%	\$375.00
Clean up (Man hours at \$25 per)	\$25 X 4 hrs	\$25 X 0.2 hrs	95.00
Disposal (Based on \$1 per thousand lb)	\$7.00/cycle	\$1.75/cycle	4.25
Extra electrical (For automated recycling—440V, 11.9A)	0	\$5.40/cycle	-5.40
TOTAL PER-DAY SAVINGS			\$468.85

Your Cost Comparison			
(Based on your media use per day)			
	YOUR SYSTEM With? (Breakdown%?)	ROOM With? (Breakdown%?)	SAVINGS
Media (cost/lb X breakdown rate X lb)	_____?	_____?	_____?
Clean up (Man hours at \$? per)	_____?	_____?	_____?
Disposal (Based on \$? per thousand lb)	_____?	_____?	_____?
Less electrical (For automated recycling at power required)	_____?	_____?	_____?
TOTAL PER-DAY SAVINGS OR LOSS			_____?

***Silica sand is not to be used in any Empire blast equipment.**

BLAST-ROOM FACILITY

If you have special requirements, Empire's sales and engineering staff will work with you to develop a top-quality system to fit your specific needs. With more than 50 years' experience producing air-blast equipment, we have the technical and manufacturing resources to do the job right, and provide turnkey installation if desired.

Empire offers two types of blast-room enclosures (Preassembled and Field Erected) in a wide variety of configurations. Once you've decided which type is best for your operation, our engineering department will design your room using proven Empire components.

This field-tested equipment includes: pneumatic recovery systems; bucket elevators; cyclonic and air-wash reclaimers; drum separators; sweep and shovel chutes; vibratory, pneumatic and screw floors; ventilation systems; pressure vessels; blast controls; and safety equipment—everything to assure your Empire blast room performs efficiently, safely and smoothly.

On the following pages, you'll find some examples of the components and capabilities we bring together to furnish **your** blast room.



PREASSEMBLED BLAST ROOM

Preassembled blast rooms are available with many options in a variety of enclosure sizes. These enclosures feature #10-gauge wall/ceiling panels and fully welded construction. Package rooms can be installed quickly. They are normally up and running within a day.



FIELD-ERECTED BLAST ROOM

Field-erected room enclosures are available in dimensions adaptable to almost any requirement. Rugged, #10 gauge wall and ceiling panels can be bolted or welded together. Advantages include: lower shipping costs, greater design flexibility and enhanced compatibility with your specific space and production requirements.

A FULL RANGE OF FIELD-PROVEN COMPONENTS

With an Empire blast room, you can select from a range of proven components for media recovery and reclamation. In addition, we offer many accessories and options designed to maximize productivity in the context of different working environments.

In other words, a room consisting of standard Empire components will meet most application requirements economically.

Rooms are ventilated with long-lasting, easily maintained **cartridge-type dust collector** (shown).

Bucket elevator, with rugged PVC-dacron belting, lifts media from floor level to the reclamation system.

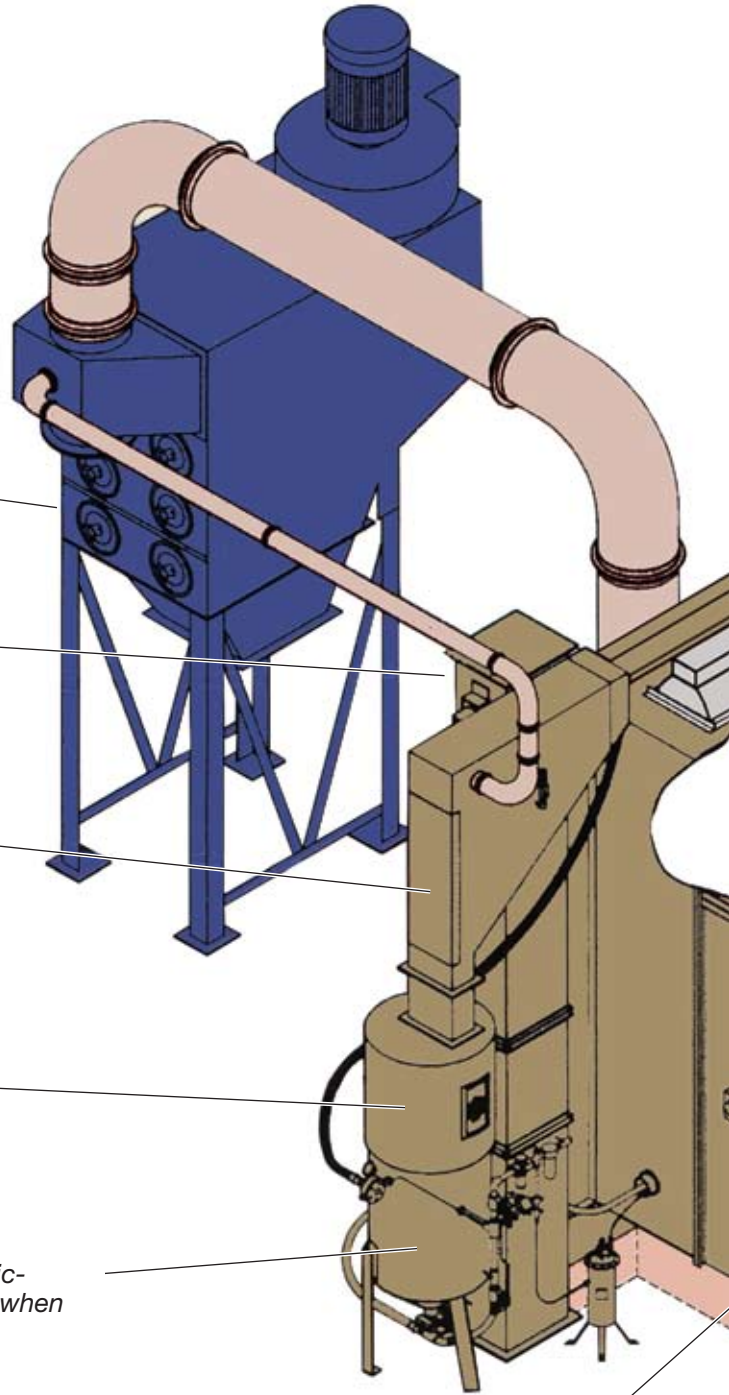
Media air-wash removes oversized particles and dust from the blast media while returning good media to the storage hopper for reuse. **Cyclonic media reclaimers** replace the air-wash in some recovery systems, such as Empire's PRS. Optional **rotary-drum separator** available for heavy contamination.

Media is normally stored in a **cylindrical hopper** sized to and mounted on the pressure vessel for automatic gravity refills. A higher-capacity, **free-standing hopper** can be substituted to lengthen operating cycles when a partial recovery floor is used.

A.S.M.E.-approved **pressure vessels** offer 6-1/2 or 10-1/2 cubic-foot capacity and a 1-1/4" pipe string to provide ample air flow when optional second outlet is required.

OSHA-accepted **safety-interlock switch** and **man-access door**, equipped with panic hardware, can be conveniently positioned along either side wall.

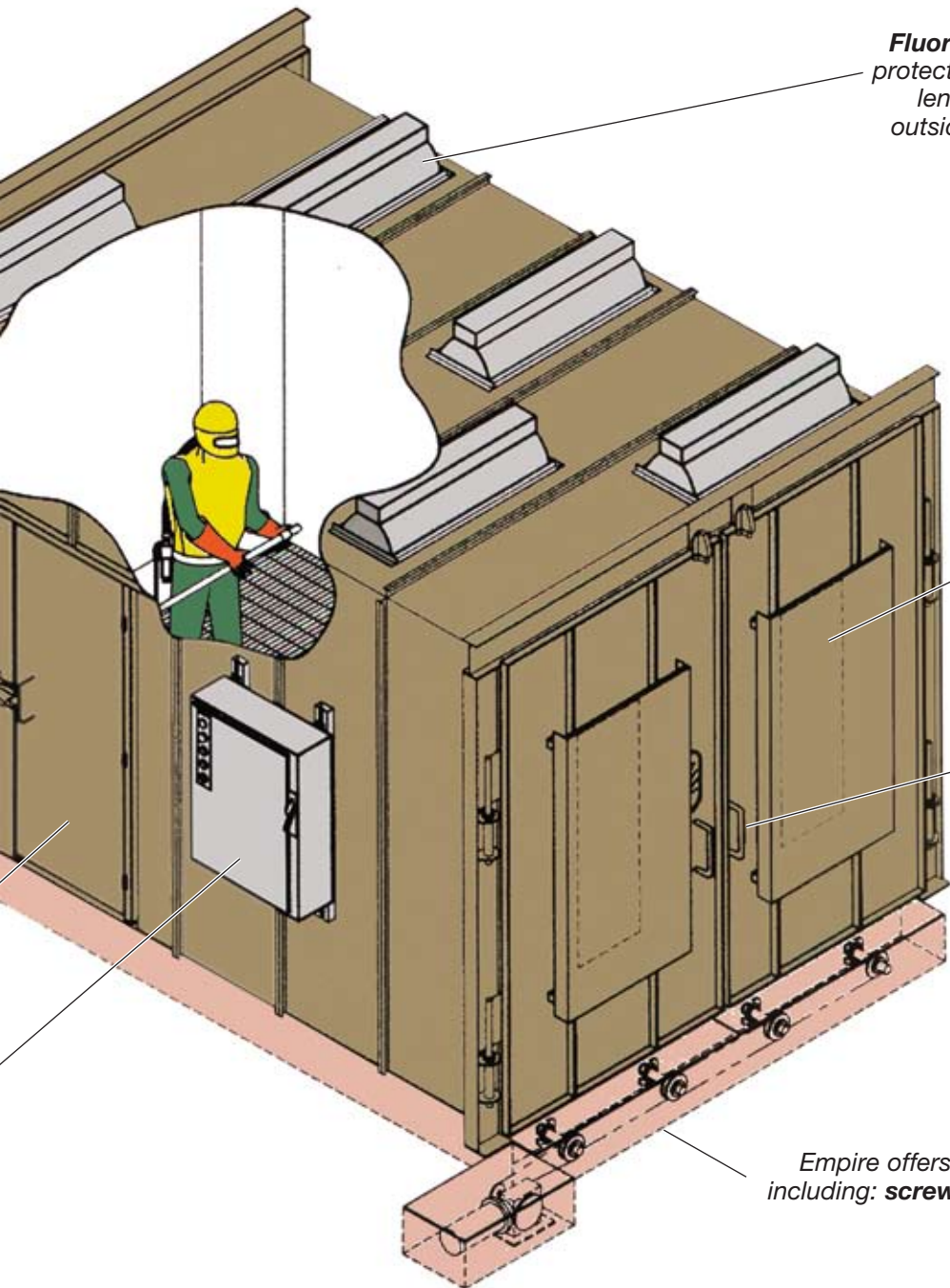
Electrical controls are installed in NEMA-12 enclosures and prewired for easy hookup.



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MANY FIELD-PROVEN OPTIONS

- *Overhead monorail or trolley*
- *Turntables and work carts*
- *Rotary-drum separator*
- *Exterior work stations*
- *Multiple blast outlets*
- *Rubber curtains*
- *Much more!*



Fluorescent lighting on ceiling and sidewalls, protected by clear lexan panels, provides excellent illumination and easy maintenance from outside the blast room. Optional **metal-halide lights** are available for larger rooms.

Air-inlets assure proper cross-draft ventilation.

Work-access doors provide a large entry for loading parts. Rooms can be equipped with doors at both ends to facilitate in-line parts handling.

Empire offers a wide range of media recovery options, including: **screw floors, vibratory floors, sweep chutes** and **pneumatic-recovery troughs**.

THE RIGHT RECOVERY SYSTEM FOR YOUR PRODUCTION NEEDS

Empire offers a full spectrum of media-recovery systems to meet almost any application requirement. These range from our economical pneumatic recovery system (PRS) to configurations incorporating full-recovery floors.

The PRS, which employs the same type of cyclonic reclaimer as our Pro-Finish® blast cabinets, can be used alone or in conjunction with a vibratory or screw floor.

However, with the partial or full floor shown on the facing page, mechanical reclamation is more economical.

Mechanical recovery consists of a bucket elevator and drum separator—or media air wash—that quickly recycle a large volume of media regardless of whether

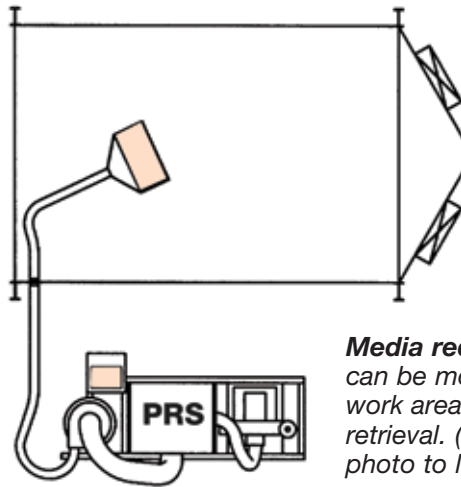
it's introduced through a sweep chute or full floor designed for nonstop production.

Empire floors can be adapted to an existing enclosure or one you build on site.

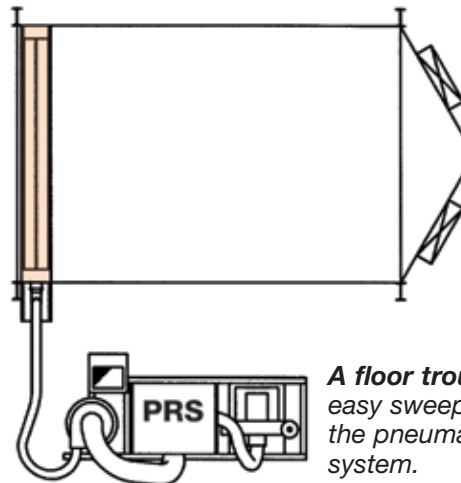
With Empire, you can select the system that's right for you and be confident we'll help you make the best choice. Plus, we offer the option of turnkey installation backed by the best warranty in the industry.



PRS system offers an economical alternative to a full blast room for limited-use operators. In addition to pneumatically collecting media, the unit recycles and cleans abrasives through a cyclonic reclaimer attached to a media-filtration system.



Media recovery hopper can be moved around work area for easy media retrieval. (Shown in photo to left.)



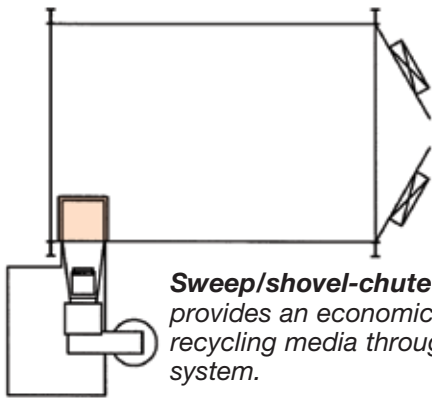
A floor trough permits easy sweep-in delivery to the pneumatic-recovery system.

RECOVERY FLOORS: FROM SIMPLE TO SOPHISTICATED

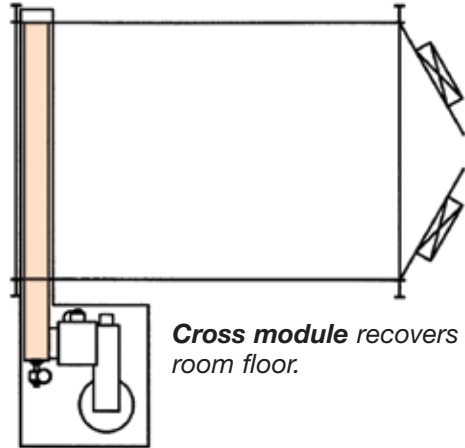
Empire offers recovery floors to meet almost any budget and production requirements. The sweep-chute floor shown below, for instance, delivers the economic and environmental benefits of media recycling at a modest cost.

In higher volume applications where both production speed and labor cost become important considerations, you can select the type of floor (vibratory, pneumatic or screw) and the degree of sophistication best suited for your operation.

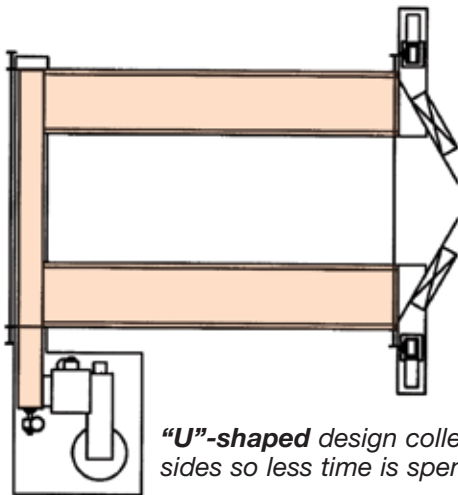
Empire's partial floors are available in single cross-module and U-shape designs. If you require a larger work area, the U-shape, which retrieves media from both sides of the room, can be expanded into an H configuration. Likewise, our full-recovery floors, which eliminate the need for sweeping, can be expanded in modular fashion to handle work pieces of almost any size.



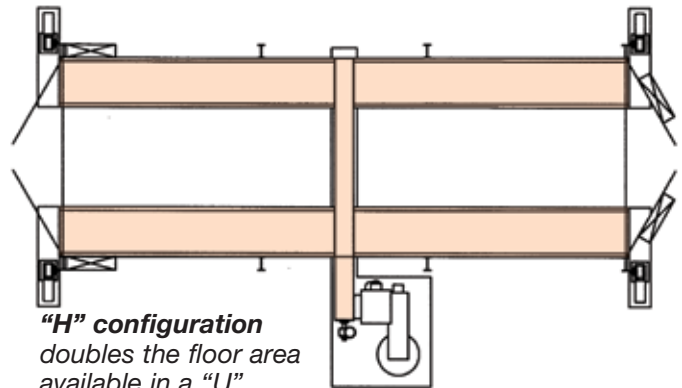
Sweep/shovel-chute recovery system provides an economical method for recycling media through the air-wash system.



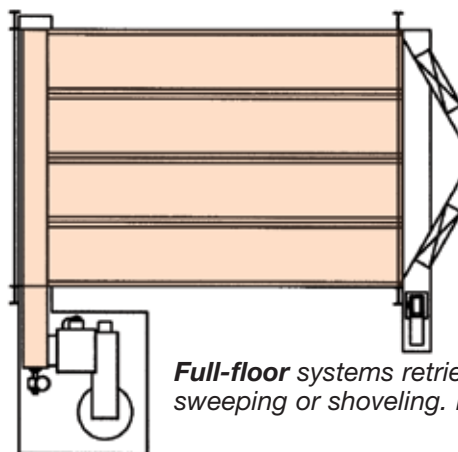
Cross module recovers media from room floor.



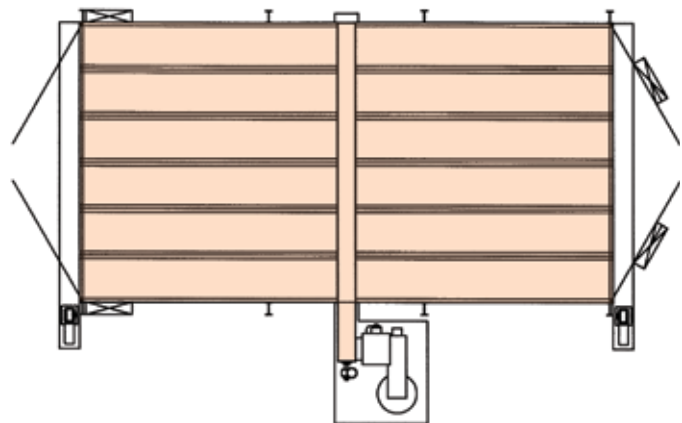
"U"-shaped design collects from both sides so less time is spent on sweep in.



"H" configuration doubles the floor area available in a "U" arrangement.



Full-floor systems retrieve media more quickly and reduce labor costs by eliminating the need for sweeping or shoveling. Floors exceeding 30' feature a cross module between long modules.



OPERATOR SAFETY EQUIPMENT

No blast room is complete without the equipment and clothing required to protect the operator. Empire offers everything you need—all NIOSH approved to comply with OSHA when the operator is fully equipped.

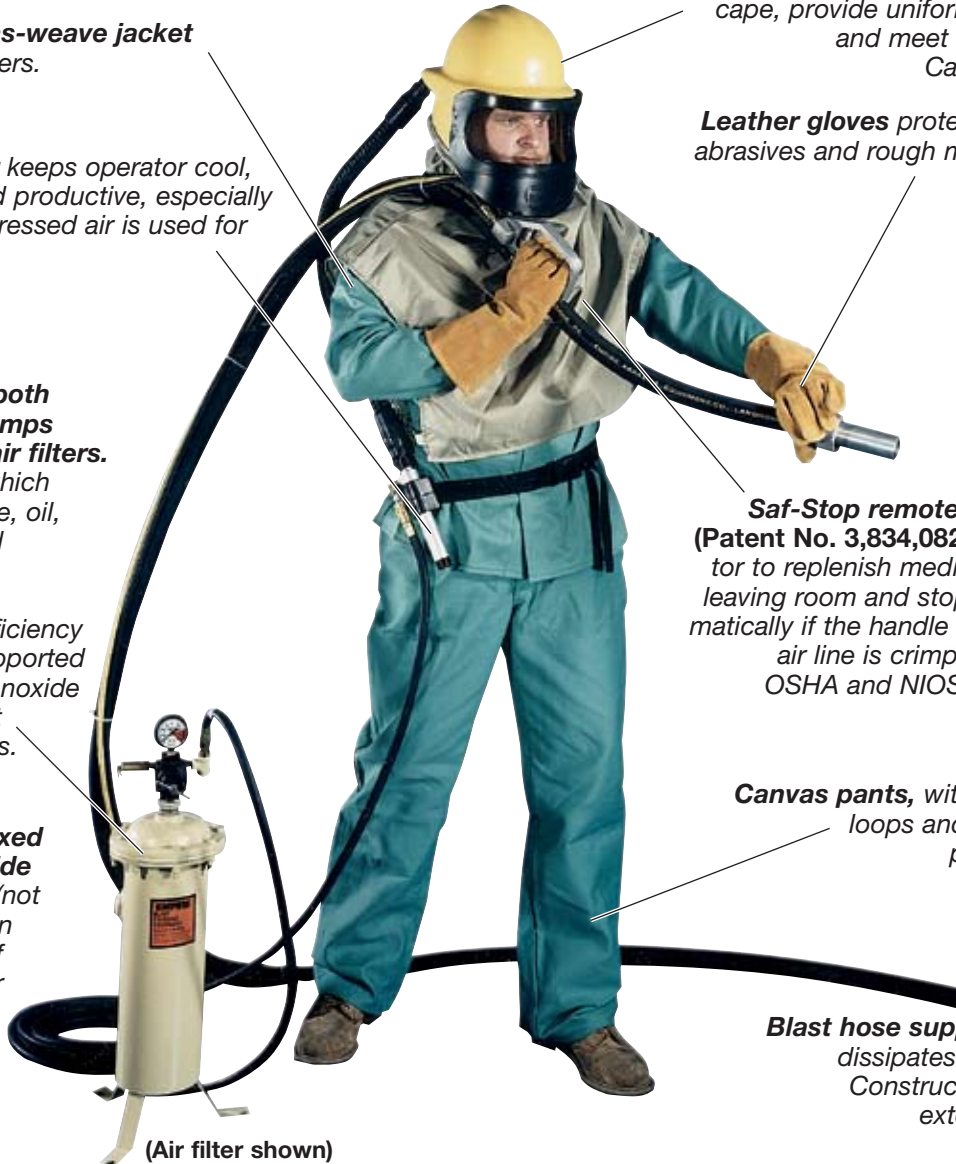
Rugged, canvas-weave jacket has snap fasteners.

Air conditioner keeps operator cool, comfortable and productive, especially when hot compressed air is used for breathing air.

Empire offers both ambient-air pumps and personal-air filters.

The air filters, which remove moisture, oil, fumes, dust and particles from compressed air, provide 99% efficiency but must be supported by a carbon-monoxide monitor to meet OSHA standards.

Portable and fixed carbon monoxide (CO) monitors (not shown) sound an alarm to warn of excess CO in air being delivered to the operator.



(Air filter shown)

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Air-fed helmet, equipped with self-adjusting head band, chin strap and inner cape, provide uniform air distribution and meet both NIOSH and Canadian approval.

Leather gloves protect operator from abrasives and rough material handling.

Saf-Stop remote-control handle (Patent No. 3,834,082) permits operator to replenish media supply without leaving room and stops blasting automatically if the handle is dropped or an air line is crimped or cut. Meets OSHA and NIOSH requirements.

Canvas pants, with reinforced belt loops and snap-fasten fly, protect legs from blast ricochet.

Blast hose supplied by Empire dissipates static electricity. Construction is 4-ply with exterior nylon wrap.

BEST WARRANTY IN THE INDUSTRY

Three years limited on parts and labor

OTHER EMPIRE PRODUCTS

- Blast cabinets
- Automated blast systems
- Plastic-media stripping systems
- Portable blasters
- Centrifugal-disc deburring machines



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