Pro-Finish® Cabinet Systems

- Rugged Construction
- Versatile Design
- Over 100 Models
- Many Factory Options

EMPIRE ABRASIVE EQUIPMENT

Buying Guide for Industrial Air-Blast Cabinets

PFBG-7121M

Why You Should Choose a Pro-Finish® System

If your operations involve cleaning with chemicals, acid etching or dipping, liquid honing, wire brushing, sanding, deburring, grinding or peening, odds are a Pro-Finish® system will save you time and money.

• These cabinet systems, designed for non-stop blasting, increase production rates because blasting is faster than other manual methods.

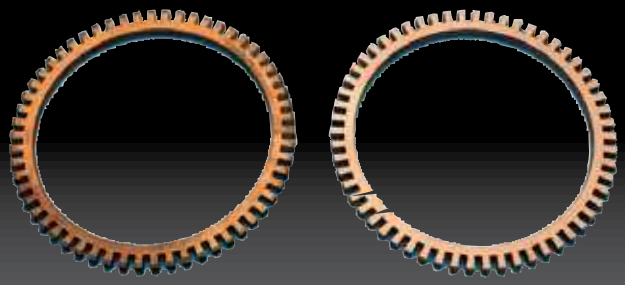
• Their versatility enables you to perform multiple tasks, ranging from blending surface flaws to removing foreign matter, such as carbon from pistons, without affecting tolerances. By simply varying air pressure and blast media, you can clean or peen and do a lot in between.

• Modular design, including many standard factory options, lets you select a system that's just right for you—without paying for features and accessories you don't need. Pro-Finish also gives you the choice of a suction or pressure blast system.

• Blasting eliminates the environmental hazards associated with chemical finishing because most modern blast media are non-caustic and non-toxic. Plus, Pro-Finish systems put the emphasis on safety in mechanical ways with features such as blasting interlocks on cabinet doors, rounded corners on safety-glass viewing windows and guards on sharp floor edges, just to list a few.

Contents

Parts BEFORE & AFTER Air Blasting in a Pro-Finish® Cabinet



Collar deburred with glass beads

Cylinder surface profiled with aluminum oxide

Copier tube etched with silicon carbide

Standard Pro-Finish® Features

No other blast cabinet on the market today offers the many practical benefits included on a Pro-Finish® cabinet as standard equipment. Just look at the features. The standard components in a Pro-Finish system have been carefully designed for safety, ease of operation, reduced maintenance and increased productivity. Throughout, these cabinets are built to meet the challenges of non-stop industrial blasting.

Bolt-Secured Glove Rings assure at tight seal, expedite glove changeovers — no tools required— and include armrests for improved operator comfort and performance.

Bag-House Dust Collectors feature an energy-saving air-filtration system that captures 99% of all particles one micron or larger so cabinet ventilation can be recirculated. Fan is mounted on the dust collector rather than reclaimer to prevent abrasive wear to the fan housing and impeller.

Cartridge Dust Collectors, offering improved efficiency and durability, are also available in 600, 900 and 1200 cfm models to simplify cleaning and maintenance.

High-Intensity Flood Lights reduce the chances of over blasting caused by poor visibility. Lights can be tilted to focus illumination on areas being blasted. Two lights are supplied on 2636, 3648, 3660, 3674 and 4848 models; three are provided as standard on 6060 and 7272 cabinets.

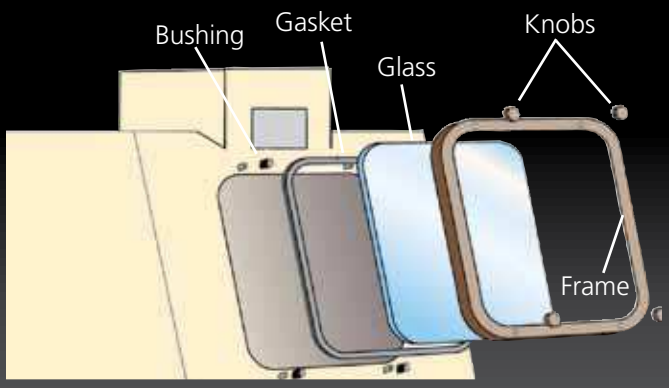
Kleensweep™ creates an air stream across the viewing window to reduce dust buildup and improve visibility.

Moisture Separator improves efficiency and reduces downtime by helping to prevent oil and moisture in supply lines from contaminating media.

One-Cubic-Foot Pressure Vessel minimizes refilling time and seals automatically for fast, easy startup. Construction is ASME coded only.

Rigid, Dual-Panel Doors stand up to abrasives and seal more tightly than single-panel doors. Flush construction minimizes media spill when the door is opened.

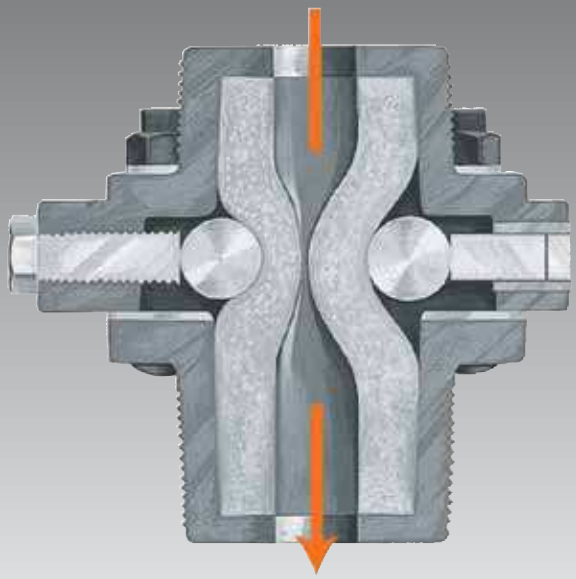
Safety-Door Switch (Patent No. 4,505,077) prevents accidental blasting when doors are open. Complies with OSHA requirements.



Safety-Glass Window (14"x 22") provides large viewing area, can be changed in a few minutes without tools and has rounded corners for safe handling.

Self-Adjusting Door Latch assures continued tight sealing as door gasket ages.

Simple, Pneumatic Controls deliver greater reliability than electric controls employing limit switches and solenoids that often stick and burn out.



Sure-Flo® Media Regulator (Patent No. 4,518,145), used on pressure cabinets, is easy to adjust and assures precise media regulation, as well as continuous flow. These regulators have excellent wear characteristics and, once the metering tube is worn, it can be easily replaced more quickly and economically than in any other media regulator on the market.

Tunable Media Reclaimers can be adjusted to control media size. Externally adjustable tuning band requires no tools and controls the size of fines extracted from the blast media. Screen prevents oversized particles from causing clogging and an easy access door permits quick filling.

Wide Foot Treadle enables operation with either foot.

Pro-Finish® Pressure Blast Cabinets

Pressure cabinets deliver blast media at higher velocities than suction systems, making a Pro-Finish® pressure cabinet ideal for turning out work fast. In many applications, these pressure cabinets will perform jobs four-times faster than suction systems. In addition, they use compressed air more efficiently and provide more precise blasting control at both high and low operating pressures. For really demanding tasks, like removing tight mill scale or finishing hard-to-reach surfaces, a pressure system is normally the only practical choice.

Pro-Finish pressure cabinets come in seven standard sizes with a number of variations. (See pages 12 and 13.)

Most include dust collectors and media reclaimers as standard equipment. (Less expensive dust bags can be selected with some models—see specifications on page 14.)

With Empire reclaimers, Pro-Finish pressure cabinets not only reduce operating costs associated with the purchase and disposal of media, but also assure consistent results shift after shift. Plus, they are available with options designed to meet almost any production need.

PRC (Pressure Cabinet with Media Reclaimer and Dust Collector)

Pressure Blast Air Requirements (scfm)

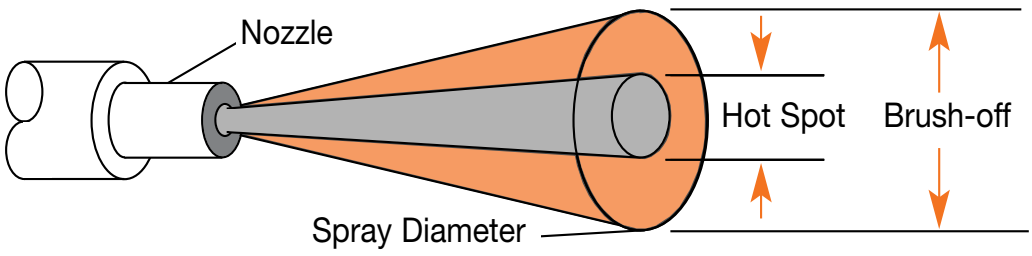
Pressure (psi)	20	30	40	50	60	80	100	120
⅛″ nozzle	6	8	10	13	14	17	20	25
3⁄16″ nozzle*	15	18	22	26	30	38	45	55
¼″ nozzle	27	32	41	49	55	68	81	97
5⁄16″ nozzle	42	50	64	76	88	113	137	152
⅜″ nozzle†	55	73	91	109	126	161	196	220

*This nozzle is supplied unless otherwise specified.

†This nozzle supplied with FaStrip® cabinets.

4 scfm = 1 compressor horsepower.

Compressors should be sized to the next larger nozzle to allow for nozzle wear.



Pressure Blast Spray Diameters

Nozzle ID	Distance from Workpiece 6″		12″		18″	
⅛″	¾″	1″	1″	1½″	–	1⅛″
3⁄16″*	1¼″	1⅜″	1½″	2″	1⅝″	2½″
¼″	1¼″	1½″	1⅞″	2¼″	2⅛″	2¾″
⅜″†	1⅝″	1¾″	2″	2¼″	2¼″	3″

*Standard nozzle
†FaStrip® nozzle

Brush-Off

Hot Spot

Pro-Finish® Pressure Blast Options

Fine-tuning controls, incorporating Empire's **automatic Sure-Flo® media regulator**, enable the operator to adjust the richness of the air-to-grit mixture from the front of the cabinet while he works. As a result, dialing in the optimum air-to-grit ratio for a particular job is greatly simplified. To further assist the operator, an indicator displays relative grit richness within the blast stream. In applications where media are changed frequently—or where contamination can cause periodic clogging of the girt valve—a push-button choke is available on the same control panel.

A **fixed-orifice media regulator** is attached below the Sure-Flo valve in applications, such as shot peening, where very precise metering is required.

For light media, our **MG-78 CR exhaust valve** works in combination with the automatic Sure-Flo to facilitate pressure vessel refills.

An optional **low media-level sensor and indicator** warns the operator when the media supply in the pressure vessel is low. **Sight glasses** enable visual checks on pressurized vessels.

Upgrading to a **3.5 cubic-foot pressure vessel** triples the amount of blasting that can be accomplished between media refills. This larger vessel is especially valuable when using a large blast nozzle or a second nozzle, and when attaching an optional **basket assembly** to the cabinet door for automated batch finishing of small workpieces. (See page 7 for more information on the basket attachment.)

Two pressure-blast nozzles can be supplied with Pro-Finish® systems to increase coverage and reach multiple faces on parts such as screw threads or root sections. Finishing speed is double that of an ordinary high-production pressure system. The two nozzles can be turned on and off individually with manual valves. Two holders are included for nozzle positioning.

Di-Carb™ nozzles (tungsten carbide) stand up to steel abrasives and glass beads; **Boron carbide nozzles** deliver superior performance when blasting with aluminum oxide, silicon carbide and garnet.

A **fixed-nozzle holder**, which bolts anywhere on the cabinet wall, can be adjusted to position the nozzle in any orientation, leaving both of the operator's hands free to maneuver workpieces.

Door trays prevent dust, which clings to the cabinet doors, from dropping onto the floor when the doors are opened.

Pressure conversion kits upgrade suction cabinets to pressure cabinets in the field.

NOTE: Some option combinations are not available. For information, please consult Empire or your local Empire distributor.

Fine-tuning controls let operator adjust air/grit ratio from cabinet front for optimum results.

Automatic Sure-Flo® media regulator promotes consistent media flow and reduces energy costs.

Sight glasses permit viewing into pressurized vessels for quick accurate checks on media supply.

Pro-Finish® Suction Blast Cabinets

Pro-Finish® suction cabinets are simpler and cost less than pressure cabinets. They also blast continuously without the need to stop for media refills, and they simplify the use of multiple nozzles. The results are usually comparable to those achieved with a pressure system although production rates are not as high. When initial cost and maintenance are primary concerns, the suction system is a good choice.

Pro-Finish suction systems come in seven sizes and can be specified with a dust collector or dust bag on smaller units.

A media reclaimer is optional. Nevertheless, when using media that can be recovered, a reclaimer is advisable because it normally pays for itself quickly in terms of reduced waste and high-quality, repeatable results.

Pro-Finish suction cabinets are available with many factory options that contribute to ease of operation, reduced maintenance and greater productivity.

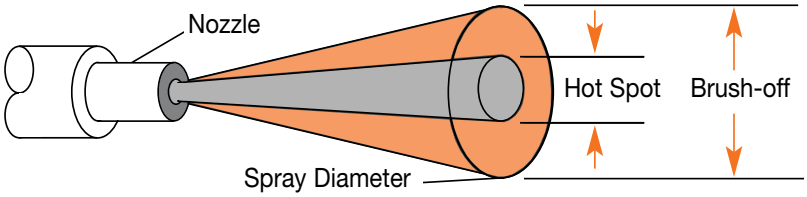
Plus, Pro-Finish's modular design lets you upgrade to a pressure system in the field at any time, enabling you to build on your original investment.

SRC (Suction Cabinet with Media Reclaimer and Dust Collector)

Suction Blast Air Requirements (scfm)

Pressure (psi)	30	40	50	60	70	80	90	100
¼"nozzle, 3⁄32"air jet	6	7	8	10	11	12	13	15
¼"nozzle, ⅛"air jet	10	12	15	17	19	21	23	26
5⁄16"nozzle, 5⁄32"air jet	15	19	23	27	31	37	38	42
7⁄16"nozzle, 7⁄32"air jet	31	38	45	52	59	66	73	80

*This nozzle is supplied unless otherwise specified.
4 scfm = 1 compressor horsepower.



Suction Blast Spray Diameters

Gun ID	Distance from Workpiece 6"		12"		18"	
¼"	1⅜"	2⅝"	–	2¾"	–	1"
5⁄16"*	1½"	3½"	1¾"	4½"	–	3¾"
7⁄16"	2"	3¾"	2"	4½"	–	3¾"

*Standard nozzle — Brush-Off — Hot Spot

Pro-Finish® Suction Blast Options

Multiple blast guns add to the speed and versatility of Pro-Finish® suction cabinets. A total of four guns can be employed to facilitate the automated blasting of parts with irregular profiles. In addition to short-handle guns, the multiple-gun option includes individual shut-off valves, a one-inch pipe string, required hoses, and holders for gun positioning. Multi-gun packages include a **4.5 cubic-foot media storage hopper** with easy access for loading and media inspection.

A **fixed gun holder** adjusts to position the blast gun or guns in any orientation so the operator can use both hands to manipulate workpieces within the blast stream.

Guns with **Di-Carb™ nozzles** (tungsten carbide) stand up to steel abrasives and glass beads; **Boron carbide nozzles** slow wear when blasting with aluminum oxide, silicon carbide and garnet.

Our **basket assembly**, which attaches to the cabinet door, automates batch finishing of small workpieces. The basket attachment includes its own drive motor and 60 minute timer. In addition, it is removable, which helps in unloading of parts and permits the cabinet to be used for manual blasting of larger workpieces. The basket attachment handles 40 pounds or 200 cubic inches of "flowable" parts and can be specified with an abrasion-resistant coating for longer service life. Empire also produces dedicated basket-blasting machines in a variety of models and sizes.

Kleen™ package consists of trays mounted under the cabinet-door opening and a return hose on the suction media regulator. Door trays prevent dust, which clings to the cabinet doors, from dropping onto the floor when the doors are opened. If the blast nozzle plugs, the pressurized media will not spill out of the media-regulator air intake. Instead, it is routed to the blast cabinet.

Fixed gun holder frees operator to manipulate parts.

Optional nozzles for MH-2 blast gun handle a full range of abrasives with minimum wear.

4.5 cubic-foot media storage hopper provides a large supply of abrasives to support up to four blast guns.

Basket attachment automates small parts finishing.

Universal Cabinet Options

Factory options can reduce maintenance and improve operating efficiency in many applications. Conveniently, most of these options retrofit to cabinets already in the field.

Rubber curtains extend cabinet life. These free-hanging liners, made of black eighth-inch neoprene and held in place by rubber knobs for easy replacement, actually last longer than steel in an abrasive environment. White rubber is also available to brighten the cabinet interior. Beyond protecting the cabinet, these curtains resist discoloration much longer than paint or steel.

Window protectors, offered in clear plastic or a perforated screen, reduce clouding and pitting.

Matting pads parts and prolongs the lives of turntables and cabinet floors.

Pneumatically powered vertical doors save floor space and facilitate loading and unloading of parts when used in combination with rolling manual turntable dollies. Several safety features prevent accidental closing, and a pneumatic sensor prevents blasting whenever the door is open in accordance with OSHA standards. Plastic tracks assure smooth operation and a full-gasket seal keeps media inside the blast enclosure. Rubber lining and heavy-duty construction provide long service life.

Door locking clamps prevent unauthorized release of particles when swings doors are opened.

Rubber safety mats, with holes to catch spilled particles, surround the cabinet to keep adjacent floor surfaces clean and prevent injuries from falls, especially when spherical media is used. The mats also dissipate static electricity, provide a comfortable surface on which to stand, and improve the appearance of the work area.

A **Cabinet sound attenuator**, mounted over the air inlet, suppresses blasting noise by absorbing sound waves and directing them away from the operator.

Our **static strap**, worn on the operator's wrist, dissipates static electrical charge, preventing shock to the operator that might otherwise occur in a low-humidity work environment.

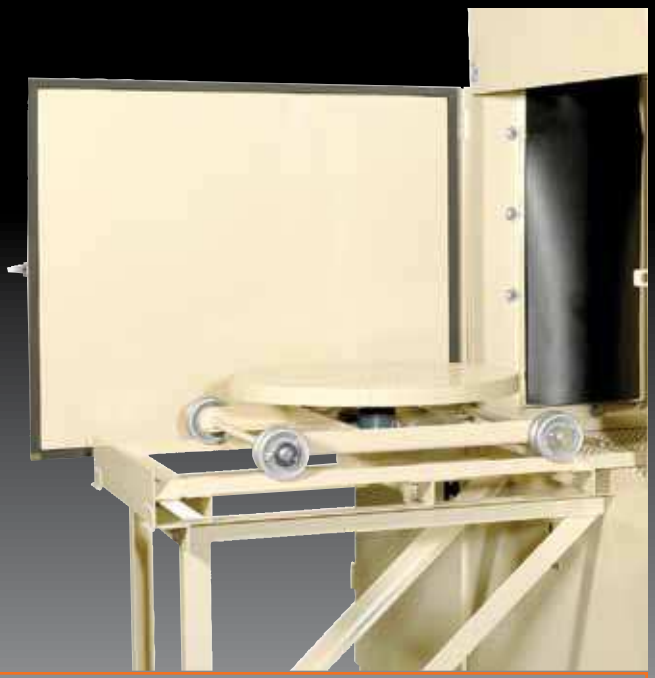
A **system security key-lock** stops use of the cabinet by unauthorized personnel. By retaining the key, supervisors are better able to keep track of why, when and by whom the system is being used.

Rubber curtains, available in white to enhance visibility, protect cabinet interiors and are easy to replace.

Empire's **vertical doors** lift smoothly, seal tightly and assure operator safety.

Pro-Finish® Tools to Automate

Powered movement of blast nozzles and/or workpieces automates air-blasting operations to varying degrees. For instance, using a powered turntable in combination with oscillating nozzles makes many blast-finishing processes virtually automatic when a timer package is added to control duration and on/off functions. Some techniques for automating Pro-Finish® cabinets—easily and economically—are described.



Turntables

Turntables, offered in both manual and pneumatically powered models, facilitate the handling of heavy parts and provide opportunities for automation. Turntables can be wheeled into or out of cabinets on a dolly or track, or fixed inside cabinets. Most stationary designs feature a low-profile, giving operators easy "over-the-top" access without wasting interior cabinet space.

Turntable Selection and Part Numbers

CABINET MODEL	MANUAL ROTATION TURNTABLES							POWERED ROTATION TURNTABLES			
	Stationary				Rolling			Stationary		Rolling	
Diameter	18"	18"	24"	36"	18"	24"	36"	24"	36"	24"	36"
Profile	Std.	Low	Low	Low	Std.	Std.	Std.	Low	Low	Std.	Std.
Capacity	300#	300#	300#	300#	1000#	1000#	1000#	300#	300#	1000#	1000#
2636	140422	140574	140502	NA	140321	NA	NA	NA	NA	NA	NA
3648	140422	140574	140502	NA	NA	140322	NA	140504*	NA	140364	NA
3660	140422	140574	140502	NA	NA	140324	NA	140504*	NA	140375	NA
3674	140422	140574	140502	NA	NA	140322	NA	140504	NA	140364	NA
3696†	140422	140574	140502	NA	NA	140322	NA	140504*	NA	NA	NA
4848	140422	140574	140502	140503	NA	140322	140323	140504*	140505*	140364	140365
6060	140422	140574	140502	140503	NA	140324	140325	140504*	140505*	140375	140376
60120†	140422	140574	140502	140503	NA	140324	140425	140504	140505	NA	NA

*Not available with Ergo-Blast models. †Two required for both cabinet stations.
•Consult factory for 7272 turntables. •Part numbers above reflect factory installation but may be used to retrofit existing systems.

Gun Oscillators, Timers & Other Accessories

Gun oscillators, suitable for larger Pro-Finish cabinets, can be used with powered turntables and multiple nozzles to reduce the number of guns required, therefore reducing compressed-air consumption. The oscillator will blend multiple passes of the nozzle, creating a more uniform finish. Production rates increase as the benefits of manual coverage and multi-gun blasting are combined.

A radially sweeping oscillator, powered by an air cylinder, strokes as many as four blast guns through a range of up to 18 inches. Stroke length, stroke speed and on/off functions can also be controlled automatically.

Timers are employed to control the on/off functions of blast guns, oscillators and turntables. Our **60 minute spring timer** is powered mechanically and works well in most automated applications. Empire's **precision reset timer**, powered by a synchronous motor, always clicks down from the same preset time. This feature, along with large graduations on the timer dial, assure more accurate control of blast durations.

When using timers with pressure systems, an adequate media supply must be available for the duration of the blast process. Consequently, a larger pressure vessel and/or media-level indicator should be considered.

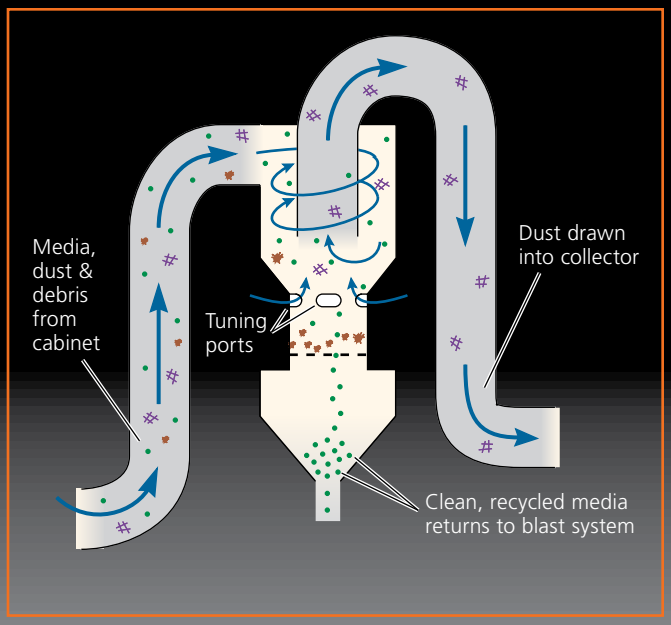
Automatic door clamps lock the cabinet during blasting. For environments in which passive dust emissions present a safety concern, a timer is added to allow for adequate dust evacuation before the cabinet doors are opened. When "close-to-clean-room" standards are required, delay switches are supplied.

Pro-Finish® Media Reclaimers

Media reclamation can be one of the most critical aspects of air-blasting processes. In addition to media costs, reclaimer performance affects operating speed and quality. Failure to remove dust and fines has an adverse effect on consistency and productivity. If oversized particles are returned to the blast system, for example, clogging and/or inconsistent results often occur.

Pro-Finish® reclaimers provide precise control of media recycling. These reclaimers can be adjusted to control the recovery of fine, medium or coarse working materials while removing unwanted particles from the blasting process. As a result, you enjoy reduced media costs as well as consistent, high-quality results.

All Pro-Finish reclaimers deliver 99% efficiency, include a screen to prevent over-sized particles from clogging, provide an easy-open access door for quick cleaning and filling, and feature 12 gauge construction for extended service life.



Reclaimer Options

Plus, we offer options to improve handling of both harsh and light media.

An easily replaceable **inlet wear plate** protects the most vulnerable area of the reclaimer. Upgrading to **Ultra-wear lining** increases the life expectancy by ten times.

For more efficient recycling of difficult media, a **vibrating screen** assures smooth, consistent flow by overcoming problems associated with very fine abrasives (200-300 mesh range), low-density media (e.g., plastics and walnut shells), and high humidity.

To remove ferrous debris, we add an easily maintained **magnetic separator** to the reclaimer.

For exceptionally durable connections between system components, **heavy-duty, media-conveying duct** made of smooth-wall, wire-reinforced PVC is available.

Media/Reclaimer Compatibility

RECLAIMER CFM	GLASS BEADS	ALUMINUM OXIDE	STEEL GRIT	STEEL SHOT
400	ALL	46	120	S-70
600	ALL	36	80	S-110
900	ALL	36	80	S-110
1200	ALL	30	40	S-170

Chart shows the maximum media sizes recoverable with single-gun/nozzle systems. Multiple guns, larger nozzles, operation at altitudes above 5000 feet, or use of a 50 Hz electrical supply may require a larger reclaimer and dust-collector blower. Larger sizes may be used. Consult factory.

Reclaimer Operating Principles

All Pro-Finish media reclaimers are tunable. By adjusting a fine-tuning band on the reclaimer, the amount of air introduced into the system can be controlled to assure precise separation of functional media from dust and other unwanted debris.

As spent media, dust and debris are pulled by air flow to the reclaimer inlet, incoming air and media spiral in a downward vortex, throwing larger particles against the outer reclaimer wall. An air stream forms an upward counter vortex through the center tube, which carries out dust while heavier particles drop into the storage hopper below for reuse. A screen catches any oversized debris.

Dust and undersized debris are drawn from the reclaimer into the bottom of the dust collector. Sudden expansion forces heavier dust particles to the bottom. Remaining fine dust is pulled to the surface of the dust filters. Clean air can then be discharged to the work area.

NOTE: The cfm of all Pro-Finish reclaimers is rated at nominal static working pressure of 6" water, with the exception of the 1200 cfm model, rated at 10" static pressure. Competitive units may appear to achieve higher cfm due to ratings based on inadequate working static pressure.

Pro-Finish® Dust Collectors

Available in cartridge and bag-house designs, Pro-Finish® dust collectors improve working conditions while reducing maintenance and operating costs. By capturing 99% or more of all particles one micron or larger, these efficient dust collectors permit filtered air to be recirculated into the plant, thus providing significant savings on heating and air conditioning.

Features shared by both designs include:

- 14 gauge, reinforced construction
- Fan blade on clean-air side for long life
- Raised clean-out opening for fast waste removal
- Top-clean air discharge for operator comfort
- Push-button control for thorough cleaning

Bag-House Collectors

Our bag-house dust collectors meet the needs of most industrial air-blast operations at a lower cost than cartridge collectors. Plus, the ability to capture 99% of all particles one micron or larger normally permits recirculation of air to the workplace.

In addition, we offer options to automate bag cleaning and reduce noise.

Cartridge Collectors

Pro-Finish cartridge dust collectors increase productivity in three ways. For starters, they can operate continuously; the air-blast system does not have to be shut down while dust is removed from filtration surfaces.

Next, they simplify dust removal from filtration material. Push-button reverse jet-pulsing, a standard feature on our cartridge collectors, enables an operator viewing a minihelic gauge—which monitors pressure drop across the filter—to purge dust while the air-blast system is operating. Alternatively, an optional photohelic upgrade moves dust from filtration surfaces to a collection drum automatically—at the right time and without operator involvement.

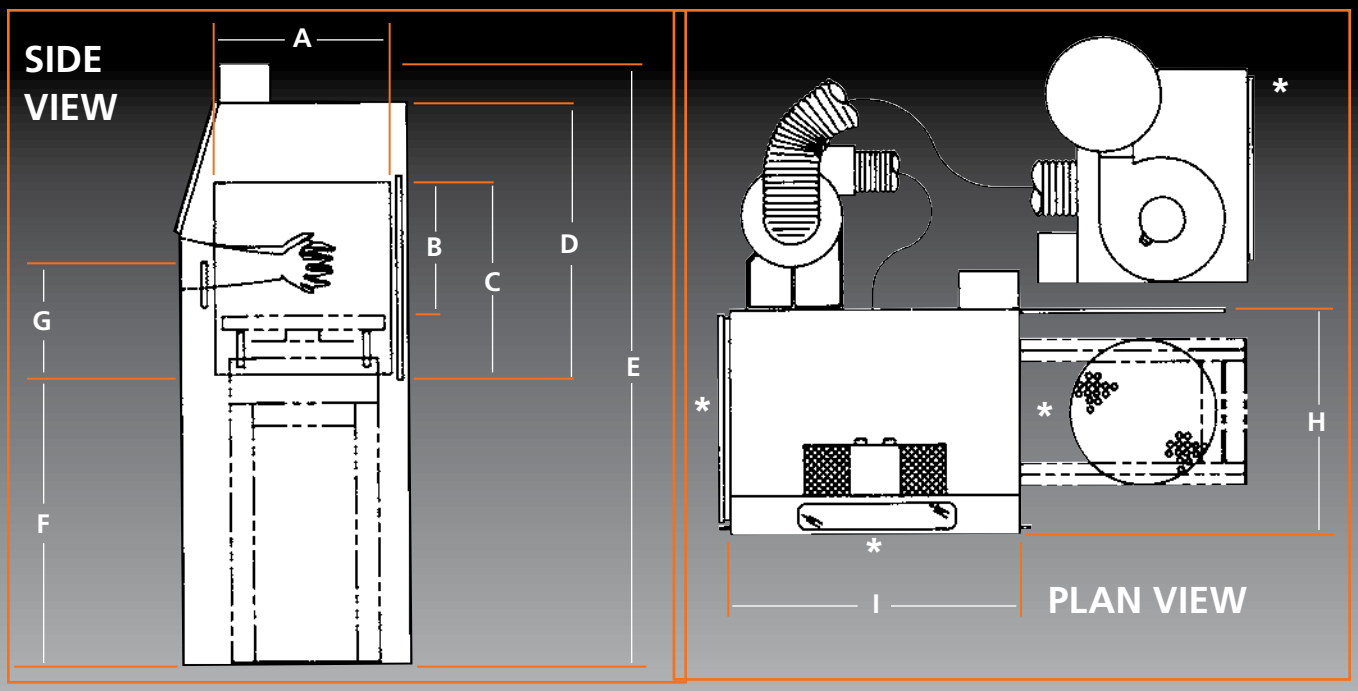
Finally, the collection cartridges, once worn, can be easily removed and replaced through a large access door.

Options are available for reducing fan noise and expediting dust disposal.

Pro-Finish® Dimensions

Standard cabinets (See "SIDE VIEW" for A, B, C, D, E, F and G. See "PLAN VIEW" for H, I, floor area and access points.)

CABINET MODEL SIZE	2636	3648	3660	3674	4848	6060	7272
A) Door opening depth (ID)	20″	29″	29″	29″	41″	50″	64″
B) Height from turntable to top of door opening							
Stationary manual turntable	17″	27″	27″	27″	27″	35″	—
Rolling manual turntable	15″	25″	25″	25″	25″	33″	44″
Rolling powered turntable	—	21″	21″	21″	21″	29″	38″
Low-profile turntable	20″	30″	30″	30″	30″	38″	—
C) Door opening height (ID)	22″	32″	32″	32″	32″	40″	58″
D) Height inside from enclosure floor to ceiling	30″	36″	36″	36″	36″	44″	62″
E) Exterior height	72″	75″	75″	75″	75″	80″	84″
F) Height from cabinet base to enclosure floor	34″	34″	34″	34″	34″	34″	28″
G) Height from enclosure floor to glove-entry midpoint	10″	10″	10″	10″	10″	10″	25″ to 29″
H) Cabinet depth (exterior)	26″	36″	36″	36″	48″	60″	72″
I) Cabinet width (exterior)	36″	48″	60″	74″	48″	60″	72″
Floor area	42 ft²	59 ft²	87 ft²	90 ft²	80 ft²	87 ft²	163 ft²
Access points	*	*	*	*	*	*	*



NOTES TO CABINET DIMENSIONS

• System shown includes cabinet, reclaimer, dust collector, turntable and some popular options. (Other configurations and options will affect dimensions, which are approximate and subject to change.) • Dust collector, reclaimer and options can be rearranged within limits to suit particular installations. • Floor areas shown indicate basic reclaimer/dust-collector sizes and include operator access points as well as turntable and platform. • Height includes reclaimer and dust-collection hose.

Dust Collectors (Dimensions in inches)

MODEL	DCM-80A	DCM-200	DCM-200A	DCM-200B	CDC-6	CDC-9	CDC-12
Dimensions (DxWxH)	21 x 26 x 98	34 x 39 x 107	34 x 39 x 105	34 x 39 x 116	34 x 39 x 115	34 x 39 x 115	34 x 39 x 118
With Sound Attenuator & Automatic Bag Shaker	29 x 31 x 107	40 x 41 x 112	40 x 39 x 112	40 x 39 x 127	—	—	—
With Sound Attenuator & Photohelic Package	—	—	—	—	34 x 48 x 120	34 x 48 x 120	34 x 48 x 123

Dust Bags (24″ deep x 30″ wide x 83″ high)

Specialized Pro-Finish® Cabinets

FaStrip® Cabinets

FaStrip® cabinets are designed for use with low-density media, such as plastics, that provide fast coverage without eroding substrates. Paint stripping, for example, can be performed quickly and economically without the use of hazardous chemicals.

FaStrip cabinets deliver plastic or organic media from a large venturi nozzle coupled to a grounded, flexible blast hose. A large, vibrating screen within the reclaimer and Empire's exclusive automatic Sure-Flo® media regulator, working in tandem with the MG-78 CR exhaust valve, keeps light media flowing smoothly. A magnetic separator is also included in the system to extract ferrous particles that can damage delicate substrates. (See page 15 for available models, part numbers, general specifications and shipping weights.)

Ergo-Blast Cabinets

Ergo-Blast systems, for instance, increase productivity by improving operator performance during extended periods of continuous blasting. These cabinets are ergonomically designed for sit-down operation and include other features to reduce fatigue. As a result, machine operators concentrate on the job at hand when working for hours on repetitive tasks rather than trying to find the best position to relieve a sore back. By removing everyday distractions, Ergo-Blast cabinets maximize production. (See pages 16 and 18 for available models, part numbers, general specifications and shipping weights.)

Pro-Finish® 7272 Cabinets

This cavernous cabinet will accept large parts, yet it's less expensive than a blast room, and it eliminates the need for operators to suit-up in protective clothing. The 7272 cabinet includes oval glove holes to extend the operator's range of motion and, thanks to a dual-cone bottom, a low floor height, enabling the operator to reach work surfaces without having to continually reposition parts in the blast enclosure.

Manufactured from 11 gauge plate steel with continuously welded seams, this rugged cabinet has a floor capacity of 1500 pounds. The blast hose enters from the top to relieve operator strain, and a serpentine media-return hose eliminates problems associated with the use of "Y" branches.

SafeStrip™ Cabinets

SafeStrip™ cabinets contain the blast process during the cleaning and stripping of delicate surfaces. They are designed to work in conjunction with our SafeStrip portables as well as other pots capable of delivering fine media.

With a SafeStrip system, you can quickly and safely remove old coatings, dirt, oil, corrosion and other unwanted residues from soft metals, rubber, plastics and other sensitive surfaces. SafeStrip is ideal for work on tools, machine parts and molds, and in many other applications requiring a "light touch." (See page 15 for available models, part numbers, general specifications and shipping weights.)

Modified Cabinets

Empire's ability to modify cabinets for specialized customer needs is unmatched in the air-blast equipment industry. By combining Pro-Finish features and options with our expertise in automated systems, we can modify standard equipment to meet production goals at a fraction of the cost required for start-to-finish custom engineering.

Pro-Finish® Cabinet Specifications (Pressure Systems, Standard)

MODEL DESCRIPTION	PART NUMBER	NUMBER OF DOORS	DUST COLLECTION	BLOWER MOTOR	SHIPPING WEIGHT
2636 PR-4	142101	1 standard	—	—	615 lb
2636 PRB-4	102100	1 standard	Dust bag	1 hp	664 lb
2636 PRC-4	102101	1 standard	DCM-80A	1 hp	914 lb
2636 PR-6	142142	1 standard	—	—	630 lb
2636 PRC-6	102142	1 standard	DCM-200	1 hp	1345 lb
2636 PRC-6, CDC	102148	1 standard	CDC-6	1½ hp	1465 lb
3648 PR-4	143101	2 standard	—	—	735 lb
3648 PRB-4	103100	2 standard	Dust bag	1 hp	782 lb
3648 PRC-4	103101	2 standard	DCM-80A	1 hp	1032 lb
3648 PR-6	143121	2 standard	—	—	750 lb
3648 PRC-6	103121	2 standard	DCM-200	1½ hp	1479 lb
3648 PRC-6, CDC	103151	2 standard	CDC-6	1½ hp	1779 lb
3660 PR-6	146102	2 standard	—	—	1180 lb
3660 PRC-6	126101	2 standard	DCM-200	1½ hp	1910 lb
3660 PRC-6, CDC	126151	2 standard	CDC-6	1½ hp	2030 lb
3660 PR-9	146121	2 standard	—	—	1215 lb
3660 PRC-9	126121	2 standard	DCM-200A	2 hp	1945 lb
3660 PRC-9, CDC	126152	2 standard	CDC-9	2 hp	2065 lb
3674 PRC-9	128121	2 standard	DCM-200A	2 hp	1970 lb
3674 PRC-9, CDC	128151	2 standard	CDC-9	2 hp	2290 lb
3696 TWIN PRB-4	106100	2 standard	(2) Dust bags	(2) 1 hp	1379 lb
3696 TWIN PRC-4	106101	2 standard	(2) DCM-80A	(2) 1 hp	1879 lb
3696 TWIN PRC-6	106121	2 standard	(2) DCM-200	(2) 1½ hp	2773 lb
3696 TWIN PRC-6, CDC	106151	2 standard	(2) CDC-6	(2) 1½ hp	3373 lb
4848 PR-6	144101	2 standard	—	—	910 lb
4848 PRC-6	104101	2 standard	DCM-200	1½ hp	1636 lb
4848 PRC-6, CDC	104151	2 standard	CDC-6	1½ hp	1936 lb
4848 PR-9	144121	2 standard	—	—	940 lb
4848 PRC-9	104121	2 standard	DCM-200A	2 hp	1671 lb
4848 PRC-9, CDC	104152	2 standard	CDC-9	2 hp	1791 lb
6060 PR-9	145101	2 standard	—	—	1219 lb
6060 PRC-9	105101	2 standard	DCM-200A	2 hp	1949 lb
6060 PRC-9, CDC	105151	2 standard	CDC-9	2 hp	2069 lb
60120 TWIN PRC-9	107101	2 standard	DCM-200A	(2) 2 hp	3713 lb
60120 TWIN PRC-9, CDC	107151	2 standard	CDC-9	(2) 2 hp	4313 lb
7272 PRC-9	127101	1 standard	DCM-200A	2 hp	2900 lb
7272 PRC-12	127123	1 standard	DCM-200B	5 hp	3000 lb

Notes to Specifications: All cabinet sizes feature 14 gauge steel construction with the exception of 7272 cabinets which are 11 gauge. Cabinets with a single door open on the right-hand side. (An additional left-hand door is optional.) For information on **electricals**, **reclaimer sizing** and **dust collection**, see "**Application Considerations"** on page 19.

Meaning of Model Numbers and Letter Codes: The first two numbers indicate nominal cabinet depth in inches. The next two or three numbers show nominal cabinet width. Letters following model numbers mean the following: **S** = Suction; **P** = Pressure; **B** = Bag; **C** = Collector; **R** = Reclaimer. Numerals following letter codes show reclaimer-ventilation capacity in hundreds of cubic feet per minute at 6" static pressure. (1,200 cfm units are rated at 10" static pressure.) **TWIN** indicates a two-cabinet system. (Example: a 60120 TWIN consists of two 6060 cabinets) Letter codes in parentheses translate as follows: **CDC** = Cartridge Dust Collector; **ERGO** = Ergo-Blast model; **FS** = FaStrip model.

Pro-Finish® Cabinet Specifications (Pressure Systems, FaStrip®)

MODEL DESCRIPTION	PART NUMBER	NUMBER OF DOORS	DUST COLLECTION	BLOWER MOTOR	SHIPPING WEIGHT
FaStrip® 2636 PRC-6	102130	1 standard	DCM-200	1½ hp	1380 lb
FaStrip® 2636 PRC-6, CDC	102159	1 standard	CDC-6	1½ hp	1495 lb
FaStrip® 2636 PR-6	140959	1 standard	—	—	660 lb
ERGO FaStrip® 3648 PRC-6	121921	2 standard	DCM-200	1½ hp	1600 lb
ERGO FaStrip® 3648 PRC-6, CDC	121951	2 standard	CDC-6	1½ hp	1900 lb
FaStrip® 3648 PR-6	140950	2 standard	—	—	775 lb
FaStrip® 3648 PRC-6	103129	2 standard	DCM-200	1½ hp	1500 lb
FaStrip® 3648 PRC-6, CDC	103159	2 standard	CDC-6	1½ hp	1800 lb
ERGO FaStrip® 3660 PRC-9	123921	2 standard	DCM-200A	2 hp	2075 lb
ERGO FaStrip® 3660 PRC-9, CDC	123951	2 standard	CDC-9	2 hp	2195 lb
FaStrip® 3660 PR-9	126951	2 standard	—	—	1245 lb
FaStrip® 3660 PRC-9	126129	2 standard	DCM-200A	2 hp	1975 lb
FaStrip® 3660 PRC-9, CDC	126159	2 standard	CDC-9	2 hp	2095 lb
FaStrip® 3674 PRC-9	128129	2 standard	DCM-200A	2 hp	1970 lb
FaStrip® 3674 PRC-9, CDC	128159	2 standard	CDC-9	2 hp	2290 lb
ERGO FaStrip® 4848 PRC-9	122921	2 standard	DCM-200A	2 hp	1800 lb
ERGO FaStrip® 4848 PRC-9, CDC	122951	2 standard	CDC-9	2 hp	2050 lb
FaStrip® 4848 PR-9	140951	2 standard	—	—	965 lb
FaStrip® 4848 PRC-9	104129	2 standard	DCM-200	1½ hp	1696 lb
FaStrip® 4848 PRC-9, CDC	104159	2 standard	CDC-9	1½ hp	1816 lb
ERGO FaStrip® 6060 PRC-9	125921	2 standard	DCM-200A	2 hp	2074 lb
ERGO FaStrip® 6060 PRC-9, CDC	125951	2 standard	CDC-9	2 hp	2193 lb
FaStrip® 6060 PR-9	140952	2 standard	—	—	1249 lb
FaStrip® 6060 PRC-9	105129	2 standard	DCM-200A	2 hp	1975 lb
FaStrip® 6060 PRC-9, CDC	105159	2 standard	CDC-9	2 hp	2094 lb
FaStrip® 7272 PRC-9	127901	1 standard	DCM-200A	2 hp	3000 lb
FaStrip® 7272 PRC-12	127923	1 standard	DCM-200B	5 hp	3100 lb

Pro-Finish® Cabinet Specifications (Pressure Systems, SafeStrip™, supplied with SafeStrip pot)

SafeStrip™ 2636	102032	1 standard	DCM-200	1½ hp	1870 lb
SafeStrip™ 2636 CDC	102033	1 standard	CDC-6	1½ hp	1990 lb
SafeStrip™ 3648	103032	2 standard	DCM-200	1½ hp	1985 lb
SafeStrip™ 3648 CDC	103033	2 standard	CDC-6	1½ hp	2105 lb
SafeStrip™ 4848	104032	2 standard	DCM-200	1½ hp	2070 lb
SafeStrip™ 4848 CDC	104033	2 standard	CDC-6	1½ hp	2190 lb
SafeStrip™ 6060	105032	2 standard	DCM-200A	2 hp	2425 lb
SafeStrip™ 6060 CDC	105033	2 standard	CDC-9	2 hp	2545 lb

Pro-Finish® Cabinet Specifications (Pressure Systems, Single Pass supplied with cabinet pot)

SafeStrip™ 2636	102032	1 standard	DCM-200	1½ hp	1870 lb
SafeStrip™ 2636 CDC	102033	1 standard	CDC-6	1½ hp	1990 lb
SafeStrip™ 3648	103032	2 standard	DCM-200	1½ hp	1985 lb
SafeStrip™ 3648 CDC	103033	2 standard	CDC-6	1½ hp	2105 lb
SafeStrip™ 4848	104032	2 standard	DCM-200	1½ hp	2070 lb
SafeStrip™ 4848 CDC	104033	2 standard	CDC-6	1½ hp	2190 lb
SafeStrip™ 6060	105032	2 standard	DCM-200A	2 hp	2425 lb
SafeStrip™ 6060 CDC	105033	2 standard	CDC-9	2 hp	2545 lb

See Page 14 for "Notes to Specifications" and "Meaning of Model Numbers and Letter Codes."

Pro-Finish® Cabinet Specifications (Pressure Systems, Ergo-Blast)

MODEL DESCRIPTION	PART NUMBER	NUMBER OF DOORS	DUST COLLECTION	BLOWER MOTOR	SHIPPING WEIGHT
ERGO 2636 PRC-4	120101	1 standard	DCM-80A	1 hp	1015 lb
ERGO 3648 PRC-4	121101	2 standard	DCM-80A	1 hp	1130 lb
ERGO 3648 PRC-6	121121	2 standard	DCM-200	1½ hp	1585 lb
ERGO 3648 PRC-6, CDC	121151	2 standard	CDC-6	1½ hp	1885 lb
ERGO FaStrip® 3648 PRC-6	121921	2 standard	DCM-200	1½ hp	1600 lb
ERGO FaStrip® 3648 PRC-6, CDC	121951	2 standard	CDC-6	1½ hp	1900 lb
ERGO 3660 PRC-6	123101	2 standard	DCM-200	1½ hp	2010 lb
ERGO 3660 PRC-6, CDC	123151	2 standard	CDC-6	1½ hp	2130 lb
ERGO 3660 PRC-9	123121	2 standard	DCM-200A	2 hp	2045 lb
ERGO 3660 PRC-9, CDC	123152	2 standard	CDC-9	2 hp	2165 lb
ERGO FaStrip® 3660 PRC-9	123921	2 standard	DCM-200A	2 hp	2120 lb
ERGO FaStrip® 3660 PRC-9, CDC	123951	2 standard	CDC-9	2 hp	2240 lb
ERGO 3696 TWIN PRC-4,	124101	2 standard	(2) DCM-80A	(2) 1 hp	2975 lb
ERGO 3696 TWIN PRC-6	124121	2 standard	(2) DCM-200	(2) 1½ hp	2900 lb
ERGO 3696 TWIN, PRC-6, CDC	124151	2 standard	(2) CDC-6	(2) 1½ hp	3500 lb
ERGO 4848 PRC-6	122101	2 standard	DCM-200	1½ hp	1735 lb
ERGO 4848 PRC-6, CDC	122151	2 standard	CDC-6	1½ hp	2035 lb
ERGO 4848 PRC-9	122121	2 standard	DCM-200A	2 hp	1775 lb
ERGO 4848 PRC-9, CDC	122152	2 standard	CDC-9	2 hp	2075 lb
ERGO FaStrip® 4848 PRC-9	122921	2 standard	DCM-200A	2 hp	1800 lb
ERGO FaStrip® 4848 PRC-9, CDC	122951	2 standard	CDC-9	2 hp	2050 lb
ERGO 6060 PRC-9	125121	2 standard	DCM-200A	2 hp	2049 lb
ERGO 6060 PRC-9, CDC	125152	2 standard	CDC-9	2 hp	2168 lb
ERGO FaStrip® 6060 PRC-9	125921	2 standard	DCM-200A	2 hp	2074 lb
ERGO FaStrip® 6060 PRC-9, CDC	125951	2 standard	CDC-9	2 hp	2193 lb

Notes to Specifications: All cabinet sizes feature 14 gauge steel construction with the exception of 7272 cabinets which are 11 gauge. Cabinets with a single door open on the right-hand side. (An additional left-hand door is optional.) For information on **electricals**, **reclaimer sizing** and **dust collection**, see "**Application Considerations"** on page 19.

Meaning of Model Numbers and Letter Codes: The first two numbers indicate nominal cabinet depth in inches. The next two or three numbers show nominal cabinet width. Letters following model numbers mean the following: **S** = Suction; **P** = Pressure; **B** = Bag; **C** = Collector; **R** = Reclaimer. Numerals following letter codes show reclaimer-ventilation capacity in hundreds of cubic feet per minute at 6" static pressure. (1,200 cfm units are rated at 10" static pressure.) **TWIN** indicates a two-cabinet system. (Example: a 60120 TWIN consists of two 6060 cabinets) Letter codes in parentheses translate as follows: **CDC** = Cartridge Dust Collector; **ERGO** = Ergo-Blast model; **FS** = FaStrip model.

Pro-Finish® Cabinet Specifications (Suction Systems, Standard)

MODEL DESCRIPTION	PART NUMBER	NUMBER OF DOORS	DUST COLLECTION	BLOWER MOTOR	SHIPPING WEIGHT
2636 S	142011	1 standard	—	—	370 lb
2636 SB	102010	1 standard	Dust bag	1 hp	421 lb
2636 SC	102011	1 standard	DCM-80A	1 hp	671 lb
2636 SR-4	142001	1 standard	—	—	400 lb
2636 SRB-4	102000	1 standard	Dust bag	1 hp	451 lb
2636 SRC-4	102001	1 standard	DCM-80A	1 hp	701 lb
2636 SR-6	142021	1 standard	—	—	440 lb
2636 SRC-6	102021	1 standard	DCM-200	1½ hp	1130 lb
2636 SRC-6, CDC	102041	1 standard	CDC-6	1½ hp	1250 lb
3648 S	143011	2 standard	—	—	490 lb
3648 SB	103010	2 standard	Dust bag	1 hp	539 lb
3648 SC	103011	2 standard	DCM-80A	1 hp	789 lb
3648 SR-4	143001	2 standard	—	—	520 lb
3648 SRB-4	103000	2 standard	Dust bag	1 hp	565 lb
3648 SRC-4	103001	2 standard	DCM-80A	1 hp	819 lb
3648 SR-6	143021	2 standard	—	—	560 lb
3648 SRC-6	103021	2 standard	DCM-200	1½ hp	1266 lb
3648 SRC-6, CDC	103051	2 standard	CDC-6	1½ hp	1575 lb
3660 S	146011	2 standard	—	—	940 lb
3660 SC	126011	2 standard	DCM-200	1½ hp	1670 lb
3660 SR-6	146001	2 standard	—	—	965 lb
3660 SRC-6	126001	2 standard	DCM-200	1½ hp	1695 lb
3660 SRC-6, CDC	126051	2 standard	CDC-6	1½ hp	1815 lb
3660 SR-9	146021	2 standard	—	—	1000 lb
3660 SRC-9	126021	2 standard	DCM-200A	2 hp	1730 lb
3660 SRC-9, CDC	126052	2 standard	CDC-9	2 hp	1850 lb
3674 SRC-9	128021	2 standard	DCM-200A	2 hp	1760 lb
3674 SRC-9 (CDC)	128051	2 standard	CDC-9	2 hp	2060 lb
3696 TWIN SB	106010	2 standard	(2) Dust bags	(2) 1 hp	1078 lb
3696 TWIN SC	106011	2 standard	(2) DCM-80A	(2) 1 hp	1578 lb
3696 TWIN SRB-4	106000	2 standard	(2) Dust bags	(2) 1 hp	1138 lb
3696 TWIN SRC-4	106001	2 standard	(2) DCM-80A	(2) 1 hp	1638 lb
3696 TWIN SRC-6	106021	2 standard	(2) DCM-200	(2) 1½ hp	2632 lb
3696 TWIN SRC-6, CDC	106051	2 standard	(2) CDC-6	(2) 1½ hp	3232 lb
4848 S	144011	2 standard	—	—	670 lb
4848 SC	104011	2 standard	DCM-200	1½ hp	1400 lb
4848 SR-6	144001	2 standard	—	—	695 lb
4848 SRC-6	104001	2 standard	DCM-200	1½ hp	1423 lb
4848 SRC-6, CDC	104051	2 standard	CDC-6	1½ hp	1545 lb
4848 SR-9	144021	2 standard	—	—	730 lb
4848 SRC-9	104021	2 standard	DCM-200A	2 hp	1458 lb
4848 SRC-9, CDC	104052	2 standard	CDC-9	2 hp	1580 lb
6060 S	145011	2 standard	—	—	939 lb
6060 SC	105011	2 standard	DCM-200A	2 hp	1669 lb
6060 SR-9	145001	2 standard	—	—	1006 lb
6060 SRC-9	105001	2 standard	DCM-200A	2 hp	1736 lb
6060 SRC-9, CDC	105051	2 standard	CDC-9	2 hp	1856 lb
60120 TWIN SC	107011	2 standard	DCM-200A	(2) 2 hp	3338 lb
60120 TWIN SRC-9	107001	2 standard	DCM-200A	(2) 2 hp	3472 lb
60120 TWIN SRC-9, CDC	107051	2 standard	CDC-9	(2) 2 hp	4072 lb
7272 SRC-9	127001	1 standard	DCM-200A	2 hp	2700 lb
7272 SRC-12	127023	1 standard	DCM-200B	5 hp	2800 lb

See Page 16 for "Notes to Specifications" and "Meaning of Model Numbers and Letter Codes."

Pro-Finish® Cabinet Specifications (Suction Systems, Ergo-Blast)

MODEL DESCRIPTION	PART NUMBER	NUMBER OF DOORS	DUST COLLECTION	BLOWER MOTOR	SHIPPING WEIGHT
ERGO 2636 SRC-4	120001	1 standard	DCM-80A	1 hp	800 lb
ERGO 3648 SRC-4	121001	2 standard	DCM-80A	1 hp	920 lb
ERGO 3648 SRC-6	121021	2 standard	DCM-200	1½ hp	1365 lb
ERGO 3648 SRC-6, CDC	121051	2 standard	CDC-6	1½ hp	1665 lb
ERGO 3660 SRC-6	123001	2 standard	DCM-200	1½ hp	1797 lb
ERGO 3660 SRC-6, CDC	123051	2 standard	CDC-6	1½ hp	1917 lb
ERGO 3660 SRC-9	123021	2 standard	DCM-200A	2 hp	1832 lb
ERGO 3660 SRC-9, CDC	123052	2 standard	CDC-9	2 hp	1952 lb
ERGO TWIN 3696 SRC-4,	124001	2 standard	(2) DCM-80A	(2) 1 hp	1840 lb
ERGO TWIN 3696 SRC-6	124021	2 standard	(2) DCM-200	(2) 1½ hp	2850 lb
ERGO TWIN 3696 SRC-6, CDC	124051	2 standard	(2) CDC-6	(2) 1½ hp	3450 lb
ERGO 4848 SRC-6	122001	2 standard	DCM-200	1½ hp	1525 lb
ERGO 4848 SRC-6, CDC	122051	2 standard	CDC-6	1½ hp	1825 lb
ERGO 4848 SRC-9	122021	2 standard	DCM-200A	2 hp	1566 lb
ERGO 4848 SRC-9, CDC	122052	2 standard	CDC-9	2 hp	1860 lb
ERGO 6060 SRC-9	125021	2 standard	DCM-200A	2 hp	1836 lb
ERGO 6060 SRC-9, CDC	125052	2 standard	CDC-9	2 hp	1956 lb

Notes to Specifications: All cabinet sizes feature 14 gauge steel construction with the exception of 7272 cabinets which are 11 gauge. Cabinets with a single door open on the right-hand side. (An additional left-hand door is optional.) For information on **electricals**, **reclaimer sizing** and **dust collection**, see "**Application Considerations"** on page 19.

Meaning of Model Numbers and Letter Codes: The first two numbers indicate nominal cabinet depth in inches. The next two or three numbers show nominal cabinet width. Letters following model numbers mean the following: **S** = Suction; **P** = Pressure; **B** = Bag; **C** = Collector; **R** = Reclaimer. Numerals following letter codes show reclaimer-ventilation capacity in hundreds of cubic feet per minute at 6" static pressure. (1,200 cfm units are rated at 10" static pressure.) **TWIN** indicates a two-cabinet system. (Example: a 60120 TWIN consists of two 6060 cabinets) Letter codes in parentheses translate as follows: **CDC** = Cartridge Dust Collector; **ERGO** = Ergo-Blast model; **FS** = FaStrip model.

Application Considerations

To specify the proper equipment for your application, you should set specific objectives and choose the equipment and materials to achieve these goals.

If you are replacing existing equipment or adding blast cabinets to meet growing needs, you are probably familiar with the benefits of air-blasting, the best media to use, and the type of system you want. However, if you have a new blasting application, you and your Empire distributor should review the following outline before making a final selection.

Cabinet Sizing

Prior to selecting a cabinet, determine the critical characteristics of your workpiece. These factors should include: part size (will the workpiece fit into the cabinet?), accessibility of surfaces to be blasted, orientation requirements, desired operating procedures (manual or automatic), and masking considerations. Normally, a sketch of the part within the cabinet is helpful in determining the most functional cabinet size.

Surface Requirements

To achieve desired results, there is no substitute for actual sample blasting, through which real-world parameters can be defined. The key factors in achieving the "right" surface characteristics are: coverage, duration, pressure and media—all of which are interrelated. Nevertheless, the best final results normally start with the "right" media. General descriptions and characteristics of the most commonly used blast media are provided on the back cover of this catalog.

Generally, fine media do faster work on lighter jobs. Heavy media impact harder for deeper etching or increased "arc heights," but may lodge in small recesses. Before making a final choice about media, determine how many times the material can be recycled and how reclamation affects your operating costs.

Production Rate

The many variables affecting production rates include: blast system type (suction or pressure); blast media (type, size and quality); blast pressure; distance and angle of guns/nozzles in relation to the workpiece; part size; and operator capabilities. Again, sample blasting is the only true test, but if higher production rates are your objective, take a look at Pro-Finish pressure systems and Ergo-Blast configurations for manual work—or consider automation options.

Reclaimer and Dust Collector

Most Pro-Finish® systems are available with two ventilation options. Dusty, heavy-use or multiple-gun applications usually require additional ventilation for optimum operator visibility and extended equipment life. Dense media require larger blowers for adequate conveying. (See **"Media/Reclaimer Compatibility"** table on page 10.) Systems with exposed dust bags or without reclaimers are not recommended for production applications.

Utilities

Your Pro-Finish system requires electricity and compressed air. Be sure the system you select interfaces properly with the electrical sources in the plant where it will be installed. Standard pre-wiring for 1 horsepower motors is: 115 volt, 60 hertz, 1 phase, 20 amp; for 1½ horsepower motors: 230 volt, 60 hertz, 1 phase, 15 amp; for 2 horsepower motors: 230 volt, 60 hertz, 1 phase, 17 amp; for 5 horsepower motors: 230 volt, 60 hertz, 3 phase, 20 amp. These numbers represent full-amp draws for the dust collector and basic cabinet. Three-phase electrical upgrades can be supplied complete with control transformer for one-source power connection. Three-phase upgrades are also available with more economical dual source. Because field re-wiring can be costly, it is not advisable.

Options

Tailor the system to your application by choosing standard options. If harsh media is selected, you will want to protect your equipment with Empire's extended-wear components. For light or fine media (200 mesh or less), or humid conditions, consider a vibrating screen and automatic Sure-Flo regulator. When using plastics or walnut-shells, FaStrip® cabinets are recommended.

Review all standard factory options as they relate to material handling, productivity and serviceability with an eye toward getting maximum value from your Pro-Finish system. Because these systems are modular, you can select only the equipment needed. Further upgrading in the field is normally a simple procedure.

Automation

You can customize a Pro-Finish cabinet to run without an operator by incorporating a powered turntable and gun holder. More sophisticated approaches include multiple blast guns, oscillators and a timer package.

Almost every automated Pro-Finish application is different so care should go into visualizing how the part will be processed. If an out-of-round workpiece is rotated on a turntable, areas that come closer to a stationary blast source will experience greater intensity. In addition, recessed regions may be missed and interior surfaces may be hard to reach with standard equipment.

Multiple guns/nozzles not only provide faster cycles through increased coverage, but also "see" more facets on multi-sided parts. Consequently, most automated systems employ multiple guns or nozzles.

Manual touch-up is offered with Pro-Finish systems involving automation because, unlike the human eye, mechanical devices cannot sense where extra blasting might be required. Touch-up can also eliminate the effect of "barberpoling," which occurs when blast oscillation is slightly faster than part rotation.

One of the final "components" to choose in your automated Pro-Finish system is the cabinet. Picture how much room is needed inside the working enclosure—not only for the workpiece, but also for the guns/nozzles, hoses and all moving mechanisms. Be careful not to under size the cabinet.

Pro-Finish® Surface-Treatment, Cleaning and Finishing Capabilities

The selections of finishes are virtually unlimited and so are the applications.

FINISHING

• Add matte or satin finish, or decorative frost • Remove glare or imperfections • Blend marks
• Hone and burnish • Mark identifications

CLEANING & REMOVAL

• Chemical impurities • Paint • Coatings • Sealants and adhesives • Carbon deposits • Scale • Excess brazing
• Casting material • Flashing • Burrs • Rust • Oxidation

SURFACE TREATMENT & PREP

• Strengthen • Add fatigue resistance • Improve wear properties
• Reduce design weight, porosity, friction or susceptibility to corrosion • Improve lubrication
• Expose flaws for inspection • Etch for bonding and adhesion • Cut

Media Guide

	Glass Bead	Ceramic Shot	Stainless Cut Wire	Steel Shot	Steel Grit	Aluminum Oxide	Silicon Carbide	Garnet	Crushed Glass	Plastic Media	Agri Shell
Finishing	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO
Cleaning/Removal	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Peening	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO	NO
Surface Profiling (Etch)	NO	NO	YES	NO	YES	YES	YES	NO	YES	YES	YES
Working Speed	MED	MED	MED	MED	MED-HIGH	HIGH	VERY-HIGH	LOW	HIGH	MED-HIGH	LOW-HIGH
Recyclability	HIGH-LOW	HIGH	HIGH	VERY-HIGH	VERY-HIGH	MED-HIGH	MED-LOW	NONE	MED-LOW	MED	LOW
Probability of Metal Removal	VERY LOW	VERY LOW	VERY LOW	VERY LOW	MED	MED-HIGH	MED-HIGH	NONE	LOW-MED	VERY LOW	VERY LOW
Hardness, MOH Scale	5.5	7	6-7.5	6-7.5	8-9	8-9	9	2.5	5.5	3-4	1-4.5
(Rockwell RC)		(57-63)	(35-55)	(20-66)	(40-66)						
Bulk Density (lb/cu. ft.)	100	150	280	280	230	125	95	60	100	45-60	40-80
Mesh Size	30-440	8-46	20-62	8-200	10-325	12-325	36-220	70-220	30-400	12-80	MANY
Typical Blast Pressures (psi)	20-55	20-90	20-90	20-90	20-90	20-90	20-90	40-80	20-50	20-60	10-40
Shapes: • Spherical; Δ Angular	•	•	•	•	Δ	Δ	Δ	Δ	Δ	• or Δ	Δ

Notes:
Above information is intended as a general reference guide. Consult your authorized Empire distributor for specific media recommendations.
1) Sodium bicarbonate must be treated with a flow agent.
2) Do not use silica sand in a hand cabinet.
3) See **Media/Reclaimer Compatibility** chart on page 10 for mesh sizes that are compatible with reclaimer systems.

Warranty: Three Year Limited

Consult Empire for details. Dimensions and specifications will vary with options and accessories purchases. INFORMATION IS SUBJECT TO CHANGE WITHOUT NOTICE.

NEVER USE SILICA SAND IN ANY EMPIRE EQUIPMENT.

EMPIRE ABRASIVE EQUIPMENT

Empire Abrasive Equipment, 2101 W. Cabot Blvd., Langhorne, PA 19047-1893

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