PULSAR PLUS BLAST CABINETS

ZERO Pulsar plus
Blast Cabinets

Reliable and consistent results.
Easy to use.
Simple to maintain.

CLEMCO®
INDUSTRIES CORP.

Clemco Industries Corp.

Pulsar® Plus Blast Cabinets

The Next Generation of Pulsar III and VI Cabinets

Low-quality blast cabinets are the worst—draining time and resources from your company every day. At Clemco, we design and build high-quality blast cabinets that last over time, so you and your team can get more jobs done on time and on budget.

You spoke. We listened.

After talking with customers and distributors all over the country to understand what they need in a blast cabinet, Clemco created the Pulsar Plus Line of Blast Cabinets—high-production cabinets that give customers what they really need:

- Reliable and consistent results.
- Simple maintenance.
- Ease of use.
- Seventeen ergonomic and state-of-the-art features—more than any competitor.
- Six models to choose from: suction and pressure.
- A detached power module that allows for flexible blast-system configurations into awkward or tight workspaces.
- Low cost of ownership.
- Quick return on investment.

Clemco's ZERO® brand Pulsar Plus Blast Cabinets have reimagined the possibilities of cabinet abrasive blasting. They make abrasive blasting with a cabinet safer, more efficient, and more profitable—while providing consistent, repeatable results that get the job done right.

Ease of Use: Electric Controls and Circuits

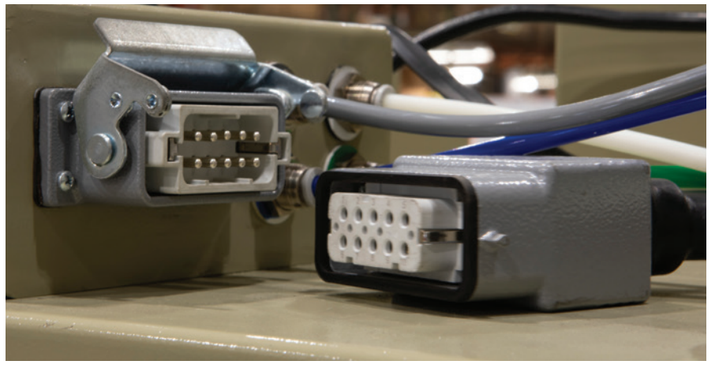
Central to the Pulsar Plus redesign is the Clemco conviction that equipment ease of use and operator comfort increase productivity and reduce downtime.

Electric Control Panel

- A front-mounted control center houses each cabinet's ON and OFF power switches, height-adjustable lift-leg controls, pressure gauge and pressure-adjustment control, and magnehelic gauge.
- The panel's centralized location lets operators know at a glance whether the cabinet is operating at peak efficiency so that they can make necessary adjustments.

Electric Circuitry

- The cabinets are equipped with an all electric control circuit that assures reliable, split-second engagement of the height-adjustable lift legs, the foot pedal, and the door and dust container safety interlocks—which halt blasting if a cabinet door is not closed or the dust container is not connected to the dust collector.
- Electric controls are easier to troubleshoot than pneumatic controls, for which troubleshooting often requires downtime.
- In addition, dirty air and air leaks in pneumatic systems cause control circuit failures, but electric controls eliminates air-related failures and complex plumbing.



Multi-Connection Port and Adaptor

- A multi-connection port behind the control panel simplifies securing electric connections between the control panel and power module.
- A single adaptor that contains all electric connections from the power module plugs into this port.

Efficient, Durable, Ergonomic Design

Quick-Change Glove Ports with Armrests

- Quick-change glove ports make replacing gloves quick and painless, and permit every operator to have a dedicated pair of gloves.
- The glove ports are designed with integrated armrests to help operators stay comfortable and focused during long shifts or demanding applications.

Ergonomic glove ports and height-adjustable, electric lift legs are examples of Pulsar Plus innovations that helped create this efficient, durable, operator-friendly line of blast cabinets.

LED Lighting: Outshines Other Light Sources

- Abundant lighting is one of the simplest fixes for improving operator efficiency, which is why Clemco has equipped its Pulsar Plus Cabinets with state-of-the-art, 50-watt LED lights that outshine even higher-wattage florescent and incandescent lights.

Dependable, Durable Construction

- Cabinet enclosures and support structures are constructed from 14ga and heavier steel.
- Double-wall, sound-insulated doors and door frames form an edge baffle, which works in tandem with adjustable door latches to maintain a positive seal. This seal prevents dust and abrasive from escaping.
- A pull-through exhaust fan reduces wear on impeller blades.

1 foot range of adjustment

Height-Adjustable, Electric Leglifts

Electric-controlled lift legs with a 1 ft range of adjustment enable operators of varying heights to work comfortably and to control their line of site through the view window, which all helps them blast more efficiently.

**Photo illustration is of the Pulsar Plus III-Suction Cabinet.*

The Power Module: A Flexible, Integrated System

Clemco's preoccupation with simplicity and flexibility defines these reimagined Pulsar Plus Cabinets, as exemplified by the design features of the detached power module.

Flexible Configurations

- The detached power module houses a reverse-pulse dust collector and the media reclaimer.
- The power module's compact design allows for flexible configuration with the blast cabinet, enabling the entire blast system to fit into awkward or tight workspaces in various work environments.

System Compatibility

- Capacities for the sump, reclaimer, dust collector, and blast system are perfectly matched.
- Because the components are housed in one cabinet, routing of hoses and tubes is simple and direct.
- Meters most common, recyclable media, from glass bead to aluminum oxide.
- To boost capabilities to meter heavy steel media, an optional steel-media kit is offered for cabinets with a 600-CFM power module.

Dust Collector: Optimizes Cabinet Performance

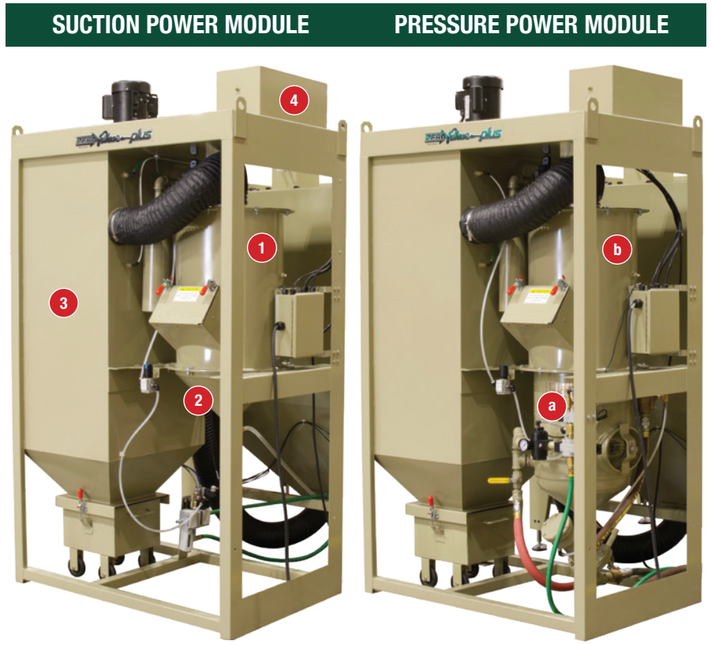
The reverse-pulse dust collector ensures optimal media recovery and visibility while blasting by maintaining an efficient, closed dust-collection system.

Designed for Efficiency

- The **1-HP exhauster motor** guarantees proper airflow.
- The **auto-timed pulse** cleans accumulated dust from the filter cartridge.
- The pleated filter cartridge that comes standard has a MERV-12 rating, which is a powerful enough efficiency rating for most industrial blasting applications.
- For work environments with especially toxic dust, an optional HEPA filter is recommended. HEPA filters trap up to 99.988% of dust down to 0.3 micron particles.
- The pulse valve has its own pressure regulator and gauge.
- An electric safety interlock monitors the connection between the dust collector and dust container. If the dust container is not connected to the dust collector, blasting is halted. Interlocks promote recovery system efficiency and reduce dust in the work area.

Recovery Cycle: Suction and Pressure Blast Systems

The recovery cycle in Pulsar Plus Suction and Pressure Blast Cabinets has been engineered to optimize each system's features and sync the operation of the media reclaimer and dust collector. The result: Whether you own a suction or pressure system, it runs as efficiently as possible.



Suction System Recovery Cycle

1. **Reclaimer**—Separates reusable media from dust, debris, and broken media.
2. **Media Storage Hopper**—Reclaimer deposits reusable media into the storage hopper.
3. **Dust Collector**—Dirty air exits the reclaimer and flows into the dust collector.*
4. **Outlet Damper**—Adjustments change static pressure in the reclaimer, which controls the size of media that is retained.

*__Air Filter Cartridge (not pictured)__—The replaceable cartridge inside the dust collector filters dust and contaminants from the air.

Pressure System Recovery Cycle

a. **1-cuft Blast Machine**—Replaces the media storage hopper in a suction system.
b. **Reclaimer**—Automatically refills the blast machine each time the foot pedal is released.

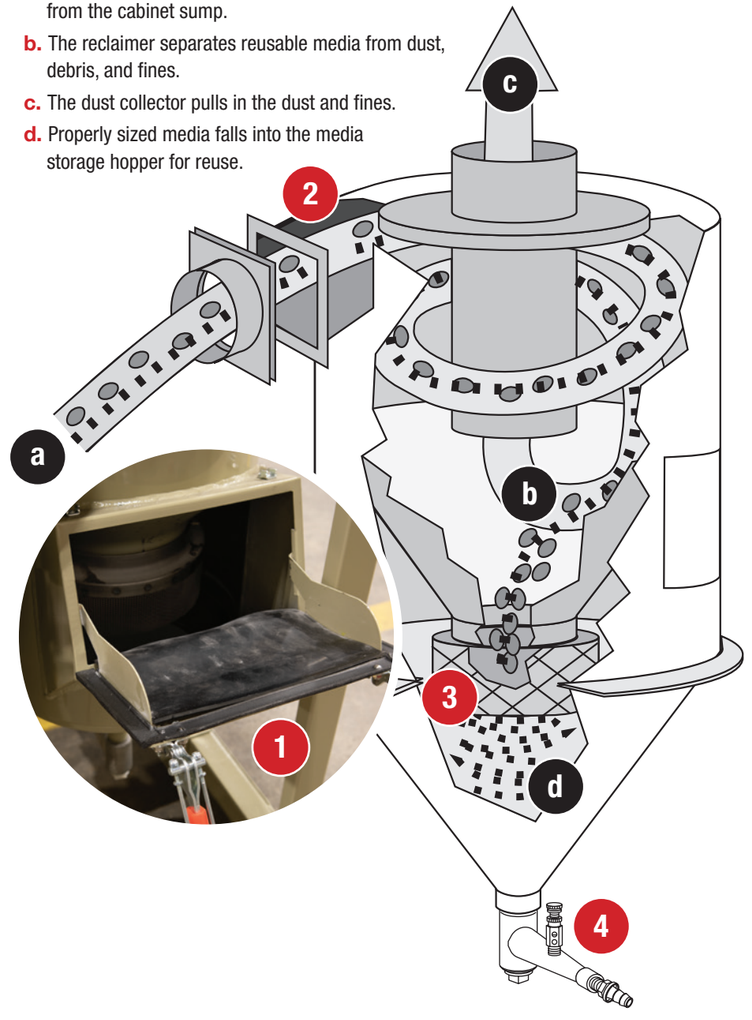
The Reclaimer: The Heart of Every Pulsar Plus Cabinet

Media Reclaimer: Adaptable, Durable, and Easy to Use

1. The media-load chute simplifies loading media and helps eliminate waste and safety hazards caused by spilled media.
2. A wear plate protects the inlet from damage by debris.
3. The debris screen beneath the reclaimer sorts out oversized material that can obstruct the blast system.
4. The metering valve adjusts media flow to fit various applications.

Media Reclaimer: Sequence of Operation

a. Air with dust, debris, and media enters the reclaimer from the cabinet sump.
b. The reclaimer separates reusable media from dust, debris, and fines.
c. The dust collector pulls in the dust and fines.
d. Properly sized media falls into the media storage hopper for reuse.



The media reclaimer maintains an effective media working mix while simultaneously removing dust and debris from the blast system. This process ensures consistent blasting results and peak blast system performance.

Simple to Maintain Blast System

Our engineers understand that innovative design also must incorporate trouble-free maintenance because operators are more likely to perform straightforward, uncomplicated equipment service.

Power Module: Unobstructed Access

- The detached power module provides unobstructed access to common wear parts, such as the reclaimer inlet adaptor and the pulse control valve. This quick access dramatically decreases maintenance downtime.
- The power module also offers unobstructed access to the metering valve, pulse-pressure regulator, pulse timer, and outlet damper. Operator access to these controls simplifies the cabinet's capability to adapt to different media.

Dust Collector: Clever, Yet Simple, Features Ease Maintenance

- A side-access door panel provides quick access to the filter cartridge, which has a twist-lock release mechanism so that it smoothly detaches from the dust collector. This uncomplicated system speeds up routine maintenance and helps prevent accidental dust release.
- The 6-gallon dust container is mounted on wheels, so it effortlessly glides out from underneath the dust collector, which makes for easier handling by operators and minimizes dust release into the work area.

Easy to Customize and Maintain

- Lift-off hinges allow operators to swap a standard door for a pass-through door or for a door fitted with a Clemco standard tumble basket.
- The tilt-out view window allows tool-free window replacement in minutes.
- A blow-off nozzle clears away dust and media after blasting.

Industry and Application Versatility

Industry Specific Applications

- **Aerospace**
  Landing gear components, molds, wheels, castings, fasteners, remanufacturing
- **Power Generation**
  Heating elements, semiconductors, turbine shafts, turbine blades
- **Oil & Gas**
  Valve components, drill shafts
- **Firearms**
  Frames, slides, cylinders, fasteners
- **Medical**
  Surgical instruments, implants
- **Automotive**
  Brake calipers, springs, general fasteners, injectors, remanufacturing
- **Food Service**
  Rollers, sealing bars, molds, baking sheets

Pulsar Plus Cabinets are designed for industry and application versatility. Whatever your industry or application, Pulsar Plus Cabinets can adapt, even if your needs change.

General Applications

- Remove rust, mill scale, heat scale, and carbon buildup from metals.
- Strip paint, powder coating, plating, and anodizing from parts for rework.
- Eliminate burrs, parting lines, flashings, and other defects from castings and injection-molded parts.
- Extract residual sand from castings.
- Beautify steel, stainless steel, aluminum, brass, and other metals with a uniform matte finish.
- Etch artwork and lettering into glass, stone, plastics, metal, and other materials.
- Reduce build lines and removes excess powders from 3D-manufactured prototypes and production parts.
- Clean release agents and material buildup from molds.

Pulsar Plus

III and VI Suction Cabinets

High-production suction cabinets designed to function with lower air volume. They are equipped with the industry-leading BNP Blast Gun, which sets the standard for efficiency and productivity.

BNP® Blast Gun

- The pistol-grip design is comfortable to hold for long periods, which increases operator productivity by reducing fatigue.
- The gun's efficiently designed mixing chamber eliminates slugging and uneven media flow.
- Pulsar Plus Suction Cabinets come equipped with a No. 5 blast gun and a ceramic nozzle.
- Optional tungsten carbide and boron carbide nozzles handle more aggressive media.

System Efficiency

- The 1/2" air filter is properly configured with each Pulsar Plus Suction Cabinet to trap oil and water that can inhibit media flow and contaminate cleaned parts.

Pulsar Plus VI-Suction

Pulsar Plus III-Suction

Pulsar Plus

III and VI Pressure Cabinets

For high-production applications, pressure cabinets clean three to four times faster than suction cabinets. They require high volumes of compressed air to maintain this production rate.

Powerful, Compact Blast Machine

- Pulsar Plus Pressure Cabinets are equipped with a 1-cuft blast machine that automatically refills from the reclaimer.
- The blast machine holds enough media to continuously blast up to 30 minutes.
- It meets ASME specifications for 125 psi maximum working pressure.
- Each blast machine is fitted with a large handhole for internal maintenance and a 35° conical bottom for smooth media flow.

Efficient and Flexible

- Pulsar Plus Pressure Cabinets come equipped with a No. 3 tungsten carbide blast nozzle and are compatible with up to No. 5 nozzles.
- An optional boron carbide nozzle handles more aggressive media.
- The metering valve's urethane-coated plate enhances its capability to meter fine media.
- The 1" air filter is properly configured with each Pulsar Plus Pressure Cabinet to trap oil and water that can inhibit media flow and contaminate cleaned parts.

Pulsar Plus VI-Pressure

Pulsar Plus III-Pressure

SPECIFICATIONS: Pulsar Plus III and VI

Complete System

Space requirements depend on desired workflow. Allow additional workspace for operator and maintenance needs. ***Note:*** *Pulsar Plus III-Pressure Cabinets come with a VI-P power module.*

Pulsar III

- 62” width (1575 mm)
- 38” depth (965 mm)
- 76” height (1930 mm)

Pulsar VI

- 71” width (1803 mm)
- 52” depth (1321 mm)
- 84” height (2134 mm)

Grate load limit on all models is 500 lbs.

Working Chamber

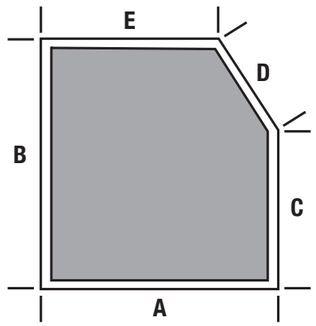
Pulsar III
- 36" width (914mm)
- 35" depth (889mm)
- 37" height (940mm)

Pulsar VI
- 50” width (1270mm)
- 39” depth (991mm)
- 43” height (1092mm)

Door Opening

Pulsar III

A. 32.5” (826 mm)
B. 34” (864 mm)
C. 19” (483 mm)
D. 17.5” (445 mm)
E. 24” (610 mm)



Pulsar VI

A. 36.5” (927 mm)
B. 38” (965 mm)
C. 19.5” (495 mm)
D. 20.5” (521 mm)
E. 27” (686 mm)

Electrical

300 CFM and 600 CFM
1 HP, 115V, 1 PH, 60 Hz

Note: *Some installations may require electrical connection by a qualified electrician.*

Window Size (safety glass)

- 19.5” width (495 mm)
- 12.5” height (318 mm)

Guns/Nozzles: Suction Blast Air Requirements

Nozzle	Nozzle Orifice	Air Jet	CFM @80psi	M³/Min @5.5 Bar
No. 4	1/4"	1/8"	21	0.6
No. 5	5/16"	5/32"	32	0.9
No. 6	3/8"	3/16"	48	1.35
No. 7	7/16"	7/32"	62	1.75
No. 8	1/2"	1/4"	85	2.4

Pulsar Plus Suction Cabinets are equipped with a BNP Blast Gun with a No. 5 ceramic nozzle.

Guns/Nozzles: Pressure Blast Air Requirements

Nozzle	Nozzle Orifice	CFM@ 80psi	CFM@ 100psi	M³/Min@ 5.5 Bar	M³/Min@ 7 Bar
No. 2	1/8"	17	20	0.5	0.6
No. 3	3/16"	38	45	1.08	1.3
No. 4	1/4"	68	81	1.93	2.3
No. 5	5/16"	113	137	3.20	4.0

Pulsar Plus Pressure Cabinets are equipped with a No. 3 tungsten carbide nozzle.

Dust Collector Filtering Area

300 CFM (9.9 m²) • **600 CFM** (18.1 m²)

Pulsar Plus Cabinets have a pleated dust filter with a MERV-12 rating. For work environments with especially toxic dust, order an optional HEPA filter. They trap 99.988% of dust down to 0.3 micron particles.

Popular Accessories

- Adjustable gun mount
- Alox kit
- Pass-through doors
- Steel grit/shot media kit
- Timed door release
- Curtains
- 20" and 30" stationary turntable
- HEPA filter
- Manometer kit

Ordering Information

Model	CFM	Standard	Weight
Suction Cabinets			
Pulsar Plus III-S	300	29381	850
Pulsar Plus III-S6	600	29393	950
Pulsar Plus VI-S	600	29383	1150
Pressure Cabinets			
Pulsar Plus III-P	600	29382	1260
Pulsar Plus VI-P	600	29384	1550

Pulsar Plus 55-Suction Cabinet

High Production for Limited Space

The Pulsar Plus 55-Suction Cabinet is the most compact cabinet of the Pulsar Plus Line. It has all of the features and innovations of other Pulsar Plus Cabinets, except it is fixed height and the power module is attached. The cabinet is ideal for cell-manufacturing floor plans.

Pulsar Plus 55-Suction

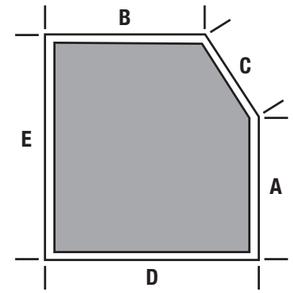
Complete System

Space requirements depend on desired workflow. Allow additional workspace for operator and maintenance needs.

- 50” width (1270 mm)
- 43” depth (1092 mm)
- 81” height (2057 mm)

Door Opening

A. 11.5” (292 mm)
B. 18” (457 mm)
C. 11” (279 mm)
D. 21” (533 mm)
E. 26.5” (673 mm)



Working Chamber

- 42” width (1067 mm)
- 23” depth (584 mm)
- 30” height (762 mm)

Electrical

1 HP, 115V, 1 PH, 60 Hz

Note: *Some installations may require electrical connection by a qualified electrician.*

Window Size (safety glass)

- 19.5” width (495 mm)
- 12.5” height (318 mm)

Guns/Nozzles

Nozzle	Nozzle Orifice	Air Jet	CFM @80psi	M³/Min @.Bar
No. 4	5/16"	1/8"	21	0.6
No. 5	5/16"	5/32"	32	0.9

Equipped with a BNP Blast Gun with a No. 5 ceramic nozzle.

Dust Collector Filtering Area - 195 ft² (18,1 m²)
The 55-S has a pleated dust filter with a MERV-12 rating. For work environments with especially toxic dust, order an optional HEPA filter. They trap 99.988% of dust down to 0.3 micron particles. **Reclaimer Flow Rate -** Nominal 300 CFM

Ordering Information

Model	CFM	Standard	Weight
Pulsar Plus 55-S	300	30363	850

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