

**ZERO**

Blast Cabinets

# Automation



## BNP A200 SERIES



**The Performance System**

**CLEMCO**<sup>®</sup>  
INDUSTRIES CORP.

# BNP A200 & BNP A205

A ZERO BNP A200 or A205 put precise, repeatable automated blast cleaning, surface finishing, deburring, and peening within the reach of small to mid-size manufacturers and machining centers.

The BNP A200 measures four by four feet; the BNP A205 is a slightly larger cabinet (five by five feet) to allow more options for gun placement and more room for maintenance work. The two models share many features with ZERO's custom-engineered automated systems — indexing turntable, rotating satellites, automatic blow-off, and fingertip process controls for cycle timer and parts rotation.



## Versatile

Six low-profile satellites and generous 12-inch by 16-inch door openings accommodate a wide array of parts. Each satellite supports up to 25 pounds, including the part being blasted and the fixture to hold it in place.

Adjustable mounts allow the automatic blast guns to be set at the appropriate angle and distance for the part being blasted.



indexing turntable



process controls



satellites and suction guns



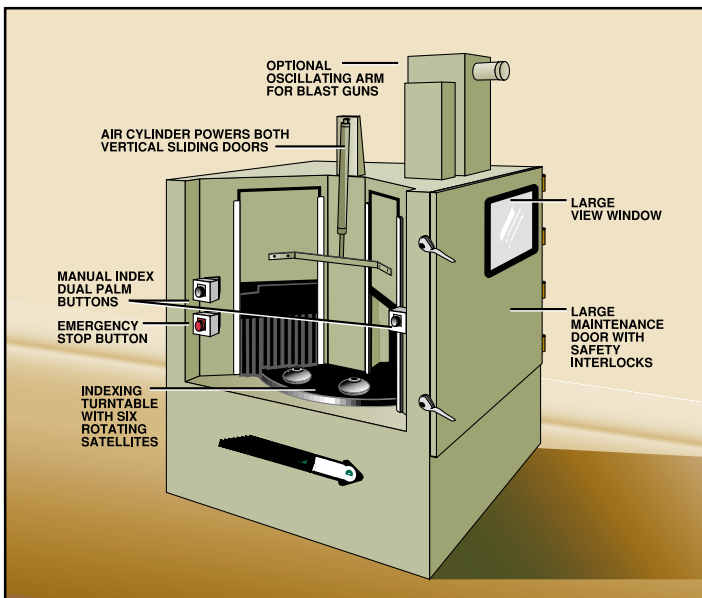
automatic blow-off with optional sound insulation



A200 Series - cabinet, reclaimer and dust collector

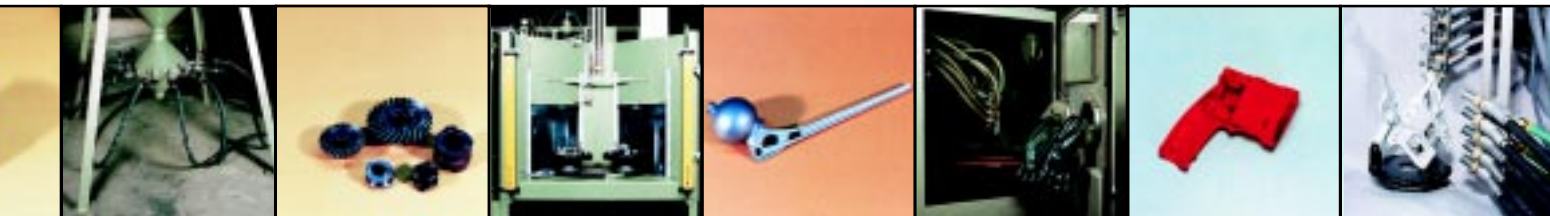
Unlike special purpose machines designed to clean just one or two types of parts, A200 Series cabinets can switch quickly from cleaning one part to another. Changing fixtures and repositioning blast guns takes just a few minutes. The A200 Series's greater flexibility allows a manufacturer to spread the cost of a system across several products.

Standard A200 Series cabinets come configured for either two-station or single-station indexing. Two-station indexing puts two parts in each of the blast, blow-off, and load positions. Single-station indexing allows multi-step blasting, such as inside and out or top and bottom.



A200 Series cabinets are packed with features

O.F. MOSSBERG & SONS • CUMMINS ENGINE • PRATT & WHITNEY • CATERPILLAR • FARBWERK • 3M • BELL HELICOPTER • MCGRAW-EDISON • WELDON • PITNEY BOW  
 WESTINGHOUSE • UNITED AIRLINES • ART CARVED CLASS RINGS • GATES RUBBER • BERRETTA USA • MILWAUKEE ELECTRIC TOOL • ARROW AUTOMOTIVE • CHAMPION  
 SERMETEL • WESTERN FORGE • TELEDYNE • DIESEL RECON • PACIFIC FABRICATION • UNIFORM TUBES • LEXMARK INTERNATIONAL • AIRFOIL MANAGEMENT • A.W.



## Precise & Repeatable

A200 Series cabinets deliver the same amount of blast cleaning to the first part, the last part, and every part in between. For shot peening applications, the A200 Series' ability to deliver consistent, documentable peening intensity makes them perfect for aircraft turbine blades and other precision parts.

For cleaning, deflashing, etching, and paint removal applications, A200 Series cabinets can eliminate expensive and time-consuming rework.

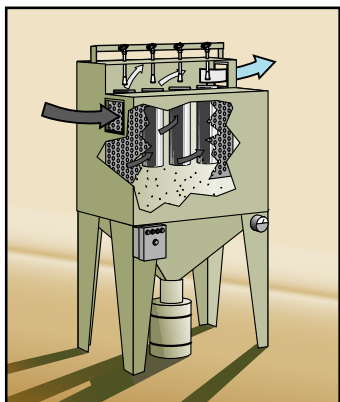


## Safer — for parts and people

A200 Series cabinets prevent impingement damage to delicate parts, because the parts never touch one another. Each part enters the blast chamber mounted on a variable-speed rotating satellite. The blast guns, firmly mounted to a fixed or optional oscillating arm, maintain a constant distance and angle so parts receive the predetermined blast intensity and coverage.

For employees, A200 Series cabinets eliminate much of the fatigue and repetitive motions associated with high-production manual parts processing. Dual palm buttons actuate the index and blast cycle only when the operator's hands are clear of moving parts.

The A200 Series cabinets stay sealed during blast and blow-off, reducing the noise level and trapping the dust and media inside.

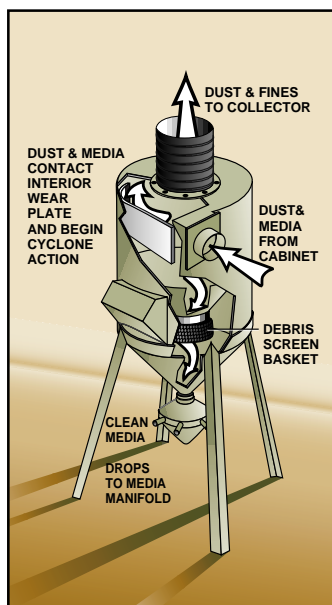


PRH collector traps dust and spent media

A200 Series cabinets come equipped with a reverse pulse cartridge dust collector, sized for the number of blast guns used. This efficient, self-cleaning dust collector maintains negative pressure in the enclosure to prevent dust from escaping. Dust and spent media fall into a sealed drum, which can be fitted with a trash bag so employees do not handle dust when emptying the drum.

## Economical

A200 Series cabinets save labor, time, and blast media, and help prevent costly rework. The standard six-gun system can thoroughly blast a part inside and out in a fraction of the time required by an operator using a single blast gun or other manual process. These cabinets are available as standard models with 6, 8, or 12 suction guns. Additional suction guns (beyond 12) or the higher-production pressure blast system are available to meet specific production requirements.



The reclaimer separates reusable media from dust and spent media

A200 Series cabinets can use most recyclable blast media. An efficient, externally adjustable reclaimer separates the dust and fractured media from the clean, reusable media. The reclaimer's ability to recycle blast media saves money and media loading time.

## Durable

Heavy-gauge steel construction throughout, with replaceable rubber curtains in the blast chamber, make A200 Series cabinets long-lasting machines. A wear plate in the reclaimer and

heavy, lined hose between the cabinet and reclaimer reduce the frequency of replacement for these key components.

Sealed bearings keep the cast aluminum satellites rotating freely under loads of up to 25 pounds. Thick urethane protects the tops of the satellites from the blast.

Scratch- and oil-resistant paint keep the cabinet, reclaimer, and dust collector looking new for years. The door latches are made from durable painted steel to stay new looking longer.

# Options and Accessories

## Gun oscillation

Increases parts coverage without adding guns and increases flexibility for gun positioning.

## Programmable controller

Makes changing selected system variables such as pressure, rotation speed, oscillation speed, and blast duration quick and easy.

## Sound insulation package

Includes extra sound-deadening foam, and raised air inlets and exhaust to meet customer specified decibel level limits.

## Light curtain control

Eliminates need for operator to depress palm buttons and prevents operation until operator's hands are clear of moving parts.

## Enhanced shot separation and sizing

For consistent peening intensity to exacting specifications.

## Shot flow monitors and controllers

Maintain consistent, repeatable, and documentable peening intensities for compliance with AMS 2432.

## Vibratory classifiers and spiral separators

Enhance the media cleaning and classification system, particularly in shot peening applications where media size and shape are critical.

## Automatic media refreshing

Maintains the proper operating mix from start to finish.

## HEPA filters

Capture 99.97 percent dust particles as small as 0.3 micron.

## Pick-and-place robotics

Allows continuous loading and unloading without an operator.

# SPECIFICATIONS

## Overall Dimensions

### A200

48" wide by 48" deep by 66" high.

### A205

60" wide by 60" deep by 66" high.

## Maintenance Doors

Double-wall construction with foam insulation for noise reduction. Right door has a large 19-inch by 12-inch view window. Doors pivot on heavy-duty hinges. Rubber strips prevent leakage when doors are closed. The doors are held closed by two heavy-duty cam latches. All doors are equipped with safety interlocks to interrupt operation if a door is opened.

## Lighting

Ceiling-mounted 150-watt incandescent light fixture is set in a shielded enclosure serviceable from inside the enclosure.

## Part Entrance & Exit

Openings are covered by vertical sliding doors designed to prevent dust and media escaping when closed. Both doors are powered by a 16-inch stroke air cylinder controlled by dual palm buttons for operator safety. Teflon™ guide rails provide smooth operation.

The entrance opening is 12 inches wide by 16 inches high from table top to top of opening.

Actual area for part passage is approximately 12 inches wide by 13½ inches high allowing for fixturing.

## Turntable

Made from carbon steel plate with structural steel support framework. Coated with a wear-resistant urethane coating for extended protection from abrasives. Mounted on triple-sealed bearings and driven by a 60:1 gear reducer powered by a 1/3 HP, 900 rpm variable speed DC motor.

The turntable has an outside diameter of 30 inches, and a total weight capacity of 150 pounds.

## Rotating Air Blow-off

Equipped with one rotating air blow-off station.

## Fixturing

Six rotating fixture bases are each capable of supporting 25 pounds. Fixture rotation is accomplished with a 50:1 gear reducer and a 1/4 HP, 1800 rpm variable speed motor (0 - 30 rpm) rotated by a urethane belt with the motor located outside blast enclosure.

## Blast Equipment System

ZERO venturi-type, suction-feed blast guns with 3/8-inch, tungsten carbide nozzles and 3/16-inch orifice assemblies, metering valve assembly, air manifold assembly, and all necessary hoses and fittings. Either model can be fitted

with 6, 8, or 12 suction guns or pressure nozzles as appropriate for the application.

Guns are mounted on carbon steel slotted bars to allow manual repositioning. Can also be mounted to optional oscillation devices.

## Air Manifold

Designed to condition and evenly distribute compressed air to each blast gun.

Includes a 1½-inch automatic drain moisture separator, and 1½-inch pilot-operated main air regulator.

## Reclaim

Highly efficient, balanced ZERO reclaimer, 900, 1200 or 1800 cfm.

## Media Manifold

This assembly is located directly below the reclaimer and ensures proper distribution of blast media to each metering valve.

## Dust Collection

Delivered standard with ZERO RPH Model reverse pulse jet cartridge dust collector in 900, 1200 or 1800 cfm.

## Electrical Control Panel

A NEMA 12 enclosure houses all electrical components. All control buttons are mounted on the door and clearly labeled.

## Electrical Requirements

Units can be wired for 460V, 3PH, 60HZ. or other electrical configurations are available upon request.

