

# Split Warm Isostatic Lab Press 200 Ton Powder Compaction Chamber For Battery Research And Material Science

Item Number: PWDA



## Introduction

Optimize your research with this 200 ton split warm isostatic press featuring uniform temperature control, advanced curve recording, and a safe high definition touchscreen interface ideal for challenging powder compaction in advanced battery and technical ceramic materials research.

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| Application                    | Description   | Key Benefit   |
|--------------------------------|---|---|
| Solid-State Battery Research   | Compacting solid electrolyte materials and electrode composites to achieve low boundary resistance. | Ensures maximum ionic conductivity and solid-state interface contact.                           |
| Technical Ceramics Fabrication | Shaping high-density alumina, zirconia, and silicon nitride parts with complex geometries.          | Eliminates internal voids and sintering shrinkage variation for precise dimensional tolerances. |
| Advanced Powder Metallurgy     | Consolidating refractive metal powders and composite alloys at elevated temperatures.               | Produces fully dense green compacts, reducing subsequent sintering times and energy costs.      |
| Catalyst Carrier Manufacturing | Compacting specialized catalyst substrates for industrial chemical synthesis applications.          | Uniformly distributes porosity and active surface areas for maximum reaction efficiency.        |
| Synthetic Gemstone Synthesis   | Pressing diamond powders and synthetic monocrystalline matrices under uniform thermal conditions.   | Guarantees crystal matrix uniformity and structural integrity under stress.                     |
| Aerospace and Defense Testing  | Preform consolidation of high-strength components and composite carbon-metal structures.            | Provides reproducible density profiles required for mission-critical structural elements.       |

| Specification Parameter                  | Variant PWDA-90 Details                            | Variant PWDA-70 Details                            |
|--|--|--|
| Model Designation                        | PWDA-90 (Large Chamber Variant)                    | PWDA-70 (High Pressure Variant)                    |
| Maximum Heating Temperature              | Room Temperature to 200°C                          | Room Temperature to 200°C                          |
| Maximum Isostatic Pressure Range         | 0 to 300 MPa                                       | 0 to 500 MPa                                       |
| Maximum Hydraulic Force                  | 200 Tons (0 - 200T Range)                          | 200 Tons (0 - 200T Range)                          |
| Internal Chamber Dimensions (ID x Depth) | Ø90 mm x 150 mm                                    | Ø70 mm x 150 mm                                    |
| Chamber Spatial Clearance                | 290 mm x 400 mm                                    | 290 mm x 400 mm                                    |
| Pressure Calculation Display Accuracy    | 0.01 Tons  | 0.01 Tons  |
| Control Screen Interface                 | 7-inch High-Definition IPS Color Touchscreen       | 7-inch High-Definition IPS Color Touchscreen       |
| Program Profile Segments                 | Up to 18 segment temperature/pressure programming  | Up to 18 segment temperature/pressure programming  |
| System Curve Recording & Export          | Real-time graphics display; U-disk export (Excel)  | Real-time graphics display; U-disk export (Excel)  |
| Integrated Safety Systems                | Door shield, overpressure protection, limit switch | Door shield, overpressure protection, limit switch |
| Structural Interface Control Buttons     | Chrome-plated metal buttons (>100,000 presses)     | Chrome-plated metal buttons (>100,000 presses)     |
| Total Equipment Power Draw               | 1500W (Standard 220V / 110V Customizable)          | 1500W (Standard 220V / 110V Customizable)          |

| Specification Parameter                       | Variant PWDA-90 Details   | Variant PWDA-70 Details   |
|---|---------------------------|---------------------------|
| <b>Main Press Dimensions (L x W x H)</b>      | 480 mm x 600 mm x 1100 mm | 480 mm x 600 mm x 1100 mm |
| <b>Main Press Weight (Net / Gross)</b>        | 871 kg / 923 kg           | 871 kg / 923 kg           |
| <b>Control Cabinet Dimensions (K x P x H)</b> | 350 mm x 460 mm x 480 mm  | 350 mm x 460 mm x 480 mm  |
| <b>Control Cabinet Weight (Net / Gross)</b>   | 109 kg / 126 kg           | 109 kg / 126 kg           |