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

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Einführung

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.

Mehr erfahren

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
Main Press Dimensions (L x W x H)	480 mm x 600 mm x 1100 mm	480 mm x 600 mm x 1100 mm
Main Press Weight (Net / Gross)	871 kg / 923 kg	871 kg / 923 kg
Control Cabinet Dimensions (K x P x H)	350 mm x 460 mm x 480 mm	350 mm x 460 mm x 480 mm
Control Cabinet Weight (Net / Gross)	109 kg / 126 kg	109 kg / 126 kg