

# Manual Heated Hydraulic Press 300X300Mm Platen 40 Ton Force 4.4 Mpa Independent Dual Zone Pid Temp Control

Item Number: XP49



## Introduction

Manual heated hydraulic press with 300x300 mm platen, 40-ton force, 4.4 MPa, independent dual-zone PID temperature control to 300°C. Ideal for polymer film, composite, and flexible device lamination. Request a quote.

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Application	Description	Key Benefit
Polymer & Engineering Plastics	High-flatness lamination and molding of PE, PP, PTFE, and optical-grade polymer films. Achieves thickness tolerances within 0.05 mm for display and packaging applications.	Superior surface finish and precise thickness uniformity under controlled heat and pressure.
Composite Material Forming	Hot press curing of fiber-reinforced plastics (FRP) and carbon fiber/epoxy prepregs. Vacuum bag compatible design enables void-free laminate panels.	Controlled curing cycles produce high-strength, void-free composites suitable for aerospace and automotive prototyping.
Flexible Electronics & Lamination	Multi-layer precision lamination of flexible printed circuit (FPC) substrates and membrane electrode assemblies (MEA) for fuel cells. Handles delicate layers with minimal misregistration.	Uniform pressure and consistent heat bonding protect sensitive layers, improving yield and performance.
Powder Metallurgy & Ceramics	Auxiliary warm press lamination of specialty ceramic green tapes (LTCC) and ceramic matrix composites.	Even temperature and moderate pressure ensure uniform layer bonding without cracking, crucial for multilayered electronic substrates.
Laboratory Sample Preparation	Preparation of test specimens, pellets, and pins for analytical techniques such as FTIR and XRF. Consistent compression for reproducible sample quality.	Versatile tooling compatibility and precise parameter control ensure repeatable sample preparation for standard methods.
Battery Research	Compression of electrode materials, solid-state electrolyte layers, and cell assembly for lithium and next-generation batteries. Integrated heating aids electrolyte distribution.	Enables processing of advanced battery components under controlled temperature, enhancing performance and safety testing.
Adhesive Bonding & Laminating	Hot melt adhesive bonding of layered structures in manufacturing. Programmable temperature profiles mimic industrial processes.	Precise control over bonding parameters allows optimization for scale-up and quality assurance.
Pharmaceutical Tablet Compression	R&D-scale production of tablets and pill formulations; compactant homogeneity testing.	Compact, cleanroom-compatible footprint and reliable pressure generation for small-batch development.

Parameter	Specification	Remarks
Model	XP49	Original model code: PCH-40T3030 / Former code: PCSM-40T3030
Drive / Pressure Control	Manual Hydraulic	Lever-operated, safe and energy-efficient
Working Force Range	0 - 40 T	Indicated by pointer pressure gauge
Maximum Platen Surface Pressure	≤ 4.4 MPa (approx. 44 bar)	Based on precise physical calculation; gentle and even
Platen Effective Size	300 × 300 mm	Dual heated platens
Maximum Operating Temperature	0 - 300 °C	Temperature accuracy: ±1 °C
Total Heating Power	3500 W	Independent dual-zone heating control
Temperature Control Method	PID Controllers	Precision regulation, prevents overshoot

Parameter	Specification	Remarks
Platen Cooling Method	Water Cooling	Built-in cooling channels; protects pump oil seals
Power Supply Requirement	Single-phase AC 220 V, 50 Hz	Operating current approx. 16 A; dedicated 16 A circuit breaker/socket recommended
Dimensions	Approx. 700 × 400 × 600 mm (H×D×W)	Corrected dimensions
Net Weight	280 kg	Rigid four-column / thick steel plate structure