

KINTEK SOLUTION

# Hydraulic Heated Lab Press Catalog

Contact us for more catalogs of Sample Preparation, Thermal Equipment, Lab Consumables & Materials, Bio-Chem Equipment, etc...



# KINTEK SOLUTION

### COMPANY PROFILE

### >>> About Us

Kintek Solution Ltd is one technology orientated organization, team members are devoted to probing the most efficieent and reliable technology and innovations in the scienticfic researching equipment, fields like biochemical reacting, new materials researching, heat treatment, vaccum creating, refrigerating, as while as pharmaceutical and petroleum extracting equipment.

In the past 20 years, we earned rich experiences in this researing equipment field, we are capable to supply both the equipment and solution according to customer's needs and realities, we have also developed lots of customer tailer equipment accoding to a specific working purpose, and we have lots of successful projects in many universities and institutes from different countries, like Asia, Europe, North and south America, Australia and New Zealand, middle east, and Africa.

Profession, quick response, hard working, and sincerity is a remarkable label of our team meambers working attitude, which earn us a sound reputation among our clients.

We are here and ready to service our clients from different countries and regions, and share the most efficent and reliable technology together!





### **Hydraulic Heated Lab Pellet Press 24T / 30T / 60T**

**Item Number: PCH** 



### Introduction

Looking for a reliable Hydraulic Heated Lab Press? Our 24T / 40T model is perfect for material research labs, pharmacy, ceramics, and more. With a small footprint and the ability to work inside a vacuum glove box, it's the efficient and versatile solution for your sample preparation needs.

| Instrument model         | PCH-24T1010   | PCH-30T2020   | PCH-60T1818   |
|--------------------------|---|---|---|
| Pressure Range           | 0-24.0 tons   | 0-30.0 tons   | 0-60.0 tons   |
| piston diameter          | 95mm (d) in chrome plated oil cylinder                            | 110mm (d) in chrome plated oil cylinder                           | 150mm (d) in chrome plated oil cylinder                           |
| Main overall structure   | Equipment without sealed connections to reduce oil leakage points | Equipment without sealed connections to reduce oil leakage points | Equipment without sealed connections to reduce oil leakage points |
| Mold heating temperature | Room temperature-300.0C/500.0C                                    | Room temperature -300.0C/500.0C                                   | Room temperature-300.0C/500.0C                                    |
| holding time             | 1 second to 0 seconds   | 1 second to 0 seconds   | 1 second to 0 seconds   |
| precision                | 0.1℃  | 0.1℃  | 0.1°C   |
| Insulation method        | Imported insulation board   | Imported insulation board   | Imported insulation board   |
| Cooling method           | Quick cooling with water cooling [optional water cooling machine] | Quick cooling with water cooling [optional water cooling machine] | Quick cooling with water cooling [optional water cooling machine] |
| Hot platen size          | 100×100mm (M×N)with chamfer                                       | 200×200mm(M×N)  | 180×180mm (M×N)   |
| Host size                | 245×175×500mm(K×P×H)  | 405×260×525mm(K×P×H)  | 405 ×260×525mm(K×P×H)   |
| Dimensions               | 500×175×500mm(L×W×H)  | 950×260×525mm(L×W×H)  | 950×260×525mm(L×W×H)  |
| power supply             | 600 W(220V/110V can be customized)                                | 1200 W(220V/110V can be customized)                               | 1000 W(220V/110V can be customized)                               |
| Weight                   | 60 Kg   | 180 Kg  | 180 Kg  |



### **Vacuum Hot Press Furnace**

**Item Number: KT-VHP** 

Heating element

Working pressure

Vacuum pressure

Press distance

Molybdenum/Graphite

10-400T

100-200mm 6x10-3Pa



### Introduction

Discover the advantages of Vacuum Hot Press Furnace! Manufacture dense refractory metals & compounds, ceramics, and composites under high temp and pressure.

| Specification   | • The electric furnace is heated by a vertical furnace body (pressure ranges from 5-800T, and the pressurization method is divided into one-way and two-way). The feeding and discharging methods are divided into top and side., electronic control system and other components.  |
|---|--|
| Furnace shell   | • The furnace shell is a double-layer water-cooled structure, the inner layer is strictly polished stainless steel, the outer layer is stainless steel sandblasting matte treatment or carbon steel anti-rust treatment, water cooling is passed between the double layers, and the furnace shell does not exceed 60 °C. The furnace cover is lifted by a mechanical mechanism, manually rotated backwards to open (one-way pressure), and a locking device is installed on the furnace cover.   |
| Stove side  | <ul> <li>The side of the furnace is equipped with an observation window, a thermocouple automatic entry and exit mechanism, an infrared thermometer and a water-cooled electrode (three-phase). The automatic entry and exit of the thermoelectric cell is electric, with high and low temperature automatic switching. In order to prevent accidents caused by abnormal furnace temperature, there is also an over-temperature protection thermocouple on the side of the furnace.</li> </ul>   |
| The heating element                                   | • The heating element is made of graphite tube (or molybdenum wire), which can be divided into single-phase and three-phase heating. The rational design of the heating element improves the uniformity of the furnace temperature.  |
| The insulation layer                                  | The insulation layer is made of graphite (or graphite paper), carbon felt, etc., which has good insulation performance, and the unique structural design reduces the vacuuming time. The insulation layer of the molybdenum wire hot pressing furnace is a metal reflective screen.  |
| The vacuum system                                     | <ul> <li>The vacuum system consists of two-stage vacuum pumps, one oil diffusion pump and one mechanical pump to complete the high and low<br/>vacuum. The vacuum valve adopts the high-vacuum baffle valve designed and produced by our company, which can realize automatic switching<br/>and control of high and low vacuum with digital display vacuum gauge and PLC.</li> </ul>   |
| The main circuit of<br>the electric control<br>system | • The main circuit of the electric control system is low-voltage and high-current input. The electric control cabinet is made with reference to the standard cabinet of Rittal. It is humanized design. There are graphic simulation screens and buttons on the control panel. The operation is intuitive and convenient. The temperature and pressure control are controlled by imported brand programs. Instrument, the cabinet is equipped with a PLC, and the sintering process is automatically completed near the preset program. The control system has sound and light alarm functions for abnormal phenomena such as water cut-off, over-temperature, over-current, and thermocouple automatic switching failure. |
| Working<br>temperature                                | 1500°C / 2200°C  |



Effective working area diameter

90-600mm

Effective working area diameter range

120-600mm



# Integrated Manual Heated Lab Pellet Press 120Mm / 180Mm / 200Mm / 300Mm

**Item Number: PCY** 



#### Introduction

Efficiently process heat-pressing samples with our Integrated Manual Heated Lab Press. With a heating range up to 500°C, it's perfect for various industries.

| Instrument model                                 | PCY-5T1212   | PCY-10T1818   | PCY-10T2020   | PCY-15T3030   |
|--|--|---|---|---|
| Pressure Range                                   | 0-5.0 tons   | 0-10.0 tons   | 0-10.0 tons   | 0-15.0 tons   |
| Piston diameter                                  | 50mm (d) in chrome plated oil cylinder                               | 65mm (d) in chrome plated oil cylinder                            | 65mm (d) in chrome plated oil cylinder                            | 95mm (d) in chrome plated oil cylinder                            |
| Main overall<br>structure                        | Equipment without sealed connections to reduce oil leakage points    | Equipment without sealed connections to reduce oil leakage points | Equipment without sealed connections to reduce oil leakage points | Equipmentwithout sealed connections to reduce oil leakage points  |
| Mold heating<br>temperature                      | Room temperature -300.0C/500.0C                                      | Room temperature-300.0C/500.0C                                    | Room temperature-300.0C/500.0C                                    | Room temperature-300.0C/500.0C                                    |
| Holding time                                     | 1 second~0 seconds   | 1 second~0 seconds  | 1 second~0 seconds  | 1 second~0 seconds  |
| Precision  | 0.1℃   | 0.1°C   | 0.1°C   | 0.1°C   |
| Insulation method                                | Imported insulation board  | Imported insulation board   | Imported insulation board   | Imported insulation board   |
| Cooling method                                   | Quick cooling with water cooling<br>[optional water cooling machine] | Quick cooling with water cooling [optional water cooling machine] | Quick cooling with water cooling [optional water cooling machine] | Quick cooling with water cooling [optional water cooling machine] |
| Hot platen size                                  | Double plate heating<br>120×120mm(M×N)                               | Double plate heating 180×180mm(M×N)                               | Double plate<br>heating200×200mm(M×N)                             | Double plate<br>heating300×300mm(M×N)                             |
| Workspace  | 140×140×60mm   | 180×180×60mm  | 200×200×60 mm   | 300×300×65mm  |
| Dimensions                                       | 250×230×390mm(L×W×H)   | 290×290×420mm(L×W×H)  | 320×290×420mm(L×W×H)  | 450×420×450mm(L×W×H)  |
| Power supply                                     | 700W(220V/110V can be customized)                                    | 1000 W(220V/110V can be customized)                               | 1200 W(220V/110V can be customized)                               | 3000 W(220V/110V can be customized)                               |
| Weight   | 55 Kg  | 90 Kg   | 95Kg  | 180Kg   |
| Dimensional<br>diagram of powder<br>tablet press | See picture below  | See picture below   | See picture below   | See picture below   |



## **Split Manual Heated Lab Pellet Press 30T / 40T**

**Item Number: PCSM** 



### Introduction

Efficiently prepare your samples with our Split Manual Heated Lab Press. With a pressure range up to 40T and heating plates up to 300°C, it's perfect for various industries.

| Instrument model                           | PCSM-30T3030  | PCSM-40T4040  |
|--|---|---|
| Pressure Range                             | 0-30.0 tons   | 0-40.0 tons   |
| Piston diameter                            | 130mm (d) in chrome plated oil cylinder                           | 130mm (d) in chrome plated oil cylinder                           |
| Main overall structure                     | Equipmentwithout sealed connections to reduce oil leakage points  | Equipment without sealed connections to reduce oil leakage points |
| Mold heating temperature                   | Room temperature-300.0C/500.0C                                    | Room temperature-300.0C   |
| Holding time                               | 1 second to 0 seconds   | 1 second to 0 seconds   |
| Precision                                  | 0.1℃  | 0.1°C   |
| Insulation method                          | Imported insulation board   | Imported insulation board   |
| Cooling method                             | Quick cooling with water cooling [optional water cooling machine] | Quick cooling with water cooling [optional water cooling machine] |
| Hot platen size                            | 300×300mm (M×N)   | 400×400mm(M×N)  |
| Host size                                  | 380×350X600mm(K×P×H)  | 500×480×650(K×P×H)  |
| Dimensions                                 | 700×400×600mm(L×W×H)  | 800×480×650(L×W×H)  |
| Power supply                               | 3000 W(220V/110V can be customized)                               | 5000 W(220V/110V can be customized)                               |
| Weight                                     | 260 Kg  | 460Kg   |
| Dimensional diagram of powder tablet press | See picture below   | See picture below   |



### **Split Automatic Heated Lab Pellet Press 30T / 40T**

**Item Number: PCSE** 



### Introduction

Discover our split automatic heated lab press 30T/40T for precise sample preparation in material research, pharmacy, ceramics, and electronics industries. With a small footprint and heating up to 300°C, it's perfect for processing under vacuum environment.

| Instrument model         | PCSE-40T4040  | PCSE-30T3030  |
|--------------------------|---|---|
| Pressure Range           | 0-40.0 tons   | 0-30.0tons  |
| Pressurization process   | Program pressurization - Program holding -Timed pressure relief   | Program pressurization - Program holding - Timed                  |
| Hold time                | 1 second to 0 seconds   | 1 second to 0 seconds   |
| Mold heating temperature | Room temperature-300.0C   | Room temperature -300.0C/500.0C                                   |
| Holding time             | 1 second to 0 seconds   | 1 second to 0 seconds   |
| Precision                | 0.1℃  | 0.1C  |
| Insulation method        | Imported insulation board   | Imported insulation board   |
| Cooling method           | Quick cooling with water cooling [optional water cooling machine] | Quick cooling with water cooling [optional water cooling machine] |
| Hot platen size          | 400×400mm(M×N)  | 300×300mm(M×N)  |
| Host size                | 500×480X650(K×P×H)  | 380×350×600mm(K×P×H)  |
| Dimensions               | 850×480X650(L×W×H)  | 700×400×600mm(L×W×H)  |
| Powersupply              | 5500W(220V/110V can be customized)                                | 3500W(220V/110V can be customized)                                |
| Weight                   | 480 Kg  | 280 Kg  |



### **Automatic Heated Lab Pellet Press 25T / 30T / 50T**

**Item Number: PCAH** 



### Introduction

Efficiently prepare your samples with our Automatic Heated Lab Press. With a pressure range up to 50T and precise control, it's perfect for various industries.

| Instrument<br>Model         | PCAH-5T1212/1212G   | PCAH-25T1818/1818G  | PCAH-25T2020/2020G  | PCAH-30T3030/3030G  | PCAH-40T4040/4040G   |
|-----------------------------|---|---|---|---|--|
| Pressure<br>Range           | 0-5.0 tons  | 0-25.0 tons   | 0-25.0 tons   | 0-30.0 tons   | 0-40.0 tons  |
| Pressurization<br>Process   | Program pressurization -<br>Program holding - Timed<br>pressure relief  | Program pressurization -<br>Program holding - Timed<br>pressure relief |
| Hold Time                   | 1 second to 0 seconds   | 1 second to 0 seconds  |
| Mold Heating<br>Temperature | Room temperature-<br>300.0°C/500.0°C                                    | Room temperature-<br>300.0°C/500.0°C                                    | Room temperature-<br>300.0°C/500.0°C                                    | Room temperature-<br>300.0°C/500.0°C                                    | Room temperature-300.0°C   |
| Holding Time                | 1 second to 0 seconds   | 1 second to 0 seconds  |
| Precision                   | 0.1°C   | 0.1°C   | 0.1℃  | 0.1°C   | 0.1℃   |
| Insulation<br>Method        | Imported insulation board   | Imported insulation board   | Imported insulation board   | Imported insulation board   | Imported insulation board  |
| Cooling<br>Method           | Quick cooling with water<br>cooling [optional water<br>cooling machine] | Quick cooling with water cooling [optional water cooling machine]      |
| Hot platen<br>size          | 120X×120mm(M×N)   | 180×180mm(M×N)  | 200×200mm(M×N)  | 300×300mm(M×N)  | 400X400mm(M×N)   |
| Dimensions                  | 182×306×460mm(L×W×H)  | 300×390×560mm(L×W×H)  | 300×390×560mm(L×W×H)  | 400×490×580mm(L×W×H)  | 500×550×620mm(L×W×H)   |
| Powersupply                 | 900 W(220V/110V can be customized)                                      | 1700 W (220V/110V can be customized)                                    | 1700 W(220V/110V can be customized)                                     | 3500 W(220V/110V can be customized)                                     | 5500 W (220V/110V can be customized)                                   |
| Weight                      | 75 Kg   | 140 Kg  | 140 Kg  | 280 Kg  | 480 Kg   |



### Vacuum Lamination Press

**Item Number: KT-VLP** 



#### Introduction

Experience clean and precise lamination with Vacuum Lamination Press. Perfect for wafer bonding, thin-film transformations, and LCP lamination. Order now!

Learn More

| Dimensions | Over-all: 775mm(L) x 550mm(W) x 1325mm(H)   |
|------------|---|
| Structure  | <ul> <li>Two 135 x 135 mm flat heating platens made of high temperature resistant Cr steel with max.</li> <li>working temperature of 500°C</li> <li>1000W Heating element is inserted into the center of the heating plates for fast heating</li> <li>Max. Load on 135x135mm Heated Platen: 10 Metric Tons at 500°C (55 kg/cm2);20 Metric Tons at RT (110 kg/cm2)</li> <li>Two precision temperature controllers which control two heating plates separately</li> <li>with 30 programmable segements</li> <li>Water cooling jackets are built on the both top &amp; bottom of the heating plates for assisting cooling</li> </ul> |
|            | <ul> <li>Modified electric hydraulic press is connected to vacuum chamber.</li> <li>Movable distance between two heating plates: 15 mm.</li> <li>Automatic max. pressure controlled via a digital pressure gauge.</li> </ul>  |

### Hydraulic Pump

- acuum chamber.
- mm.
- ressure gauge.
- Pressure accuracy: +/-0.01 Mpa ( 0.1 kg/cm²)
- $\bullet$  Two flat heating plates are installed with water cooling plates for Max.  $500^{o}\text{C}$  working temperature.
- Water cooling (>15L/min) is required to cool the heating plates when the operating temperature is over 200 ºC.
- Two precision temperature controllers with 30 programmable segments control the heating plates .
- separately with +/1°C accuracy.
- The temperature controllers have PID auto tune function, over-temperature protection and thermal couple broken protection.
- Max. Temperature: 500°C with inert gas or vacuum with accuracy +/-1°C
- Max. Heating rate: 2.5°C/min
- Software and PC interface is built in the controller , which can be connected to a PC for computer controlling via a RS232 connector.
- Digital pressure meter ( controller ) is built outside the vacuum chamber.
- You can set pressure at the desired value which can stop the electric hydraulic press automatically.

| Temperature control and |
|-------------------------|
| Pressure Display        |
|                         |

Vacuum Charmber

- Electric hydraulic press and heating plates are placed inside then vacuum chamber.
- Vacuum chamber is made of SS304 with the size: 525Lx480Wx450H (mm).
- Vacuum chamber Capacity : about 75 Liters.
- 300mm dia. vacuum sealed hinged type door with 150mm Dia. quartz glass window is installed for easy sample loading and observation.
- Silicone O-ring can be used for all vacuum sealings .
- One precision digital vacuum guage ( 10E-4 torr ) is installed on the vacuum chamber .

| Model                  | KT-VLP100 | KT-VLP300 | KT-VLP400 |
|------------------------|-----------|-----------|-----------|
| Heating plate size     | 100x100mm | 300x300mm | 400x400mm |
| Plates travel distance | 30mm      | 40mm      | 40mm      |



| Working pressure    | 30T during heating/40Tin the cold state  |
|---------------------|--|
| Pressure gauge      | Digital pressure gauge                   |
| Heating temperature | <500°C                                   |
| Temperature control | Touch screen with PID thermal controller |
| Vacuum chamber      | 304 Stainless steel                      |
| Vacuum pump         | Rotary vane vacuum pump                  |
| Vacuum pressure     | -0.1Mpa                                  |
| Power supply        | AC110-220V, 50/60HZ                      |



### **Vacuum Tube Hot Press Furnace**

**Item Number: KT-VTP** 



### Introduction

Reduce forming pressure & shorten sintering time with Vacuum Tube Hot Press Furnace for high-density, fine-grain materials. Ideal for refractory metals.

| Hydraulic press        | Working pressure: 0-30Mpa Travel distance: Pressure stability: ≤1MPa/10min Pressure meter: Digital pressure gauge Drive solution: Electric drive with standby manual drive  |
|------------------------|---|
| Vertical split furnace | Working temperature: ≤1150°C Heating element:Ni-Cr-Al resistance wire with dipped Mo Heating speed: Hot zone length: 300mm Constant temperature zone: 100mm Controller: Touch screen with PID thermal controller Rated power: 2200W                             |
| Vacuum furnace tube    | Tube material: Quartz tube(Optional Alumina/Nickel alloy) Tube diameter: 100mm(Optional 120/160mm) Vacuum sealing: SS flange with silicon O ring Flange cooling method: Inter layer water circulating cooling   |
| Graphite pressing die  | Die material: High purity graphite (Graphite must work under vacuum to prevent oxidation) Pressure rod diameter: 87mm Sleeve die size: 55mm OD/ 50mm Height Die inserts: OD22.8 x ID20.8 Pushing Rod: 12.7mmOD/40mm Height Other sizes die can be customer made |
| Vacuum pump setup      | Rotary vane pump vacuum is up to 10-2 torr<br>Turbo pump station vacuum is up to 10-4 torr  |
| Electric power supply  | AC110-220V, 50/60HZ   |





### **Kintek Solution**

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