

TESTING INSTRUMENTS FOR
A MEASURABLE DIFFERENCE...

iDM
instruments

LABORATORY HEATED PRESS

LHP SERIES



IDM-LHP002-M1

IDM-LHP001-M3

INTRODUCTION

International Standard IDM Laboratory Heated Presses are used by laboratories around the world for pressing, forming, molding, laminating, embossing and bonding of various material samples between two heated platens.

The current IDM, LHP Series has been expanded and improved with more sizes, options, features, and quality performance than others.

Standard choices also now include two-column and four-column, bench top and floor standing, and manual, Hydraulic Power Unit, or automatic plc presses with clamping capacities from 10 to 60 tons. Automatic "Auto Series" presses include user-friendly PLC control system and integral safety enclosures. Accessories include new self-contained, electrically operated AutoPak hydraulic power unit for Two digital temperature controllers enable the platens to be heated or cooled and even set process times for heating and cooling. One the control panel a digital panel meter connected to a pressure transducer is used to display the compression force in (kgf) enabling fast and accurate control of pressure application.

These Presses are widely used in

- **Quality and Performance Testing of Physical Properties:** compression strength, flexural strength, shear strength, flow and color dispersion.
- **Lab Testing:** ASTM test plaque or bar molds for polyethylene and polypropylene.
- **Laminating:** Other applications: composite molding, compression molding, crushing, encapsulation, extrusion, forming, insert pressing, producing KBr pellets for infrared spectroscopy, metal forming (dimpling), insert molding, oil extraction, pelletizing, specimen preparation, splice molding, splitting chilled oils, transfer molding, and vulcanizing rubber stamps.

Custom Presses

In addition to the model shown on this web site, IDM designs and manufactures a wide variety of custom-made presses and accessories to suit your specific application. Please consult the factory for any equipment not specifically listed on this site.

FEATURES

- Temperature range up to 400°C
- Digital Temperature Controllers
- Digital Pressure Gauges
- Auto-Zero Function
- Sample Rate: 5 to 100 per second (selectable)

APPLICATIONS

- Ceramics
- Composites
- Construction Materials
- Cosmetics
- Drugs & Pharmaceuticals
- Powder Metals
- Printed Circuit Boards
- Rubber

- Polypropylene Composites
- Polypropylene
- Credit Cards
- ID cards
- Plaques
- Silicone
- Elastomers
- Soil, thermoplastic resins and thermosets

LHP SERIES M3 MODELS – PLC CONTROL

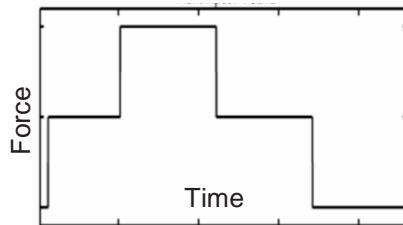
The M3 Models comes with the latest design featuring a PLC touch-screen to control various functions of the instrument. This feature allows easy operation like changing the force (kgf) or lowering the platen and eliminates manual operation. It also comes with two temperature controllers to control the temperatures of the upper & lower platens.

PLC Touch-screen

The PLC Touch-screen ensures digital control of the instrument ensuring efficiency. By the click of a button, the platen position & force can be altered before or during the test. It displays in real-time the current force being applied, time remaining for each cycle and the total time remaining. Using the Test Setting function, 5 test cycles can be set by inputting the required force and time for each cycle. The instrument automatically stops after the cycles have been completed.

| IDM SIN: 21-08-2439 11 35 - 17/08/2021 | | TEST MONITORING | |
|--|-------------|---|------|
| SETTING | | CYCLE 1 | |
| REQUIRED FORCE 2000 kgf | | ACTUAL FORCE 2101 kgf | ZERO |
| CURRENT CYCLE TIME 0 hrs : 1 min | | CURRENT CYCLE TIME REMAINING 0 hrs : 1 min | |
| TOTAL CYCLE TIME 0 hrs : 5 min | | TOTAL TIME REMAINING 0 hrs : 5 min | |
| START CYCLE | STOP | LOWER PLATEN | |
| TEST SETTINGS | ALARMS | PARAMETERS | |

Sample Test Screen



Force Ramp Effect Demonstration



LHP SERIES M2 MODELS – ELECTRIC PUMP

The M2 models come with an Electric Operated Hydraulic Pump which is used to raise and lower the compression platens on the Laboratory Heated Press. The electric pump has a flow-control valve to increase or decrease speed of the platens. It also has Advance valve which holds pressure with motor shut off and Return valve which advances cylinder with motor running and returns cylinder with motor shut off. The model has a control panel displaying the real-time force applied along with temperature controllers displaying the temperature of the upper and lower platens.



LHP SERIES M1 MODELS – HAND PUMP

The M1 models have been upgraded with a robust design to ensure durability of the instrument. A control panel is fitted with a digital display that specifies in kgf to give you an indication of how much force you are applying. Two temperature controllers for the upper and lower platens are also fitted and display the set point and the actual temperature when running. When the water-cooling option is selected, a timer is also supplied for turning on the water to cool the platens to ambient after a pre-set heating time.



MODELS & SPECIFICATIONS

| Model | IDM-LHP0001 | IDM-LHP002 | IDM-LHP0003 |
|--------------------------|---|---|---|
| Options | IDM-LHP0001-M1 (<i>Hand Pump</i>) IDM-LHP0001-M2 (<i>Electric Pump</i>) IDM-LHP0001-M3 (<i>PLC Control</i>) | IDM-LHP0002-M1 (<i>Hand Pump</i>) IDM-LHP0002-M2 (<i>Electric Pump</i>) IDM-LHP0002-M3 (<i>PLC Control</i>) | IDM-LHP0003-M1 (<i>Hand Pump</i>) IDM-LHP0003-M2 (<i>Electric Pump</i>) IDM-LHP0003-M3 (<i>PLC Control</i>) |
| Control | 2-20 Tonne | 3-30 Tonne | 5-50 Tonne |
| Readability | 20,000 x 10 kgf | 30,000 x 10kgf | 50,000 x 10 kgf |
| Platen Size | 300 mm | 300 mm | 300 mm |
| Temperature Range | 300°C ± 1% FS | | |
| Daylight | 150 mm | | |
| Connections | 415 VAC @ 50 HZ, 3 Phase | | |

OPTIONAL ITEMS

| Option | IDM-LHP0001 | IDM-LHP002 | IDM-LHP0003 |
|---|--|--|--|
| Temperature Range - 400°C | IDM-LHP0001-OP1 | IDM-LHP0002-OP1 | IDM-LHP0003-OP1 |
| Daylight – 200 mm | IDM-LHP0001-OP2 | IDM-LHP0002-OP2 | IDM-LHP0003-OP2 |
| Platen Size – 400 mm | -- | IDM-HP0002-OP3 | IDM-HP0003-OP3 |
| | IDM-LHP0001-OP3 | <ul style="list-style-type: none"> IDM-LHP0002-OP4-1 (Platen Size 300 mm) IDM-LHP0002-OP4-2 (Platen Size 400 mm) | <ul style="list-style-type: none"> IDM-LHP0003-OP4-1 (Platen Size 300 mm) IDM-LHP0003-OP4-2 (Platen Size 400 mm) |
| The water-cooled platens are fitted onto the instrument at time of manufacture, and allow the platens to cool at a faster rate also comes with Water Solenoid Valve | | | |
| Safety Enclosure | IDM-LHP0001-OP4 | IDM-LHP0002-OP5 | IDM-LHP0003-OP5 |
| | Safety Enclosure is an outer cover to ensure maximum safety and auto-stop function when the enclosure is open. | | |
| Heat Ramp Temperature Controller | Consult with IDM for this option | | |

STANDARDS

- ASTM D 4703

WORKING ENVIRONMENT

- Temperature: -10°C to 40°C
- Humidity: 25% to 85%

DIMENSIONS

IDM-LHP0001 Series

Packaged:

- H: 1580 mm
- W: 1120 mm
- D: 860 mm
- Weight: 525 kg

IDM-LHP0002 Series

Packaged

- H: 1580 mm
- W: 1270 mm
- D: 1010 mm
- Weight: 655 kg

IDM-LHP0003 Series

Packaged

- H: 1580 mm
- W: 1420 mm
- D: 1160 mm
- Weight: 790 kg

WARRANTY AND CALIBRATION SERVICES

- **1 year Warranty**
- Our **Preventive Maintenance and Calibration (PM&C) program** has been designed to make the maintenance and calibration of your valuable testing equipment more cost effective by preventing breakdowns and downtime by regular calibration, service and replacement of defective parts. Talk to us about this today.

RELATED ITEMS

Cavity Sample moulds

- IDM-D0005-2 – 2 Cavities
- IDM-D0005-4 – 4 Cavities

