

Wabash MPI Genesis 30 ton Hydraulic Press

Location of Machine: Composites Lab, RFM 1218

Location of SOP and Machine Operating & Safety Manual: Composites Lab website under resources; Composites Lab TRACS site; and Hardcopy near machine.

Emergency Contact:

- Call 911
- Call EHS & Risk Management at 512-245-3616
- Call Head Lab Technician, Dr. Ray Cook (office 512-245-2050)
- Call Dr. Jitendra S Tate (office 512-245-4872)

Before using this machine:

- You must have permission from Dr. Tate.
- You must have received formal training from technician or, trained research student (designated by Dr. Tate) related to machine safety and operation.
- You must read and understand **SOP**.
- You must use this machine under direct supervision of Dr. Tate or, Dr. Cook or, trained research student (designated by Dr. Tate).
- You must have signed “Lab Rules” document with Dr. Tate. This document must be signed every semester fall, spring, and summer (as applicable).
- If you do NOT follow above instructions you will be held responsible for your own safety and damages.

Safety Precautions:

Protective Equipment: Prior to performing this procedure, the following personal protective equipment must be obtained and ready for use: **Heat Gloves, Safety Goggles, and Lab Coat.**

Important Safeguards:

1. Make sure water valve is open to allow the machine to cool down when necessary.
2. Platens must be cleaned of any resin build up prior to use.
3. Air valve must be opened prior to use.
4. Water valve must be opened ¼” prior to use.



General information

Genesis Series presses are state-of-the-art hydraulic presses for compression molding of rubber, plastics and composites; also for laminating. The Genesis Series reflects more than a half century of WABASH leadership in hydraulic press design and construction. It is rugged enough for a round-the-clock performance on the production floor, but works equally well as a precision laboratory press.

This Genesis press has capacity of 30 ton. The hydraulic system produces faster closing and opening speeds, making it ideal for use with many of today's advanced molding compounds. The unit is equipped with heated platens for 500°F operating temperatures, which are required for many other applications including composite, ceramic and molding. The size of the platens are 18 by 18 inches.

Specifications:

Clamp forces available from 5 to 30 tons

Platen size: 18"x 18"

Programmable controller with access module

Automatic transfer from closing to pressing speed

Closing speed 70 IPM (approx)

OSHA approved operating system

Pressure relief valve

Integral hydraulic system with high-efficiency TEFC motor, reservoir, gauge, and water cooled heat exchanger



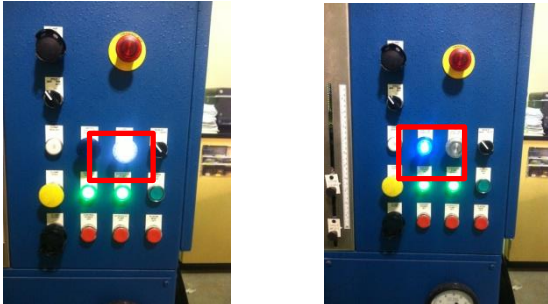
Electrical supply: 460/3/60



Heated platens (500 F) with cartridge heaters
 Water cooled platens
 Air-cooled heat exchanger
 Temperature controller and plugs for mold heaters

Accessories:

- **Fixture:** 4.75" x 4.75" Compression mold
- **Fixture:** 7.5" x 7.5" Compression mold
- **Plate:** 15" x 15" x 3/8"

Compression Press Standard Operating Procedure	
<p>1. Water and air valve</p> <p>a) Turn on air valve behind the machine to the left</p> <p>b) Turn on water valve ¼" turn behind the machine to the right</p>	
<p>2. Turning on</p> <p>a) Make sure that "Emergency Power Off" is pulled out</p> <p>b) Put the "Manual Power Switch" to on position</p> <p>c) Turn "Control Power", "Hydraulic Pump", and "Platen Heat"</p> <p style="padding-left: 40px;">Green buttons; should light green</p>	
<p>3. Setting Temperature</p> <p>a) Push once "Cycle" button on a platen controller to see "SP"</p> <p>b) Set the temperature (red screen) using "Up"/"Down" bottoms</p> <p>c) Push once "Cycle"</p>	

<ul style="list-style-type: none"> • Current temperature is on top in red • Set temperature is on the bottom in green <p>d) Repeat the steps 1 – 3 for the other controller (Same Inputs)</p>	
<p>4. Platens Manual Control</p> <ol style="list-style-type: none"> a) Put the black “CYCLE” knob on “MAN” (manual) b) Set the Hydraulic force (black valve) c) Open guard 	
<p>5. Platens Manual Control (cont.)</p> <ol style="list-style-type: none"> a) Place your materials into press and close the guard b) Push and Hold simultaneously two “CLOSE CLAMP” (black) buttons <ol style="list-style-type: none"> i. Hold until the platens start to move c) Adjust force if needed 	
<p>6. Cooling down</p> <ol style="list-style-type: none"> a) Wait until the process is done b) Let the machine cool down for 10 minutes with air by pulling Air knob c) Then let the machine cool down with water until 75 F. Pull water knob. 	

<p>7. Removing materials</p> <ol style="list-style-type: none"> Push and hold “CLAMP OPEN” (yellow) Open the guard CAREFULLY remove materials (very HOT!) Close guard. 	 <p>A photograph of a person's hand pressing a yellow button on a blue control panel. The panel has several other buttons, including a large yellow emergency stop button at the top right and several green and red buttons below.</p>
<p>8. Turning off</p> <ol style="list-style-type: none"> Turn off “Control Power”, “Hydraulic Pump”, and “Platen Heat” <ul style="list-style-type: none"> Red buttons ; light green should dim Turn off “Master Power Switch” 	 <p>A photograph of a control panel with a red box highlighting three buttons. The buttons are arranged in a grid. The highlighted buttons are a yellow one on the left, and two green ones in the middle row. Below them are three red buttons. Labels for the buttons are visible but small.</p>