

# OWNERS MANUAL

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## Bienfang® Vacuum Press® 3648H, 4468H and 5298H Programmable Combination Vacuum Presses



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# SPECIFICATIONS FOR THE BIENFANG® VACUUM PRESS

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	5298H	4468H	3648H
<b>Catalog Number</b>	2170	2160	2180
<b>Floor Stand</b>	included	2165	2167
<b>Working Area</b>	48" x 96" x 1"	44" x 68" x 1"	36" x 48" x 1"
<b>Outside Dimensions</b>	109" x 65" x 7"	77" x 57" x 7"	57" x 48" x 1"
<b>Net Weight</b>	375 lbs.	215 lbs.	135 lbs.
<b>Shipping Weight</b>	800 lbs.	500 lbs.	350 lbs.
<b>Power Requirements</b>	208-230V/Single Phase	208-230V/Single Phase	208-230V/Single Phase
<b>Power Consumption</b>	Approx. 5925 Watts	Approx. 3390 Watts	Approx. 1700 Watts
<b>Watts-amps</b>	@ 230VAC (26 amps)	@ 230VAC (15 amps)	@ 230VAC (11 amps)
<b>Plug Type</b>	NEMA L14-30P Twist Lock	NEMA L14-20P Twist Lock	NEMA L14-20P Twist Lock

• International plugs supplied by user.

# IMPORTANT SAFEGUARDS

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**Please read the entire manual and fully understand the proper operating procedures before proceeding to use the press.**

1. Place the vacuum press on either a BIENFANG® Floor Stand or a sturdy, flat, level surface and ensure the feet and hinges are properly adjusted. The press should not be located in the direct path of air conditioning or room-cooling vents.
2. Keep the vent cloth positioned so that it covers the vacuum manifolds (located in the rear corners of the press) and does not extend across the edge of the rubber diaphragm. Failure to do so will result in temporary loss of vacuum.
3. Place all materials inside the press so that they fit into the recessed chamber in the base. If any materials extend across the edge of the rubber diaphragm, they will prevent a seal and cause either low vacuum or no vacuum at all.
4. When opening and closing the press grasp both handles and keep your body, head and hands away from the press opening.
5. Foreign objects such as knives, tools, rulers, paper clips and markers should be kept out of the press and away from the press opening at all times.
6. Do not stack boards in the press. Placing a smaller board on top of a larger one may cause lines or dents in the aluminum platen.
7. Do not use an exposed blade to cut materials in the press. A slice or puncture in the rubber diaphragm will result in loss of vacuum.
8. Allow the vacuum level to drop before opening the press.
9. Turn the power breaker OFF and keep the press in the closed position when not in use. Disconnect the power supply before cleaning or replacing parts.
10. High-pressure gas springs make opening and closing the press easier. If they are to be removed, the top MUST be held in the fully opened position for safety and to prevent damage.

*Contact Bienfang's Technical Service in the event the press needs service for parts not covered in this Owner's Manual.*

## FEATURES

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**The Bienfang® Vacuum Press 3648H, 4468H and 5298H presses are professional mounting and laminating systems designed to provide the highest quality results with maximum versatility and ease of operation. The combination of two machines in one – a dry mount press and cold vacuum frame – allows the quick professional application of dry mounting adhesives and laminates, as well as wet and spray adhesives. The presses decrease labor costs and increase production while minimizing operator training and supervision.**

**Specific features and benefits include:**

- **Easy to Use:** Close the top, press a key and wait for the signal that the work is done - automatic operation frees the operator for other duties.
- **Digital Display:** lets the operator know at all times the vacuum level, platen temperature and cycle time remaining; the display is switchable between showing the original settings and actual readings.
- **Locking:** All current models have side latches. Previous models have the front latch.
- **Programmable Settings:** The operator can store up to six programs in memory for repeatable processes. Time and temperature settings for each program are stored for quick, easy access.
- **High, Uniform Vacuum Pressure:** 10-13 psi (20-27" Hg) ensures good bond penetration for consistent, professional results.
- **Automatic Pressure Adjustment:** Self adjusts for boards up to 1" thick, or mounts several pieces of varying thickness at one time — without additional set-up time.
- **Double-Duty Top:** Specially constructed heavy-duty flat top doubles as work or storage space when the press is not in use.
- **Floor Stand:** Optional for 3648H and 4468H. Used to make the presses freestanding units rather than tabletop machines. Each incorporates one shelf support. The 5298H model comes with a floor stand.

# INSTALLATION AND PREPARATION

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**Each Bienfang® Vacuum Press 3648H, 4468H and 5298H (floor stand included) is fully assembled, calibrated and tested at the factory to pull a high level of vacuum in a minimum amount of time. Once passed by the Quality Control Department, the completely tested press and pump are packaged and shipped together to ensure that each customer receives a complete and tested unit.**

During shipping and uncrating, the alignment of the top and base of the press may be altered and require adjustment by the user. In addition, placing the press on an uneven or warped table surface may require adjustment of the leveling feet and hinges by the user. Follow these instructions to ensure proper operation.

## **Installation**

For consistent long-term operation of the 3648H and 4468H, Bienfang recommends using the appropriate Vacuum Press Floor Stand. First assemble the Floor Stand following the directions supplied with it, then lift the press out of the shipping crate and position it on the Floor Stand so that each of the four feet fit into the top of a Floor Stand leg. Using the bolts supplied with the Floor Stand, bolt the two support brackets on each leg into the corresponding hole underneath the frame. When complete, tighten each bolt fully and the press can be moved into position.

As an alternative to the 3648H/4468H Floor Stand, a heavy-duty, flat level table can be used. The press should sit completely on the table, so a 46" x 53" or 57" x 77" surface area is required. The recommended surface material is 3/4" Grade B plywood or better. A table height of 30" is typical. Make sure all four adjustable feet are fully screwed in, place the press on the prepared table and adjust the feet individually so that the press is level front to back and side to side.

## **For a Qualified Electrician**

The Bienfang Vacuum Press 3648H and 4468H are rated for 230VAC/60 Hz Single Phase (with Neutral) on a 20 Amp circuit. Actual line voltages between 208-230 VAC are acceptable. The press power-cord has a NEMA L14-20P twist lock plug which is UL listed for use in this application. The 5298H is rated for 230VAC/60HZ Single Phase (with Neutral) on a 30 Amp circuit. Actual line voltages between 208-230VAC are acceptable. The press power cord has a

NEMA L14-30P twist lock plug, which is UL listed for use in the application.

If you choose to hard-wire direct to a junction box, the 12-gauge power cord (3 wire plus ground) is color-coded using the conventional standards:

<i>Red - L1 (Hot)</i>	<i>White - Neutral</i>
<i>Black - L2 (Hot)</i>	<i>Green - Ground</i>

*Note: Separate ground and neutral lines must be installed or the pump will not operate and the press will not meet UL standards or safety codes.*

After hookup is complete, check with the Power Switch ON, the tacking iron outlet on the front of the press measures 110-120VAC between L1 and Neutral, that there are 0 Volts between neutral and Ground and that there is continuity between Ground and press frame.

*Note: If there are any questions, call your distributor or Bienfang Technical service at 888-240-6021.*

Leave at least 5" between the rear of the press and the wall so the top has room to open easily. The vacuum pump should be placed on the floor behind the press. The plastic vacuum line tubing is already connected underneath the press and the free end will have to be attached to the inlet side of the pump. To attach, depending on the pump fitting, slide the vacuum line firmly into the chrome fitting on the pump until it snaps in place or tighten the brass nut onto the pump fitting.

*(TIP: Bienfang recommends the use of a static guard mat in high-static areas).*

With the Power Switch OFF, plug the vacuum pump power cord into the electrical outlet marked Vacuum Pump Only on the rear of the press.

To check operation, close the press and turn the Power Switch ON (on the side of the press). The programmable systems controller should come on and display room temperature, 0 time and 0 vacuum.

# INSTALLATION AND PREPARATION (CONTINUED)

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Press the vacuum "Manual On/Off" key and the pump should run. If not, check that the pump is plugged into the back of the press and then have a qualified electrician re-check the electrical hookup. *(If separate ground and neutral lines are not installed, the pump may not operate even though the display illuminates.)*

After turning on the pump, the display should read a minimum of 20" of Hg for: 3648H within 40 seconds, 4468H within 1 minute and for the 5298H within 2 minutes. If there is any difficulty in drawing a proper vacuum, refer to the Owner's Adjustment Procedures section of Page 6 of this manual.

Press the "Heat On" key and the press should begin to heat up to 180°F (+/- 2°F) within 15-20 minutes. If not, call Bienfang Technical Service at 888-240-6021.

The press is now ready for use.

## **Adjustment Procedures**

Proper leveling of the press and adjustment of the hinges and latch are necessary to consistently achieve proper vacuum. Check the following owner adjustment procedures, in the order listed, if any difficulty arises.

### **Leveling**

If the press is not placed on a sturdy, flat, level surface, proper operation cannot be guaranteed. Ensure press levelness by opening the press and placing a 2' carpenter's level on the frame. Shim the floor stand legs so that the frame of the press is level (both front-to-back and side-to-side). If not on a floor stand, adjust the corner feet until the press is level.

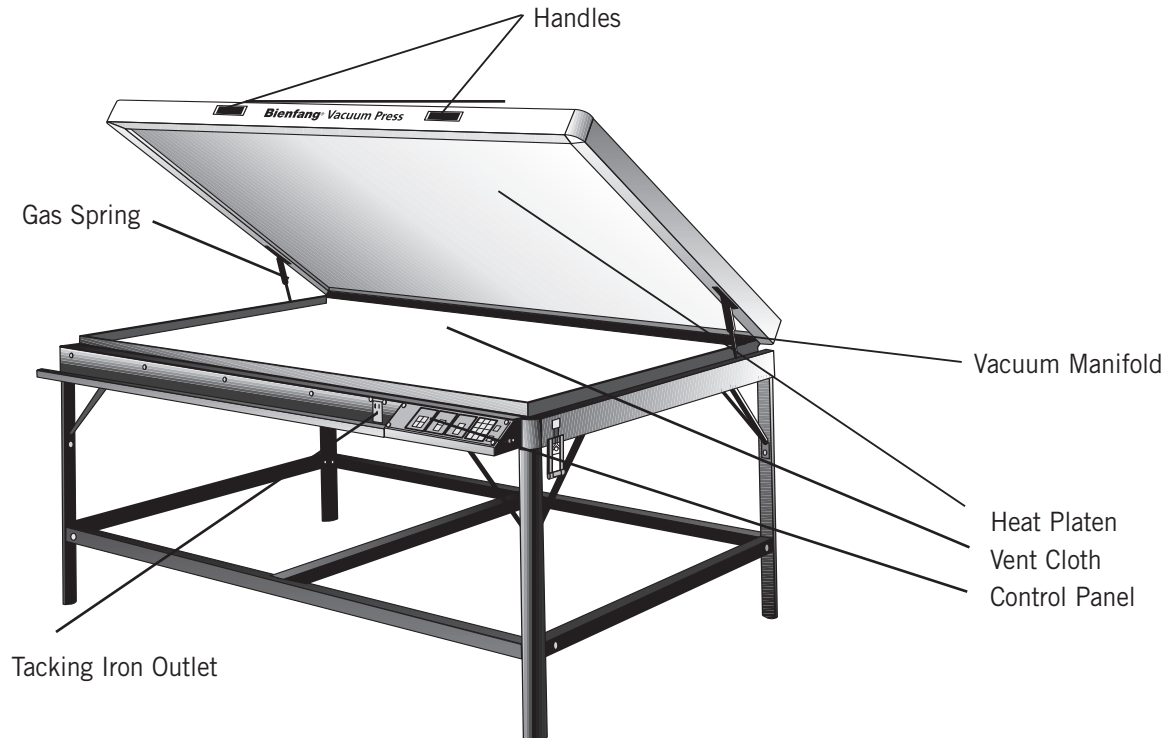
### **Hinge Adjustment**

After leveling the press, check the adjustment of the rear hinges. These might shift during shipment, handling or rigorous use and are essential to proper alignment of the top to the base. To realign, follow these instructions:

1. Close and set temperature to 180°F.
2. As your assistant holds open the lid, remove the clips from the bottom of the gas springs (located around the bottom socket head only) using the needle nose pliers. This could possibly be done by hand. Bump first the bottom of the gas spring off the ball sockets from both left and right sides of the machine. Then remove the top by grasping the gas spring and tilt away from ball stud. Spring will come off. The gas springs MUST be taken completely off the machine.
3. Loosen (do not remove) screws in the slotted holes of the hinges, located on the back of the machine.
4. Once machine is fully heated, start the vacuum. Give unit 45 seconds to 1 minute to pull full vacuum. If no vacuum is achieved, walk around machine and put slight pressure on lid in various sections until a full vacuum is achieved.
5. Tighten set screws on hinges and replace gas springs.

If any further questions arise, contact your authorized Bienfang® dealer or the Bienfang Technical Service Department at 1-888-240-6021.

# IDENTIFICATION OF CONTROLS



*Before using the press, prepare a Bienfang® overlay, this performs the function of keeping the press and work clean while allowing adhesives to be used oversized without sticking to the press.*

### Three types of Release Materials are available:

- **Single-Sided Release Paper** — a heavy white paper coated with silicone on one side. This also permits mounting of the uncoated side to a smooth board to create a reusable release board (*recommended size is Bienfang No. A490 - 42" x 30 yds.*).
- **Double-Sided Release Paper** — a thin paper coated with silicone on both sides to create two non-stick surfaces (*recommended size is Bienfang No. 934 - 42" x 30 yds. for 3648H/4468H; Bienfang No. 986 - 50" x 36 yds. for 5298H*).

- **Release Board** — a thin, smooth board coated with silicone on both sides. Lays flat to smooth out posters, doesn't wrinkle or crease so it lasts longer than release papers (*recommended size is Bienfang No. 938 - 32" x 40", pack of 5*). To be used on top of application only.

- **Clear Release Film** — a reusable, clear protective overlay made of polyester film coated with silicone on both sides. (Recommended size is Bienfang No. 945 - 42" x 90'). To be used on top of application only.

One sheet of Bienfang Release Paper should be cut to fit inside the base of the press (on top of the vent cloth), and either a second sheet of Release Paper or a Release Board should be placed over the materials being processed. Never use a sheet of Release Board under another board or damage to the press platen may occur.

*NOTE: Please read the entire manual and fully understand proper operating procedures before using your press.*

# PROCEDURES FOR USE

## Turning the Press On

A master power switch/circuit breaker on the side of the press turns on the display and tacking iron outlet.

## Running A Factory-Loaded Program

The Bienfang® Vacuum Press controller has 6 preset programs that automatically turn on the heat and set the proper time and temperature. They are handy for frequently used processes as they save time and eliminate guesswork. Programs are preset as shown below and can be initiated by pressing the “Program” key, number 1 through 6 from the numeric keypad, and “Enter.” Before pressing “Enter” the display will blink to show the setting, upon pressing “Enter” the display will stop blinking and the press will begin to warm up to the temperature setting.

	Temp.	Time	Application
Program 1	190°F	5 mins.	ColorMount®
Program 2	175°F	5 mins.	Fusion®/BufferMount®
Program 3	150°F	3 mins.	SingleStep® Plus
Program 4	180°F	3 mins.	SingleStep®
Program 5	215°F	7 mins.	Finish Guard® UV (posters)
Program 6	215°F	9 mins.	Finish Guard® UV (photos)

When the press warms up and stabilizes (15-20 minutes) the program can be run by pressing the “Start/Repeat Cycle” key which starts the pump and timers. The press will display the set time and then countdown to (time out). The controller will also display the vacuum level in the press and the actual platen temperature.

When the time is up, the press will sound an audible signal that the cycle is over, but the press will not turn off automatically. Upon hearing the signal, the operator should press the “Stop” key. The vacuum pump will stop, the vacuum will release and the press can be opened. The temperature display will continue to show the actual platen temperature and timer display will show the best time.

## The entire sequence to run Program 1 for dry mounting with ColorMount is:

- Program
- 1
- Enter

- Start/Repeat Cycle
- Stop

*NOTE: The press does not turn off automatically because materials could be accidentally left inside the press without pressure, while they are still hot. This could cause delaminating or excessive warping of the mounting board. The press should be turned off and the materials removed immediately by the operator.*

## Repeating a Program

To repeat the same program again, just press the "Start/Repeat Cycle" key

## To Run Another Program

Press the “Program” key, the number of the program, and the “Enter” key. When the temperature has stabilized at the new setting press the “Start/Repeat Cycle” key to start the cycle.

- Program
- 2
- Enter
- Start/Repeat Cycle

## Warming up the Press

Press the “Heat On” key to warm up the press (when the heat is turned on the light on the switch will illuminate). The press will start warming up to 180°F, the default setting.

## Setting the Temperature

To set a temperature, press the "Set Temp" key, enter the desired temperature on the numeric keypad, and then press the "Enter" key. (For example, to set the press temperature at 190°F, press "Set Temp", press 190 on the keypad and press "Enter"). After "Enter" is pressed, the display will show the actual reading.

## Setting the Time

Press the “Set Minutes” key, enter the desired number of minutes on the numeric keypad, and press “Enter”. (For example, to set the timer for a 5-minute cycle, press “Set Minutes”, press 5 on the keypad and press “Enter”.) You can also set seconds using the “Set Seconds” key in the same sequence. The set time will display until the cycle is run.



# PROCEDURES FOR USE (CONTINUED)

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## **Review Settings**

To check the temperature setting, press the “Heat On” key and the setting will blink on the display for 5 seconds before reverting back to the actual temperature. While running a cycle the Time/Temperature settings can be seen by pressing the “Program” key. After 5 seconds, the display will revert back to the actual readings.

## **Changing Settings**

To change settings use the “Set” keypad and “Enter” keys. No changes can be made while a cycle is running.

## **To Change or Store a Program**

To store the settings for a new program (6 programs are possible), press the “Program” key and any keypad number from 1 to 6. While the display is blinking, set the desired time/temperature using the “Set” numeric keypad and “Enter” keys as usual, then press “Enter” a second time at the end to save the program. The programs will be remembered even after turning the press off.

To change the settings of an existing program, press “Program”, the keypad number, and then the appropriate “Set” key, numeric entry and “Enter”. Press “Enter” a second time to save the program change.

If a mistake is made while entering or changing a program, press the “Clear” key to cancel the entry (much like a calculator). The original program will remain unchanged.

## **Aborting a Cycle while Running**

- To stop in mid-cycle, press “Stop”.

## **Running a pump without the timer**

- To run the pump without the timer (for checking fittings, etc.), press vacuum “Manual On/Off”.
- Press “Manual On/Off” again to stop the pump.

## **Changing the display to Metric**

If you wish, press the temperature “English Metric” key to change the display to Celcius or back to Fahrenheit. The vacuum display can also be set for in/Hg or mm/Hg using the Vacuum “English/Metric” key. The display will show whether it is in English or Metric mode by illuminating the appropriate symbol next to each display.



# RECOMMENDED TIME AND TEMPERATURE SETTING

The following suggested settings should give professional-level results under a variety of conditions. Depending on thickness and size of board, amount of moisture present, actual line voltage, and other local conditions you may be able to process materials faster or you may require longer dwell times. It may also be possible to lower temperatures slightly (up to 10°F) without effecting results if the time is set adequately. Follow the guidelines in the instruction manual and personal experience for best results.

## MOUNTING

Material	Adhesive	Temp.	Time	Program
Foam Boards	ColorMount®	190°F	4-5 min.	1
	Fusion®	180°F	4-5 min.	2
	BufferMount™			
Card Stock	ColorMount®	190°F	5-6 min.	1
	Fusion/ BufferMount	180°F	5-6 min.	2
Masonite®	ColorMount	190°F	8-10 min.	N/A
	Fusion/ BufferMount	180°F	8-10 min.	N/A
Any Spray		Off	5 min.	N/A
Canvas	Fusion 4000	175°F	4-5 min.	2
Cloth Back	CanvasMount™	170°F	4-5 min.	2

## FACTORY PROGRAM SETTINGS

	Temp.	Time	Application
Program 1	190°F	5 mins.	ColorMount®
Program 2	175°F	5 mins.	Fusion/BufferMount
Program 3	150°F	3 mins.	SingleStep® Plus
Program 4	180°F	3 mins.	SingleStep®
Program 5	215°F	7 mins.	Finish Guard UV (posters)
Program 6	215°F	9 mins.	Finish Guard UV (photos)

## MOUNTING AND LAMINATING

### FINISH GUARD-UV

Material	Adhesive	Temp.	Time	Program
Posters	ColorMount®	215°F	7-10 min.	4
Photos	ColorMount®	225°F	9-12 min.	5

*Start at low 160-180°F temperature, load bonding temp. before closing press.*

## MOUNTING AND LAMINATING AND TEXTURING EXHIBITEX

Material	Adhesive	Temp.	Time	Program
Any	Fusion/ColorMount	215°F	8-20 min.	6

*Start at low 160-180°F temperature, load bonding temp. before closing press.*

*NOTE: Allow time for the press temperature to rise from the initial to the bonding temperature and maintain it for 1-4 minutes (dwell time). With the press at the initial temperature setting, place the materials inside, set the temperature at the bonding temperature and quickly close the press and press the "Start/Repeat Cycle" key. Watch the press temperature rise and, when it reaches the bonding temperature, allow an additional 1-4 minutes (depending upon the size and type of material) processing time. Note the complete cycle time for future reference.*

# PERIODIC MAINTENANCE

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Your Bienfang® Vacuum press has been engineered to require a minimum level of maintenance. Review the following to keep the press in prime operating condition throughout its lifetime.

1. Clean the platen regularly; Bienfang UnStik™ adhesive releasing solvent or Bienfang Platen Cleaner can be used to dissolve difficult deposits.
2. Check the vent cloth regularly for proper positioning and cleanliness. Ensure both vacuum manifolds are fully covered and clean or replace the vent cloth as necessary when soiled.
3. Check the vacuum manifolds occasionally for blockages. Make sure that obstructions, paper and debris are removed.
4. Check the rubber diaphragm occasionally for abrasions, cuts, slices and cleanliness; repair or clean as necessary.
5. Check the foam support occasionally for tears, depressions, hard or soft spots, and cleanliness. Repair or clean as necessary.
6. Check the overall press occasionally for levelness, loose screws or damaged components. Adjust, tighten or fix as necessary.
7. Check the vacuum pump occasionally for cleanliness, dryness and any strange or unusual noises. The vacuum pump requires no maintenance, however, keeping the pump clean and dry will result in a longer life.

# LIMITED WARRANTY

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Elmer's Products, Inc. warrants to the original consumer purchaser that each new Bienfang® equipment product which proves defective in materials or workmanship within the applicable warranty period will be repaired or, at our option, replaced without charge upon its return, postpaid, as outlined below. The applicable warranty shall be one year from date of purchase. "Original consumer purchaser" means the person who first purchased the product covered by this warranty other than for purposes of resale.

Elmer's Products, Inc. liability for breach of any warranty express or implied shall be limited to the repair or replacement, at Elmer's option, of the defective item. Elmer's shall not be liable for damages, including but not limited to incidental or consequential damages, arising out of or in connection with the use or performance of any Bienfang product.

To get performance under this warranty, contact Bienfang Technical Support (1-888-240-6021) for assistance or to obtain a Return Authorization. If it is to be returned, pack the product securely to prevent damage in transit and send the product, postpaid or freight prepaid, with a description of the defect or malfunction and proof of the date of purchase to Elmer's Products, Inc. Attn: RA Number. Elmer's is not responsible for damages from mishandling and abuse in transit, in which case a claim should be filed with the carrier.

This warranty extends to and is enforceable only by the original consumer purchaser, and only for the period (during applicable term) during which the product remains in the possession of the original consumer purchaser.

**Warranty Department • Bienfang Framing Products 2020 W Front St. Statesville, NC 28677**

# TROUBLESHOOTING

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Symptom	Probable Cause	Action
<b>No Vacuum</b>	Pump, fittings, "solenoid" Levelness Hinge Adjustment	Perform check below see Page 5 see Page 5
<b>Low Vacuum</b>	Materials extending across rubber edges Vent Cloth  Leak in diaphragm	Reposition materials placed in press Check position, clean or replace Locate and patch or replace diaphragm
<b>No Heat</b>	Not plugged in Power supply off Power Switch off Heat off  Controller malfunction	Check power cord Check circuit breaker Check position Check control setting Contact Bienfang® Technical Service
<b>Uncontrolled Heat</b>	Controller Malfunction  Solid State relay (does press heat up over temp. even when not calling for heat)	Contact Bienfang® Technical Service
<b>Bumps, pits</b>	Cleanliness	Clean platen
<b>Bubbles, no adhesion</b>	Improper adhesive Inadequate time High moisture level Low/uneven pressure Low/high temperature	Check specifications Reprocess longer Reprocess longer See low vacuum Check specifications

## Checking the Pump and Fittings

To check attachment of the vacuum pump and tubing, open the press and fold the vent cloth forward exposing the two vacuum manifolds. Place a small piece of thin plastic, rubber or similar material (i.e., inner tube, heavy shrink wrap or plastic film approximately 6" x 6") over each vacuum manifold.

Press the "Manual On/Off" key to turn the vacuum pump on and observe the reading on the Vacuum display. If the display does not read a good vacuum (over 20" Hg), check the vacuum line for leaks. If there are no leaks in the line then have the pump repaired or replaced. If the vacuum display reads over 20" Hg, then the pump, lines and fittings are all fine. After completing these checks, press the "Manual On/Off" key to turn the vacuum pump off, remove the pieces of plastic or rubber from both manifolds and reposition the vent cloth. If pump checks out okay, check diaphragm assembly, as in Periodic Maintenance, (pg.10). Machine may need to be checked for levelness and a hinge adjustment may be required.

# REPLACEMENT PARTS

Replacement Part Numbers - Domestic (International)				Replacement Part Numbers - Domestic (International)			
<b>Description</b>	<b>3648H</b>	<b>4468H</b>	<b>5298H</b>	<b>Heater(s)</b>			
<b>Pump, Piston</b>				Right	TS1202105	TS2302089	TS2302907
Domestic	TS6288126 Kit	TS6299126 Kit	TS6299126 Kit	Left	N/A	TS2302089	TS2302097
International	TS56299123	TS6299123	TS6299123	Center	N/A	N/A	TS2302096
<b>Ball Stud</b>	TS1068010	TS1068010	TS1068010	<b>Platen</b>	TS5612027	TS5612019	TS5612026
<b>Feet - Leveling</b>	TS1103010	TS1103010	TS1103010	<b>Power Board Assembly</b>			
<b>Stain Relief, Power Cord</b>				Domestic	TS2304092	TS2304092	TS2304092
Domestic	TS1106045	TS1106045	TS1106045	International	TS2304092-1	TS2304092-1	TS2304092-1
International	TS1106048	TS1106048	TS1106148	<b>Wire Harness</b>			
<b>Stain Relief, Conduit</b>	TS1106046	TS1106046	TS1106046	Domestic	TS5304027	TS5304027	TS5304053
<b>Union, Tee 3/8"</b>	TS1122083	TS1122083	TS1122083	International	TS5304028	TS5304028	TS5304054
<b>Gas Spring</b>	TS1124013	TS1124013	TS1124014	<b>Diaphragm Assembly</b>	TS6299118 Kit	TS6299114 Kit	TS6299130 Kit
<b>Clip, Gas Spring</b>	TS1126015	TS1126015	TS1126015	<b>Tubing, 1/4"</b>	TS016042	TS016042	TS016042
<b>Plug, Male, Domestic</b>	TS12010122	TS1201022	TS1201024	<b>Tubing, 3/8"</b>	TS0509003	TS0509003	TS0509003
<b>Accessory Plug, Pump</b>	TS1202052	TS1202052	TS1202052	<b>Male Elbow, 3/8" Tubing</b>	TS1122092	TS1122092	TS1122092
<b>Outlet, Tacking Iron</b>				<b>Coupling, F-F</b>	TS1122082	TS1122082	TS1122082
Domestic	TS1105024	TS1105024	TS1105024	<b>Vent Cloth</b>	TS5214012	TS5214008	TS5214001
International	TS1105025	TS1105025	TS1105025	<b>Controller Instructions</b>	TB2160C	TB2160C	TB2160C
<b>Breaker, 2 Pole</b>				<b>Formica Top</b>	TS5704016	TS5704014	TS5704013
Domestic & Intn.	TS1308041	TS1308041	TS1308061	<b>Sensor, Temperature</b>	TS6208075	TS6208075	TS6208075
<b>Control Board, Assembly</b>				<b>Relay, SS</b>	TS1306026	TS1306026	TS1306028
Domestic	TS2304093	TS2304093	TS2304093	<b>Solenoid, 12 VDC</b>	TS1122087	TS1122087	TS1122087
International	TS2304093-1	TS2304093-1	TS2304093-1	<b>Flag Terminal, Solenoid</b>	TS1238011	TS1238001	TS1238001
<b>Ribbon Cable, Interface</b>	TS5304026	TS5304026	TS5304026	<b>Male Elbow, 1/4" Tubing</b>	TS1122070	TS1122070	TS1122070
<b>Insulation</b>	TS0511009	TS0511009	TS0511010	<b>Terminal Block</b>	N/A	N/A	TS1203043
<b>New Latch</b>							
<b>(Latch Assembly)</b>	TS1123013	TS1123013	TS1123013				

**Bienfang Framing Products**  
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**Tech Service:** 888-240-6021  
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