





Owners Manual and Safety Instructions

READ ALL SAFETY, ASSEMBLY AND OPERATING INSTRUCTIONS BEFORE ASSEMBLING OR OPERATING THE PRESS. FAILURE TO DO SO CAN RESULT IN SERIOUS or LIFE-THREATENING INJURIES.

Save this manual: Keep this manual for the safety warnings and precautions, assembly, operating, inspection, cleaning and maintenance procedures. Keep this manual safe and dry for future reference.

SAFETY WARNINGS & CAUTION

WARNING SYMBOLS AND DEFINITIONS	
	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible serious or Life-Threatening injuries.
	Indicates a hazardous situation which, if not avoided, could result in serious or Life-Threatening injuries.
	Indicates a hazardous situation which, if not avoided, could result in serious or Life-Threatening injuries
	Addresses practices not related to personal injury.

DANGER **WARNING**

- 1. KEEP WORK AREA CLEAN.** Cluttered areas invite injuries.
- 2. KEEP CHILDREN AWAY.** All children should be kept away from work area.
- 3. DO NOT ASSEMBLE OR OPERATE THE PRESS IF UNDER THE INFLUENCE OF ALCOHOL, OR DRUGS.** Read warning labels on prescriptions to determine if your judgment or reflexes are impaired while taking drugs. If there is any doubt, do not attempt to assemble or operate.
- 4. AVOID MOVING PARTS DURING OPERATION.** Keep fingers and hands away from all moving parts.
- 5. USE EYE and FACE PROTECTION.** Wear ANSI approved impact safety face and eye protection.
- 6. DRESS SAFELY.** Protective, gloves and non-skid footwear or safety shoes are recommended when working with and operating the Press. Don't wear loose clothing or jewelry. They can get caught in moving parts. Also, wear a protective hair covering to prevent long hair from getting caught in the Press.
- 7. ALWAYS CENTER YOUR WORK,** do not press anything off-center. Look at your setup from multiple angles to insure that everything is centered within the press.
- 8. CONTAIN THE DIE AND OBJECTS WHENEVER POSSIBLE,** Use form-boxes or silhouette die containers to contain the urethane and dies.
- 9. ALWAYS STAND BEHIND THE UPRIGHT COLUMNS OF THE PRESS WHENEVER USING THE PRESS. INSURE THAT ALL PERSONS ARE LOCATED BEHIND THE COLUMNS WHEN PRESSING.**
- 10. DO NOT COMPRESS SPRINGS, do not press cast iron, rocks, or any fragile or brittle objects.**
Do not press items that could disengage and cause a potential hazard
- 11. STAY ALERT.** Watch what you are doing. Use common sense. Do not operate any tool when you are tired.
- 12. 20 TON LIMIT.** Do not operate the hydraulic jack beyond rated capacity.
- 13. BOLT PRESS SECURELY TO BENCH.**
- 14. DON'T OVERREACH.** Keep proper footing and balance at all times.
- 15. REPLACEMENT PARTS AND ACCESSORIES.** When servicing, use only identical replacement parts. Only use Approved accessories intended for use with this Press.

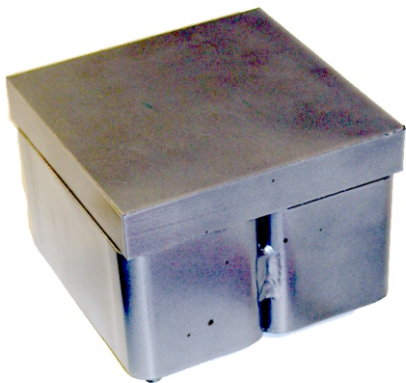
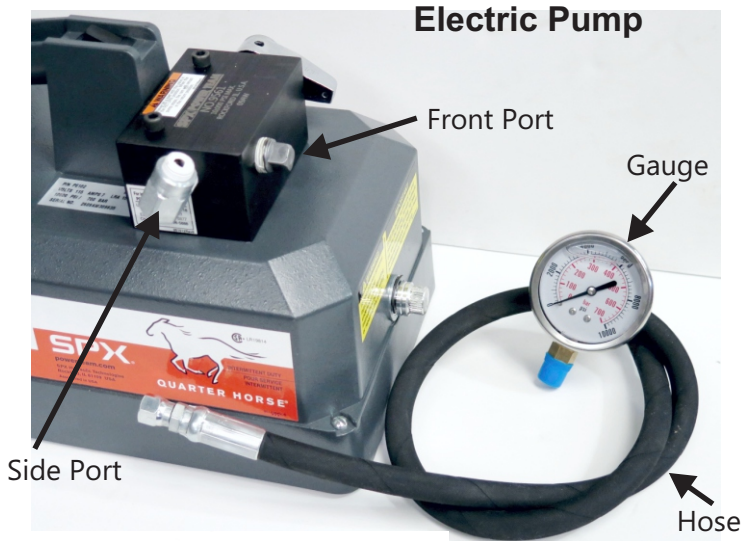
The warnings, precautions, and instructions discussed in this manual cannot cover all possible conditions and situations that may occur. The operator must understand that common sense and caution are factors, which cannot be built into this product, but must be supplied by the operator.

NOTICE
CAUTION

Identify all Parts Electric Press

All warranties void if instructions are not followed

Shipping Crate: Please save the shipping crate, it has been specially designed to protect the ram and gauge during shipping. You will need to ship the ram back to the factory for new seals every 3-5 years depending upon use. It must be shipped in this crate.



Riser block**
**** only used with MKIII models**



Important:
Always keep this valve closed, check for tightness at least once a month.

Tools you will need: large flat screwdriver, #2 Phillips screwdriver, 7/16", 9/16", and 11/16" wrenches



Please note that there may be missing paint on the handles and heads of the rams. They are painted in the factory in Japan and are bent afterwards to fit into the shipping boxes. This will leave tell tale marks and missing paint. This is normal and should not be judged as used or inferior.

No VOC's (volatile organic compounds) are emitted at Bonny Doon via the painting of parts. All of our products are either powder coated or left natural to minimize our carbon footprint.



Lay the ram on it's side, have a rag or two handy to wipe up leaks.



Use the supplied hex key to undo the port plug at the base of the ram.



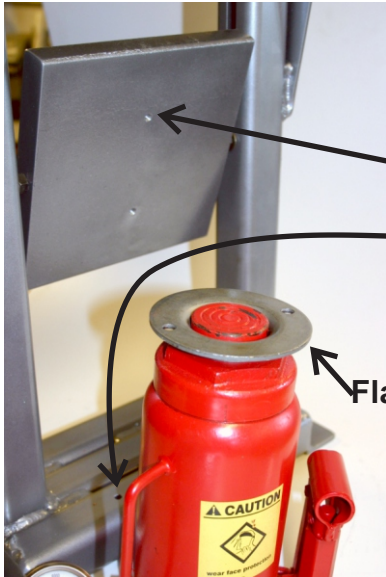
Hand thread the brass colored nipple into the port to insure a clean thread and avoid cross-threading.



Only after hand threading should you tighten the nipple with a 9/16" wrench.

Assembly

NOTICE
CAUTION



Step 1. Place the flange over the top of the ram as shown at left in Figure 1. Note the two threaded holes in the bottom of the lower platen, check the threads to make sure they are clear of debris. Also notice the one hole in the bottom of the press frame.

Flange

Figure 1

Step 2. Placing the jack into the press frame: Slide the ram with flange into place on the frame (Figure 2). If needed, use a screwdriver to pry up the platen bolt located inside the hole (see Figure 3) on one of the upright posts as you slide the ram into position.



Figure 2
Lift the lower platen by using a screwdriver to pry the platen bolt upwards

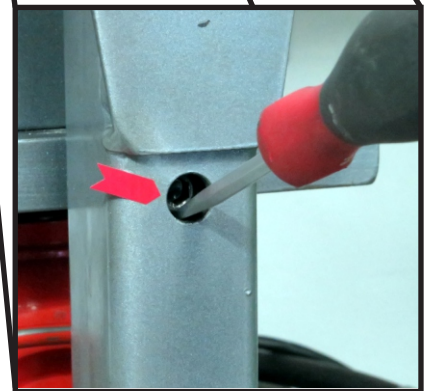


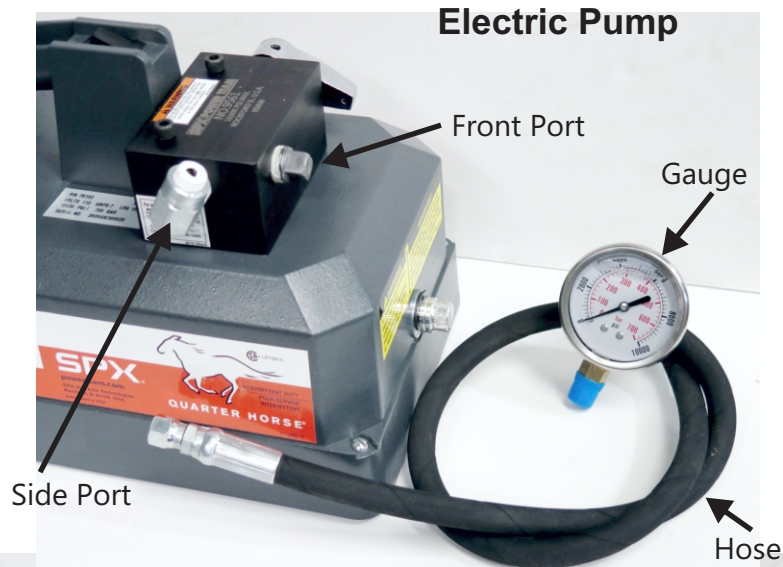
Figure 3

Close up of platen bolt, **DO NOT UNSCREW BOLT.**

Place screwdriver under the head of the bolt and pry bolt upwards to make room for the ram. Gently lower the platen onto the ram head.

Step 3. Thread the two supplied cap-head screws through the holes in the flange and into the two threaded holes in the lower platen using the supplied hex key.

NOTICE
CAUTION



Orient the pump in the upright position, unscrew the plug on the front port as shown above, use a 7/16" wrench to loosen.



Hand thread the hose into the Front port a minimum of two full turns. Then tighten with 11/16" wrench.



Unscrew the plug on the Side port shown using the supplied 1/4" hex key.



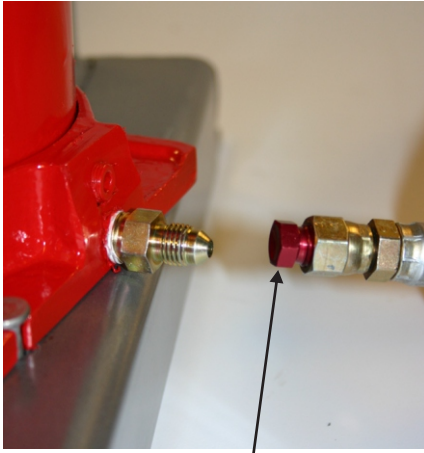
Hand thread the gauge into the Side port a minimum of 2 full threads before applying a wrench. Do not force.



Tighten the hose with a 9/16" wrench.

NOTICE
CAUTION

Electric Press Attach the pump hose



Remove and save the hose end plugs
Replace end plugs when shipping.



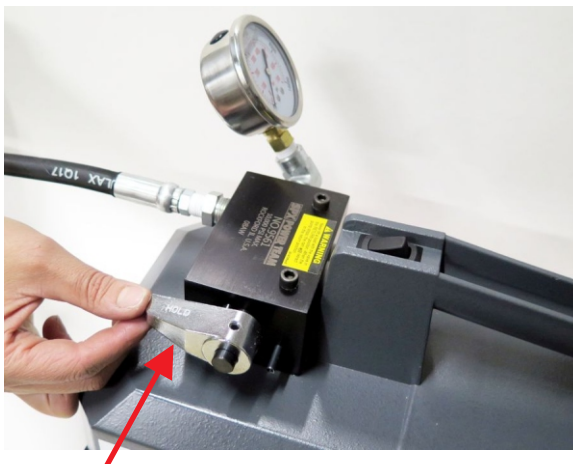
Carefully align the hose end to the ram nipple



Tighten with a 9/16" wrench
Do not use teflon tape on this connection.

When using the electric pump for the first time there may be a delay in the ram movement at first. Raise the ram three or four inches and release to the bottom of the stroke, repeat several times to help bleed any excess air.

Never raise the ram more than 5.5" with an electric press, if you raise the ram more than 5.5" you will pump hydraulic oil into the rams reservoir by way of an overflow valve (similar to your bathroom sink) which prevents the oil from returning to the pump's reservoir. This will possibly void all warranties and may make it necessary to ship the ram and pump back to the manufacturer for repair.



When the pump switch is set to "Hold" the ram will stay in position when the pump is off.



With the pump switch set to "Return" the ram will descend after each use.

NOTICE
CAUTION

Save all warnings and instructions for future reference.

Cleaning, Maintenance, and Lubrication

Before each use, inspect the general condition of the Press and Ram. Check for broken, cracked, or bent parts, loose or missing parts, and any condition that may affect the proper operation of the product. If a problem occurs, have the problem corrected before further use.

Clean: Clean the press and ram by using a clean cloth with a detergent or mild cleaner. Store and use the press in a well protected area free of corrosive vapors, abrasive dust, and harmful elements. Keep all warning labels clean and legible.

Oil Level: The oil level is topped off when shipped. It may leak during transport. All hydraulics leak over time and use, if your press is leaking more than a tablespoon per week then it is in need of repair. If it is leaking less than a tablespoon per week it is within the normal limits of use.

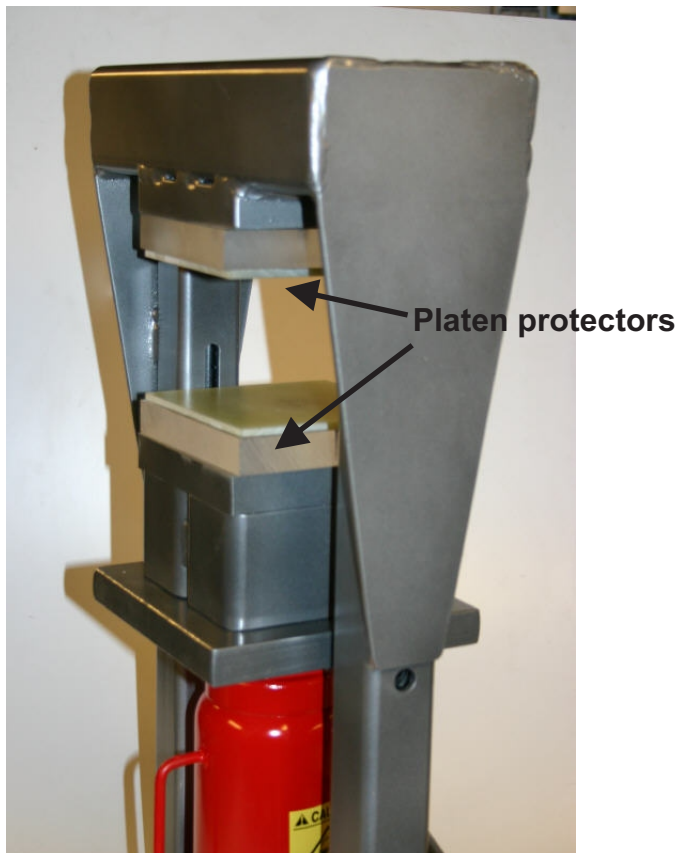
Electric Press: Check the level through the reservoir fill plug hole located at the gauge end of the electric pump with the gauge end of the pump oriented up. With the ram all the way down follow the instructions located on the gauge end of the electric pump.

Use only "Hydraulic Jack Oil". Change the oil often to save the seals. The first oil change should be performed no more than 12 months after purchase, change every 12 months thereafter, more frequently with heavy use. The ram should be lowered all the way down at the end of each day's use. This keeps the ram clean and free of dust and debris which wears on the seals.

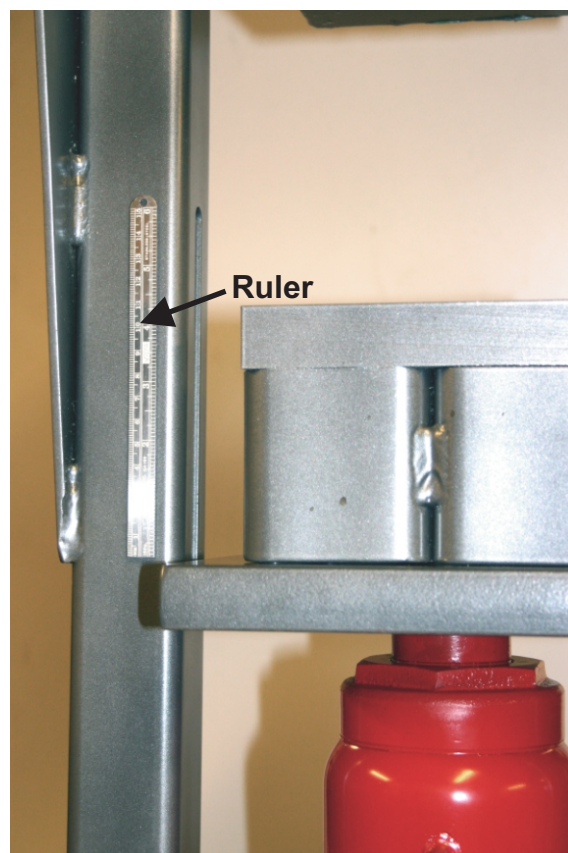
Never extend the ram more than 5.5", (*This is most important with the electric pump models.*)

Tip: Tape a 6" ruler to the uprights with the "0" mark of the ruler adjacent to the top side of the lower platen. See below right.

TO PREVENT SERIOUS INJURY: Use caution when troubleshooting a malfunctioning Press. Completely resolve all problems before use. Do not use a damaged or malfunctioning press.



Press shown with two platen protectors in place which keeps the ram from over-extending.



Place a ruler on an upright and use it to keep from over-extending the ram.

Tips for Using your Hydraulic Press

⚠ WARNING

ALWAYS WEAR SAFETY GLASSES OR A FACE SHIELD. Things can always break under the pressures that you are working with. Plexiglass will withstand incredible pressure if it is fully supported on the back side, but if it is hanging over the edge, and the urethane pad starts to bend the area that is hanging over it is sure to break. Do not use small daps or punches with urethane pads. This does three things; it ruins the pad by cutting it, and the punch can eject out of the press if pressure was excessive, the punches are for use with the contained block of urethane or forming box. See "**Understanding PSI and Surface Area**" below.

ALWAYS CENTER THE WORK. Use of the tooling holes will automatically do this for you. If using matrix dies, or blanking dies, place them in the center of the platen because you will get a more even impression, and the platen will not tilt under pressure.

NEVER TRY TO EMBOSS OR USE BLANKING DIES WITHOUT THE TOP SPACER/S. The top spacer is to make the tooling holes "go away". These holes can damage your die. **If you are using an electric pump** it is important to never run the ram further than 5". If the ram extends more than 5" you will be pumping hydraulic fluid out of the pump's reservoir and into the rams reservoir. This will keep the fluid from flowing back into the pump's reservoir and you will soon be out of fluid. The hydraulic fluid may flow profusely out of the fill hole.

DO NOT EXCEED THE PROPER PRESSURE FOR THE JOB. See chart below for ranges of pressures for various processes. Avoid using small surface-area punches such as small daps and punches.

UNDERSTAND FORCE and SURFACE AREA: the smaller the surface area of a punch the more force is applied at the point of contact. The 20 ton rating on this press is in reference to 1 square inch. In other words, if you place 20 tons of force on 1 square inch of work you will get 20 tons per square inch (40,000 pounds per sq inch). If 20 tons of force is applied to a workpiece or a punch with an area of only ½ square inch then the force applied to that workpiece or punch will be equal to 80 tons. This is far beyond the material limits of many metals including steel and may represent a dangerous condition. Understand the material properties of each item you are placing in the press. Consequently if you exert 20 tons of force on a workpiece of 10 square inches then you are exerting only 2 tons of force per square inch of workpiece.

ALWAYS BOLT TOOLING IN PLACE. NEVER use a cast spoon stake in the press. The cast stakes are not designed for use in any press. They are cast iron and will shatter and/or eject out of the press. Tooling attachment holes are in the top platen of the press for this reason.

1. Never get in a hurry!
2. Use the proper tool for the job!
3. Exercise thought before pumping the press!
4. Remember the 5 "C's", Cover your face and eyes, Center your work in the press, Contain the work whenever possible, stand behind the Columns, and exercise Common Sense.

NOTICE

CAUTION

ASSEMBLE YOUR WORK ON A PALLET AND SLIDE THE PALLET INTO THE PRESS. This allows you to locate everything without disturbing your assembly. The way I describe this in the workshops is that "it is easier to assemble the pizza on a pan and slide the whole works into the oven, rather than trying to assemble the whole thing in the oven."
(The "pallet" is usually a platen protector or kevlar sheet)

ALWAYS LOWER THE RAM WHEN FINISHED FOR THE DAY. The ram is slightly oily and an excellent dust and grit magnet. Abrasive grit, corrosive vapors, dust and other harmful substances are to be avoided. When not in use, lower the ram back into its protective sheath.

