

# Bonny Doon FAQ

## General

Given that the price difference is fairly significant, what is the difference between the Mark III and the Classic press?

Generally speaking, the Mark III and the Pro are specially designed with reinforced framing that reduces flex, especially at high pressures. It delivers the maximum force from the ram to the dies—ideal for coining and for using conforming dies. The accessory die shoes made for the Marc III and Pro machine holds dies perfectly aligned to ensure accurate forming and coining. The Classic frame is ideally suited to embossing and forming—any work that does not require deep drawing or coining.

If you are in business or planning to start a business, the electric Mark III and Pro models are probably your best choice. Though the initial capital investment is greater, in the long run, these machines will provide a higher level of service and a faster return on your investment.

What is the difference between the Electric and Manual Press Packages?

The difference between the two packages is the electric ram. In using the electric ram, you get stronger, more consistent pressure and you don't have to manually close and open the pressure release valve, which saves time. The manual ram can handle a great many applications and, if you decide to upgrade later to an electric ram.

What is the red plug in my ram for?

The red plug serves to cover the reservoir and make changing the fluid easier. It is a convenience only and does not have any effect on the pressure. If you choose to use it, stand the jack upright and carefully remove the reservoir fill plug, replacing it with the red plug. **Important:** Save the original plug for shipping when rebuilding is needed. *Do not ship the ram with the red plug in place.*

What is the Shore scale for Bonny Doon urethane?

The Shore scale for Bonny Doon urethane is "A". There are, however, differences among manufacturers; all "A" scale urethanes are not necessarily equal. We have done extensive research to find the toughest urethane possible, ensuring that Bonny Doon urethane will deliver long-term, dependable results.

## Applications

How much pressure do I need to create coins?

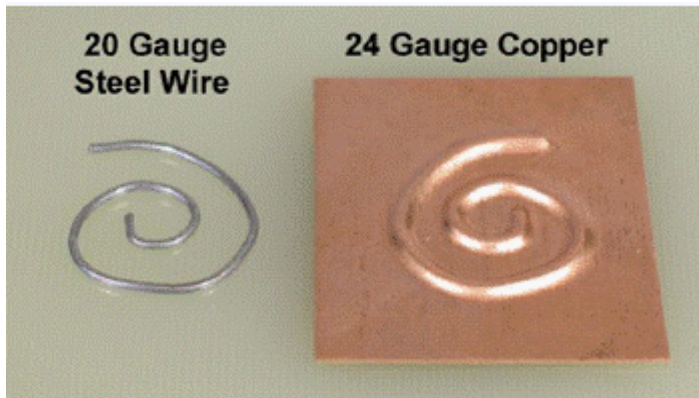
According to the U.S. Mint, coining silver or gold requires 50–60 tons per sq. inch. Using the dimensions of the die you plan to use, you can calculate the necessary pressure for your particular need. For example, if your die measures 3/4" x 3/4", multiply to find the square inches ( $.75 \times .75 = 0.5625$ ). Then multiply this figure by 50 (the required tonnage/sq. inch):  $0.5625 \times 50 = 28$  tons. Keep in mind, though, that coining is as much art as science. You can coin with larger dies using less force depending on how the dies are built and designed. Also, if you create a die with a mate to push the metal, rather than just emboss it, then you need much less pressure.

Is the 20-ton press suitable for making coins?

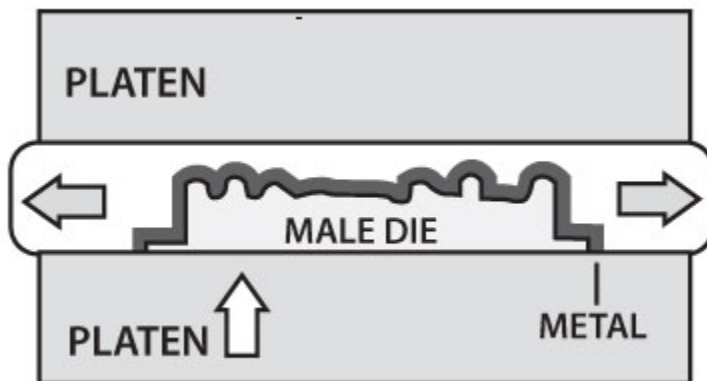
Yes, many Bonny Doon owners are coining with the 20-ton presses. Many more are using conforming dies, but this application is limited to certain sizes. The Classic and Mark III models can create coins up to 5/8" in diameter; the Pro model can create coins up to 3/4" in diameter. For larger coin sizes, the special-order 55-ton press is an option (see the formula above to calculate a rough estimate of the tonnage you will need). The 55-ton is custom-made to your requirements.

I understand that aluminum is not the best metal to bring out embossed details. What alloy and temper would be more suitable?

It is less a question of which metal to use and more a question of how much detail you are trying to capture in the embossing process. The smaller and more detailed the master, the harder it will be for any metal to accept the detail. To emboss on the Bonny Doon press, the master (the positive, or "male" design) is covered with the metal you want to emboss, followed by a sheet of 90d–95d urethane on top of that (the urethane should only be slightly thicker than the master). Then, you apply close to 10,000 lbs of pressure. After embossing, the metal surface that you pressed down has some nice detail to it, but the underside (the side that was against the master) has much better detail. Simple embossing is more difficult to consistently repeat. Below is an example of embossing with 24g (.020") copper.



As you can see, the detail is not as crisp or as fine as you might like. The detail may be better with the aluminum, but it is unlikely to catch all the fine details of your design. Below is an illustration of what is happening with embossing.



As the platens come together, some of the pressure energy dissipates to the side rather than working the metal and this results in a loss of detail. A contained urethane can greatly increase the detail. Using a conforming die pair (both a male and a female die) will yield an even higher level of detail as well as more consistency.

## Accessories

What is the hole size in the die shoe accessory for the Mark III? Is the shoe available with metric hole sizes?

The holes in the die shoe accessory are threaded for 5/16" bolts. This size bolt should be fairly easy to acquire. Alternatively (and at additional cost), metric mounting holes can be made in the shoe, or a basic clamping kit is available for purchase.

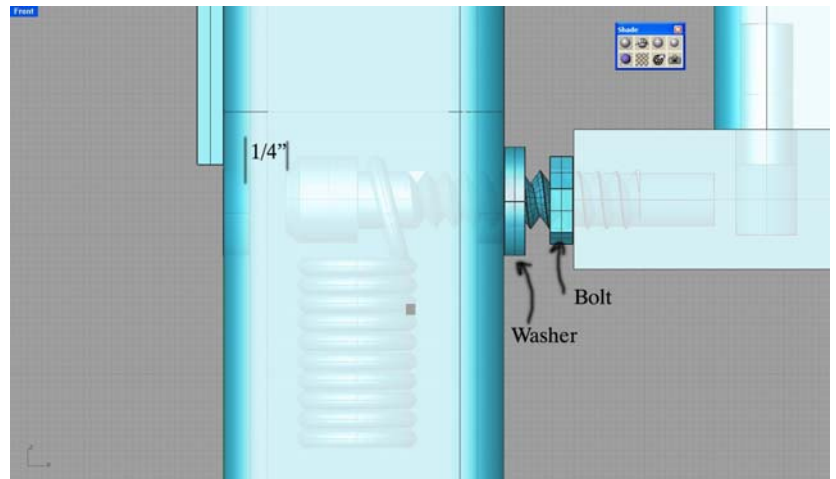
Does the Bonny Doon Mark III Manual Press Package include the die shoe accessory?  
No, the package does not include the die shoe.

Does a 6" deep-draw kit include everything that's in the 3" kit in addition to the 6" parts?  
No, the 6" deep-draw kit includes only the punches and dies for drawing a 6" disc of metal into 3.5", 3", 2.5" and 2" vessels.

## Maintenance & upgrades

How do I adjust the spring in my Bonny Doon press?

One of the key elements of the upper spring connection is that the 3/8" bolt extends well into the upright tube for the spring to wrap around. The goal is to allow the spring to float in the center of the tube. If this bolt is tightened closer to the inner wall of the upright, the spring will rub against the wall, unable to operate effectively. Outside the upright, the bolt has a washer and a nut between the platen and the upright tube. The washer should be in contact with the upright column. The nut is then tightened down against the platen, which keeps the bolt from unthreading. There should be no more than 1/4" (.250") between the tip of the bolt and the inside surface of the tube far wall (as shown).



How did oil get inside the pressure gauge?

The substance you may see in the gauge is actually glycerin residue. The heavy-duty gauges on the Bonny Doon presses are well-made of stainless steel and come filled with glycerin. The glycerin, while ideal for other industries, slows the gauge responsiveness by 2 or 3 seconds and is less than ideal for press work. We drain the glycerin so they can respond fast to the press and the residue can be visible. There are 'dry' gauges available that would address this problem but, in our experience, they tend to be poorly made and don't hold up well under the rigors of high-pressure press work. *Please Note:* On rare occasions, a gauge will develop a leak at the high-pressure side, but it's very obvious when it happens (the fluid starts pouring out of the gauge when you pump). Simply replace the gauge.

What upkeep does a Bonny Doon press need?

Check your owner's manual for instructions regarding maintenance of your hydraulic press. In general, you should change your hydraulic fluid every few months if you're using it daily, or anytime you notice that it has become dirty. Most tool and equipment suppliers sell it as "hydraulic jack oil." Discount stores (such as Wal-Mart) and auto supply stores also typically carry it. Use a 30W detergent-free oil from an oil distributor (Tellus 30, for example, from Shell Oil).

This oil is suitable for quenching dies after it's drained from the hydraulic pumps.

As far as the old Bonny Doon press goes, there's not much that can go wrong. The bolts in the sides of the bottom platen can loosen over time, which allows the platen to migrate to one side or the other. Just keep those nuts tight against the platen. With the motorized units, the pump manufacturer provides information about upkeep and general use. Keep your hoses in good condition; some customers wrap their hoses with a urethane tape.

Where do I find hydraulic fluid?

Hydraulic fluid (also called jack oil) can be found at automotive supply stores or sometimes at discount stores such as Wal-Mart. Some come with a handy spout, which makes filling the reservoir easy.

How do I test the level of the fluid in a manual press?

Check the oil with a thin piece of paper (about 5"L x 1/8"–1/4" wide). Dip it in the hole and see how far below the hole the top of the fluid pool is; ideally, it should be about 1/8" below the hole.

How do I add fluid to my Bonny Doon Lite hydraulic press?

The oil fill plug is near the top of the ram. Remove it with a pair of needle-nose pliers (use firm pressure, the plug fits tightly into the hole). Check the oil with a thin piece of paper (about 5"L x 1/8"–1/4" wide). Dip it in the hole and see how far below the hole the top of the fluid pool is; ideally, it should be about 1/8" below the hole.

To change the oil, pour the oil out through the refill hole, and then add fresh oil. Hydraulic fluid can be found at discount stores such as Wal-Mart and automotive supply stores. *Please Note:* Some replacement oil comes in a container with a handy spout; if yours does not have one, make a funnel out of paper that will fit in the hole. Replace the plug after filling. Because the plug fits so tightly, getting it all the way back in may be difficult; if so, halfway in is sufficient to close the hole and keep the dust out.

Can I swap out the jack in my press for a new one?

If your press has a serial number that begins with '2050' or higher, you can change out the ram (bottle jack). Use item #110-441 for a manual ram or item #110-442 for an electric ram. If your press has a smaller number or is one of the 'Old Gold' presses, the ram is mated to the press frame and is not exchangeable. These rams can be sent in for rebuilding (use item #110-443).

I have an older press and would like to upgrade to an electric pump; what do I need to do?

If the ram of the press has a serial number that is '2049' or lower, or is built onto one of the 'Old Gold' presses, the conversion process entails re-plumbing the original ram. The reason for this is that the ram and the press frame on these models are registered individually to one another. To accomplish the upgrade, use item #110-440 and send the ram to us (allow 3 to 4 weeks for the work and the return shipping).

I currently have a manual 20-ton press. How much time would it take for me to convert it to electric power and how expensive is it to do?

Since the ram portion of your press must be shipped to us for the upgrade, you should allow approximately 3 to 4 weeks for the work and the return shipping time.

## Troubleshooting

My manual ram won't hold pressure; what should I do?

1) Check to make sure the pressure release valve is tightened fully. Sometimes a little extra pressure is all it takes to fully seal the ball bearing and allow pressure to build.

2) Make sure that the ball bearing is in place. If the pressure release valve is taken out or the T-handle is unscrewed for any reason, the ball bearing could have been lost. To check, lay the ram on its side, T-handle up. Unthread the T-handle and check to see if the ball bearing is in place (it may take a strong flashlight to see down into the hole, or you can use a small, high-powered magnet to retrieve it). If it is lost, replace it with any 6mm steel ball bearing (a 1/4" should work as well).

3) It is possible that the ram has been extended too far. If it has been extended more than 5", the fluid is dumped off back into the reservoir. *Please Note:* Failure to have at least 2" of tooling

between the platens can cause this to happen. To correct the problem, drain the reservoir and refill the pump.

The Delrin guides in one of my deep-draw kits (item #115-259) doesn't fit the master die set (MDS); there isn't enough clearance for it to fit between the bolts. What do I do?

The guides are made to tight tolerances and tend to fit tightly, which is necessary for accuracy. Try putting the guide over the master die set and pressing it into place, making sure that the two holes are aligned with the two pins that extend out of the master die set. If this doesn't look like it will be an effective solution, please send them back, and we will correct the problem (or replace the set) and return them to you.

My electric ram is leaking around the base; do I need to replace a seal?

If the ram cylinder is leaking, the fluid from the pump has entered the reservoir. This is usually caused by extending the ram piston further than 5 inches. To correct the problem, drain the reservoir and refill the pump.

My ram isn't building up pressure/or raising, what do I do?

If a Bonny Doon ram (bottle jack) is not building up pressure or the ram is not rising, the cause could be the pump seal, especially in older units. Replacement seals are available to correct this. Use item #110-444 for the pressure release valve (T-handle); use item #110-446 for the point where the pump handle is inserted into the tube. If you prefer, use item #110-443 and send the ram to us for a complete rebuild. *Please Note:* Units with a serial number starting with '2050,' can simply be replaced with a new unit (use item #110-441 for a manual ram or item #110-442 for an electric ram).

My ram is leaking around the pressure release valve or the pump handle.

Replacement seals are available to correct this. Use item #110-444 for the pressure release valve (T-handle); use item #110-446 for the point where the pump handle is inserted into the tube. If you prefer, use item #110-443 and send the ram to us for a complete rebuild. *Please Note:* Units with a serial number starting with '2050,' can simply be replaced with a new unit (use item #110-441 for a manual ram or item #110-442 for an electric ram).

## Older presses

I have an 'Old Gold' Bonny Doon press. Will the newer tooling fit on it?

Yes. The tool mounting has not changed, and all the new tools will mount in the old presses. You just have to be sure there is enough room between the platens to accommodate the tooling. Ask the Rio Grande Tech Support for any help you may need to find the right tooling for your press.

I have an 'Old Gold' press that is leaking at the ram; can I still get it fixed?

Yes, we are happy to service these rams, or we have replacement seals that you can order and replace yourself on site. Use item #110-444 for the pressure release valve (T-handle); use item #110-446 for the point where the pump handle is inserted into the tube. If you prefer, use item #110-443 and send the ram to us for a complete rebuild.

Do you have instruction handbooks for the 'Old Gold' press?

Unfortunately, no. However, these presses operate in much the same way as the newer models, it is possible that those instructions may be of some use. Call us; we'll be happy to discuss your needs and see if we can help.

## Information & services

Can you recommend someone who could make a die to my specifications?

Some of our customers have told us that they've had good results from this company:  
<http://www.ringstamps.com/>

Where can I get blanking dies made?

To have blanking dies (dies that will cut shapes out of sheet metal) made to order, we recommend that you contact Dar Shelton. His website is <http://www.sheltech.net>; his phone number is 505-256-7073.

Where can I get more information about Bonny Doon and their products?

More information can be obtained at the Bonny Doon website:  
<http://www.bonnydoonengineering.com>. There is a forum on this site that's full of useful information.

What is the Bonny Doon website address?

<http://www.bonnydoonengineering.com>