

Model TM1202

Tofu Maker & Food Press Kit

About the TM1202

The TM1202 is multi-functional device that can be used as a tofu maker, tofu press or general food press. The TM1202 is constructed from knot-free, select pine high-grade lumber that is assembled using through-groove joints and quality wood screws. All wooden components have been hand rubbed with walnut oil to provide a food-safe water resistant treatment. All clevis pins and cotter pins are stainless steel for water resistance. The device includes thermoplastic feet to control slipping and reduce water contact while pressing. The handle and plunger assembly can be easily detached from the main assembly for easy cleaning of all surfaces and storage.

Drainage holes are provided on all four sides and the bottom plate. This facilitates fast drainage of fresh tofu so that the cake can set quicker, and at greater firmness. The handle and plunger assembly enables the user to manually press tofu or other food in the device. The handle offers approximate 2x lever advantage. For slow pressing, the TM1202 is provided with a band press kit. There are two large bands and a steel post that, together, can exert an equivalent weight of up to 20 pounds on the top plate. This novel approach means that no other fixtures, devices or weights are needed. The device remains completely stable and safe when the full weight is applied.

Unlike other tofu makers on the market, the TM1202 can make large single cakes of fresh tofu. This is a great advantage for the home tofu maker since so much set up is needed to just prepare the soy milk; being able to produce larger batches of fresh tofu is a real labor saving advantage. The adjustable positions for the plunger on the handle and the handle to the main assembly enable the user to make tofu cakes ranging from 1 pound up to nearly 4 pounds, depending upon desired firmness. A 2 to 3 pound batch is typical.

The TM1202 is the second generation tofu maker based upon the TP1201. The most significant improvement in the TM1202 is the replacement of all structural wood screws with stronger wood joinery. The main assembly is now constructed using box joints while the the base and handle support pieces are now attached using a sliding dovetail joint. The plunger is now made from a single piece of wood. The result of these construction changes is a much sturdier design and one that is more aesthetically pleasing. Also, all wood pieces are now hand-rubbed with food-safe walnut oil that has been heat treated to eliminate the proteins that can be allergens to sensitive persons. This treatment gives the device a soft golden luster.

What's in the Kit

The TM1202 is offered as a complete tofu maker kit, all you need is the soy milk. These instructions include a simple guideline for making fresh soy milk from raw dried soy beans. The TM1202 kit contains the following items:

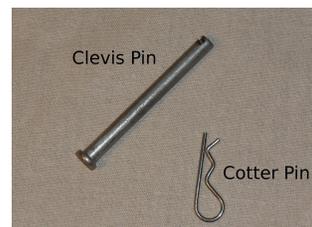
- Main Assembly [four sides, base support and thermoplastic feet]
- Handle and Plunger with clevis and cotter pins
- Top Plate
- Bottom Plate
- Band Press Kit [includes 3 bands, 2 steel post and 2 end screws]
- Filter Cloth [24" x 18" 100% cotton muslin]
- Japanese Nigari [3 OZ sufficient to make 10+ pounds of tofu]
- Instructions



Assembling the TM1202

There are three points for assembly of the TM1202: the clevis pin that connects the handle to the main assembly, the clevis pin that connects the plunger to the handle, and steel posts that are inserted in any one of the three center holes in the front of the main assembly. Since the plunger comes already attached to the handle, the only assembly required is to attach the handle to the main assembly as follows:

1. Remove the cotter pin [the small hairpin-like pin in the end of the clevis pin] from the main assembly cotter pin then slide out the clevis pin.
2. Slide the drilled end of the handle between the handle supports on the main assembly. Be sure that the plunger is pointing down.
3. Carefully line up the handle and support holes and slide the clevis pin into the support, through the handle and out the other side of the second support. Please note, the pin may be snug going back in. You may apply a few drops of cooking or mineral oil [do not use any oil that is not food safe] to the pin and tap it lightly.
4. Reinsert the cotter pin in the end of the just-inserted clevis pin.



Using the TM1202 to Make Tofu

The TM1202 is offered as a kit that includes 3 ounces [weight] of Japanese nigari and a durable/reusable straining cloth for making tofu. The device comes with adjustable pins so that it can easily make a 2-pound cake or a thicker 3-pound+ cake of tofu. The band press kit and handle enable the user to press the fresh tofu cake with the equivalent of up to 20 pounds of weight without needing any additional weights or items. There are two press bands in the kit, and three positions for the steel post so that a wide range of pressure can be applied. The bands and steel post are very easy to remove or adjust. The user can then achieve any desired firmness for the tofu cake by experimenting with these adjustments.

A detailed guide to making tofu is offered at the end of this instruction. So a less-detailed, general procedure is presented here to illustrate how the TM1202 is used. The basic steps for making tofu are as follows:

IMPORTANT

Wipe down all of the inside surfaces of the TM1202 with a soaped sponge then rinse thoroughly prior to its first use. After each use all wood parts should be dried thoroughly prior to storage. It is highly recommended that some sort of food-grade non-reactive oil is applied to all wood surfaces after drying following each use. There are several types of oil on the market for this purpose including: Mahoney's Walnut Oil, Boos Mystery Oil, Butcher Block Oil or mineral oil. Do not use supermarket oils including walnut oil as these will not dry, and may leave a rancid residue

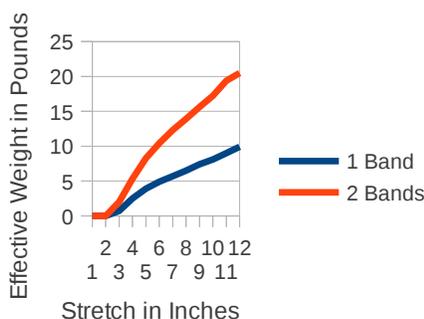
1. Prepare fresh soy milk using your preferred method.
2. Prepare the TM1202 for desired batch size and firmness, by setting clevis pin locations and steel bolt location.
3. Put the bottom plate and dampened filter cloth in the TM1202, and place it in a pan.
4. Use the nigari to create the tofu curds.
5. Place the curds in the TM1202.
6. Press the curds to form a cake and separate the whey.
7. Remove the tofu cake and clean the TM1202.

Note: This is a kitchen device for making food, remember to wash then thoroughly dry it after each use. Also, do not put any part of the TM1202 in the dishwasher.

Using the Band Press

The band press utilizes one or two industrial rubber bands to create downward tension on the TM1202 handle to simulate weight being applied to the top plate. The amount of tension depends upon the number of bands used and at what length they are being stretched. Now it should be noted that over time the elasticity of any rubber band will

wear out, so it is important to keep in mind that these bands need to be replaced periodically, as soon as they appear to be elongated. The band should be 5 inches or less from end to end when laid down flat. The good news is that the bands are very inexpensive and easy to replace. When the bands are new they conform to the table shown below.



The “stretch” is measured from the bottom of the TM1202 handle to the steel post. So as you can see in the chart, a single band will provide up to ten pounds of equivalent weight, while two bands will provide about twenty pounds. So the stretch is determined by how much the TM1202 is filled, that is, the height of the top plate, and which hole [there are three] in the front of the unit the steel post is inserted. Note that only the holes directly in line below the handle should be used. Also, the TM1202 now includes two steel posts so that the pressing weight may be changed easily during a single press cycle; simply install both posts, then move the band[s] from a higher to lower post to increase the equivalent pressing weight.

Using the TM1202 as a Tofu Press

The TM1202 assembly and press band kit can function as a stand-alone tofu press. The device will hold two 400gm tofu cakes, the standard type/size that is sold in supermarkets, side by side. The band press can then be adjusted and used to press water from the purchased tofu cakes. No additional items are needed.

Using the TM1202 as a Food Press

The TM1202 can also be used as a stand-alone food press. The handle and plunger provide the user with an approximate 2x lever advantage for pressing food such as blanched spinach, sliced summer squash/zucchini, salad greens. The press band kit can also be used for slower, lighter pressing.

How to Make Tofu Using the TM1202 [or TP1201]

Prepare Fresh Soy Milk

There seem to be two camps when it comes to homemade soy milk: scratch-made or machine-made. Since the scratch method is a bit more rigorous, and doesn't require an expensive soy milk machine, that is shown here. To make soy milk from scratch you will need the following:

- Dried soy beans
- Electric blender
- Cooking pot
- Flat wooden ladle or spoon
- Heavy duty filter bag or cheesecloth
- A large draining sieve
- A medium draining sieve
- A large bowl for de-hulling
- A soaking container [1-2 gallon]

Step-by-step Procedure for Soy Milk:

1. Determine the amount of dried soy beans that you will need to make your desired batch. One pound of dried soy beans will produce just over one pound of tofu cake. Also, one pound of dried soy beans is approximately 2 2/3 cups of dried soy beans.
2. Prepare a soaking container of at least one gallon in size. It should have a removable lid and drains easily. The container at the left is 1 1/2 gallons, made of plastic, purchased at a dollar store for one dollar. The lid has a large opening cut into it, then it screws over a couple of pieces of plastic mesh cloth. You can find this cloth in the sheet rock section of most home improvement stores.
3. Place the soy beans in the soaking container and cover with twice their height in water. The beans need to soak at least over night, 24 hours is better. Be sure to change the water a couple of times. The photo at the right shows 2 pounds of beans after soaking for 24 hours.
4. Now you need to de-hull the beans. After soaking, the bean hulls will slide off fairly easily. You do this de-hulling by placing a cup or two of the soaked beans in a large bowl and filling it about two thirds full with water. Now, with your hand, massage the beans in the water, the hulls will slide off and most of the beans will split into their two cotyledon halves. After massaging hulls off the beans, gently swirl the water so that the hulls are at the top and the bean halves are separated at the bottom. Swirl off the hulls into a medium sieve. The process is somewhat like panning for gold. You will have to iterate....massage, swirl, pan off hulls....massage, swirl, pan off hulls...etc. Perhaps as many as four times to get all of the hulls separated. Dump the clean beans from the large bowl into a separate large sieve.
5. Continue this process with the rest of the soaked soy beans. You should end up with two separate piles, hulls and bean halves as shown in the photo at the right. Discard the hulls, in your compost heap if you have one.
6. At this point you are ready to prepare the raw uncooked soy milk. To do this use an electric blender. Add two cups of water for each cup of beans. For a standard-sized blender you should be able to easily fit two cups of beans and four cups of water. Puree the beans on the highest speed for about two minutes, or until you can hear that there is a smooth homogenous mixture, no more grinding sound. Here is what the mixture should



look like, before and after, in the photos to the right.

- The next task is to separate the okara from the soy milk. Okara is the insoluble part of the soybean. Okara is low in fat, high in fiber, and also contains protein, calcium, iron, and riboflavin. If you are a vegan, you will save the okara to be used as a nutritious additive to many foods. Otherwise, into the compost heap it goes. To separate the okara you will need a filter cloth or high-quality cheese cloth. I have found that mono-filament nylon fiber bags work best; they are very tough, inexpensive, easy to clean, and can be found on-line from many sources, including Ebay and Amazon. I use a 150 micron bag, shown below. This one has a padded steel ring at the top opening that makes it very easy to hold, and remain open while the soy milk mixture is being poured.
- Pour the soy milk mixture from the blender into the cooking pot through the filter cloth, bag, or cheese-cloth. When using the nylon bag to the right, most of the filtering is done just by jiggling the bag. To render the last 10-15% of milk in the bag, simply twist and squeeze, wringing the bag out. You now have filtered soy milk in the cooking pot and okara in the filter bag. Dump the okara into a separate bowl for handling later. Thoroughly rinse the filter bag spraying from the outside to the inside in order to unclog the micro pores in the surface. For each two cups of filtered beans you should get a tennis-ball size clump of okara as shown here.
- When you have filtered all of the pureed soy bean mixture, you should end up with about 1 ½ gallons of raw soy milk. The uncooked milk will have a foam on top, looking very much like shaving lather. This needs to be skimmed off using a large flat spoon and discarded. When this is done you are ready to start cooking. Raw soy milk must be cooked, brought to a boil in order to improve its nutritional value by heat inactivating soybean trypsin inhibitor [for proper pancreas function], improve its flavor and to sterilize the final milk solution.
- The soy milk should be slowly brought to a boil while continuously stirring and scraping the pot bottom to prevent the build-up of solids that can stick and burn, and eventually ruin the entire batch. Once the milk has come to a boil, back off the heat so that it is simmering and continue cooking for another 20 to 30 minutes. You now have a rich soy milk that is ready to become fresh tofu.



Step-by-Step Procedure to Make the Tofu Cake[s]

- Prepare fresh soy milk using your preferred method.
- Assemble the TM1202 and set the plunger and handle clevis pins in the appropriate positions for your planned batch size. In both cases, the lower hole [on the plunger, or on the handle supports] is for smaller batches, and the upper hole is for larger batches.
- If this is the first use of the TM1202, be sure to thoroughly wash the device with warm soapy water, then completely rinse.
- Place the prepped TM1202 in a pan, such as a 9x13 cake. Place the bottom plate inside the device, and flip the handle to the back side, out of the way..
- Thoroughly soak the filter cloth then spread it out evenly on the inside of the TM1202, the wetness will help it to adhere to the sides of the device. Make sure that it is center so that there will be sufficient length on the ends to cover the cake.
- While your fresh soy milk is still hot, at least 185 degrees F, mix boiling water with your nigari flakes to dissolve.
- Immediately drizzle the nigari water into the hot soy milk and give it a quick stir. DO NOT OVER STIR.
- Wait at least 15-30 minutes for curds to form.

9. Move your TM1202 in its pan near to the tofu curd and whey pot. Now, using a slotted spoon, ladle the curds



into the device. Use the spoon to evenly pack the curds.

10. Pour the last of the curds/whey from the pot into a small sieve to collect the curds, then add these to the TM1202.
11. Fold the ends of the filter cloth evenly over the top of the curds, then put the top plate in place. Handles



facing up.

12. Place the TM1202 and pan near to a sink. This is so that the drainage water [whey] from the tofu can be easily managed.
13. Manually use the handle to press the top plate into place and to press out some of the whey. Dump drainage water into the sink as needed so that the pan does not become too full.
14. Place the steel post in the appropriate hole for your batch size and firmness, then attach one or two bands for the desired approximate press weight.
15. Allow at least 30 minutes for the pressing.
16. Disconnect the press bands from the steel post, flip the handle back and remove the top cover. For a firm tofu cake, you can simply remove the cake by lifting it out by the ends of the filter cloth.

