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Successful Conversion of Water Bladder Press to Air

Posted by <u>Brittany Kordick</u>
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<u>Brittany Kordick</u>
<u>Successful Conversion of Water Bladder Press to Air</u>
August 16, 2023 05:31PM

Like many purchasers of water bladder presses, soon after we bought ours we began wondering if we could avoid wasting water by converting the unit to work with air pressure instead. Inquiries with OESCO, where we purchased our Lancman press, led to cautionary statements to refrain from trying to convert to air because the bladder would inflate too rapidly for a good pressing. Many online forums have similar statements, and indeed, list other potential cons and hazards of converting a press made to work with water pressure to air. Note, there are bladder presses that are made to run off of air, so it's not that fruit can't be pressed using an air pressure setup, just whether or not a system designed to work with water can be successfully converted to air. Aside from the water waste motivation, in theory, you will get a much better, more thorough press using air since it will be distributed equally throughout the bladder at all times (versus water building pressure from the bottom up, inevitably resulting in a more thorough press at the bottom of your pomace load compared to the top).

A handy friend of ours watched us press apples a while back and asked why in the world we didn't convert it to run off air. We explained that we would love to, but everything we'd been told and read cautioned against it. He thought this was hogwash and proceeded to put together an air pressure manifold for our water press. It's about as simple as you can get, works great, and we are getting better yields and more thorough pressings, as well as saving time (don't have to wait for all that water to drain before setting up your next press). The key is keeping air pressure low and slow, as it takes so little air to inflate your bladder, compared with water. We've dragged out pressings to as long as 45 minutes, and could easily go longer if we wanted to.

The outfit our friend put together for us cost about \$55, but it actually could have been put together more cheaply -- he wasn't sure exactly what we needed (for example, he included a valve to release air, which we don't need because we have the valve typically used to release the water in the bladder post-pressing at the bottom of the press). All you ultimately need is a couple of fittings, an air pressure regulator and a pressure gauge, preferably one that only goes up to 50 psi or so, so you can have exact readings, rather than the vague lines available on a 200 psi pressure regulator that measures in 10 psi increments.

The Lancman press comes equipped with a pressure gauge that displays pressure in terms of metric "bar," so if you're using an American brand regulator on your air pressure setup that displays as "psi," you need to know that about 14.5 psi is equal to 1 bar of pressure. The max pressure before your emergency valve lets out water (or air) at the bottom of the unit is set up to kick on at 3 bar (unless you have adjusted it otherwise), so you don't want to be putting more than about 43.5 psi on your unit.

Currently, we turn our air compressor's pressure regulator as low as we can go, and likewise, turn our unit's new air pressure regulator as low as it can go before beginning to press. We also keep the valve that lets water (or air) into the bladder almost completely closed. This results in those long 45 minute pressings that may be desirable at times, but which we will be reducing to the standard 25 minute presses we typically want to do. As we gain experience with our air pressure set-up, we will be fine-tuning our methods to have a more precise standardized system, i.e., leave the valve completely open, and while we will probably always keep our air compressor's regulator as low as possible, we want to know, OK, to achieve a 25 min. press, we open up our pressure regulator on our press to say, 5 psi, for the first 5 minutes, then increase it incrementally until we finish at around 40 psi.

But the bottom line is, you can definitely switch out a Lancman press to run off of air; it's not expensive; it's not going to burst your bladder; and your overall pressing will improve a bit because of that even pressure distribution from air. Noise from the compressor is really not an issue either -- if you have a big enough one, you can fill it with air pre-press, then just let it out. The little pancake compressor we currently have our press hooked up to kicks on a time or two during the press, but that's all.

Kordick Family Farm Westfield, NC Zone 7a seth jones

Re: Successful Conversion of Water Bladder Press to Air

August 18, 2023 05:05PM

Hello Brittany!

Thanks so much for this. I've been trying to noodle just this kind of set up since acquiring a bladder press last year. I had been looking at a water tank reservoir so we could reuse the same water and save on well and pump use. This is far superior. Any further info on your connections and experience with it would be very helpful. Even a photo of the set up. Thanks again.

Registered: 7 years ago

Registered: 4 years ago

Posts: 12

Posts: 211

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Brittany Kordick

Re: Successful Conversion of Water Bladder Press to Air

August 19, 2023 03:15AM

I'd be glad to share a photo of our air pressure setup. As I think I understand the photo uploading process for this forum, though, the only way to do it is to link to a photo with an internet address of some kind, and I'm afraid I don't have any kind of social media or photo sharing accounts. If you (or anyone else) wants to shoot an email to us at cheers@kordickfamilyfarm.com, I can reply with a photo. We have a very light, spotty crop this year, so won't be doing a ton of pressing, but we're going to keep playing around with the air pressure to try to find our sweet spot methodology and will definitely keep updating this thread.

Kordick Family Farm

Westfield, NC
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