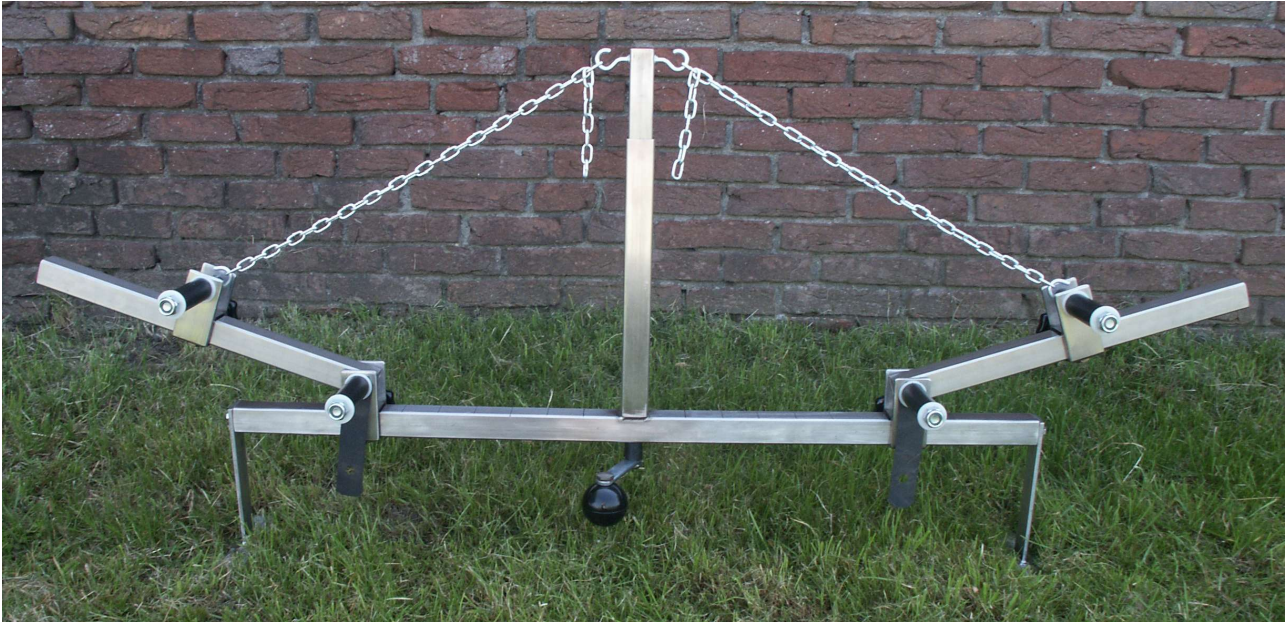




OPA'S BOWPRESS



This is it: a bowpress that will fit any bow. It's cheap to build, very rugged, and doesn't need a lot of expensive machining: in fact, the one pictured above, built in stainless steel costed me about \$100.

(All measurements are in millimeters, sorry. I have no idea what standard measurements for tubing etc. are in the US: just find something in inches that comes close. You can convert millimeters to inches here: <http://www.dadsrockshop.com/conversion.html> . For bolts the number after the M represents the thickness of the bolt)

First a list of things you need:

- 1: Square tube 30x30 mm thick walled 800 mm long 1x
- 2: Square tube 30x30 mm thick walled 400 mm long 2x
- 3: Square tube 35x35 mm thick walled (fits nicely over 30x30) 35 mm long 4x
- 4: Sideplates 35x80 mm 5 mm thickness 8x
- 5: Nuts M10 4x
- 6: Thumb Screw M10 4x
- 7: Bolts M12 x 140 mm and nuts 4x
- 8: Large diameter nylon washers M12 8x
- 9: Some hard rubber tubing 12 mm internal 4x
- 10: Swivel mount jack 1x
- 11: Threaded hook + nut 2x
- 12: S type hook 12 mm 2x
- 13: 600 mm length chain 2x
- 14: Steel washers, to fill the space between the sideplates and the swinging arms 8x
- 15: Piece of 23 mm strip to make the "legs"
- 16: Nice guy in machinshop 1x

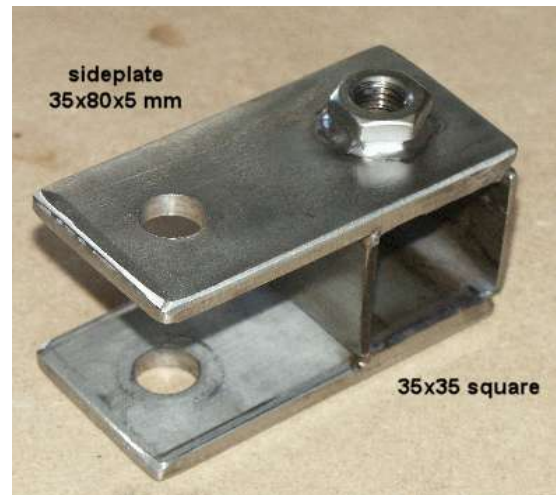
Advise: Have the drilling done by a professional: it's very hard if not impossible with DIY equipment to get the tight tolerances needed to avoid torque. Also first check the bolt diameters to drill the holes as tight as possible.

So, let's start with the machine shop parts:

The joints:

The 35x80x5 mm sideplates (#3) are welded on each side of the 35x35 #2 tubes. A 12mm hole is drilled on the back of the closed part, and a M10 nut welded over the hole.

At the open end of the joints a 12mm hole is drilled in the sideplates.



The swing arms:

12mm holes are also drilled at one end of the #2 tubes



The Jack:

The jack needs to be something like this: I found this one at northerntool.com (Bulldog Square Tube Jack) for \$ 37.99 A bit over the top because it can lift 3000 lbs, but I couldn't find a lighter one..

I deliberately chose one with the swivel on top instead of a swivel on the side because you need less space under your press that way. Only space needed now is to operate it comfortably, while with the side operated one you need room to make a full circle with the swivel.



For modern deflex and reflex bows it's more than enough to have the swivel itself about 100 mm below the base of the press.

If you want to press say pre 2000 bows, you'll find there are some almost shaped like a

recurve: for those you need to put the swivel a bit lower, and make the “legs” a little higher.

The swivel jack is welded in the center, upside down as in the picture above, and to the BACK of the #1 tube. Bottom (swivel) of the jack needs to be +/- 100 mm below the main tube.

To clarify a pic of my Merlin Super Nova in the press: the swivel on mine is about 25 mm below the main tube. If you want to press “oldfashioned” deflex bows, that distance needs to be increased.



Note: I can't provide a picture of a press with a swivel jack because it differs from the one I made: these swivel jacks are not available in the Netherlands :-(

I had to improvise and make one out of two telescoping square tubes with parts of an old Volvo jack inside: this contraption was welded on top of the main tube. So, the only thing different is that I don't have the jack welded on the back but on top of the main tube.

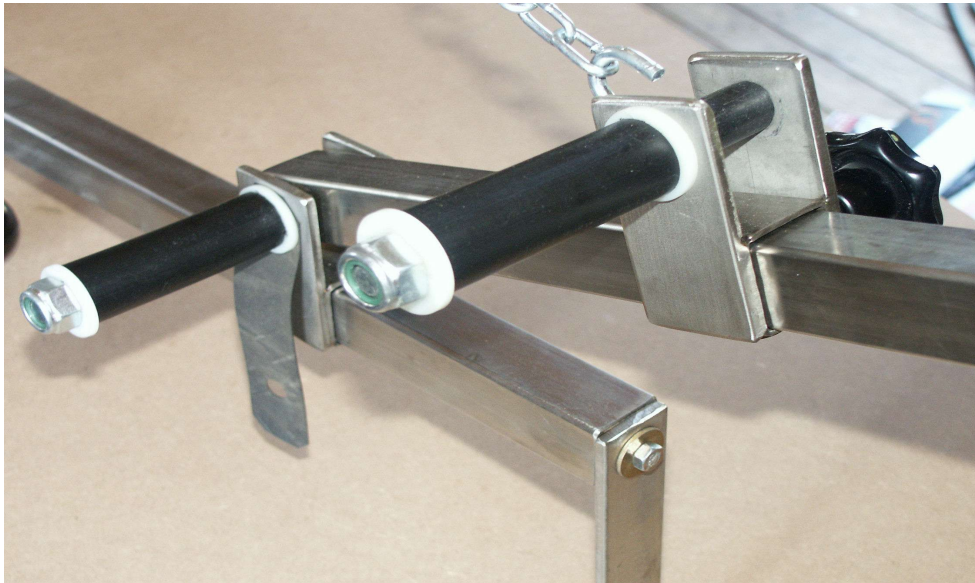
The “legs”:

Not much to tell: a simple T shape made of two strips of 35 mm stainless steel. At the top a hole to attach it to the press. They must be high enough to operate the swivel comfortably. It depends on the swivel and your anatomy how high..



If you're a little bit of a DIY guy you can do the rest yourself with simple tools: File, hacksaw, fine sandpaper and a knife to cut the rubber tubing. Get rid of any sharp edges, sand it down, paint it if you want to or sand/polish it when it's stainless steel.

Now it's time to put everything together, please use the picture below for reference:



1: Slide 2 joints over the main tube: welded nuts on the backside. Fix them with the thumb screws.

2: Attach the swing arms: make sure the space between the side plates is filled with STEEL washers. Insert the bolt from the back. Put a nylon washer on the excess bolt, cut the rubber tubing to size, another nylon washer and finally the nut.

In the pic you see a rubber band between the joint and the first washer: very handy to secure the bow before pressing:



3: Put the 2 remaining joints on the swing arms: welded nuts on the backside. Fix them with the thumb screws.

Cut a piece of tubing long enough to keep the S hook in place (see picture). Bolt goes in from the back, rubber and S hook between the sideplates, and push the bolt through. Put a nylon washer on the excess bolt, cut the rubber tubing to size and put it on, another nylon washer and finally the nut.

4: Put the threaded hooks on the end of the jack (if there are no holes, drill them)



5: Put the 2 pieces of chain on both sides: The excess chain hanging down in the middle makes it easy to see if you're working symmetrically.

6: The only thing left are the legs:

To secure them to the press I hammered 2 blocks of hardwood in the main tube and put woodscrews in with normal threading on the outside (see picture below, right) and attached the legs with a nut. This was done because the press may also be used by a wheelchair archer: in that case the press (including bow) can be rotated forward (if fixed to a workbench) to give easy access to the cams.



That's it: the press is ready for use!

If you decide to build it, I'm sure you won't be disappointed. It's very gentle on your bow, easy to use and very sturdy.

If there is a problem with getting the jack let me know: I will consider to take mine apart and take some photographs for how I made the jack from the Volvo parts... Maybe :-)

Finally, if you have any comments you can send them to atopa@xs4all.nl but please keep in mind it can take some time to answer...

I hope you enjoy this press for a long time,

OPA

Thanks to:

Divardy Constructions (www.divardy.nl) : The nice guys from the machine shop!

Open Office (www.openoffice.org) for providing the excellent free program that can convert MS Word to PDF