

Vacuum frame

I have made a large vacuum frame many years ago when I had to print 100x70cm cyanotypes for an artist here. It is the one you see on the picture at lightmeasure.com. I use 6 philips HPR125 lamps above it. But that could be any other UV lightsource.



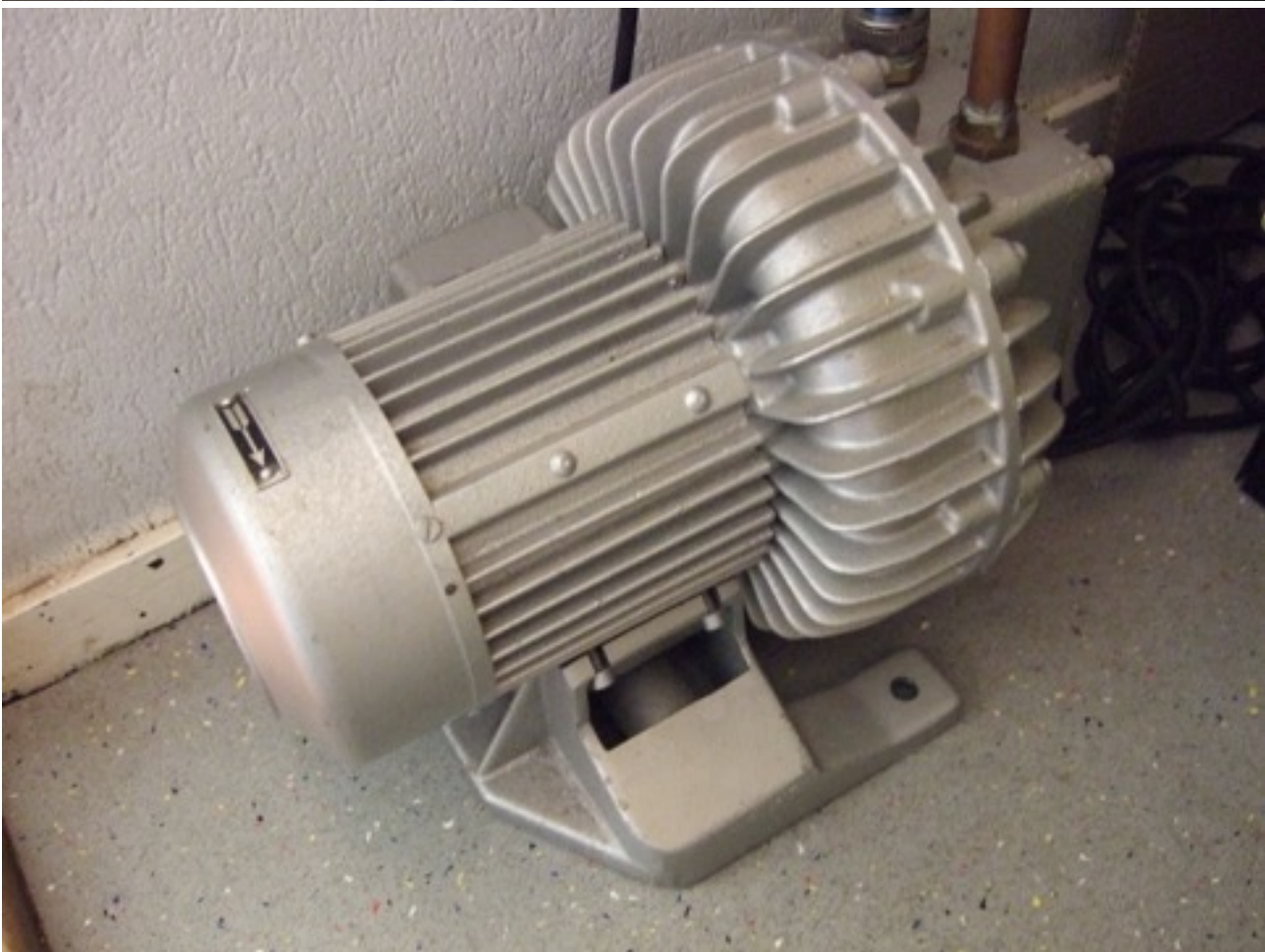
The frame is a large wooden box made of two pieces of plywood (birchwood multiplex 12mm) 80x120cm each. The sides are 44mm wood strips. There is an opening with a connector for the vacuum hose that goes to the pump.

Inside there are placed a number of small reinforcements made of the same wood used for the sides. Without these the vacuum will deform the top. In the top is a very large number of drilled 1 mm holes at 1cm distance. It should be possible to use less I think. But it is a nice meditative job to do this massive drilling...

After drilling the top has to be sanded to make it really smooth.

Bottom sides, reinforcements are glued together and pressed together with clamps to dry.

When the frame is glued together all wood connections are checked and sealed with some extra woodglue or kit to prevent leaks.



I am using a rietschle vacuum pump. But in the early days of the frame I just used my Nilfisk vacuum cleaner.



I use a sheet of 75 micron polyester on top. You can use Melinex. I am using Secol 75 micron polyester. The negative and sensitive paper goes on the frame first and then on top goes the polyester sheet. polyester has about the same UV transmittance as glass with a cutoff below 320nm.

I also put a piece of polyester fleece called TST fleece between the top and the polyester. This is used by paper restaurators and is flat, smooth and air can pass through it.

Similar can be found at Gabi Kleindorfer

You can use anything that is flat and smooth or just omit it. For polymer plates maybe a thin felt might work good.

If you use nothing the top needs to be sanded very smooth.

After this big one I have also made a small 40x50cm one that fits under my lightbox with UV TL tubes. It is this [lightbox](#). For that one I have a smaller 24V diafragm vacuum pump (ASF/Thomas).



One of my students copied that one. He made a more elaborate design for the inside reinforcements and this is how it looks like.

