

Building a Home Made Press
by Natalia Moroz

Anyone with good hand skills and equipment can build a vertical press. The initial concept goes back centuries to Gutenberg and our modern tools and machinery only make it easier.

The press measures 30" x 36"(w) x 22"(h) and has a print area of 24" x 30". The idea to build a printing press with a car jack isn't a new one. All the mechanical parts were easy to obtain, the press uses a pump and a Low Profile Ram (a normal car jack would have made the press tall & bulky). All wooden bars are solid oak - 3"x 3" in cross-section. The base has two 24" Precision Drawer Slides, so the bed can move forward when pulled by the handle. Under the handle side of the bed, we attached a wheel to make moving the bed back and forth easier and more stable.

The bed and the upper hydraulically panel puts pressure on the printing forme, these are made of plywood (at first we used a wood board, but after a few months it had warped slightly - so we had to replace the upper part with plywood, which is inert). The upper panel (in cross-section) is shaped like a pyramid for distributing the pressure evenly on the 24"x12" pressing surface (a 3"x 3"x 30" oak bar on the top). The hydraulic pump and jack are attached to the wood by bolts.

Sheets of masonite board were glued onto the plywood in order to make the surfaces smooth and even. The jack delivers 10 tons of pressure, but in fact during printing the upper beam bends slightly and part of the pressure gets lost. If you can additionally reinforce the upper bar it'll be much better. One of the problems my husband had to solve was how the upper plate would get up after the pressure was released. He came up with the idea to put strong springs on both side - they push it back up. When we assembled the press and started testing, it squeaked very loudly, so we took it apart and inserted thin pieces of cardboard where all the horizontal and vertical bars contacted each other. We also bolted the press down to the printing table for extra stability.

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