Stepper Mount Cross Slide:

The stepper for the cross slide is mounted on the back of the cross slide. To attach the stepper to the spindle a 5 mm hole is drilled in the spindle using an end mill to get the best straight hole. The adapter, to attach the spindle to the flex shaft is then turned to precisely fit this hole and the flex shaft. The adapter is then glued to the spindle using epoxy glue.
The Stepper is mounted on a mounting plate which is mounted on a bracket using spacers.
The hole for the spacers is drilled a lit bigger to allow adjusting the stepper position.
The bracket is mounted on the carriage on top (bottom) of the modified saddle press board.
This gives a rock steady mount.
To prevent swarf getting into he flex shaft, it is protected using adhesive tape (transparent).

Spindle:

The original lathe spindle is used having a 1.27 mm pitch.

Gears:

No gears, direct mount

Powersupply:

20 V

Stepper:

Nema 17, 17HD48004-22B
4 wires, 2 phase
200 steps
550 mNm at 1.2A

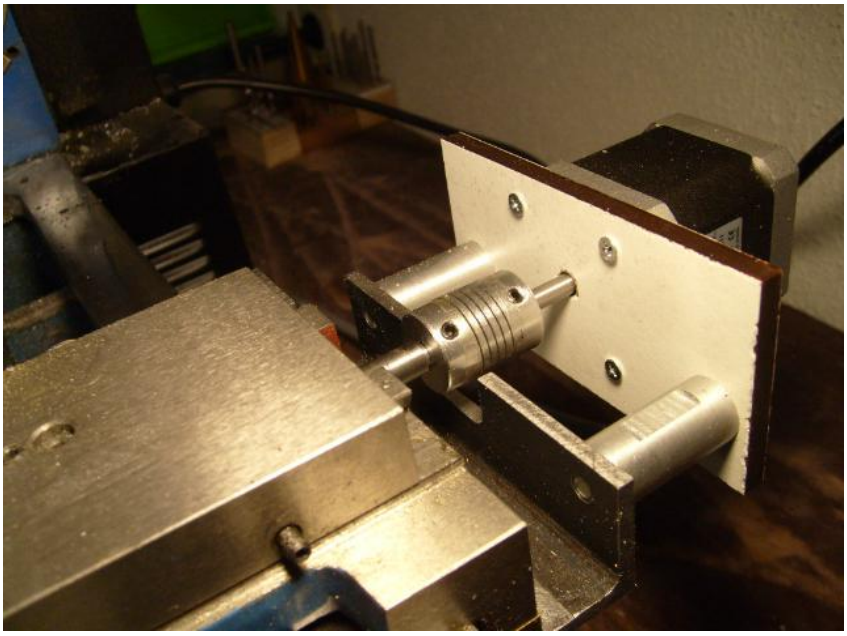
TB6600 settings

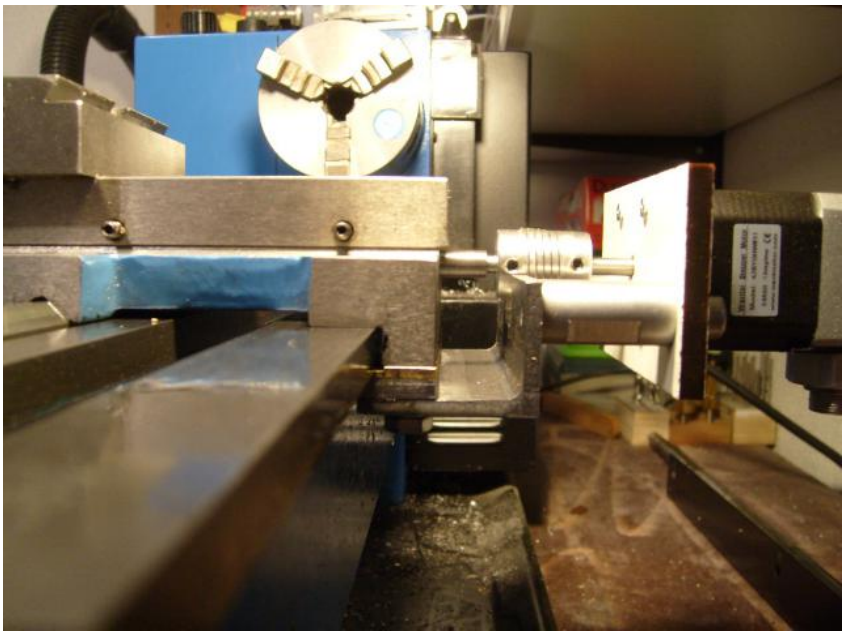
Exitation		8	steps

GRBL settings:

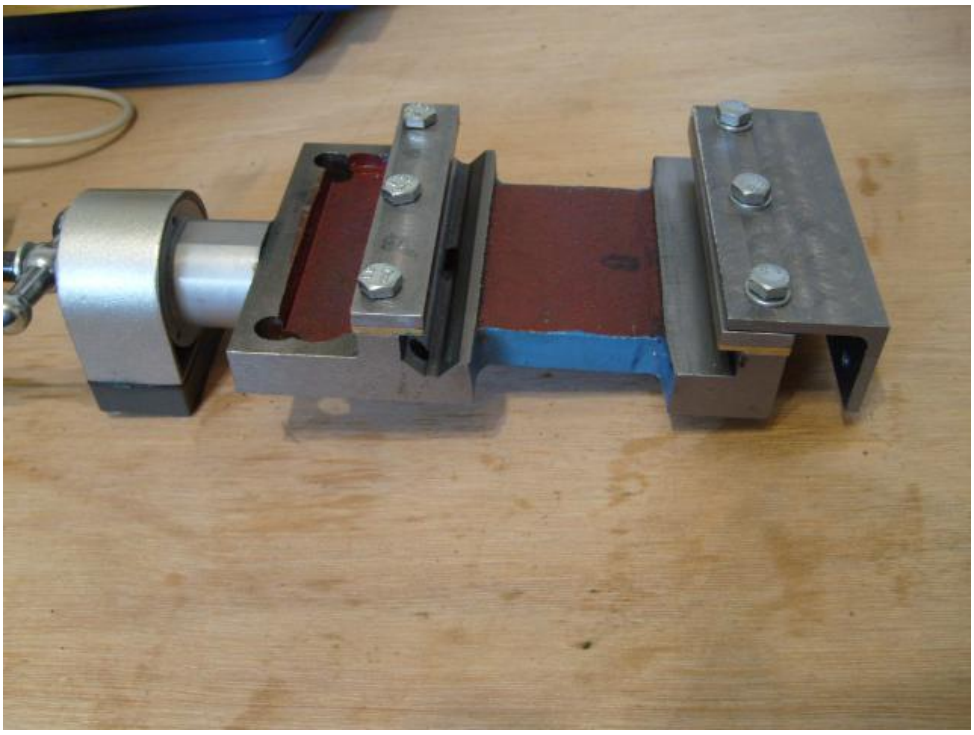
$100	X-axis resolution	1259.843	steps/mm
$110	X-axis max rate	110	mm/min
$120	X-axis acceleration	0.917	mm/s^2

Mounted cross slide stepper:

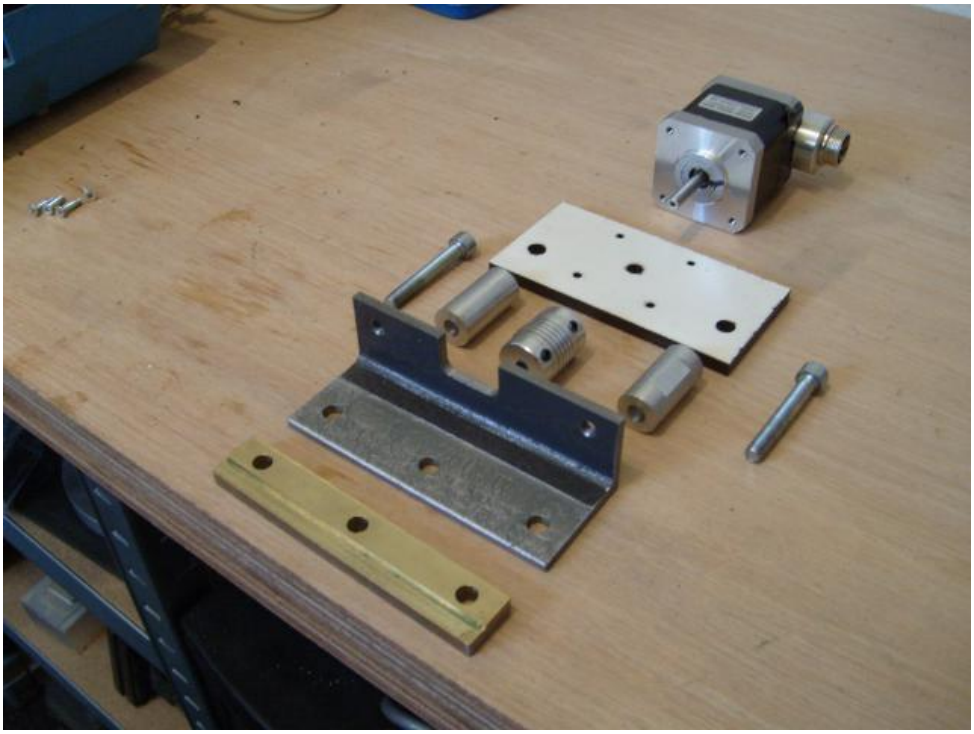




Bracket mounted on top of the modified saddle press board:



All parts disassembled:



Note: the spindle adapter is missing