

## How to machine square bar in a 3-jaw chuck

How do you machine a square bar truly axially?

Set it up in a 4 jaw and adjust the position using a dial gauge?

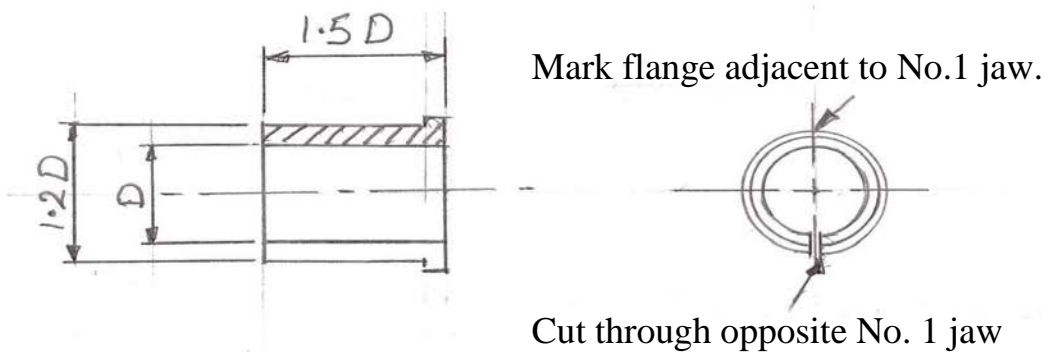
Takes a while doesn't it?

Especially if there are several pieces to do.

Here is a way to do it in a 3 jaw. You will first need to make a split collet to suit the size of bar, but this should be re-usable. The diagram shows the approximate size of the collet to match the bar size.

I've used dural, brass and mild steel depending what I have available.

$D$  = dimension over opposite corners of item to be gripped



The flange is about the proportions as drawn. I use a sharp centre punch to mark it and a normal hacksaw to make the cut.

I've used this for material from 1/8" square upwards. It works OK provided you don't try and take heavy cuts. Even OK for parting off if you use a narrow blade.

This method can obviously also be used for rectangular bar as well.