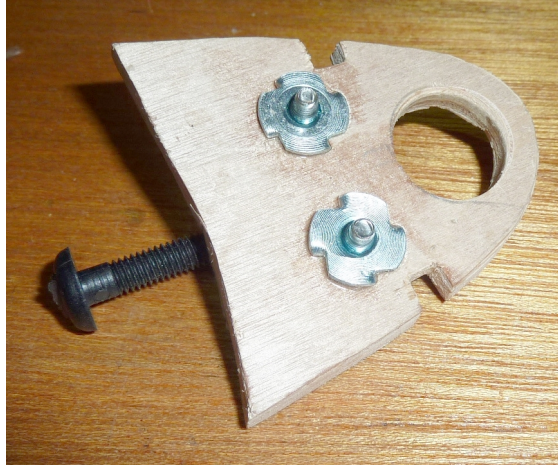


## Cutting accurate round holes in wood and carbon fibre

I needed some accurate 20mm round holes in 6mm liteply formers to give an interference fit for a 20mm carbon fibre tube. I happened across diamond crusted holesaws that are sold mostly for cutting ceramics such as tiles and marble. Fitted into my bench drill press, the 20mm one did an excellent job. There was a lot of smoke. You have to take it gently and keep backing it off to let it cool. You also have to dig the disks out of the saw using a screwdriver. Here you can see the holesaw and one of the formers.



Individual holesaws on eBay are about £1.50 upwards, but I have now found a 15 piece set for just under £8. Sizes go from 6mm to 50mm and the quality seems fine.

Holesaws also work well on carbon fibre. I needed a slot cut in a 20mm carbon fibre tube that was to be the core of a glider fuselage, to allow the servo leads to be extended to the tail end. I used a machine vice on my drill press, set so the tube just slid smoothly. Using a 5mm holesaw I cut a hole, then, holding the holesaw steady, pushed the tube to extend the hole sideways. I found a small amount of up and down movement helped to clear hanging fibres, being careful not to move out of the hole and scratch the tube's surface. Some fibres were still left hanging inside but these were easily pushed away with a wooden barbecue stick. It's good to try out the technique on a scrap piece before you risk the real one. The picture here shows my practice piece with slot a bit skew.



If you have never used carbon fibre, beware, because the fibres are thin and sharp. Never blow away drillings or dust as you would with wood. If you do a lot of work wear a high quality mask. Don't touch loose fibres, as they can get onto or into your skin and be very irritating.

I feel sure that a holesaw could be used much like an endmill cutter on suitable materials. A router would rotate it too fast but a bench drill press should be fine. I will report back on any further experiments.

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