

Ask Jon Eakes

Sheet Metal apprenticeship at George Brown College

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Although we know that the professionally installed ducting in our houses, like the heating ducts, are all made out of formed sheet metal, when we install ducts ourselves we tend to use the convenient flex ducting. A straight sheet metal duct and a straight flex duct of the same size will not move the same quantity of air; in fact the rippled surface inside the flex duct will cause it to have twice the resistance to air movement as the smooth sheet metal duct. Notice how I have twisted and turned the flex duct in my hands in the first photo above; two 90 degree elbows, a bit of a twist and all flex duct. Chris Vickers, a sheet metal professor at George Brown College in Toronto, took the guess that such a convoluted little piece of ducting is probably equal to about 80 feet of straight smooth ducting. No wonder our clothes take so long to dry! While many of the tools used in the sheet metal industry today are the same as were used a hundred years ago, there are also some big technological advances. The second photo shows what is called a Plasma Cutter. This is a computer controlled device that reads your plan off the computer, calculates how to get the most out of a sheet of metal, and then cuts it many times faster and cleaner than anyone can do with sheet metal snips. In fact, humans usually have about 30% waste when trying to cut pieces out of a large sheet, and the machine has only about 5 to 10% waste. So with more efficiency and higher speed, machines like this are replacing many old techniques in modern shops -- and trade schools like George Brown are training their students to work in all sized shops with both old hand tools and modern cutting, clinching and welding equipment. More and more young people are discovering that good trades training can lead to highly satisfying and profitable careers, and with a good percentage of the existing trades people planning on retiring in the next few years, there are lots of job opportunities for qualified candidates.

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