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The Best-Known Advantages of Waterjet based Machining by [Prince](#)

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A highly pressurized jet of water that is used for machining or cutting is known as a waterjet. As part of this process, the jet of water might be used for cutting, slicing, making flooring inlays, carving and other such processes. This method is a much better option in comparison with other heat-based cutting methods because it does not emit harmful gases or chemicals. Moreover, it also doesn't lead to the formation of heat-affected zones.

For cutting materials that are very thick, many technicians also mix different types of abrasive powders with the jet of water. With the use of several advanced techniques, it has become possible to cut even the hardest of materials in a matter of a few seconds. In most cases, waterjet cutting doesn't require elaborate finishing as this process creates clean cuts and contours. Materials such as aluminum, copper, steel, phenolic, Kevlar, composites, titanium, marble, copper and several other forms of stone. There are several reasons why this cutting method is highly preferred as compared with heat-based cutting methods. Let's take a quick look at some of the best known advantages of using this machining method:

The set-up time and cost for prototyping is relatively low. This means that there is less downtime.

If you have a large batch that requires an entire production run, you stand to benefit from the use of waterjet as it offers great repeatability, consistency and economy.

As compared with advanced methods of cutting such as lasers, using a pressurized jet of water gives you a much cleaner finish and the time taken is also less.

The best part of this versatile machining procedure is that it can be used for a number of industries including but not limited to aerospace, defense, glass, machine tool, gasket manufacturing, automobiles, plastics and metal working.

This process can be entirely CNC driven in order to get results that call for very tight tolerances. As a result, you can expect accuracy and repeatability par excellence.

If you look around, you are bound to find different materials such as displays, signs, and decorative railings etc that are a result of this process called waterjet cutting. This process is also great for single runs in cases where customers need a truly unique design or piece of art. Interestingly, a number of artists and sculptors also use this method because it offers impeccable results. In the buildings and construction sector too, high quality flooring inlays can be created with the use of this method.

Another reason why you should choose waterjet over other cutting methods is that when the cutting process is in progress, it doesn't really interfere with the properties of the metal or material that it is cutting.

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[Prince](#) - About Author:

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