# Stainless Quick Tips.

## Working With Stainless Steel.

**Stainless steel distorts up to 70% more than other steels when heat is applied, and therefore much more care should be taken when welding, cutting, and polishing.**

### Welding.

When welding stainless steel be sure to aim the heat away from the job and remember to use chill bars or even to cool the work with water.

### Cutting

Cutting stainless steel for the average person should be done using an angle grinder with a 1mm thick cutting disk, remember the thinner the disk the better, as this will cut through a lot easier. A thicker cutting disk will only add more heat and it will harden the steel making your job of cutting the steel more difficult with a possibly burning your work.

### Drilling

Drilling is a cutting process and therefore very different to grinding processes, unlike grinding where you are using friction and speed, with drilling you should use a slow speed, sharp drill bit and plenty of lubricant, drilling in this way will prolong the life of your drill bits and not burn your job.
Remember as mentioned above the hotter Stainless Steel gets the harder it becomes, the harder it becomes the easier it will blunten your drill bits.

### Bending

Bending stainless can be a little difficult also as it work hardens very quickly, after only a few bends the steel forms cracks and will break very easily.

### Note:

Any steel will expand when heated and contract when cooled and it is important to know that the steel will expand or contract in a uniform manner, for example of you were to apply heat to a ring of steel it will expand in a way that will increase the outer as well as the inner circumference and the opposite would occur if cooled.



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## Cleaning Stainless Steel.

**Cleaning Stainless Steel can be easy if the right steps and precautions are taken, below we will explain a few do's and don'ts when it comes to cleaning Stainless Steel.**

Stainless Steel Should be cleaned regularly to prevent the build up of dirt and chemicals that can cause stains, as the name of Stainless Steel suggests, it will Stain-Less it is not Stain-Proof. Stainless Steel is protected from corrosion by a thin layer of chromium oxide. This Oxide layer is created by the presence of Oxygen in the atmosphere combining with the Chromium on the surface of the Stainless Steel, any contamination on the surface of the steel hinders this process and reduces or destroys this protective barrier, this is why routine cleaning should be done.

### General Cleaning

To start off with, you do not need to go out and buy expensive Stainless specific cleaners, these do work very well, however if you are not cleaning Stainless every day or would like to save a pretty penny you don't need them.

Use of Mild Detergent that has been diluted in warm water, along with a soft cloth or brush is generally all that is needed to get the surface clean again (remember that only a small amount of Mild detergent should be used, the reason for this is that a stronger detergent will require a lot more water to remove the residue left behind). Clean regularly and remember to wipe the surface dry straight away to avoid spotting on the surface.

Depending on the extent of cleaning required you may need to use something stronger and in this case it is recommended that you use methylated spirits or glass cleaner on a soft cloth (this is great for removing finger prints). for a longer lasting protection olive oil can be used, again this is done with a soft cloth and be sure to use the olive oil sparingly, if too much is used dust will stick and accumulate on the surface. Cleaning Stainless with a grain or satin finish the best results are achieved by cleaning with the grain not against it.

### Removing stains and Labels

Food or coffee stained items should be left to soak in a solution of boiling water and Bi-Carb Soda (otherwise known as Baking Soda) To remove sticky labels a hair dryer should be used to soften the glue for easy removal (rather than using a scraper as this will scratch the steel) once this is done a soft cloth soaked with olive oil and a little elbow grease will get the job done.

### Precautions

Using a mere wet cloth to clean Stainless Steel does nothing but smear the dirt and oil over the surface. Do not leave Stainless Steel in contact with Acids, Alkalies, Salts or Carbon Steels (wet or not) for prolonged periods of time as this will discolour or stain your item (as the name suggests it is Stain-Less not Stain-Proof). Never use steel unless it states it is ok to use on Stainless Steel, steel wool is usually made up of carbon steel and any of these particles can be embedded into your Stainless only to rust later on down the track.