# AM.CO.ZA MetalWise Lite CNC Plasma Cutter Suggested Parameters

Latest Modified at 2017/02/14 01:39:42 AM

## Plasma Cutting Easy Panel

The easy panel is an upgrade for the MetalWise Lite. It brings up some common settings in an easy to adjust knob and common functions to an easy to press button. Without the panel, all settings can still be set inside the Control System. The Plasma Cutting Easy Panel is an upgrade for convenience not function.
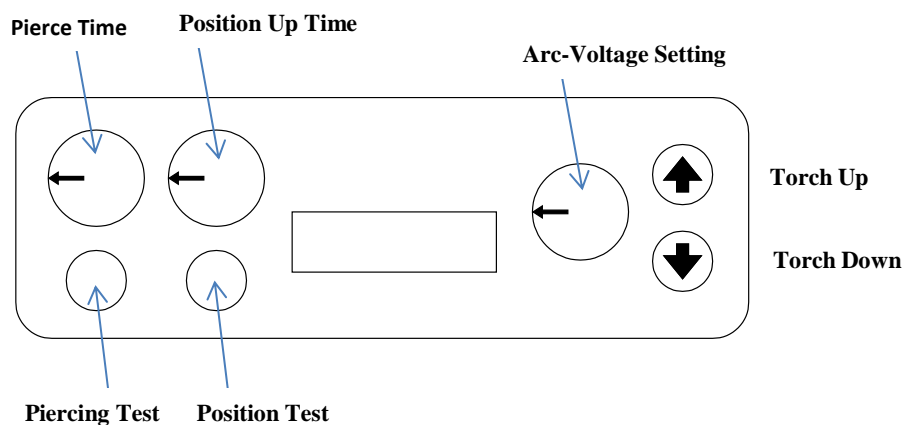
## F1 Common: Common Settings for Plasma and Flame Cutting

| Setting | Suggest Value |
|---|---|
| Max Cutting Speed | Setup maximum cutting speed depends on material, not suggest higher than 4000mm/min, normally 300 – 2000mm/min |
| Manual Move Speed | **6000 mm/min**, 6meter per minute is the maximum speed machine designed for with the stepper motors installed |
| G00 Move Speed | **4000 mm/min**, the torch moving speed from one path to another within a cutting process. Set lower than maximum speed avoids loosing steps. |
| Demo/Back Speed | **2000 mm/min**, the speed used for move backwards |
| Marker Speed | 0, no use |
| Kerf Value | Normally 0.3 to 1mm, half of the value of the width of the cutting gap |
| Corner Speed | **95%** of normal speed suggested, can be lower if not cutting through |
| Demo Run Speed | **4000 mm/min**, the speed used for demonstration cutting process |
| Cutting Type | Flame, Plasma or Demo, depends on your requirement |

## F3 Plasma: Plasma Cutting Settings

# those values have been override by the Easy Panel

| Setting | Suggest Value |
|---|---|
| Delay Before Arc | **0.3 – 0.4s**, time delay from torch positioned to arc, to avoid vibration |
| Pierce Time # | **0.3 – 0.8s** or more, depends on the plate thickness |
| Torch Up Time | **1 – 2s**, when finish one cut, lift time before move to next one |
| Arcing Check Time | **15s** |
| Position Check Time # | **10s** |
| Position Up Time # | **0.3 – 0.6s**, after torch touched plate, lift time before positioned and arc. The optimal distance for piercing is between 2-3 mm. |
| Speed to Lock THC | **95.00%** mm/min, disable THC if speed lower than this setting |
| Distance to Lock THC | **5mm**, when part of cutting path less than this distance, disable THC |
| Lose Arc Delay | **0s**, delay for machine gives warning when arc broke. Need to setup delay if you cut mesh or grill, or with lead in/out -- try 0.5s.<br>For Hypertherm unit, try 1.5s since the signal from Hypertherm Powermax unit generally have delays. |
| Time to Lock THC Before M08 | **0s** |
| Watch Arc Enable | Yes, enable Arc-Voltage checking. Set to No to disable THC |
| Use Cylinder THC | No |
| *Arc-Voltage* # | *130.00V*<br>Change the value to get optimal distance of cutting between plate to nozzle about 2-3 mm. |
| *Over-Arc Protection* # | *30.00V* |
| *Sensitive* # | *40.00%* |
| *Step* # | *1.00V* |
| *Position Time* # | *6.00S* |

## F5 System: System Settings

| Setting | Suggest Value |
| --- | --- |
| Horizontal Axis Pulse<br>Vertical Axis Pulse | 453.000 or 500.000 Pulse/mm, keep original value. This value is mechanical dependant and use to determine distance moved |
| Max Cutting Speed<br>Max G00 Speed<br>Max Manual Speed | Can set at machine maximum possible speed 8000mm/min, but suggest use 6000mm/min or lower. |
| Small Arc Limit | 500mm/min |
| Limited Speed Below Radius | 15mm, this setting gives you better cutting quality on small circles. |
| Accelerate Time in Flame | 0.40s |
| Accelerate Time in Plasma | 0.30s |
| Emergency Stop Time | 0.08s |
| Start Speed | 250mm/min |
| Max +X<br>Max +Y<br>Min -X<br>Min -Y | MetalWise Lite does not come with limit switch, the moving distance determined by mechanical structure. Keep default setting, 100000.00mm for Max, and -100000.00mm for Min. |