

## Liaocheng City Hengchunyuan Machinery Equipment Co., Ltd.

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#### PARAMETERS FOR 80WAT LASER TUBE

suggested paramters for some materials.(the parameters might be a bit different according to different machines

#### **CUTTING**

Laser head type: standard laser head

| materials           | thickness | speed | max power | power in corners |  |
|---------------------|-----------|-------|-----------|------------------|--|
| mdf                 | 2.3       | 35    | 60        | 60               |  |
| acr                 | 5.0       | 12    | 60        | 60               |  |
| acr                 | 8.0       | 4     | 60        | 60               |  |
| acr                 | 10.0      | 3     | 60        | 60               |  |
| acr                 | 20.0      | 0.8   | 80        | 80               |  |
| foam                | 17.0      | 10    | 60        | 60               |  |
| plywood             | 2.0       | 160   | 60        | 60               |  |
| plywood             | 4.5       | 30    | 60        | 60               |  |
| cardboard           | 6.0       | 60    | 60        | 60               |  |
| non-dust cloth      | 1.0       | 300   | 33        | 33               |  |
| leather             | 1.5       | 50    | 60        | 60               |  |
| rubber              | 4.5       | 6     | 60        | 60               |  |
| double color boards | 1.5       | 40    | 60        | 60               |  |
| bamboo              | 7.0       | 9     | 60        | 60               |  |
| paper               | 0.2       | 300   | 60        | 60               |  |
| Kraft paper         | 1.0       | 300   | 20        | 20               |  |
| plastics            | /         | /     | /         | /                |  |
| composite wood      | 7.0       | 10    | 60        | 60               |  |
| granite             | /         | /     | /         | /                |  |
| marble              | /         | /     | /         | /                |  |
| ceramic cup         | /         | /     | /         | /                |  |
| rostone             | /         | /     | /         | /                |  |
| anodized aluminum   | /         | /     | /         | /                |  |
| grip tape           | /         | /     | /         | /                |  |

### **ENGRAVING**

Laser head type: standard laser head

| materials | thickness | speed | max power | min power | scan gap |
|-----------|-----------|-------|-----------|-----------|----------|
| MDF       | /         | 500   | 20        | /         | 0.08     |
| acr       | /         | 500   | 15        | /         | 0.08     |
| bamboo    | /         | 500   | 20        | /         | 0.08     |
| plywood   | /         | 500   | 13        | /         | 0.08     |
| cardboard | /         | 500   | 15        | 1         | 0.08     |

| paper               | / | 500 | 13 | /  | 0.08 |
|---------------------|---|-----|----|----|------|
| painted aluminum    | / | 500 | 25 | /  | 0.08 |
| cherry wood         | / | 500 | 15 | /  | 0.08 |
| anodized aluminum   | / | 500 | 20 | /  | 0.08 |
| plastaic            | / | 500 | 18 | /  | 0.08 |
| glass               | / | 500 | 15 | /  | 0.08 |
| Kraft paper         | / | 500 | 18 | /  | 0.08 |
| leather             | / | 500 | 15 | /  | 0.08 |
| cloth               | / | 500 | 13 | /  | 0.08 |
| rubber              | / | 500 | 30 | 15 | 0.06 |
| metal               | / | /   | /  | /  | /    |
| double color boards | / | 500 | 15 | /  | 0.08 |
| granite             | / | 500 | 15 | /  | 0.08 |
| marble              | / | 500 | 40 | /  | 0.08 |
| ceramic cup         | / | 500 | 22 | /  | 0.08 |
| rostone             | / | 500 | 25 | /  | 0.08 |
| grip tape           | / | 500 | 18 | /  | 0.08 |
| foam                | / | /   | /  | /  | /    |

## **CUTTING**

Laser head type: 4 inches laser head

| materials         | thickness | speed | max power | power in corners |  |
|-------------------|-----------|-------|-----------|------------------|--|
| mdf               | 2.3       | 23.0  | 60        | 60               |  |
| acr               | 10.0      | 3     | 60        | 60               |  |
| acr               | 20.0      | 0.9   | 60        | 60               |  |
| foam              | 17.0      | 10    | 60        | 60               |  |
| plywood           | 4.5       | 20    | 60        | 60               |  |
| plywood           | 10.0      | 4.0   | 60        | 60               |  |
| cardboard         | /         | /     | /         | /                |  |
| mahogany wood     | 18.5      | 2     | 80        | 80               |  |
| leather           | 1.5       | 35.0  | 60        | 60               |  |
| rubber            | 4.5       | 6.0   | 60        | 60               |  |
| cherry wood       | 12.0      | 5     | 60        | 60               |  |
| bamboo            | 7.0       | 13.0  | 60        | 60               |  |
| taekwondo wood    | 8.0       | 16    | 60        | 60               |  |
| plastics          | /         | /     | /         | /                |  |
| glass             | /         | /     | /         | /                |  |
| granite           | /         | /     | /         | /                |  |
| marble            | /         | /     | /         | /                |  |
| ceramic cup       | /         | /     | /         | /                |  |
| rostone           | /         | /     | /         |                  |  |
| anodized aluminum | /         | /     | /         | /                |  |
| grip tape         | /         | /     | /         | /                |  |

## **ENGRAVING**

Laser head type: High resolution laser head

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|-----------|-----------|-----------------|-----------|----------|
| materials | tnickness | speed max power | min power | scan gap |

| MDF                 | / | 400 | 13 | /  | 0.06 |
|---------------------|---|-----|----|----|------|
| acr                 | / | 400 | 15 | /  | 0.04 |
| bamboo              | / | 500 | 15 | /  | 0.06 |
| plywood             | / | 500 | 15 | /  | 0.06 |
| cardboard           | / | 500 | 14 | /  | 0.06 |
| paper               | / | /   | /  | 1  | 0.06 |
| painted aluminum    | / | 500 | 15 | /  | 0.06 |
| cherry wood         | / | 500 | 15 | /  | 0.06 |
| anodized aluminum   | / | 500 | 15 | /  | 0.05 |
| plastaic            | / | 500 | 15 | /  | 0.06 |
| glass               | / | 500 | 15 | /  | 0.06 |
| Kraft paper         | / | 500 | 14 | 1  | 0.06 |
| leather             | / | 500 | 14 | /  | 0.06 |
| cloth               | / | 500 | 14 | /  | 0.06 |
| rubber              | / | 500 | 40 | 15 | 0.06 |
| metal               | / | /   | /  | /  | /    |
| double color boards | / | 500 | 15 | /  | 0.06 |
| granite             | / | 500 | 15 | /  | 0.06 |
| marble              | / | 500 | 25 | /  | 0.06 |
| ceramic cup         | / | 500 | 25 | 1  | 0.06 |
| rostone             | / | 500 | 25 | 1  | 0.06 |
| grip tape           | / | 500 | 18 | 1  | 0.06 |
| foam                | / | /   | /  | /  | /    |

# **Cutting and Engraving a variety of plastaic**

| Material                   | Abbreviation | Trade name               |
|----------------------------|--------------|--------------------------|
| Polyamide                  | PA           | Kevlar®, Nylon®          |
| Polyoxymethylene           | POM          | Delrin®                  |
| Polyester                  | PES          | Thermolite®, Polarguard® |
| Polyethylene terephthalate | PET          | Mylar®                   |
| Polyimide                  | PI           | Kapton®                  |
| Polystyrene                | PS           |                          |
| Polymethyl-methacrylate    | PMMA         | Plexiglas®               |
| Polycarbonate              | PC           | Lexan®, Makrolon®        |
| Polypropylene              | PP           |                          |
| Acrylonitrile butadiene    |              |                          |
| styrene co-polymerisate    | ABS          |                          |